

**Faculty Council Meeting**  
**Meeting Minutes**  
Monday, September 28, 2020  
4:00-5:30PM – ZOOM Meeting

4:00-4:05PM	Welcome and Chair Announcements	Jennifer McBride
4:05-4:10PM	Review and Approval of June 15, 2020 Faculty Council Meeting Minutes	
4:10-4:15PM	Faculty Council Steering Committee Report	Nicole Ward
4:15-4:30PM	Annual Report - Committee on Women and Minority Faculty	Amy Hise
4:30-4:50PM	Topics from the Dean	Dean Gerson
4:50-5:45PM	Presentation of New Departments at CCLCM	Gene Barnett
4:45-5:00PM	New Business	
5:00-5:05PM	Adjourn	

**Members Present**

Corinne Bazella  
Melissa Bonner  
Matthias Buck  
Bryan Carroll  
Cathy Carlin  
Gary Clark  
Darin Croft  
Piet de Boer  
Philipp Dines  
William Dupps  
Todd Emch  
Judith French  
Thomas Gerken  
Stanton L. Gerson  
Monica Gerrek

Peter Harte  
Amy Hise  
Jeffrey Hopcian  
Alex Huang  
Darrell Hulisz  
Beata Jastrzebska  
David Katz  
Varun Kshetry  
Vinod Labhasetwar  
Suet Kam Lam  
Lia Logio  
Peter MacFarlane  
Danny Manor  
Jennifer McBride  
Maureen McEnery

Sam Mesiano  
Matthew Pleshinger  
Arne Rietsch  
Elie Anthony Saade  
Hemalatha Sentilkumar  
Patricia Taylor  
Heather Vallier  
Allison Vidimos  
Satish Viswanath  
Susan Wang  
Nicole Ward  
Jo Ann Wise  
James Wilson  
Jamie Wood

### **Members Absent**

Robert Bonomo	Maria Cecilia Lansang	Ashleigh Schaffer
Jae-Sung Cho	Alan Levine	Barbara Snyder
Brian D'Anza	Ameya Nayate	Daniel Sweeney
Katherine DiSano	George Ochenjele	Sarah Tehranisa
Robert Geertman	Clifford Packer	Danie Tisch
Anna Maria Hibbs	Nimitt Patel	Carlos Trombetta
Ankur Kalra	Anand Ramamurthi	
Laura Kreiner	Abhishek Ray	

### **Others Present**

Gene Barnett	Joyce Helton	Matthew Lester
Nicole Deming		

### **Chair Announcements**

Jennifer McBride, Chair of Faculty Council, offered a warm welcome to returning and new members of Faculty Council. She thanked them for their willingness to commit their time and appreciated their being here. She encouraged them to review the short orientation that she had created as an overview of what Faculty Council is, what we do, and what resources are available on the Faculty Affairs & HR website.

Faculty Council follows Roberts Rules of Order when being recognized by the Chair, and to make and discuss motions. If anyone is unfamiliar with this document, a cheat sheet, and other resources are available on line. We are a large diverse body of representatives and need to stay on course with our discussion and debates to keep the agenda moving forward.

The last item issue that was brought forward from last June's Faculty Council Meeting was the Faculty Council Steering Committee election results and the procedural steps being followed to reach a conclusion on the issue that was raised regarding an irregularity in the election. It is nearly complete and we anticipate receiving the final decision soon, which will then be shared at the October Faculty Council Meeting.

### **Review and Approval of June 15, 2020 Faculty Council Meeting Minutes**

Dr. McBride requested that those members who had something to discuss, change, or correct in the meeting minutes, send a chat (which is automatically directed to Nicole Deming). That will allow us to address any inconsistencies within the minutes. No corrections were suggested and the vote proceeded. A motion was made and seconded to approve the meeting minutes as submitted. There being no further discussion, a vote was taken. 23 were in favor, 1 was opposed, and 1 abstained. The motion passes.

Peter Harte commented that he was disappointed to see the rationale stated in the minutes for the action taken on not reporting the Faculty Council Steering Committee election results. At the last meeting, it was stated that not reporting the election outcomes was the result of a request by the Faculty Senate and the General Counsel. He stated that there is no line of authority that he was aware of, that would permit the General Counsel or the Chair of the Faculty Senate to intervene and tell the faculty governance of a school to not report the results of a completed election. He asked if Dr. McBride could provide more information.

Dr. McBride stated that she empathized with his frustration and that she was equally concerned about the speed of this process. They cannot share anything further as it is confidential. Dr. McBride reminded everyone that while we are frustrated with this process, once engaged we need to respect the steps required to see it through to its entirety.

Dr. Harte responded that he had called the Chair of the Faculty Senate, Joachim Voss, and University General Counsel, Peter Poulos, and the Chair of the Senate categorically denied that he requested to have the election results embargoed and that they have no authority to intervene in the reporting of a faculty election. Their role is to give advice, state the pros and cons, and game out any scenarios. They do not have any authority to make a decision of this nature. Dr. Harte stated that while the decision was taken locally, and he understands that what is being said is that Dr. McBride was essentially compelled by this external force, he doesn't think that is the case.

Dr. McBride explained that there is a process that is ongoing and confidentiality is required. Dr. Harte stated that he was absolutely convinced that this decision was made by the people here, by "you" Dr. McBride. Dr. McBride stated again that she could appreciate his frustration. We are waiting for the resolution of this process and will then be able to share the results of the election. She further stated that while his concerns are acknowledged and shared, we needed to move on.

The next item on the agenda is the Faculty Council Steering Committee report presented by the Faculty Council Chair-Elect, Nicole Ward.

#### **Faculty Council Steering Committee Report (Nicole Ward)**

The Faculty Council Steering Committee reviewed the summer activities of the FCSC including approving candidates for the MD degree and providing advice to the Dean on interim chair appointments. Dean Gerson presented an overview of diversity to the committee. Emeritus appointments were reviewed and recommendations made. Amy Hise, Chair of the Committee on Women and Minority Faculty, presented that committee's annual report. Faculty Council goals for the year and potential meeting topics were discussed. The committee asked for an update on the SOM bylaws amendment status and approved the Faculty Council agenda for the September 28 meeting.

#### **The Annual Report for the Committee on Women and Minority Faculty (Amy Hise, Chair)**

Dr. Hise thanked the council for the opportunity to present their inaugural annual report from the Committee on Women and Minority Faculty. The members of the committee are listed in the presentation for both last year and this year. Dr. Hise stated that they had held an election as part of filling the committee for the first terms. Some members have only served for one year while others will serve for multiple terms. Almost all of the affiliates were represented with the exception of MetroHealth Medical Center. It is hoped that in future elections there will be some members joining from that facility.

The committee charge was crafted with the help of Sana Loue, Jo Ann Wise, and Amy Hise, voted upon and approved by Faculty Council. There are a number of specific tasks the committee has been charged with and these have been reviewed with the committee.

The first task is gathering data on diversity within the SOM, policies and programming related to diversity. They are to participate in Faculty Council meetings and advise the administration on issues related to diversity. The committee met five times last year and this year they are

scheduled to meet monthly. To date, they have met with select chairs (Jonathan Karn and Lin Mei) with the intent that this will be an ongoing activity within the committee. They had very fruitful conversations regarding the challenges and successes related to diversity within the faculty. The committee met with Don Feke, Vice Provost for Undergraduate Education & Academic & Faculty Affairs, and presented him with a synopsis of the latest CWRU Climate Survey (2018). The committee will continue to request reviews of the upcoming climate surveys as they become available.

Lynn Singer presented the final report of IDEAL-N grant. The committee met with Cynthia Kubu and reviewed her excellent study on women staff and faculty at CCLCM out of which came some very specific information about direct mentoring. They reviewed the Provost Office's data on diversity, the CWRU SOM Diversity Strategic Action Plan, and the AAMC data on diversity, which includes information from a diverse range of medical schools, as well as some data from CWRU. Gathering of diversity data from our affiliate hospitals has begun. While an incomplete process, they will continue to work on this task.

As a quick overview of some of the diversity challenges within the School of Medicine, the committee learned from the AAMC (2018-2019) that over half of the medical school applicants are women, almost half of the graduates are women, and 41% of the faculty of medicine are women. However, as you go to more senior leadership and advanced academic ranks, the numbers drop off. The deans are much less representative of the woman participants in SOM. In 2018, 13% of the chairs are women. The snapshot over time indicates that the changes have not been dramatic over the past ten years. Women still are underrepresented overall in faculty. A lot has been published on gender bias e.g. when grant reviewers focused on the science and were blinded to gender, women fared better.

The Provost's Office has noted trends but these affected all faculty within the university, and not just focused on the SOM. Over time, the numbers have not really changed other than to see an increase of women in non-tenure track categories. For Professor, Associate Professor, Assistant Professor and Instructor level -- the numbers have not really changed over the past five years.

The AAMC pie chart shows, in terms of full time medical faculty, racial divisions. Most faculty members are Caucasian, next are Asian. For the SOM there was some progress over time from 2014-2019 in terms of minority faculty. This category also includes Asian faculty, who are not considered underrepresented by the AAMC. We have not been successful in recruiting African American, Hispanic, or Native American faculty. We think the numbers are fairly similar to those of the AAMC.

This committee wants to strategize ways to increase diversity and determine the key strategies moving forward. We need to know currently where we are. There is a critical need for accessible and complete data on diversity specific to the SOM. The AAMC only has data that seems to be from basic science departments rather than clinical faculty. We need to make sure that the data is accurate and know that the Office of Faculty Affairs, and the interim Dean of Diversity, are working to collect accurate data. It was recommended that the Dean needed to have a specific advisory committee on diversity and it has already been created.

We would like to move forward with the diversity survey, which was written up as part of the Diversity Strategic Action Plan, specifically for the SOM and affiliated faculty. The climate survey will gather aggregate data and specific comments to the SOM. A salary survey is also



important to know where we stand in relation to salary disparities. We intend to follow the Diversity Strategic Action Plan as a template for moving forward.

It was also identified that there are issues related to recruitment and retention of faculty, pipeline issues, so we plan to focus on ways to recruit from within, and how to retain our most promising post docs, physicians and trainees. There is an NIH mechanism in place called FIRST (Faculty Institutional Recruitment for Sustainable Transformation) award. The money, over nine years, would go to help each of roughly a dozen universities and medical schools and support a cluster of 10 or more newly hired young faculty members. CWRU will be one of the recipients of this award. These funds will go to support the hiring of underrepresented faculty, and where we have programs in place to support them (e.g. the need to maintain the diversity of our search committees and candidate pools, examining the gender gap in salaries, the opportunity for seed grants, childcare or eldercare so we can present that research at national meetings, and seed grants for equipment to get projects off the grounds).

Mentoring, sponsorship and supporting existing faculty is clearly critical. Recognizing institutional bias and communicating that our SOM is a welcoming institution for diverse faculty in everything from our web presence, social media postings, outreach to underrepresented medical societies, and through advertising in all these society meetings to show that CWRU supports these groups. We will partner with the university to make sure that CWRU has a table to support recruitment from these societies. There are mechanisms for posting our jobs as many of these organizations have job boards, which will help us reach out to underrepresented faculty showing them that CWRU is a place that they would want to come.

The President's executive order has unclear implications for the SOM. Dr. Hise reached out to Robert Solomon at OIDEA to determine how it would impact our current diversity. The language on this executive order seems to prohibit or limit any form of race stereotyping or scapegoating. We do not know how this may impact our existing adversity training for participants on a search committee when it speaks to implicit bias. The AAMC issued a statement. Until we know how this will be implemented we want to bring it to people's attention.

Dr. Hise ended her presentation stating that the Committee on Women and Minority Faculty welcomes any input from Faculty Council. If there are suggestions for work or topics the committee should focus on, please email her and she will be happy to address it.

### **Topics from the Dean (Dean Gerson)**

Dr. Gerson noted that this is his first encounter with Faculty Council in his current position. He stated that his email door is always open; if you have something on your mind please let him know. We need to be responsive. There are a lot of moving targets these days, and a lot of activities going on.

Diversity and inclusion – we all have witnessed personally in our reading, listening and our emails the emergence of important dialogue on the complex spectrum of diversity and inclusion. We have just heard from Dr. Hise on behalf of the Committee on Women and Minority Faculty, for which I am grateful, exists. The mood in the country academically has shifted remarkably toward underrepresented faculty by race, ethnicity, gender, and sexual orientation, focusing relatively on women. We want to focus specifically on underrepresented individuals in the

research community. First, our data is not accurate because it leaves out a quarter of the individuals on our roster of 4,000 faculty across five institutions. We give Faculty Affairs & HR the directive to collect that data. It is unacceptable that a quarter of the information is not there. As Dr. Hise mentioned, we have initiated a committee for the Dean that will complement the Committee on Women and Minority Faculty. It will be a short-term group that may meet over a year and half and update procedures and methods to ensure that we are being as proactive as we can be. We would like to have a daily discussion. Talking points could be submitted by email to Nicole Deming, or at least captured in the meeting minutes for everyone to consider and then take the opportunity at the next meeting to discuss.

Dr. Gerson is participating by audio and has become very difficult to hear. Dr. McBride stated that it might be best to postpone this discussion to the next Faculty Council meeting in October. Dr. Gerson ends his participation in the meeting. Dr. McBride stated that if anyone has questions for Dr. Gerson, please put them in chat and we can collate and forward them on to him, in addition to any items in the minutes, or other questions emailed, and have him come back in October.

### **Presentation of New Departments at CCLCM (Gene Barnett)**

Dr. Gene Barnett, Associate Dean of Faculty Affairs, is here to discuss the creation of four new departments at CCLCM (Orthopaedics, Physical Medicine & Rehabilitation, Psychiatry and Radiation Oncology). Nicole Deming explained that the Faculty Council members voting to approve these applications today would be using the chat function to vote. This will ensure that all who are able to vote are accounted for.

Dr. Barnett explained that when CCLCM was established there were a limited number of departments and most were incorporated in Medicine or Surgery. These new departments parallel the departments at the other affiliates (UHCMC or MHMC).

### **Orthopaedics**

Orthopedics was originally placed under the Department of Surgery when CCLCM began. The proposed chair is Brendan Patterson, MD, MBA. Dr. Patterson is past Chief Financial Officer and recently second President Elect (will serve as President in 2022) of the Orthopaedic Trauma Association. He helped develop the Northern Ohio Trauma System and served as Chair for three years. He has presented both nationally and internationally. This department faculty will be comprised of 110 physicians throughout the institution. They will teach medical students (CWRU and SOM), residents, fellows, podiatry trainees, post-graduate Physical Therapy residents and physician assistant students from CWRU and other universities. Faculty and trainees are involved in clinical trials and outcomes research with LRI. They generate nearly 200 peer-reviewed articles annually.

This department was requested by the previous Dean, Pam Davis. It is a significantly robust department, warrants being recognized, and offers the SOM department alignment with the other institutions. An analysis of the effect of the establishment of this department on existing departments of the SOM concluded that there would be no adverse effect, it is a preferred alignment, and it will allow for a better showcasing of their unique accomplishments. The 5-year business plan affirms the new department will not require funding from the SOM.

### **Physical Medicine & Rehabilitation**

Physical Medicine & Rehabilitation is already an established department at UHCMC and MHMC. It was originally placed under the Department of Medicine when CCLCM began. The

proposed academic chair is Francois Bethoux, MD, who is the Director of Rehabilitation Services at the Mellen Center and Fellowship Director of Musculoskeletal Rehabilitation. He has been Editor-in-Chief for the International Journal of MS Care from 2014 to the present. He has authored over 80 articles and 26 book chapters. PM&R will consist of over 24 professional staff who will teach medical students from CCLCM and CWRU. There are 12 residents per year and two from Internal Medicine; one fellow per year and two from MetroHealth. Rotating Pain Management has nine fellows per year. Research projects are required by both residents and fellows. Two staff members are Clinician Scientists. There will be collaboration with LRI and the Mellen Center. Grants from federal and foundations are: Effectiveness of Acupressure, Evaluation of Pressure Overlay, and Movement Feedback.

This proposed new department was requested by the previous Dean, Pam Davis. It is a significantly robust department, warrants being recognized, and offers the SOM department alignment with other institutions. After analysis, it was determined that the establishment of this department will have no adverse effect on existing departments of the SOM, and will allow for better showcasing of their unique accomplishments. All CCLCM research will continue to note CCLCM of CWRU appointment. This new department will better reflect the academic diversity of CCLCM of CWRU and will have no financial impact on CWRU and/or SOM. The visibility of the new department may spur further pursuits and encourage engagement at the HEC.

### **Psychiatry**

Psychiatry is an already established SOM department at UHCMC and MHMC. It was originally placed under the Department of Medicine when CCLCM began. Donald A. Malone, Jr., MD is the proposed academic chair. Dr. Malone is the Director for the Center for Behavioral Health, and President of Cleveland Clinic Lutheran Hospital. He has held prominent positions in the Ohio Psychiatric Association, the American Psychiatric Association, the Association for Convulsive Therapy, the American College of Psychiatrists, and is currently on the Board of Directors of the International Society for Neurostimulation. He has authored more than 60 articles and eight book chapters and handbooks.

This department will have more than 125 professional staff members who will teach residents fellows, and trainees from CCLCM, CWRU, and other institutions. Rotations include Chemical Dependence Rehab and Child & Adolescent Psychiatry. There is a dedicated resident research track. The Vice-Chair of Research assists interested staff and trainees. This department has secured \$29 million in funding over a five-year period (Patient-Centered Outcome Research Institute, National Institutes of Health, and philanthropic funds).

This department was requested by the previous Dean, Pam Davis. It is significantly robust, warrants being recognized, and offers SOM departments alignment with other institutions. An analysis of the effect of the establishment of the second department on existing departments of the SOM concluded that there would be no adverse effect, that it was a preferred alignment, and that it will allow for better showcasing of the unique accomplishments of its professional staff. All CCLCM research will continue to note CCLCM of CWRU appointment. This new department will better reflect the academic diversity of CCLCM of CWRU.

### **Radiation Oncology**

The department of Radiation Oncology is an already established SOM department at UHCMC and MHMC. It was originally placed under the Department of Medicine when CCLCM began. John H. Suh, MD is the proposed academic chair. Dr. Suh is the Associate Director of the Gamma Knife Center. He is the NCCN Guidelines Steering Committee Representative for the

Case Comprehensive Cancer Center from 2019 to the present. He is a member of the Board of Trustees of the American Board of Radiology from 2019 to the present. He has authored 270 peer-reviewed publications and 40 book chapters. He has given more than 300 presentations both regionally and internationally.

There are 35 physicians and 25 medical physicists in the department, including four physician scientists who collaborate with LRI. Faculty teach medical students, residents, and fellows from CCLCM and CWRU. There is a Medical Student 4<sup>th</sup> year elective program and mentored research year, and research projects for both faculty and trainees. There is a dedicated statistician and mentorship provided for protocols and scientific writing. The grants cover many topics (Therapeutic Resistance in Leukemic Cells, Lung Cancer, Prevent Therapy Resistance; Lethal Prostate Cancer, and HPV and Oropharyngeal Carcinoma).

This department was requested by the previous Dean, Pam Davis. It is significantly robust, warrants being recognized, and offers SOM department alignment with other institutions. After analysis, it was determined that there would be no adverse effect from the establishment of the second department on existing department of the SOM. It will offer preferred alignment and will allow for better showcasing of the department's unique accomplishments. All CCLCM research will continue to note CCLCM of CWRU appointment. This new department will better reflect the academic diversity of CCLCM or CWRU and will have no financial impact on CWRU and/or SOM. The visibility of the new department may spur further pursuits and encourage engagement at the HEC.

There being no further discussion, questions or comments, Dr. McBride thanked Dr. Barnett for his presentation and proceeded to the vote.

A motion was made and seconded to endorse the creation of a Department of Orthopaedics at CCLCM of CWRU. There being no further discussion, a vote was taken. 39 were in favor, 1 was opposed, and 0 abstained. The motion passes.

A motion was made and seconded to endorse the creation of a Department of Psychiatry at CCLCM of CWRU. There being no further discussion, a vote was taken. 36 were in favor, 1 was opposed, and 1 abstained. The motion passes.

A motion was made and seconded to endorse the creation of a Department of Physical Medicine & Rehabilitation at CCLCM of CWRU. There being no further discussion, a vote was taken. 36 were in favor, 0 were opposed, and 2 abstained. The motion passes.

A motion was made and seconded to endorse the creation of the Department of Radiation Oncology at CCLCM of CWRU. There being no further discussion, a vote was taken. 35 were in favor, 1 was opposed, and 1 abstained. The motion passes.

### **New Business**

Darin Croft asked that since the election results are not yet resolved, and we are going to be receiving reports from the Faculty Council Steering Committee, if there is business taking place, who comprises the Faculty Council Steering Committee? Dr. McBride explained that currently the standing committee consists of Jennifer McBride, Gary Clark, and Nicole Ward. Hopefully, we will have the full eight people by the next meeting.

Matthias Buck shared a piece of information he stated was especially for the SOM members. Covid 19 is not over and he is currently engaged with the Covid 19 financial strategy. He wrote a letter several months ago to the CFO of the university and the Provost and received a reply about transparency and creating a financial strategy. Today, a second letter is being sent to address further concerns and engagement of faculty. He thinks it is especially important, since Covid 19 is impacting us personally (labs and also departments), that it is important to know how we have saved, cut, or spent funds, the milestones being created, and that we can recommend a strategy plan. Anyone who is interested in seeing a copy of this letter should email him.

Dr. Kam Lam stated she had exciting news to share with faculty. She said that we have just secured a reinstatement of Case as a member of the Consortium of Universities of Global Health (CUGH) after a few years' absence. This membership opens up opportunities for all faculty affiliated with Case, including research, education, serving on committees, etc. Please feel free to forward this exciting news to any faculty working in global health. The funding comes from a donor to the Andrew B. Kaufman World Medicine Pathway for Case and CCLCM med students, of which Drs. Kam Lam and Chris Longenecker, are co-directors. For more information go to <https://www.cugh.org/>

Nicole Ward added to Dr. Buck's comments by stating the difficulties that new investigators are having with their inability to spend start-up money and only being able to hire research personnel off of NIH sponsored/funded. She asked if Dr. Buck's committee could gain transparency and potentially add a timeline. When Dr. Buck explained that they have already asked this question, Matthew Lester added that they have presented this issue to Central Administration several times. They successfully made the case to hire individuals who are on start-up packages, and new faculty hiring staff to enable them to do their research. The ability for us to get some exceptions is more clear now. There is a big pushback where we are hiring faculty and their start up is 100% off of the SOM. Dr. Ward asked that in terms of jobs being advertised, are faculty being recruited to Case ongoing or are these prior approved, before Covid, or newly approved?

Matthew Lester explained that it was a mix of both -- approved prior to Covid but continue to manage the start date. Some of the chairs have been successful in identifying individuals with grants for support. Dean Gerson is working with the chairs looking at the time, when they start, now or spring – generally for starting hires, and asking for approval for those. There is a batch going to the Provost's Office shortly, approving relatively shortly, with the thought that the timeline is being worked through.

The comment was made that since we are on a delay with the hiring and our start-up packages, and it keeps being delayed, is there any chance that the actual deadlines of these start-up packages could be extended, since we are supposed to wait, and these all end at a certain time. Dean Lester stated that in the past they have been fairly flexible with the start-up times. The best advice would be to let your department administrator know, or reach out to Brian Foss in Finance. If you are running into anything that will change your timeline, we will work with you on that.

The suggestion was made that it would be a nice gesture, a practice taken from the Faculty Senate, that all new members be introduced by the Chair, to put a face and a name together and determine where they are from and whom they represent. Dr. McBride responded that the updated Faculty Council roster would be sent to all members.

Usha Stiefel, serving as Interim Vice Dean for Faculty Development and Diversity, asked to circle back to what Dr. Hise presented regarding the difficulty in collecting good data to determine the diversity of our faculty. Faculty have no obligation to disclose gender, race, or ethnicity to their employing body, university or hospital, which is part of the reason that the data is not very good. There is no mechanism to force them to participate. We are going to send out an email to everyone, since the climate has changed and while there are many reasons for not reporting these things, we hope that has gone by, and are asking everyone to update their data. Reach out and encourage people to update their data. We are very keen to improve things but it is hard to get to where you want to go unless you know where you are right now. Please encourage everyone to update if they feel comfortable doing so.

Dr. McBride explained that next time, rather than receiving all of the meeting items via email, you will receive instructions for BOX, which is a repository where all of the information will be e.g. meeting minutes from this meeting, and new items on the agenda. Please look at the email and the instructions for setting it up.

There being no further agenda items to address, a motion was made and seconded to adjourn the meeting. All were in favor, no one opposed, and no one abstained. The motion passes.

Dr. McBride adjourned the meeting at 5:08PM.

Respectfully submitted,

Joyce Helton

**Faculty Council Meeting**  
**Draft Meeting Minutes**  
Monday, June 15  
4:00-5:30PM – ZOOM Meeting

4:00-4:10PM	Welcome and Chair Announcements	Gary Clark
4:10-4:15PM	Approval of May Faculty Council Minutes	
4:15-4:20PM	Steering Committee Report	Jennifer McBride
4:20-4:40PM	Faculty Council Elections	
4:40-4:50PM	Bylaws Amendments Presentation	Darin Croft
4:50-5:05PM	Faculty Senate Report	Cynthia Kubu
5:05-5:25PM	Standing Committee Annual Reports	
5:25-5:30PM	New Business	

**Members Present**

Matthias Buck	Jeffrey Hopcian	Anna Miller
Cathy Carlin	Alex Huang	Vincent Monnier
Sudha Chakrapani	Darrell Hulisz	Vicki Noble
Gary Clark	Beata Jastrzebska	Ben Roiitberg
Travis Cleland	David Katz	Ashleigh Schaffer
Darin Croft	Allyson Kozak	Hemalatha Sentilkumar
Piet de Boer	Varun Kshetry	Daniel Sweeney
Pamela Davis	Cynthia Kubu	Patricia Taylor
William Dupps	Suet Kam Lam	Carlos Trombetta
Todd Emch	Maria Cecelia Lansang	Heather Vallier
Judith French	Charles Malemud	Allison Vidimos
Thomas Gerken	Peter MacFarlane	Susan Wang
Monica Gerrek	Jennifer McBride	Nicole Ward
Anna Maria Hibbs	Maureen McEnery	Richard Zigmond
Amy Hise		

### **Members Absent**

Alicia Aguilar	Laura Kreiner	Abhishek Ray
Corinne Bazella	Vinod Labhasetwar	Steve Ricanati
Robert Bonomo	Ameya Nayate	Satya Sahoo
Shu Chen	George Ochenjele	Barbara Snyder
Jae-Sung Cho	Clifford Packer	Satish Viswanath
Brian D'Anza	Nimitt Patel	Jo Ann Wise
Philipp Dines	Anand Ramamurthi	Jamie Wood
Ankur Kalra		

### **Others Present**

Mark Chance	Neil Greenspan	Danny Manor
Nicole Deming	Joyce Helton	Joan Schenkel
Stan Gerson	Matthew Lester	

### **Chair Announcements**

Gary Clark, Chair of Faculty Council, welcomed the members to the final Faculty Council meeting for the 2019-2020 academic year. This meeting is being conducted via ZOOM. If you wish to speak, indicate, if you are visual, with a hand up; send a chat request, or use the hand icon in Zoom which is the best way to be recognized, and we will recognize you appropriately to ask a question or make a comment.

Dr. Clark reminded the members of the Diversity Strategic Action Plan presented by Sana Loue at the December Faculty Council meeting. He gave a brief overview of the plan's overall vision, goals and strategies to remind everyone of its relation in the context of what is happening in our society today.

The plan's vision is to increase knowledge, understanding, presence, and celebration of diversity at all levels of the School of Medicine.

GOAL 1: To enhance the overall climate to reflect, promote, and welcome diversity.

- Develop and sustain the speaker series with diversity focus
- Support student affinity group
- Conduct biannual diversity needs assessment survey
- Increase diversity-related events at SOM
- Conduct a systematic evaluation of policies/procedures to identify unintentional bias
- Improve faculty, staff, student awareness re: reporting requirements
- Produce annual diversity report that focuses on diversity issues and accomplishments
- Increase faculty and staff diversity
- Increase pipeline programs

GOAL 2: Enhance the Curriculum and associated training opportunities to increase inclusiveness and decrease adverse experiences

- Revise medical school curriculum to be more representative, less othering
- Improve IQ facilitator training for diversity
- Improve oversight of medical school training sites
- Encourage clinical affiliates to sponsor student networking events



- Integrate diversity-related issues into graduate programs
- Develop formal mentor-mentee match program for URM, first generation college, and low SES students and postdocs
- Restructure diversity-related SOM offices
- Continue to provide established programs
- Provide mental health resources/supports for SOM professional/graduate students

GOAL 3: Improve and expand content and format of diversity training for faculty, staff, and students in context of professionalism

- Foster diversity of thought
- Create longitudinal core curriculum
- Develop trained, SOM-based core facilitator group to lead diversity sessions
- Create, disseminate, and utilize mechanisms to foster narrative and discussion
- Integrate faculty participation in leading diversity training into salary, promotion, tenure metrics
- Train faculty and staff to better manage conflict situations

GOAL 4: Enhance SOM diversity and diversity-related functions through the development of adequate financial resources

- Increase scholarships for SOM medical and graduate students
- Create opportunities and programs to develop more diverse pipeline
- Raise sufficient funding to create/sustain SOM Center for Diversity and Inclusion

This is the strategic development action plan that was developed and is now in place for our university for the next four years. Clifford Harding, Professor and Chair of Pathology, sent an e-mail to faculty, staff and students.

“Our society and our local community are faced with a disease that I believe is a far greater threat than COVID-19, and this disease has actually been with us for a long time. This is the disease of racism, which affects many communities, but particularly Black Americans. The horrific tragedy of George Floyd’s death is the latest in a long history of injustices, so quickly following the outrageous murder of Ahmaud Arbery. Race, ethnicity, religion, gender identity – these and other social parameters are too often used as the basis of destructive othering.

I hope we will stand against racism and seek true remedies for this disease. But what should we do? The answer will be different for each of us, depending on our circumstances and abilities. I will give you some general thoughts, information sources and opportunities that was provided by Michelle Cruz, an MSTP student in the Pathology Graduate Program. You may find other ways to contribute. (The complete text of Dr. Harding’s e-mail is included as an attachment.)

Michelle Cruz made a powerful statement when she said that it is not enough to simply not be racist. She stated that if you want to learn how to be a better ally or start to make change here are several great places to start being anti-racist. The scaffolded list includes ways to identify where you are in your process. Educate yourself on white supremacy share this with others, and have difficult conversations with family/friends which create sustained change. If you do not feel comfortable protesting, donate to various groups. There are a number of websites that relate to Black Lives Matter. Join groups and take action such as CWRU Social Justice Institute and SURI (showing up for Racial Justice). There are mailing lists, Facebook groups, write letters to senators, volunteer. Call Ohio Statehouse, Oppose 2 bills which will only serve to increase

mortality – H.B.381 – “Stand Your Ground” and HB 178 – untrained carry (AKA permit-less carry). This would allow Ohioans to carry firearms without a permit or any training.

She recommends acknowledging, empathizing, and understanding with what students of color are going through. There should be some ideas on better ways to support “wellness”. Have your facts straight. As scientists, it is probably important for you to have actual statistics and published papers about police violence e.g. black men are about 2.5 times more likely to be killed by police than white men. There are databases that provide this information (<https://mappingpoliceviolence.org/> and <https://fatalencounters.org/>). (Michelle Cruz’ entire response to Dr. Harding’s email is attached.)

Dr. Gerson stated that he perceives this as a challenge – challenging us as faculty and as Faculty Council, to be more engaged in trying to implement the plan. This will be a topic of significant discussion in the fall and we will identify faculty champions in the fall. This is clearly an important item for all of us to spend more time on. We have to balance needs to be one priority. The strategic plan is very complex and is going to take efforts of all to prioritize to make progress, do have to develop a sense of prioritization, of commitment. Should be proactive about it.

Amy Hise, the chair of the newly formed Committee on Women and Minority Faculty, stated that she appreciated the comments of Dr. Clark and Dr. Gerson. She is looking forward to the fall when her committee will be presenting data, assessing where we are right now, and determining what are the key recommendations moving forward.

In summarizing Faculty Council’s annual report, Gary Clark noted that Faculty Council met nine times with the April, May and June meetings being conducted remotely through Zoom. The council made a recommendation for the creation of an ad hoc committee on faculty awards. They voted to elect two Faculty Council members to the NEC: Anand Ramamurthi and Jo Ann Wise. They approved the creation of an on-line Nutrition degree program, and the creation of an ad hoc committee on professional conduct. They approved the Bylaws Committee amendments to Article 5, which completed the 5-year review. They approved the creation of an ad hoc committee tasked with looking at the tenured salary guarantee in the SOM bylaws. They approved Article 3.6b for clarity and Sana Loue presented the Diversity Strategic Action Plan.

Dr. Clark acknowledged that this is Dean Davis’ final Faculty Council meeting, as she will be stepping down in a little over two weeks as Dean of the School of Medicine. He wanted to take a moment to recognize and show our appreciation for all of her contributions and dedication to the School of Medicine.

Dean Davis thanked everyone in Faculty Council for all of their hard work this year, for committee work and council work, and stated that they’ve done great yeoman service this year.

Dr. Clark also added his thanks to all involved in Faculty Council. He thanked them for being informed, being engaged, and for their contributions as well.

#### **Approval of May 18 Faculty Council Meeting Minutes**

When the council was polled for suggested edits or corrections, several members indicated their attendance was not noted correctly. Attendees not noted as being present but having attended the

meeting were: Pete McFarland, Monica Gerrek, Vincent Monnier, Robert Bonomo, and Anna Maria Hibbs.

A motion was made and seconded to approve the Faculty Council meeting minutes as amended. There being no further discussion, a vote was taken. All in favor say aye or raise hands. All opposed say nay or raise hands. All were in favor, no one opposed, and no one abstained. The motion passes.

### **Faculty Council Steering Committee Report**

Dr. Clark will summarize the outcome of the recent elections. Darin Croft from The Bylaws Committee reviewed appendices and the faculty handbook and made corrections. The merits of oral vs. written reports for the standing committees was discussed. Requested transition of the ad hoc Committee on Graduate Education Programs to a standing committee. The Faculty Council Steering Committee reviewed materials in support of the new chairperson and sent them to the Dean for consideration.

The first remote electronic voting for Faculty Council elections was successful. There were 47 ballots out of 58 representatives. NEC reviewed and confirmed that it was a valid election. Brian D'Anza had 39 votes. For Chair-Elect, Nicole Ward had 24 votes; Darin Croft had 23 votes. Nicole Ward is the new Chair-Elect for Faculty Council.

The results of the election of Faculty Council Steering Committee members is still under review. When the review is completed, the results will be shared with Faculty Council.

When asked what it meant when results are still being reviewed, Dr. Clark explained that he could not comment further than that it is under review. If it is a valid election, why can't we know the results? Question raised that requires input and until that is resolved, they have been asked not to say anything about the election, nor to go into any details. At the resolution the results of the Steering Committee election will be share with Faculty Council. When asked if this was a technical error with the election, Nicole Deming again stated that the best course of action is to not say anything at this point.

A member felt that this was completely unacceptable and since it is the last Faculty Council meeting of the academic year the results needed to be disseminated. While this is a democratic process, there are other dynamics with regard to the Faculty Senate that are involved, which cannot be discussed. When it is resolved, the results of the election will be communicated to Faculty Council.

Independent of these election results, we cannot disclose the Faculty Senate's involvement. It is an unusual situation and we are asking you to bear with us and we will update as appropriate, and disclose as much as we can after resolution of this issue. We acknowledge that it is frustrating, but we are constrained from discussing it further

We have been asked to refrain from disclosing the election results at this time. No one is happy to not know the results of the election, but in the interest of time and the agenda, we do have to move on.

When the member persisted and accused the Chair of trying to interfere with a free and fair election, the Chair deemed him out of order and, as was his prerogative, and moved on to Darin Croft's presentation.

### **Bylaws Presentation – Darin Croft**

Today we will present changes that are basically clarifications, which were made to the appendix.

Appendix to the Bylaws Qualifications and Standards for Appointment, Promotion and Tenure – we just reviewed this essentially for minor formatting and consistency issues a few months ago. It was discussed briefly at Faculty Council but a separate committee to review its substance. We did not touch the substance of the qualifications.

Table of contents – in the title, “of faculty” was removed as being redundant, and made it parallel to the Faculty Handbook. The phrase “combined achievement track”, which appears throughout this document, was deleted and replaced with “non-tenure track.” A page number had been repeated and was corrected. One important change in terms of correcting the citation for 1A, made it consistent between the SOM and the faculty handbook –

The sentence “Success in obtaining external research grants or other supportive funding shall also be considered in the evaluation of research qualifications” was moved to better reflect its relative importance in the review process. When talking about criteria for tenure and excellence in scholarly research, contributions should be evaluated to include publications in scholarly journals, awards, honors, and national offices. While two comments had been added to the document, the Bylaws Committee is not proposing any changes right now. They recommend that this be looked at closely by the administration and/or committee that next reviews these standards. It might be appropriate to remove “generally” or loosen other requirements, as the description does not seem to closely match the current situation. However, the Exceptional Qualifications section may provide enough latitude to permit this language.. There is a little bit of gray area in the exceptional qualifications section. If you are super exemplary in one of these areas, it may help to compensate for deficiencies.

Another comment the committee felt was important to highlight was that the Provost’s approval of transfer be based on evidence. That text is taken directly from the faculty handbook. The committee is suggesting adequate resources (funding, space) are also necessary to develop such components. The final change, under Standards for Promotion of Adjunct Faculty –used to be referred to as subject committees, now have blocks. That concludes the proposed changes

A member asked that regarding the comment about qualifications for tenure, is the Bylaws Committee just recommending that we push this to the Committee on Promotions and Tenure? Dr. Croft explained that periodically there is a special committee to review these qualifications, not the CAPT. Whenever that is done, we are flagging it for that group.

A motion was made and seconded to approve bylaws amendments to the appendix as presented. There being no further discussion, a vote was taken. 38 were in favor, 0 were opposed, and 0 abstained. The motion passes.

### **Annual Report for Committee on Biomedical Research – Stan Gerson**

Dr. Gerson will name a replacement chair for the Committee on Biomedical Research in early July.

There are a couple of informative engagements designed to help appreciate the breadth of research initiatives across the school. Review of artificial intelligence by Anant Madabhushi, an

absolute star in this area. Further progressed and developed in BME across the school and Cancer Center. Took a broad perspective. Review of previous strategic plan in preparation for new SOM Dean. Currently exists to help the committee in the upcoming year. We will consider revisions to that plan and contribute to that during the next deanship period.

Core facilities review — Chris Flask reviewed selecting priority for shared resources and request additional support. Alan Diehl discussed plans for the Biochemistry Department, which included a discussion of metabolomics and did couple of adjustments on the committee for both MHMC and Cleveland Clinic.

Additional conversation was to bring in Jing Li, the interim chair of the newly formulated Computer and Data Sciences Department. The SOM Data Department has multiple interactions, which makes it hard to encourage large scale research projects. How can shared resources be maximized at the university. Discussion of the technology and applications of single cell sequencing to encourage broader uptake for the technology and how to build pipeline across spectrum for that search.

In response to an issue brought forth by the Provost's Office at the request of the board of the university, asked for an inventory and review of all centers and institutes in the SOM. Centers that are still missing from the list need to be identified. This is a daunting task. The committee is reviewing the process for establishment, review and disestablishment of centers and institutes, with the goal of bringing it up-to-date on this process. We met for two months in a row on this topic through the committee. Dr. Gerson will plan to discuss this with chairs after this meeting and discuss it at the Dean's Leadership Group in July, and bring back to Faculty Council in the fall. Recommendations for actions are to go to the Dean in July. Discussion with faculty/chairs regarding inclusion of hospital based centers will be addressed in the fall

Activities will not alter the right to form centers and institutions under GMS and will retain the six member advisory committee Dean Davis has appointed over the past few years and oversight in centers and institutions. We will suggest that a couple of centers that are currently A be converted to B, reassessing as center in SOM. We are in the process of doing so. There are a number of hospital-based centers that may or may not be appropriate for ongoing recognition by the school. Centers to change from A to B (no primary faculty) are: Center for Global Health and Disease, Center for Proteomics and Bioinformatics, and the National Center for Regenerative Medicine. The Center for Synchrotron Biosciences will be removed from the B list. There are three centers to disestablish, and five centers that will be reviewed under the new guidelines for applicability as a SOM center.

The goal is to help provide a little extra rigor around development of centers and have institutes and centers be interchanged. Let folks decide.

In essence, we are going to suggest that the designations of the school only include type A and B centers and we want to clear that with the chairs. Perhaps we can increase involvement of the chairs in organizational structures so that the centers have more alignment with the schools. There are 120-130 centers in the institute. Trying to do our part by coming forward with a better proposal.

Mostly since 1986, it was left up to the authority of the Dean. Further discussion with Faculty Council will be informative for feedback but not for voting.

The annual report for the Committee on Biomedical Research is accepted as presented.

### **Faculty Senate Report – Cyndi Kubu**

Cyndi Kubu provided a brief summary of the Faculty Senate activities. A neuroscience major was approved as was approval given to have the committee meet remotely. Financials were presented last month.

### **Annual Report for CAPT**

All of the demographics are not yet available, and the committee is still reviewing file. It would make more sense to present this report in the fall and look at that data in September. .

### **Admissions Committee Annual Report**

Todd Otteson, chair of the Admissions Committee is not available for the presentation. The report has been posted on BOX.

### **Bylaws Committee – Annual Report**

Dr. Croft stated that it was a very busy year for the Bylaws Committee and the details are in the annual report. They are still working, with another meeting this week, to codify the regulations about electronic elections. Two of members are rotating off – Maureen McEnery and Jonathan Miller. He acknowledged their contributions over the past three years and that it has been great working with them. He is looking forward to having the two new members on the committee next year.

### **Committee on Budget, Finance, and Compensation – Annual Report**

Matthias Buck, chair of the CBFC briefly summarized the written report as submitted. He explained that the CBFC has two standing committees that report to Faculty Council. The committee is comprised of faculty from the basic science and clinical departments. Matthew Lester represents the administration, Hope Barkoukis and Mark Aulisio – ex officio Basic Science Chairs, with Robert Salata and the ex officio Clinical Science Chair. Dr. Buck expressed his gratitude to Stephanie Ford and Marvin Nieman for their participation as they will be rotating off the committee and an election will be held shortly to identify new members.

Dr. Buck stated that the charge is extensive as the committee provides wide input on reviewing proposed budgets for consistency with SOM strategic plan priorities, and analyzing and reporting on SOM sponsored research activities. They provided annual recommendations to Faculty Council on the allocation of SOM resources, and met with the Faculty Council Steering Committee regarding compensation and the annual allocation of funds available for faculty compensation. A town hall meeting was held on November 25, 2019. They provided an annual review of the guidelines and policies for faculty compensation for each department, and a competitive analyses of faculty compensation n peer universities nationwide. They assessed the effect of compensation on the ability of the SOM to attract and retain top faculty. They held nine monthly CFBC meetings in addition to three special meetings.

They received Quarterly updates on the SOM finances and Budget projections review of FY20 and of early FY21 spending guidelines. Dr. Buck noted that the SOM is doing overall well given the changed agreement with UH and COVID-19. When comparing and discussing faculty salaries with respect to AAMC median and our peer institutions, the decile curve has been largely flattened and we are slightly above AAMC median in most levels/departments.

The CBFC had presentations from the Development Office concerning the past capital campaign and ongoing fund raising, the Research Office on SOM Bridge Funding where recommendations

were made and Mark Chance replied; Instrumentation Cores, their administration and finances, and hiring and retention success of faculty.

It is extra-ordinary business in extra-ordinary times. The CBFC provided input into prioritization and strategy of the COVID-19 contingency request for a 10% cut to SOM unrestricted budget. An ad hoc sub-committee (Mendel Singer, chair; Mark Aulisio, Matthias Buck, Danny Manor, William Schilling) was formed to investigate and make recommendations regarding the RCM budgetary model and centralization of SOM functions and finances. There was concern with finances of inter-school programs such as ThinkBig(ongoing) and distribution of awards.

For FY21, the committee would like to have a better understanding of some of the recurring budget numbers, e.g. the operational budget. The 5-year strategic plan is aligned with research and teaching. How much does research cost us.

Finally, should mention that the committee wrote a letter and sent it last Wednesday to Provost Vinson and John Sedaris expressing concern about the timely communication and transparency on financial decisions that were being made. The general feeling from the Faculty Senate Finance Committee is that they were not in the loop as much as they should be. They acknowledged receipt of the letter and will reply soon.

#### **Committee on Students -- Annual Report**

The annual report for the Committee on Students has been distributed.

#### **Lecture Committee – Annual Report**

The chair of the committee, Neil Greenspan, explained that the main focus of the Lecture Committee are the Louis A. Bloomfield Memorial and H.M. Hanna lectureships. In the last couple of years, a whole host of lectureships have been added within the SOM due to underutilized funds.

One used in the past year or year and a half is the Courtney Burton lectureship where quite a bit of underutilized funds have accumulated since it hasn't been used much. Had scheduled past year – Hanna Lecture in November, with Professor Sheena Radford from the University of Leeds Center for Structural Biology. There was another candidate from UCSF in May and he had agreed to come but got back to us after months indicating that he couldn't find date that would work and now we're dealing with the pandemic. We had a lecture scheduled for next year for the Hanna lectureship from the Netherlands, but were informed that we should not expect a visit in person even next fall. We inquired whether a Zoom on line lecture was a possibility, but he declined. There are no Hanna lectures scheduled for the next academic year.

The Lecture Committee had three Courtney Burton frontiers of medicine lectures in past year (going back to April and May of 2019). Someone was invited for a spectroscopy symposium. Over the summer in July, a series of lectures for the Opioid Conference that was held here. As a committee, do we have to plan to invite people who will speak remotely? It is a new situation planning for lectures, as we can't actually have people come here. Through the fall, could not invite people to come in person. How open or interested are they in giving zoom lectures, and how interested are staff or students in listening to lectures remotely. It was noted that sometimes you can actually get better attendance on a Zoom lecture.

Of the lectureships made to us by Nicole Deming and Halle Lewis underutilized, no one was submitting nominations. Started getting a series of applications for the Courtney Rurton lectureship; Nicole and Halle had agreed on two dates for submission, October and April. Would have started in the spring but was obliterated by the pandemic. That is the situation with the Lecture Committee.

The comment was made that it would probably be a good idea to start doing the lectures remotely as many other institutions are doing just that.

The ad hoc Committee on Women and Minority Faculty will present their report in the fall and we look forward to their presentation.

This completes the annual reports submission.

Dean Davis stated that we have heard from our colleagues at Cleveland Clinic, who are involved in the analysis of the epidemiology of COVID-19 in Cleveland, and who feel it is indicated that they are able to return Hope Hospital to the HEC. That process will begin very shortly, if hasn't already begun. We are hoping to reclaim the Education Building towards the end of July. This is a very exciting development and especially since we are eager to be able to do as much in person as possible. We think this is a great advantage for the SOM.

The council, when polled, did not indicate there was any new business. A motion was made and seconded to adjourn. All were in favor, none were opposed, and none abstained. The motion passes.

Cyndi Kubu thanked Dr. Clark for his service and leadership over the past year.

There being no further agenda items to be addressed, the meeting was adjourned at 5:12PM.

Respectfully submitted,

Joyce Helton



# SOM Committee on Women and Minority Faculty Annual Report

Sept, 2020

# Members

## 2019-2020

**Amy Hise**, MD, MPH, Chair (2022)

Department of Pathology – SOM

Department of Medicine - VA

**Aparna Padiyar**, MD (2022)

Department of Medicine - UH

**Abby Spencer**, MD (2021)

Department of Medicine - CCLCM

**Komal Sawlani**, MD (2022)

Department of Neurology - UH

**Mariya Geube**, MD (2021)

Department of Anesthesiology - CCLCM

**Clara Pelfrey**, PhD (2020)

Division of General Medical Sciences - SOM

**Helen Salz**, PhD (2020)

Department of Genetics and Genome Sciences – SOM

**Kathryn A/ Martinez**, PhD, MPH (2020)

Department of Medicine – CCLCM

**Lynn Singer**, PhD (2021)

Population & Quantitative Health Sciences, Pediatrics, Psychiatry and Psychology - SOM

**Sana Loue**, PhD, JD (ex officio)

Bioethics - SOM

Vice Dean for Faculty Development & Diversity

**Claire Michael**, MD (ex officio)

Pathology - UH

President, WFSOM

## 2020-2021

**Amy Hise**, MD, MPH, Chair (2022)

Department of Pathology – SOM

Department of Medicine - VA

**Aparna Padiyar**, MD (2022)

Department of Medicine - UH

**Abby Spencer**, MD (2021)

Department of Medicine - CCLCM

**Komal Sawlani**, MD (2022)

Department of Neurology - UH

**Mariya Geube**, MD (2021)

Department of Anesthesiology - CCLCM

**Cynthia Kubu**, PhD (2023)

Department of Neurology – CCLCM

**Helen Salz**, PhD (2020)

Department of Genetics and Genome Sciences – SOM

**Nora Nock**, PhD (2023)

Population and Quantitative Health Sciences - SOM

**Lynn Singer**, PhD (2021)

Population & Quantitative Health Sciences, Pediatrics, Psychiatry and Psychology - SOM

**Usha Stiefel**, MD (ex officio)

Medicine - VA

Interim Vice Dean for Faculty Development & Diversity

**Susan Padrino**, MD (ex officio)

Psychiatry -- UH

President, WFSOM

Approved by Faculty Council 2017-2018  
CASE WESTERN RESERVE UNIVERSITY  
SCHOOL OF MEDICINE  
COMMITTEE ON WOMEN AND MINORITIES

**Purpose and Responsibilities:**

The purpose of the Committee on Women and Minorities is to act in an oversight and advisory capacity to identify factors that have impeded progress towards improving the status of women and minority faculty and recommend ameliorative policies and actions to the School of Medicine (SOM) Faculty Council and Administration.

**Specific charges:**

1. Assess the quality of the environment for women and under-represented minority faculty members within the SOM through climate surveys targeted to these groups. Administrative support for these special surveys, as well as activities described below, will be requested from the Office of Faculty Affairs on an ad hoc basis. The results of these surveys will be reviewed with regard to facilitating the achievement of individual career goals, providing appropriate mentoring, etc.
2. Design and promote policies and programming to improve the representation, advancement and professional environment for women and under-represented minority faculty in consultation and/or collaboration with other SOM entities including but not limited to the Dean's office, the Office of Faculty Development and Diversity and the Women Faculty of the School of Medicine (WFSOM).
3. Contribute to increasing the number and/or percentage of women and under-represented minority faculty members, especially at the rank of full professor and in departmental and school-wide leadership positions, by sponsoring programming that encourages faculty members committed to advancing this goal to participate in faculty governance and to serve on search committees.
4. If no member of the committee is a voting member of Faculty Council, the committee chair or another member shall be designated to serve in an ex officio non-voting capacity. This individual shall attend each Faculty Council meeting for the purpose of identifying issues related to women and under-represented minority faculty.
5. To provide advice on a regular basis to the Faculty Council and Administration on policies and practices affecting women and under-represented minority faculty. Submit to the Faculty Council a comprehensive end-of-year report on the committee's activities and recommendations for the future.
6. At least once every five years, review the committee's charge and recommend changes as deemed appropriate.

# Activities

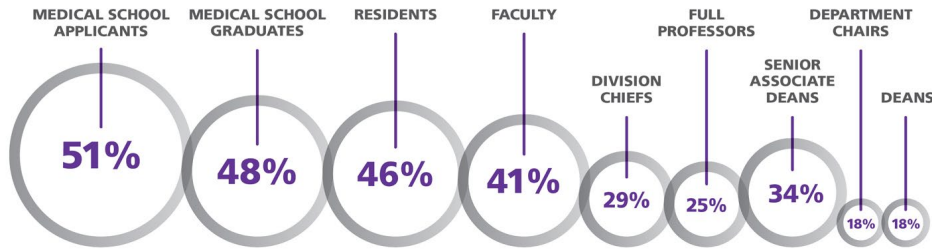
- Committee met:
  - 12/18/19, 01/22/20, 02/19/20, 04/20/20, 06/09/20
- Met with chairs to discuss diversity experience/challenges:
  - Jonathan Karn (Dept Mol Biol and Micro)
  - Lin Mei (Dept Neurosciences)
- Met with Don Feke, Vice Provost for Undergraduate Education & Academic & Faculty Affairs presented a synopsis of the latest CWRU Climate Survey (2018)
- Lynn Singer presented final report of IDEAL-N grant

# Activities

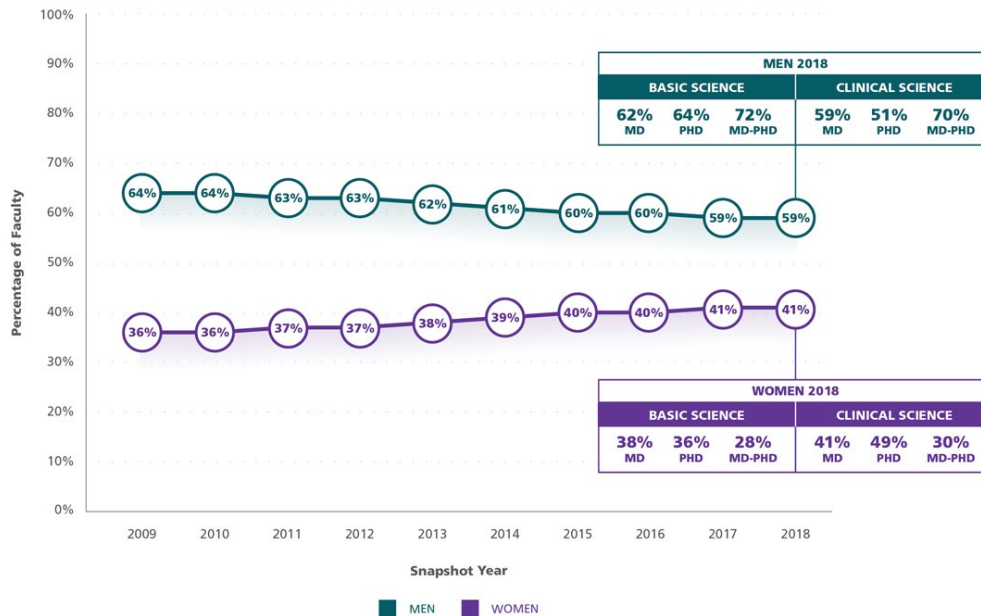
- Met with Cynthia Kubu – reviewed her study on women staff and faculty at CCLCM.
- Reviewed Provost Office data on diversity
- Reviewed CWRU SOM DSAP
  - <https://case.edu/medicine/faculty-development-diversity/diversity/>
- Reviewed AAMC Data on diversity
- Solicited diversity data from affiliated hospitals

# Status of Women Faculty in US Medical Schools

## REPRESENTATION OF WOMEN IN ACADEMIC MEDICINE 2018-2019



CWRU: 13% chairs women



In 2018 18% of medical school deans were women

## NATURE NEWS 26 JANUARY 2018

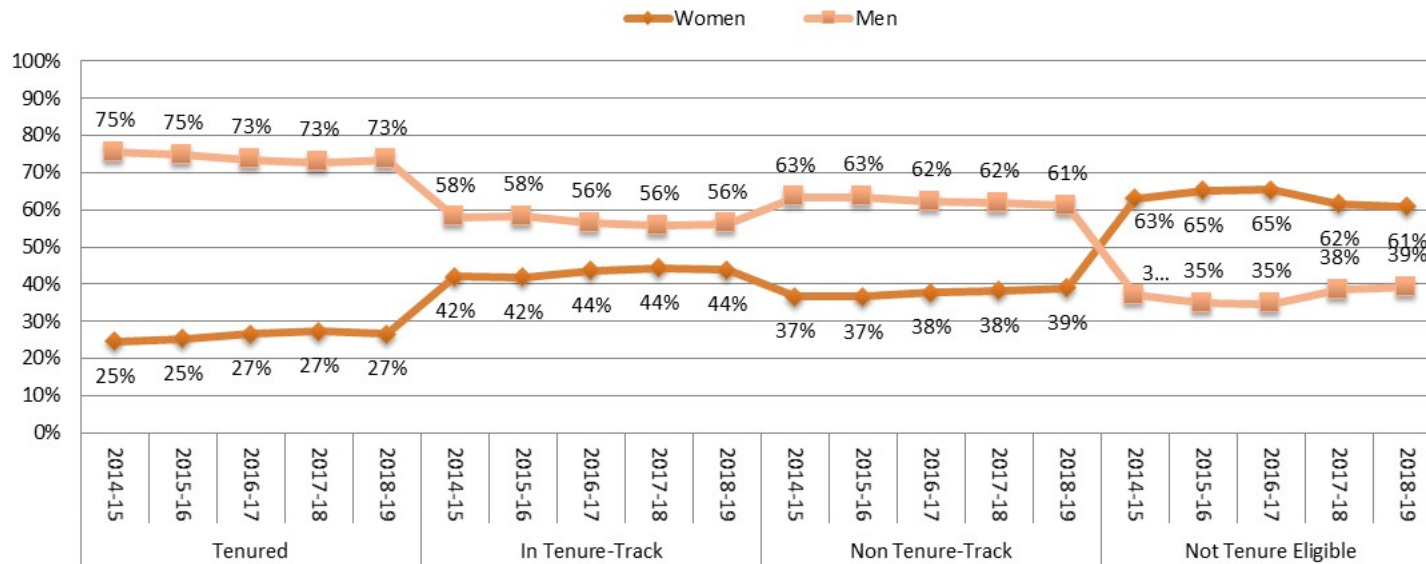
Gender bias goes away when grant reviewers focus on the science

*But female scientists suffer when their research proposals are judged primarily on the strength of their CVs.*

<https://www.nature.com/articles/d41586-018-01212-0>

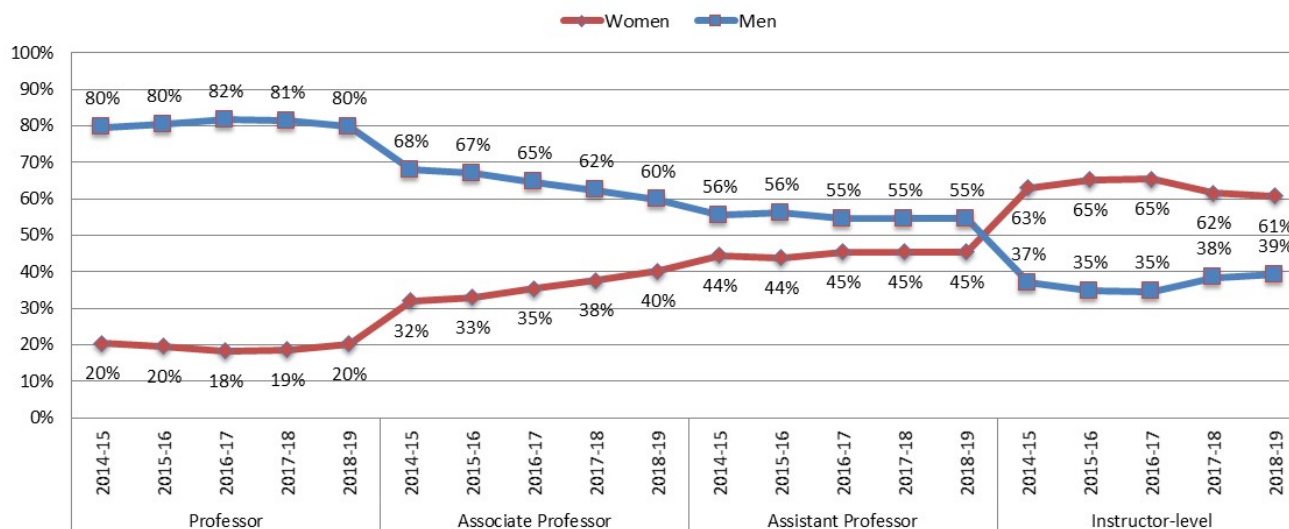
# Percentage of All Faculty by Tenure Status and Gender

2014-15 to 2018-19



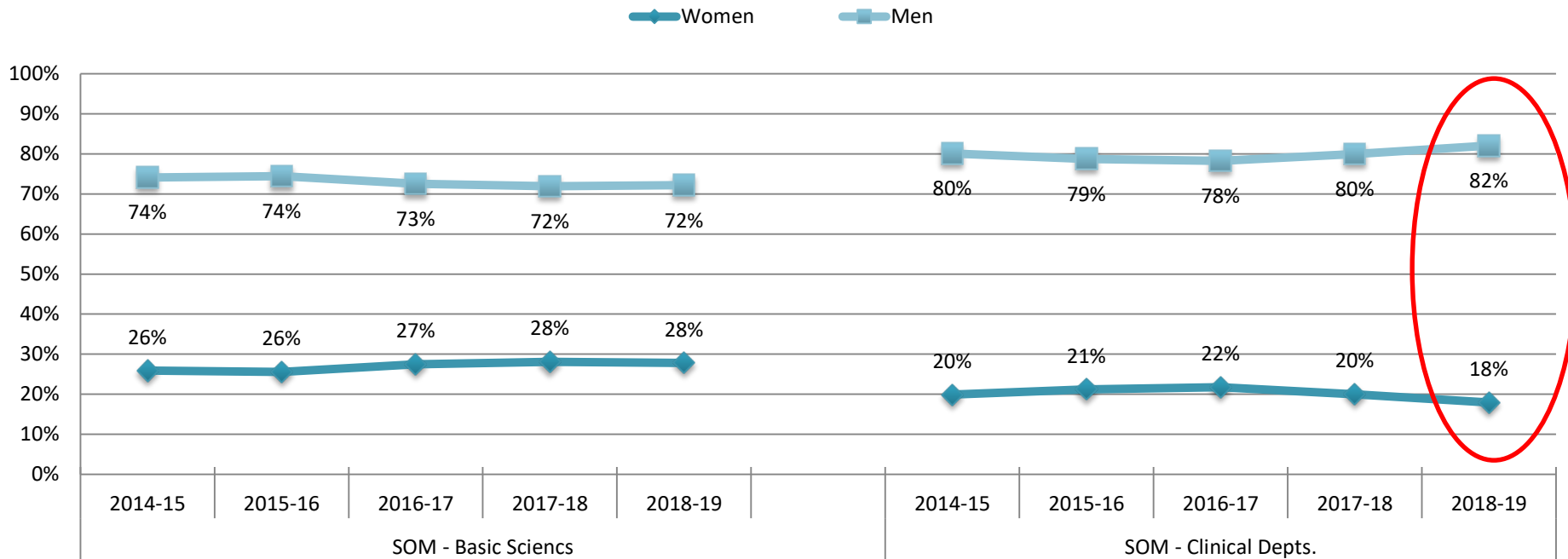
## Percentage of All Non-Tenure-Stream Faculty by Rank and Gender

2014-15 to 2018-19



# Percentage of Tenure-Stream Faculty by School and Gender (School of Medicine)

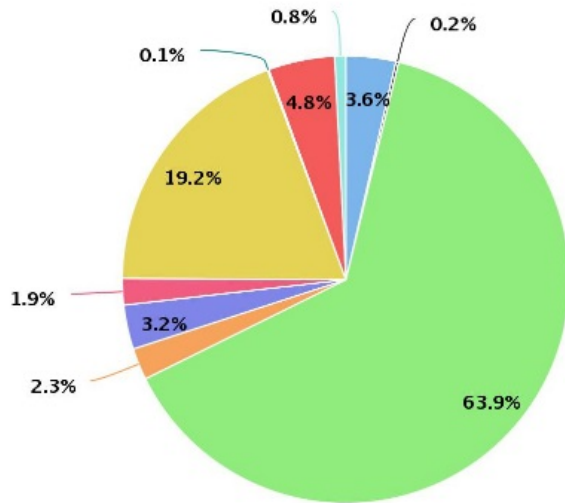
2014-15 to 2018-19





# Status of Minority Faculty in US Medical Schools

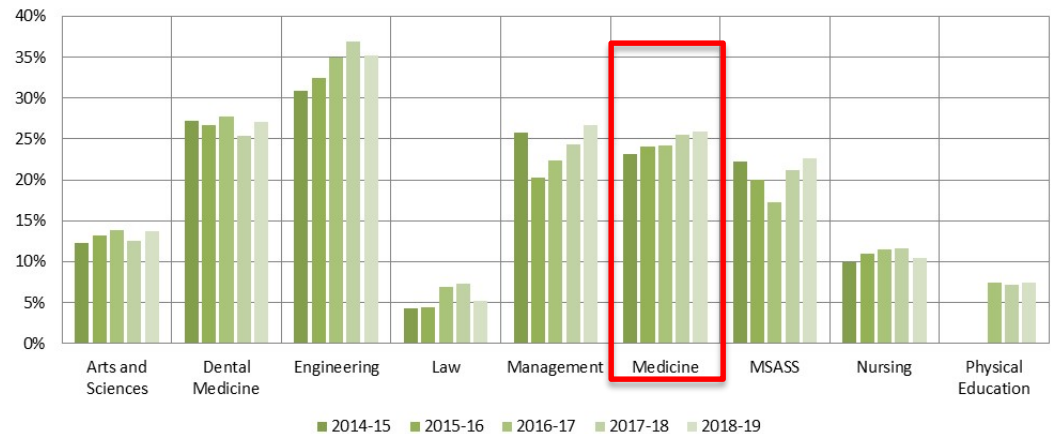
Figure 15. Percentage of full-time U.S. medical school faculty by race/ethnicity, 2018.



Click on legend item below to add or remove a section from the report.

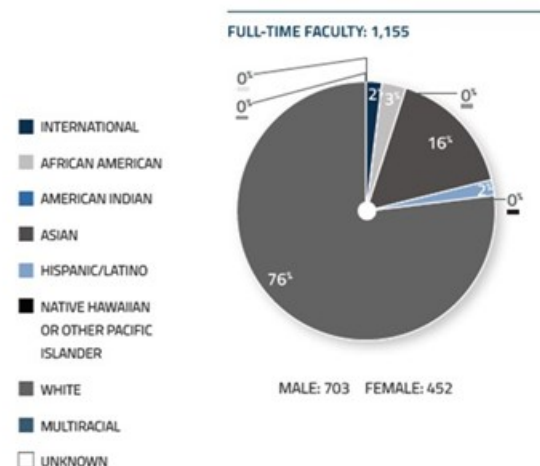
- American Indian or Alaska Native (274)
- Asian (34,015)
- Black or African American (6,288)
- Hispanic, Latino, or of Spanish Origin (5,734)
- Multiple Race - Hispanic (3,978)
- Multiple Race - Non-Hispanic (3,441)
- Native Hawaiian or Other Pacific Islander (141)
- Other (1,456)
- White (112,894)
- Unknown (8,511)

Percentage of CWRU-paid Minority Faculty by School



## DIVERSITY SNAPSHOT

## All CWRU faculty



Note: To allow for unduplicated counts of faculty, "Multiple Race - Hispanic" includes all faculty who were reported as Hispanic and at least one other race/ethnicity. "Multiple Race - Non-Hispanic" includes all faculty who were reported as more than one race/ethnicity but who were not reported as Hispanic.

# Strategies for Increasing Diversity

## **Knowing where we are:**

- Data: Critical need for accessible and complete data on diversity specific to SOM
- Dean – form advisor committee on diversity (done)
- Diversity survey – part of DSAP
- Climate survey
- Salary survey

## **What to do next:**

- Follow CWRU SOM DSAP
  - <https://case.edu/medicine/faculty-development-diversity/diversity/>

# Strategies for Increasing Diversity

## How do we recruit and retain under-represented groups to our school?

### – Focused URiM recruitment:

- Recruit from within
- NIH FIRST Award
- Diversity on search committees/increase diversity of candidate pools (DSAP)



### – Maintain a supportive climate for existing faculty (DSAP):

- Equity in salary
- Opportunity grants/seed grants
- Mentoring
- Identify and correct institutional bias (DSAP)
- Diversify training (DSAP)

### – Communication:

- Web presence
- Social Media
- Outreach to URiM societies (NMS, AWIS, GWIMS, Ciencia PR, AISES, etc), presence at meetings, HBCU's, [minoritypostdocs.org](http://minoritypostdocs.org)

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## CASE WESTERN RESERVE UNIVERSITY

*Approved by Faculty Council November 21, 2005*

*Revised by Faculty Council December 11, 2017*

### Case Western Reserve University School of Medicine Procedures for Establishment of New Academic Departments

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Establishment of new academic departments at the Case Western Reserve University School of Medicine is governed by the University Faculty Handbook, the School of Medicine Bylaws, and precedent established by Deans of the School of Medicine. Proposals for new departments may concern basic science or clinical science disciplines.

Proposals fall into two types:

- 1) Initial recognition of a discipline as an academic department; or
- 2) Establishment of a second or subsequent department at a new location (e.g., hospital affiliate) in a discipline previously recognized by the University as having departmental status. In general, establishment of a second or subsequent department in a previously recognized discipline will be considered where separate hospital affiliates have separate clinical services in that discipline.

#### I. INITIAL RECOGNITION OF A DISCIPLINE AS AN ACADEMIC DEPARTMENT

Establishment of all new departments begins with the presentation of a written proposal by the program proponent to the Dean, School of Medicine. The proposal must include a cover letter or statement of purpose which explains the rationale for the new academic department. The Dean will refer all proposals to the steering committee of the Faculty Council for its review.

Proposals should address the following criteria:

1. The academic discipline should represent an independent body of knowledge;
2. The group that comprises the proposed department should perform or have the potential to perform a significant and unique teaching function;
3. Recruitment efforts should be enhanced by departmental status due to national climate;
4. The discipline represented by the new department should reflect the interests and mission of the medical school as a whole;
5. A five-year business plan demonstrating how the new department will achieve and maintain financial viability or, in the alternative and if appropriate, the proposal should affirm that the new department will not require funding from the School of Medicine.
6. An analysis of the effect of establishment of the new department on existing departments, if applicable, especially the effect on its "parent" if the discipline is currently a division or sub-group within an existing department; and
7. Current faculty who plan to switch their primary appointment to the new department should be identified and the strength of their teaching and research productivity should be assessed.

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Office of Faculty Affairs, School of Medicine

**MAILING ADDRESS**

Case Western Reserve University  
10900 Euclid Avenue  
Cleveland, Ohio 44106-4915

**VISITORS AND DELIVERIES**

W171 School of Medicine  
2109 Adelbert Road

**REPLIES**

Phone 216-368-3870  
Fax 216-368-3013  
E-mail nmd11@case.edu

## CASE WESTERN RESERVE UNIVERSITY

*Approved by Faculty Council November 21, 2005*

*Revised by Faculty Council December 11, 2017*

8. A statement that research publications authored by faculty with appointment in the new department will make note of the Case Western Reserve University faculty appointment.
9. A statement of willingness to contribute to the financial viability of the School of Medicine according to the terms negotiated with the Dean of the School of Medicine in an affiliation agreement. New departments should receive similar rights and responsibilities, both academic and financial, as existing departments either basic science or clinical.
10. Any other relevant factors.

Proposals should include supporting documentation of the following:

1. The credentials of the Chair.
2. The CVs of all candidates for faculty appointment in the new department
3. Educational contributions, made at any and all levels, to the School of Medicine and University including:
  - a. Case graduate students and postdoctoral students;
  - b. Case/CCLCM Medical Student rotations
  - c. Medical students from other Schools
  - d. Graduate Medical Education programs for residency and fellowship
  - e. Continuing Medical Education
4. Current and planned Research Programs and contributions,
  - a. Institutes
  - b. Centers
  - c. Programmatic Research areas
  - d. Grants
  - e. Publications
  - f. Scientific Society activity
  - g. NIH reviewers
5. Service to the School of Medicine and University, if already being made:
  - a. Medical School Committees
  - b. Community Activities
  - c. Governmental Activities

Following its review, Faculty Council will make a recommendation to the Dean. If the Dean recommends approval, the proposal will be forwarded to the University Faculty Senate. The Senate will make its recommendation to the President, who will consider the recommendation and transmit it to the Board of Trustees for approval and final action.

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### II. NEW DEPARTMENTS WHEN THE ACADEMIC DISCIPLINE HAS ALREADY BEEN RECOGNIZED AS HAVING DEPARTMENT STATUS AT ANOTHER AFFILIATE:

If the Board of Trustees has already approved a CWRU department in an academic discipline, a new department may be proposed in that discipline at a new location. In general, establishment of a second or subsequent department in a previously recognized discipline will be considered where separate hospital affiliates are providing separate clinical services in that discipline. In such cases, the independence of the body of knowledge in question, the significance of its place in the curriculum, the effect on recruitment efforts and the discipline's relation to the mission of the medical school will all have been established. The program proponent will present a written proposal that must include a cover letter or statement of purpose which explains the rationale for the new academic department, along with appropriate supporting materials to the Dean focusing on:

1. The breadth and depth of the identified faculty's teaching and research productivity: a) CV of chair, b) list of current grants, c) list of recent publications (past three years), d) number of medical students trained (past three years), e) number of graduate students (past three years), f) number of residents and fellows trained (past three years).
2. Any additional factors that are relevant to the proposed new department.
3. An analysis of the effect of establishment of the second department on existing departments of the School of Medicine.
4. A statement that research publications authored by faculty with appointment in the new department will make note of the Case Western Reserve University faculty appointment.
5. A five-year business plan demonstrating how the second department will achieve and maintain financial viability or, in the alternative and if appropriate, the proposal should affirm that the new department will not require funding from the School of Medicine;

The Dean will refer the proposal to the Faculty Council and receive its recommendation concerning the new department. The Dean will then decide whether or not to establish the new department.

Proposals should include supporting documentation as outlined above under requirements for new departments.

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August 31, 2020

Stanton L. Gerson, MD  
Interim Dean, CWRU School of Medicine  
Case Western Reserve University  
10900 Euclid Avenue  
Cleveland, OH 44106

Dear Dean Gerson:

It is my privilege to propose the creation of the Academic Department of Orthopaedics at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University. The Academic Chair of this new Orthopaedics department would be the same person as the Clinical Chair of Orthopaedics at Cleveland Clinic, who is Dr. Brendan M. Patterson.

Dr. Patterson graduated magna cum laude from Amherst College in 1981 majoring in economics and chemistry. He graduated from Case Western Reserve University School of Medicine as a member of Alpha Omega Alpha and was elected as President of AOA in his fourth year. He received his Master's in Business Administration from the Weatherhead School of Management, Case Western Reserve University in 2000.

Dr. Patterson recently joined the professional staff at the Cleveland Clinic after over 25 years of service at MetroHealth Medical Center. He joined the faculty of MetroHealth in 1992 following an orthopaedic residency at the Hospital for Special Surgery in New York City and an orthopaedic trauma fellowship at Harborview Medical Center, University of Washington in Seattle, Washington. He served as Chairman of Orthopaedic Surgery in the MetroHealth System for over 10 years, was promoted to Professor, Orthopaedic Surgery Case Western Reserve University School of Medicine in 2012, and was Executive Director of Surgical Services for the MetroHealth System for nearly five years. His areas of expertise include limb salvage, complex fractures and adult reconstruction. He is currently in the process of transferring his professor appointment to the CCLCM Department of Surgery.

The Cleveland Clinic Foundation

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He is a Fellow of the American Academy of Orthopaedic Surgery and an active member of the Orthopaedic Trauma Association. His academic contributions are related to limb salvage and complex lower extremity fractures. He was site principal investigator for the LEAP Study, funded by NIH. Dr. Patterson is a past at-large member of the Board of Directors of the Orthopaedic Trauma Association served as its Chief Financial Officer for five years and was recently elected to the role of 2nd President Elect and will serve as President of the OTA in 2022. In 2009 he led the establishment of the Center for Orthopaedic Trauma Advancement, a 501(c3) organization whose primary mission is to develop funding for the education of orthopaedic trauma fellows. In 2010 he helped to orchestrate the development of the Northern Ohio Trauma System and served as its Chair for three years during which time trauma mortality in the region was lowered by 40%.

### **1. The breadth and depth of the identified faculty's teaching and research productivity.**

The Department of Orthopaedic Surgery is part of the Orthopedic and Rheumatologic Institute (ORI) and enjoys a strong national reputation for clinical, research and educational excellence.

Patients travel to the Clinic from throughout the world for orthopaedic specialty care in 8 areas of subspecialty expertise: adult reconstructive surgery, shoulder surgery, trauma surgery, hand and upper extremity surgery, musculoskeletal oncology, sports medicine, pediatric orthopaedic and scoliosis surgery and foot and ankle surgery. Additionally, there are four orthopaedic surgeons in the Neurologic Institute who have joint appointments in our Institute and are involved in adult spinal care. Orthopaedic surgery has a major presence at Main campus, Euclid Hospital, Hillcrest Hospital, Marymount Hospital and Lutheran Hospital. US News and World Report ranked orthopaedic surgery at the Cleveland Clinic as ninth in the nation.

The research program in the department is robust. Faculty and residents are involved in collaborative outcomes research and clinical trials as well as basic science and translational research through our collaboration with basic scientists at Lerner Research Center. As a group, our faculty are responsible for nearly 200 peer reviewed articles annually. Additionally, our department is represented on the podium at every major national orthopedic subspecialty meeting. Outstanding administrative, data base management and statistical support make the research program one of the most prolific in the nation.

Education is the final part of the triad of the Cleveland Clinic mission. Our department currently trains 45 residents in general orthopaedic surgery leading to board certification by the American Board of Orthopaedic Surgery. Thirty residents are based at main campus in an M.D. program and fifteen are based at South Pointe Hospital in a D.O. program. While there is a separate schedule and administrative hierarchy for each program, they are very collaborative. The department also trains fellows in adult reconstructive surgery, foot and ankle surgery, hand surgery, pediatric orthopaedics, primary care sports medicine, orthopaedic sports medicine and shoulder surgery. A spine fellowship is housed in the Neurologic Institute. Beyond the M.D./D.O. realm, the department supports physical therapy residencies, research residents and fellows, trainees in orthopaedic physician assistant programs and podiatric residents. Positions in all of these training programs are highly competitive and graduates of the residency pursue and are accepted into equally competitive and prestigious fellowship programs. Graduates of both our residencies and our fellowships are in positions of orthopaedic leadership throughout the nation and the world.

Our department also collaborates with the Cleveland Clinic Lerner College of Medicine as well as Case Western Reserve Medical School in hosting their students for fourth year clerkships and acting internships. Of the 30-40 acting internships at main campus, approximately 60% are from medical schools around the nation.



**2. Any additional factors that are relevant to the proposed new department.**

The proposal to create an Academic Department of Orthopaedics comes at the request of former Dean Pamela Davis. Faculty members of the clinical department are actively involved in the teaching of medical students, residents, and fellows, and it is fitting that they be recognized for the academic pursuits in this specialty. They are currently in the Academic Department of Surgery and would then transfer into the newly created Academic Department of Orthopaedics. At its inception, CCLCM purposefully started with few departments, however as the College has matured, we believe that it is important to align our academic departments with those of the other institutions that are CWRU-SOM teaching institution and that in this case, Orthopaedics is sufficiently robust that it should stand apart from the Academic Department of Surgery.

**3. An analysis of the effect of establishment of the second department on existing departments of the School of Medicine.**

Creation of this department would parallel the existence of such academic departments at other CWRU School of Medicine teaching hospitals, but would have no adverse impact on them and may facilitate academic interaction amongst them. The new academic department will clearly define the academic disciplines that already exist within its clinical department.

**4. A statement that research publications authored by faculty with an appointment in the new department will make note of the Case Western Reserve University faculty appointment.**

Research publications authored by faculty with an appointment in this new department will make note of their Case Western Reserve University faculty appointment.

**5. A five-year business plan demonstrating how the second department will achieve and maintain financial viability or, in the alternative and if appropriate, the proposal should affirm that the new department will not require funding from the School of Medicine.**

The creation of this department will have no financial impact on CWRU or the School of Medicine and will not require any funding from either. It is anticipated that this validation of the faculty's academic accomplishments will further stimulate these pursuits in the future. Further, the alignment of these faculty appointments with the other CWRU-SOM departments should facilitate engagement with students and like faculty at the new Health Education Campus.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gene Barnett', with a stylized flourish at the end.

Gene H. Barnett, MD, MBA  
Associate Dean for Faculty Affairs  
Professor of Neurological Surgery

August 31, 2020

Stanton L. Gerson, MD  
Interim Dean, CWRU School of Medicine  
Case Western Reserve University  
10900 Euclid Avenue  
Cleveland, OH 44106

**RE:     Brendan M. Patterson, MD**  
**Application for Appointment as Academic Chair, Department Orthopaedics within Cleveland Clinic**  
**Lerner College of Medicine of Case Western Reserve University**

Dear Dean Gerson:

On behalf of Gene H. Barnett, MD, Cleveland Clinic Lerner College of Medicine Associate Dean of Faculty Affairs, our Faculty Appointment and Promotions Committee, and the Cleveland Clinic Lerner College of Medicine Executive Team, I would like to propose Brendan M. Patterson, MD as the new Chair for the Academic Department of Orthopaedics, within the Cleveland Clinic Lerner College of Medicine. Dr. Patterson was chosen as he is the current Chair of the Department of Orthopaedic Surgery and is well suited to this leadership position.

Dr. Patterson graduated magna cum laude from Amherst College in 1981 majoring in economics and chemistry. He graduated from Case Western Reserve University School of Medicine as a member of Alpha Omega Alpha and was elected as President of AOA in his fourth year. He received his Master's in Business Administration from the Weatherhead School of Management, Case Western Reserve University in 2000. Type all body copy in 11-point Times New Roman upper- and lowercase, single space line spacing. Skip one line before typing the Addressee's name and address flush left with the date line.

Dr. Patterson recently joined the professional staff at the Cleveland Clinic after over 25 years of service at MetroHealth Medical Center. He joined the faculty of MetroHealth in 1992 following an orthopaedic residency at the Hospital for Special Surgery in New York City and an orthopaedic trauma fellowship at Harborview Medical Center, University of Washington in Seattle, Washington. He served as Chairman of Orthopaedic Surgery in the MetroHealth System for over 10 years, was promoted to Professor, Orthopaedic Surgery Case Western Reserve University School of Medicine in 2012, and was Executive Director of Surgical Services for the MetroHealth System for nearly five years. His areas of expertise include limb salvage, complex fractures and adult reconstruction. He is currently in the process of transferring his professor appointment to the CCLCM Department of Surgery.

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He is a Fellow of the American Academy of Orthopaedic Surgery and an active member of the Orthopaedic Trauma Association. His academic contributions are related to limb salvage and complex lower extremity fractures. He was site principal investigator for the LEAP Study, funded by NIH. Dr. Patterson is a past at-large member of the Board of Directors of the Orthopaedic Trauma Association served as its Chief Financial Officer for five years and was recently elected to the role of 2nd President Elect and will serve as President of the OTA in 2022. In 2009 he led the establishment of the Center for Orthopaedic Trauma Advancement, a 501(c3) organization whose primary mission is to develop funding for the education of orthopaedic trauma fellows. In 2010 he helped to orchestrate the development of the Northern Ohio Trauma System and served as its Chair for three years during which time trauma mortality in the region was lowered by 40%.

In summary, we are very enthused to have Brendan M. Patterson, MD be the chair of our new CCLCM Orthopaedics academic department. His enthusiasm and dedication will serve the students and faculty well at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University.

Please let me know if you have any questions.

Sincerely,



J. Harry Isaacson, MD  
Executive Dean, Cleveland Clinic Lerner College of Medicine  
Professor of Medicine

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**Brendan M. Patterson, MD MBA**13415 Shaker Boulevard 9K6  
Cleveland, OH 444120(C) 216-780-1450  
[patterb2@ccf.org](mailto:patterb2@ccf.org)

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**Professional  
History**

Chair, Department of Orthopaedic Surgery Cleveland Clinic Health System Professor, Orthopaedics CWRU SOM	2018-present
Attending Orthopaedic Surgeon/Trauma Section Office of Clinical Transformation Cleveland Clinic Health System	2017-present
Executive Director, Specialty Care Service Line Interim Chair, Neurosciences/Neurosurgery MetroHealth System	2015-2017 2015-2017
Executive Director, Surgical Services Service Line MetroHealth System	2010-2015
Chair, Orthopaedic Surgery, MetroHealth System Professor, Orthopaedics, Case Western Reserve University SOM	2000-2011
Professor, Orthopaedic Surgery Case Western Reserve University School of Medicine	2012-present
Associate Professor, Orthopaedic Surgery Case Western Reserve University School of Medicine	2001-2011
Medical Director, Orthopaedic Trauma Service Huron Road Hospital, Cleveland Clinic Health System	2007-2009
President, MetroHealth Medical Staff	1998-2000
Associate Chief of Staff, Inpatient Services, MetroHealth System	1997-1999
Medical Director, Quality Department, MetroHealth System	1996-2000
Assistant Professor, Orthopaedic Surgery Case Western Reserve University School of Medicine	1993-2000
Clinical Instructor Department of Orthopaedic Surgery Harborview Medical Center University of Washington	1991-1992

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**Brendan M. Patterson, MD MBA**    13415 Shaker Boulevard 9K6    (C) 216-780-1450  
Cleveland, OH    444120    [patterb2@ccf.org](mailto:patterb2@ccf.org)

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<b>Education &amp; Training</b>	<b>Harvard Business School</b> Executive Education Leadership Development Program	December 2016
	<b>Case Western Reserve University, Cleveland, Ohio</b> Weatherhead School of Management Master Business Administration	May 2000
	<b>Harborview Medical Center, Seattle, Washington</b> Trauma Fellowship, University of Washington	1991-1992
	<b>Hospital for Special Surgery, New York, New York</b> Residency, Orthopaedic Surgery	1987-1991
	<b>University Hospitals of Cleveland/ Cuyahoga County Hospital</b> Case Western Reserve University, Cleveland, Ohio Internship, General Surgery	1986-1987
	<b>Case Western Reserve University, Cleveland, Ohio</b> Medical Degree, <i>Alpha Omega Alpha</i> <ul style="list-style-type: none"><li>• President, Alpha Omega Alpha Class of 1986</li></ul>	1982-1986
	<b>Amherst College, Amherst, Massachusetts</b> Bachelor of Arts <i>Magna Cum Laude</i> Majors in Chemistry and Economics <ul style="list-style-type: none"><li>• Waters Prize, Chemistry</li><li>• Sigma Xi</li></ul>	1977-1981
	<b>Xavier High School</b> Middletown, CT	1973-1977

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## Certification & Licensure

American Board Orthopaedic Surgery	July 1994
Recertification	June 2004
Maintenance of Certification (MOC)	May 2014
Ohio Medical License 35.054237	08/1986-present

## Organizations

Orthopaedic Trauma Association	
Health Care Policy and Planning Committee	2002-2006
Finance Committee	2007-2010
Member-at-Large Board of Directors	2008-2010
OTA Board of Directors	2014-present
OTA Chief Finance Officer	2014-present
Chair, Publisher Negotiations Team	2015-2017
Second President Elect OTA	2019-
Center for Orthopaedic Trauma Advancement (COTA)	2009-present
Board of Directors	2009-present
President	2009-2014
Operation Unified Relief (Haiti Earthquake Response/US Military)	February 2010
North American AO/ASIF Faculty	1994-present
Reviewer Journal Bone and Joint Surgery	2009-present
Orthopaedic Trauma Association/Department of Defense Landstuhl, Germany Distinguished Visiting Scholars Program	December 2008
American Orthopaedic Association	2007-2018
Fellow, American Academy of Orthopaedic Surgeons	1994-present
St. Paul's Church	1992-present
Stewardship Committee	2004-2006
Cleveland Bluecoats	2005-present
Airline Operators Pilots Association	2008-present
Instrument Flight Rated Single Engine	2009-present
NewBridge Board of Trustees	2014-present
Apollo's Fire Baroque Orchestra Board of Directors	2016-
Twentieth Century Orthopaedic Association	2016-

## Administrative Experience/Community Leadership

- Chief Finance Officer, Orthopaedic Trauma Association (OTA); OTA is the primary academic society for the subspecialty of Orthopaedic Traumatology. In my role as CFO I developed the investment policy, spending policy, evaluated wealth management performance and executed transfer of our \$10M corpus to a different, lower cost investment firm. Negotiated all contracts with the publisher for our journal, launched a new open access journal and established a knowledge portal, an online educational platform created in partnership with industry and Wolters-Kluwer. Restructured Board Committees to implement a digital approach to education.
- Service Line Director, Medicine Specialties: Physician executive in a dyad operating model for Medicine Specialties (Renal, GI, Palliative Care, Pulmonary, Endocrine, Rheumatology, ID and Hospital Medicine). Net income increased 80% in first year (\$10M to \$18M). Developed a cross-disciplinary team of specialists, informaticists, PCP's and ancillary providers to identify and implement new models for population health management.
- Executive Director, Surgery PCU: Assumed leadership for Surgery PCU in 2010 in the midst of a major system reorganization. Built a leadership triad of nursing, administration and physicians spanning Surgery and Perioperative Care Units. Established a PI team to address chronic throughput issues in the Operating Room through initiatives in CSPD, Board Management, Block Time, Scheduling, PSE and Tray Optimization. Surgical volumes increased 14% and outperformed the market in a hypercompetitive region. Transitioned several services from Main Campus OR to system-owned ASC to improve efficiency and grow inpatient volumes. Surgical PCU 2011 (402 FTE's, CM \$ 18.6M, 50% increase from 2011)
- Chair, Northern Ohio Trauma System: Led a group of senior physicians and hospital executives from MetroHealth and the Cleveland Clinic to develop a regional approach to trauma care, to rationalize services and improve outcomes across systems. The established a public-private partnership, the Northern Ohio Trauma System (NOTS). NOTS enhanced trauma care through standardized protocols, improved coordination among hospitals and concentration of severe cases in a Level I center. Regional mortality decreased by 40-% from 4.7% to 2.7%. NOTS has gained statewide and national recognition for trauma system improvement.
- Chair, Orthopaedics: Stabilized the department of orthopaedic surgery in 1999 during a period of dramatic change in area AMC's and hospitals. Initiated a separation from a university based faculty practice plan to a hospital employed model for the orthopaedic surgeons at MetroHealth Medical Center. Recruited three full-time and ten part time surgeons into the new model, smoothly integrated the all the surgeons with employed model, amicably resolved contracts with the university practice/academic chair and created a highly productive department. The new plan was implemented in three months and all surgeons were retained. Full-time faculty has more than tripled in the past 12 years. The Department expanded to 15 surgeons in the ten year period with an emphasis on trauma and specific expertise in the management of injury in the disciplines of Spine, Adult/Pediatric Trauma and Hand/Upper Extremity. The Department was one of eight centers in the LEAP Study and is a core center for METRC, the trauma research consortium funded by the Department of Defense. Faculty in the Department occupy positions of leadership in AO, Hand Society and the OTA. The Department is nationally recognized for the quality of trauma care and the significant number of its graduates engaged in academic orthopaedic traumatology. Served on the OTA Board of Directors during tenure as Chair, established the Center for Orthopaedic Trauma Advancement (COTA) and served as its first President.
- Chair, MetroHealth Foundation: Led a 35 member non-profit foundation chartered to raise community engagement and develop philanthropic support for a major public health system. Reinvigorated the Board through active recruitment of new members, expanded membership by 20% and increased the assets of the Foundation 187% during the three year period of leadership. Personally developed two Professorships in Orthopaedic Surgery within the Case School of Medicine totaling \$3M in endowment.

- Associate Chief of Staff, Inpatient Services: Reported to SVP MA for inpatient clinical operations. Responsibilities included working across departments with Medicine, Surgery, Anesthesia and Emergency Department leaders to enhance throughput and decrease diversions; instituted physician accountability for hospital throughput, structured budgets to align technical and professional activity and led change. Led turnaround for a faltering, system leased, ambulatory surgery center. Effort involved repositioning the ASC as a focused factory in Eye, ENT and Hand Surgery and worked collaboratively with clinical service leaders to increase access and surgical volume at the facility. The ASC is recognized as the most efficient procedural platform in the organization.
- Medical Director, Quality: Chaired system-wide performance improvement initiative 1996-2000 and prepared the organization for the JCAHO surveys in 1997 and 2000. Provided leadership for quality program that generated JCAHO grid score of 92/100 in 2000 survey. Led the development of a rigorous sentinel event process with a focus on root cause analysis and achieved several process improvements including alarm result notification in radiology and pathology and system wide protocols for heparin administration.

<b>Awards/Grants</b>	Educator of the Year CWRU Department of Orthopaedic Surgery	2016-2017
	Middletown CT Sports Hall of Fame	2015
	Best Doctors Northeast Ohio	2006-2018
	Kappa Delta Award (LEAP Study Group) Orthopaedic Research & Education Foundation Lower Extremity Assessment Project	2003
	Teaching Excellence Award Case Western Reserve University Orthopaedic Surgery Residency Program	1995
	Site Principal Investigator LEAP Project, NIH funded Multicenter Limb Salvage Study (\$150,000)	1994
	Lewis Clark Wagner Resident Research Award Hospital for Special Surgery	1991
	AOA-Zimmer National Research Award	1991
	Mary and David Hoar Fellowship New York Academy of Medicine	1990
	NIH Nutrition Pilot Study Grant	1989
	Merck Sharp Dome Award      CWRU School of Medicine	1986
	Lubrizol Foundation Award      CWRU School of Medicine	1986
	Paul H. Curtiss Musculoskeletal Award Department of Orthopaedics University Hospitals of Cleveland	1984
	Howard Waters Doughty Prize Best Thesis in Chemistry, Amherst College <i>Photo-oxidation of Organometallic Compounds-Physical Chemistry</i>	1981
	Magna Cum Laude, Amherst College	1981
	Sigma Xi, Amherst College	1981



## Publications

Dooley, DM. and Patterson, BM.: Photo-oxidation of Bis(maleonitriledithiolate) Complexes. *Inorganic Chemistry* 21:4330-4332, 1982.

Patterson, BM., Marchand, R. and Ranawat, CS: Complications of Heparin Therapy Following Total Joint Arthroplasty. *J Bone and Joint Surg.* 71A:1130-1134, 1989.

Patterson, BM., Salvati, EA, and Huo, M.: Total Hip Arthroplasty Following Intertrochanteric Fractures. A Technical Note. *J Bone and Joint Surg.* 72A:776-777, 1990.

Patterson, BM., Healey, JH. Cornell, CN. and Sharrock, N.: Cardiac Arrest During Long Stem Cemented Hip Arthroplasty. A Report of Seven Cases. *J Bone and Joint Surg.* 73A:271-278, 1991.

Moeckel, BH., Patterson, BM., Inglis, AE., and Sculco, TP.: Ankle Arthrodesis. A Comparison of Internal and External Fixation. *Clinical Orthopaedics and Related Research* 268:78-83, 1991.

Lieberman, JR., Patterson, BM., Salvati, EA.: Complications of Total Hip Arthroplasty. *Current Opinion in Orthopaedics* 2:455-462, 1991.

Patterson, BM., Cornell, CN., Carbone, B., Levine, B., and Chapman, D.: Metabolic Stress and Protein Depletion in Elderly Patients with Hip Fractures. *J Bone and Joint Surg.* 74A:251-260, 1992.

Patterson, BM., Insall, JN.: Surgical Management of Gonarthrosis in Patients with Poliomyelitis. *J of Arthroplasty* 7: Supplement 419-426, 1992.

Patterson, BM., Routt, ML., Benirschke, SK., and Hansen, ST.: Retrograde Nailing of the Femur. A Treatment for Severe Injuries. *Journal of Trauma* 38:38-43, 1995.

Rosenberg, GA. and Patterson, BM.: Tarsometatarsal (Lisfranc's) Fracture-Dislocation. *American Journal of Orthopaedics, Supplement*:7-16, 1995.

Patterson, BM.: Pelvic Ring Injury and Associated Urologic Trauma. An Orthopaedic Perspective. *Seminars in Urology* 13:25-34, 1995.

Patterson, BM., Lieberman, JR., Salvati, EA.: Intraoperative Complications of Total Hip Arthroplasty. *Orthopaedics* 18:1089-1095, 1995.

Hegstad, SJ., Smith, AS., Patterson, BM., et al.: Functional Lower Limb Salvage with an Osteocutaneous Flap of the Foot. *Annals of Plastic Surgery.* 36:413-416, 1996.

Patterson, BM., Inglis AE., Moeckel, B.: Anterior Sliding Graft for Tibiotalar Arthrodesis. *Foot and Ankle* 18:330, 1997.

Peljovich, A. and Patterson, BM.: Ipsilateral Femoral Neck and Shaft Fractures. *Journal of the American Academy of Orthopaedic Surgeons* 6, 1998.

Rosenberg, G and Patterson, BM.: Limb Salvage for Severe Lower Extremity Trauma. *American Journal of Orthopaedics*, 1998.

Miric, A and Patterson, BM.: Pathologic Anatomy of Intra-articular Os Calcis Fractures; *Journal of Bone and Joint Surgery* 80A:207-212, 1998.

## **Publications (cont)**

Schildhauer, T., Wilber, JH, Patterson, BM.: Locked Posterior Fracture Dislocation of the Pelvic Ring.: Journal of Orthopaedic Trauma 14:107-111, 2000.

Patterson, BM., Smith, AA., Holdren, AM., and Sontich, JK.: Osteocutaneous Pedicle Flap of the Foot for Salvage of Below Knee Amputation Following Lower Extremity Trauma. Journal of Trauma 48:767-772, 2000.

LEAP Study Group: MacKenzie, E., Bosse, M., Kellam, J., Burgess, A., Webb, L., Swiontkowski, M., Sanders, R., Jones, A., McAndrew, M., Patterson, B., and McCarthy, M.: Characterization of Patients With High-Energy Lower Extremity Trauma. J. Orthopaedic Trauma 14:457-466, 2000.

Yue, J., Sontich, J., Miron, S., Wilber, J., Peljovich, A., Yue, D. and Patterson, B.: Blood Flow Changes to the Femoral Head Following Acetabular Fracture or Dislocation in the Acute Injury and Perioperative Period. Journal of Orthopaedic Trauma 15:170, 2001.

LEAP Study Group: Bosse, M., MacKenzie, E., Kellam, J., Burgess, A., Webb, L., Swiontkowski, M., Sanders, R., Jones, A., McAndrew, M., Patterson, B., McCarthy, M., and Cyril, J.: A Prospective Evaluation of the Clinical Utility of the Lower-Extremity Injury Severity Scores. Journal of Bone and Joint Surgery 83A:3-14, 2001.

Yowler, C., Patterson, B., Brandt, C. and Fratianni, R.: Osteocutaneous Pedicle Flap of the Foot for Salvage of Below-Knee-Amputation Level After Burn Injury. J. Burn Care and Rehabilitation. 22:21-25, 2001.

Cohen, N., Balazsy, JE., Patterson, BM.: Capture of Percutaneous Locking Screws. Acta Orthop Scand 73:589, 2002.

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Vallier, H. A., Hennessey T. A, Sontich, J. K. and Patterson, B. M.: Failure of LCP Condylar Plate Fixation in the Distal Part of the Femur. A Report of Six Cases. Journal of Bone Joint Surg. Am. 2006; 88: 846-853.

DeFranco, M. J. and Patterson, B.M.: The Floating Shoulder. J Am Acad Orthop Surg, Vol. 14 No 8 August 2006 499-509

Patterson, Brendan M. MD; Agel, Julie MA, ATC; Swiontkowski, Marc F. MD; MacKenzie, Ellen J. PhD; Bosse, Michael J. MD; the LEAP Study Group Knee Dislocations With Vascular Injury: Outcomes in the Lower Extremity Assessment Project (LEAP) Study. Journal of Trauma-Injury Infection & Critical Care. 63(4):855-858, October 2007

Vallier, H.A., Patterson, B.M., Meehan, C. and Lombardo, T.: Orthopaedic Traumatology: The Hospital Side of the Ledger, Defining the Financial Relationship Between Physicians and Hospitals. J. Orthop. Trauma 22(4) 221-226; 2008

Vallier, H.A., Prokuski, L.J., Nash, C.L., Patterson, B.M.: Effects of resident work hours restrictions on education and patient care, Current Orthopaedic Practice, 20:77-83, 2009

## Publications (cont.)

Vallier, H.A. and Patterson, B.M., Economic Impact of Orthopaedic Trauma care on Hospitals and Hospital Systems. *Curr Orthop Pract* 20(5):475-481 2009

Vallier, H. A., Patterson, B.M., Sontich, J.K.: Surgical technique for: Osteocutaneous pedicle flap transfer for salvage of transtibial amputation after severe lower extremity injury, *Journal of Bone and Joint Surgery Essential Techniques* 2:1-12, 2012.

Vallier, H.A., Cureton, B.A., Patterson, B.M.: Factors affecting functional outcomes after distal tibia fractures, *Journal of Orthopaedic Trauma* 26:178-183, 2012.

Vallier, H.A., Fitzgerald, S., Sontich, J. K. and Patterson, B. M.: Pedicle Flap for Limb Salvage in the Lower Extremity. *Journal of Bone and Joint Surgery* March 2012 94:447-454

Nahm, N.J., Vallier, H.A., Patterson, B.M: The impact of injury severity and transfer status on reimbursement for care of femoral fractures, *Journal of Trauma* 73:957-965, 2012.

Claridge, J.A., Allen, D., Patterson, B., DeGrandis, F., Emerman, C., Bronson, D. and Connors, A.: Regional collaboration across hospital systems to develop and implement trauma protocols saves lives within 2 years. *Surgery* October 2013 Volume 154 Issue 4 pp 875-884

Building a Clinical Research Network in Trauma Orthopaedics: The Major Extremity Trauma Research Consortium (METRC). Major Extremity Trauma Research Consortium (METRC). *J Orthop Trauma*. 2016 Jul;30(7):353-61. METRC Study Group

Regionalization and Rationalization. Hitting the Triple Aim in Trauma. Twentieth Century Orthopaedic Association Annual Meeting. Whistler, British Columbia August 5, 2016 (*Abstract*)

Development and Validation of a Machine Learning Algorithm After Primary Total Hip Arthroplasty: Applications to Length of Stay and Payment Models. Ramkumar PN, Navarro SM, Haeberle HS, Karnuta JM, Mont MA, Iannotti JP, Patterson BM, Krebs VE; *J Arthroplasty*. 2019 Apr; 34(4):632-637.

Preoperative Prediction of Value Metrics and a Patient-Specific Payment Model for Primary Total Hip Arthroplasty: Development and Validation of a Deep Learning Model. Ramkumar PN, Karnuta JM, Navarro SM, Haeberle HS, Iorio R, Mont MA, Patterson BM, Krebs VE; *J Arthroplasty*. 2019 May 2

Remote Patient Monitoring Using Mobile Health for Total Knee Arthroplasty: Validation of a Wearable and Machine Learning-Based Surveillance Platform. Ramkumar PN, Haeberle HS, Ramanathan D, Cantrell WA, Navarro SM, Mont MA, Bloomfield M, Patterson BM. *J Arthroplasty*. 2019 May 16

Artificial Intelligence and Arthroplasty at a Single Institution: Real-World Applications of Machine Learning, Big Data, Value-Based Care, Mobile Health, and Remote Patient Monitoring. Ramkumar, P.N.; Haeberle, H.S.; Bloomfield, M.; Schaffer, J. L.; Kamath, A.F.; Patterson, B.M.; Krebs, V. E. (*in press J. Arthroplasty*)

The Utility of the Angled Blade Plate in Hip Fracture Nonunion Treatment. Joshua M. Lawrenz, MD, Danielle C. Marshall, BA, Brendan M. Patterson, MD\* (*Advances in Orthopaedics in press*)

New versus Old. A Prospective, Randomized Controlled Trial Comparing the 95 Degree Angled Blade Plate with the Locking Condylar Plate for Distal Femur Fractures. Brendan M. Patterson, MD MBA, Mary A. Breslin, BA, Leanne K. Wadenpfehl, BA, Heather A. Vallier, MD *Journal of Orthopaedic Trauma* (in press)

## Book Chapters

*Complications of Multiple Trauma*, Brendan M. Patterson, M.D. and Sigvard T. Hansen, M.D. in Complications of Orthopaedic Surgery, edited by Charles Epps, J. B. Lippincott Philadelphia PA 1994.

*Forearm Fractures-ORIF*. Brendan M. Patterson, M.D. in Master Techniques in Orthopaedic Surgery: Fractures, edited by Donald A. Wiss, M.D. Lippincott Raven, Philadelphia, PA 1998.

*Case #25 Management of an Infected Tibial Intramedullary Nail*. Megan Brady, MD and Brendan M. Patterson, MD; edited by William T. Obremskey, MD; Manish K. Sethi, MD and A. Alexis Jahangir, MD Orthopaedic Traumatology: An Evidence-Based Approach. Springer-Verlag 2012.

*Foreword* Brendan M. Patterson, MD for Trauma Anesthesia edited Charles E. Smith, MD and John J. Como MD MPH: Cambridge University Press 2015

## **Presentations**

Metabolic Stress in Elderly Patients with Hip Fractures. American Academy of Orthopaedic Surgeons, February 1989.

Complications of Heparin Therapy Following Total Joint Arthroplasty. American Academy of Orthopaedic Surgeons, February 1989.

Tibiotalar Arthrodesis Using an Anterior Sliding Graft. American Academy of Orthopaedic Surgeons, February 1989.

The Impact of Protein Depletion on Elderly Patients with Hip Fractures. New York Academy of Medicine, January 1991.

Intraoperative Complications of Total Hip Replacement. Robert P. Kelly Lectureship, Emory University, Atlanta, Georgia, April 23, 1991.

A Comparison of All Polyethylene and Metal-Backed Acetabular Components in Cemented Total Hip Arthroplasty. Eastern Orthopaedic Association, presented by Michael Huo, MD Madrid, Spain October 1991.

Metabolic Stress and Protein Depletion in Elderly Patients with Hip Fractures. Orthopaedic Trauma Association, Seattle, Washington, November 1991.

Retrograde Nailing of the Femur. A Treatment for Severe Injuries. Orthopaedic Trauma Association, Minneapolis, Minnesota, October 1992.

Comminuted Intraarticular Fractures of the Distal Femur. A Study of Outcome. Orthopaedic Trauma Association, Minneapolis, Minnesota, October 1992.

Custom Contoured 3.5 and 4.5mm Blade Plates for Periarticular Fractures of the Tibia. American Academy of Orthopaedic Surgeons, presented by S.K.Benirschke, San Francisco, February 1993.

Indications for Internal Fixation in Foot and Ankle Trauma. AO Foot and Ankle Course, Breckinridge, Colorado, February 1994.

Fractures of the Talus Blood Supply and Classification. AO Foot and Ankle Course, Breckinridge, Colorado, February 1994

Management of Lower Extremity Injury. Lisfranc Fracture-Dislocations. Orthopaedic Trauma Association, Trauma Update, Chicago, Illinois, May 1994.

Shoulder Girdle Injuries, AO Basic and Advanced Course, Phoenix, Arizona, April 1994.

Management of Humeral Shaft Fractures in Multiply Injured Patients. Plates vs. Antegrade Nailing. Orthopaedic Trauma Association, Tampa, Florida, September 1995.

Plate Stabilization of Proximal Third Tibial Shaft Fractures. An Alternative to Nailing. Orthopaedic Trauma Association, Tampa, Florida, September 1995.

Management of Lower Extremity Fractures: The Soft Tissues are the Key. American Academy of Orthopaedic Surgeons, Orthopaedic Learning Center, Rosemont Illinois, October 26-29, 1995.

## **Presentations (cont.)**

Plate Stabilization of Proximal Third Tibial Shaft Fractures. An Alternative to Nailing. American Academy Orthopaedic Surgery Atlanta, Georgia, February 1996.

Distal Femur Fractures. Surgical Management. Advanced Concepts of Internal Fixation AO Course, Marco Island, Florida, March 1996.

Osteotomy Instructional Series. Advanced Concepts of Internal Fixation AO Course, Marco Island, Florida, March 1996.

Pathologic Anatomy of Intraarticular Calcaneal Fractures. Orthopaedic Trauma Association. Boston, Massachusetts, October 1996.

Avascular Necrosis in Displaced Talar Neck Fractures Treated by Emergent ORIF using a two incision Technique. Orthopaedic Trauma Association. Boston. Massachusetts, October 1996.

Reamed versus Unreamed Nails for Femoral Shaft Fractures. A Randomized Study. Orthopaedic Trauma Association, Boston, Massachusetts, October 1996.

Femoral Head Blood Supply Following Hip Dislocation. Orthopaedic Trauma Association. Boston. Massachusetts, October 1996.

Surgical Management Humeral Shaft Fractures. Indications for Internal Fixation of Tibial Shaft Fractures. Lectures and Lab instruction. Summer Institute American Academy of Orthopaedic Surgeons, Washington, DC, September 1997

Posterior Approach for the Stabilization of Pelvic Ring Injuries, Orthopaedic Trauma Association. Louisville, Kentucky, October 1997

Stabilization of Distal Femur Fractures. Orthopaedic Trauma Association. Louisville, Kentucky, October 1997

Complex Distal Humeral Fractures. Surgical Treatment and Complications. Hospital for Special Surgery Alumni Meeting. New York, New York, November 1997

Retrograde Intramedullary Nailing for Femoral Shaft Fractures. Indications and Limitations. AO North American Fracture Course, Sun Valley, Idaho, March 1999

Management of Proximal Tibial Shaft Fractures. AO North American Fracture Course. Sun Valley, Idaho, March 1999

Amputation Update. An Emphasis on Trauma. Instructional Course Lecture. American Academy of Orthopaedic Surgeons, Orlando, Florida, March 2000

Symposium. The Dysvascular Limb. Mangled Lower Extremity Assessment Project. American Academy of Orthopaedic Surgeons, Orlando, Florida, March 2000

Pilon Fractures: Surgical Treatment and Outcomes. Visiting Professor, Gujarat Orthopaedic Association, Gujarat Orthopaedic Association Annual Meeting, Ahmdebad, India February 2003

Management of Subtrochanteric Fractures. Visiting Professor, Gujarat Orthopaedic Association, Gujarat Orthopaedic Association Annual Meeting, Ahmdebad, India February 2003

## **Presentations (cont.)**

Soft Tissue Management, Wound Care and Coverage. Practical Techniques for Improved Fracture Management  
AAOS Orthopaedic Learning Center, Rosemont, Illinois December 5-7 2003

Orthopaedic Traumatology. The Hospital Side of the Ledger. Orthopaedic Trauma Association Annual Meeting  
Ottawa, Canada October 20, 2005

Hospital Finances for Orthopaedic Surgeons: Homer Stryker Visiting Lecturer University of Michigan, Ann  
Arbor, April 19, 2007

Management of Hip Fractures: AO North America Midwest Fracture Summit, Cleveland, Ohio September 14,  
2007

Regional Trauma Systems. Concept and Development. Ohio Orthopaedic Society; Columbus, Ohio, May 2010

Complications in the Operative Management of Acetabulum Fractures and Extensile Exposure of the Acetabulum  
and Proximal Femur, Orthopaedic Trauma Fellows Course; Boston MA, April 2010

Limb Salvage Surgery, Current Concepts. Visiting Professor, Mayo Clinic Department of Orthopaedic Surgery,  
Rochester Minnesota, October 2010.

Management of Complex, High Energy Fractures of the Lower Extremity. Grand Rounds, University Hospitals,  
Case Medical Center, Cleveland, Ohio January 2011.

Orthopaedic Management of Major Blunt Musculoskeletal Trauma, Visiting Professor Ahmedabad Municipal  
Hospital, Ahmedabad, India. February 2011

Limb Salvage Techniques. Visiting Professor Gujarat Civil Hospital, Ahmedabad, India. February 2011

Grand Rounds, University Hospitals of Cleveland, Case Medical Center; Distal Femur Fractures, The  
Fundamentals. January 11, 2012 Cleveland, Ohio

Regionalization. The NOTS Experience. Ohio Assembly Health Committee. May 2013

Management of Open Wounds. Grand Rounds University Hospitals of Cleveland January 12, 2014

Regionalization and Rationalization. Hitting the Triple Aim in Trauma. Twentieth Century Orthopaedic  
Association Annual Meeting. Whistler, British Columbia August 5, 2016

Not so Simple Ankle Fractures. NOTS Symposium Cleveland, OH November 14, 2016

XOXO. Humanity and Technology in Modern Medicine. Awards Dinner Speaker Alpha Omega Alpha Case  
Western Reserve University School, Cleveland Ohio May 2017

New versus Old. A Prospective, Randomized Controlled Trial Comparing the 95 Degree Angled Blade Plate  
with the Locking Condylar Plate for Distal Femur Fractures. Twentieth Century Orthopaedic Association Annual  
Meeting, Woodstock, Vermont August 18, 2017.

New versus Old. A Prospective, Randomized Controlled Trial Comparing the 95 Degree Angled Blade Plate  
with the Locking Condylar Plate for Distal Femur Fractures. Orthopaedic Trauma Association Annual Meeting  
Vancouver, British Columbia Oct 12, 2017

## **Presentations (cont.)**

Population Health. Why? When? Who and How? Grand Rounds Orthopaedic and Rheumatologic Institute. November 4, 2017.

Regional Health Care Collaboration. A Path to the Future for Greater Cleveland. MEDWORKS Meeting. The City Club of Cleveland. December 5, 2017.

Distal Femur Fractures: Treatment Fundamentals. Chinese Association Orthopaedic Surgeons. Annual Meeting Hangzhou, China May 10-12, 2018 Invited International OTA Guest Lecturer.

Tibial Plateau Fractures. Chinese Association Orthopaedic Surgeons. Annual Meeting Hangzhou, China May 10-12, 2018 Invited International OTA Guest Lecturer

Surgical Management of Pilon Fractures.: Chinese Association Orthopaedic Surgeons. Annual Meeting Hangzhou, China May 10-12, 2018 Invited International OTA Guest Lecturer

Limb Salvage and Management of Grade III Open Fractures of the Lower Extremity.: Chinese Association Orthopaedic Surgeons. Annual Meeting Hangzhou, China May 10-12. 2018 Invited International OTA Guest Lecturer

Management Complex Fractures of the Distal Femur. Visiting Professor, Orthopaedic Resident Research Day, Lenox Hill Hospital, New York, NY June 6-7 2019



**Cleveland Clinic Lerner College of Medicine - Faculty List**  
**Orthopaedics**

<b>Last Name</b>	<b>First Name</b>	<b>Credentials</b>	<b>CCLCM Appointment</b>
<b>White = Have a Faculty Appointment</b>		<b>Gray = Will apply in the future</b>	
Balis	George	MD	Clinical Assistant Professor
Ballock	Robert Tracy	M.D.	Professor
Barsoum	Wael	M.D.	Professor
Berkowitz	Mark	MD	Clinical Assistant Professor
Billow	Damien	MD	Assistant Professor
Bloomfield	Michael R.	M.D.	Assistant Professor
Botek	Georgeanne	DPM	Clinical Assistant Professor
Brochin	Robert		
Brooks	Peter	MD	Clinical Assistant Professor
Cann	John	DPM	Clinical Assistant Professor
Chiunda	Stella	DPM	Clinical Assistant Professor
Davis	Alan	MD	Clinical Assistant Professor
Day	Carly	M.D.	Clinical Associate Professor
DeBarr	Colleen	DPM	Clinical Assistant Professor
Donley	Brian	M.D.	Professor
Drake	Daniel		
Entezari	Vvahid		
Estes	Kelly		
Evans	Peter	MD, PhD	Professor
Farrow	Lutul	M.D.	Associate Professor
Figler	Richard	MD	Clinical Assistant Professor
Frangiamore	Salvatore	MD	Clinical Assistant Professor
Genin	Jason	DO	Clinical Assistant Professor
George, Jr.	Joseph	MD	Clinical Assistant Professor
Gilot	Gregory	MD	Clinical Assistant Professor
Gladden	Kim	MD	Clinical Assistant Professor
Goodwin	Ryan	M.D.	Associate Professor
Greene	Kenneth A		
Gurd	David	MD	Clinical Assistant Professor
Haidet	Kirk		
Hampton	Robert	DO	Clinical Assistant Professor
Herbert	Christopher	DPM	Clinical Assistant Professor
Higuera Rueda	Carlos	M.D.	Assistant Professor
Hild	Gina	DPM	Clinical Assistant Professor
Ho	Jason	MD	Assistant Professor
Iannotti	Joseph	M.D., Ph.D.	Professor
Ilyas	Haariss	MD	Clinical Instructor
Johnson	Tanya		
Jones	Morgan	MD	Clinical Assistant Professor
Joyce	Michael	M.D.	Clinical Associate Professor
Kamath	Atul	MD	Professor
Killen	Cameron		

King	Dominic	DO	Clinical Assistant Professor
Konya	Meredith	M.D.	Clinical Assistant Professor
Kolczun	Michael		
Krahe	David	DO	Clinical Assistant Professor
Krebs	Viktor	MD	Clinical Assistant Professor
Kuivila	Thomas	MD	Clinical Assistant Professor
Leo	Brian	MD	Clinical Assistant Professor
Lewis	Caitlin		
Martin	Nicholas		
Maschke	Steven	MD	Clinical Assistant Professor
Masin	Richard		
Matko	Andrew	DO	Clinical Assistant Professor
McCoy	Brett	MD	Clinical Assistant Professor
McKee	Patrick		
Mesko	Nathan	MD	Assistant Professor
Miniaci	Anthony	M.D.	Professor
Miniaci-Coxhead	Sara	MD	Clinical Assistant Professor
Molloy	Robert	M.D.	Assistant Professor
Mont	Michael	MD	Clinical Assistant Professor
Mroz	Thomas	MD	Clinical Assistant Professor
Murray	Trevor	M.D.	Assistant Professor
Muschler	George	M.D.	Professor
Nickodem, Jr.	Robert	MD	Clinical Assistant Professor
Nicolosi	Nicole	DPM	Clinical Assistant Professor
Nystrom	Lukas	MD	Associate Professor
Oberle	Lara	MD	Clinical Assistant Professor
Park	Kevin		
Parker	Richard	M.D.	Professor
Patel	Preetesh	MD	Clinical Assistant Professor
Patterson	Thomas	Ph.D.	Adjunct Assistant Professor
Peck	Evan	MD	Clinical Assistant Professor
Pennington	Jacob		
Pham	Thuan	DPM	Clinical Assistant Professor
Pierce	Bradley	MD	Clinical Assistant Professor
Pinney	Stephen		
Piuzzi	Nicholas	MD	Clinical Assistant Professor
Pylawka	Tamara		
Rex	Anne	DO	Clinical Assistant Professor
Ricchetti	Eric	M.D.	Associate Professor
Richardson	Nicholas		
Richter	Kelly	MD	Clinical Assistant Professor
Rosneck	James	MD	Assistant Professor
Rowland	Joy	DPM	Clinical Assistant Professor
Sabesan	Vani	MD	Clinical Assistant Professor
Sabo, Jr.	Frank	MD	Clinical Assistant Professor
Saluan	Paul	M.D.	Assistant Professor
Scarcella	Joseph	MD	Clinical Assistant Professor

Schaefer	Marie	MD	Clinical Assistant Professor
Scheiber	Elizabeth	DPM	Clinical Assistant Professor
Schickendantz	Mark	M.D.	Professor
Seitz	William	M.D.	Professor
Serna	Alfred	MD	Clinical Assistant Professor
Shapiro	David	MD	Clinical Assistant Professor
Soehnlen	Neil		
Spindler	Kurt	MD	Professor
Srinath	Arjun	MD	Clinical Assistant Professor
Star	Michael	MD	Clinical Assistant Professor
Stearns	Kim	M.D.	Assistant Professor
Stock	Dina	DPM	Clinical Assistant Professor
Styron	Joseph	M.D., Ph.D.	Assistant Professor
Sziraky	Patrick	MD	Clinical Assistant Professor
Taylor	Aaron	M.D.	Clinical Instructor
Tejpar	Farah	MD	Clinical Assistant Professor
Testrake	Matthew		
Torzok	Thomas	DC	Clinical Assistant Professor
Umeda	Yuji	MD, PhD	Clinical Assistant Professor
Verdun	Mark	DO, PhD	Clinical Assistant Professor
Westerdahl	David	MD	Clinical Assistant Professor
Williams	James		
Young	Ernest		
Zipper	Ronald	DO	Clinical Assistant Professor

## CLEVELAND CLINIC ~ ORTHOPAEDICS RESEARCH GRANTS / FUNDING 2017 - 2020

Project	Type	PI	Sponsor	Start Date	End Date	Funding
PROGNOSIS AND PREDICTORS OF ACL RECONSTRUCTION: A MULTICENTER	FEDERAL GRANT	Spindler, Kurt P.	NIAMS	9/18/2015	4/20/2021	\$ 2,823,858
BEAR-MOON: A TWO ARM NONINFERIORITY BLINDED RANDOMIZED CLINICAL TRIAL	FEDERAL GRANT	Spindler, Kurt P.	NIAMS	8/1/2018	7/31/2023	\$ 6,065,905
CLINICIAN SCHOLAR CAREER DEVELOPMENT PROGRAM (CSCDP)	FEDERAL GRANT	Spindler, Kurt P.	NIAMS	7/1/2019	6/30/2022	\$ 90,000
IMAGING POST-TRAUMATIC OSTEOARTHRITIS 10 YEARS AFTER ACL RECONSTRUCTION	FEDERAL GRANT	Li, Xiaojuan; Spindler, Kurt P.	NIAMS	7/16/2019	7/31/2024	\$ 3,167,370
ROTATOR CUFF FAILURE WITH CONTINUITY	FEDERAL GRANT	Iannotti, Joseph P.	NIAMS	4/1/2016	3/31/2021	\$ 3,133,048
EFFECT OF MENISCUS STATUS AND ACTIVITY LEVEL ON STRUCTURAL COMPONENTS AFTER ACL	FEDERAL GRANT	Jones, Morgan	NIAMS	2/5/2015	1/31/2021	\$ 462,220
IDENTIFYING THE PATIENT DISEASE SURGICAL AND IMPLANT POSITIONAL SHIFT FACTORS THAT PREDICT OUTCOMES FOLLOWING TSA	FEDERAL GRANT	Ricchetti, Eric	NIAMS	4/1/2020	3/31/2023	\$ 624,819
PREVENTING INCIDENT KNEE OSTEOARTHRITIS: THE OSTEOARTHRITIS PREVENTION STUDY	FEDERAL SUBAWARD	Spindler, Kurt P.	WAKE FOREST UNIVERSITY	4/1/2020	3/31/2022	\$ 55,890
TREATMENT OF MENISCAL PROBLEMS IN OSTEOARTHRITIS (TEMPO)	FEDERAL SUBAWARD	Jones, Morgan	BRIGHAM & WOMEN'S HOSPITAL	5/15/2017	3/31/2022	\$ 386,733
INJECTION AFTER ARTHROSCOPIC PARTIAL MENISCECTOMY	FOUNDATION	Jones, Morgan	ARTHRITIS FOUNDATION	8/1/2020	7/31/2023	\$ 1,500,000
CHARACTERIZING CARTILAGE DEGRADATION FOLLOWING INITIAL PATELLAR INSTABILITY	FOUNDATION	Farrow, Lutul	ORTHOPAEDIC RSRCH & EDUC FDN (OREF)	9/1/2019	8/31/2020	\$ 50,000
PERSONALIZED OUTCOME PREDICTION TOOL FOR TOTAL KNEE ARTHROPLASTY	FOUNDATION	Piuzzi, Nicolas S.	ORTHOPAEDIC RSRCH & EDUC FDN (OREF)	2/1/2019	1/31/2020	\$ 48,179
ONE STAGE VERSUS TWO STAGE FOR PERIPROSTHETIC HIP AND KNEE I	FOUNDATION	Higuera-Rueda, Carlos A.	ORTHOCAROLINA RESEARCH INST	11/1/2015	12/31/2020	\$ 96,350
TRANCUTANEOUS OXYGEN AS A PREDICTOR OF WOUND HEALING COMPLICATIONS	FOUNDATION	Nystrom, Lukas	ORTHOPAEDIC RSRCH & EDUC FDN (OREF)	7/24/2017	9/30/2020	\$ 80,706
CLINICAL SCHOLAR IN SHOULDER AND ELBOW SURGERY	FOUNDATION	Ricchetti, Eric	ARTHRITIS FOUNDATION AUSTRALIA	8/1/2017	8/31/2018	\$ 41,845
TELEMEDICINE IN TOTAL KNEE ARTHROPLASTY USING WEARABLE TECHN	FOUNDATION	Ramkumar, Prem N.	ORTHOPAEDIC RSRCH & EDUC FDN (OREF)	5/1/2018	4/30/2019	\$ 5,000
RISER VS SANDERS IN AIS: A PROSPECTIVE COHORT STUDY ASSESSING	PROFESSIONAL SOCIETY/ ORGANIZATION	Goodwin, Ryan C.	PEDI ORTHOPAEDIC SOC N AMERICA	6/1/2019	2/28/2021	\$ 9,964
COMPARATIVE EFFECTIVENESS OF PULMONARY EMBOLISM PREVENTION AFTER HIP AND KNEE REPLACEMENT	PROFESSIONAL SOCIETY/ ORGANIZATION	Molloy, Robert	DARTMOUTH-HITCHCOCK CLINIC	7/1/2019	2/28/2024	\$ 32,900
COMPARATIVE EFFECTIVENESS OF PULMONARY EMBOLISM PREVENTION AFTER HIP AND KNEE REPLACEMENT	PROFESSIONAL SOCIETY/ ORGANIZATION	Molloy, Robert	PCORI/MEDICAL UNIVERSITY OF SOUTH CAROLINA	3/1/2016	2/28/2020	\$ 331,800
ARTHROSCOPY / SPORTS FELLOWSHIP FUNDING	PROFESSIONAL SOCIETY/ ORGANIZATION	Farrow, Lutul	ARTHROSCOPY ASSOCIATION OF NORTH AMERICA	8/1/2017	7/31/2021	\$ 50,580
PROPHYLACTIC ANTIBIOTIC REGIMENS IN TUMOR SURGERY (PARITY):	PROFESSIONAL SOCIETY/ ORGANIZATION	Mesko, Nathan	MCMMASTER UNIVERSITY	7/1/2017	3/31/2021	\$ 25,722
LOCAL BISPHOSPHONATE EFFECT ON RECURRENCE RATE IN EXTREMITY	PROFESSIONAL SOCIETY/ ORGANIZATION	Nystrom, Lukas	ST LOUIS UNIVERSITY	9/20/2018	4/30/2020	\$ 14,906
IMPROVING ACL RECONSTRUCTION OUTCOMES: COGNITIVE-BEHAVIORAL	PROFESSIONAL SOCIETY/ ORGANIZATION	Spindler, Kurt P.	VANDERBILT UNIVERSITY	6/1/2018	5/31/2019	\$ 11,180

*In addition to federal, foundation and professional society funding noted above, revenue from corporate projects has increased from \$933,000 in 2017, to \$1.8M in 2018 and \$1.3M in 2019.*

# CLEVELAND CLINIC ~ ORTHOPAEDICS

## PUBLICATIONS 2017

Article Title	Authors	Source	Times Cited	Journal Impact Factor
Current Epidemiology of Revision Total Hip A	Gwam, Chukwuweike U.; Mistry, Jayde	JOURNAL OF ARTHROPLASTY	80	3.709
A Call for Standardization in Platelet-Rich Plas	Chahla, Jorge; Cinque, Mark E.; Piuze, I	JOURNAL OF BONE AND JOINT SI	75	4.578
Effect of Bundled Payments and Health Care	Siddiqi, Ahmed; White, Peter B.; Mistry	JOURNAL OF ARTHROPLASTY	72	3.709
Current Epidemiology of Revision Total Knee	Delanois, Ronald E.; Mistry, Jaydev B.;	JOURNAL OF ARTHROPLASTY	61	3.709
Articular cartilage repair: Current needs, met	Correa, Diego; Lietman, Steven A.	SEMINARS IN CELL & DEVELOPM	51	6.691
An evidence-based guide to the treatment of	Chughtai, M.; Piuze, N. S.; Khlopas, A.;	BONE & JOINT JOURNAL	41	4.306
Evidence for the Use of Cell-Based Therapy fo	Piuze, Nicolas S.; Chahla, Jorge; Schroc	JOURNAL OF ARTHROPLASTY	35	3.709
Predictors of Hip Pain and Function in Femor	Westermann, Robert W.; Lynch, T. Sea	ORTHOPAEDIC JOURNAL OF SPO	31	2.492
A Multicenter Study of Early Anti-inflammato	Lattermann, Christian; Jacobs, Cale A.;	AMERICAN JOURNAL OF SPORTS	31	5.81
Do Press Ganey Scores Correlate With Total K	Chughtai, Morad; Patel, Nirav K.; Gwan	JOURNAL OF ARTHROPLASTY	29	3.709
2017 American College of Rheumatology/Am	Goodman, Susan M.; Springer, Bryan; C	ARTHRITIS CARE & RESEARCH	28	4.056
Administrative Databases Can Yield False Con	George, Jaiben; Newman, Jared M.; Rai	JOURNAL OF ARTHROPLASTY	27	3.709
2017 American College of Rheumatology/Am	Goodman, Susan M.; Springer, Bryan; C	ARTHRITIS & RHEUMATOLOGY	26	9.586
Analysis of Cell Therapies Used in Clinical Tria	Piuze, Nicolas S.; Chahla, Jorge; Jiando	JOURNAL OF ARTHROPLASTY	24	3.709
Magnetic Resonance Imaging Predictors of Fa	Frangiamore, Salvatore J.; Lynch, T. Sea	AMERICAN JOURNAL OF SPORTS	22	5.81
Patient Satisfaction Outcomes after Robotic /	Marchand, Robert C.; Sodhi, Nipun; Khl	JOURNAL OF KNEE SURGERY	21	1.986
Hamstring Strength Asymmetry at 3 Years Aft	Abourezk, Matthew N.; Ithurnburn, Mat	AMERICAN JOURNAL OF SPORTS	21	5.81
Day of Surgery Affects Length of Stay and Ch	Newman, Jared M.; Szubski, Caleb R.; B	JOURNAL OF ARTHROPLASTY	20	3.709
Change in Anterior Cruciate Ligament Graft C	Kaeding, Christopher C.; Pedroza, Ange	ARTHROSCOPY-THE JOURNAL OF	20	4.325
Obesity Epidemic: Is Its Impact on Total Joint	George, Jaiben; Klika, Alison K.; Navale,	CLINICAL ORTHOPAEDICS AND RI	19	4.329
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The 2018 Definition of Periprosthetic Hip and Knee Infection	Parvizi, Javad; Tan, Timothy L.; Goswami, K.	JOURNAL OF ARTHROPLASTY	133	3.709
Ten-Year Outcomes and Risk Factors After Anterior Cruciate Ligament Reconstruction	Spindler, Kurt P.; Huston, Laura J.; Chagin, Alexander	AMERICAN JOURNAL OF SPORTS MEDICINE	35	5.81
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2018 International Consensus Meeting on Muscu	Schwarz, Edward M.; Parvizi, Javan	JOURNAL OF ORTHOPAEDIC RES	27	2.728
Systematic Review and Meta-analysis of Outcom	Minkara, Anas A.; Westermann, R	AMERICAN JOURNAL OF SPORTS	26	5.81
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Emergency Department Visits Within Thirty Days	Saleh, Anas; Faour, Mhamad; Sult	JOURNAL OF ARTHROPLASTY	5	3.709
Deep Learning Preoperatively Predicts Value Me	Ramkumar, Prem N.; Karnuta, Jare	JOURNAL OF ARTHROPLASTY	5	3.709
The Role of Virtual Rehabilitation in Total and Ur	Chughtai, Morad; Kelly, John J.; Ne	JOURNAL OF KNEE SURGERY	4	1.986
Racial Disparities in Revision Total Knee Arthropl	Roche, Martin; Law, Tsun Yee; Sul	JOURNAL OF RACIAL AND ETHNI	4	1.661
Preoperative Prediction of Value Metrics and a P	Ramkumar, Prem N.; Karnuta, Jare	JOURNAL OF ARTHROPLASTY	4	3.709
Patients with a History of Treated Septic Arthritis	Sultan, Assem A.; Mahmood, Bilal	CLINICAL ORTHOPAEDICS AND R	4	4.329
Metaphyseal Fixation Using Highly Porous Cones	Denehy, Kevin M.; Abhari, Sarag; H	JOURNAL OF ARTHROPLASTY	4	3.709
Impact of Intravenous Acetaminophen on Length	Barrington, John W.; Hansen, Ryan	JOURNAL OF KNEE SURGERY	4	1.986
Five-Year Outcome of Operative and Nonoperati	Katz, Jeffrey N.; Shrestha, Swastin	ARTHRITIS & RHEUMATOLOGY	4	9.586
Donor-matched comparison of chondrogenic pro	Mantripragada, V. P.; Piuzzi, N. S.;	CONNECTIVE TISSUE RESEARCH	4	2.795
Does the Robotic Arm and Preoperative CT Planr	Marchand, Robert C.; Sodhi, Nipun	JOURNAL OF KNEE SURGERY	4	1.986
Tear characteristics and surgeon influence repair	Derwin, Kathleen A.; Sahoo, Samb	JOURNAL OF SHOULDER AND ELI	3	2.817
Revision Analysis of Robotic Arm-Assisted and M	Cool, Christina L.; Needham, Keith	JOURNAL OF ARTHROPLASTY	3	3.709
Predictors of Patient-Reported Outcomes at 2 Ye	Wright, Rick W.; Huston, Laura J.;	AMERICAN JOURNAL OF SPORTS	3	5.81
Predictors of Extended Length of Hospital Stay in	Sultan, Assem A.; Berger, Ryan J.;	SPINE	3	2.646
Postoperative stroke after anterior cervical disce	Chughtai, Morad; Sultan, Assem A	SPINE JOURNAL	3	3.191
Effect of Antibiotic-Impregnated Bone Cement in	Anis, Hiba K.; Sodhi, Nipun; Faour,	JOURNAL OF ARTHROPLASTY	3	3.709
Are Subchondral Intraosseous Injections Effectiv	Sundaram, Kavin; Vargas-Hernand	JOURNAL OF KNEE SURGERY	3	1.986
Accelerated Growth of Cellular Therapy Trials in	Piuzzi, Nicolas S.; Ng, Mitchell; Ch	ORTHOPEDICS	3	1.409
What are the Short-Term Outcomes in Multiple S	Newman, Jared M.; Sultan, Assem	JOURNAL OF KNEE SURGERY	2	1.986
Validity and efficiency of a smartphone-based el	Sahoo, Sambit; Mohr, Jill; Strnad,	JOURNAL OF SHOULDER AND ELI	2	2.817
The role of prehabilitation with a telerehabilitati	Chughtai, Morad; Shah, Neil, V; Su	ANNALS OF TRANSLATIONAL ME	2	3.297
The effect of operative time on in-hospital length	Garbarino, Luke J.; Gold, Peter A.;	ANNALS OF TRANSLATIONAL ME	2	3.297
The Main Predictors of Length of Stay After Total	Piuzzi, Nicolas S.; Strnad, Gregory	JOURNAL OF BONE AND JOINT SI	2	4.578
The Effect of Body Mass Index on 30-day Compli	Roth, Alexander; Khlopas, Anton;	JOURNAL OF ARTHROPLASTY	2	3.709
Superior 2-Year Functional Outcomes Among You	Capin, Jacob J.; Failla, Mathew; Za	ORTHOPAEDIC JOURNAL OF SPO	2	2.492
Quantifying proliferative and surface marker het	Kwee, Edward; Saidel, Gerald; Pov	JOURNAL OF TISSUE ENGINEERIN	2	3.078

Predicting Inpatient Payments Prior to Lower Ext	Karnuta, Jaret M.; Navarro, Sergio	JOURNAL OF ARTHROPLASTY	2	3.709
Outcomes of Grade III Medial Collateral Ligamen	Westermann, Robert W.; Spindler	ARTHROSCOPY-THE JOURNAL OF	2	4.325
Osteonecrosis of the femoral head with subchon	Piuzzi, Nicolas S.; Anis, Hiba K.; Mu	CLEVELAND CLINIC JOURNAL OF	2	1.552
No Difference Between Low-and Regular-dose A	Faour, Mhamad; Piuzzi, Nicolas S.	CLINICAL ORTHOPAEDICS AND R	2	4.329
Native-Osteoarthritic Joint Resident Stem and Pr	Mantripragada, Venkata P.; Bova,	AMERICAN JOURNAL OF SPORTS	2	5.81
Multicenter Evaluation of a Modular Dual Mobili	Huang, Ronald C.; Malkani, Art L.	JOURNAL OF ARTHROPLASTY	2	3.709
Mortality after hip resurfacing versus total hip ar	Brooks, Peter J.; Samuel, Linsen T.	ANNALS OF TRANSLATIONAL ME	2	3.297
Influence of Baseline Magnetic Resonance Imagin	MacFarlane, Lindsey A.; Yang, Hei	AMERICAN JOURNAL OF SPORTS	2	5.81
Dependent Functional Status is a Risk Factor for	Curtis, Gannon L.; Hammad, Aws;	JOURNAL OF ARTHROPLASTY	2	3.709
Comparison of radiographic and clinical outcome	Mahylis, Jared M.; Puzzitiello, Rich	JOURNAL OF SHOULDER AND ELI	2	2.817
Classification systems for platelet-rich plasma	Rossi, L. A.; Murray, I. R.; Chu, C. R	BONE & JOINT JOURNAL	2	4.306
Astym (R) therapy: a systematic review	Chughtai, Morad; Newman, Jared	ANNALS OF TRANSLATIONAL ME	2	3.297
Artificial Intelligence and Machine Learning in Lo	Haeberle, Heather S.; Helm, James	JOURNAL OF ARTHROPLASTY	2	3.709
Accuracy of 3-Dimensional Planning, Implant Ten	Iannotti, Joseph P.; Walker, Kyle; F	JOURNAL OF BONE AND JOINT S	2	4.578
A Nationwide Analysis of Preoperative Planning	Sodhi, Nipun; Anis, Hiba K.; Coste,	JOURNAL OF KNEE SURGERY	2	1.986
Venous thromboembolism rates remained uncha	Warren, Jared A.; Sundaram, Kavin	INJURY-INTERNATIONAL JOURNA	1	2.106
Venous Thromboembolism Rates Did Not Decrea	Warren, Jared A.; Sundaram, Kavin	JOURNAL OF ARTHROPLASTY	1	3.709
Use of an offset head center acetabular shell in d	Wassef, Andrew J.; Khlopas, Antor	ANNALS OF TRANSLATIONAL ME	1	3.297
Total Hip Arthroplasty Outperforms Hemiarthro	Warren, Jared A.; Sundaram, Kavin	GERIATRIC ORTHOPAEDIC SURGI	1	1.345
The Quality of Diagnostic Studies in Periprosthet	Saleh, Anas; George, Jaiben; Sulta	JOURNAL OF ARTHROPLASTY	1	3.709
Serum neurotrophins at birth correlate with resp	Simpson, Samantha L.; Grayson, S	PEDIATRIC PULMONOLOGY	1	2.534
Routine use of commercial antibiotic-loaded bon	Sultan, Assem A.; Samuel, Linsen T	ANNALS OF TRANSLATIONAL ME	1	3.297
Revisiting the International Normalized Ratio (IN	Rudasill, Sarah E.; Liu, Jiabin; Kam	JOURNAL OF BONE AND JOINT S	1	4.578
Quadriceps tendinopathy: a review, part 2-classi	King, Dominic; Yakubek, George; C	ANNALS OF TRANSLATIONAL ME	1	3.297
Prospective Evaluation of the Patient Acceptable	Vega, Jose F.; Jacobs, Cale A.; Strn	AMERICAN JOURNAL OF SPORTS	1	5.81
Predictors of Pain and Function Before Knee Arth	Bessette, Matthew C.; Westermar	ORTHOPAEDIC JOURNAL OF SPO	1	2.492
Patient satisfaction and outcomes of static progr	Sodhi, Nipun; Yao, Benjamin; Anis	ANNALS OF TRANSLATIONAL ME	1	3.297
Opioid Disorders Are Associated With Thromboe	Vakharia, Rushabh M.; Sabeh, Kar	JOURNAL OF ARTHROPLASTY	1	3.709
Operative Times Can Predict and Are Correlated	Sodhi, Nipun; Anis, Hiba K.; Gold,	JOURNAL OF ARTHROPLASTY	1	3.709
Not all primary total hip arthroplasties are equal	Sodhi, Nipun; Dalton, Sarah E.; Ga	ANNALS OF TRANSLATIONAL ME	1	3.297
Non-operative treatment options for knee osteo	DeRogatis, Michael; Anis, Hiba K.	ANNALS OF TRANSLATIONAL ME	1	3.297
No Difference Between Posterolateral Corner Re	Westermann, Robert W.; Marx, Ro	ORTHOPAEDIC JOURNAL OF SPO	1	2.492
Musculoskeletal-based Patient-reported Outcom	Lowry, Kent Jason; Brox, William T	JOURNAL OF THE AMERICAN AC	1	2.286
Medical Malpractice Litigation Following Primary	Samuel, Linsen T.; Sultan, Assem A	JOURNAL OF ARTHROPLASTY	1	3.709
Hemiarthroplasty or Total Hip Arthroplasty: Is Th	Rudasill, Sarah E.; Dattilo, Jonatha	GERIATRIC ORTHOPAEDIC SURGI	1	1.345
Have We Actually Reduced Our 30-Day Short-Ter	Sodhi, Nipun; Anis, Hiba K.; Garba	JOURNAL OF ARTHROPLASTY	1	3.709
Effects of a Total Knee Arthroplasty Care Pathwa	Featherall, Joseph; Brigati, David F	JOURNAL OF ARTHROPLASTY	1	3.709
Development and Validation of an Evidence-Bas	Shohat, Noam; Tan, Timothy L.; De	JOURNAL OF ARTHROPLASTY	1	3.709
Core Decompression and Bone Grafting for upda	Sultan, Assem A.; Mont, Michael A	FOOT AND ANKLE CLINICS	1	1.18
Comparing total hip arthroplasty and hemiarthroc	Tucker, Nicholas J.; Kamath, Atul F	ANNALS OF TRANSLATIONAL ME	1	3.297
Charcot Neuroarthropathy Advances Understand	Botek, Georgeanne; Figas, Samant	CLINICS IN PODIATRIC MEDICINE	1	0.729
Biomarkers for Femoroacetabular Impingement	Lynch, T. Sean; O'Connor, Michael	AMERICAN JOURNAL OF SPORTS	1	5.81
Arthroscopic irrigation and debridement is assoc	Faour, Mhamad; Sultan, Assem A.	KNEE SURGERY SPORTS TRAUMA	1	3.166
An increased body mass index was not associat	Sundaram, Kavin; Warren, Jared;	KNEE	1	1.913
A technology-enabled electronic incident report	Linder, Susan M.; Cruickshank, Jas	MEDICINE	1	1.552
A nationwide comparative analysis of medical co	Moore, Tam; Sodhi, Nipun; Kalsi, A	ANNALS OF TRANSLATIONAL ME	1	3.297
A comparison of peri-operative outcomes betwe	Anis, Hiba K.; Sodhi, Nipun; Coste,	ANNALS OF TRANSLATIONAL ME	1	3.297
A 6-year trends analysis of infections after revisi	Gold, Peter A.; Garbarino, Luke J.	ANNALS OF TRANSLATIONAL ME	1	3.297
What's New in Musculoskeletal Infection	Fehring, Thomas K.; Fehring, Keith	JOURNAL OF BONE AND JOINT S	0	4.578
Validation of a Novel Surgical Data Capturing Sys	Brown, Marsalis C.; Westermann,	JOURNAL OF THE AMERICAN AC	0	2.286
Using Edmonton Symptom Assessment Scale in F	Parsai, S.; Lawrenz, J.; Mesko, N.	INTERNATIONAL JOURNAL OF RA	0	5.859
Upper extremity myxofibrosarcoma mimicking ai	Colak, Ceylan; Kilpatrick, Scott E.	SKELETAL RADIOLOGY	0	1.618
Trends in Hip Arthroscopic Labral Repair: An Ame	Westermann, Robert W.; Day, Mo	ARTHROSCOPY-THE JOURNAL OF	0	4.325
Trends and Epidemiologic Factors Contributing to	Kuczinski, Ashley; Newman, Jared	SPORTS HEALTH-A MULTIDISCIPL	0	2.866
Total hip arthroplasty in the setting of tuberculo	Sultan, Assem A.; Dalton, Sarah E.	EXPERT REVIEW OF MEDICAL DE	0	2.2

Total Joint Arthroplasty Outcomes in Patients With	Sundaram, Kevin; Yakubek, George	JOURNAL OF ARTHROPLASTY	0	3.709
Top 100 Most-Cited Clinical Studies of Hip and Knee	Piuzzi, Nicolas S.; Sultan, Assem A.	ORTHOPEDICS	0	1.409
Timely Topics for Today's Arthroplasty Surgeon	Sodhi, Nipun; Anis, Hiba K.; Ehiorobo, Joseph O.	JOURNAL OF KNEE SURGERY	0	1.986
The Natural History of Meniscus Tears	Chambers, Henry G.; Chambers, Robert	JOURNAL OF PEDIATRIC ORTHOPEDICS	0	1.909
The Mystical Experience-An Editorial	Andrish, Jack T.	SPORTS MEDICINE AND ARTHROPLASTY	0	1.352
The Glenojet Procedure: A Bone Preserving Alternative	McCoy, Brett W.; Miniaci, Anthony	OPERATIVE TECHNIQUES IN SPORTS MEDICINE	0	0.35
The Effects of Endurance Sports on Children and Adolescents	Egger, Anthony C.; Oberle, L. Morgan	SPORTS MEDICINE AND ARTHROPLASTY	0	1.352
Systematic review of pre-operative planning models for total hip arthroplasty	Acuna, Alexander J.; Samuel, Linsen	JOURNAL OF HIP PRESERVATION	0	1.917
Survival of total hip replacements	Sodhi, Nipun; Mont, Michael A.	LANCET	0	60.392
Surgical and Medical Costs for Fibromyalgia Patients	Moore, Tara; Sodhi, Nipun; Cohen, David	JOURNAL OF KNEE SURGERY	0	1.986
Static progressive stretch orthosis-consensus model for knee osteoarthritis	Bhave, Anil; Sodhi, Nipun; Anis, Hiba K.	ANNALS OF TRANSLATIONAL MEDICINE	0	3.297
Short-term outcomes after anatomic total shoulder arthroplasty	Navarro, Sergio M.; Haeberle, Heather S.	ANNALS OF TRANSLATIONAL MEDICINE	0	3.297
Robotically Simulated Pivot Shift That Represents the Normal Range of Motion	Colbrunn, Robb W.; Dumpe, Jarrod	JOURNAL OF ORTHOPAEDIC RESEARCH	0	2.728
Risk Factors for Loss to Follow-up in 3202 Patients With Knee Osteoarthritis	Ramkumar, Prem N.; Tariq, Muhammad	AMERICAN JOURNAL OF SPORTS MEDICINE	0	5.81
Response to Letter to the Editor on "Machine Learning in Arthroplasty"	Navarro, Sergio M.; Haeberle, Heather S.	JOURNAL OF ARTHROPLASTY	0	3.709
Reliable assessment of bone marrow and bone mineral density in the hip	Mantripragada, Venkata P.; Piuzzi, Nicolas S.	REGENERATIVE MEDICINE	0	2.598
Relationship Between Sports Participation After Total Hip Arthroplasty	Bigouette, John P.; Owen, Erin C.	AMERICAN JOURNAL OF SPORTS MEDICINE	0	5.81
Relationship Between Insertion Torque and Complications After Total Hip Arthroplasty	Diaz, Miguel A.; Garrigues, Grant E.	JOURNAL OF ORTHOPAEDIC RESEARCH	0	2.728
Reasons for Revision, Oxidation, and Damage Mechanisms in Cemented Total Hip Arthroplasty	Spece, Hannah; Schachtner, Jacyr	JOURNAL OF ARTHROPLASTY	0	3.709
RESILIENCE FACTORS PREDICT RECOVERY FROM TOTAL HIP ARTHROPLASTY	Creameans-Smith, Julie K.; Salaski, David	PSYCHOSOMATIC MEDICINE	0	3.702
Quadriceps tendinopathy: a review-part 1: epidemiology and pathophysiology	King, Dominic; Yakubek, George	ANNALS OF TRANSLATIONAL MEDICINE	0	3.297
QUANTITATIVE ASSESSMENT AND COMPARISON OF RADIOGRAPHIC AND MRI FINDINGS IN KNEE OSTEOARTHRITIS	Mantripragada, V. R.; Wes, B.; Piuzzi, Nicolas S.	OSTEOARTHRITIS AND CARTILAGE	0	4.793
Prognostic utility of an magnetic resonance imaging-based model for knee osteoarthritis	Ramkumar, Prem N.; Haeberle, Heather S.	JOURNAL OF SHOULDER AND ELBOW SURGERY	0	2.817
Predictors of Radiographic Osteoarthritis 2 to 3 Years After Total Hip Arthroplasty	Jones, Morgan H.; Oak, Sameer R.	ORTHOPAEDIC JOURNAL OF SPORTS MEDICINE	0	2.492
Predicting the Need for Surgical Intervention Prior to Total Hip Arthroplasty	Vega, Jose F.; Strnad, Gregory J.	ORTHOPAEDIC JOURNAL OF SPORTS MEDICINE	0	2.492
Postoperative Infection in Cementless and Cemented Total Hip Arthroplasty	Anis, Hiba K.; Ramanathan, Deepa	JOURNAL OF KNEE SURGERY	0	1.986
Periacetabular osteotomy using three-dimensional navigation	Wirth, Stephan H.; Rahm, Stefan	JOURNAL OF HIP PRESERVATION	0	1.917
Periacetabular osteotomy using an imageless computer-assisted navigation system	Hooper, Jessica M.; Mays, Rachel	JOURNAL OF HIP PRESERVATION	0	1.917
PREDICTORS OF RADIOGRAPHIC OSTEOARTHRITIS AND FUNCTIONAL OUTCOMES AFTER TOTAL HIP ARTHROPLASTY	Jones, M. H.; Oak, S. R.; Andrish, Jack T.	OSTEOARTHRITIS AND CARTILAGE	0	4.793
Orthopedic Surgeon Payment For Joint Replacement Surgery	Kamath, Atul F.; Molloy, Robert	HEALTH AFFAIRS	0	5.331
Optimizing the Volume-Value Relationship in Lumbar Discectomy	Frankel, William C.; Navarro, Sergio	SPINE	0	2.646
Normal and Pathoanatomy of the Arthritic Shoulder	Getz, Charles L.; Ricchetti, Eric T.	JOURNAL OF THE AMERICAN ACADemy OF ORTHOPEDIC SURGEONS	0	2.286
Neighborhood Socioeconomic Status Affects Patient Outcomes After Total Hip Arthroplasty	Jones, Morgan H.; Reinke, Emily K.	ORTHOPAEDIC JOURNAL OF SPORTS MEDICINE	0	2.492
NO DIFFERENCE IN THE PREVALENCE OF PATELLOFEMORAL OSTEOARTHRITIS IN PATIENTS WITH OR WITHOUT KNEE OSTEOARTHRITIS	Li, X.; Altahawi, F.; Oak, S. R.; Winans, H. J.	OSTEOARTHRITIS AND CARTILAGE	0	4.793
Modified iliac spine wafer osteotomy for exposure of the acetabulum in total hip arthroplasty	Samuel, Linsen T.; Munim, Mohan	JOURNAL OF HIP PRESERVATION	0	1.917
Malnutrition increases the 30-day complication rate after total hip arthroplasty	Newman, Jared M.; Sodhi, Nipun	HIP INTERNATIONAL	0	1.349
Lower extremity arthroplasty Preface	Sodhi, Nipun; Ehiorobo, Joseph O.	ANNALS OF TRANSLATIONAL MEDICINE	0	3.297
Influence of Acetabular Shell Position and Complications on the Outcome of Total Hip Arthroplasty	Rueda, Carlos A. Higuera; Ferguson, David	JOURNAL OF ARTHROPLASTY	0	3.709
Incidence, Causes, and Timing of 30-Day Readmissions After Total Hip Arthroplasty	Curtis, Gannon L.; Jawad, Michael	JOURNAL OF ARTHROPLASTY	0	3.709
In-Room Ultraviolet Air Filtration Units Reduce Airborne Contamination in the Operating Room	Anis, Hiba K.; Curtis, Gannon L.; Kline, David	JOURNAL OF ORTHOPAEDIC RESEARCH	0	2.728
INCREASED JOINT SPACE NARROWING AFTER ARTHROSCOPIC DEBRIDEMENT OF THE KNEE	Santana, D. C.; Oak, S. R.; Jin, Y.; Rhee, J. S.	OSTEOARTHRITIS AND CARTILAGE	0	4.793
IDENTIFICATION AND CHARACTERIZATION OF IPSCs IN KNEE OSTEOARTHRITIS	Mantripragada, V. R.; Luangphakdeepong, J.	CYTOTHERAPY	0	4.218
Hip Arthroscopy: A Social Media Analysis of Patient Perceptions	Haeberle, Heather S.; Bartschat, Norman	ORTHOPAEDIC JOURNAL OF SPORTS MEDICINE	0	2.492
HIGH THROUGHPUT PERFORMANCE-BASED SELECTION OF KNEE OSTEOARTHRITIS PATIENTS FOR SURGERY	Mantripragada, V. R.; Carson, E.; Piuzzi, Nicolas S.	CYTOTHERAPY	0	4.218
Establishing Safe Extra-articular Parameters for Cemented Total Hip Arthroplasty	Hooper, Perry O.; Warren, Jared	AMERICAN JOURNAL OF SPORTS MEDICINE	0	5.81
Epidemiology and Impact of Prior Musculoskeletal Injuries on Total Hip Arthroplasty	Ramkumar, Prem N.; Navarro, Sergio	ORTHOPAEDIC JOURNAL OF SPORTS MEDICINE	0	2.492
Dual Nonlocked Plating as an Alternative to Locking Plates for Distal Femoral Fractures	Randall, Rachel M.; Nagle, Tara	JOURNAL OF FOOT & ANKLE SURGERY	0	1.043
Diagnostic Accuracy of the Alpha-Defensin Test for Infection in Total Hip Arthroplasty	Miyamae, Yushi; George, Jaiben	JOURNAL OF ARTHROPLASTY	0	3.709
Development and Implementation of a Multi-Disciplinary Approach to the Management of Hip Osteoarthritis	Alberts, Jay L.; Modic, Michael T.	JOVE-JOURNAL OF VISUALIZED EXPERIMENTS	0	1.163
DONOR-MATCHED COMPARISON OF CHONDROCYTES IN KNEE OSTEOARTHRITIS	Mantripragada, V. R.; Piuzzi, Nicolas S.	OSTEOARTHRITIS AND CARTILAGE	0	4.793
Current topics in robotic-assisted total hip arthroplasty	Perets, Itay; Mu, Brian H.; Mont, Michael A.	HIP INTERNATIONAL	0	1.349
Corticosteroid injections for knee osteoarthritis: a systematic review	Piuzzi, Nicolas S.; Mont, Michael A.	THERAPEUTIC ADVANCES IN MUSCULOSKELETAL MEDICINE	0	5.043
Concussion in American Versus European Professional Football	Ramkumar, Prem N.; Navarro, Sergio	AMERICAN JOURNAL OF SPORTS MEDICINE	0	5.81
Comparison of Standard and Right/Left Internal Rotation in Total Hip Arthroplasty	Magnuson, Justin A.; Strnad, Gregory	AMERICAN JOURNAL OF SPORTS MEDICINE	0	5.81
Clostridium difficile Colitis Following Revision Total Hip Arthroplasty	Curtis, Gannon L.; Yokhana, Sanar	JOURNAL OF ARTHROPLASTY	0	3.709

Clinical Utility of an MRI-Based Classification Sys	Ramkumar, Prem N.; Haeberle, He	ORTHOPAEDIC JOURNAL OF SPO	0	2.492
Clinical Faceoff: A Changing Landscape-Current a	Ramkumar, Prem N.; Urch, Ekater	CLINICAL ORTHOPAEDICS AND R	0	4.329
Changes of median nerve conduction, cross-secti	Yao, Yifei; Grandy, Emily; Jenkins,	JOURNAL OF ORTHOPAEDIC TRA	0	3.986
Carpal Tunnel Syndrome: A Potential Early, Red-f	Donnelly, Joseph P.; Hanna, Maze	JOURNAL OF HAND SURGERY-AM	0	2.124
CORR Insights (R): Temporary External Fixation C	Nystrom, Lukas M.	CLINICAL ORTHOPAEDICS AND R	0	4.329
CORR Insights (R): Regional Lymph Node Involve	Nystrom, Lukas M.	CLINICAL ORTHOPAEDICS AND R	0	4.329
CORR Insights (R): Primary Monoblock Inset Reve	Ricchetti, Eric T.	CLINICAL ORTHOPAEDICS AND R	0	4.329
CHARACTERIZATION OF HUMAN CARTILAGE-DER	Mantripragada, V. R.; Bova, W.; Pi	CYTOTHERAPY	0	4.218
Atypical "Sclerosing" Osteoblastic Neoplasm: A T	McHugh, Kelsey E.; Reith, John D.;	AMERICAN JOURNAL OF SURGIC	0	4.958
Associations of Preoperative Patient Mental Hea	Sahoo, Sambit; Ricchetti, Eric T.; Z	AMERICAN JOURNAL OF SPORTS	0	5.81
Are Patients More Satisfied With a Balanced Tot	Golladay, Gregory J.; Bradbury, Th	JOURNAL OF ARTHROPLASTY	0	3.709
Anterior and Rotational Knee Laxity Does Not Aff	Magnussen, Robert; Reinke, Emily	AMERICAN JOURNAL OF SPORTS	0	5.81
An Analysis of Centers for Medicare & Medicaid	Delanois, Ronald E.; Gwam, Chukv	JOURNAL OF ARTHROPLASTY	0	3.709
A smart decision: smartphone use for operative	Mohr, Jill; Strnad, Gregory J.; Farr	JOURNAL OF THE AMERICAN ME	0	4.112
3D printing of implants for patient-specific aceta	Tomazevic, Matevz; Kristan, Anze;	EUROPEAN JOURNAL OF TRAUM	0	2.139

## CLEVELAND CLINIC ~ Orthopaedics

Trainee Type	Total #
<b>Medical Students Medical Student Year IV (CCLCM, CWRU &amp; *other institutions)</b>	
2017	25
2018	35
2019	23
<b>Medical Students Medical Student Year III (CCLCM &amp; CWRU)</b>	
2017	6 CWRU / 2 CCLCM
2018	7 CWRU/ 4 CCLCM
2019	8 CWRU / 3 CCLCM
<b>Podiatry Students**</b>	
2017	3
2018	4
2019	4
<b>Graduate Students</b>	
2017	113
2018	118
2019	125
<b>Residents (avg/year)</b>	
	45 Orthopaedic / 2 Podiatric
<b>Fellows (avg/year)</b>	
	17
<b>CCLCM Students</b>	
2017	2
2018	5
2019	3
<b>CWRU SOM Students</b>	
2017	8
2018	18
2019	17



<b>*Medical Students MSIV (Other Institutions)</b>		
<b>2017</b>	<b>2018</b>	<b>2019</b>
Chicago Medical School, Rosalind Franklin University of Medicine & Science	Alfaisal University	Ain Shams University Faculty of Medicine
Columbia University Vagelos College of Physicians and Surgeons	Columbia University Vagelos College of Physicians and Surgeons	Baylor College of Medicine
Drexel University College of Medicine	Jordan University of Science and Technology Faculty of Medicine	Brody School of Medicine at East Carolina University
Emory University School of Medicine	Northeast Ohio Medical University (NEOMED)	Harvard Medical School
Harvard Medical School	Ohio University Heritage College of Osteopathic Medicine @ South Pointe	Johns Hopkins University School of Medicine
Indiana University School of Medicine	Pontificia Universidad Javeriana	Jordan University of Science and Technology Faculty of Medicine
Northeast Ohio Medical University (NEOMED)	Saint Louis University School of Medicine	Oakland University William Beaumont School of Medicine
Northwestern University Feinberg School of Medicine	Southeast University Medical College	Southern Illinois University School of Medicine
Perleman School of Med at The Univ of Pennsylvania	SUNY Downstate Medical Center College of Medicine	The Ohio State University College of Medicine
Sidney Kimmel Medical College at Thomas Jefferson University	SUNY Upstate Medical University College of Medicine	University of Michigan Medical School
The Ohio State University College of Medicine	The Ohio State University College of Medicine	University of Missouri School of Medicine
Un of Missouri, Kansas City School of Medicine	Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSPA) Faculdade de Medicina	University of Sydney, Sydney Medical School
University of Cincinnati College of Medicine	University of Chicago Pritzker School of Medicine	Western Michigan University Homer Stryker M.D. School of Medicine
University of Florida College of Medicine	University of Cincinnati College of Medicine	
University of Louisville School of Medicine	University of Iowa Carver College of Medicine	
University of Toledo College of Medicine	University of Michigan Medical School	
University of Virginia School of Medicine	University of Pittsburgh School of Medicine	
Washington University School of Medicine	University of Texas Southwestern Medical School	
Wright State University Boonshoft School of Med	University of Toledo College of Medicine	
	University of Virginia School of Medicine	
	Wayne State University School of Medicine	

**Podiatry Students MSIV (Other Institutions)			
Arizona Podiatric Medicine Program, Barry University School of Graduate Medical Sciences, California School of Podiatric Medicine at Samuel Merritt University, Des Moines University College of Podiatric Medicine, New York College of Podiatric Medicine, Kent State University College of Podiatric Medicine, Dr. William M. Scholl College of Podiatric Medicine at Rosalind Franklin University of Medicine and Science, Temple University School of Podiatric Medicine, Western University of Health Sciences, College of Podiatric Medicine			
Medical Students Year III Kent State University College of Podiatric Medicine (1 week rotation)			
2017	2018	2019	
62	61	60	
Graduates Students (Physical Therapy Internships)			
2017	2018	2019	
Cleveland State University	Cleveland State University	Cleveland State University	
Drexel College	Drexel College	College of Mount St Joseph	
	Duke University		
Duquesne University	Duquesne University		
Emory University	Emory University	Emory University	
Gannon University	Gannon University	Gannon University	
Marquette University	Marquette University	Marquette University	
Medical College of South Carolina	Medical College of South Carolina	Medical College of South Carolina	
Mount St Joseph University		Mount St Joseph University	
Ohio University	Ohio University	Ohio University	
Rosalind Franklin			
		Saint Francis University	
Shenandoah University			
Slippery Rock University		Slippery Rock University	
The Ohio State University	The Ohio State University	The Ohio State University	
The University of Findlay	The University of Findlay	The University of Findlay	
The University of Toledo	The University of Toledo	The University of Toledo	
	The University of Saint Augustine		
University of Dayton	University of Dayton	University of Dayton	
	University of Pittsburgh	University of Pittsburgh	
Walsh University	Walsh University	Walsh University	
		Washington University	
Wheeling Jesuit University	Wheeling Jesuit University	Wheeling Jesuit University	
Youngstown State University	Youngstown State University	Youngstown State University	
Post Graduate Physical Therapy Residents 2017-2019 - SPORTS 2 / ORTHO 10			

**Post Graduate Physician Assistant Students 2017-2019 - 12 per year**

Baldwin Wallace University, Butler University, Case Western Reserve University, Cleveland State University-Tri-C, Duquesne University, Gannon University, Kettering University, Lake Erie College, Marietta College, Ohio Dominican University, Ohio University, The University of Findlay, The University of Toledo, University of Dayton, University of Mount Union

August 31, 2020

Stanton L. Gerson, MD  
Interim Dean, CWRU School of Medicine  
Case Western Reserve University  
10900 Euclid Avenue  
Cleveland, OH 44106

Dear Dean Gerson:

It is my privilege to propose the creation of the Academic Department of Physical Medicine and Rehabilitation at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University. The Academic Chair of this new Physical Medicine and Rehabilitation department would be the same person as the Clinical Chair of Physical Medicine and Rehabilitation at Cleveland Clinic, who is Dr. François A. Bethoux.

François Bethoux, MD, physiatrist, currently serves as Chair of the Department of Physical Medicine and Rehabilitation in the Cleveland Clinic Neurological Institute. He is also Director of Rehabilitation Services at the Cleveland Clinic Mellen Center for MS Treatment and Research, and Medical Director of the Cleveland Clinic Art + Design Institute. He holds an appointment as Professor of Medicine in the Cleveland Clinic Lerner College of Medicine at Case Western Reserve University. Dr. Bethoux is Fellowship Director for the Cleveland Clinic Musculoskeletal Rehabilitation Fellowship, has co-mentored several trainees in the Mellen Center Neuroimmunology Fellowship, and is a member of the Clinical Competency Committee for the CWRU/MetroHealth Traumatic Brain Injury and Spinal Cord Injury Rehabilitation fellowships. He has been the editor in chief of the International Journal of MS Care since 2014. He sits on the Board of Governors and on the Research Committee of the Consortium of MS Centers.

Dr. Bethoux received his medical degree from Claude Bernard University, in Lyon France, and a Doctorate in Life Sciences from Jean Monnet University in Saint Etienne, France. After his residency training in Physical Medicine and Rehabilitation, he completed a research fellowship in the Functional Electrical Stimulation Center at MetroHealth Medical Center/Case Western Reserve University in Cleveland, and a clinical neuroimmunology fellowship at the Mellen Center. Dr. Bethoux joined the Cleveland Clinic staff in 2003. His clinical activity is primarily focused on multiple sclerosis rehabilitation, gait rehabilitation in neurological disorders, and spasticity management. His clinical research focuses mainly on evaluating interventions to improve walking in persons with MS and other central nervous system disorders. He was the overall Principal Investigator of a multi-center trial comparing functional electrical stimulation to ankle foot orthosis for the management of foot drop after stroke. He has presented the results of this research internationally, and has authored or co-authored more than 100 articles and book chapters. He co-edited the textbook *Multiple Sclerosis and Related Disorders: Diagnosis, Medical Management, and Rehabilitation*.

The Cleveland Clinic Foundation

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Cleveland, Ohio 44195

Tel 216 442 5627  
Fax 216 636 1348  
barnetg@ccf.org / clevelandclinic.org/ccfcm

A program of

## **1. The breadth and depth of the identified faculty's teaching and research productivity.**

The Cleveland Clinic Department of Physical Medicine and Rehabilitation (PM&R) is renowned for its clinical and academic excellence. Cleveland Clinic Rehabilitation Hospitals were rated #1 in Ohio by Newsweek in 2020, based on reputation and performance metrics.

The PM&R residency program, led by Dr. John Lee, trains a total of 6 residents from PGY-2 to PGY-4 (2 residents per year). Our program's reputation is rapidly growing, and we matched #1 and #6 in 2019. Most members of the PM&R Department's staff serve as faculty for our residents, both in the inpatient and outpatient setting, covering a wide range of conditions, including neurological, musculoskeletal, and spine rehabilitation, chronic pain and spasticity management. Educational opportunities for our residents include didactics, journal club, ultrasound and botulinum toxin injection workshops, and cadaver lab. Our PM&R residents and MSK fellow are required to complete a research project (based on a research curriculum developed by our faculty) and to publish their results during their training period. We also welcome 6 PM&R residents from MetroHealth Medical Center every year for outpatient clinic and inpatient consultation rotations. The PM&R Department hosts a Musculoskeletal Rehabilitation Fellowship, with one fellow every 1-2 years. The Spine Medicine Fellowship, hosted by CC Spine Center, trains 4 fellows per year, most of them physiatrists. In addition, Spinal Cord Injury and Traumatic Brain Injury fellows from MetroHealth Medical Center rotate in our department for 2-3 months every year, as well as Cleveland Clinic Vascular Neurology and Pain Management fellows. We host a total of 25 medical students per year from CCLCM, CWRU SOM, Ohio University, and other institutions. Two staff members (Dr. Lee and Dr. Nemunaitis) are in a Clinician Educator career track.

The PM&R Department has developed its own clinical research infrastructure, including two staff members on a Clinician Scientist career track (Dr. Johnson and Dr. Linder). In addition, the department actively collaborates with researchers in the Biomedical Engineering Department of the Lerner Research Institute (particularly with Dr. Ela Plow), in the Mellen Center for MS Treatment and Research, and in the Center for Value-Based Care Research. Research topics include health services outcomes, clinical trials of interventions to improve functional performance and quality of life in central neurological disorders (stroke, spinal cord injury, multiple sclerosis, Parkinson's disease), technology-enhanced rehabilitation, motion analysis, and functional imaging to investigate the mechanism of action of rehabilitation interventions. We provide support and mentoring for clinicians who want to be involved in clinical research. As mentioned above, we support research efforts from trainees, including medical students (particularly by mentoring CCLCM students during their summer research rotation), residents, and fellows.

## **2. Any additional factors that are relevant to the proposed new department.**

The proposal to create an Academic Department of Physical Medicine and Rehabilitation comes at the request of former Dean Pamela Davis. Faculty members of the clinical department are actively involved in the teaching of medical students, residents, and fellows, and it is fitting that they be recognized for the academic pursuits in this specialty. They are currently in the Academic Department of Medicine and would then transfer into the newly created Academic Department of Physical Medicine and Rehabilitation. At its inception, CCLCM purposefully started with few departments, however as the College has matured, we believe that it is important to align our academic departments with those of the other institutions that are CWRU-SOM teaching institution and that in this case, Physical Medicine and Rehabilitation is sufficiently robust that it should stand apart from the Academic Department of Medicine.

**3. An analysis of the effect of establishment of the second department on existing departments of the School of Medicine.**

Creation of this department would parallel the existence of such academic departments at other CWRU School of Medicine teaching hospitals, but would have no adverse impact on them and may facilitate academic interaction amongst them. The new academic department will clearly define the academic disciplines that already exist within its clinical department.

**4. A statement that research publications authored by faculty with an appointment in the new department will make note of the Case Western Reserve University faculty appointment.**

Research publications authored by faculty with an appointment in this new department will make note of their Case Western Reserve University faculty appointment.

**5. A five-year business plan demonstrating how the second department will achieve and maintain financial viability or, in the alternative and if appropriate, the proposal should affirm that the new department will not require funding from the School of Medicine.**

The creation of this department will have no financial impact on CWRU or the School of Medicine and will not require any funding from either. It is anticipated that this validation of the faculty's academic accomplishments will further stimulate these pursuits in the future. Further, the alignment of these faculty appointments with the other CWRU-SOM departments should facilitate engagement with students and faculty at the new Health Education Campus.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gene Barnett', with a stylized flourish extending to the right.

Gene H. Barnett, MD, MBA  
Associate Dean for Faculty Affairs  
Professor of Neurological Surgery

August 31, 2020

Stanton L. Gerson, MD  
Interim Dean, CWRU School of Medicine  
Case Western Reserve University  
10900 Euclid Avenue  
Cleveland, OH 44106

**RE: François A. Bethoux, MD**  
**Application for Appointment as Academic Chair, Department Physical Medicine and Rehabilitation**  
**within Cleveland Clinic Lerner College of Medicine of Case Western Reserve University**

Dear Dean Gerson:

On behalf of Gene H. Barnett, MD, Cleveland Clinic Lerner College of Medicine Associate Dean of Faculty Affairs, our Faculty Appointment and Promotions Committee, and the Cleveland Clinic Lerner College of Medicine Executive Team, I would like to propose François A. Bethoux, MD as the new Chair for the Academic Department of Physical Medicine and Rehabilitation, within the Cleveland Clinic Lerner College of Medicine. Dr. Bethoux was chosen as he is the current Chair of the Department of Physical Medicine and Rehabilitation and is well suited to this leadership position.

François Bethoux, MD, physiatrist, currently serves as Chair of the Department of Physical Medicine and Rehabilitation in the Cleveland Clinic Neurological Institute. He is also Director of Rehabilitation Services at the Cleveland Clinic Mellen Center for MS Treatment and Research, and Medical Director of the Cleveland Clinic Art + Design Institute. He holds an appointment as Professor of Medicine in the Cleveland Clinic Lerner College of Medicine at Case Western Reserve University. Dr. Bethoux is Fellowship Director for the Cleveland Clinic Musculoskeletal Rehabilitation Fellowship, has co-mentored several trainees in the Mellen Center Neuroimmunology Fellowship, and is a member of the Clinical Competency Committee for the CWRU/MetroHealth Traumatic Brain Injury and Spinal Cord Injury Rehabilitation fellowships. He has been the editor in chief of the International Journal of MS Care since 2014. He sits on the Board of Governors and on the Research Committee of the Consortium of MS Centers.

Dr. Bethoux received his medical degree from Claude Bernard University, in Lyon France, and a Doctorate in Life Sciences from Jean Monnet University in Saint Etienne, France. After his residency training in Physical Medicine and Rehabilitation, he completed a research fellowship in the Functional Electrical Stimulation Center at MetroHealth Medical Center/Case Western Reserve University in Cleveland, and a clinical neuroimmunology fellowship at the Mellen Center.

The Cleveland Clinic Foundation

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SCHOOL OF MEDICINE  
CASE WESTERN RESERVE  
UNIVERSITY

Dr. Bethoux joined the Cleveland Clinic staff in 2003. His clinical activity is primarily focused on multiple sclerosis rehabilitation, gait rehabilitation in neurological disorders, and spasticity management. His clinical research focuses mainly on evaluating interventions to improve walking in persons with MS and other central nervous system disorders. He was the overall Principal Investigator of a multi-center trial comparing functional electrical stimulation to ankle foot orthosis for the management of foot drop after stroke. He has presented the results of this research internationally, and has authored or co-authored more than 100 articles and book chapters. He co-edited the textbook *Multiple Sclerosis and Related Disorders: Diagnosis, Medical Management, and Rehabilitation*.

In summary, we are very enthused to have François A. Bethoux, MD be the chair of our new CCLCM Physical Medicine and Rehabilitation academic department. His enthusiasm and dedication will serve the students and faculty well at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University.

Please let me know if you have any questions.

Sincerely,



J. Harry Isaacson, MD  
Executive Dean, Cleveland Clinic Lerner College of Medicine  
Professor of Medicine



## **CURRICULUM VITAE**

### **François André BETHOUX**

Office address: Department of Physical Medicine and Rehabilitation /Desk S31  
The Cleveland Clinic Foundation  
9500 Euclid Avenue  
Cleveland, OH 44195  
Phone : (216) 445.7352  
Fax : (216) 636.2634  
Email : bethouf@ccf.org  
ORCID: 0000-0003-4784-9418

#### **Current Appointments:**

Jul 2019-present Chairman, Department of Physical Medicine and Rehabilitation  
Cleveland Clinic  
  
Aug 2017-present Professor of Medicine  
Cleveland Clinic Lerner College of Medicine  
Case Western Reserve University  
  
Jan 2016- present Medical Director  
Arts and Medicine Institute  
Cleveland Clinic  
  
Jan 2003- present Director of Rehabilitation Services – Associate Staff  
The Mellen Center for MS Treatment & Research  
Cleveland Clinic

#### **Past Appointments**

Jan 2001- Dec 2002 Clinical Associate - Department of Neurology  
The Cleveland Clinic  
  
Nov 95 - Oct 97 Assistant Professor -Jean Monnet University, Saint Etienne (France);  
  
Nov 95 - Oct 97 Associate Staff - Department of Physical Medicine and Rehabilitation, Bellevue University  
Hospital, Saint Etienne (France).

#### **Administrative Functions/Committees:**

2019-present Member Clinical Competency Committee for the CWRU/MetroHealth SCI Medicine fellowship.  
2016-present Member, Cleveland Clinic Aesthetics Committee  
2011-2015 Member, Arts & Medicine Institute Advisory Committee  
2009-2015 Chair, Neurological Institute Patient Experience Outcomes Group  
2007-2013 Quality Officer, the Mellen Center for MS  
2007-2013 Co-Chair, Neurological Institute Falls Committee and member, CC Falls Committee  
2007-2011 Member of the Cleveland Clinic Neurologic Institute Hospital Operations Council (NIHOC)

#### **Other Professional Activities:**

2015-present: Multiple Sclerosis Section editor, US Neurology  
2014-present: Editor in Chief, International Journal of MS Care  
2014-present: Member, Board of Governors, Consortium of Multiple Sclerosis Centers  
2006-present: Member, Research Committee, Consortium of Multiple Sclerosis Centers.  
2004-2015: Chair, Research Interest Group on Symptom Management, Consortium of Multiple Sclerosis Centers.

Editorial board member: 2013-present Annals of Physical Medicine and Rehabilitation  
2010-present US Neurology  
2009-2014 MS In Focus (journal of the MS International Federation)  
2008-2013 International Journal of MS Care.

Ad hoc journal reviewer (past and present)

American Journal of Physical Medicine and Rehabilitation  
Annals of Physical Medicine and Rehabilitation  
Archives of Physical Medicine and Rehabilitation  
Disability and Rehabilitation  
Journal of the Neurological Sciences  
Journal of Neurology, Neurosurgery, and Psychiatry  
Journal of Rehabilitation Research and Development  
Multiple Sclerosis International  
Multiple Sclerosis Journal  
Multiple Sclerosis Journal: Experimental, Translational and Clinical  
Muscle and Nerve  
Neurology  
Neuromodulation  
Neurorehabilitation and Neural Repair  
Physiotherapy Theory and Practice  
Quality of Life Research

Grant reviews

Multiple Sclerosis Scientific Research Foundation (MSSRF) Collaborative Team Grant Review Committee - 2018

National Multiple Sclerosis Society:

2010-present: Fast Forward Therapeutic Development Programs Treating Symptoms of MS  
2010-2017: Scientific Peer Review Committee C  
2006-2011: NMSS Pilot Grant Program reviewer

### **Licensure**

10/00 - Present: State Medical Board of Ohio

### **Education and Postgraduate Training**

Nov 97 – Dec 2000 Clinical Neuroimmunology Fellowship  
The Mellen Center for Multiple Sclerosis  
The Cleveland Clinic Foundation, Cleveland OH

Nov 94 - Oct 95 Rehabilitation Research Fellowship  
Rehabilitation Engineering Center  
Case Western Reserve University - MetroHealth Medical Center, Cleveland OH

May 91 - Oct 94 Residency Training - Physical Medicine and Rehabilitation (France)  
Geriatric Rehabilitation (Dr Delomier); La Charité Hospital, Saint Etienne  
General and Neurological Rehabilitation (Dr Minaire); Bellevue University Hosp, Saint Etienne  
Pediatric and Orthopedic Rehabilitation (Dr Mouilleseaux); La Digoyniere Clinic, St Etienne  
Neurological Rehabilitation (Dr Eyssette); Henry Gabrielle University Hospital, Lyon

Sept 82 - Oct 90 Medical Studies :

Alexis Carrel Medical School (now RTH Laennec Medical School)  
Claude Bernard University - Lyon, France

### **Examinations and Diplomas**

#### **USA**

Dec 1999 USMLE Step 3

May 97 Test Of English as a Foreign Language (TOEFL) Score : 670 (maximum score = 677)  
Test of Written English (TWE) : score = 5 (maximum score = 6).

Sept 95 Educational Commission for Foreign Medical Graduates (ECFMG) Certification:  
- United States Medical Licensing Examination (USMLE) Steps 1 and 2

Updated 03/04/2019

Jun 95 General Record Examination (GRE) General Test

**France**

Oct 97 Doctorate in Life Sciences [Doctorat d'Etat en Sciences de la Vie]  
Jean Monnet University - Saint Etienne, France  
Title of thesis : "From impairment to quality of life : a study of the consequences of vascular hemiplegia on patients and proxies"  
Thesis Director : Dr Bernard Laurent  
Dept of Neurology, Bellevue University Hospital - Saint Etienne, France

Oct 94 Board of Physical Medicine and Rehabilitation [Diplôme d'Etudes Spécialisées en Médecine Physique et Réadaptation]  
Jean Monnet University - Saint Etienne, France  
Title of clinical research report : "Quality of life assessment in hemiplegic stroke patients : utility of the Reintegration to Normal Living Index".

Oct 94 Diploma of Advanced Studies in Sciences and Techniques Applied to Handicap and Rehabilitation [Diplôme d'Etudes Approfondies Sciences et Techniques Appliquées au Handicap et à la Réadaptation]  
University of Bourgogne - Dijon, France  
Title of clinical research report : "Quality of life of the spouses of stroke patients".

Oct 90 M.D.  
Claude Bernard University - Lyon, France  
Title of thesis : "Therapeutic trial of cyclophosphamide in Charcot's Disease (Amyotrophic Lateral Sclerosis)" [Essai thérapeutique de cyclophosphamide dans la maladie de Charcot].  
Thesis Director : Dr C.Confavreux  
Neurologic Hospital - Lyon, France

June 82 Baccalaureate (Lyon, France)

**Society Memberships**

2018 – Present	Association of Academic Physiatrists (AAP)
2009 - Present	Rehabilitation in Multiple Sclerosis (RIMS)
2000 - Present	American Academy of Neurology (AAN)
1997 - Present	International Society for Quality of Life Research (ISOQOL)
1996 - Present	French Society of Physical Medicine and Rehabilitation (SOFMER)

**Awards-Honors**

1998 2<sup>nd</sup> prize – Neuroscience Research Day – The Cleveland Clinic Foundation

**Current Research**

**Funded research**

2020-2021 - A pilot single-blind randomized controlled trial to evaluate the safety and feasibility of interactive rhythmic auditory stimulation for gait training in persons with Multiple Sclerosis.

Role: PI

The overall goal of this pilot randomized controlled trial is to assess the safety and acceptability of interactive rhythmic auditory stimulation (RAS) music combined with gait training in individuals with MS and walking impairment.

2019-2021 - A Randomized Controlled Trial Utilizing the Arts to Improve Health, Resilience, and Well-Being in Individuals with Chronic Health Conditions in Underserved Neighborhoods

Sponsor: National Endowment for the Arts

Role: co-investigator

The purpose of this randomized controlled study is to determine the outcomes of an 8-week arts-based program on the health, resilience, and well-being of individuals with chronic health conditions (HeRe We Arts™) in an outpatient underserved community setting as compared to outcomes from individuals participating in a separate 8-week non-arts-based health education program (HeRe We Ed) in the same setting.

Updated 03/04/2019

2018- 2022 - Comparing a Multiple Sclerosis Fatigue Management Course Delivered via Teleconference, Internet, or in Person (Reducing Fatigue and Restoring Energy to Support Health (REFRESH))

Sponsor: PCORI

Role: co-investigator (PI: Matthew Plow, PhD)

This study compares 3 modes of delivery of a fatigue management program (teleconference, internet, in-person) in individuals with MS-related fatigue.

2/1/18-1/31/22 - Comparative Effectiveness of an Exercise Intervention Delivered via Telerehabilitation and Conventional Mode of Delivery.

Sponsor: PCORI

Role: co-investigator (PI: Deborah Backus PhD), 20% effort

This study assesses the comparative impact of a 16-week telerehabilitation exercise program and a facility-based exercise program on walking and mobility outcomes, social and vocational participation, and quality of life in persons with MS. The research study design is a two-stage randomized choice design aimed at non-inferiority. Outcomes are assessed at the end of treatment and 12 months later.

2018-2020 - A Multicenter, Open-Label Safety and Efficacy Study of ADS-5102 Amantadine Extended Release Capsules in Patients with Multiple Sclerosis and Walking Impairment (Protocol ADS-AMT-MS303)

Sponsor: Adamas Pharmaceuticals

Role: Site PI

Open-label extension study to test the efficacy and safety of amantadine extended-release capsules in individuals with MS and walking impairment.

2016-2021 - Deep cerebellar electrical stimulation for post-stroke motor recovery

Sponsor: NIH 1UH3NS100543-01

Role: Co-investigator (Andre Machado PI), 10% effort

The purpose of this feasibility study is to obtain clinical experience and scientific evidence to evaluate the feasibility, safety and effectiveness of electrical stimulation of the dentate nucleus of the cerebellum for the treatment of chronic upper extremity hemiparesis due to ischemic stroke.

#### Unfunded research

2009-2014 “Validation of the Spasticity Subscale of Performance Scales in Multiple Sclerosis Patients with Spasticity”

Co-investigator

Mellen Center Spasticity Registry - IRB 5105 Ongoing.

#### **Completed Research**

##### The Cleveland Clinic – Funded Research

2019-2020 - Pilot study of Powered Exoskeleton Use for Gait Rehabilitation in Individuals with Multiple Sclerosis

Internally funded (Cleveland Clinic Annual Fund and Research Program Committee grants)

Role: PI

The main goal of this pilot study is to investigate the safety and feasibility of using the Ekso exoskeleton for gait training in individuals with MS and moderate to severe walking limitations, and to gather preliminary efficacy outcomes to power a larger clinical trial.

2018-2020 - A 3-Arm, Multicenter, Double-Blind, Placebo-Controlled, Randomized Study to Assess the Efficacy and Safety of ADS-5102 Amantadine Extended Release Capsules in Multiple Sclerosis Patients with Walking Impairment (Protocol ADS-AMT-MS301).

Sponsor: Adamas Pharmaceuticals

Role: Site PI

Phase III RCT to test the efficacy and safety of amantadine extended-release capsules in individuals with MS and walking impairment.

2017-2019 - A Randomized Controlled Trial Utilizing the Arts to Improve Health, Resilience, and Well-Being in Individuals with Chronic Health Conditions.

Sponsors: Cuyahoga Arts and Culture

Role: co-investigator (PI: Lisa Gallagher)

This study assesses the effects of an 8-week group intervention to promote the use of the arts to enhance health, resilience, and well-being in community-dwelling individuals presenting with a variety of chronic health conditions.

2017 - Measurement of Walking Speed in Individuals with Multiple Sclerosis using the Echo5D System.

Sponsor: Atlas5D

Role: Study PI, 3% effort

The primary objective of this study is to provide validation data on measurements collected with the Echo5D system, with a focus on walking speed. Echo5D is a new system developed by Atlas5D, which allows continuous measurement of body motion in the home as usual activities are performed. Echo5D measurements will be validated against validated measures of gait and walking.

2016-2017 – Monitoring exertion-induced changes in gait parameters in patients with relapsing-remitting MS.

Sponsor: Consortium of MS Centers

Role: Study PI, 1% effort

Pilot study to measure exertion-induced changes in gait (motor fatigue) in patients with relapsing-remitting MS and low disability, and their evolution over a 6-month period. A subset of participants will undergo diffusion tensor imaging of the corticospinal tract to assess the relationship between DTI findings and gait changes.

2015-2017 - Validation of the MSPT Walking and Balance Tests

Sponsor: Biogen

Role: Study PI, 5% effort

The goal of this investigator-initiated study is to validate the Walking Speed Test and Balance Test of the MSPT, including concurrent validity with a variety of measures of walking and gait, and sensitivity to change.

2015-2016 - A Double-Blind, Placebo-Controlled, Parallel-Group Study to Evaluate the Efficacy and Safety of Two Dose Strengths of Dalfampridine Extended Release Tablets for Treatment of Stable Walking Deficits in Post-Ischemic Stroke (MILESTONE)

Sponsor: Acorda Therapeutics – Protocol # DALF-PS-1016

Role: Site PI

Phase III multi-center, double-blind, three arm, parallel group, placebo-controlled, randomized clinical trial to evaluate the efficacy, safety and tolerability of dalfampridine-ER tablets for treatment of stable walking deficits in subjects with post-ischemic stroke.

2015-2016 - Safety and Efficacy of ADS-5102 (amantadine HCl) Extended Release Capsules in Patients with Multiple Sclerosis and Walking Impairment.

Sponsor: Adamas – Protocol # ADS-AMT-MS201

Role: Site PI

Phase II multi-center, randomized, double-blind, placebo-controlled, 2-arm, parallel group study of ADS-5102 in MS subjects with walking impairment.

2014-2015 - Physical Therapy Enhanced with a Virtual Environment: Impact on Ambulation, Mood, and Cognition.

Sponsor: Consortium of MS Centers

Role: Study PI

Investigator-initiated trial comparing traditional physical therapy to PT enhanced with the use of a virtual reality environment.

2013-2015 - Effects of a home based walking program using rhythmic auditory stimulation on walking and cortical activation in patients with MS.

Sponsor: Kelvin & Eleanor Smith Foundation

Role: Study PI

Investigator-initiated trial of rhythmic auditory stimulation (RAS, a neuro-music therapy technique) on gait in patients with MS. The study includes fMRI assessment of changes in cortical activation induced by RAS during mental imagery of walking.

2013-2014 - The Effects of Yoga Practice on Walking and Balance in Ambulatory Multiple Sclerosis Patients.

Sponsor: Consortium of MS Centers Pilot Grant

Role: Study PI

Pilot study comparing the effects of yoga and those of relaxation and guided imagery on walking and balance in patients with multiple sclerosis.

2013-2014 - Prospective, open-label, non-randomized, single-arm, multi-center dose titration study to investigate the safety and efficacy of NT 201 in subjects deemed to require total body doses of 800 U of NT 201 during the course of the study for the treatment of upper and lower limb spasticity of the same body side due to cerebral causes. (Protocol MRZ60201\_3053\_1, TOWER study).

Sponsor: Merz Pharmaceuticals

Role: Site PI

Open label trial to assess the safety and efficacy of high doses of incobotulinum toxin A in patients with spasticity of cerebral origin.

2012-2014 - Innovative Outcomes Assessment of MS Patients Treated with Gilenya in a Real-World Setting.

Sponsor: Novartis (Non-interventional Study Protocol HEORUS0367)

Role: Co-investigator

Validation of a novel method for testing motor and cognitive impairment in MS patients.

2011-2014 – Evaluating the effects of physical activity and fatigue management strategies.

Sponsor: National MS Society. Grant # RG 4665-A-1

Total amount: \$225,748.10

Role: Co-investigator, 8% effort. PI: Matthew Plow.

The purpose of this project is to evaluate the relationship between fatigue and inactivity and to introduce a combination of interventions aimed at improving both fatigue and inactivity levels in persons with MS.

2010-2014 – Clinically Applied Rehabilitation Engineering (CARE)

Sponsor: Ohio Department of Development. Grant # TECH 11-019

Total amount: \$1,940,000.00

Role: co-investigator, 3% effort. PI: Margot Damaser.

Consortium focused on improving rehabilitation devices.

2013 – 2014 Effects of rhythmic auditory stimulation on cortical activation with mental imagery of walking in patients with MS.

Sponsor: Cleveland Clinic Arts & Medicine Institute

Role: Study PI

Pilot study of the immediate effects of rhythmic auditory stimulation (RAS, a neuro-music therapy technique) on gait and on cortical activation during mental imagery of walking, in patients with MS.

2012- 2013 A Double-Blind, Placebo-Controlled, Crossover Study in Subjects with Cerebral Palsy to Evaluate the Safety and Tolerability and the Effect on Sensorimotor Function of Dalfampridine-ER

Sponsor: Acorda Therapeutics. Protocol # DALF-CP-1002.

Total amount: \$ 38,509

Role: Site PI, 1% effort.

Phase 2 randomized controlled trial of dalfampridine in patients with cerebral palsy.

2011-2013 – Combining physical therapy with dalfampridine in patients with MS and walking limitations: a randomized crossover pilot study.

Sponsor: Acorda Therapeutics (investigator-initiated study)

Total amount: \$158,752.00

Role: PI, 2% effort.

Pilot study comparing the effects of physical therapy (treatment) versus a home stretching program (control) in MS patients already treated with dalfampridine.

2010-2013 - Impact of a hip flexion assist orthosis on gait performance in multiple sclerosis patients.

Sponsor: National Multiple Sclerosis Society

Total amount: \$274,868.00. Grant # RG 3979A3/3

Role: PI, 15% effort.

Single-blind controlled clinical trial of a hip flexion assist device on ambulation in MS patients.

2010-2013 - Randomized Trial of the Innovative Neurotronics WalkAide Compared to Conventional Ankle- Foot Orthosis (AFO) in Stroke Patients (INSTRIDE)

Sponsor: Innovative Neurotronics.

Total amount: \$202,935.00 + \$150,000

Role: Study PI and site PI, 7% effort.

Multi-center trial of the WalkAide functional electrical stimulation device for foot drop in hemiparetic stroke patients, compared to standard of care (AFO). The trial has been approved by CMS and the FDA.

2010-2013 - Promoting physical activity behavior for persons with multiple sclerosis.

Sponsor: National Institute on Child Health and Human Development. Grant # R03HD060073-ARRA

Total amount: \$93,465.00.

Role: Co-investigator, 5% effort. PI: Matthew Plow, PhD

Randomized controlled pilot study of a print-based intervention to enhance physical activity in individuals with multiple sclerosis.

2009-2013 - Neural Effects of Exercise, Cognitive, and Combined Training in Persons At-Risk for AD

Sponsor: NIH/National Institute on Aging. Grant # RC1AG035775-ARRA.

Total amount: \$554,508.32

Role: Co-investigator, 13% effort. PI: Stephen Rao, PhD

Randomized control study to evaluate the efficacy of low-risk and relatively inexpensive interventions for addressing cognitive decline in older age.

2011-2012 “Double-Blind, Placebo-Controlled, Parallel-Group Study to Evaluate the Safety and Efficacy of Two Doses of Oral Dalfampridine Extended Release Tablets (5 mg and 10 mg twice daily) in Patients with Multiple Sclerosis”

Acorda Therapeutics Protocol # DER-401

Site PI

2010- 2012 “The Effects of Rhythmic Auditory Stimulation on Patients with MS”

Cleveland Clinic RPC (Research Programs Committees) Internal Grant

and Consortium of MS Centers Pilot Project Grant

Study PI

2009- 2012 “The effect of biofeedback in MS”

Bakken Heart-Brain Institute at the Cleveland Clinic Pilot Grant

Co- investigator

2007-2010 “Open-Label Extension Study to Evaluate the Safety, Tolerability and Activity of Oral Fampridine-SR in Patients with Multiple Sclerosis who Participated in the MS-F204 Trial”

Acorda Therapeutics Inc. Protocol MS-F204 EXT

Principal Investigator

2006-2010 “Open-Label Extension Study to Evaluate the Safety, Tolerability and Activity of Oral Fampridine-SR in Subjects with Multiple Sclerosis who Participated in the MS-F203 Trial”

Acorda Therapeutics Inc. Protocol MS-F203 EXT

Principal Investigator; 2% effort; total amount \$59,504

2004-2010 “Open-Label Extension Study to Evaluate the Safety, Tolerability and Activity of Oral Fampridine-SR in Subjects with Multiple Sclerosis”

Acorda Therapeutics Inc. Protocol MS-F202 EXT

Principal Investigator

2004-2010 “Quality of Life Outcomes in Neurological Disorders”

NINDS contract HHSN26520043601C \$4,157,456

Co-investigator; 1% effort

2006-2009 “Gait-QOL Feasibility Study”

Sponsored by Medtronic, Inc.

Principal Investigator; \$12,792

2005-2009 “Evaluation of the Effect of Intrathecal Baclofen (ITB) Therapy on Gait Performance in Ambulatory Multiple Sclerosis Patients, Using Three-Dimensional Gait Analysis.”

Sponsored by Medtronic, Inc.

Principal Investigator; 5% effort; total amount \$131,430

2005-2009 "Prospective Evaluation of Spasticity and Functional Status in Ambulatory Multiple Sclerosis Patients with Severe Spastic Paraparesis."

Sponsored by Medtronic, Inc.

Principal Investigator; 5% effort; total amount \$47,255

2001-2009 "A Study of The Effect of Intrathecal Baclofen On Spasticity and Functional Status in Ambulatory Patients with Multiple Sclerosis."

Sponsored by Medtronic, Inc.

Principal Investigator; 5% effort; total amount \$121,640

2003-2009 "Implantable System Performance Registry"

Sponsored by Medtronic, Inc. (protocol # NSP0010-0000)

Principal Investigator; 5% effort; total amount \$13,400

2007 "Double-Blind, Placebo-Controlled, Parallel Group Study to Evaluate the Safety and Efficacy of Oral Fampridine-SR (10 mg B.I.D.) in Patients with Multiple Sclerosis"

Acorda Therapeutics Inc. Protocol MS-F204.

Principal Investigator

2005-2007 "Mental Practice of Action as a Novel Tool for Rehabilitation in MS."

National Multiple Sclerosis Society pilot study grant PP1148

Co-investigator; 1% effort; total amount \$8,800

2005-2006 "Double Blind, Placebo-Controlled, 21-Week, Parallel Group Study to Evaluate Safety and Efficacy of Oral Fampridine SR (10 mg B.I.D.) in Subjects with Multiple Sclerosis."

Acorda Therapeutics, Inc. Protocol MS-F203

Principal Investigator

2005-2006 "Efficacy Of A Hip Flexion Assist Orthosis In Ambulatory Multiple Sclerosis Patients."

National Multiple Sclerosis Society pilot study grant PP1112

Principal Investigator

2003 "Double Blind, Placebo-Controlled, 20-week, Parallel Group Study of Oral Fampridine-SR in Subjects with Multiple Sclerosis"

Acorda Therapeutics, Inc. Protocol MS-F202

Principal Investigator

2002 - "Botulinum A Toxin (Botox) injection as a treatment for detrusor hyperreflexia"

Co-investigator

2002 - "Botulinum A Toxin (Botox) injection as a treatment for detrusor-sphincter dyssynergia (DSD)"

Co-investigator

2001 "A Double Blind, Dose-Ranging Study of Fampridine-SR in Subjects with MS"

Acorda Therapeutics Inc. Protocol No. MS-F201

Treating Physician

2000 – 2001 "A Multinational, Multicenter, Randomized, Double-Blind, Placebo-Controlled Study to Evaluate the Efficacy, Tolerability and Safety of 2 Doses (5 mg and 50 mg) of Glatiramer

Acetate Orally Administered in RRMS Patients" (Protocol GA/7023/7023)

Examining Physician

2000 – 2003 "Randomized, controlled trial of rehabilitation following acute relapses of MS"

Study funded by the National Multiple Sclerosis Society

Principal Investigator

1998 – "Phase 2 study of Hu23F2G multidose in acute exacerbations of multiple sclerosis"



## Examining Physician

1997 – 1999 “A randomized study of low-fat diet with  $\omega$ -3 fatty acids supplementation in patients with relapsing-remitting multiple sclerosis”  
Examining Physician

## The Cleveland Clinic Foundation – Quality Improvement and Outcomes Research Projects

2001 - "Evaluation of the reliability and validity of the revised CCF Falls Minimization Protocol."  
Co-investigator

1998-2000 “The outcome of hip and knee replacement for osteoarthritis”  
Data Manager / Study Coordinator  
Cleveland Clinic Foundation

1998-1999 “Restraint reduction in the acute care setting”  
Data Manager - Cleveland Clinic Foundation site

## Unfunded research

2009 “Effect of Time of The Day on Walking Capacity on Persons With MS & Differential Value of Walking Capacity Tests”  
Rehabilitation in Multiple Sclerosis (RIMS) network  
Co-investigator

2009 “The Effects of Modified Melodic Intonation Therapy on patients with Expressive Aphasia on an Acute Care Hospital Unit”  
Co-investigator

2008–2009 “The Effects of Rhythmic Auditory Stimulation (RAS) on Gait Performance in the Multiple Sclerosis Patient.” - IRB 08-820  
Principal Investigator

Comprehensive Peripheral Nerve Clinic Registry – IRB 6733

## Department of Physical Medicine and Rehabilitation - University Jean Monnet - Saint Etienne, France

### Unfunded research

1997 “French Translation of the Functional Assessment Measure”  
1997 “Evolution of the quality of life of spouses of hemiplegic stroke patients over time : a prospective study”  
1996 - 97 “Physical activity, perceived health status and rehabilitation program in amputees: a multi-center study”  
1994 “Quality of life assessment in stroke patients : utility of the Reintegration to Normal Life Index”  
1994 “Quality of Life of the spouses of stroke patients”

## Rehabilitation Engineering Center - Case Western Reserve University - Cleveland, Ohio

1995 “Motor impairment as a predictor of disability in acute stroke patients : role of cognition”  
1994 - 95 “Effectiveness of percutaneous FES for the restoration of functional grasp – release movements in hemiplegic stroke patients”  
1994 - 95 “Surface stimulation and motor recovery in acute stroke patients”

## Teaching

### USA

2019-present - Member Clinical Competency Committee for the CWRU/MetroHealth SCI Medicine fellowship.  
2019-present - Member Clinical Competency Committee for the CWRU/MetroHealth TBI Medicine fellowship.

6/7/18 – MetroHealth Medical Center PM&R Resident Didactics - Spasticity Management in Clinical Practice.

2016-present Faculty, Cleveland Clinic Physical Medicine and Rehabilitation Residency Program

10/8/15 – Cleveland Clinic Neurology resident noon conference: Evaluating and Managing Spasticity.

8/4/15: Cleveland Clinic Neurology resident Journal Club: Writing for Publication - An Overview of the Journal Publishing Process.

2015-2016      Cleveland Clinic School of Yoga  
Lecture (90 mn): “Yoga and Neurological Disorders: Example of Multiple Sclerosis”

2001-present: Cleveland Clinic Foundation:

Mentor, elective rotations for:

- Residents in Neurology
- Residents in Physical Medicine and Rehabilitation (since 2006)
- Clinical Neuroimmunology Fellows
- Spinal Cord Injury Fellows (since 2007)

### France

- Jacques Lisfranc Medical School - Jean Monnet University

Dec 1996 : organization of a two-day seminar on Physical Medicine and Rehabilitation for 3rd - 4th year medical students

- Jean Monnet University, Department of Physical Medicine and Rehabilitation

1991 - 1997 : Lectures on various rehabilitation topics, from biomechanics to social reintegration

- Jean Monnet University, Vocational Training in Social Sciences

1994 : “Epidemiology of Handicap”

- Jean Monnet University, Diploma of Orthopedic Medicine

1994 : “Muscular testing, neurological examination”

-School of Physical Therapy, Saint Etienne

1993 - 1997 : First year students : “General Medicine and Prevention” (24 hours)

1996 : Second year students : “Stroke : prevention and risk factors, clinical syndromes, rehabilitation”

-Bellevue University Hospital, Saint Etienne, Vocational Training,

1993 - 1997 : “Handicap : history, concepts, social and medical issues”

-National School of Driving Security and Prevention (accredited by the French Government)

1996 : “Motor vehicle driving and Motor Handicap”

-Institute for Research and Training of Social Workers, Saint Etienne

1996 - 1997 : Medicine (30 hours)

-Orthotics and Orthopedics Diploma for Pharmacists, University Jean Monnet - Saint Etienne

1996 : “Orthopedic shoes”

-Continuing Education, Casino Inc., Saint Etienne

1996 : “Employment of People with disabilities”

- National Diploma of Physical Therapy

1996 - 1997 : jury member

### Thesis committees

2018- Member of thesis committee for Robert Unger, Cleveland Clinic Lerner College of Medicine

### Continuing Education

11/7/19 - Faculty – Live demonstration of botulinum toxin injections for spasticity. *8th Annual Comprehensive Neurotoxin Course for Neurological Conditions*. Cleveland, OH.

6/28/19 – Faculty – *Technology for MS Rehab: What does the Future Hold?* Mellen Center Update in Multiple Sclerosis. Cleveland, OH

5/29/19 – Course Director - *Utilizing the Power of the Arts in MS Care: Everyone Benefits*. 2019 Annual Meeting of the Consortium of Multiple Sclerosis Centers, Seattle WA.

Presentation: *Evidence supporting the use of the arts in the management of MS*

5/16/19 – Grand Rounds - *Is it Feasible to Improve Walking in MS?* New York-Presbyterian Hospital / Weill Cornell Medical Center, New York NY.

11/9/18 - Faculty – Live demonstration of botulinum toxin injections for spasticity. *7th Annual Comprehensive Neurotoxin Course for Neurological Conditions*. Cleveland, OH.

9/13-15/18 - Spasticity and Neuromotor Rehabilitation: Pediatric and Adult Symposium 2018. Setting the Tone Across the Lifespan, Cleveland OH

- Symposium co-director
- Faculty:
  - o 9/13/18: *Spasticity Management Across Conditions: Focus on Intrathecal Baclofen*
  - o 9/14/18: *Ultrasound Muscle Localization for Botulinum Toxin Injections*  
*Botulinum Injection Techniques & Nerve Block*

4/19/18 and 5/16/18 – Faculty - *Writing for Scientific Publication and Presentation in Multiple Sclerosis* (Part 1 and Part 2). Webinars sponsored by the Consortium of MS Centers and the International Organization of MS Nurses.

11/10/17 - Faculty – *Live demonstration of botulinum toxin injections for spasticity*. 6th Annual Comprehensive Neurotoxin Course for Neurological Conditions. Cleveland, OH.

12/15/16 – Faculty - *Functional Electrical Stimulation: Evidence and Application*. Webinar sponsored by the Australian Orthotic Prosthetic Association:

11/11/16 - Faculty – *Live demonstration of botulinum toxin injections for spasticity*. 5th Annual Comprehensive Neurotoxin Course for Neurological Conditions. Cleveland, OH.

10/22/16 – Faculty – *MS Spasticity Management in Clinical Practice*. Modern Advances in Multiple Sclerosis Spasticity Management. Holy Name MS Center, Teaneck, NJ.

6/2/16 – Faculty – *Current Topics and Trends in Rehabilitation: Therapeutic Outcomes and Intervention Strategies*. 2016 Annual Meeting of the Consortium of Multiple Sclerosis Centers. National Harbor, MD.

5/13-5/14/16 - *Spasticity and other Movement Disorders: Pediatric and Adult Symposium 2016*. Cleveland, OH.

- Symposium co-director
- Faculty: Botulinum Toxin/Nerve Block Injection Techniques – Upper and Lower Extremity

1/4/2016 – Neurology Grand Rounds - *Integrating Arts into Medicine: Rhythmic Auditory Stimulation in Patients with Neurologic Disorders*. Cleveland Clinic, Cleveland, OH.

11/6/15 - Faculty – *Live demonstration of botulinum toxin injections for spasticity*. 4th Annual Comprehensive Neurotoxin Course for Neurological Conditions. Cleveland, OH.

11/3/15 - Multiple Sclerosis Monthly Reports - *Evaluation and Treatment of Gait Disturbance in MS*. case-based CME webcast. <http://www.clevelandclinicmeded.com/online/webcasts/ms-vgr/gait-disturbance-in-ms/>

5/27/15 – Course Director – *Writing for Publication*. 2015 Annual Meeting of the Consortium of Multiple Sclerosis Centers. Indianapolis, IN.

11/22/14 - Faculty – *Live demonstration of botulinum toxin injections for spasticity*. 3rd Annual Comprehensive Neurotoxin Course for Neurological Conditions. Cleveland, OH.

10/10/14 – *Spasticity Management Across the Lifespan: a Pediatric and Adult Symposium*. Cleveland, OH.

Symposium co-chair

Faculty – *Treatment Options – Surgical & Medical Management*.

Faculty – *Botulinum Toxin Injection Techniques for Spasticity*.

9/2014 – Faculty - *“Patient Simulation: Managing Symptoms Related to Multiple Sclerosis.”* Medscape Neurology program MS78. <http://www.medscape.org/viewarticle/830155>

6/27/14 – Faculty – *The Role of New Technologies in MS: There's an App for That!* Mellen Center Update in Multiple Sclerosis (MS). Cleveland, OH.

12/14/13 – Faculty – *Live demonstration of botulinum toxin injections for spasticity.* 2nd Annual Comprehensive Neurotoxin Course for Neurological Conditions. Cleveland, OH.

December 2013 – Faculty - *Study Companion: Mastering Clinical Concepts in Multiple Sclerosis Management.* Web-based CME program developed by the Annenberg Center for Health Sciences.

6/21/13 – Faculty - *Analyzing and Treating Gait Disorders in MS.* Mellen Center Update on Multiple Sclerosis (MS). Cleveland, OH.

5/31/13 – Symposium co-chair - *Best Practices in Mobility in MS: A Consensus.* Fifth Cooperative Meeting of CMSC and ACTRIMS. Orlando, FL.

5/29/13 - Workshop Faculty - *Writing for Publication: An Overview of the Journal Publishing Process.* Fifth Cooperative Meeting of CMSC and ACTRIMS. Orlando, FL.

5/28/13 – CME Event Faculty - *Case Challenges: Improving the Assessment and Management of Symptoms of Impaired Mobility in MS—Dialogue with the Experts.* Fifth Cooperative Meeting of CMSC and ACTRIMS. Orlando, FL.

4/11/13 – Grand Rounds - *Post-Stroke Spasticity Diagnosis and Management – A Case-based Initiative.* Summa Rehabilitation Hospital - Akron, OH.

10/5/12 – Faculty - *Rehabilitation Interventions to Improve Walking in Persons with MS: the “Low Cost Approach”.* 2012 International Symposium on the Multiple Sclerosis Brain. Hartford, CT.

8/18/12 – Faculty – *Live demonstration of botulinum toxin injections for spasticity.* Comprehensive Neurotoxin Course for Neurological Conditions. Cleveland, OH.

6/9/12 – Faculty – *Spasticity and the Role of Botulinum Toxin.* Current And Emerging Uses Of Botulinum Toxins In Neurology And Rehabilitation: A Comprehensive Practical Skills Workshop. Birmingham, MI.

6/8/2012 – Faculty - *Assessment and Treatment of Walking Limitations in MS.* Mellen Center Update on Multiple Sclerosis. Cleveland, OH.

2/17/12 – Chair - *The Multiple Sclerosis Rehabilitation Team: A Patient-Centered Approach.* Internet CME activity sponsored by the University of Cincinnati.

1/30/12 – *Ambulation in Patients with Stroke and Multiple Sclerosis (MS): Only a Matter of Speed?* Neurology Grand Rounds. Cleveland Clinic Foundation.

10/1/11 – Faculty - *Clinician-administered measures of gait.* 1<sup>st</sup> International Symposium on Gait and Balance in Multiple Sclerosis: Gait and Balance as Biomarkers in MS. Portland, OR.

9/16/11 – Faculty – *Spasticity and stroke: from acute to long term management.* Cleveland Clinic 3<sup>rd</sup> Annual Practical Management of Acute Stroke Conference. Cleveland, OH.

7/19/2011 – Webcast CME Activity chair - *Maintaining Quality of Life in MS: Strategies for Interdisciplinary Medicine and Rehabilitation Management. Improving the Health Care Provider-Patient Relationship.* CME Outfitters

6/24/2011 – Faculty - *MS Rehabilitation Update.* Mellen Center Update on Multiple Sclerosis. Cleveland, OH.

6/1/2011 – Faculty - *Improving Mobility for Patients With MS: Pharmacologic and Nonpharmacologic Approaches.* Online recorded presentation, MS Virtual Grand Rounds.

6/1/2011 – Clinical course chair. *Ambulation and MS: “Walking is man’s best medicine”.* 25th Annual Meeting of the Consortium of Multiple Sclerosis Centers. Montreal, QC, Canada.

4/21/2011 – Webcast faculty. *Considering the Key Tenets of Comprehensive Care for Multiple Sclerosis: An Interdisciplinary Panel Discussion*. University of New Mexico Health Sciences Center, School of Medicine PeerView CME/CNE activity.

11/4/2010 – Symposium chair. *Improving Ambulation in MS*. Satellite symposium at the American Academy of Physical Medicine and Rehabilitation annual meeting. Seattle, WA.

10/21/2010 – Symposium faculty. *Advances in Outcome Measures for Neurologic Disorders*. 2010 ACRM-ASNR Joint Educational Conference: Progress in Rehabilitation Research. Montreal, QC, Canada.

6/11/10 – Faculty. *Complex Cases 2 – Rehabilitation Issues*. Mellen Center Update on Multiple Sclerosis. Cleveland, OH.

6/4/10 – Symposium Director. *Improving Walking in MS: Create your Ambulation Toolbox*. 24th Annual Meeting of the Consortium of Multiple Sclerosis Centers. San Antonio, TX.

10/22/09 – Satellite symposium faculty. *Quantifying physical disability—ambulation, strength, and spasticity (New Approaches to Assessing Functionality in MS: Benchmarks for Patient Management)*. American Academy of Physical Medicine and Rehabilitation 70<sup>th</sup> Annual Assembly. Austin, TX.

10/15/09 – Symposium faculty. *Osteoporosis and Multiple Sclerosis*. 24<sup>th</sup> Annual Meeting of the French Society of Physical Medicine and Rehabilitation. Lyon, France.

10/3/09 – Symposium Co-Director. *Spasticity Management in Motion: Midwest Spasticity Conference 2009 and the Pediatric Spasticity Symposium*. Cleveland, OH.

9/16/09 – Medicine Grand Rounds. *Update on Treatment Options for Cerebral & Spinal Origin Spasticity in Adults*. Lakewood Hospital, Lakewood, OH.

8/5/09 – Neurosurgery Grand Rounds. *Use of Intrathecal Baclofen Therapy in Ambulatory Stroke and Multiple Sclerosis Patients with Severe Spasticity*. Cleveland Clinic Foundation, Cleveland, OH

5/27/09 - Clinical Course Chair. *Assessing and Treating Spasticity in MS*. 23<sup>rd</sup> Annual Meeting of the Consortium of Multiple Sclerosis Centers. Atlanta, GA.

5/28/09 – Workshop Faculty. *Quality of life in MS: the Role of the Team*. 23<sup>rd</sup> Annual Meeting of the Consortium of Multiple Sclerosis Centers. Atlanta, GA.

5/29/09 - Symposium Chair. *Using Technology to Improve Ambulation: a Team Effort*. 23<sup>rd</sup> Annual Meeting of the Consortium of Multiple Sclerosis Centers. Atlanta, GA.

3/25/09 – Neurology Grand Rounds. *The Impact of Spasticity Management on Ambulation in Patients with Multiple Sclerosis*. St John's Mercy Medical Center. St Louis, MO

11/20/08 – Course Faculty. *The Mind, Legs and Eyes of Multiple Sclerosis*. 69<sup>th</sup> American Academy of Physical Medicine and Rehabilitation Annual Assembly. San Diego, CA.

9/26-9/27/08 – Symposium Co-Director. *Optimizing Function Through Spasticity Management: Midwest Spasticity Conference 2008*. Cleveland, OH

6/6/08 – Keynote Speaker. *Modern Spasticity Management*. Mellen Center Regional Symposium on Multiple Sclerosis. Cleveland OH.

11/12/07 – Physical Medicine and Rehabilitation Grand Rounds. *Effects of Rehabilitative Interventions and Spasticity Management on Gait Performance in Ambulatory Patients with Multiple Sclerosis*. MetroHealth Medical Center, Cleveland OH.

9/27/07 – Workshop Faculty. *Advanced Strategies for the Management of Ambulatory Patients With Spastic Hypertonia*. American Academy of Physical Medicine and Rehabilitation 68<sup>th</sup> Annual Assembly, Boston MA

9/20-9/21/07 – Symposium Co-Director. *The Continuum of Spasticity Management: Midwest Spasticity Conference and the Pediatric Spasticity Symposium*. Cleveland OH

2007 – Activity Director. *Evaluation and Management of Spasticity in Multiple Sclerosis*. Web-based presentation (Consortium of Multiple Sclerosis Centers).

6/2/07 – Workshop Director. *Spasticity Management. Improving Comfort and Function*. Consortium of Multiple Sclerosis Centers Annual Meeting. Washington DC.

9/26/06 – Center for Neurological Restoration Grand Rounds. *Using Intrathecal Baclofen in Adult Patients with Severe Spasticity*. Cleveland Clinic Foundation, Cleveland OH.

9/21-9/22/06 – Course Faculty. *Midwest Spasticity Conference*. Ann Arbor, MI

6/2/06 – Symposium Director. *Assessment and Management of Disorders of Ambulation in MS*. 20<sup>th</sup> Annual Conference of the Consortium of MS Centers; Scottsdale, AZ.

1/6/06 - Grand Rounds. *Use of Intrathecal Baclofen Therapy in Ambulatory Patients with Multiple Sclerosis and other Neurologic Disorders*. Mary Free Bed Rehabilitation Hospital, Grand Rapids, MI.

8/22/05 – Grand Rounds. *Spasticity Management with Intrathecal Baclofen in Adult Ambulatory Patients*. Cleveland Clinic Foundation, Cleveland, OH.

6/9-6/10/05 – Course Faculty. *Midwest Spasticity Conference 2005 – Innovative Management Approaches for Adult & Pediatric Applications*. Ypsilanti, MI

6/6/05 – Workshop Director. *Does my patient need a baclofen pump?* Navigating the World of Multiple Sclerosis – Consortium of MS Centers' 19<sup>th</sup> Annual Meeting; Orlando, FL

3/4/05 – Course Faculty. *Management of Spasticity in Children*. The Cleveland Clinic Foundation – Cleveland, OH

6/10-6/11/04 – Course Faculty. *Midwest Spasticity Conference*; Ann Arbor, MI

6/5/04 – Workshop Director. *Facing the Challenges of Spasticity Management in MS*. The Art and Science of Multiple Sclerosis – Consortium of MS Centers Annual Meeting; Toronto, Canada

3/5/04 – Neurology Grand Rounds. *Challenges in the Management of Severe Spasticity in Multiple Sclerosis*; Cedars-Sinai Medical Center; Los Angeles, CA

3/25/03 – Neurology Grand Rounds. *Spasticity Management in Multiple Sclerosis*; Ohio State University; Columbus, OH

### **Invited Presentations**

5/15/18 – *Transition to Adult Spasticity Management*. Shaker Rehabilitation Hospital Therapy Services Grand Rounds. Cleveland OH.

5/19-5/20/17 - *Quantitative gait analysis in MS rehabilitation and clinical Trials*. International Conference on Spinal Cord Involvement and Imaging in MS and NMOSD. Berlin, Germany.

6/3/15 – *Can walking be improved in individuals with multiple sclerosis?* FES Center Seminar. Cleveland, OH.

5/19/14 – Faculty - *Arts in Medicine: Why Do We Need It? A Doctor's Perspective*. 5<sup>th</sup> Annual Patient Experience: Empathy + Innovation Summit. Cleveland, OH

7/27/13 – Faculty – *Relax: An Overview on Spasticity*. Cleveland Clinic 4<sup>th</sup> Annual APN/PA Pharmacology Conference.

11/8/12 – Faculty – *Spasticity: an Overview*. Cleveland Clinic 15th Annual Innovations in Neuroscience. Cleveland, OH.

10/30-10/31/09 – Course Director. *Management of Severe Spasticity National Symposium*. Washington, DC.

10/16/09 – Symposium faculty. *Quantitative Gait Analysis and Multiple Sclerosis*. 24<sup>th</sup> Annual Meeting of the French Society of Physical Medicine and Rehabilitation. Lyon, France.

9/18/09 – Visiting lecturer. *Unique Characteristics of Spasticity in Multiple Sclerosis*. S.T.A.R. (Spasticity Treatment and Research) Center at TIRR Memorial Hermann. Houston, TX.

5/15/08 – Speaker. *Multiple Sclerosis: a Course for Occupational and Physical Therapists*. Organized by the National Multiple Sclerosis Society Buckeye Chapter. Cleveland, OH.

5/9/08 – Session co-chair and invited lecturer. *Intrathecal baclofen treatment*. RIMS (Rehabilitation in Multiple Sclerosis) 2008 Meeting: Targeting Good Practice in MS Care and Rehabilitation. Leuven, Belgium.

2/7/08 – Invited lecturer. *Interventions for improving gait performance in MS patients*. Montreal Neurological Institute. Montreal, QC, Canada.

12/3/07 – Visiting Professor. *Effects of rehabilitation interventions on gait performance in patients with multiple sclerosis*. Department of Physical Medicine and Rehabilitation, University of Washington. Seattle, WA.

9/7/07 – Invited lecturer. *Evaluation of the consequences of spasticity and its treatments in multiple sclerosis patients*. IRDPQ - CIRRS. Québec, QC, Canada.

9/6/07 – Invited lecturer. *Management of Spasticity in Multiple Sclerosis*. Hôpital de l'Enfant Jésus. Québec, QC, Canada

6/22-6/23/07 – Course Faculty. *Spasticity Management National Symposium*. Minneapolis, MN.

11/15/06 – *Intrathecal Baclofen Therapy – Overview*. Presentation to Medical Mutual of Ohio case managers. Cleveland OH

11/3-11/4/06 – Course Faculty. *Management of Spasticity in the Adult Population*. Houston, TX.

9/14/06 – *Spasticity in MS and its Treatments*. Professional Education Program for health care providers.

8/2/06 – *Treatment of spasticity in adult patients*. Presentation to physical and occupational therapists from Cleveland Clinic Home Care agency.  
CEU

1/13-1/15/06 – Course Faculty. *Spasticity Management in the Patient with Stroke or MS: The Role of ITB Therapy*. San Francisco, CA

12/2/05 – Course Director. *ITB Therapy for Spasticity Management in Patients with MS and Stroke*. Baltimore, MD

9/15-9/17/05 – Invited Speaker. *Avances en Neurorehabilitacion Impacto en la Recuperation del Paciente - Hospital Santo Tomas XVIII Jornadas Cientificas*. Panama City, Panama.

8/19-8/21/05 – Course Faculty. *Advanced Practice in ITB Therapy: Achieving Good Outcomes*. Minneapolis, MN

5/5/05 – Course Faculty. *Multiple Sclerosis: A Course for Occupational and Physical Therapists*. National MS Society Ohio Buckeye Chapter – Columbus, OH  
CEU

1/22-1/23/05 – Course Faculty. *Spasticity Management for Multiple Sclerosis: ITB™ Therapy and Other Treatment Options*. Atlanta, GA

12/4/04 – Course Faculty. *Pharmacological Neuromodulation Therapies for Voiding Dysfunction*; The Cleveland Clinic Foundation - Cleveland OH

10/23-10/24/04 – Course Faculty. *ITB Therapy for the Management of Spasticity: A Course for the Adult Neurologist*; The Cleveland Clinic Foundation - Cleveland, OH.

3/23/04 – *Challenging Spasticity in Multiple Sclerosis*; Maryland Center for MS, University of Maryland – Johns Hopkins Hospital; Baltimore, MD

9/13/03 – Course Director. *Managing Severe Spasticity: a Comprehensive Approach to Managing Patients with Multiple Sclerosis*; Columbus, OH

8/15-8/16/03 – Course Faculty. *Advanced ITB Therapy Course*; Baltimore, MD

7/18-7/20/03 – Course Faculty. *Managing Severe Spasticity: the Role of ITB Therapy*; San Francisco, CA

11/1/02 – Neurology and Physical Medicine & Rehabilitation Grand Rounds. *Rehabilitation and Multiple Sclerosis*; University of Rochester; Rochester, NY

6/14/02 – Multiple Sclerosis: Spasticity Management. *MS Pathology, Diagnostics, and Contemporary Treatments*; The Cleveland Clinic Foundation; Cleveland, OH

4/4/02 - Intrathecal baclofen therapy in clinical practice. *The Total Case Manager VIII*; Cleveland I-X Center; Cleveland, OH

6/16/01 - Management of spasticity and tremor. *Comprehensive Multiple Sclerosis Care in the Era of Disease Modifying Therapy*; Cleveland OH

4/28/01 - ITB therapy in MS: miracle treatment or dangerous temptation ?  
*Spasticity Management Workshop*; Medtronic Inc., Minneapolis MN

#### **Task force / Expert panel**

6/15-17/16 - Addressing the Needs of People with Advanced MS. Stakeholder meeting convened by the National Multiple Sclerosis Society. Chicago, IL. Panel member.

9/15/12 – Co-chair – CMSC consensus conference: Comprehensive Management of Complex Symptoms in Multiple Sclerosis. Cleveland, OH.

4/2/11 – CMSC consensus conference: Functional Capacity Evaluation in MS. Cleveland, OH.

12/10-12/12/10 – CMSC consensus conference: Best Practices in Comprehensive MS Symptomatic Management. Short Hills, NJ.

11/28-11/29/07 - Consensus conference on Rehabilitation Outcomes. Sponsored by the Consortium of Multiple Sclerosis Centers. Chicago, IL.

2005 – National Multiple Sclerosis Society Cognition and MS Consensus Task Force

5/23-5/24/05 – NMSS, NCMRR/NIH and NMSC Workshop: *Increasing the Quality and Quantity of MS Rehabilitation Research*. New York, NY.

2004 - Rehabilitation Consensus Statement Task Force. *Rehabilitation: Recommendations for Persons with Multiple Sclerosis*. Expert Opinion Paper from the Medical Advisory Board of the National Multiple Sclerosis Society.

#### **Patient education**

7/21/18 - *Managing Spasticity and Activity Limitations*. MSWorld Talks: A Total Wellness Approach to Living with MS! Cleveland OH.

4/8/14 – *Multiple Sclerosis and Walking*. Program sponsored by the Buckeye Chapter of the National Multiple Sclerosis Society.

4/11/13 - *Spasticity and Stroke*. Presentation at the Lakewood Hospital Stroke Support Group Meeting. Lakewood, OH.

5/15/12 - *Walking with MS: fighting the consequences of MS on mobility*. National Multiple Sclerosis Society patient education teleconference series.



11/12/11 – *MS and Walking*. What's Hot in MS? National Multiple Sclerosis Society patient education program. Cleveland, OH.

10/9/10 – *MS on the Move: New Ways to Enhance Mobility*. What's Hot in MS? National Multiple Sclerosis Society patient education program. Cleveland, OH.

3/25/09 – *Movement for Living Program*. Sponsored by Medtronic, Inc.

6/19/08 – *How to Maximize your Mobility*. Jumpstart Program: an introduction to the Heuga Center for Multiple Sclerosis and its wellness-program philosophy. Cleveland, OH.

6/21/06 – *Botulinum toxin therapy and multiple sclerosis*. Multiple Sclerosis Society support group. Parma. OH.

12/10/05 – *Mobility in Multiple Sclerosis*. MS Active Source patient seminar. Cleveland, OH.

5/14/05 – *Pain and Mobility Issues in MS: Therapeutic Options*. Educational seminar for MS patients and their loved ones. Living with MS: Practical Considerations. Saginaw, MI

11/6/04 – *Movement for Living Program*. Sponsored by Medtronic, Inc.

10/16/04 – Keynote Speaker: *Is Rehabilitation Useful in MS?* National MS Society, Eastern North Carolina Chapter. Healthy Living with MS: the Pathway to Wellness. Raleigh, NC

2004 North American Education Conference. *The Path Back from an MS Attack*. National Multiple Sclerosis Society 2004: 124 p.

10/4/03 – *Management of Spasticity in Multiple Sclerosis*. National MS Society Buckeye Chapter Educational Program. Columbus OH.

8/2/03 – *Management of Spasticity in Multiple Sclerosis*. Active Source seminar. Independence OH

4/12/03 – *Spasticity- what can we do, what should we do about it?* Multiple Sclerosis Society Columbus chapter patient education program. Columbus, OH

10/19/02 – *Management of spasticity in multiple sclerosis*. Multiple Sclerosis Society Cleveland chapter patient education program. Independence, OH

## **Publications**

### **Journal articles**

1. Abbamatarco J, Griffin A, Jones N, Hartman J, McKee K, Wang Z, Nagel SJ, Machado AG, Bethoux FA. Long-Term Outcomes of Intrathecal Baclofen in Ambulatory Multiple Sclerosis Patients: A Single Center Experience. *Multiple Sclerosis Journal*. Online First publication July 14, 2020.
2. Plow M, Packer T, Mathiowetz VG, Preissner K, Ghahari S, Sattar A, Bethoux F, Finlayson M. REFRESH protocol: A noninferiority randomized clinical trial comparing internet and teleconference to in-person “Managing Fatigue” interventions on the impact of fatigue among persons with multiple sclerosis. *Accepted for publication in BMJ Open June 2020*.
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23. Bethoux F : Qualité de vie post-AVC: le rôle de l'aidant [quality of life after stroke: role of the informal caregiver]. In Azouvi P, Bussel B : *Rééducation de l'hémiplégie vasculaire*; Frison-Roche ed., Paris 2003:147-56.
24. Bethoux F : Treatment of tremor. In Rudick RA and Goodkin DE : *Multiple Sclerosis Therapeutics*; Martin Dunitz ed., London 1999: 553-60
25. Gautheron V, Calmels P, Bethoux F : Qualité de vie et maladies neuro-musculaires [Quality of life and neuromuscular diseases]. In Pelissier J and Urtizberea JA : *Les Maladies Neuromusculaires : de la génétique à la Réadaptation*; Masson ed., Paris 1996
26. Calmels P, Bethoux F, Villard C, Gonard C, Fayolle I, Domenach M, Minaire P : Echelles d'incapacité et de qualité de vie chez l'hémiplégique vasculaire [Disability and quality of life scales in hemiplegic stroke patients]. In *Le médecin rééducateur et les hémiplégies vasculaires* ; Frison Roche ed.; Paris 1994:149-63

#### Presentations / Abstracts

1. Bethoux F, Nichol K, Wagner J, Berwaerts J, Checketts D, Gardener E, Cartwright K. Effect of Nabiximols on Spasticity and Muscle Strength in Patients with Multiple Sclerosis (MS) across 3 Randomized Controlled Trials. Poster presentation at the *2020 annual meeting of the Consortium of MS Centers*. Virtual poster presentation.
2. Plow M, Finlayson M, Motl R, Bethoux F. Randomized Controlled Trial of Telehealth Interventions Among Adults With Multiple Sclerosis. Oral presentation at the *ACRM 2019 Annual Conference*. 5-8 November 2019, Chicago, IL. Abstract published in *Arch Phys Med Rehabil* 2019; 100(10):e26-e27.
3. Stough DK, Alberts J, Koenig K, Lowe M, Ontaneda D, Streicher M, Bethoux F. Monitoring Exertion-Induced Changes in Gait Parameters in Patients with Relapsing-Remitting MS: 6 Month Follow-up Data. Poster presentation at the *2019 annual meeting of the Consortium of MS Centers*. May 29-June 1, 2019, Seattle, WA. Abstract published in *Int J MS Care* 2019;21 (Suppl.1):87.
4. Smith J, Hartman J, McKee K, Bethoux F. Improving Appointment Compliance Rate in Multiple Sclerosis Patients with Intrathecal Baclofen Pumps Using Specialty Care Coordination. Poster presentation at the *2019 annual meeting of the Consortium of MS Centers*. May 29-June 1, 2019, Seattle, WA. Abstract published in *Int J MS Care* 2019;21 (Suppl.1):53.



5. Hartman J, Abbatemarco J, Griffin AC, Machado A, McKee K, Nagel S, Bethoux F. Complications of Intrathecal Baclofen Therapy in MS Patients with Severe Spasticity Based on Ambulation Status. Poster presentation at the *2019 annual meeting of the Consortium of MS Centers*. May 29-June 1, 2019, Seattle, WA.  
Abstract published in *Int J MS Care* 2019;21 (Suppl.1):98-9.
6. Jones N, Abbatemarco J, Griffin A, Hartman J, McKee K, Machado A, Nagel S, Bethoux F. Predictors of Intrathecal Baclofen Therapy Outcomes in Multiple Sclerosis Patients. Poster presentation at the *2019 annual meeting of the Consortium of MS Centers*. May 29-June 1, 2019, Seattle, WA.
7. Plow M, Motl RW, Finlayson M, Bethoux F. Identifying mediators to increase physical activity and fatigue self-management behaviors in adults with multiple sclerosis. Platform presentation at the *40th Annual Meeting and Scientific Sessions of the Society of Behavioral Medicine*. March 6-9, 2019, Washington, DC.
8. Bethoux F, Gallagher L, Jukic M. Arts in Health Research: Let's Team Up!  
Platform presentation at the *National Organization for Arts in Health 2018 Conference*, October 8-10, 2018, Austin, TX.
9. Ben-Zacharia A, Bethoux F, Volandes A. Professionals' Knowledge and Attitudes About End of Life in Multiple Sclerosis. Poster presentation at the *2018 annual meeting of the Consortium of MS Centers*. May 30-June 2, 2018, Nashville, TN.  
Abstract published in *Int J MS Care* 2018;20(S1):44.
10. Griffin AC, Abbatemarco J, Hartman J, Jones N, McKee K, Machado A, Nagel S, Bethoux F. Assessing the Efficacy of Intrathecal Baclofen Therapy in Ambulatory and Nonambulatory Patients. Poster presentation at the *2018 annual meeting of the Consortium of MS Centers*. May 30-June 2, 2018, Nashville, TN.  
Abstract published in *Int J MS Care* 2018;20(S1):76-7.
11. Stough DK, Alberts J, Koenig K, Li H, Lowe M, Natarajan S, Ontaneda D, Streicher M, Bethoux F. Monitoring Exertion-Induced Changes in Gait Parameters in Patients with Relapsing-Remitting Multiple Sclerosis. Poster presentation at the *2018 annual meeting of the Consortium of MS Centers*. May 30-June 2, 2018, Nashville, TN.  
Abstract published in *Int J MS Care* 2018;20(S1):80.
12. Hartman J, Bethoux F, Abbatemarco J, Austin G, Jones N, McKee K, Machado A, Nagel S. Outcome of Intrathecal Baclofen Test Injection in Patients with Multiple Sclerosis and Severe Spasticity Based on Ambulation Status. Poster presentation at the *2018 annual meeting of the Consortium of MS Centers*. May 30-June 2, 2018, Nashville, TN.  
Abstract published in *Int J MS Care* 2018;20(S1):83-4.
13. Abboud H, Fernandez H, Yu X, Bethoux F. Spasticity-related Involuntary Movements: A Cross-sectional Study. Poster presentation (P6.052) at the *American Academy of Neurology 70th Annual Meeting*. April 21-27, 2018, Los Angeles, CA.  
Abstract published in *Neurology* 2018;90(S15).
14. Bethoux F, Li H, Schindler D, Mourany L, Streicher M, Stough D, Reece C, Miller D, Rao S, Alberts J. Convergent validity of acceleration-derived parameters from iPad®-based walking and balance testing. Poster presentation at the *7<sup>th</sup> joint ECTRIMS-ECTRIMS meeting*. October 25-28, 2017, Paris, France.  
Abstract published in *Mult Scler J* 2017;23(S3):146.
15. Weber M, Mourany L, Losinski G, Reece C, Bethoux F, Miller D, Bermel R, Schindler D, Alberts J, Rudick R, Phillips G, Rhodes J, Rao S. Are we underestimating the severity of cognitive dysfunction in MS? Poster presentation at the *7<sup>th</sup> joint ECTRIMS-ECTRIMS meeting*. October 25-28, 2017, Paris, France.  
Abstract published in *Mult Scler J* 2017;23(S3):283.
16. Freiburger JL, Mourany L, Weber M, Kemeny D, Long A, Reece C, Bethoux F, Miller D, Bermel R, Schindler D, Alberts J, Rudick R, Phillips G, Rhodes J, Rao S. Can MS patients accurately self-time the 25-foot walk? E-poster presentation at the *7<sup>th</sup> joint ECTRIMS-ECTRIMS meeting*. October 25-28, 2017, Paris, France.  
Abstract published in *Mult Scler J* 2017;23(S3):738.
17. Stough D, Greenberg B, Sullivan A, Rao S, Sutliff M, Streicher M, Alberts J, Bethoux F. Physical Therapy Enhanced with a Virtual Environment: Impact on Ambulation, Mood, and Cognition. Poster presentation at the *American Congress of Rehabilitation Medicine 93<sup>rd</sup> Annual Conference*. October 30-November 4 2016, Chicago, IL.  
Abstract published in *Arch Phys Med Rehabil* 2016;97(10):e25

18. Jones JC, Lee B, Lang M, Dai L, Lobel D, Machado A, Bethoux F. The effect of intrathecal baclofen therapy in ambulatory multiple sclerosis patients. Poster presentation at the *2016 annual meeting of the Consortium of MS Centers*. June 1-4, 2016. National Harbor, MD  
Abstract published in *Int J MS Care* 2016;18(S1):83.
19. Shayya L, Bethoux F. Neurologic Abnormalities in Allgrove Syndrome: case report and literature review. Poster presentation at the *Cleveland Clinic Foundation Neurological Institute Research Day*. May 26, 2016; Cleveland, OH.
20. Lang M, Lee B, Jones J, Achey R, Dai L, Lobel DA, Nagel S, Machado AG, Bethoux F. Outcomes of Intrathecal Baclofen Therapy in Ambulatory Multiple Sclerosis Patients. Poster presentation (Poster # 1785) at the *84<sup>th</sup> Annual Scientific Meeting of the American Academy of Neurological Surgeons*. April 30-May 4, 2016. Chicago, IL.
21. Bethoux F, Mourany L, Schindler D, Lee JC, Rizk R, Streicher M, Stough D, Reece C, Miller D, Rao S, Alberts J. Validation of the MS performance test walking and balance tests: preliminary results. ePoster presentation (EP1273) at the 31st Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS). October 7 - 10 2015. Barcelona, Spain.  
Abstract published in *Mult Scler* 2015;21(11 suppl):665.
22. Rao S, Mamone B, Mourany L, Reece C, Losinski G, Kemeny D, Bethoux F, Miller D, Schindler D, Agashivala N, Hashmonay R, Alberts J. Multiple Sclerosis Performance Test: Longitudinal Validation in Fingolimod-Treated MS Patients and Healthy Controls. Poster presentation (P324) at the 31st Congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS). October 7 - 10 2015. Barcelona, Spain.  
Abstract published in *Mult Scler* 2015;21(11 suppl):125.
23. Koenig KA, Lowe MJ, Stough DK, Gallagher L, Conklyn D, Bethoux F. Rhythmic auditory stimulation therapy modifies cortical activation in patients with multiple sclerosis. Poster presented at the annual meeting of the *Organization for Human Brain Mapping*. June 14-18, 2015. Honolulu, Hawaii.
24. Koenig KA, Lowe MJ, Stough DK, Gallagher L, Conklyn D, Bethoux F. Effect of rhythmic auditory stimulation on cortical activation during the mental imagery of walking in patients with multiple sclerosis. Poster presentation at the annual meeting of the *International Society for Magnetic Resonance in Medicine*. May 30-June 5, 2015. Toronto, Canada.
25. Stough DK, Golubic M, Bar J, Pernotto Ehrman J, Musgrave D, Bethoux F. The Effects of Yoga and Meditation on Walking, Balance, and Mood in Ambulatory Multiple Sclerosis Patients. Poster presentation at the *2015 Annual Meeting of the Consortium of Multiple Sclerosis Centers (CMSC)*. May 27-30, 2015. Indianapolis, IN.  
*Int J MSCare* 2015;17(S1):76-7.
26. Dapul G, Bethoux F. Effects of a home-based walking program using rhythmic auditory stimulation on walking in patients with MS: preliminary results. Poster presentation at the *Cleveland Clinic Foundation Neurological Institute Research Day*. May 21, 2015; Cleveland, OH.
27. Bethoux F, Schindler D, Lee J-C, Rao S. Validity of spatiotemporal gait parameters at self-selected speed in patients with MS. Poster presentation at the *4th International Symposium on gait and balance in multiple sclerosis: the role of cognition*. October 10-11, 2014;Cleveland, OH.  
Abstract published in *Int J MS Care* 2014;16(4):210.
28. Bethoux F, Greenberg B, Stough DK, Rensel M, Moravec CS, McKee MG. Effects of biofeedback-assisted stress management on symptoms and neurologic performance in patients with MS. Poster presentation at the *2014 Joint ACTRIMS-ECTRIMS Meeting*. September 10-13, 2014. Boston, MA.  
Abstract published in *Mult Scler* 2014; 20(S1):425.
29. Bethoux F, Schindler D, Alberts J, Miller D, Rao S, Lee J-C, Stough D, Reece C, Mamone B, Rudick R. Assessment of upper extremity function using the manual dexterity component of the Multiple Sclerosis Performance Test: validation of novel metrics. Poster presentation at the *2014 Joint ACTRIMS-ECTRIMS Meeting*. September 10-13, 2014. Boston, MA.  
Abstract published in *Mult Scler* 2014; 20(S1):83

30. Doležalová V, Baert I, Dalgas U, Romberg A, Bethoux F, Gebara B, Santoyo Medina C, Maamâgi H, Rasova K, Maertens Noordhout B, Knuts K, Skjerbaek A, Jensen E, Feys P. Presence and influencing factors of motor fatigue during 6MWT in Multiple Sclerosis. Presentation at the *Rehabilitation In MS 2014 Conference*. June 6-7, 2014; Brighton, UK. Abstract published in *Mult Scler* 2014;20: 965-1019.
31. Bethoux F, Lowe M, Koenig K, Stough D, Gallagher L, Conklyn D. Effects of Rhythmic Auditory Stimulation on Gait and on Cortical Activation with Mental Imagery of Walking in Patients with MS. Poster presentation at the *Fifth Cooperative Meeting of the Consortium of Multiple Sclerosis Centers (CMSC) and Americas Committee for Treatment and Research in Multiple Sclerosis (ACTRIMS)*. May 28 – 31, 2014; Dallas, TX. Abstract published in *Int J MS Care* 2014; 16(Suppl.3):76.
32. Rudick R, Miller D, Bethoux F, Rao S, Lee JC, Stough D, Reece C, Schindler D, Alberts J. Multiple Sclerosis Performance Test: A Reliable, Sensitive, and Meaningful Tool to Quantify MS Related Disability. Poster presentation at the *American Academy of Neurology 2014 Annual Meeting*. April 26-May 3, 2014; Philadelphia, PA. Abstract published in *Neurology* 2014;82:P3.129.
33. Bethoux F, Rudick R, Miller D, Rao S, Lee JC, Stough D, Reece C, Schindler D, Alberts J. The Multiple Sclerosis Performance Test: An Innovative Approach To Measuring MS-Related Manual Dexterity Impairment. Poster presentation at the *American Academy of Neurology 2014 Annual Meeting*. April 26-May 3, 2014; Philadelphia, PA. Abstract published in *Neurology* 2014;82:P3.132.
34. Miller D, Lee JC, Bethoux F, Rao S, Alberts J, Schindler D, Stough D, Reece C, Rudick R. Multiple Sclerosis Performance Test: Patients Express High Satisfaction with the Application. Poster presentation at the *American Academy of Neurology 2014 Annual Meeting*. April 26-May 3, 2014; Philadelphia, PA. Abstract published in *Neurology* 2014;82:P3.140.
35. Rao S, Alberts J, Miller D, Bethoux F, Lee JC, Stough D, Reece C, Mourany L, Schindler D, Hirsch J, Rudick R. Processing Speed Test (PST): A Self-Administered iPad®-Based Tool for Assessing MS-Related Cognitive Dysfunction. Platform presentation at the *American Academy of Neurology 2014 Annual Meeting*. April 26-May 3, 2014; Philadelphia, PA. Abstract published in *Neurology* 2014;82:S33.001.
36. Greenberg B, Grossman EF, Bolwell GJ, Reynard AK, Schneeberger DL, Bethoux F, Moravec CS, McKee MG. Biofeedback Assisted Stress Management for Multiple Sclerosis. Poster presentation at the *Association for Applied Psychophysiology and Biofeedback 45th Annual Scientific Meeting*. March 19-22, 2014; Savannah, GA.
37. Bethoux F, Miller D, Alberts J, Rao S, Stough D, Schindler D, Reece C, Lee JC, Rudick R. Quantifying Cognitive and Motor Function in Multiple Sclerosis Patients: the Cleveland Clinic MS Performance App. Poster presentation (P11) at the *American Congress of Rehabilitation Medicine 90<sup>th</sup> Annual Conference*. November 12-16 2013; Orlando, FL. Abstract published in *Arch Phys Med Rehabil* 2013;94(10):e15.
38. Bethoux F. Immediate impact of a hip flexion assist device on spatiotemporal parameters of gait in individuals with MS. Poster presentation at the *3rd International Symposium on Gait and Balance in MS*. October 18-19 2013; St Louis, MO. Abstract published in *Int J MS Care* 2013;15(4):179.
39. Bethoux F, Plow M. Correlates of walking speed on the Timed 25 Foot Walk in patients with multiple sclerosis and gait disturbance. Poster presentation (P1160) at the *29th congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) and the 18th Annual Conference of rehabilitation in MS (RIMS)*. October 2-5 2013; Copenhagen, Denmark. Abstract published in *Mult Scler* 2013;19(S1):546.
40. Feys P, Bibby M, Romberg A, Santoyo C, Gebara B, Maertens de Noordhout B, Knuts K, Bethoux F, Sjerbaek A, Vaney C, de Groot V, Dalgas U. A multi-center study on within-day variability on short and long walking capacity tests in persons with multiple sclerosis within different ambulation categories Poster presentation (P792) at the *29th congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) and the 18th Annual Conference of rehabilitation in MS (RIMS)*. October 2-5 2013; Copenhagen, Denmark. Abstract published in *Mult Scler* 2013;19(S1):355.

41. Bethoux F, Bennett S. Comprehensive assessment of complex symptoms and mobility in multiple sclerosis: results from a consensus conference. Poster presentation (P687) at the *29th congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) and the 18th Annual Conference of rehabilitation in MS (RIMS)*. October 2-5 2013; Copenhagen, Denmark.  
Abstract published in *Mult Scler* 2013;19(S1):303.
42. Rudick R, Miller D, Bethoux F, Rao S, Lee JC, Stough D, Reece C, Schindler D, Alberts J. The Multiple Sclerosis Performance Test: An iPad®-Based Clinical Disability Assessment Tool. Poster presentation (P795) at the *29th congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) and the 18th Annual Conference of rehabilitation in MS (RIMS)*. October 2-5 2013; Copenhagen, Denmark.  
Abstract published in *Mult Scler* 2013;19(S1):356.
43. Alberts JL, Schindler D, Miller D, Bethoux F, Rao S, Lee JC, Stough D, Reece C, Rudick R. Rudick. The Development and Validation of an Objective and Quantitative Approach to Assessing Cognitive and Motor Performance of Patients With MS. Poster presentation (P799) at the *29th congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) and the 18th Annual Conference of rehabilitation in MS (RIMS)*. October 2-5 2013; Copenhagen, Denmark.  
Abstract published in *Mult Scler* 2013;19(S1):358.
44. Rao S, Alberts J, Miller D, Bethoux F, Hirsch J, Kana, Lee JC, Schindler D, Linder S, Stough D, Reece C, Mourany L, Rudick R. The Processing Speed Test (PST): A Self-Administered iPad®-Based Measure of Information Processing Speed. Poster presentation (P344) at the *29th congress of the European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) and the 18th Annual Conference of rehabilitation in MS (RIMS)*. October 2-5 2013; Copenhagen, Denmark.  
Abstract published in *Mult Scler* 2013;19(S1):123.
45. Stough DK, Harrison-Cudnik M, Mays J, Ontaneda D, Sutliff M, Bethoux F. Combining PT With Dalfampridine In Patients With MS and Walking Limitations. Poster presentation (RH34) at the *Fifth Cooperative Meeting of CMSC and ACTRIMS*; May 29-June 1 2013; Orlando, FL.  
Abstract published in *Int J MS Care* 2013; 15(S3):120
46. Bennett SE, Bethoux F. Consensus Conference: Comprehensive Management Of Complex Symptoms In MS. Poster presentation (SX07) at the *Fifth Cooperative Meeting of CMSC and ACTRIMS*; May 29-June 1 2013; Orlando, FL.  
Abstract published in *Int J MS Care* 2013; 15(S3):124
47. Yuhas A, Stough DK, Harrison-Cudnik M, Sutliff M, Bethoux F. Assistive Devices and Spatiotemporal Parameters of Gait in Persons With MS. Poster presentation (RH37) at the *Fifth Cooperative Meeting of CMSC and ACTRIMS*; May 29-June 1 2013; Orlando, FL.  
Abstract published in *Int J MS Care* 2013; 15(S3):122
48. Bethoux F, Stough D, Harrison-Cudnik M., Ivancic D, Sutliff M, Bennett SE. Preliminary Results of a Randomized Controlled Trial of a Hip Flexion Assist Device in MS. Poster presentation (RH09) at the *Fifth Cooperative Meeting of CMSC and ACTRIMS*; May 29-June 1 2013; Orlando, FL.  
Abstract published in *Int J MS Care* 2013; 15(S3):110
49. Miller DM, Arias J, Ford P, Craighead T, Caine K, Griffin M, Perryman J, Kirtz T, Fink C, Barclay K, Johnson P, Bethoux F. An Initiative To Assess Patient Capacity For Clinical Informed Consent. Poster presentation (CG34) at the *Fifth Cooperative Meeting of CMSC and ACTRIMS*; May 29-June 1 2013; Orlando, FL.  
Abstract published in *Int J MS Care* 2013;15(S3):77
50. Applebee A, Goodman A, Mayadev A, Bethoux F, Goldman M, Klingler M, Henney H, Blight A, Carrazana E. Effects of 5mg and 10mg Dalfampridine Extended Release Tablets on 6-Minute Walk Distance in People with Multiple Sclerosis: A Subgroup Analysis of a Double-Blind, Placebo-Controlled Trial. Platform presentation at the *American Academy of Neurology 65th Annual Meeting*, March 16-23, 2013; San Diego, CA.  
Abstract published in *Neurology* 2013; 80(Meeting Abstracts 1): S01.007.
51. Schapiro RT, Bethoux F, Brown TR, Williamson L, Rabinowicz AL, Marinucci L, Carrazana EJ. Open-Label Extension Patient Retention Rates With Dalfampridine Extended Release Tablets in Multiple Sclerosis. Poster presentation at the *28th Congress of the European Committee for Treatment and Research in Multiple Sclerosis*; October 10–13, 2012; Lyon, France.  
Abstract published in *Mult Scler* 2012;18(S4):477.

52. Fink C, Hussain M, Caine K, Ely R, Griffin M, Ives J, Craighead T, Kirtz T, Miller DM, Perryman J, Bethoux F. Effects of a Fall Prevention Initiative on Falls During Outpatient Visits in an MS Center. Poster presentation at the *Fourth Cooperative Meeting of CMSC and ACTRIMS*; May 30-June 2 2012; San Diego, CA.  
Abstract published in *Int J MS Care* 2012;14(Suppl. 2):78.
53. Bethoux F, Jones B, Stough D, Harrison M, Sutliff M. Validity and Sensitivity of Spatiotemporal Parameters of Gait in MS. Poster presentation at the *Fourth Cooperative Meeting of CMSC and ACTRIMS*; May 30-June 2 2012; San Diego, CA.  
Abstract published in *Int J MS Care* 2012;14(Suppl. 2):80-1.
54. Stough D, Harrison-Cudnik M, Ivancic D, Ives J, Sutliff M, Bethoux F. Impact of a Hip Flexion Assist Device on Gait Performance in MS. Poster presentation at the *Fourth Cooperative Meeting of CMSC and ACTRIMS*; May 30-June 2 2012; San Diego, CA.  
Abstract published in *Int J MS Care* 2012;14(Suppl. 2):79-80.
55. Bethoux F, Stough D, Conklyn D, Butler R. Impact of a Home Walking Program Utilizing Rhythmic Auditory Stimulation. Platform presentation at the *Fourth Cooperative Meeting of CMSC and ACTRIMS*; May 30-June 2 2012; San Diego, CA.  
Abstract published in *Int J MS Care* 2012;14(Suppl. 2):10.
56. Deoras M, Boissy A, Bokar D, Miller D, Picciano B, Shields B, Stough D, Bethoux F. Use and Impact of Healing Services Interventions at the Cleveland Clinic. Platform presentation at the *Cleveland Clinic Foundation Neurological Institute Research Day*; May 24<sup>th</sup> 2012; Cleveland, OH.
57. Bethoux F, Stough D, Conklyn D. Correlation Between Walking Speed and Gait Parameters in Patients With Multiple Sclerosis. Platform presentation at the *25th Annual Meeting of the Consortium of Multiple Sclerosis Centers*; June 1-4, 2011; Montreal, QC, Canada..  
Abstract published in *International Journal of MS Care* 2011;13(Suppl. 3):12.
58. Stough D, Opara P, Harrison-Cudnick M, Bethoux F. Is Computerized Balance Assessment More Useful than the Berg Balance Scale in Detecting Fall Risk in Multiple Sclerosis Patients? *Progress in Rehabilitation Research. 2010 ACRM-ASNR Joint Educational Conference*; October 20-23, 2010; Montreal, QC, Canada.  
Abstract published in *Arch Phys Med Rehabil* 2010;91(10):e47.
59. Marrie RA, Stough D, Bethoux F: Validation of the Performance Scales Spasticity Subscale. *24th Annual Meeting of the Consortium of Multiple Sclerosis Centers*; June 2-5, 2010; San Antonio, TX.  
Abstract published in *International Journal of MS Care* 2010;12(Suppl 1):8-9.
60. Bethoux F, Forwell S, Stough D, Marrie RA : The Impact of Spasticity on Daily Activities in People with Multiple Sclerosis. *24th Annual Meeting of the Consortium of Multiple Sclerosis Centers*; June 2-5, 2010; San Antonio, TX.  
Abstract published in *International Journal of MS Care* 2010;12(Suppl 1):16.
61. Stough D, Marrie RA, Forwell S, Bethoux F : Patterns of Spasticity Management in the Multiple Sclerosis Patient. *24th Annual Meeting of the Consortium of Multiple Sclerosis Centers*; June 2-5, 2010; San Antonio, TX.  
Abstract published in *International Journal of MS Care* 2010;12(Suppl 1):67.
62. Bethoux F, Bakouche W, Calmels P, Grand S, Gautheron V: Functional Independence Measure French database: a promising start. *24<sup>th</sup> Annual Meeting of the French Society of Physical Medicine and Rehabilitation*; October 14-17, 2009; Lyon, France.
63. Hartman E, Stough D, Bethoux F: Intrathecal Baclofen Pump Therapy in Ambulatory Multiple Sclerosis Patients: Effect on Ambulation Speed. *23rd Annual Meeting of the Consortium of Multiple Sclerosis Centers*; May 27-30, 2009; Atlanta, GA.  
Abstract published in *International Journal of MS Care* 2009;11(Suppl 2):30.
64. Koch P, Stough D, Bethoux F: Does Gait Performance After a Test Injection of Intrathecal Baclofen Predict Gait Performance with Chronic Infusion of Intrathecal Baclofen? *23rd Annual Meeting of the Consortium of Multiple Sclerosis Centers*; May 27-30, 2009; Atlanta, GA.  
Abstract published in *International Journal of MS Care* 2009;11(Suppl 2):55.
65. Namey M, Bethoux F, Stough D, Gulick E, Halper J: Monitoring My Multiple Sclerosis, a New Scale for Patients. *23rd Annual Meeting of the Consortium of Multiple Sclerosis Centers*; May 27-30, 2009; Atlanta, GA

Abstract published in *International Journal of MS Care* 2009;11(Suppl 2):81.

66. Koelbel S, Bethoux F, Hughes M, Stevenson V, Gudesblatt M, Zaffaroni M, Bennett S, Plunkett R: Effect of Intrathecal Baclofen Therapy on Pressure Sores Incidence in Nonambulatory Multiple Sclerosis Patients. *23rd Annual Meeting of the Consortium of Multiple Sclerosis Centers*; May 27-30, 2009; Atlanta, GA  
Abstract published in *International Journal of MS Care* 2009;11(Suppl 2):86-87.
67. Bennett S, Bethoux F, Gudesblatt M, Plunkett R: Change in the Timed-25 Foot Walk in Ambulatory Patients with Multiple Sclerosis Who Have an Intrathecal Baclofen Pump. *23rd Annual Meeting of the Consortium of Multiple Sclerosis Centers*; May 27-30, 2009; Atlanta, GA.  
Abstract published in *International Journal of MS Care* 2009;11(Suppl 2):87.
68. Stough D, Conklyn D, Paczak S, Chemali K, Bethoux F: The Effects of Rhythmic Auditory Stimulation on Gait Performance in the Multiple Sclerosis Patient. *23rd Annual Meeting of the Consortium of Multiple Sclerosis Centers*; May 27-30, 2009; Atlanta, GA.  
Abstract published in *International Journal of MS Care* 2009;11(Suppl 2):27.
69. Koch P, Bethoux F: Effects of intrathecal baclofen on spasticity, motor function, and neural networks in multiple sclerosis. *23rd Annual Meeting of the Consortium of Multiple Sclerosis Centers*; May 27-30, 2009; Atlanta, GA.
70. Koch P, Bethoux FA, Stough DK: Effect of a single dose of intrathecal baclofen on spasticity, muscle strength and walking speed in multiple sclerosis. *World Congress on Treatment and Research in Multiple Sclerosis*; September 17-20, 2008; Montréal QC, Canada.  
Abstract published in *Multiple Sclerosis* 2008;14(1):S144.
71. Koch P, Stough D, Bethoux F: Effect of a Single Dose of Intrathecal Baclofen on Spasticity, Muscle Strength and Walking Speed in Patients with Multiple Sclerosis. *The Cleveland Clinic Foundation 1st Neurological Institute Research Day*; May 22, 2008; Cleveland OH USA
72. Stough D, Bethoux F: Intrathecal Baclofen Complications and Ambulation Status in Multiple Sclerosis. *22<sup>nd</sup> Annual Meeting of the Consortium of Multiple Sclerosis Centers*; May 28-31, 2008; Denver CO, USA.  
Abstract published in *International Journal of MS Care* 2008;10(Suppl 1):35-6
73. Ives J, Stough D, Bethoux F: Comparison of NPT Findings and Driving Evaluation Performance in MS Patients. *22<sup>nd</sup> Annual Meeting of the Consortium of Multiple Sclerosis Centers*; May 28-31, 2008; Denver CO, USA.  
Abstract published in *International Journal of MS Care* 2008;10(Suppl 1):2
74. Webster N, Crawford P, Stough D, Bethoux F: Discrepancies in Subjective and Objective Outcomes with ITB Therapy. *22<sup>nd</sup> Annual Meeting of the Consortium of Multiple Sclerosis Centers*; May 28-31, 2008; Denver CO, USA.  
Abstract published in *International Journal of MS Care* 2008;10(Suppl 1):9
75. McClelland S III, Bethoux FA, Sutliff MH, Stough DK, Schwetz KM, Gogol DM, Harrison M, Pioro EP, Boulis NM: Intrathecal Baclofen For Spasticity-Related Pain in Amyotrophic Lateral Sclerosis: Efficacy and Factors Associated With Pain Relief. *American Association of Neurological Surgeons, 75th Annual Meeting*. (AANS Article ID Number: 40863).  
Abstract published in *Journal of Neurosurgery* 2007;106(4):A767
76. Stough D, Bethoux F, Davis B, Wozniak B: Assessment of the Effects of a Hip Flexion Assist Orthosis with 3-Dimensional Gait Analysis in Multiple Sclerosis Patients. *American Congress of Rehabilitation Medicine – American Society of Neurorehabilitation Joint Conference*; October 3-7, 2007; Washington DC, USA.  
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84. Stough D, Bethoux F : Satisfaction and Outcomes One and Six Months after Intrathecal Baclofen Pump Placement in Ambulatory Multiple Sclerosis Patients. *American Congress of Rehabilitation Medicine – American Society of Neurorehabilitation Joint Conference*; September 28-October 2, 2005; Chicago, IL, USA.  
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88. Bethoux F, Miller DM, Stough D, Lee JC, Arrigain S : Factors Associated with Subject Dropout in a Trial of Rehabilitation for MS Patients. *The Art and Science of Multiple Sclerosis – Consortium of MS Centers Annual Meeting*; June 2-6, 2004; Toronto, Canada
89. Schuele SU, Kellinghaus C, Bethoux FA, Boulis N, Loddenkemper T : Frequency of seizures in multiple sclerosis patients treated with intrathecal baclofen. *American Epilepsy Society 57<sup>th</sup> Annual Meeting*; December 5-10, 2003; Boston MA, USA  
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95. Bethoux F, Miller DM, Stough D, Kinkel RP : Trial of rehabilitation after exacerbations of MS: recovery prior to randomization. *The spectrum of multiple sclerosis care - Consortium of Multiple Sclerosis Centers*; May 30-June 1, 2003; San Diego CA, USA.
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Abstract published in *Annals of Physical Medicine and Rehabilitation* 2002;45(7):379.
98. Bethoux F, Crawford P, Richer C, Jeris D, Chelune G : Un programme pluridisciplinaire d'évaluation et de traitement de la fatigue dans la sclérose en plaques aux Etats-Unis. [A multidisciplinary program for the evaluation and treatment of multiple sclerosis fatigue in the United States] *XVIIe Congrès National de la SOFMER*; October 10-12, 2002; Perpignan, France.  
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99. Bethoux F : Utilisation de la pompe à Lioresal® dans la sclérose en plaques: le point de vue des patients. [Utilization of the baclofen pump in multiple sclerosis: the patients' point of view] *XVIIe Congrès National de la SOFMER*; October 10-12, 2002; Perpignan, France.  
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Abstract published in *International Journal of MS Care* 2002;4(2):76
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104. Bethoux F, Miller DM, Muschler GM : Impact of a change in mode of administration on questionnaire return during a study of the outcome of hip and knee replacement. *International Society for Quality of Life Research Annual Meeting*; November 7-10, 2001; Amsterdam, The Netherlands.



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*Archives of Physical Medicine and Rehabilitation* 2001; 82:1329
106. Bethoux FA, Richer CB, Kelly D, Miller DM, Kinkel RP : A randomized trial of rehabilitation after acute relapses of multiple sclerosis: preliminary results on 14 patients in the treatment arm.  
*Archives of Physical Medicine and Rehabilitation* 2001; 82:1332
107. Bethoux F, Muschler GM, Ott P, Miller DM, LoGrasso M, Younts JB : The outcome of hip and knee replacement for osteoarthritis: early follow-up. *7<sup>th</sup> Annual Conference of the International Society for Quality of Life Research*; October 29-31, 2000; Vancouver, Canada.
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*AGR/AFAR 2000 Annual Scientific Meeting*; May 17-21 2000; Nashville TN, USA  
Abstract published in *Journal of the American Geriatrics Society* 2000; 48(8): S60
109. Bethoux F, Kinkel R, Miller D : Design of a Randomized Controlled Trial of Rehabilitation Following Acute Relapses of MS. *25<sup>th</sup> Annual Neuroscience Residents' Day*, Tuesday, May 16, 2000; The Cleveland Clinic Foundation, Cleveland, OH, USA
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Abstract published in *Neurology* 2000; 54 (Suppl 3):A118.
111. Finelli DA, Stone LA, Fisher E, Bethoux F, Rudick R : Brain parenchymal volume fraction correlates strongest with clinical disability in MS patients among several MR-derived parameters: observations from routine use of an imaging-clinical correlational database. *Radiological Society of North America (RSNA) Meeting*; December 1, 2000; Chicago IL, USA.
112. Bethoux F, Rudick R : Use of an assay for IFN $\beta$  neutralizing antibodies in a large MS center: impact on treatment decisions. *52<sup>nd</sup> Annual Meeting of the American Academy of Neurology*; April 29-May 6, 2000; San Diego CA, USA.  
Abstract published in *Neurology* 2000; 54 (Suppl 3):A58.
113. Bethoux F, Muschler GM, Miller DM, McMann C : The outcome of hip and knee replacement for osteoarthritis: preliminary results. *6<sup>th</sup> Annual Conference of the International Society for Quality of Life Research*; November 3-6 1999; Barcelona, Spain  
Abstract published in *Quality of Life Research* 1999; 8:652.
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Abstract published in *Journal of the American Geriatrics Society* 1999; 47:S66.
115. Bethoux F, Miller DM, Kinkel RP : Recovery from MS exacerbations after intravenous methylprednisolone treatment. *5<sup>th</sup> Annual Conference of the International Society for Quality of Life Research*; November 15-17 1998; Baltimore MD, USA  
Abstract published in *Quality of Life Research* 1998; 7:572.
116. Bethoux F, Calmels P : Assessing quality of life in stroke patients' spouses with the Subjective Quality of Life Profile (SQLP) . *4<sup>th</sup> Annual Conference of the International Society for Quality of Life Research*; November 5-8 1997; Vienna, Austria  
Abstract published in *Quality of Life Research* 1997; 6 (7-8):624.
117. Calmels P, Thomas M, Bethoux F, Nayme P, Richard A : Disability scales in low back pain. Interest of the Quebec back pain disability scale . *4<sup>th</sup> Annual Conference of the International Society for Quality of Life Research*; November 5-8 1997; Vienna, Austria  
Abstract published in *Quality of Life Research* 1997; 6 (7-8) : 630
118. Bethoux F, Calmels P, Metton G, Gautheron V, Roux L, Labourel D, Verdier A : La Mesure d'Adaptation Fonctionnelle (MAF) : traduction française de la Functional Assessment Measure (FAM) [The "Mesure d'Adaptation Fonctionnelle

(MAF)” : French version of the Functional Assessment Measure (FAM)] . *XIIth National Meeting of the French Society of Physical Medicine and Rehabilitation (SOFMERR)*; October 16-18 1997; Strasbourg, France  
Abstract published in *Annals of Physical Medicine and Rehabilitation* 1997; 40:350.

119. Bethoux F, Calmels P, Valayer E, Chagnon PY, Anajjar B, Simard C, Gautheron V : Evaluation de la qualité de vie des patients amputés de jambe traumatiques et vasculaires appareillés : résultats préliminaires [Quality of life assessment in patients with tibial amputation of traumatic or vascular origin : preliminary results] . *XIIth National Meeting of the French Society of Physical Medicine and Rehabilitation (SOFMERR)*; October 16-18 1997; Strasbourg, France  
Abstract published in *Annals of Physical Medicine and Rehabilitation* 1997; 40:430.
120. Ebermeyer E, Calmels P, Bethoux F, Gonard C, Fayolle-Minon I, Gautheron V : Indépendance fonctionnelle et charge en soins chez l'hémiplégique à domicile [Functional independence and burden of care in hemiplegic patients living at home] . *XIIth National Meeting of the French Society of Physical Medicine and Rehabilitation (SOFMERR)*; October 16-18 1997; Strasbourg, France  
Abstract published in *Annals of Physical Medicine and Rehabilitation* 1997; 40:338.
121. Metton G, Rode G, Chapuis F, Bethoux F, Gautheron V, Boisson D : Reprise professionnelle après un traumatisme crânien sévère : étude rétrospective de 60 cas [Return to work after a severe traumatic brain injury : retrospective analysis of 60 patients] . *XIIth National Meeting of the French Society of Physical Medicine and Rehabilitation (SOFMERR)*; October 16-18 1997; Strasbourg, France  
Abstract published in *Annals of Physical Medicine and Rehabilitation* 1997; 40:350.
122. Calmels P, Ebermeyer E, Bethoux F, Gonard C, Gautheron V : Functional Independence Measure and burden of care for stroke patients living at home. *10th European Meeting of Physical Medicine and Rehabilitation*; April 1-4 1997; Rome, Italy.
123. Bethoux F, Calmels P, Chagnon PY, Anajjar B : Activité physique, état de santé perçu et prise en charge rééducative chez les personnes amputées traumatiques et vasculaires [Physical activity, perceived health status and rehabilitation program in amputees: preliminary results] . *1st National Meeting of the International Society for Prosthetics and Orthotics (ISPO)-France*; October 24-25 1996; Lyon, France.
124. Bethoux F, Calmels P, Gautheron V : Quality of life assessment in stroke patients' spouses : any benefit for patients ? *International Quality of Life Meeting "in homage to Denis Buquet"*; October 3-4 1996; Paris, France.
125. Bethoux F, Chae J : Upper extremity motor impairment as a predictor of self-care disability in acute stroke patients : role of cognition. *American Association of Academic Physiatrists (AAP) Annual Meeting*; February 18 - 22 1996; Las Vegas, Nevada (USA).
126. Bethoux F, Calmels P, Gautheron V, Minaire P : Quality of life of the spouses of stroke patients : a preliminary study . *2nd Annual Conference of the International Society for Quality of Life Research*; October 14-17 1995; Montréal, Quebec (Canada).  
Abstract published in *Quality of Life Research* 1995; 4(5):398.
127. Calmels P, Bethoux F, Pereira A, Domenach M, Pallot-Prades B, Alexandre C, Minaire P : Functional ability and quality of life in rheumatoid arthritis : evaluation using the Functional Independence Measure and the Reintegration to Normal Living Index . *2nd Annual Conference of the International Society for Quality of Life Research*; October 14-17 1995; Montréal, Quebec (Canada)  
Abstract published in *Quality of Life Research* 1995; 4(5):407.
128. Calmels P, Bethoux F : Echelles d'incapacité et de qualité de vie chez l'hémiplégique vasculaire [Disability and quality of life scales in hemiplegic stroke patients]. *8th National Rehabilitation Day: the physiatrist and hemiplegia from stroke*; May 28 1994; Paris, France.
129. Bethoux F, Calmels P, Aigo JL, Barral FG, Domenach M, Minaire P : Heterotopic ossifications and rhabdomyolysis . *Proceedings of the International "Paraplegia" Meeting (IMSOP-AFIGAP-DMGP Meeting)*; May 25-28 1993; Ghent, Belgium.

Cleveland Clinic Lerner College of Medicine - Faculty List

**Physical Medicine & Rehabilitation**

Last Name	First Name	Credentials	CCLCM Appointment
<b>White = Have a Faculty Appointment</b>		<b>Gray = Will apply in the future</b>	
Aguilera	Richard	MD	Clinical Assistant Professor
Bethoux	Francois	M.D.	Professor
Dapul	Geraldine	MD	
DeMicco	Russell	DO	
Goyal	Kush	MD	
Grobman	Daniel	DO	Clinical Assistant Professor
Holman	Lainie	MD	Clinical Associate Professor
Hou	Juliet	MD	Clinical Assistant Professor
Jedlicka	Lynn	MD	Clinical Assistant Professor
Johnson	Josh	Ph.D	
Khalaf	Tagreed	MD	
Lee	John	MD	Clinical Assistant Professor
Linder	Susan	DPT	Adjunct Assistant Professor
Mascarinas	Angelie	MD	Clinical Assistant Professor
McKee	Keith	MD	
Murdock	Erin	MD	Clinical Assistant Professor
Nemunaitis	Greg	MD	Professor
Reddy	Anantha	MD	Clinical Assistant Professor
Rosenquist	Ellen	MD	
Schmitt	Patrick	DO	Clinical Assistant Professor
Shaughnessy	Patrick	MD	Clinical Assistant Professor
Shumyatcher	Yana	MD	Clinical Assistant Professor
Thomas	Santhosh	DO	
Van Keuren	Cynthia	PsyD	
Venesy	Deborah	MD	
Villarosa	Leonardo	MD	
Wadeson	Kelly	Ph.D.	Clinical Assistant Professor
Zachary	Adrian	DO	

## Physical Medicine and Rehabilitation Center

Grant Awards 2017 – 2020

PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Bethoux, Francois A. UNRESTRICTED FUND T55345 276001550101 9/1/2010 - 12/31/2020 178,998.24 PM&R PROJECT SUPPORT
PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Lin, Vernon FEDERAL GRANT US ARMY RESEARCH OFFICE 277048260201 9/30/2012 - 9/29/2017 677,280.00 EFFECTIVENESS OF ACUPRESSURE TREATMENT FOR PAIN MANAGEMENT A
PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Bethoux, Francois A. CORPORATE DABIR SURFACES INC 277048260301 4/1/2015 - 5/31/2021 77,434.40 EVALUATION OF DABIR ALTERNATING PRESSURE OVERLAY
PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Potter, Kelsey A. DEPARTMENT/RPC FUND T55345 278822930101 5/31/2016 - 8/31/2019 20,000.00 FEASIBILITY OF ENHANCING MOTOR RECOVERY IN PATIENTS WITH INCOMPLETE SPINAL CORD INJURY USING NON-INVASIVE BRAIN
PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Johnson, Joshua CORPORATE VIDEOTHERAPY/ALLEYNYC 275117730101 2/15/2019 - 4/5/2024 42,635.00 VIDEO THERAPY STUDY
PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Shell, Courtney DEPARTMENT/RPC FUND T55345 278981620101 5/30/2019 - 5/30/2021 21,810.00 PROVIDING MOVEMENT FEEDBACK FOR PROTHESIS USERS: BACKGROUND

PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Linder, Susan M. FEDERAL GRANT NICHD 014125080202 8/1/2019 - 7/31/2020 152,123.48 COST-EFFECTIVENESS AND EFFICACY OF A COMBINED INTERVENTION T
PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Johnson, Joshua PROFESSIONAL SOCIETY/ORGANIZAT ACADEMY OF ACUTE CARE PHYSICAL 275117730201 8/18/2019 - 8/17/2020 2,000.00 ASSOCIATION BETWEEN THE FREQUENCY OF ACUTE CARE PHYSICAL THE
PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Bethoux, Francois A. FOUNDATION CONSORTIUM OF MS CENTERS 275070030101 3/1/2020 - 2/28/2021 40,000.00 A PILOT SINGLE-BLIND RANDOMIZED CONTROLLED TRIAL TO EVALUATE
PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Bethoux, Francois A. TEMPORARILY RESTRICTED FUND T56749 275070030201 3/1/2020 - 2/28/2021 57,661.00 PM&R Research Support
PI PROJECT -TYPE SPONSOR Activity Begin Date- End Date BUDGET DESCRIPTION	Bethoux, Francois A. CORPORATE MEDRHYTHMS INC. 275070030301 3/4/2020 - 3/3/2025 54,023.00 RAS STUDY

## Cleveland Clinic PM&R Department Publications

Francois Bethoux MD

### 2016

1. Bethoux F, Marrie RA. A Cross-Sectional Study of the Impact of Spasticity on Daily Activities in Multiple Sclerosis. *Patient* 2016;9(6):537-46.
2. Bethoux F, Plow M. Correlates of the Timed 25 Foot Walk in a Multiple Sclerosis Outpatient Rehabilitation Clinic. *Int J Rehabil Res* 2016;39(2):134-9.
3. Miller DM, Bethoux F, Victorson D, Nowinski CJ, Buono S, Lai J-S, Wortman K, Burns JL, Moy C, Cella D. Validating Neuro-QoL Short Forms and Targeted Scales with Persons who have Multiple Sclerosis. *Mult Scler* 2016 ;22(6):830-41.
4. Leone C, Severijns D, Doležalová V, Baert I, Dalgas U, Romberg A, Bethoux F, Gebara B, Santoyo Medina C, Maamâgi H, Rasova K, Maertens de Noordhout B, Knuts K, Skjerbaek A, Jensen E, Wagner JM, Feys P. Prevalence of walking-related motor fatigue in Persons with Multiple Sclerosis: decline in walking distance induced by the Six-Minute walk test. *Neurorehabil Neural Repair* 2016;30(4):373-83.

### 2017

5. Lee BS, Jones J, Lang M, Achey R, Dai L, Lobel DA, Nagel SJ, Machado AG, Bethoux F. Early outcomes after intrathecal baclofen therapy in ambulatory patients with multiple sclerosis. *J Neurosurg* 2018;129(4):1056-62. doi: 10.3171/2017.5.JNS162925. PMID: 29192855. Gallagher LM, Bethoux F. Therapeutic use of the arts for Patients with Multiple Sclerosis. *US Neurology* 2017;13(2):82–9.
6. Bethoux F, Fatemi A, Fowler E, Marciniak C, Mayadev A, Waksman J, Zackowski K, Suarez G, Blight AR, Rabinowicz AL, and Carrazana E. Safety, tolerability, and sensorimotor effects of extended-release dalfampridine in adults with cerebral palsy: A pilot study. *Clin Ther* 2017;39(2):337-46.
7. Rao SM, Losinski G, Mourany L, Schindler D, Mamone B, Reece C, Kemeny D, Narayanan S, Miller DM, Bethoux F, Bermel RA, Rudick RA, Alberts J. Processing Speed Test: Validation of a Self-Administered, iPad®-Based Tool for Screening Cognitive Dysfunction in a Clinic Setting. *Mult Scler* 2017;23(14):1929-37.
8. Lee BS, Jones J, Lang M, Achey R, Dai L, Lobel DA, Nagel SJ, Machado AG, Bethoux F. Early outcomes after intrathecal baclofen therapy in ambulatory patients with multiple sclerosis. *J Neurosurg* 2018;129(4):1056-62. doi: 10.3171/2017.5.JNS162925. PMID: 29192855. Gallagher LM, Bethoux F. Therapeutic use of the arts for Patients with Multiple Sclerosis. *US Neurology* 2017;13(2):82–9.
9. Bethoux F, Fatemi A, Fowler E, Marciniak C, Mayadev A, Waksman J, Zackowski K, Suarez G, Blight AR, Rabinowicz AL, and Carrazana E. Safety, tolerability, and sensorimotor effects of extended-release dalfampridine in adults with cerebral palsy: A pilot study. *Clin Ther* 2017;39(2):337-46.
10. Rao SM, Losinski G, Mourany L, Schindler D, Mamone B, Reece C, Kemeny D, Narayanan S, Miller DM, Bethoux F, Bermel RA, Rudick RA, Alberts J. Processing Speed Test: Validation of a Self-Administered, iPad®-Based Tool for Screening Cognitive Dysfunction in a Clinic Setting. *Mult Scler* 2017;23(14):1929-37.

## 2018

11. Yang F, Finlayson M, Bethoux F, Su X, Dillon L, Maldonado HM. Effects of controlled whole-body vibration training in improving fall risk factors among individuals with multiple sclerosis: A pilot study. *Disabil Rehabil* 2018;40(5):553-60. doi: 10.1080/09638288.2016.1262466.
12. Streicher MC, Alberts JL, Sutliff MH, Bethoux F. Effects of Physical Therapy Training in an Immersive Virtual Reality System or Traditional Physical Therapy Training in MS Patients: a Case Series. *Int J Ther Rehabil* 2018;25(10):522-8.
13. Shao J, Frizon L, Machado AG, McKee K, Bethoux F, Nagel SJ. Occlusion of the Ascenda Catheter in a Patient with Pump Twiddler's Syndrome: A Case Report. *Anesth Pain Med* 2018;8(2):e65312. PMID: 30027067.
14. Abbateamarco JR, Willis MA, Wilson RG, Nagel SJ, Machado AG, Bethoux FA. Case Series: Intrathecal Baclofen Therapy in Stiff Person Syndrome. *Neuromodulation* 2018;21:655-9. PMID: 29532593.
15. Dalgas U, Langeskov-Christensen M, Skjerbaek A, Jensen E, Baert I, Romberg A, Santoyo Medina C, Gebara B, Maertens de Noordhout B, Knuts K, Béthoux F, Maamâgi H, Rasova K, Severijns D, Bibby BM, Kalron A, Norman B, Van Geel F, Wens I, Feys P Is the impact of fatigue related to walking capacity and perceived ability in persons with multiple sclerosis? A multicenter study. *J Neurol Sci* 2018; 387:179-86. PMID: 29571860.
16. Gallagher LM, Gardner V, Bates D, Mason S, Nemecek J, Baker DiFiore J, Bena J, Li M, Bethoux F. Impact of Music Therapy on Hospitalized Patients Post-Elective Orthopaedic Surgery. *Orthopaedic Nursing* 2018;37:124-33. PMID: 29570546.
17. Bethoux F, Varsanik JS, Chevalier TW, Halpern EF, Stough D, Kimmel ZA. Walking Speed Measurement by an Ambient Measurement System (AMS) Correlates with Standard Gait Assessments in Multiple Sclerosis. *Gait Posture* 2018;61:393-97. PMID: 29454289.
18. Yang F, Finlayson M, Bethoux F, Su X, Dillon L, Maldonado HM. Effects of controlled whole-body vibration training in improving fall risk factors among individuals with multiple sclerosis: A pilot study. *Disabil Rehabil* 2018;40(5):553-60. doi: 10.1080/09638288.2016.1262466.
19. **Book:** Fox R, Rae-Grant A, Bethoux F. *Multiple Sclerosis and Related Disorders: Diagnosis, Medical Management, and Rehabilitation 2<sup>nd</sup> Edition*; Demos Medical Publishing ed., New York 2018:421 p.
20. **Book chapter:** Bethoux F. Overview of Rehabilitation in Multiple Sclerosis. In Rae-Grant A, Fox R, Bethoux F: *Multiple Sclerosis and Related Disorders: Diagnosis, Medical Management, and Rehabilitation 2<sup>nd</sup> Edition*. Demos Medical Publishing, New York 2018:159-65.
21. **Book chapter:** Bethoux F, Willis MA. Spasticity Management in Multiple Sclerosis. In Rae-Grant A, Fox R, Bethoux F: *Multiple Sclerosis and Related Disorders: Diagnosis, Medical Management, and Rehabilitation 2<sup>nd</sup> Edition*. Demos Medical Publishing, New York 2018:259-67.
22. **Book chapter:** Bethoux F, Sosnoff JJ, McKee K. Multiple Sclerosis and Mobility. In Rae-Grant A, Fox R, Bethoux F: *Multiple Sclerosis and Related Disorders: Diagnosis, Medical Management, and Rehabilitation 2<sup>nd</sup> Edition*. Demos Medical Publishing, New York 2018:268-78.

## Gregory Nemunaitis, MD

## 2016

1. Nemunaitis G, Roach MJ, Claridge J, Mejia M. Early Predictors of Functional Outcome following Trauma. *PM R*. 2016 Apr;8(4):314-20. **PMID: 26314232**
2. Bryden AM, Hoen HA, Keith MW, Mejia M, Kilgore KL, Nemunaitis GA. Upper Extremity Assessment in Tetraplegia: The Importance of Differentiating between Upper and Lower Motor Neuron Paralysis. *Arch Phys Med Rehabil*. 2016;97(6 Suppl 2):S97-104. **PMID: 27233597**

3. Nemunaitis G, Roach MJ, Mejia M, Hefzy S. Redesign of a Spine Board: Proof of Concept Evaluation - Assist Technol. 2016. Fall;28(3):144-51. **PMID: 26852872**
4. Zhang X, Plow E, Ranganathan V, Huang H, Schmitt M, Nemunaitis G, Kelly C, Frost F, Lin V. Functional Magnetic Stimulation of Inspiratory and Expiratory Muscles in Subjects With Tetraplegia. PM R. 2016 Jul;8(7):651-9. **PMID: 26968608**

**2018**

5. Mehech D, Mejia M, Nemunaitis GA, Chae J, Wilson RD. Percutaneous peripheral nerve stimulation for treatment of shoulder pain after spinal cord injury: A case report. The Journal of Spinal Cord Medicine 2018 Jan;41(1):119-124. (**PMID: 28303761**)
6. Del Fabro AS, Mejia M, Nemunaitis G. An Investigation of the Relationship Between Autonomic Dysreflexia and Intrathecal Baclofen in Spinal Cord Patients. J Spinal Cord Med. 2018 Jan;41(1):102-105. **PMID: 28406070**.
7. Kilgore KL, Bryden AM, Keith MW, Hoen HA, Hart RL, Nemunaitis GA, Peckham PH. Evolution of Neuroprosthetic Approaches to Restoration of Upper Limb Function in Spinal Cord Injury. Special Upper Extremity Issue of Topics in Spinal Cord Injury. 2018;24(3):252-264. **PMID: 29997428**
8. Marino RJ, Sinko R, Bryden A, Backus D, Chen D, Nemunaitis GA, Leiby BE. Comparison of Responsiveness and Minimal Clinically Important Difference of the Capabilities of Upper Extremity Test (CUE-T) and the Graded Redefined Assessment of Strength, Sensibility and Prehension (GRASSP). Top Spinal Cord Inj Rehabil 2018;24(3):227-38. **PMID: 29997426**
9. Bryden A, Kilgore KL, Nemunaitis GA. Advanced Assessment of the Upper Limb in Tetraplegia: A Three-Tiered Approach to Characterizing Paralysis. Top Spinal Cord Inj Rehabil. 2018 Summer;24(3):206-216. **PMID: 29997424**
10. **Book Chapter:** Brose SW, Kilgore KL, Triolo R, DiMarco AF, Bourbeau DJ, Nemunaitis G. (2018). Functional Electrical Stimulation for Patients with Spinal Cord Injury. In: Spinal Cord Medicine, 3rd Ed. Edited by S Kirschblum, VW Lin, Benzel EC, Burns SP, Field-Fote EC, Gorman PH, Groah SL, Sabharwal S. Springer Publishing Company, LLC; New York, NY. Publication Date December 21, 2018

**John Lee, MD**

**2018**

1. Lee, J. (2018) Chapter 50. 'Home modifications and architectural changes for SCI patients', in Kirshblum S, Lin VW, editors. Spinal cord medicine. Springer Publishing Company, pp 849-856.
2. Lee, J. (2018) Chapter 9. 'Lower limb impairments after stroke' in Wilson, R, Raghavan, P, editors. Stroke Rehabilitation

**Susan Linder, DPT**

**2016**

1. Linder SM, Clark C, Forester B, Goldberg E. Art saved my life. The Journal of Humanities in Rehabilitation. 2016;4.



2. Burke D, Linder SM, Hirsch J, Dey T, Kana D, Ringenback S, Schindler D, Alberts J. Characterizing information processing with a mobile device: Measurement of simple and choice reaction time. *Assessment*. 2016;24(7):885-895.

## 2017

3. Linder SM, Rosenfeldt AB, Dey T, Alberts JL. Forced Aerobic Exercise Preceding Task Practice Improves Motor Recovery Post-Stroke. *American Journal of Occupational Therapy*. 2017;70(1): 7102290020p1-7102290020p9. PMCID: PMC5317391.
4. Ozinga SJ, Koop MM, Linder SM, Machado AG, Dey T, Alberts JL. Three-dimensional evaluation of postural stability in Parkinson's disease with mobile technology. *NeuroRehabilitation*. 2017;41:211-218.
5. Ozinga SJ, Linder SM, Alberts JL. Use of mobile device accelerometry to enhance evaluation of postural instability in Parkinson's disease. *Arch Phys Med Rehabil*. 2017; 98(4):649-658.

## 2018

6. Linder SM, Ozinga SJ, Koop MM, Dey T, Figler R, Cruickshank J, Alberts JL. Cleveland Clinic- Postural Stability Index Norms for the Balance Error Scoring System. *Medicine & Science in Sports & Exercise*. 2018;50(10):1998-2006.
7. Ozinga SJ, Linder SM, Koop MM, Dey T, Figler R, Russman AN, So R, Rosenthal AH, Cruickshank J, Alberts JL. Normative Performance on the Balance Error Scoring System by Youth, High School, and Collegiate Athletes. *Journal of Athletic Training*. 2018;53(7):636-645.
8. Linder SM, Rosenfeldt AB, Bazyk A, Koop, MM, Ozinga SJ, Alberts JL. Improved Lower Extremity Pedaling Mechanics in Individuals with Stroke Under Maximal Workloads. *Topics in Stroke Rehabil*. 2018;25(4):248-255.

## Ellen W. K. Rosenquist, MD

## 2016

1. Xu J, Yang J, Lin P, Rosenquist E, and Cheng J. Intravenous Therapies for Complex Regional Pain Syndrome: A Systematic Review. *Anesthesia & Analgesia*: 2016 Mar; 122(3):843-56.
2. Alexander Bautista, MD, Alisher Dadabayev, MD, Ellen Rosenquist, MD, and Jianguo Cheng, MD. Bipolar Radiofrequency Neurotomy to Treat Neck and Back Pain in Patients with Automatic Implantable Cardioverter Defibrillator. *Pain Physician* 2016; 19:E
3. Rosenquist EWK. Pain Consult: When to get a consult, what to ask your consultant, and establishing a treatment goal. In: *Management of Chronic Pain in Hospital Settings in Hospital*. (Rosenquist R, SouzdaInitski D, and Urman R, eds). Oxford University Press, 2016.

## 2017

4. Rosenquist EWK and Strickland, N. Pediatric Pain and Development of Pain Systems. In: *Pain Medicine: A Comprehensive Board Review for Primary and Maintenance of Certification*. (Huntoon M, ed). Oxford University Press, 2017.

**Patrick Schmitt, DO**

**2015**

1. Lie, D.A., Fu, J.B., Schmitt, P., Kodish, E. and Mukherjee, D., 2017. Cultural Factors in Ethics Consultations. *PM&R*, 9(10), pp.1030-1037

**2017**

2. Kibbe,B., Schmitt,P.,Ford, P.J., " An ethicist's scope of practice" equipping stakeholders for closure." *Am J Bioeth.*, 2015;15(1):37-8

## Physical Medicine & Rehabilitation Trainees

**Total Number of Department Trainees (not names) in the last 3 years or **total number per average year** [Word or Excel]**

- Total of Trainees and number from each of the following:
  - Medical Students (CCLCM, CWRU, and other institutions) **25** (Ohio University 18, CWRU 4, CCLCM 3)
  - Graduate students (name of institutions) **0**
  - Residents 6 CC PM&R residents; in addition, 6 MetroHealth Medical Center PM&R residents and 2 CC Internal Medicine rotating through our department. So the total would be **14**.
  - Fellows 1 fellow based in PM&R; in addition, 2 PM&R fellows from MetroHealth Medical Center (spinal cord injury and traumatic brain injury fellows), 4 CC Stroke Vascular Neurology fellows, and 9 CC Pain fellows rotating through PM&R. The grand total is **16**
- Number of CCLCM vs. SOM students trained per year see above

August 31, 2020

Stanton L. Gerson, MD  
Interim Dean, CWRU School of Medicine  
Case Western Reserve University  
10900 Euclid Avenue  
Cleveland, OH 44106

Dear Dean Gerson:

It is my privilege to propose the creation of the Academic Department of Psychiatry at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University. The Academic Chair of this new Psychiatry department would be the same person as the Clinical Chair of Psychiatry and Psychology at Cleveland Clinic, who is Dr. Donald Malone, Jr.

Dr. Malone graduated with his MD degree from The Northeastern Ohio University's College of Medicine in 1985. There he was a member of Alpha Omega Alpha. Following his medical school training, he did one year of internship in internal medicine followed by a psychiatric residency at The Massachusetts General Hospital. Since 1989, he has been at Cleveland Clinic. Dr. Malone has been very active in research, education, and various local and national committees. He has held positions in The Ohio Psychiatric Association, The American Psychiatric Association, The Association for Convulsive Therapy, and The American College of Psychiatrists. Currently, he is on the Board of Directors for The International Society for Neurostimulation. His research has been primarily in the areas of anxiety disorders, anabolic steroid use and abuse, ECT, and most recently, Deep Brain Stimulation. He has authored numerous publications in these areas and presented both nationally and internationally.

Donald A. Malone, Jr., M.D., is currently a Professor of Medicine at Cleveland Clinic Lerner College of Medicine of Case Western Reserve University and the President of Lutheran Hospital. He is also the Chair of the Department of Psychiatry and Psychology at Cleveland Clinic where he performs duties as the Director of the Center for Behavioral Health. He is also the Chair of Cleveland Clinic Strategic Space Planning Committee and a member of the Cleveland Clinic Enterprise Risk Management Committee.

The Cleveland Clinic Foundation

9500 Euclid Avenue / EC40  
Cleveland, Ohio 44195

Tel 216 442 5627  
Fax 216 636 1348  
[barnetg@ccf.org](mailto:barnetg@ccf.org) / [clevelandclinic.org/cclem](http://clevelandclinic.org/cclem)

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## **1. The breadth and depth of the identified faculty's teaching and research productivity.**

The Department of Psychiatry and Psychology has an outstanding reputation for clinical and academic excellence, being rated "high performing" by U.S. News & World Report. Our Psychiatry & Psychology staff has developed a robust research program, which provides excellent opportunities for faculty, fellows, residents, and medical students. Research is conducted in various disorders, including substance dependence, child psychiatry, mood disorders, pain, bariatrics, consultation-liaison psychiatry, and community psychiatry. Areas of research include genetics, brain imaging, neuroinflammatory biomarkers, and other biomarkers for diagnosis and treatment effects. Several clinical trials are ongoing for a range of treatment modalities, including pharmacological agents, neurostimulation techniques, psychotherapies, and community interventions. Outcome research is also an area of particular interest. In addition, active collaboration opportunities are available with colleagues in other specialties, including neurology, neurosurgery, cardiology, primary care, and oncology. Faculty have ample opportunity to pursue research projects.

The vice-chair for research coordinates and facilitates all administrative, regulatory and clinical aspects of research for interested investigators. Department members have secured nearly \$30 million in research funding over the last five years. Currently, the department conducts large-scale studies funded by the Patient-Centered Outcome Research Institute (PCORI) and the National Institutes of Health (NIH). The department also conducts studies in association with the pharmaceutical industry and private foundations. Philanthropic funds are available to conduct pilot and novel studies.

Research education is provided to medical students in the form of didactics, summer electives, and research year projects. The department supports a broad spectrum of behavioral health residency and fellowship training programs: 32 psychiatry residents, 4 child & adolescent psychiatry fellows, 2 psychiatry consultation-liaison fellows, 1 research fellow, and 6 post-doctoral health psychology fellows. Residents participate in didactics on research topics and can take electives to conduct the research of their choice. There is a dedicated resident research track for residents who are interested in pursuing a research career. We also offer a Clinical Neuroscience Research Fellowship for 1-2 years for graduating residents interested in pursuing research careers.

In addition to our thriving residency and fellowship programs, we provide training to medical and graduate students through rotations in Chemical Dependence Rehabilitation, Child & Adolescent Psychiatry, Psychiatry Acting Internship, and Psychiatry Consultation-Liaison. Since 2017, we have had a total of 67 students from both domestic and international universities receive training from our staff: 10 students from Case Western Reserve University School of Medicine; 30 students from Cleveland Clinic Lerner College of Medicine; and 27 students from non-CCLCM/CWRU medical schools including Jawaharlal Nehru Medical College Belgaum, Kansas City University of Medicine & Biosciences College of Osteopathic Medicine, Michigan State University College of Osteopathic Medicine, Ohio University Heritage College of Osteopathic Medicine, The Ohio State University College of Medicine, and University of Cincinnati College of Medicine.

A dedicated research manager and financial manager oversee all aspects of research along with the vice-chair. Statistical support is available through the Neurological Research Institute and the Quantitative Health Sciences Institute. Several coordinators and research analysts are also available. Research space is available for faculty, coordinators, and research analysts, including a dedicated data analysis office.

## **2. Any additional factors that are relevant to the proposed new department.**

The proposal to create an Academic Department of Psychiatry comes at the request of former Dean Pamela Davis. Faculty members of the clinical department are actively involved in the teaching of medical students, residents, and fellows, and it is fitting that they be recognized for the academic pursuits in this specialty. They are currently in the Academic Department of Medicine and would then transfer into the newly created Academic Department of Psychiatry. At its inception, CCLCM purposefully started with few departments, however as the College has matured, we believe that it is important to align our academic departments with those of the other institutions that are CWRU-SOM teaching institution and that in this case, Psychiatry is sufficiently robust that it should stand apart from the Academic Department of Medicine.

**3. An analysis of the effect of establishment of the second department on existing departments of the School of Medicine.**

Creation of this department would parallel the existence of such academic departments at other CWRU School of Medicine teaching hospitals, but would have no adverse impact on them and may facilitate academic interaction amongst them. The new academic department will clearly define the academic disciplines that already exist within its clinical department.

**4. A statement that research publications authored by faculty with an appointment in the new department will make note of the Case Western Reserve University faculty appointment.**

Research publications authored by faculty with an appointment in this new department will make note of their Case Western Reserve University faculty appointment.

**5. A five-year business plan demonstrating how the second department will achieve and maintain financial viability or, in the alternative and if appropriate, the proposal should affirm that the new department will not require funding from the School of Medicine.**

The creation of this department will have no financial impact on CWRU or the School of Medicine and will not require any funding from either. It is anticipated that this validation of the faculty's academic accomplishments will further stimulate these pursuits in the future. Further, the alignment of these faculty appointments with the other CWRU-SOM departments should facilitate engagement with students and like faculty at the new Health Education Campus.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gene Barnett', with a stylized flourish at the end.

Gene H. Barnett, MD, MBA  
Associate Dean for Faculty Affairs  
Professor of Neurological Surgery

August 31, 2020

Stanton L. Gerson, MD  
Interim Dean, CWRU School of Medicine  
Case Western Reserve University  
10900 Euclid Avenue  
Cleveland, OH 44106

**RE: Donald Malone, Jr., MD**  
**Application for Appointment as Academic Chair, Department Psychiatry within Cleveland Clinic Lerner College of Medicine of Case Western Reserve University**

Dear Dean Gerson:

On behalf of Gene H. Barnett, MD, Cleveland Clinic Lerner College of Medicine Associate Dean of Faculty Affairs, our Faculty Appointment and Promotions Committee, and the Cleveland Clinic Lerner College of Medicine Executive Team, I would like to propose Donald Malone, Jr., MD as the new Chair for the Academic Department of Psychiatry, within the Cleveland Clinic Lerner College of Medicine. Dr. Malone was chosen as he is the current Chair of the Department of Psychiatry and Psychology and is well suited to this leadership position.

Dr. Malone graduated with his M.D. degree from The Northeastern Ohio University's College of Medicine in 1985. There he was a member of Alpha Omega Alpha. Following his medical school training, he did one year of internship in internal medicine followed by a psychiatric residency at The Massachusetts General Hospital. Since 1989, he has been at Cleveland Clinic. Dr. Malone has been very active in research, education, and various local and national committees. He has held positions in The Ohio Psychiatric Association, The American Psychiatric Association, The Association for Convulsive Therapy, and The American College of Psychiatrists. Currently, he is on the Board of Directors for The International Society for Neurostimulation. His research has been primarily in the areas of anxiety disorders, anabolic steroid use and abuse, ECT, and most recently, Deep Brain Stimulation. He has authored numerous publications in these areas and presented both nationally and internationally.

Donald A. Malone, Jr., M.D., is currently Professor of Medicine at Cleveland Clinic Lerner College of Medicine of Case Western Reserve University and the President of Lutheran Hospital. He is also the Chair of the Department of Psychiatry and Psychology at Cleveland Clinic where he performs duties as the Director of

The Cleveland Clinic Foundation

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the Center for Behavioral Health. He is also the Chair of Cleveland Clinic Strategic Space Planning Committee and a member of the Cleveland Clinic Enterprise Risk Management Committee.

In summary, we are very enthused to have Donald Malone, Jr., MD be the chair of our new CCLCM Psychiatry academic department. His enthusiasm and dedication will serve the students and faculty well at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University.

Please let me know if you have any questions.

Sincerely,



J. Harry Isaacson, MD  
Executive Dean, Cleveland Clinic Lerner College of Medicine  
Professor of Medicine





## **CURRICULUM VITAE**

**Donald A. Malone, Jr., M.D.**

### **TITLE**

- Chairman, Department of Psychiatry and Psychology; Cleveland Clinic
- Director, Center for Behavioral Health, Cleveland Clinic Health System
- President, Cleveland Clinic Lutheran Hospital
- Professor of Medicine, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University

### **HOME ADDRESS**

4003 Franklin Blvd  
Cleveland, OH 44113  
216-312-3156 (mobile)

### **BUSINESS ADDRESS**

Cleveland Clinic Foundation  
Department of Psychiatry & Psychology  
9500 Euclid Avenue, Desk P57  
Cleveland, Ohio 44195  
216/444-5817  
216/445-0127 (fax)  
E-mail: [maloned@ccf.org](mailto:maloned@ccf.org)

Cleveland Clinic Lutheran Hospital  
LU 100A  
1730 West 25th Street  
Cleveland, Ohio 44113  
216-523-7027  
216-523-7029 (fax)

### **EDUCATION**

- |      |  |
|------|--|
| 1981 | B.S.<br>Youngstown State University<br><i>Summa Cum Laude</i>                    |
| 1985 | M.D.<br>Northeastern Ohio Universities College of Medicine<br>Alpha Omega Alpha  |
| 1995 | Graduate<br>Cleveland Clinic Foundation Executive Program in Practice Management |

**CLINICAL TRAINING & EXPERIENCE**

1985-1986	PGY-1 Internal Medicine Youngstown Hospital Association Youngstown, Ohio
1986-1988	Resident in Psychiatry Massachusetts General Hospital Boston, Massachusetts
1988-1989	Chief Resident - Acute Psychiatry Service Massachusetts General Hospital Boston, Massachusetts

**CLINICAL & HOSPITAL SERVICE RESPONSIBILITIES**

1987-1989	Associate Clinical Staff Pembroke Hospital Pembroke, Massachusetts
1988-1989	Affiliated Staff Habit Management Institute Boston, Massachusetts
1989-1991	Associate Staff Cleveland Clinic Foundation Department of Psychiatry Cleveland, Ohio
1991-present	Staff Cleveland Clinic Foundation Department of Psychiatry Cleveland, Ohio
1990-2012	Director, ECT Services Department of Psychiatry Cleveland Clinic Foundation
1990-1997	Associate Director Residency Training Program Department of Psychiatry Cleveland Clinic Foundation
1991-1998	Head, Grand Rounds Committee Department of Psychiatry Cleveland Clinic Foundation

1993-2012	Director, Sub-specialty Programs for Mood and Anxiety Disorders Department of Psychiatry Cleveland Clinic Foundation
1995-1997	Head, Research Committee Department of Psychiatry Cleveland Clinic Foundation
1996-2010	Section Head, Primary Adult Services Department of Psychiatry Cleveland Clinic
1998-2000	Consulting Staff Heather Hill Hospital Chardon, Ohio
2005-present	Staff Physician Cleveland Clinic - Lutheran Hospital Cleveland, Ohio
2006-present	Director, Psychiatric Neuromodulation Center Cleveland Clinic Cleveland, Ohio
2008-present	Director, Center for Behavioral Health Cleveland Clinic Cleveland, Ohio
2009-present	Staff Physician Cleveland Clinic - Fairview Hospital Cleveland, Ohio
2013-present	President Cleveland Clinic - Lutheran Hospital Cleveland, Ohio

#### **ACADEMIC APPOINTMENTS**

1986-1989	Clinical Fellow in Psychiatry Harvard Medical School
1993-2003	Assistant Professor, Department of Psychiatry Ohio State University
2009-present	Professor of Medicine Cleveland Clinic Lerner College of Medicine of Case Western Reserve University

**OFFICER AND COMMITTEE ASSIGNMENTS**

1986-1989	Residents' Association Committee Massachusetts General Hospital
1988-1989	Residency Training Committee Massachusetts General Hospital
1989-1997	Quality Assurance Committee Department of Psychiatry Cleveland Clinic Foundation
1989-2012	Head, ECT Subcommittee Department of Psychiatry Cleveland Clinic Foundation
1995-1997	Head, Research Committee Department of Psychiatry Cleveland Clinic Foundation
1990-1991	Co-Chairman Scientific Program Committee Ohio Psychiatric Association
1990-1991	Co-Chairman Program Committee Cleveland Psychiatric Society
1991-1992	Chairman Liaison Committee Cleveland Psychiatric Society
1991-1992	Treasurer, Cleveland Consultation Liaison Society
1992-1993	President, Cleveland Consultation Liaison Society
1991-1994	Co-Chairman Program Committee Ohio Psychiatric Association
1994-2000	Member, Program Committee Ohio Psychiatric Association
1991-1995	Training Council Association for Convulsive Therapy
1993-2000	Sub-committee on Joint Co-sponsorship of CME American Psychiatric Association
1993	American Psychiatric Association, Physician Representative National Public Education Campaign on Clinical Depression

1994-2000	Long-range Planning Committee Ohio Psychiatric Association
1994-1996	Clinical Roles Committee Cleveland Clinic Foundation
1994-1997	Marketing Committee Cleveland Clinic Foundation
1995-1998	Head, Grand Rounds Committee Cleveland Clinic Foundation
1997-2001	Membership Committee Ohio Psychiatric Association
1998-2000	Chairman, Membership Committee, OPA
1997-2000	Laughlin Fellowship Selection Committee American College of Psychiatrists
1994-1998	Institutional Review Board Cleveland Clinic Foundation
1998-2006	Formulary Sub-committee Cleveland Clinic Foundation
1999-2018	Member, Task Force on ECT Certification Association for Convulsive Therapy
1999-2003	Education and Research Foundation Ohio Psychiatric Association
2000-2001	Treasurer The Association for Convulsive Therapy
2001-2007	Education Award Selection Committee American College of Psychiatrists
2002-2003	Secretary The Association for Convulsive Therapy
2004-2006	Vice-President The Association for Convulsive Therapy
2006-2008	President The Association for Convulsive Therapy

2008-2018	Board of Directors (Chair 2017-18) The International Society for ECT and Neurostimulation
2008-2014	Member Neurological Institute Peer Review Committee
2006-2013	Chairman CCF Neurosciences Specialty Panel of the P&T Committee
2006-2013	Member Pharmacy and Therapeutics Committee, CCF
2006-2012	Member Neurological Institute Appointment and Promotions Committee
2007-2012	Member Neurological Institute Hospital Operations Committee
2009-2013	Member Cleveland Clinic Board of Governors
2010-2012	Vice-Chair Cleveland Clinic Strategic Space Planning Committee
2012-present	Chairman Cleveland Clinic Strategic Space Planning Committee
2011-2013	Member American College of Psychiatrists Scientific Program Committee
2012-2013	Member Cleveland Clinic Board of Directors
2012-2016	Member Cleveland Clinic Planning Committee
2012-2014	Member Cleveland Clinic Executive Team
2014-2019	Member Cleveland Clinic Enterprise Risk Management Committee
2013-present	Member Cleveland Clinic Regional Hospitals Board of Trustees

**OTHER PROFESSIONAL RESPONSIBILITIES**

Examiner: American Board of Psychiatry and Neurology

Editorial Board: The Journal of ECT

Review Panels: NIMH Study Section (RFA 11-177), "Translational Research for  
The Development of Novel Interventions for Mental Disorders"

NIH Center for Scientific Review Special Emphasis Panel (ZRG1-  
DBD-M), "Developmental Brain Disorders"

Reviewer: Acta Psychiatrica Scandinavica  
Addiction  
The American Journal of Psychiatry  
Archives of General Psychiatry  
Biological Psychiatry  
Bipolar Disorders  
Cleveland Clinic Journal of Medicine  
European Neuropsychopharmacology  
Experimental Neurology  
JAMA  
Journal of Neurology, Neurosurgery, and Psychiatry  
The Journal of Clinical Psychiatry  
The Journal of ECT  
Lancet  
Neuromodulation  
Neuropsychopharmacology  
Neurosurgery  
The World Journal of Biological Psychiatry

Member: Medical Advisory Board, NAMI Metro Cleveland

Board Membership: Ohio City, Inc. Board of Trustees  
The Centers for Families and Children Board of Trustees  
Skylight Foundation Board of Trustees

### **PROFESSIONAL ORGANIZATIONS**

Phi Kappa Phi Honor Society  
American Psychiatric Association  
American Medical Association  
Alpha Omega Alpha  
American Association for the Advancement of Science  
Academy of Psychosomatic Medicine, Fellow  
Ohio Psychiatric Association  
Cleveland Consultation-Liaison Society  
Cleveland Psychiatric Society  
American Association of Directors of Psychiatric Residency Training  
International Society for ECT and Neurostimulation  
Society for Neuroscience  
International Society for Sport Psychiatry

The American College of Psychiatrists  
The Academy of Medicine of Cleveland  
North American Neuromodulation Society  
Society of Biological Psychiatry  
American College of Healthcare Executives

### **HONORS:**

1980      Phi Kappa Phi Honor Society  
1985      Alpha Omega Alpha  
1988      Laughlin Fellowship, American College of Psychiatrists  
1993      Fellow, Academy of Psychosomatic Medicine  
1994      President's Award, Ohio Psychiatric Association  
1996      Member, American College of Psychiatrists  
1996      President's Award, Ohio Psychiatric Association  
1998      Fellow, American Psychiatric Association  
2001      Northern Ohio Live Magazine, "Top 3 Psychiatrists in Northeast Ohio" (Annual since)  
2001      Listed in Guide to Top Doctors (Annual since)  
2002      Exemplary Psychiatrist Award, National Alliance for the Mentally Ill  
2002      Fellow, American College of Psychiatrists  
2003      Distinguished Fellow, American Psychiatric Association  
2004      Cleveland Magazine's "Top Docs" (Yearly since 2004)  
2005      Best Doctors in America (Yearly since 2005)  
2008      Best Poster Award (Stereotactic and Functional Category) – AASFN  
2010      Ziskind Somerfeld Research Award Nominee, Society of Biological Psychiatry  
2011      Who's Who in Medicine and Healthcare  
2017      President's Award, Ohio City Incorporated  
2017      Marthea Infield Service Excellence Award (for service to behavioral health in Northeast Ohio)  
2018      Nightingale Physician Collaboration Award (given by Cleveland Clinic Nursing Institute for collaboration with nursing staff)

### **LICENSURE & CERTIFICATION**

1989      Ohio Medical License  
            Registration No. 58231  
            (active)  
  
1991      ABPN Board Certification in Psychiatry  
            Certificate No. 34254  
  
1996-2006      ABPN Added Qualifications in Geriatric Psychiatry

### **TEACHING EXPERIENCE**

#### **High School**



1982-1983            Chemistry Teacher  
                         Upward Bound Program  
                         Western Reserve Academy  
                         Hudson, Ohio

**Medical Student Supervision & Teaching**

1987-1989            Lecturer  
                         Harvard Medical School Core Seminar Series  
                         Massachusetts General Hospital

1988-1989            Acute Psychiatry Service  
                         Massachusetts General Hospital

1992-2003            Lecturer  
                         Ohio State Medical School Core Seminar Series  
                         Cleveland Clinic Foundation

1992-2006            Supervisor  
                         Ohio State Medical School Core Clerkship in Psychiatry

2004-present        Lecturer and Supervisor  
                         Cleveland Clinic Lerner College of Medicine

**Psychiatry Resident Supervision & Teaching**

1988                    Lecturer, Resident Orientation  
                         Massachusetts General Hospital

1988-1989            Acute Psychiatry Service  
                         Massachusetts General Hospital

1989-present        Psychotherapy Supervisor  
                         Cleveland Clinic Foundation

1989-present        Lecturer, Resident Didactic Seminars  
                         Cleveland Clinic Foundation

1990-2010            Clerkship Director, Electroconvulsive Therapy Elective  
                         Cleveland Clinic Foundation

1990-1997            Associate Director  
                         Psychiatry Residency Training Program  
                         Cleveland Clinic Foundation

## **RESEARCH & GRANT SUPPORT**

"Psychiatric Disorders in Weightlifters Using Anabolic Steroids"

Funding: Cleveland Clinic Foundation Research Grant #3206

Co-PI with Robert J. Dimeff, M.D.

Grant award - \$20,300

"Anabolic Steroids: A New Issue in Prevention Research"

Funding: National Institute on Drug Abuse (RO1-DA07793)

Consultant to Paul J. Goldstein, Ph.D.

Grant award - \$1,800,000

"A Clinical Evaluation of Risperdal in the Treatment of Schizophrenia"

Funding: Janssen Research Foundation Protocol #RIS-USA-54

Co-investigator

"Electrical Stimulation of the Internal Capsule for Intractable Obsessive-Compulsive Disorder" (CCF IRB #4498)

Funding: Medtronic, Inc.

Co-investigator

"The Use of Aripiprazole Augmentation in Patients with Treatment Refractory Obsessive Compulsive Disorder" (CCF IRB#6997)

Principle Investigator

Funding: Bristol Myers Squibb

Grant award - \$25,000

"Observational Prospective Study of Patients Initiated or Switched to Olanzapine versus Ziprasidone" (CCF IRB#4847)

Funding: Eli Lilly

Co-Investigator

"Evaluation of the Electrophysiological Characteristics of Seizures Induced During Routine Electroconvulsive Therapy" (CCF IRB#6792)

Funding: Internal

Co- Investigator

"Electrical Stimulation of the Internal Capsule for Intractable Major Depression" (CCF IRB#6577)

IDE#030183

Funding: Medtronic, Inc

Principal Investigator

"EMG Study of Patients with Deep Brain Stimulation of the Anterior Internal Capsule" (CCF IRB#6246)

Funding: Internal

Co- Investigator

"Deep Brain Stimulation for the Treatment of Advanced Parkinson's Disease" (CCF

IRB#7447)  
Funding: NIH RO1  
Co-Investigator

“Using fMRI to Predict Therapeutic Response to DBS in Patients with Severe and Medically Refractory Major Depression and Obsessive-Compulsive Disorder” (CCF IRB#6708)  
Funding: Internal  
Co-Investigator

“Characterization of the Cortical/Subcortical Networks Involved in the Generation and Propagation of Seizures Induced During Routine Electroconvulsive Therapy – an Ictal SPECT Study” (CCF IRB#7519)  
Funding: Internal  
Co-Investigator

“Controlled Trial of DBS for OCD”

Funding: NIMH RO1 MH076179-01A1

Project Period: 9/25/06 – 8/31/13

IDE#G070235

PI-CCF Site (8% Effort)

“Reclaim Deep Brain Stimulation Clinical Study for Treatment Resistant Depression”  
(CCF IRB#08-679)

Funding: Medtronic, Inc

Project Period: 8/6/08-4/30/13

IDE#G080033

Total funding: \$1,081,899

National PI and Site PI

“Effect of Deep Brain Stimulation on EEG Recordings”

(CCF IRB#08-696)

Funding: Medtronic, Inc

Project Period: 4/09-5/10

Total funding: \$46,716

Co-PI with Kenneth Baker, PhD

“Humanitarian Device Exemption (HDE) for Reclaim DBS Therapy for OCD”

(CCF IRB#10-078)

Approved 2/22/10

Principal Investigator

“Deep Brain Stimulation for Thalamic Pain Syndrome”

Funding: NIH Director Award (Machado)

Total Funding: \$1,500,000

Machado (PI)

Percent effort- 5%

“Electroconvulsive Therapy Versus Ketamine for Severe Resistant Depression”

Funding: Patient-Centered Outcomes Research Institute (PCORI)

Total Funding: \$11,128,538

11/1/16-10/31/21

Anand (PI)

Co-Investigator

**DATA AND SAFETY MONITORING BOARD PARTICIPATION**

Cavanagh et al. A Quantitative Test of On-Orbit Exercise Countermeasures for Bone Demineralization using a Bed Rest Analog. Funding: NASA

Goodman et al. (Mt. Sinai Hospital, NY). Multiscale Investigation of the Living Human Brain.

## **PUBLICATIONS**

### **Original Publications**

Giannini AJ, Nageotte C, Loiselle RH, **Malone DA**, Price WA: Comparison of chlorpromazine, haloperidol, and pimozide in the treatment of phencyclidine psychosis: DA-2 receptor specificity. Clin Toxicology 1985; 22(6): 573-9.

**Malone DA**, Wagner RA, Myers JP, Watanakunakorn C: Enterococcal bacteremia in two large community teaching hospitals. Am J of Med 1986; 81: 601-6.

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Giannini AJ, **Malone DA**, Loiselle RH, Price WA: Blunting of TSH response to TRH in chronic cocaine and phencyclidine abusers. J Clin Psychiatry 1987; 48(1): 25-26.

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**Malone DA**: Anxiety and depression. Patient Care, 1999; 33 (13): 8-10.

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The OCD-DBS Collaborative Group: Deep Brain Stimulation for psychiatric disorders. Neurosurgery 2002; 51 (2): 519.

Greenberg BD, Price LH, Rauch SL, Friehs G, Noren G, **Malone D**, Carpenter LL, Rezai AR, and Rasmussen SA: Neurosurgery for Intractable Obsessive Compulsive Disorder and Depression: Critical issues. Neurosurgery Clinics of North America 2003; 14 (2): 199-212.

**Malone DM**, Rezai AR: Long-Term Electrical Capsular Stimulation in Patients with Obsessive-Compulsive Disorder: (Editorial) Neurosurgery 2003; 52(6): 1274.

**Malone DM**, Greenberg BD, Rezai AR: The Use of Deep Brain Stimulation in Psychiatric Disorders. Clinical Neuroscience Research 2004; 4:107-112.

Okun MS, Bowers D, Springer U, Shapira NA, **Malone DA**, Rezai AR, Nuttin B, Heilman KM, Morecraft RJ, Rasmussen SA, Greenberg BD, Foote KD, Goodman WK: What's in a "Smile?" Intra-operative Observations of Contralateral Smiles Induced by Deep Brain Stimulation. Neurocase 2004; 10(4):271-279.

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Machado A, Haber S, Sears N, Greenberg B, **Malone D**, Rezai A: Functional Topography of the Ventral Striatum and Anterior Limb of the Internal Capsule Determined by Electrical Stimulation of Awake Patients. *Clin Neurophysiol* 2009;120:1941-1948.

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## **Book Chapters and Other Publications**

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**Malone DA:** Pharmacological Therapies of Anabolic-Androgenic Steroid Addiction, in Pharmacological Therapies for Drug and Alcohol Addictions, Miller NS, Gold MS (eds), New York, 1995, Marcel Dekker, Inc.

**Malone DA** (special issue medical editor): Anxiety and Depression Handbook. Patient Care; 33 (13), August 15, 1999.

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Rezai AR, Machado A, **Malone D,** Greenberg B: Surgery for Obsessive Compulsive Disorder (OCD), in Youmans Textbooks of Neurological Surgery, 6<sup>th</sup> Edition, Winn HR (ed), Philadelphia, 2011, Elsevier Saunders.

Pandya M, Machado A, **Malone D:** Depression in Humans – The Ventral Capsule/Ventral Striatum, in Deep Brain Stimulation: A New Frontier in Psychiatry, Denys D, Feenstra M, Schuurman R (eds), Berlin Heidelberg, 2012, Springer-Verlag.

### **Book Reviews**

Stoudemire A., Fogel BS (eds). Principles of Medical Psychiatry. Grune and Stratton, Inc. 1987. Reviewed by Malone, DA. Psychosomatics 1988, 29(4): 449-450.

### **Abstracts**

**Malone DA,** Wagner RA, Myers JP, Watanakunacorn C: "Enterococcal Bacteremia in Two Large Community Teaching Hospitals". American College of Physicians Annual Meeting, Columbus, Ohio; September 1985.

**Malone DA,** Dimeff RJ: "The Use of Fluoxetine in Depression Associated With Anabolic Steroid Withdrawal". Annual Meeting of the Academy of Psychosomatic Medicine, Phoenix, Arizona; November 1990.

**Malone DA,** Camara EG, Krug JH: "The Ophthalmologic Effects of Psychotropic Medications". Annual Meeting of the Academy of Psychosomatic Medicine, Phoenix,

Arizona; November 1990.

**Malone DA:** "The Treatment of Anabolic Steroid Withdrawal Depression". Annual Meeting of the Cleveland Consultation-Liaison Society, Cleveland, Ohio; April 1991.

**Malone DA,** Dimeff RJ, Lombardo J: "The Psychiatric Effects of Anabolic Steroids". Annual Meeting of the American Psychiatric Association, New Orleans, Louisiana; May 1991.

Varley JD, **Malone DA,** Goodkin DE, Fischer J: "The Incidence of Psychiatric Disorders in Patients with Multiple Sclerosis". Annual Meeting of the American Psychosomatic Society, New York, New York; April 1992.

**Malone DA,** Dimeff RJ: "Anabolic Steroids: Dosage and Psychiatric Effects". Annual Meeting of the American Psychiatric Association, Washington, DC; May 1992.

Varley JD, **Malone DA,** Goodkin DE, Fischer J: "Comparison of SCID-Derived Psychiatric Diagnoses and Cranial MRI Data in Patients with Chronic Progressive Multiple Sclerosis". Annual Meeting of the Cleveland Consultation-Liaison Society, Cleveland, Ohio; April 1993.

**Malone DA,** Dimeff RJ: "Psychiatric Symptomatology Associated with Anabolic Steroid Use". First International Congress on Hormones, Brain, and Neuropsychopharmacology Rhodes, Greece; September 1993.

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**Malone DA,** Pozuelo LJ, Cash JM, et al: "Psychiatric Symptoms for Breast Implant and Chronic Fatigue Patients". 10th Annual Meeting of the World Congress of Psychiatry, Madrid, Spain; August 1996.

Baracskey DJ, **Malone DA,** Paganini EP: "The Use of Psychotropics in Hemodialysis". Annual Meeting of the Academy of Psychosomatic Medicine, San Antonio, Texas; November 1996.

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Hermida TE, **Malone DA,** Reddy S: "Nutrition and Insulin use in Individuals with Insulin Dependant Diabetes". Annual Meeting of the American Psychiatric Association,

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Kubu C, **Malone D**, Greenberg B, Rasmussen S, Malloy P, Rezai A. "Neuropsychological Outcome Following Deep Brain Stimulation for Obsessive Compulsive Disorder (OCD)." Biennial Meeting of the American Society for Stereotactic and Functional Neurosurgery. Cleveland, Ohio; October 2004.

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Horenstein C, Phillips M, Baker K, Lowe M, Kopell B, **Malone D**, Machado A, Greenberg B, Rezai A. "Functional MRI (fMRI) Evaluation of Deep Brain Stimulation (DBS) for Treatment of Depression". 91<sup>st</sup> Scientific Assembly and Annual Meeting of the Radiological Society of North America, Chicago, IL; November 2005.

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Kubu CS, Azmi H, Greenberg B, **Malone D**, Machado A, Friehs G, Rasmussen S, Malloy P, Rezai A. "DBS in the Internal Capsule/Ventral Striatum Improves Memory in Patients with Severe Psychiatric Disorders". American Association of Neurological Surgeons' Annual Meeting, Washington, DC; April 2007.

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Kubu C, Greenberg B, **Malone D**, Rasmussen S, Friehs G, Machado A, Rezai A. "Cognitive effects of DBS in the Ventral Striatum in patients with severe Major

Depression and Obsessive-Compulsive Disorder". Society for Biological Psychiatry Annual Meeting, Washington, DC; May 2008.

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Lujan JL, Chaturvedi A, **Malone D**, Rezai AR, McIntyre CC. "Axonal Pathways Activated by Deep Brain Stimulation for Neuropsychiatric Disorders". American Society for Stereotactic and Functional Neurosurgery Biannual Meeting, Vancouver, Canada; June 2008.

Pieren S, Abdelmalak B, **Malone D**. "Perioperative Management of a VNS in a Patient Undergoing Gastric Bypass". Midwest Anesthesiology Residents Conference, Chicago, IL; April, 2009.

**Malone DA**, Dougherty DD, Rezai AR, Carpenter LL, Friehs GM, Eskandar EN, Rauch SL, Rasmussen SA, Machado AG, Kubu CS, Tyrka AR, Price LH, Stypulkowski PH, Giftakis JE, Rise MT, Malloy PF, Salloway SP, Greenberg BD. "Deep Brain Stimulation of the Ventral Capsule/Ventral Striatum for Treatment-Resistant Depression". American Psychiatric Association Annual Meeting, San Francisco, CA; May 2009.

Lujan JL, Chaturvedi MS, **Malone DA**, Rezai AR, McIntyre CC. "Volume of Tissue Activated by Deep Brain Stimulation for Neuropsychiatric Disorders and Their Correlation to Therapeutic Outcomes". Meeting of the World Society for Stereotactic and Functional Neurosurgery, Toronto, Canada; June 2009.

Lujan JL, Chaturvedi MS, **Malone DA**, Rezai AR, McIntyre CC. "Axonal Pathways Activated by Deep Brain Stimulation for Neuropsychiatric Disorders and their Correlation to Therapeutic Outcomes". Society for Neuroscience, Chicago, IL; October 2009.

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Muzina DJ, Keene M, **Malone DA**, Lulic R, Baudisch R, Bhandari I. "Rate of Non-Adherence Prior to Upward Dose Titration in Previously Stable Antidepressant Users". Institute on Psychiatric Services, Boston, MA; October 2010.

**Malone DA**, Beall EB, Sakaie KE, Szymkowicz S, Muzina DJ, Dale RM, Phillips MD, Lowe MJ. "White Matter Track Integrity is Not Impaired by Electroconvulsive Therapy". Annual Meeting of the International Society for ECT and Neurostimulation, Honolulu,

HI; May 2011.

Dougherty DD, Carpenter LL, Bhati M, Howland RH, O'Reardon JP, Denko T, Jacobs KJ, Pandya MM, Price LH, Tyrka AR, Evans K, Rezai AR, Baltuch G, Machado AG, Eskandar EN, Kondziolka D, **Malone DA**. "A Randomized Sham-Controlled Trial of DBS of the VC/VS for Treatment-Resistant Depression". Society of Biological Psychiatry, Philadelphia, PA; May 2012.

Rezai AR, Baltuch G, Eskandar EN, Machado AG, Kondziolka D, Dougherty DD, Carpenter LL, Bhati M, Howland RH, O'Reardon JP, **Malone DA**. "Deep Brain Stimulation for Treatment-Resistant Depression: A Randomized Controlled Trial". The American Society for Stereotactic and Functional Neurosurgery, San Francisco, CA; June 2012.

Beall EB, **Malone DA**, Muzina DJ, Dale R, Koenig KA, Jones SE, Phillips MD, Lowe MJ. "Functional Connectivity and Activation in Major Depression Before and After Electroconvulsive Therapy Reveals Centrality of Orbitofrontal Cortex." 3<sup>rd</sup> Biennial Conference on Resting State Brain Connectivity, Magdeburg, Germany; Sept 2012.

Shultz E, Pandya M, **Malone D**, Pozuelo L. "A Case of Creutzfeldt-Jakob Disease Presenting as Psychotic Depression." The Academy of Psychosomatic Medicine Annual Meeting, Atlanta, GA; November 2012.

Machado A, **Malone D**. "Nucleus Accumbens for Pain". American Society of Stereotactic and Functional Neurosurgery, Washington D.C.; June 2014.

Hamm B, Koirala P, Malone D. "The Problem with Using Venlafaxine and Other Mildly Dopaminergic Antidepressants in Patients with Dopa-Responsive Dystonia". Annual Meeting of the Academy of Psychosomatic Medicine, Palm Springs CA; November 2017.

Cohn J, Jeni L, Ertugrul I, **Malone D**, Okun M, Borton D, Goodman W. "Automated Affect Detection in Deep Brain Stimulation for Obsessive-Compulsive Disorder: A Pilot Study". In 2018 International Conference on Multimodal Interaction (ICMI '18), October 16–20, 2018, Boulder, CO, USA. ACM, New York, NY, USA, 5 pages.  
<https://doi.org/10.1145/3242969.3243023>

## **PRESENTATIONS**

### **Selected Presentations**

"Cocaine: The Problem of Abuse and its Treatment". Massachusetts General Hospital; October 1987.

"Acquired Tourettism". Massachusetts General Hospital; November 1987.

"The Effects of Psychotropics on the Eye and Ear". Massachusetts General Hospital; November 1987.

"Psychiatric Trauma". Beverly Hospital Trauma Day, Beverly, Massachusetts; November 1988.

"The Psychiatric Aspects of Anabolic Steroid Use". Department of Psychiatry Grand Rounds, Cleveland Clinic Foundation; May 1990.

"The Recognition and Treatment of Depression in the Medically Ill". Visiting Professor. Department of Internal Medicine Grand Rounds, Akron City Hospital, Akron, Ohio; November 1990.

"The Use of Antidepressants in the Medically Ill Patient". Visiting Professor, Department of Psychiatry Grand Rounds, Timken Mercy Medical Center, Canton, Ohio; December 1991.

"Psychiatric Effects of Anabolic Steroid Use". Department of Psychiatry Grand Rounds, Metro Health Medical Center, Cleveland, Ohio; February 1991.

"Psychiatric Effects of Anabolic Steroids in Weightlifters". Annual Medical Scientific Conference of the American Society of Addiction Medicine, Boston, Massachusetts; April 1991.

"Psychiatric Aspects of Anabolic Steroid Use". Spring Meeting of the Ohio Psychiatric Association, Houston Wood State Park; April 1991.

"Psychiatric Aspects of Anabolic Steroid Abuse: Dependence and Demographics". American Society for Pharmacology and Experimental Therapeutics, National Press Club, Washington D.C.; June 1991.

"Electroconvulsive Therapy in the 1990's". Medical Division Grand Rounds, St. Vincent Health Center, Erie, Pennsylvania; March 1992.

"Group Therapy in Patients with Borderline Personality Disorder". Department of Psychiatry Grand Rounds, Cleveland Clinic Foundation, Cleveland, Ohio; April 1992.

"Panic Disorder and Other Related Diagnoses". Ohio Permanente Medical Group, Inc., Cleveland, Ohio; July 1992.

"Medical Topics Relevant to Psychiatry". Laurelwood Hospital, Willoughby, Ohio; November 1992.

"The Psychiatric Effects of Anabolic Steroids". Visiting Professor, Department of Psychiatry Grand Rounds, West Virginia School of Medicine, Morgantown, West Virginia; April 1993.

"The Psychological Effects of Anabolic Steroids". Third International Congress of Therapeutic Drug Monitoring and Clinical Toxicology, Philadelphia, Pennsylvania; May 1993.



"Panic and Depression in the Elderly", The Cutting Edge: Depression and Panic Disorder, Cleveland, Ohio; September 1993.

"Training and Accreditation in ECT". Annual Meeting of the AADPRT, New Orleans, Louisiana; January 1994.

"The Training and Credentialing of Residents in ECT". Annual Meeting of the Association for Academic Psychiatry, Tucson, Arizona; March 1994.

"Treatment of Depression - Indications and Outcomes, Short- and Long-term - Where Are We?" Pittsburgh Psychiatric Society, Pittsburgh, Pennsylvania; September 1994.

"New Developments in the Treatment of Depression". Clinton Valley Center Psychiatric Hospital, Bloomfield Hills, Michigan; September 1994.

"The Treatment of Depression in the Medically Ill". St. Alphonsus Regional Medical Center Grand Rounds, Boise, Idaho; February 1995.

"An Update on OCD". Rockford Memorial Hospitals Annual Psychiatric Update Day, Rockford, Illinois; March 1995.

"The Anxious Athlete". 2nd Annual Ohio Sports Medicine Conference, Cleveland Clinic Foundation, Cleveland, Ohio; May 1995.

"Psychopharmacology Update on Anxiety Disorders". Anxiety and Somatoform Disorders in Children and Adults, Cleveland Clinic Foundation, Cleveland, Ohio; September 1995.

"Psychotropic Drug Use in the Medically Ill". 5th District Academy of Osteopathic Physicians Meeting, Sandusky, Ohio; October 1995.

"An Update on the Treatment of OCD". Milwaukee V.A. Hospital Grand Rounds, Milwaukee, Wisconsin; December 1995.

"Training in ECT". Annual Meeting of the American Association of Psychiatric Residency Training Directors, San Francisco, California; January 1996.

"Anabolic Steroid Use in Adolescents". Annual Meeting of the American Osteopathic Association, Las Vegas, Nevada; October 1996.

"The ECT Workup". Annual Meeting of the American Academy of Psychosomatic Medicine, San Antonio, Texas; November 1996.

"OCD and the Spectrum Disorders". Texas School of Osteopathic Medicine Grand Rounds, Fort Worth, Texas; December 1996.

"Diagnostic and Treatment Options for Anxiety Disorders". Kalamazoo Psychiatric Institute Grand Rounds, Kalamazoo, Michigan; June 1997.

"An Update on Atypical Neuroleptics". Columbia Mercy Medical Center Conference on Clinical Issues in Schizophrenia, Canton, Ohio; November 1997.

"The Spectrum of Obsessive-compulsive Disorders". International Latino Psychiatric Association Meeting, Chicago, Illinois; May 1998.

"An Update on Panic Disorder". The Menninger Clinic Course on New Developments in the Treatment of Anxiety Disorders, St. Louis, Missouri; June 1998.

"An Update on Social Anxiety Disorder". Wright State University College of Medicine Grand Rounds, Dayton, Ohio; February 1999.

"An Overview of Obsessive-Compulsive Disorder". Obsessive-compulsive Disorder Conference sponsored by NAMI, Cleveland, Ohio; May 1999.

"The Treatment of Depression in Primary Care". Alpena Hospital Internal Medicine Grand Rounds, Alpena, Michigan; June 1999.

"The Diagnosis and Treatment of Social Phobia". St. Joseph Hospital Grand Rounds, Youngstown, Ohio; June 1999.

"An Overview of Social Phobia". Forum Hospitals 5<sup>th</sup> Annual Behavioral Medicine Conference, Youngstown, Ohio; September 1999.

"The Treatment of Mood Disorders". Meeting of the Northeast Ohio Academy of Pharmacists, Cleveland, Ohio; October 1999.

"The Diagnosis and Treatment of Panic Disorder". Fairview Hospital Family Medicine Grand Rounds, Fairview, Ohio; October 1999.

"Obsessive-compulsive Disorder in the Workplace". Northern Ohio Chapter of the International Employee Assistance Professionals Association, Cleveland, Ohio; November 1999.

"Anabolic Steroids and Their Psychiatric Effects". Akron-Canton District Branch of the Ohio Psychiatric Association, Akron, Ohio; January 2000.

"The Treatment of the Suicidal Patient". American Foundation for Suicide Prevention, Cleveland, Ohio; March 2000.

"Behavior Problems in Dementia". CCF Course on Dementia in Older Patients, Cleveland, Ohio; April 2000.

"The Use of Anesthesia in ECT". Association for Convulsive Therapy Certificate Course on ECT, Chicago, Illinois; May 2000.

"Diabetes and Eating Disorders". CCF Diabetes Day 2000, Cleveland, Ohio; May 2000.

"The Pharmacologic Treatment of Panic Disorder". Combined Meeting of the Ohio

Psychiatric and Psychological Societies, Cleveland, Ohio; November 2000.

"Geriatric Depression". ProMedica Health System, Toledo, Ohio; March 2001.

"Contemporary Treatment of Obsessive-Compulsive Disorder". Cleveland Clinic Foundation Grand Rounds, Cleveland, Ohio; March 2001.

"Deep Brain Stimulation in Neurologic and Psychiatric Disorders". Cleveland Consultation Liaison Society Annual Meeting, Cleveland, Ohio; May 2001.

"The Technique of ECT". Association for Convulsive Therapy Certificate Course on ECT, New Orleans, Louisiana; May 2001.

"An Update on Bipolar Disorder". St. Elizabeth Hospital Grand Rounds, Youngstown, Ohio; June 2001.

"The Management of Treatment Refractory Depression". Good Samaritan Hospital Grand Rounds, Cincinnati, Ohio; October 2001.

"New Advances in the Treatment of Obsessive Compulsive Disorder". Case Western Reserve University School of Medicine Grand Rounds, Cleveland, Ohio; January 2002.

"A Review of Mood Stabilizers". Northeastern Ohio Universities College of Medicine Psychiatry Grand Rounds, Akron, Ohio; March 2002.

"The Use of Deep Brain Stimulation in Psychiatric Disorders". Twelfth Annual Meeting of the Association for Convulsive Therapy, Philadelphia, Pennsylvania; May 2002.

"Hoarding as an Obsessive Compulsive Disorder". Presented at The Ohio Coalition for Adult Protective Services Symposium on Hoarding, Cleveland, Ohio; September 2002.

"The Diagnosis and Treatment of Panic Disorder". Medical College of Ohio Psychiatric Symposium, Toledo, Ohio; September 2002.

"Psychology and Stress in the Professional Athlete". Cleveland Clinic Sports Health Medical Summit for Sports Agents, Cleveland, Ohio; June 2002 and November 2002.

"Bipolar Disorder: Treatment Strategies". Broughton Hospital Grand Rounds, Morganton, North Carolina; January 2003.

"Treatment Options for OCD". Metro Health Medical Center Psychiatry Department Grand Rounds, Cleveland, Ohio; February 2003.

"Standard and Experimental Treatments for OCD". Geisinger Medical Center, Danville, Pennsylvania; April 2003.

"Common Psychological Problems in Athletes". The Cleveland Clinic Foundation Sports Medicine Conference, Huron, Ohio; June 2003.

“Trash to Treasures: The Diagnosis and Treatment of Hoarding Behavior”. 23<sup>rd</sup> Annual Probate Practice Seminar, Girard, Ohio; October 2003.

“Electroconvulsive Therapy New Twists on an Old Treatment”. University Hospital Psychiatry Department Grand Rounds, Cleveland, Ohio; October 2003.

“Stress, Anxiety, and Depression”. The Cleveland Clinic Foundation Men’s Health Summit, Cleveland, Ohio; November 2003.

“The Clinical Uses of Deep Brain Stimulation”. 83<sup>rd</sup> Annual Conference of the Association for Research in Nervous and Mental Disease, New York, New York; November 2003.

“Innovative Treatments for Treatment Refractory OCD”. Ohio State University Department of Psychiatry Grand Rounds, Columbus, Ohio; December 2003.

“Innovative Treatments for Refractory OCD”. Cleveland Clinic Foundation Department of Psychiatry Grand Rounds, Cleveland, Ohio; April 2004.

“Behavioral Neurosurgery for Tourette Syndrome and Obsessive-Compulsive Disorder” 4<sup>th</sup> International Scientific Symposium on Tourette Syndrome, Cleveland, Ohio; June 2004.

“Surgery for Psychiatric Disorders: Surgical Candidates”. Neuromodulation: Defining the Future, Biennial Meeting of the American Society for Stereotactic and Functional Neurosurgery, Cleveland, Ohio; October 2004.

“Issues in Sports Psychiatry”. Call-in Radio Show at WKNR, Cleveland, Ohio; October 2004.

“An Update on Eating Disorders”. Seventh All Ohio Institute on Community Psychiatry, Cleveland, Ohio; March 2005.

DBS for Psychiatric Disorders”. Fourteenth meeting of the World Society for Stereotactic and Functional Neurosurgery, Rome, Italy; June 2005.

“Innovative Treatments for Psychiatric Disorders”. Department of Psychiatry Grand Rounds, U Texas Health Science Center at San Antonio, San Antonio, Texas; September 2005.

“The Use of Deep Brain Stimulation in Psychiatric Disorders”. Department of Psychiatry Grand Rounds, Cleveland Clinic Foundation, Cleveland, Ohio; September 2005.

“The Use of Deep Brain Stimulation for Psychiatric Disorders”. Department of Psychiatry Grand Rounds, Henry Ford Hospital, Detroit, Michigan; November 2005.

“Seasonal Affective Disorder”. One-hour Call-In Show on National Public Radio, November 2005.

"Treatment Resistant Depression". CCF Family Health Center Grand Rounds, January 2006.

"The Use of Deep Brain Stimulation in Psychiatric Disorders". Cleveland Psychiatric Society; February 2006.

"The Use of Deep Brain Stimulation in Psychiatry". Dr Daniel Verne Symposium, Cleveland, Ohio; September 2006.

"ECT in the Medically Ill". Academy of Psychosomatic Medicine 53<sup>rd</sup> Annual Meeting, Tucson, AZ; November 2006.

"The Diagnosis and Treatment of Depression". Free Clinic of Cleveland, Cleveland, Ohio; January 2007.

"The Use of DBS for the Treatment of Psychiatric Disorders". Center for Neurological Restoration Grand Rounds, Cleveland, Ohio; March 2007.

"The Use of Anitpsychotics in Agitation". Recovery Resources, Cleveland, Ohio; April 2007.

"The Use of DBS for the Treatment of Psychiatric Disorders". Annual Meeting of the Association for Convulsive Therapy, San Diego, CA; May 2007.

"Surgery for Psychiatric Disorders: Current Treatments and Emerging Applications". Congress of Neurological Surgeons Annual Meeting, Chicago, IL; September 2007.

"Surgery for Intractable Psychiatric Disease". Loyola University Stritch School of Medicine Psychiatry Grand Rounds, Chicago, IL; October 2007.

"DBS for Treatment Refractory Psychiatric Disorders". Akron General Medical Center Psychiatric Grand Rounds, Akron, OH; January 2008.

"The Use of Deep Brain Stimulation in the Treatment of Psychiatric Disorders". MetroHealth Medical Center Department of Psychiatry Grand Rounds, Cleveland, OH; January 2008.

"Deep Brain Stimulation for Treatment-Refractory Psychiatric Disorders". Psychiatric Research Society Annual Meeting, Salt Lake City, Utah; February 2008.

"Integration of Mental and Behavioral Health Services into the Neurosciences". Sg2 Neurosciences Membership Meeting on Emerging Trends in Mental and Behavioral Health, Chicago, IL; March 2008.

"Practical Issues in Providing Clinical DBS for Patients with Severe OCD". Association for Convulsive Therapy Annual Meeting, Washington, DC; May 2008.

"DBS for Psychiatric Disorders: Outcomes and Quality of Life". US Department of

Health and Human Services, Washington, DC; May 2008.

“Troubling Thoughts: Strategies for Managing Anxiety and Obsessive Compulsive Disorder”. Georgia Psychiatric Physicians Association, Amelia Island, FL; August 2008.

“Multidisciplinary Treatment Care of Eating Disorders”. Cleveland Clinic Department of Psychiatry Grand Rounds, Cleveland, OH; September 2008.

“DBS in Ventral Capsule/Ventral Striatum for Depression”. 18<sup>th</sup> Congress of the European Society for Stereotactic and Functional Neurosurgery, Rimini, Italy; October 2008.

“The Use of Deep Brain Stimulation for Psychiatric Disorders”. State University of New York, Buffalo Medical School, Department of Psychiatry Grand Rounds, Buffalo, NY; November 2008.

“Update on Neuromodulation Therapies”. Cleveland Clinic Dept of Psychiatry Grand Rounds, Cleveland, OH; January 2009.

“DBS- Current State of the Treatment and Where it Might Fit”. Association for Convulsive Therapy Annual Meeting, San Francisco, CA; May 2009.

“The Effects of Ventral Capsule/Ventral Striatum Stimulation in Depression”. 9<sup>th</sup> World Congress of Biological Psychiatry, Paris, France; July 2009.

“Treatment-Resistant Depression”. Lakewood Hospital Medical Grand Rounds, Lakewood, OH; September 2009.

“Deep Brain Stimulation for Depression”. 2009 Heart Brain Summit, Chicago, IL; October 2009.

“The Use of Deep Brain Stimulation in Psychiatric Disorders”. Henry Ford Hospital Grand Rounds, Detroit, MI; October 2009.

“Direct Brain Intervention and Deep Brain Stimulation-A Quality of Life Issue”. 12<sup>th</sup> Annual Innovations in Neuroscience Conference, Cleveland, OH; November 2009.

“The Use of Deep Brain Stimulation in Psychiatric Disorders”. Ohio State University Department of Psychiatry Grand Rounds, Columbus, OH; November 2009.

“The Pharmacologic Treatment of Depression”. Cleveland Clinic Department of Medicine Grand Rounds, Cleveland, OH; December 2009.

“The Use of Deep Brain Stimulation in Psychiatric Disorders”. Zucker Hillside Hospital Long Island Jewish Health System Department of Psychiatry Grand Rounds, Glen Oaks, NY; December 2009.

“The Use of Deep Brain Stimulation in Psychiatric Disorders”. University of Iowa Department of Psychiatry Grand Rounds, Iowa City, IA; March 2010.

"The Role of Deep Brain Stimulation in Current Psychiatric Practice". International Society for Neurostimulation Annual Meeting, New Orleans, LA; May 2010.

"Deep Brain Stimulation for OCD and Depression". 10<sup>th</sup> Annual Meeting of the International College of Geriatric Psychoneuropharmacology, Athens, Greece; September 2010.

"Deep Brain Stimulation for Treatment of Refractory OCD and Depression", Recovery Resources Grand Rounds, Cleveland, OH; March 2011.

"DBS-The Role of DBS in Current Psychiatric Practice", 25<sup>th</sup> Annual Meeting of the International Society for ECT and Neurostimulation, Honolulu, HI; May 2011.

"Deep Brain Stimulation in Psychiatric Disorders", 4<sup>th</sup> Annual Chair Summit, Annapolis, MD; June 2011.

"Treatment-Resistant and Treatment-Refractory Depression", 4<sup>th</sup> Annual Chair Summit, Annapolis, MD; June 2011.

"The Use of DBS in the Treatment of Psychiatric Disorders", Visiting Professor, Mayo Clinic, Rochester, MN; January 2012.

"Update on US DBS Research", European Psychiatric DBS Working Group Meeting, Paris, France; February 2012.

"Stimulation Techniques in Psychiatry", University Hospitals of Cleveland Grand Rounds, Cleveland, OH; November 2012.

"The Use of Neuromodulation for the Treatment of Psychiatric Disorders", Ohio Psychiatric Physicians Association Annual Meeting, Columbus, OH; March 2013.

"Update on the Role of DBS in OCD and Depression", International Society of ECT and Neurostimulation, San Francisco, CA; May 2013.

"Recent Developments in Clinical Trials Using DBS for Depression", New York Academy of Sciences Brain Forum, Aspen, CO; September 2013.

"The Use of Deep Brain Stimulation in Psychiatric Disorders". Visiting Professor, University of Rochester College of Medicine, Rochester, NY; October 2015.

"Lessons Learned: Getting DBS to Market for Neuropsychiatric Disorders". Cleveland Clinic Medical Innovation Summit, Cleveland, OH; October 2015.

"Promising Anti-Violence Strategies", Violence: Its Causes, Consequences and Cures, Cleveland, OH; June 2016.

"Neurostimulation". Two Day Course on Neurostimulation, American College of Psychiatrists Annual Meeting, Scottsdale, AZ, February 2017.

“The Use of Neurostimulation in the Treatment of Psychiatric Disorders”, Visiting Professor, Henry Ford Hospital/Wayne State University, Detroit, MI, April 2017.

“Dual Diagnosis and Nonadherence”, Presented at Promoting Growth and Change Amongst Complex Patients, Cleveland, OH, April 2017.

“Population Health”, Presented at Health in Action, Cleveland, OH, September 2018.

“Psychiatric Deep Brain Stimulation Research: Participant, Investigator, and Ethicist Experiences”, Presented at the 21<sup>st</sup> Annual Conference of the American Society for Bioethics and Humanities, Pittsburgh, PA, October 2019.

Revised August 28, 2020



# CLEVELAND CLINIC ~ PSYCHIATRY

## Appendix A and B

Last Name	First Name	Credentials	CCLCM Appointment	CCLCM Dept.
<b>White = Have a Faculty Appointment</b>			<b>Gray = Will apply in the future</b>	
Abdelaziz	Abdelrahman			
Ahmed	Zubair	MD	Assistant Professor	Medicine
Ahuja	Veena	MD	Clinical Assistant Professor	Medicine
Ajayi	William			
Albers-Bowling	Susan	PsyD	Clinical Assistant Professor	Medicine
Altinay	Murat	MD	Assistant Professor	Medicine
Anand	Amit	M.D.	Professor	Medicine
Appleby	Kristin	MD	Clinical Assistant Professor	Medicine
Ashton	Kathleen	PhD	Associate Professor	Surgery
Austerman	Joseph	DO	Clinical Assistant Professor	Medicine
Bambakidis	Peter	MD	Clinical Assistant Professor	Medicine
Bamford	Cynthia	M.D.	Clinical Assistant Professor	Medicine
Banez	Gerard	Ph.D.	Clinical Assistant Professor	Pediatrics
Barnett	Brian	MD	Assistant Professor	Medicine
Baron	Eric	DO	Clinical Assistant Professor	Medicine
Bea	Scott	Ph.D.	Assistant Professor	Medicine
Benore	Ethan	Ph.D.	Associate Professor	Pediatrics
Borland	Adam	PsyD	Clinical Assistant Professor	Medicine
Bowers-Smith	Minnie	MD	Clinical Assistant Professor	Medicine
Brendza	Dana	PsyD	Clinical Assistant Professor	Medicine
Cherian	Neil	MD	Clinical Assistant Professor	Medicine
Childs	Chivonna			
Coffman	Kathy	MD	Clinical Assistant Professor	Medicine
Craciun	Horia	MD	Clinical Assistant Professor	Medicine
Cuddy	Cara	Ph.D.	Clinical Assistant Professor	Pediatrics
Cunningham	Wendy	PsyD	Clinical Assistant Professor	Pediatrics
Dale	Roman	M.D.	Clinical Assistant Professor	Medicine
Dar	Syma	MD	Clinical Assistant Professor	Medicine
Davidson	Kelly	MD	Clinical Assistant Professor	Medicine
Davin	Sara	PsyD, MPH	Clinical Assistant Professor	Medicine
Davis	Nicholas	MD	Clinical Assistant Professor	Family Medicine
Dean	Erin			
Dixon	Beth	Psy.D.	Clinical Assistant Professor	Medicine
Dodds	Judy	Ph.D.	Clinical Assistant Professor	Medicine
Eastman	Kristen	PsyD	Clinical Assistant Professor	Pediatrics
El-Mallawany	Jung	MD	Clinical Assistant Professor	Medicine
Eshleman	Kate	PsyD	Clinical Assistant Professor	Pediatrics
Estemalik	Emad	MD	Clinical Assistant Professor	Medicine
Falcone	Tatiana	MD	Assistant Professor	Medicine

Feldman	Lara	DO	Clinical Assistant Professor	Medicine
Fernandez	Hubert	M.D.	Professor	Medicine
Ferrari	Rachel			
Floden	Darlene	Ph.D.	Assistant Professor	Medicine
Galioto	Rachel	PhD	Assistant Professor	Medicine
Gaw	Catherine	PsyD	Clinical Assistant Professor	Pediatrics
Gonsalves	Lilian	M.D.	Clinical Professor	Medicine
Goodpaster	Kasey	PhD	Assistant Professor	Medicine
Gostkowski	Michal	DO	Clinical Assistant Professor	Medicine
Havemann	Justin	MD	Clinical Assistant Professor	Medicine
Heinberg	Leslie	Ph.D.	Professor	Medicine
Honaker	Lindsay	DO	Clinical Assistant Professor	Medicine
Hurley	Karen	PhD	Adjunct Assistant Professor	Medicine
Itin	Ilia	MD	Clinical Assistant Professor	Medicine
Jacobs	Karen			
Jain	Vrashali	MD	Clinical Assistant Professor	Medicine
Janesz	Joseph	PhD, LICDC	Clinical Assistant Professor	Medicine
Jassani	Amir	Ph.D.	Clinical Assistant Professor	Medicine
Jensen	Vanessa	PsyD	Clinical Assistant Professor	Pediatrics
Jones	Daniel	PH.D.	Clinical Assistant Professor	Medicine
Jones	Kathryn	PhD	Clinical Assistant Professor	Pediatrics
Josell	Regina	PsyD	Clinical Assistant Professor	Medicine
Kennedy	Eileen	Ph.D.	Clinical Assistant Professor	Pediatrics
Khawam	Elias	MD	Clinical Assistant Professor	Medicine
Khokhar	Naveed			
Klaas	Patricia	Ph.D.	Clinical Assistant Professor	Medicine
Krew	Travis	MD	Clinical Instructor	Medicine
Kriegler	Jennifer	M.D.	Associate Professor	Medicine
Kubu	Cynthia	Ph.D.	Professor	Medicine
Lachhwani	Pilar	MD	Clinical Assistant Professor	Medicine
Lambrese	Jason	MD	Assistant Professor	Medicine
Lamparyk	Katherine	Psy.D.	Assistant Professor	Pediatrics
Lee	Amy	Ph.D.	Clinical Assistant Professor	Pediatrics
Levy	Jess	MD	Clinical Assistant Professor	Medicine
Lightbody	Richard			
Lorenzo	Diana	MD	Clinical Assistant Professor	Medicine
Maleki	Jahangir	MD, PhD	Clinical Assistant Professor	Medicine
Malone	Donald	M.D.	Professor	Medicine
Manno	Jane	PsyD	Clinical Assistant Professor	Medicine
Manos	Michael	Ph.D.	Associate Professor	Pediatrics
Maroney	Zane	M.D.	Clinical Instructor	Medicine
Mathew	Shila			
Martin	Beth Anne	Ph.D.	Clinical Assistant Professor	Pediatrics

McLaughlin	Douglas			
Mick	Thomas	MD	Clinical Assistant Professor	Medicine
Miller	Ashley	PhD	Assistant Professor	Medicine
Morris	Gene			
Moses	Alison	PH.D.	Clinical Assistant Professor	Pediatrics
Mudd	Emily	Ph.D.	Clinical Assistant Professor	Pediatrics
Muzina	Kathryn			
Nagel	Sean	M.D.	Assistant Professor	Neurological Surgery
Pandya	Mayur	DO	Assistant Professor	Medicine
Plas	Jeffrey	MD	Clinical Assistant Professor	Medicine
Potter	Dawn	PsyD	Clinical Assistant Professor	Neurology
Pozuelo	Leopoldo	MD	Clinical Assistant Professor	Medicine
Quinn	Kathleen	M.D.	Clinical Assistant Professor	Medicine
Rajaram	Ryan			
Ralson	Laurel			
Rish	Julie	PhD	Assistant Professor	Medicine
Rispinto	Sarah	PhD	Clinical Assistant Professor	Medicine
Rock	Joseph	PSYD	Clinical Assistant Professor	Medicine
Rosenberg	Zachary			
Roth	Alicia			
Rowney	Robert			
Rudolph	Joseph	MD	Clinical Assistant Professor	Medicine
Rush	Taylor	PhD	Adjunct Assistant Professor	Medicine
Sacco	Matthew	PhD	Clinical Assistant Professor	Medicine
Samples	Stephen	MD	Clinical Assistant Professor	Medicine
Schuermeier	Isabel	MD	Clinical Assistant Professor	Medicine
Senders	Pamela	Ph.D.	Clinical Assistant Professor	Pediatrics
Seng	Cynthia	MD	Clinical Assistant Professor	Medicine
Simmons	Jean	Ph.D.	Clinical Assistant Professor	Medicine
Simon	Barry	DO	Clinical Assistant Professor	Medicine
Stenroos	Catherine	Ph.D.	Clinical Assistant Professor	Medicine
Stillman	Mark	MD	Clinical Assistant Professor	Medicine
Streem	David	M.D.	Clinical Associate Professor	Medicine
Sullivan	Amy	PsyD	Assistant Professor	Medicine
Taljan	Katherine			
Tampi	Rajesh	MD	Professor	Medicine
Tesar	George	M.D.	Associate Professor	Medicine
Tilahun	Becky Bikat	PhD	Clinical Assistant Professor	Medicine
Toddd	Mark	Ph.D.	Clinical Assistant Professor	Medicine
Viguera	Adele	MD	Clinical Assistant Professor	Medicine
Walter	Benjamin	MD	Associate Professor	Medicine
White	Cynthia	Ph.D.	Clinical Assistant Professor	Medicine
Wimbiscus	Molly	M.D.	Assistant Professor	Medicine

Windover	Amy	PhD	Associate Professor	Medicine
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# CLEVELAND CLINIC ~ PSYCHIATRY

## PUBLICATIONS 2016

Article Title	Authors	Source	Journal	
			Times Cited	Impact Factor
Reproductive Safety of Second-Generation Antipsychotics	Cohen, Lee S.; Viguera, Adele C.; McInerney, Kathleen	AMERICAN JOURNAL OF PSYCHIATRY	41	14.119
Development of an Objective Autism Risk Index Using Machine Learning	Frazier, Thomas W.; Klingemier, Eric W.; Beuker, J. H.	JOURNAL OF THE AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY	21	6.936
Biomarkers in the diagnosis and study of psychogenic non-epileptic seizures	Sundararajan, T.; Tesar, G. E.; Jimenez, X. F.	SEIZURE-EUROPEAN JOURNAL OF EPILEPTOLOGY	20	2.522
The prevalence and clinical characteristics associated with chronic pain in patients with major depressive disorder	McIntyre, Roger S.; Woldeyohannes, Hanna O.; Fennell-Notestine, R. D.	THERAPEUTIC ADVANCES IN CHRONIC PAIN	18	4.257
Resting State Brain Network Disturbances Related to Psychogenic Non-Epileptic Seizures	Spielberg, Jeffrey M.; Beall, Erik B.; Hulvershorn, C. P.	NEUROPSYCHOPHARMACOLOGY	15	6.751
Estimating risk of word-finding problems in adults with major depressive disorder	Busch, Robyn M.; Floden, Darlene P.; Prayson, D. A.	NEUROLOGY	15	8.77
What the Psychiatrist Needs to Know About Ventriculoperitoneal Shunt Infection	Caro, Mario A.; Rosenthal, Julie L.; Kendall, Kay; et al.	PSYCHOSOMATICS	10	2
Binge eating in adults with mood disorders: Results from the National Comorbidity Survey	Woldeyohannes, Hanna O.; Soczynska, Joanna L.; McIntyre, Roger S.	OBESITY RESEARCH & CLINICAL PRACTICE	10	2.062
Anhedonia and cognitive function in adults with major depressive disorder	McIntyre, Roger S.; Woldeyohannes, Hanna O.; Fennell-Notestine, R. D.	CNS SPECTRUMS	9	3.356
Understanding migraine and psychiatric comorbidity: A review	Seng, Elizabeth K.; Seng, Cynthia D.	CURRENT OPINION IN NEUROLOGY	8	4.207
Depression, Anxiety, and Regret Before and After Cataract Surgery	Schuermeier, Isabel; Maican, Anca; Sharp, Richard	JAMA OPHTHALMOLOGY	8	6.198
Supplement use by women during pregnancy: data from the National Health and Medical Research Council Australian Longitudinal Study on Women's Health	Freeman, Marlene P.; Sosinsky, Alexandra Z.; Minkovitz, J. S.	ARCHIVES OF WOMENS MENTAL HEALTH	7	2.5
Long-Term Outcomes and Clinical Characteristics of Patients with Chronic Headache	Tariq, Nauman; Estemalik, Emad; Vij, Brinder; Kulkarni, Anand	HEADACHE	7	4.041
Spiritual Struggle Among Patients Seeking Treatment for Depression	Exline, Julie J.; Krause, Steven J.; Broer, Karen A.	JOURNAL OF RELIGION & HEALTH	4	1.162
Quetiapine Extended Release Open-Label Treatment of Psychogenic Non-Epileptic Seizures	Altinay, Murat; Karne, Harish; Beall, Erik; Anand, Amit	JOURNAL OF CLINICAL PSYCHOPHARMACOLOGY	4	2.7
Bridging a clinical gap in psychogenic non-epileptic seizures: A review	Jimenez, Xavier F.; Bautista, Jocelyn F.; Tilahun, Y. M.	EPILEPSY & BEHAVIOR	4	2.508
Addiction to Armodafinil and Modafinil Presenting as Psychotic Symptoms	Jerry, Jason M.; Shirvani, Nicole; Dale, Roman	JOURNAL OF CLINICAL PSYCHOPHARMACOLOGY	4	2.7
Argyrophilic Grain Disease Presenting as Excited Delirium	Kumari, Sonali; Sundararajan, Tharani; Caro, Mario A.	PSYCHOSOMATICS	3	2
Atypical Findings in Massive Bupropion Overdose: A Case Report	Zhu, Yuanjia; Kolawole, Tiwalola; Jimenez, Xavier F.	JOURNAL OF PSYCHIATRIC PRACTICE	2	1.161
Mesiotemporal Disconnection and Hypoactivity in Psychogenic Non-Epileptic Seizures	Caro, Mario A.; Jimenez, Xavier F.	JOURNAL OF CLINICAL PSYCHIATRY	1	4.204
Assessment Style in Psychogenic Non-Epileptic Seizures	Jimenez, Xavier F.; Tesar, George E.	PSYCHOSOMATICS	1	2
Acute movement disorders in the medical setting: A review	Zawar, Ifrah; Caro, Mario A.; Feldman, Lara; Jimenez, Xavier F.	INTERNATIONAL JOURNAL OF PSYCHIATRY	1	0.724
The Majority of Quality of Life Domains Are Impacted by Depression in Patients with Irritable Bowel Syndrome	Leone, Pamela J.; Lopez, Rocio; Jimenez, Xavier F.	AMERICAN JOURNAL OF GASTROENTEROLOGY	0	10.171
The Additive Benefit of Physiologic Self-Regulation in Patients with Depression	Fisher, Carolyn; Greenberg, Benjamin; Sweet, William	APPLIED PSYCHOPHYSIOLOGY AND BIOFEEDBACK	0	1.246
Lithium Monotherapy Effects on Corticoamygdala Activity in Patients with Depression	Altinay, Murat; Anand, Amit; Karne, Harish	BIOLOGICAL PSYCHIATRY	0	12.095
FORWARD OBSERVATION TO IMPROVE HEALTH OF PATIENTS WITH DEPRESSION	Anderson, Peter; Powaski, Kristen; Houser, Lynne	PEDIATRIC BLOOD & CANCER	0	2.355
A. Dale Gullledge, MD, MS, FAPM (1932-2015)	Gonsalves, Lilian	PSYCHOSOMATICS	0	2

## CLEVELAND CLINIC ~ PSYCHIATRY

### PUBLICATIONS 2017

Article Title	Authors	Source	Times Cited	Journal Impact Factor
Sustained improvements in pain, mood	Huffman, Kelly L.; Rush, Taylor E.; Fan, Youran; S	PAIN	18	5.483
The Global ECT-MRI Research Collabora	Olstedal, Leif; Bartsch, Hauke; Sorhaug, Ole Johan	NEUROIMAGE-CLINICAL	17	4.35
Valproate-Induced Hyperammonemic E	Lewis, Chandani; Tesar, George E.; Dale, Roman	PSYCHOSOMATICS	5	2
Patients with challenging behaviors: Co	Schuermeier, Isabel N.; Sieke, Erin; Dickstein, Le	CLEVELAND CLINIC JOURNAL OF I	5	1.552
Use of atypical antipsychotics in pregna	Panchaud, Alice; Hernandez-Diaz, Sonia; Freema	JOURNAL OF PSYCHIATRIC RESEA	4	3.745
New-Onset Refractory Status Epilepticu	Patel, Neil A.; Jerry, Jason M.; Jimenez, Xavier F.	PSYCHOSOMATICS	3	2
Neuropsychological outcome following	Busch, Robyn M.; Floden, Darlene P.; Ferguson,	NEUROLOGY	3	8.77
Loperamide Abuse and Life-Threatening	Caro, Mario A.; Shah, Syed Amir; Jerry, Jason M.	PSYCHOSOMATICS	3	2
The effects of DAT1 genotype on fMRI	Brown, Brenna K.; Murrell, Jill; Karne, Harish; Ar	BRAIN IMAGING AND BEHAVIOR	2	3.391
Effects of surgical side and site on psych	Prayson, Brigid E.; Floden, Darlene P.; Ferguson,	EPILEPSY & BEHAVIOR	2	2.508
CONTRACT WITH THE PATIENT WITH IN	Hussain, Syed T.; Gordon, Steven M.; Streem, D	JOURNAL OF THORACIC AND CAR	2	4.451
Additional evidence supporting the cen	Jimenez, Xavier F.; Aboussssouan, Alix; Mandell,	SPINE JOURNAL	2	3.191
Capacity Evaluation Requests in the Me	Pesanti, Stephen; Hamm, Brandon; Esplin, Bryn	PSYCHOSOMATICS	1	2
Utilizing psychophysical measurements	Huffman, K.; Gopalakrishnan, R.; Martincin, R.; A	JOURNAL OF PAIN	0	4.621
Refractory Self-Injurious Behavior in Se	Hamm, Brandon; Khokhar, Naveed; Jimenez, Xa	PSYCHOSOMATICS	0	2
Is There a Priority Shift in Mental Heal	Anand, Vibha; Ghosh, Soumya; Anand, Amit	MEDINFO 2017: PRECISION HEAL	0	n/a
Evaluation of the Patient Health Questi	Shankar, Lakshmi; Smith, Nicole; Uchino, Ken; TI	JOURNAL OF STROKE & CEREBRO	0	1.787
Ethical and psychiatric boundaries in tra	Coffman, Kathy Lee	CURRENT OPINION IN ORGAN TR	0	2.571
Delusional Pregnancy Presenting to the	Sosinsky, Alexandra Z.; Freeman, Marlene P.; Sa	JOURNAL OF CLINICAL PSYCHOPH	0	2.7
Additive Benefit of Biofeedback in Stres	Fisher, Carolyn; Greenberg, Benjamin; Sweet, W	APPLIED PSYCHOPHYSIOLOGY AN	0	1.246

## CLEVELAND CLINIC ~ PSYCHIATRY PUBLICATIONS 2018

Article Title	Authors	Source	Times Cited	Journal Impact Factor
Volume of the Human Hippocampus and	Olstedal, Leif; Narr, Katherine L.; Al	BIOLOGICAL PSYCHIATRY	43	12.095
Mood-Stabilizing Anticonvulsants, Spina	Patel, Neil; Viguera, Adele C.; Bald	JOURNAL OF CLINICAL PSYCH	7	2.7
Spectral Dynamics of Resting State fMRI	Wohlschlagel, Afra; Karne, Harish	FRONTIERS IN PSYCHIATRY	6	2.849
Risk of Major Malformations in Infants F	Cohen, Lee S.; Goez-Mogollon, Lin	AMERICAN JOURNAL OF PSYC	6	14.119
Treatment of Kratom Withdrawal and A	Khazaeli, Azin; Jerry, Jason M.; Va	JOURNAL OF ADDICTION MEI	5	3.014
Lithium monotherapy associated clinica	Altinay, Murat; Karne, Harish; Ana	JOURNAL OF AFFECTIVE DISO	5	3.892
Nomograms to predict naming decline a	Busch, Robyn M.; Hogue, Olivia; K	NEUROLOGY	4	8.77
Revising Diagnostic and Statistical Manu	Parker, Gordon; Tavella, Gabriela;	AUSTRALIAN AND NEW ZEAL	3	4.657
Prevalence and Predictors of Depressio	Viguera, Adele C.; Fan, Youran; Th	PSYCHOSOMATICS	3	2
A Systematic Review of Atypical Antipsy	Jimenez, Xavier F.; Sundararajan,	CLINICAL JOURNAL OF PAIN	3	2.893
The "How and Why" of Group Biofeedb	Fisher, Carolyn J.; Moravec, Christ	APPLIED PSYCHOPHYSIOLOGY	1	1.246
Psychiatric Medications and Reproducti	Freeman, Marlene P.; Farchione, T	JOURNAL OF CLINICAL PSYCH	1	4.204
Prolonged Psychosis Associated with Le	Thusius, Nuria; Romanowicz, Mag	PSYCHOSOMATICS	1	2
Is binge eating a cognitive disorder? Res	Lee, Yena; Carmona, Nicole E.; She	ANNALS OF CLINICAL PSYCHI	1	1.5
Cannabis for chronic pain: Not a simple	Jimenez, Xavier F.	CLEVELAND CLINIC JOURNAL	1	1.552
Blood Brain Barrier Integrity Biomarkers	Falcone, Tatiana; Miniard, Angela;	BIOLOGICAL PSYCHIATRY	1	12.095
The Chauvet Workgroup: From Inceptio	Amer, H.; Jowsey-Gregoire, S.; Ku	AMERICAN JOURNAL OF TRA	0	7.338
Outcomes of Outpatient Parenteral Ant	Vazirian, Mohsen; Jerry, Jason M.	PSYCHOSOMATICS	0	2
In memory of Dr. Jimmie Holland	Schuermeier, Isabel; Rosenstein,	PSYCHO-ONCOLOGY	0	3.006
Global white matter microstructural abn	Hulvershorn, Leslie; Hummer, Ton	BRAIN IMAGING AND BEHAV	0	3.391
Differences in distress and effectiveness	Ashton, Kathleen; Pederson, Holly	PSYCHO-ONCOLOGY	0	3.006
Characteristics of Successful Transitions	Lapid, Maria I.; Forsyth, Diane Mc	JOURNAL OF PSYCHIATRIC PR	0	1.161
Assessment of depression in epilepsy: t	Strober, Lauren B.; Chapin, Jessica	CLINICAL NEUROPSYCHOLOG	0	2.232
Amphetamines and Sex: Erectile Dysfun	Thusius, Nuria; Sola, Christopher;	AMERICAN JOURNAL ON ADE	0	2.371



August 31, 2020

Stanton L. Gerson, MD  
Interim Dean, CWRU School of Medicine  
Case Western Reserve University  
10900 Euclid Avenue  
Cleveland, OH 44106

Dear Dean Gerson:

It is my privilege to propose the creation of the Academic Department of Radiation Oncology at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University. The Academic Chair of this new Radiation Oncology department would be the same person as the Clinical Chair of Radiation Oncology at Cleveland Clinic, who is Dr. John H. Suh.

John H. Suh, M.D. is Chairman of the Department of Radiation Oncology at the Taussig Cancer Institute, Professor of Medicine at the Cleveland Clinic Lerner College of Medicine at Case Western Reserve University, and Associate Director of the Gamma Knife Center at the Rose Ella Burkhardt Brain Tumor and Neuro-oncology Center. He obtained his undergraduate and medical degree from the University of Miami through a combined B.S./M.D. program in 1990 and completed his residency and fellowship in Radiation Oncology at the Cleveland Clinic in 1994 and 1995, respectively. His clinical, research and educational interests are focused on brain, spine and ocular tumors, stereotactic radiosurgery and stereotactic body radiation therapy, and innovative radiation technologies.

He has contributed over 270 peer-reviewed manuscripts and over 40 book chapters. He has given over 300 regional, national, and international talks and is the co-editor or editor of 3 textbooks. He was awarded the National Brain Tumor Foundation Clinical Research Award at the 2003 Society of Neuro-Oncology meeting. He has been the principal investigator for two phase III trials evaluating the use of radiation sensitizers with whole brain radiation therapy and has been the institutional principal investigator of the Radiation Therapy Oncology Group (RTOG) since 1995.

Since 2019, he has been the NCCN Guidelines Steering Committee representative for Case Comprehensive Cancer Center. He was the section head for the CNS/pediatrics section of the oral board for the American Board of Radiology from 2008-2019. Since 2019, he has been on the Board of Trustees for the American Board of Radiology. From 2010-2018, he was on the Advisory Committee for Medical Uses of Isotopes (ACMUI) for the Nuclear Regulatory Commission. He has been editor of Applied Radiation Oncology since 2012.

The Cleveland Clinic Foundation

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**CASE WESTERN RESERVE**  
UNIVERSITY

### **1. The breadth and depth of the identified faculty's teaching and research productivity.**

The Department of Radiation Oncology at the Taussig Cancer Institute, which has the main campus and nine regional sites, has developed a national and international reputation for clinical and academic excellence through the efforts of the 35 physician and 25 medical physics faculty. Members of the Department of Radiation Oncology are highly engaged in a wide variety of clinical and research activities in various cancers such as head and neck, breast, thoracic, gastrointestinal, genitourinary, pediatric, central nervous system, lymphomas, sarcomas, and gynecologic malignancies. Research activities include clinical trials, both investigator and cooperative group through the NRG consortium, medical physics research, retrospective institutional and multi-institutional databases, and translational research through the effort of our four physician scientists (primary and secondary appointment at the Lerner Research Institute) who have 3 RO1 awards, 2 American Cancer Society grants, and a Prostate Cancer Foundation award. Notable faculty includes Drs. Greg Videtic, Ping Xia, Jay Ciezki, Jennifer Yu, Rahul Tendulkar, Chirag Shah, Sam Chao, Kevin Stephans, Shlomo Koyfman, Erin Murphy, and John Suh. A list of CCLCM Radiation Oncology Faculty and a list of potential new faculty comprises Appendix A.

The department supports medical student trainees through 4<sup>th</sup> year electives at our main campus facility. Students apply for this opportunity through an online application on the Cleveland Clinic Lerner College of Medicine website. In the past 3 years, 30 students have rotated through our department. Given the training that our residents and fellows receive, they become national and international leaders in research and academic medicine as well as successful community-based practitioners. We have 3 residents per year for our medical residency, 1-2 medical physics residents per year, and 1 clinical fellow annually. We have a total of 12 medical residents, 4-5 medical physics, and 12 fellows that currently train here.

Many research opportunities for trainees and staff exist. Residents have a number of different educational opportunities to support their education and experience with research during their clinical rotations, didactics, journal clubs, morbidity and mortality conference, and a mentored research year during the PGY-4 year. For staff, we offer research and career mentorship and encourage physician researchers to initiate or participate in clinical research. Dedicated research infrastructure to support the research activities within our department exists and include dedicated data management support through the radiation oncology EMR and tumor registry, a dedicated statistician, and mentorship for protocol development and scientific writing.

### **2. Any additional factors that are relevant to the proposed new department.**

The proposal to create an Academic Department of Radiation Oncology comes at the request of former Dean Pamela Davis. Faculty members of the clinical department are actively involved in the teaching of medical students, residents, and fellows, and it is fitting that they be recognized for the academic pursuits in this specialty. They are currently in the Academic Department of Medicine and would then transfer into the newly created Academic Department of Radiation Oncology. At its inception, CCLCM purposefully started with few departments, however as the College has matured, we believe that it is important to align our academic departments with those of the other institutions that are CWRU-SOM teaching institution and that in this case, Radiation Oncology is sufficiently robust that it should stand apart from the Academic Department of Medicine.

### **3. An analysis of the effect of establishment of the second department on existing departments of the School of Medicine.**

Creation of this department would parallel the existence of such academic departments at other CWRU School of Medicine teaching hospitals, but would have no adverse impact on them and may facilitate

academic interaction amongst them. The new academic department will clearly define the academic disciplines that already exist within its clinical department.

**4. A statement that research publications authored by faculty with an appointment in the new department will make note of the Case Western Reserve University faculty appointment.**

Research publications authored by faculty with an appointment in this new department will make note of their Case Western Reserve University faculty appointment.

**5. A five-year business plan demonstrating how the second department will achieve and maintain financial viability or, in the alternative and if appropriate, the proposal should affirm that the new department will not require funding from the School of Medicine.**

The creation of this department will have no financial impact on CWRU or the School of Medicine and will not require any funding from either. It is anticipated that this validation of the faculty's academic accomplishments will further stimulate these pursuits in the future. Further, the alignment of these faculty appointments with the other CWRU-SOM departments should facilitate engagement with students and faculty at the new Health Education Campus.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "Gene Barnett", with a stylized flourish at the end.

Gene H. Barnett, MD, MBA  
Associate Dean for Faculty Affairs  
Professor of Neurological Surgery

August 31, 2020

Stanton L. Gerson, MD  
Interim Dean, CWRU School of Medicine  
Case Western Reserve University  
10900 Euclid Avenue  
Cleveland, OH 44106

**RE: John H. Suh, MD, FASTRO, FACR**  
**Application for Appointment as Academic Chair, Department Radiation Oncology within Cleveland Clinic Lerner College of Medicine of Case Western Reserve University**

Dear Dean Gerson:

On behalf of Gene H. Barnett, MD, Cleveland Clinic Lerner College of Medicine Associate Dean of Faculty Affairs, our Faculty Appointment and Promotions Committee, and the Cleveland Clinic Lerner College of Medicine Executive Team, I would like to propose John H. Suh, MD, FASTRO, FACR as the new Chair for the Academic Department of Radiation Oncology, within the Cleveland Clinic Lerner College of Medicine. Dr. Suh was chosen as he is the current Chair of the Department of Radiation Oncology and is well suited to this leadership position.

John H. Suh, M.D. is Chairman of the Department of Radiation Oncology at the Taussig Cancer Institute, Professor of Medicine at the Cleveland Clinic Lerner College of Medicine at Case Western Reserve University, and Associate Director of the Gamma Knife Center at the Rose Ella Burkhardt Brain Tumor and Neuro-oncology Center. He obtained his undergraduate and medical degree from the University of Miami through a combined B.S./M.D. program in 1990 and completed his residency and fellowship in Radiation Oncology at the Cleveland Clinic in 1994 and 1995, respectively. His clinical, research and educational interests are focused on brain, spine and ocular tumors, stereotactic radiosurgery and stereotactic body radiation therapy, and innovative radiation technologies.

He has contributed over 270 peer-reviewed manuscripts and over 40 book chapters. He has given over 300 regional, national, and international talks and is the co-editor or editor of 3 textbooks. He was awarded the National Brain Tumor Foundation Clinical Research Award at the 2003 Society of Neuro-Oncology meeting. He has been the principal investigator for two phase III trials evaluating the use of radiation sensitizers with whole brain radiation therapy and has been the institutional principal investigator of the Radiation Therapy Oncology Group (RTOG) since 1995.

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Since 2019, he has been the NCCN Guidelines Steering Committee representative for Case Comprehensive Cancer Center. He was the section head for the CNS/pediatrics section of the oral board for the American Board of Radiology from 2008-2019. Since 2019, he has been on the Board of Trustees for the American Board of Radiology. From 2010-2018, he was on the Advisory Committee for Medical Uses of Isotopes (ACMUI) for the Nuclear Regulatory Commission. He has been editor of Applied Radiation Oncology since 2012.

In summary, we are very enthused to have John H. Suh, MD, FASTRO, FACR be the chair of our new CCLCM Radiation Oncology academic department. His enthusiasm and dedication will serve the students and faculty well at the Cleveland Clinic Lerner College of Medicine of Case Western Reserve University.

Please let me know if you have any questions.

Sincerely,



J. Harry Isaacson, MD  
Executive Dean, Cleveland Clinic Lerner College of Medicine  
Professor of Medicine



## CURRICULUM VITAE

**Name:** John H. Suh, MD, FASTRO, FACR

**Work Address:** Department of Radiation Oncology, CA50  
Cleveland Clinic Foundation  
9500 Euclid Avenue  
Cleveland, Ohio 44195

**Office Number:** (216) 444-5574  
**nature**

**E-mail Address:** suhj@ccf.org

**Home Address:** 2633 Ginger Wren Road  
Pepper Pike, OH 44124

**Home Number:** (216) 464-9984

### Education

1986 - 1990 University of Miami School of Medicine, Miami, Florida  
M.D. awarded in 1990

1984 - 1986 University of Miami, Coral Gables, Florida  
B.S. in Biology awarded in 1987

### Training

1994 - 1995 Clinical Fellow in Radiation Oncology  
Cleveland Clinic Foundation

Brachytherapy Elective  
Memorial Sloan-Kettering Cancer Center  
1/30/95 - 2/24/95

Stereotactic Radiosurgery Elective  
Joint Center for Radiation Therapy (Harvard)  
7/11/94 - 8/19/94

1991 - 1994 Resident in Radiation Oncology  
Cleveland Clinic Foundation

1993 - 1994 Co-chief Resident in Radiation Oncology  
Cleveland Clinic Foundation

Pediatric Radiation Oncology Elective  
The University of Pennsylvania/Children's Hospital of Philadelphia  
5/3/93 - 6/25/93

1990 - 1991 Pre-Radiation Oncology Resident  
Cleveland Clinic Foundation

### Professional Experience

2011- present Professor of Medicine, Cleveland Clinic Lerner of Medicine of Case Western Reserve  
University School of Medicine

2006- present Chairman, Department of Radiation Oncology

2006 – present	Staff Physician in the Brain Tumor and Neuro-oncology Center
2002- present	Staff Physician at Fairview Hospital
2002 - 2006	Staff Physician in the Brain Tumor Institute
1998 - present	Staff Physician in Radiation Oncology Cleveland Clinic Foundation
1996 - 1998	Associate Staff in Radiation Oncology Cleveland Clinic Foundation
1995 - 1996	Assistant Staff in Radiation Oncology Cleveland Clinic Foundation

#### **Academic/administrative/teaching experience**

2019- Present	A,merican Board of Radiology Trustee (radiation oncology)
2019- Present	NCCN Guidelines Steering Committee representative for Case Comprehensive Cancer Center
2015-Present	Section editor for HemOnc Today
2012- Present	Editor-in-Chief Applied Radiation Oncology
2010- 2018	Advisory Committee for Medical Uses of Isotopes (ACMUI) for (Nuclear Regulatory Commission
2009- 2010	Member of the search committee for Chair of Cutaneous Surgery
2009	Member of the review committee for the Brain Tumor and Neuro-oncology Center
2007- 2019	Section head for CNS/pediatric section for the oral board exam, American Board of Radiology
2007 – Present	Associate Director of the Gamma Knife Center
2007 - 2019	Oral board examiner for the American Board of Radiology, CNS/pediatrics
2006 – Present	Chairman of the Department of Radiation Oncology
2006 – 2011	Member of the Radiation Safety Committee
2005 – 2011	ACR Appropriateness Criteria Expert panels on Radiation Oncology (Brain metastases)
2006 – March 2006	Interim chair in Radiation Oncology
2006 - 2009	Written board contributor for American Board of Radiology (CNS tumors)
2005 – Present	Reviewer of Society of Neuro-oncology abstracts
2005- Present 2005	Reviewer for ASTRO abstracts (CNS tumors) Member of the review committee for the chair of the Division of Radiology
2005 - Present	Editorial advisory board for Medical Imaging

2004- Present	Angoff reviewer for written boards, CNS section
2004 - 2008	Exam writer for the Radiation Oncology in-service exam (CNS section)
2003 - 2004	Cleveland Clinic's "Leading in Healthcare Course"
2003 - 2007	Director of the Cleveland Clinic Gamma Knife Center
2002	Oral board examiner for the American Board of Radiology, CNS/pediatrics
2002 - 2008	Board member of the International Stereotactic Radiosurgery Society Chair of membership committee 2003-2004
2001 - 2006	Written board contributor for American Board of Radiology (Pediatrics)
1999 - Present	Cancer Center Executive Committee for Cleveland Clinic
1999 - 2003	Clinical Director of Radiation Oncology at the main campus
1999 – 2000	Editorial board member for The Journal of Radiosurgery
1999 - Present	Ad hoc reviewer for various journals including New England of Medicine, Cancer, International Journal of Radiation Oncology Biology and Physics, Journal of Clinical Oncology, Technology in Cancer Research and Treatment, American Journal of Clinical Oncology, Journal of Oncology and Neuro-oncology.
1998 - 1999	Office of Practice Management's Executive Education Program
1998 - Present	Organizer of the Annual ASTRO Review.
1997 - Present	Lecturer for Gamma Knife course
1996 - 2002	Residency program director for the Department of Radiation Oncology
1995 - Present	Staff resident morning conference
1995 - 2002	Medical student rotation coordinator
1994 – 2014	Principal investigator for RTOG at Cleveland Clinic

### Licensure

American Board of Radiology (Certification in Radiation Oncology 1995; Recertification 2000, 2010)  
 National Board of Medical Examiners  
 Ohio State Medical License (35-06-2788)  
 Pennsylvania State Medical License (MD 048977 L) - inactive

### Honors/Awards

- Fellow of American College of Radiology (FACR) 2017
- Fellow of American Society of Radiation Oncology (ASTRO) 2016
- ARRO/ASTRO Teacher of the Year 2016-2017
- The Global Directory of Who's Who 2008-2010
- America's Top Oncologists 2008
- Best Doctors in America 2007-2013
- Best Doctors of America (Newsweek) 2015
- Swarthmore's Who's Who- 2007



- America's Top Doctors for Cancer 2009-2019 (Castle Connolly)
- America's Top Physicians for Cancer 2005-2009 (Consumers' Research Council of America)
- Teacher of the year award in Radiation Oncology– 2003-2004
- National Brain Tumor Foundation Clinical Research Award presented at Society of Neuro-Oncology meeting, 2003
- ESTRO/ASTRO Traveling Fellowship Award - 1999
- American College of Radiation Oncology Fellowship for brachytherapy subspecialty training - 1995
- Best resident presentation at the Ohio State Radiological Society Meeting - 1994
- University of Miami School of Medicine's Summer Research Scholarship - 1987
- Honors Program in Medical Education University of Miami- 1984-1990
- Cum Laude - 1986
- Dean's List - 1986
- President's List - 1984-1985
- Henry Stanford Scholarship - 1984-1986

### **Visting Professorships**

1. State University of New York Upstate Medical University, Syracuse, NY. March 15, 2000.
2. William Beaumont Hospital, Royal Oak, MI. September 12, 2003.
3. University of Wisconsin-Madison, Department of Human Oncology, Madison, WI. October 28, 2005.
4. Wayne State University, Henry Ford, and William Beaumont. Royal Oak, MI. August 2, 2006.
5. University of Maryland, Baltimore, MD. January 22, 2007.
6. Henry Ford Hospital, Detroit, MI. April 13, 2007.
7. Memorial Sloan Kettering Cancer Center. New York, NY. March 26, 2008.
8. New York University. New York, NY. March 27, 2009.
9. University of Kentucky. Lexington, KY. September 24, 2010.
10. Houston Methodist Hospital. Houston, TX. February 3, 2015.
11. University of Southern California. Los Angeles, CA. April 3, 2015.
12. University of Arizona. Tucson, AZ. August 6, 2015.
13. Northshore/Long Island Jewish. Long Island, NY. Dec 4, 2015.
14. SUNY Downstate. Brooklyn, NY. March 23, 2016.
15. Cornell University Medical Center. New York, NY. March 24, 2016.
16. University of Cincinnati. Cincinnati, OH. April 13, 2016.
17. Stanford University. Palo Alto, CA. March 17, 2017.
18. University of Pittsburgh. Pittsburgh, PA. June 9, 2017.
19. University of Maryland. Baltimore, MD. October 6, 2017
20. Jefferson University Hospital. Philadelphia, PA. October 26, 2017
21. Allegheny Health Network. Pittsburgh, PA. November 8, 2017

22. Cedars Sinai Hospital, Los Angeles, CA. Feb 7, 2019
23. City of Hope Hospital. Daurte, CA. Feb 8, 2019
24. Medical College of Wisconsin. Milwaukee, WI. May 31, 2019
25. University of Minnesota. Minneapolis, MN. Oct 10, 2019
26. Northwell Hospital. Manhasset, NY, Dec 5, 2019
27. Rush University. Chicago, IL. Jan 17, 2020.

### **Invited Presentations**

1. Overview of stereotactic radiosurgery. Grand Rounds in the Department of Radiation Oncology at Memorial Sloan-Kettering Cancer Center, February 16, 1995.
2. Gamma Knife radiosurgery for brain metastases. New Horizons in the Treatment and Management of Cutaneous Malignancies. Cleveland, OH, November 15, 1997.
3. Management of brain metastases. Cleveland Clinic Center Grand Rounds, February 6, 1998.
4. Overview of Gamma Knife Radiosurgery. 58<sup>th</sup> Annual Meeting of the Ohio State Radiological Society, May 2, 1998.
5. Radiation Therapy in Palliative Care. Essence of Palliative Care Conference, Cleveland, Ohio, October 23, 1998.
6. Overview of Gamma Knife Radiosurgery, Kyungpook National Medical School, Taegu, South Korea, November 6, 1998.
7. Overview of Gamma Knife Radiosurgery. Brain Tumor Conference -Hamot Medical Center Auditorium, Erie, PA, February 5, 1999.
8. Role of Radiotherapy and Radiosurgery for Brain Metastases. Neuro-Oncology Symposium – 1999, Naples, Florida, February 1999.
9. Role of Radiation for Gliomas. Neuro-Oncology Symposium–1999, Naples, Florida, February 1999.
10. Overview of Gamma Knife Radiosurgery. Wake Forest University Medical Center, Department of Radiation Oncology, Winston-Salem, NC, February 18, 1999.
11. Advances in Therapeutic Radiation for CNS Tumors. Current Management of Neurologic Disorders, Cleveland Ohio, August 13, 1999.
12. Role of Gadolinium Texaphyrin for brain metastases. Academic Medical Center, Amsterdam, Netherlands, September 8, 1999.
13. Neurocognitive effects of cranial radiation. Academic Medical Center, Amsterdam, Netherlands, September 9, 1999.
14. Overview of radiation therapy for brain tumor. The Netherlands Cancer Institute, Amsterdam, Netherlands, September 10, 1999.
15. Role of Gd: Texaphyrin as a radiation sensitizer. Cleveland Clinic Cancer Center, Cleveland, OH, September 28, 1999.

16. Overview of Gamma Knife, Peacock and Cyberknife. Cleveland Clinic, Department of Occupational Therapy, November 12, 1999.
17. Update on brain tumors: ASTRO 1999. ASTRO Review 1999, Independence, OH. 1999.
18. Intensity modulated radiation therapy and Cyberknife radiosurgery. Neuro-Oncology Symposium: Current Concepts 2000, Naples FL, February 7, 2000.
19. Role of radiation in managing glial tumors. Neuro-Oncology Symposium: Current Concepts 2000, Naples, Florida; February 10, 2000.
20. Phase II results of Gd: Texaphyrin as a radiation sensitizer for brain metastases. Regional Investigator Meeting, Chicago, IL, March 3, 2000.
21. Overview of Gamma Knife radiosurgery. State University of New York Upstate Medical University, Syracuse, NY, March 15, 2000.
22. Leksell Gamma Knife: a radiation oncology tool. 10<sup>th</sup> International Meeting of the Leksell Gamma Knife Society. Squaw Valley, CA, April 14, 2000.
23. Radiation oncology and the brain. 2000 Radiation Oncology Symposium, Parma, Ohio, May 24, 2000.
24. Expanding your radiation oncology practice using the gamma knife. 2000 ASTRO Meeting, Boston, MA, October 21, 2000.
25. Updated phase II results and RT-009 status. Allos Investigator meeting. ASTRO Meeting, Boston, MA, October 22, 2000.
26. Role of radiosurgery in managing brain metastases. 2000 Society of Neuro-oncology Meeting, Chicago, IL, November 9, 2000.
27. Update on brain tumors: ASTRO 2000. ASTRO Review 2000, Independence, OH. Nov. 29, 2000.
28. Intensity modulated radiation therapy. Neuro-Oncology Symposium: Current Concepts 2001, Naples, FL, February 17, 2001.
29. Role of radiation in managing glial tumors. Neuro-Oncology Symposium: Current Concepts 2001, Naples, FL, February 19, 2001.
30. Radiation for pediatric brain tumors. Neuro-Oncology Symposium: Current Concepts 2001, Naples, FL, February 19, 2001.
31. RTOG: Radiation Therapy Oncology Group. Neuro-Oncology Symposium: Current Concepts 2001, Naples, FL; February 20, 2001.
32. Radiation Planning for PCYC 0206 Phase II GBM Study. PCYC 0206 Phase II GBM Investigator Meeting, Scottsdale, AZ. March 2, 2001.
33. Overview of brain metastases. European investigator's meeting for the REACH protocol. Paris, France. May 3, 2001.
34. Update of the REACH protocol. European investigator's meeting. Paris, France. May 4, 2001.
35. Overview of motexafin texaphyrin for brain tumors. Pharmacoclytics update dinner, Cleveland, Ohio, May 31, 2001.
36. Whole brain radiation as an adjunct to the surgical or radiosurgical management of one, two, or three brain metastases. 5<sup>th</sup> International Stereotactic Radiosurgery Society Congress Meeting, Las Vegas, NV, June 12, 2001.

37. Overview of radiation oncology for malignant brain tumors. Cleveland Clinic Neurosurgery Grand Rounds, July 23, 2001.
38. Comparison of linac-based radiosurgery to Gamma Knife radiosurgery. Elekta Symposium at the 2001 ASTRO meeting, San Francisco, CA. Nov. 3, 2001.
39. Update of the REACH protocol for brain metastases. Allos investigator's meeting held at ASTRO 2001. San Francisco, CA. Nov. 4, 2001.
40. Overview of RSR13 and nursing consideration. Aviation Country Club, Erie, Pa. October 10, 2001.
41. Update on brain tumors: ASTRO 2001. ASTRO Review 2001, Independence, OH. Dec. 5, 2001.
42. Radiotherapy for brain metastases. Neuro-oncology 2002: Current Concepts. Naples, FL. February 2, 2002.
43. Overview of treatment options for brain metastases. Palliative Medicine Grand rounds at Cleveland Clinic. May 15, 2002.
44. ASCO 2002 Radiation Oncology update. Lansing, MI, June 5, 2002.
45. Radiation for skull base chordomas and chondrosarcomas. Skull base conference, Cleveland, OH, October 4, 2002.
46. Use of radiation sensitizers in brain metastases. ASTRO CME Symposium hosted by Schering Plough. New Orleans, LA, October 6, 2002.
47. Overview of radiation for pituitary tumors. Skull base conference, Cleveland, OH, November 1, 2002.
48. Update on brain tumors: ASTRO 2002. ASTRO Review 2002, Independence, OH. November 7, 2002.
49. Modern treatment approaches to brain metastases. Indiana University radiation oncology grand rounds, February 20, 2003.
50. Role of radiation therapy for Cushing's disease. Endocrinology grand rounds at Cleveland Clinic, February 21, 2003.
51. Central and nervous system malignancies: Radiation Therapy: Standard and Novel Techniques. Schering Preceptorship. Cleveland Clinic, April 23, 2003.
52. Modern use of Gamma Knife Radiosurgery. Elekta User's Conference, Paradise Island Bahamas, May 30, 2003.
53. Modern treatment approaches to brain metastases. Fairview Hospital Tumor Boards, Cleveland, OH, June 6, 2003.
54. Nuances in brachytherapy for gliomas. 2<sup>nd</sup> Biennial Cleveland Clinic International Summit, Brain Tumor Summit, Cleveland Clinic, July 12, 2003.
55. Update on radiotherapy for brain tumors. Family Health Talk, InterContinental Hotel & Conference Center, Cleveland Clinic, July 13, 2003.
56. Radiation therapy options for benign and low-grade tumors. American Brain Tumor Association, Family Weekend, Lincolnshire, IL, July 19, 2003.
57. Role of Gamma Knife radiosurgery for trigeminal neuralgia. Trigeminal Neuralgia Cleveland Support Group, Solon, OH, July 26, 2003.
58. Contemporary management of brain metastases. Grand Rounds, Department of Radiation Oncology, William Beaumont Hospital, Royal Oak, MI, September 12, 2003.

59. Radiation Therapy: Standard and Novel Techniques. Schering Preceptorship. Cleveland Clinic, September 17, 2003.
60. Contemporary management of brain metastases. Grand Rounds, Department of Radiation Oncology, University of Texas Southwestern Medical Center, Dallas, Texas. October 3, 2003.
61. Overview of Radiation Therapy Oncology Group. Radiation Oncology Research Retreat. Cleveland, OH, October 13, 2003.
62. Outcomes of Recent Clinical Trials: Innovative Treatment Modalities for Brain Metastases. ASTRO Satellite Symposium, Salt Lake City, Utah, October 21, 2003.
63. Radiotherapy and Radiosurgery for brain tumors. Brain Tumor Institute National Leadership Board. Cleveland Clinic Gamma Knife Center, October 23, 2003.
64. Management of CNS Tumors. ASTRO Review 2003. Cleveland, OH, November 13, 2003.
65. Contemporary Management of Brain Metastases. Palliative Care Grand Rounds. Cleveland Clinic Foundation, November 19, 2003.
66. Overview of RT-008 results. San Antonio Breast Cancer Support Group, San Antonio, Tx., December 5, 2003.
67. Modern radiation treatment approaches for brain metastases patients. 2004 Neuro-oncology symposium. Orlando, FL. February 1, 2004.
68. Radiation Therapy: Standard and Novel Techniques. Schering Preceptorship. Cleveland Clinic, March 10, 2004.
69. Overview of radiation therapy options for brain tumor patients. RTT in-service. Cleveland Clinic, March 10, 2004.
70. Role of RSR13 for brain metastases. International Oncology Network Breast Cancer Symposium. Atlanta, GA. March 13, 2004.
71. Role of RSR13 for brain metastases. 2004 ASTRO Brain Tumor symposium. Washington D.C. May 8, 2004.
72. Overview of RT-016 trial. Breast cancer advocacy group. New Orleans, LA, June 7, 2004.
73. Role of Gamma Knife radiosurgery for brain metastases. MASCC/ISOO 16<sup>th</sup> International Symposium, Miami Beach, FL, June 25, 2004.
74. Overview of Gamma Knife radiosurgery. Cleveland's Visitor's Bureau. Cleveland. August 21, 2004.
75. Update of ENRICH study, 2004 ASTRO Meeting, Atlanta, GA, October 2, 2004.
76. Overview of Efaproxiral. Chemotherapy Foundation meeting, New York, NY. November 13, 2004.
77. Overview of Brain Metastases. South American Investigator's meeting for the ENRICH study, Buenos Aires, Argentina, December 3, 2004.
78. Review of RT-009 study. South American Investigator's meeting for the ENRICH study, Buenos Aires, Argentina, December 3, 2004.
79. Management of Efaproxial toxicity. South American Investigator's meeting for the ENRICH study, Buenos Aires, Argentina, December 3, 2004.

80. Advances in Pituitary Radiotherapy. Pituitary update conference. Lake Buena Vista, FL, Jan 28, 2005.
81. Moderator for new therapeutic approaches for brain tumors, 2005 Neuro-oncology symposium, Lake Buena Vista, FL, Jan 29, 2005.
82. Moderator for complementary medicine for brain tumors, 2005 Neuro-oncology symposium, Lake Buena Vista, FL, Jan 29, 2005.
83. Overview of Brain Metastases. European Investigator's meeting for the ENRICH study, Paris, France, February 4, 2005.
84. Review of RT-009 study. European Investigator's meeting for the ENRICH study, Paris, France, February 4, 2005.
85. Management of Efavoxir toxicity. European Investigator's meeting for the ENRICH study. Paris, France, February 4, 2005.
86. Radiation Oncology. Cleveland Clinic Taussig Cancer Center National Leadership board, Cleveland, OH, June 2, 2005.
87. Overview of Gamma Knife radiosurgery. Neuro-Oncology Symposium, Cleveland, OH, August 12, 2005.
88. Achieving clinical excellence through a dedicated radiosurgery tool. Leksell Gamma Knife Mini-Symposium. Las Vegas, NV, September 24, 2005.
89. Gamma Knife Treatments for Brain Tumors. Risk Appraisal Forum Semi-Annual Meeting. Cleveland, OH, September 30, 2005.
90. Glioblastoma multiforme: the multidisciplinary approach to treatment. Chicago, IL, October 6, 2005.
91. Glioblastoma multiforme: the multidisciplinary approach to treatment. Department of Radiation Oncology at Rush University. Chicago, IL October 7, 2005.
92. Case-based symposium on brain metastases. Schering-Plough symposium at the 2005 ASTRO meeting. Denver, CO, October 15, 2005.
93. Modern treatment options for brain metastases. Global ENRICH investigator's meeting. Denver, CO, October 18, 2005.
94. ASTRO Refresher course on brain metastases. 2005 ASTRO meeting. Denver, CO, October 20, 2005.
95. Treatment options for brain metastases. University of Wisconsin-Madison, Department of Human Oncology. October 28, 2005.
96. Glioblastoma multiforme: the multidisciplinary approach to treatment. Cleveland, OH. November 2, 2005.
97. Overview of stereotactic radiosurgery. Novalis users group meeting. Orlando, FL. November 12, 2005.
98. Glioblastoma multiforme: the multidisciplinary approach to treatment. Troy, MI. November 15, 2005.
99. Management of CNS tumors – ASTRO 2005. ASTRO Review 2005, Independence, OH. December 1, 2005.

100. Overview of Xcytrin. 4<sup>th</sup> symposium of combined modality therapy. Dallas, TX. February 23, 2006.
101. Advances in pituitary radiotherapy. Managing pituitary disease. Cleveland, OH. March 9, 2006.
102. Update on pituitary radiotherapy. Contemporary issues in pituitary disease: Management update. Cleveland, OH. March 10, 2006.
103. Central and nervous system malignancies: Radiation Therapy: Standard and Novel Techniques. Schering Preceptorship. Cleveland Clinic, March 30, 2006.
104. Radiotherapy or radiosurgery for pituitary adenomas. Special symposium: Pituitary adenomas. 13<sup>th</sup> International Meeting of the Leksell Gamma Knife Society, Seoul, South Korea. May 22, 2006.
105. Radiation necrosis versus tumor progression. Schering Plough North American Temodar Investigators Advisory Board. Chicago, IL. July 14-15, 2006.
106. Treatment options for brain metastases. St. Joseph's Hospital Cancer Center grand rounds. TEAM program. Atlanta, GA. July, 25, 2006.
107. Glioblastoma multiforme: the multidisciplinary approach to treatment. TEAM program. Troy, MI. August 1, 2006.
108. Glioblastoma multiforme: the multidisciplinary approach to treatment. St. Joseph Mercy Hospital Cancer Center grand rounds, Oakland, MI. August 2, 2006.
109. Overview of Gamma Knife radiosurgery. William Beaumont Hospital, Department of Radiation Oncology. August 2, 2006.
110. Treatment options for brain metastases. Akron City Hospital dinner program. Akron, OH. August, 28, 2006.
111. Radiation Therapy. Brain Tumors: Confronting the challenge together. Brain Tumor Society. Cleveland, OH. September 9, 2006.
112. Case-based symposium on gliomas. Schering-Plough symposium at the 2006 ASTRO meeting. Philadelphia, PA, November 5, 2006.
113. ASTRO Refresher course on brain metastases (Educational session #502). 2006 ASTRO meeting. Philadelphia, PA. November 9, 2006.
114. Update of treatment options for malignant brain tumors. 2006 RSNA meeting. Chicago, IL. November 27, 2006.
115. Image optimization for brain tumor treatment. 2006 RSNA meeting. Chicago, IL. November 28, 2006.
116. Modern treatment approaches for brain metastases. Firelands Hospital, Sandusky, OH. January 18, 2007.
117. Update on treatment options for brain metastases. Kukuna-o-ka-la Radiation Oncology conference. Kapulua, Maui, Hawaii. February 6, 2007.
118. Update on treatment options for malignant gliomas. Kukuna-o-ka-la Radiation Oncology conference. Kapulua, Maui, Hawaii. February 7, 2007.
119. Overview of radiosurgery for spinal metastases. Kukuna-o-ka-la Radiation Oncology conference. Kapulua, Maui, Hawaii. February 8, 2007.
120. Overview of radiosurgery for benign brain tumors. Kukuna-o-ka-la Radiation Oncology conference. Kapulua, Maui, Hawaii. February 8, 2007.

121. Course co-director- First International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 23-25, 2007.
122. Management of brain metastases. First International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 25, 2007.
123. Radiosurgery for acoustic neuromas. First International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 25, 2007.
124. Update on pituitary radiotherapy. 3<sup>rd</sup> contemporary issues in pituitary disease: Management update. Cleveland, OH. March 2, 2007.
125. Advisory board meeting for Allos Therapeutics. Las Vegas. March 16-17, 2007.
126. Update on treatment strategies for brain metastases. Regional oncology dinner meeting. Cleveland, OH, April 11, 2007.
127. Modern treatment approaches to brain metastases. Henry Ford Hospital. Detroit, MI. April 13, 2007.
128. Brachytherapy for brain tumors. American Brachytherapy Society meeting. Chicago, IL. April 30, 2007.
129. Overview of Gamma Knife radiosurgery with emphasis on trigeminal neuralgia. American Association of Medical Audit Specialists. Williamsburg, VA. May 4, 2007.
130. Treatment devices for stereotactic radiosurgery and radiotherapy. North American Society Base Society meeting. Chicago, IL. May 25, 2007.
131. Radiation oncology updates from ASCO 2007. ASCO Review 2007, Cleveland, OH. June 28, 2007.
132. Management of patients with CNS tumors. 4<sup>th</sup> International Congress on Kidney and Bladder Cancer. Orlando, FL. August 4, 2007.
133. Contemporary management of malignant gliomas. Dept. of Radiation Oncology, Samsung Medical Center. Seoul, South Korea. September 28, 2007.
134. Therapeutic strategies for glioblastoma multiforme patients at Cleveland Clinic. Pre-symposium research meeting Samsung Medical Center. Seoul, South Korea. September 28, 2007.
135. Contemporary treatment of brain metastases. Samsung International Brain Tumor Symposium. Seoul, South Korea. September 29, 2007.
136. Contemporary management of brain metastases. Long Island Jewish Southside Hospital Grand Rounds, NY. October 23, 2007.
137. ASTRO Refresher course on brain metastases (Educational session #502). 2007 ASTRO meeting. Los Angeles, CA. October 30, 2007.
138. Refresher course on Image optimization for brain tumor treatment. 2007 RSNA meeting. Chicago, IL. November 28, 2007.
139. Course co-director-2<sup>nd</sup> International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 23-25, 2008.
140. Role of stereotactic radiosurgery for meningiomas. 2<sup>nd</sup> International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 22, 2008.
141. New frontiers in radiosurgery and radiation therapy-discussion of plenary talks. 2<sup>nd</sup> International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 23, 2008.



142. Contemporary management of brain metastases. Grant rounds in Department of Radiation Oncology at Memorial Sloan Kettering Cancer Center. March 26, 2008.
143. Glioblastoma multiforme: the multidisciplinary approach to treatment. TEAM program. West Hartford, CT. March 27, 2008.
144. Update on pituitary radiotherapy. 4<sup>th</sup> annual contemporary issues in pituitary disease: Case-based management update. Cleveland, OH April 11, 2008.
145. Contemporary management of brain metastases. Alegent Health Dinner meeting. Omaha, NE. May 15, 2008.
146. Contemporary management of brain metastases. Neuro-oncology conference for primary care physicians. Omaha, NE. May 16, 2008.
147. Contemporary management of brain metastases. American Association of Medical Dosimetrists national meeting. Cleveland, OH. June 26, 2008.
148. Radiation oncology updates from ASCO 2008. ASCO Review 2008. Cleveland, OH. June 26, 2008.
149. Conventional radiation in malignant spine tumors. Centro Medico Paitilla Scientific meeting on benign and malignant tumors of the central nervous system. Panama City, Panama. July 11, 2008.
150. Advances in glioma treatment. Centro Medico Paitilla Scientific meeting on benign and malignant tumors of the central nervous system. Panama City, Panama. July 12, 2008.
151. Radiosurgery for AVMs. Centro Medico Paitilla Scientific meeting on benign and malignant tumors of the central nervous system. Panama City, Panama. July 12, 2008.
152. The role of conventional radiation therapy for spinal tumors. Managing spine tumors. Cleveland, OH. July 22, 2008.
153. Conventional radiation therapy for gliomas. 3<sup>rd</sup> International Congress of Mexican Neurosurgery Society/5<sup>th</sup> International Congress of Mexican Neuro-oncology Society. Los Cabos, Mexico. Nov. 6, 2008.
154. Conventional radiation therapy for brain metastases. 3<sup>rd</sup> International Congress of Mexican Neurosurgery Society/5<sup>th</sup> International Congress of Mexican Neuro-oncology Society. Los Cabos, Mexico. Nov. 6, 2008.
155. Case discussion on gliomas. 3<sup>rd</sup> International Congress of Mexican Neurosurgery Society/5<sup>th</sup> International Congress of Mexican Neuro-oncology Society. Los Cabos, Mexico. Nov. 7, 2008.
156. Gamma Knife radiosurgery for vestibular schwannoma. 3<sup>rd</sup> International Congress of Mexican Neurosurgery Society/5<sup>th</sup> International Congress of Mexican Neuro-oncology Society. Los Cabos, Mexico. Nov. 8, 2008.
157. Refresher course on Image optimization for brain tumor treatment. 2008 RSNA meeting. Chicago, IL. December 1, 2008.
158. Course co-director-3<sup>rd</sup> International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 20-22, 2009.
159. Stereotactic radiosurgery for arteriovenous malformations. 3<sup>rd</sup> International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 20, 2009.

160. ENRICH trial. Brain metastases in breast cancer workshop. Sponsored by Susan Komen and RTOG. Pentagon City, VA. March 1, 2009.
161. Contemporary management of brain metastases. Grand Rounds in Department of Radiation Oncology at NYU. New York, New York. March 27, 2009.
162. Update on pituitary radiotherapy. 5<sup>th</sup> annual contemporary issues in pituitary disease: Case-based management update. Cleveland, OH. April 3, 2009.
163. Update of Radiation Oncology Technologies 2009. 2nd update on medical advances. Cleveland, OH. April 7, 2009.
164. Treatment of brain metastases. Ohio Society of Radiologic Technologists. Warrensville Heights, OH 44122. April 18, 2009.
165. Update on radiation technologies. 4<sup>th</sup> Annual Citigroup "Clinic at the Clinic". Cleveland, OH. June 17, 2009.
166. Radiation oncology update from ASCO 2009. ASCO Review 2009, Cleveland, OH. June 25, 2009.
167. Clinical trials update in brain metastases. 2009 Neuro-oncology symposium. Cleveland, OH. September 11, 2009.
168. Revolution in radiotherapy technology. 2009 Medical Innovation Summit. Improving the prognosis: cancer cures through innovation. Cleveland, OH. October 6, 2009.
169. Moderator for RO43 Boost: Central Nervous System- Case review. 2009 RSNA meeting. Chicago, IL. December 2, 2009.
170. Update on pituitary radiotherapy. 6<sup>th</sup> annual contemporary issues in pituitary disease: Case-based management update. Cleveland, OH. April 9, 2010.
171. Stereotactic radiosurgery (SRS) in the treatment of prolactin producing tumors: when is it appropriate? Seattle Pituitary Symposium. Seattle, WA. May 8, 2010.
172. Advances in pituitary radiotherapy. Seattle Pituitary Symposium. Seattle, WA. May 8, 2010.
173. Controversies in management: Stereotactic radiosurgery versus stereotactic radiosurgery and whole brain radiation therapy for brain metastases. International symposium on the long-term control of secondary malignancies. June, 8, 2010.
174. Overview of radiation oncology at Parma Community General Hospital. Cancer Center 10 year anniversary. Parma, OH, June 9, 2010
175. Latest advances in radiation oncology therapies for brain and spinal metastases. 2010 Brain Tumor Patient Education Meeting. Cleveland, OH. June 26, 2010.
176. Contemporary management of brain metastases. CNS stereotactic radiosurgery symposium. Manalapan, FL, July 22, 2010.
177. Role of imaging in radiation oncology. Meeting with Siemens. Cleveland, OH. July 27, 2010.
178. Contemporary management of brain metastases. Radiation Oncology Grand Rounds. Lexington, KY. September 24, 2010.
179. Radiobiology of radiosurgery. AANS resident course on stereotactic radiosurgery and radiation therapy. Cleveland, OH. September 24, 2010.
180. Radiosurgery for meningioma. AANS resident course on stereotactic radiosurgery and radiation therapy. Cleveland, OH. September 25, 2010.

181. Radiation oncology update 2010. 5<sup>th</sup> annual Citi “Clinic at the Clinic” Cleveland, OH. September 29, 2010.
182. Management of the brain lesions without tissue confirmation. St. Luke's Cancer Center Grand Rounds. Maumee, Ohio. October 15, 2010.
183. Moderator for RO26 Boost: Central Nervous System- Case review. 2010 RSNA meeting. Chicago, IL. November 29, 2010.
184. Conventional radiotherapy in the management of benign, atypical, and malignant meningiomas. 2010 LINAC radiosurgery. Lake Buena Vista, FL. December 11, 2010.
185. Class I evidence to guide the treatment of metastatic brain and spine tumors. 2010 LINAC radiosurgery. Lake Buena Vista, FL. December 11, 2010.
186. Moderator for Brain SRS. 4<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 25, 2011
187. The role of radiosurgery in gliomas. 4<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 25, 2011
188. Moderator for Plenary session I: The way of the future. 4<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 26, 2011
189. Radiosurgery versus whole brain debate. 4<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 26, 2011.
190. Contemporary management of brain metastases. Cleveland Clinic Taussig Cancer Institute grand rounds. Cleveland, OH. March 18, 2011.
191. Session chair- Radiation therapy for primary brain tumors: clinical role for proton therapy, stereotactic radiosurgery, and hypofractionated schedules. 2011 ASCO meeting, Chicago, IL. June 3, 2011.
192. Role of stereotactic radiosurgery for primary brain tumors. 2011 ASCO meeting, Chicago, IL. June 3, 2011.
193. Conventional radiotherapy in the management of spine tumors. The International Symposium on Spine Tumor Innovations. Cleveland, OH. July 11, 2011.
194. Controversies in management: Stereotactic radiosurgery versus stereotactic radiosurgery and whole brain radiation therapy for brain metastases. 2<sup>nd</sup> International symposium on the long-term control of secondary malignancies. Cleveland, OH. Sept. 9, 2011.
195. Sellar and parasellar tumors: what we think we know? Gamma Knife radiosurgery in the Americas. Pittsburgh, PA. Sept. 18, 2011.
196. Stereotactic radiosurgery for brain metastases. Hypofractionation 2011: Scientific concepts and clinical experiences. Miami, FL. September 30, 2011.
197. Multiple brain metastasis: when to recommend focal radiation, whole brain radiation or both? Neuro-oncology symposium. Sao Paulo, Brazil, October 14, 2011.
198. Evidence for post-resection focal radiotherapy. Sao Paulo, Brazil, October 14, 2011.
199. Radiation therapy of vertebral metastasis. Sao Paulo, Brazil, October 14, 2011.

200. Evidence for radiation therapy in low-grade glioma. Sao Paulo, Brazil, October 15, 2011.
201. Role of radiation therapy in recurrent glioma. Sao Paulo, Brazil, October 15, 2011.
202. RO51 Boost: Central Nervous System- Anatomy and Contouring (An Interactive Session). 2011 RSNA meeting. Chicago, IL. December 1, 2011.
203. Treating physician expectation of meaningful clinical benefit for patients with brain metastases. Veliparib and radiation therapy for brain metastases. Abbott Oncology Meeting. Chicago, IL. January 13, 2012.
204. Radiosurgery or radiation therapy in brainstem gliomas. First Annual International Brain Tumor and Spine Surgery Symposium. Weston, FL. January 27, 2012
205. Radiosurgery in vestibular schwannomas. First Annual International Brain Tumor and Spine Surgery Symposium. Weston, FL. January 27, 2012
206. Radiosurgery therapy management of brain metastases. First Annual International Brain Tumor and Spine Surgery Symposium. Weston, FL. January 28, 2012.
207. Contemporary role of radiation therapy and radiosurgery for pituitary tumors. 5<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 24, 2012.
208. Moderator for Plenary session I: Foundations from the past. 5<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 24, 2012.
209. Radiosurgery versus whole brain radiation therapy for multiple brain metastases debate. 5<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 24, 2012.
210. Whole brain radiation therapy is the standard for metastatic brain tumors. The North Shore-LIJ Center for Stereotactic Radiosurgery and Stereotactic Body Radiation Therapy- 2<sup>nd</sup> annual meeting. Manhasset, NY. March 16, 2012.
211. The Maturation of Intracranial SRS and the Rise of Extracranial SRS. The North Shore-LIJ Center for Stereotactic Radiosurgery and Stereotactic Body Radiation Therapy- 2<sup>nd</sup> annual meeting. Manhasset, NY. March 16, 2012.
212. Management of CNS Tumors. 2012 ASTRO Spring Refresher Course. Chicago, IL. April 15, 2012.
213. Brain and Spine: Dose painting/conformal avoidance/technical advances. 2012 State of the Art Techniques in IGRT, SBRT, Protons and Brachytherapy: Emphasis on Quality and Safety. Las Vegas, NV. May 4, 2012.
214. Overview of pediatric tumors with focus on radiation therapy. ASTRO-SASTRO educational course for residents. Cape Town, South Africa. May 10, 2012.
215. Management of benign brain tumors. ASTRO-SASTRO educational course for residents. Cape Town, South Africa. May 10, 2012.
216. Contemporary management of malignant primary brain tumors. ASTRO-SASTRO educational course for residents. Cape Town, South Africa. May 10, 2012.
217. Contemporary management of malignant primary brain tumors. ASTRO-SASTRO educational course for residents. Cape Town, South Africa. May 10, 2012.
218. Roundtable of CNS tumor management. ASTRO-SASTRO educational course for residents. Cape Town, South Africa. May 10, 2012.

219. Conventional radiotherapy in the management of spine tumors. The International Symposium on Spine Tumor Innovations. Cleveland, OH. July 9, 2012.
220. Case presentation of spinal tumors. The International Symposium on Spine Tumor Innovations. Cleveland, OH. July 10, 2012.
221. Stereotactic radiosurgery for benign brain tumors. Advances in Neurosciences- 6<sup>th</sup> Annual Bay Area Symposium. Fremont, CA. July 14, 2012
222. Radiobiology of Radiosurgery. AANS/ASTRO Stereotactic Radiosurgery Course for Neurosurgery and Radiation Oncology Residents. Evanston, IL. Aug 3, 2012.
223. Pros and cons of radiotherapy for Cushing's disease. 8<sup>th</sup> annual contemporary issues in pituitary disease: Case-based management update. Cleveland, OH. Sept. 5, 2012.
224. Radiosurgery for brain metastases. 14<sup>th</sup> Annual Brain Tumor Update and 3<sup>rd</sup> International Symposium on Long-Term Control of Metastases to the Brain. Las Vegas, NV. Sept. 22, 2012.
225. Stereotactic radiosurgery with/without whole brain radiation therapy debate. 14<sup>th</sup> Annual Brain Tumor Update and 3<sup>rd</sup> International Symposium on Long-Term Control of Matastases to the Brain. Las Vegas, NV. Sept. 22, 2012.
226. Basic anatomy, planning and delivery of brain tumors. 5<sup>th</sup> Biennial Cancer-CI 2013 conference. Hyderabad, India. Feb 7, 2013.
227. Stereotactic radiosurgery. 5<sup>th</sup> Biennial Cancer-CI 2013 conference. Hyderabad, India. Feb 7, 2013
228. Stereotactic body radiation therapy for lung cancer. 5<sup>th</sup> Biennial Cancer-CI 2013 conference. Hyderabad, India. Feb 7, 2013
229. Radiosurgery for multiple brain metastases debate. 6<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 22, 2013.
230. Radiosurgery alone versus whole brain radiation therapy for multiple brain metastases debate. 6<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Lake Buena Vista, FL. February 23, 2013.
231. Contemporary management of brain metastases. PROS/ASTRO/SEAROG bi-annual meeting on Integrating Tomorrow's Therapeutic Modalities for Common Cancers Today. Manila, Phillipines. March 7, 2013.
232. Management of benign brain tumors with radiation. PROS/ASTRO/SEAROG bi-annual meeting on Integrating Tomorrow's Therapeutic Modalities for Common Cancers Today. Manila, Phillipines. March 7, 2013.
233. Evidence-based treatment approaches in malignant gliomas. PROS/ASTRO/SEAROG bi-annual meeting on Integrating Tomorrow's Therapeutic Modalities for Common Cancers Today. Manila, Phillipines. March 8, 2013.
234. Management of brain tumors. 16<sup>th</sup> Annual Moll Pavillion Cancer Symposium. Cleveland, OH. April 10, 2013.
235. Radiation therapy for spinal metastases. 15<sup>th</sup> Annual Brain Tumor Update and 3<sup>rd</sup> International Symposium on Long-Term Control of Matastases to the Brain. Las Vegas, NV. November 9, 2013.
236. Contemporary management of brain metastases. Levine Cancer Institute Grand rounds. Charlotte, NC. November 18, 2013.

237. How can we mitigate the very late effects of radiation therapy? 4<sup>th</sup> annual WFNO/SNO meeting. San Francisco, CA. November 24, 2013.
238. Approach to treating solitary brain metastases. 32<sup>nd</sup> Annual Leland R. Cowden Cancer Symposium: Update on CNS Neoplasms. Salt Lake City, UT. Jan 26, 2014.
239. Radiosurgery alone versus whole brain radiation therapy for multiple brain metastases debate. 7<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Naples, FL. Feb 22, 2014.
240. Radiotherapy or fractionated stereotactic radiation therapy for benign brain tumors, 16<sup>th</sup> Congress of the Brazilian Radiotherapy Society. Sao Paulo, Brazil. May 2, 2014.
241. Stereotactic body radiation therapy for spinal tumors, indications and dose. 16<sup>th</sup> Congress of the Brazilian Radiotherapy Society. Sao Paulo, Brazil. May 2, 2014.
242. Treatment of brain metastases. How to decide. 16<sup>th</sup> Congress of the Brazilian Radiotherapy Society. Sao Paulo, Brazil. May 3, 2014.
243. Radiobiology of Radiosurgery. AANS/ASTRO Stereotactic Radiosurgery Course for Neurosurgery and Radiation Oncology Residents. Evanston, IL. Aug 1, 2014.
244. Auto-planning: Physicians perspective. Philips Users Meeting, San Francisco, CA. Sept 2014
245. Radiation therapy: The role of photons, protons, and particles. Panel discussion. Innovations Summit, Cleveland, OH. Oct 29, 2014.
246. Radiation therapy for spinal metastases. 16<sup>th</sup> Annual Brain Tumor Update and 3<sup>rd</sup> International Symposium on Long-Term Control of Metastases to the Brain. Las Vegas, NV. November 7, 2014.
247. Radiosurgery and fractionated radiation therapy for brain metastases. Educational session. 19<sup>th</sup> Annual SNO Meeting. Miami Beach, FL. November 13, 2014.
248. Contemporary management of brain metastases. Grand Rounds at Houston Methodist Cancer Center. Feb 3, 2015.
249. Radiosurgery Alone vs. Whole Brain Radiation for Multiple Brain Metastases. 8<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. February 20, 2015.
250. How I treat brain metastases and why? 8<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery? February 21, 2015.
251. Contemporary management of brain metastases. Neurosurgery Grand Rounds at University of Southern California. April 3, 2015.
252. Contemporary treatment approaches for brain and spine tumors. State of the Art Radiation Therapy. Las Vegas, NV. April 10, 2015.
253. CNS clinical and physics aspects of treatment planning: Physician perspective. State of the Art Radiation Therapy. Las Vegas, NV. April 10, 2015.
254. CNS challenging case panel. State of the Art Radiation Therapy. Las Vegas, NV. April 10, 2015.
255. Advances in pituitary radiotherapy. Managing pituitary disorders. Cleveland, OH. April 23, 2015.
256. Radiation treatment of persistent pituitary disease. 10<sup>th</sup> Annual Contemporary Issues in Pituitary Disease: Managing persistent and recurrent disorders. Cleveland, OH. April 24, 2015

257. Gamma knife radiosurgery for brain metastases. North American Gamma Knife Consortium Meeting. Cleveland, OH. June 28, 2015.
258. Conventional radiation therapy for spinal metastases. Cleveland Spine Review. Cleveland, OH. July 15, 2015.
259. Contemporary management of brain metastases. Radiation oncology grand rounds at University of Arizona. August 7, 2015.
260. When non-focal treatments are indicated in the management of spine tumors. 17<sup>th</sup> Annual Brain Tumor Update and 4th Annual International Symposium on Long-term Control of Metastases to the Brain and Spine. Las Vegas, NV. Nov 8, 2015
261. Radiosurgery resistant brain metastases. 17<sup>th</sup> Annual Brain Tumor Update and 4th Annual International Symposium on Long-term Control of Metastases to the Brain and Spine. Las Vegas, NV. Nov 8, 2015
262. Contemporary management of brain metastases. Neurosurgery grand rounds at Northshore/Long Island Jewish Hospital. Dec 4, 2015
263. Contemporary management of brain metastases. Radiation oncology grand rounds at Northshore/Long Island Jewish Hospital. Dec 4, 2015
264. Central nervous system tumors. 1<sup>st</sup> Annual ASTRO Review. New York, NY. Dec 5, 2015
265. Central nervous system tumors. 1<sup>st</sup> Best of Radiation Oncology. Fort Lauderdale, FL. Jan 23, 2016.
266. Contemporary management of brain metastases. Radiation oncology grand rounds. SUNY Downstate. Brooklyn, NY. March 23, 2016.
267. Contemporary management of brain metastases. Radiation oncology grand rounds. Cornell University. New York, NY. March 24, 2016.
268. Contemporary management of brain metastases. Brain Tumor Center grand rounds. University of Cincinnati. Cincinnati, OH April 13, 2016.
269. Stereotactic radiosurgery and targeted therapy for brain metastases. 17<sup>th</sup> Biennial Canadian Neuro-oncology meeting. June 10, 2016.
270. Conventional radiation therapy for spinal metastases. Cleveland Spine Review. Cleveland, OH. August 9, 2016.
271. Central nervous system tumors. 2<sup>nd</sup> Annual Best of Radiation Oncology Review. New York, NY. Dec 2, 2016
272. Whole Brain Radiation for Multiple Brain Metastases- Debate. 10<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. February 25, 2017.
273. Leadership lessons learned as chair. Stanford University Hospitals. Palo Alto, CA. March 17, 2017.
274. Contemporary management of brain metastases. Malcolm Baghaw Lectureship. Stanford University Hospitals. Palo Alto, CA. March 17, 2017.
275. Contemporary management of brain metastases. Radiation oncology grand rounds. University of Pittsburgh. Pittsburgh, PA. June 9, 2017.

276. Radibiology of stereotactic radiosurgery. AANS/ASTRO Stereotactic Radiosurgery Course for Neurosurgery and Radiation Oncology Residents. Pittsburgh, PA. June 9, 2017
277. Conventional radiation therapy for spinal metastases. Cleveland Spine Review. Cleveland, OH. July 11, 2017.
278. Overview of ACMUI and radiation safety. ARRO meeting. Sept 23, 2017
279. Global collaborations in brain cancer trials. ASTRO meeting. San Diego, CA. Sept. 26, 2017.
280. Contemporary management of brain metastases. Radiation oncology grand rounds. University of Maryland. Baltimore, MD. October 5, 2017.
281. Contemporary management of brain metastases. Radiation oncology grand rounds. Jefferson University Hospital. Philadelphia, PA. October 26, 2017.
282. Is there still a role for whole brain radiation in the treatment of brain metastases. 7<sup>th</sup> Annual Brain Tumor Symposium: Current and Emerging Treatment Approaches for Central Nervous System Tumors. Philadelphia, PA. October 27, 2017.
283. Debate: Brain metastases (5 or more) radiosurgery vs. radiotherapy. 19<sup>th</sup> Annual Brain Tumor Update and 8th Annual International Symposium on Long-term Control of Metastases to the Brain and Spine. Las Vegas, NV. October 28, 2017.
284. Contemporary management of brain metastases. Neuroscience grand rounds. Allegheny Health Network. Pittsburgh, PA. November 8, 2017.
285. Central nervous system tumors. 3rd Annual Best of Radiation Oncology Review. New York, NY. Dec 1, 2017.
286. Clinics Slam: Protons There or Photons Here. 57th Annual Conference of the Particle Therapy Co-Operative Group (PTCOG), Cincinnati OH, May 24-25, 2018.
287. Conventional Radiotherapy in the Management of Spine Tumors. Cleveland Spine Review, Management of, Spine Tumors, Cleveland OH, July 10-11, 2018
288. Role of SRS for recurrent glioblastoma. 11<sup>th</sup> Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery. Orlando, FL. February 23, 2018.
289. Debate: Brain metastases (5 or more) radiosurgery vs. radiotherapy. 20<sup>th</sup> Annual Brain Tumor Update and 9th Annual International Symposium on Long-term Control of Metastases to the Brain and Spine. Santa Monica, CA. September 29, 2018
290. Stereotactic radiosurgery for meningiomas. 20<sup>th</sup> Annual Brain Tumor Update and 9th Annual International Symposium on Long-term Control of Metastases to the Brain and Spine. Santa Monica, CA. September 30, 2018
291. Updates in central nervous system tumors. 4th Annual Best of Radiation Oncology Review. New York, NY. Dec 7, 2018.
292. Contemporary management of brain metastases .Radiation Oncology Grand Rounds, City of Hope Hospital, Duarte CA. February 8, 2019
293. Contemporary management of brain metastases .Radiation Oncology Grand Rounds, Cedars Sinai Hospital, Los Angeles, CA. February 8, 2019
294. Contemporary management of brain metastases. 71st Annual Midwinter Radiology and Radiation Oncology Conference and Conjoint Nuclear Medicine Seminar. February 9, 2019



295. Stereotactic radiosurgery for meningiomas. 71st Annual Midwinter Radiology and Radiation Oncology Conference and Conjoint Nuclear Medicine Seminar. February 9, 2019
296. Stereotactic radiosurgery for pituitary tumors. 71st Annual Midwinter Radiology and Radiation Oncology Conference and Conjoint Nuclear Medicine Seminar. February 9, 2019
297. Importance of integral dose. 11th Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery, Orlando FL. February 22-24, 2019
298. Neoadjuvant radiation, post resection cavity SRS or WBRT: What is the best option? 11th Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery, Orlando FL. February 22-24, 2019
299. Contemporary management of brain metastases. Cleveland Clinic Florida Cancer Center Grand Rounds. Weston, FL. March 1, 2019
300. Modern radiation techniques for craniopharyngiomas. 14th Annual Symposium on Contemporary issues in pituitary disease. Cleveland, ON. April 5, 2019
301. Contemporary management of brain metastases. Medical College of Wisconsin. Milwaukee, WI. May 31, 2019.
302. Role of liquid biopsy in stereotactic radiosurgery and SBRT. ISRS Congress, Rio de Janeiro, Brazil. June 10-13, 2019
303. Discussant of radiation oncology abstracts. Society for Neuro-Oncology (SNO) Brain Metastases, New York NY, August 16, 2019
304. Contemporary management of brain metastases. Seymour Levitt lectureship. Minneapolis, MN. Oct 10, 2019.
305. New approaches to whole-brain radiation therapy. 21<sup>th</sup> Annual Brain Tumor Update and 10th Annual International Symposium on Long-term Control of Metastases to the Brain and Spine. Las Vegas, NV. Nov 2, 2019
306. Contemporary management of brain metastases. Radiation oncology grand rounds. Northwell Hospital. Dec 5, 2019
307. Contemporary management of brain metastases. Cancer center grand rounds. Rush University Hospitals. Jan 17, 2020.
308. Radiosurgery and gliomas. 12th Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery, Orlando FL. February 21-23, 2020
309. Preoperative radiosurgery for brain metastases: debate. 12th Annual International Symposium on Stereotactic Body Radiation Therapy and Stereotactic Radiosurgery, Orlando FL. February 21-23, 2020

## Publications

1. Suh JH, Dass KK, Pagliacci L, Taylor ME, Saxton JP, Tan M, Mehta A. Use of endobronchial radiation therapy with or without Nd: YAG laser for managing malignant airway obstruction. *Cancer* 73:2583-2588, 1994.
2. Sohn JW, Schell MC, Dass KK, Suh JH, Tefft M. Uniform irradiation of the craniospinal axis with a penumbra modifier and an asymmetric collimator. *Int J Radiat Oncol Biol Phys* 29(1): 187-90, 1994.

3. Sohn JW, Suh JH, Pohar S. A method for delivering accurate and uniform radiation dosages to the head and neck with asymmetric collimator and a single isocenter. *Int J Radiat Oncol Biol Phys* 32(3): 809-813, 1995.
4. Sohn JW, Dalzell JG, Suh JH, Tefft M, Schell M, Higgins PD. Dose-volume histogram analysis of techniques for irradiating pituitary adenomas. *Int J Radiat Oncol Biol Phys* 32(3): 831-837, 1995.
5. Sohn JW, Suh JH, Pohar S. In response to Dr. Harari. *Int J Radiat Oncol Biol Phys* 33(4): 972, 1995.
6. Fernandez-Vicioso E, Suh JH, Kupelian PA, Sohn JW, Barnett GH. Analysis of prognostic factors for patients with single brain metastasis treated with stereotactic radiosurgery. *Radiat Oncol Invest* 5:31-37, 1997.
7. Kupelian P, Katcher J, Levin H, Zippe C, Suh J, Macklis R, Klein E. External beam radiotherapy versus radical prostatectomy for clinical stage T1-2 prostate cancer: Therapeutic implications of stratification by pretreatment PSA levels and biopsy Gleason scores. *Cancer J Sci* 3:78-87, 1997.
8. Kupelian PA, Klein EA, Witte J, Kupelian VA, Suh JH. Familial prostate cancer: a different disease? *J Urol* 158:2197-2201, 1997.
9. Suh JH, Barnett GH, Miller DW, Fernandez-Vicioso E, Kupelian PA. The results of stereotactic radiosurgery with or without whole brain radiation therapy for patients with newly diagnosed single brain metastasis. *Radiosurg* 2:51-63, 1998.
10. Mohan DS, Suh JH, Phan JL, Kupelian PA, Cohen BH, Barnett GH. Outcome in elderly patients undergoing definitive surgery and radiation therapy for supratentorial glioblastoma multiforme at a tertiary care institution. *Int J Radiat Oncol Biol Phys* 42:981-987, 1998.
11. Suh JH. On comparison of methods for response analysis of central nervous system neoplasms. *J Radiosurg* 2(3):163, 1999.
12. Sohn JW, Macklis RM, Suh JH, Kupelian PA. A mobile shield to reduce scatter radiation to the contralateral breast during radiotherapy for breast cancer: preclinical results. *Int J Radiat Oncol Biol Phys* 43:1037-1041, 1999.
13. Prayson RA, Suh JH. Subependymomas: clinicopathologic study of 14 tumors including comparative MIB-1 immunohistochemistry with other ependymal neoplasms. *Arch Pathol Lab Med* 123:306-309, 1999.
14. Kang S, Suh JH. Radiation therapy for neurosarcoidosis: Report of three cases from a single institution. *Radiat Oncol Invest* 7:309-312, 1999.
15. Chidel MA, Rice TW, Adelstein D, Kupelian PA, Suh JH, Becker M. Resectable esophageal carcinoma: Local control with neoadjuvant chemotherapy and radiation therapy. *Radiol* 213:67-72, 1999.
16. Chidel MA, Suh JH, Greskovich JF, Kupelian PA, Barnett GH. Treatment outcome for patients with primary non-small cell lung cancer and synchronous brain mets. *Radiat Oncol Invest* 7:313-319, 1999.
17. Suh JH, Barnett GH. Brachytherapy for brain tumor. *Hematol Oncol Clin N Amer* 13:635-650, 1999.
18. Suh JH, Barnett GH, Miller DW, Crownover RL, Willoughby, TR, Weinhaus MS, Barrett PA, Walsh JG, Macklis RM. Successful conversion from a linear accelerator-based to a Gamma Knife radiosurgery program: the Cleveland Clinic experience. *St Funct Neurosurg* 72 (suppl 1): 159-167, 1999.
19. Chidel M, Suh JH, Barnett GH. The management of brain metastases. *Cleve Clin J Med* 67:120-127, 2000.

20. Suh JH, Barnett GH, Sohn JW, Kupelian PA. Linear accelerator-based stereotactic radiosurgery for recurrent and newly diagnosed acoustic neuromas. *Radiat Oncol Invest* 90:145-151, 2000.
21. Suh JH, Saxton JP. Conventional radiation therapy for skull base tumors. *Neurosurg Clin N Amer* 11: 575-586, 2000.
22. Barnett GH, Suh JH, Crownover RL. Recent advances in the treatment of skull base tumors using radiation. *Neurosurg Clin N Amer* 11: 587- 595, 2000.
23. Mahmoud-Ahmed AS, Suh JH. On metastatic hepatomas to the brain with stereotactic radiosurgery. *J Radiosurg* 3:145-146, 2000.
24. Goyal LK, Suh JH, Prayson RA, Mohan DS, Barnett GH. The importance of gross total resection in attaining durable local control with aggressive meningiomas. *Int J Radiat Oncol Biol Phys* 46:57-61, 2000
25. Chidel MA, Suh JH, Reddy CA, Chao S, Lundbeck M, Barnett GH. Application of recursive partitioning analysis and evaluation of the use of whole brain radiation among patients treated with stereotactic radiosurgery for newly diagnosed brain metastases. *Int J Radiat Oncol Biol Phys* 47(4): 993-999, 2000.
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29. Chidel M, Suh JH, Matejczyk MB. Radiation prophylaxis for heterotopic ossification of the knee. *J Arthropl* 16:1-6, 2001.
30. Mahmoud-Ahmed AS, Suh JH, Barnett GH, Webster KD, Kennedy AW. Tumor distribution and survival in six patients with brain metastases from cervical carcinoma. *Gynecol Oncol* 81:196-200, 2001.
31. Sanghavi SN, Miranpuri SS, Chappell R, Buatti JM, Suh JH, Regine WF, Weltman E, Sneed PK, Goetsch SJ, Sperduto PW, Scott C, Mehta MP. Multi-institutional survival analysis of brain metastases patients treated with radiosurgery stratified by RTOG RPA classification. *Int J Radiat Oncol Biol Phys* 51: 426-434, 2001.
32. Mahmoud-Ahmed AS, Suh JH, Barnett GH, Webster KD, Kennedy AW. The effect of radiation therapy on brain metastases from endometrial carcinoma: a retrospective study. *Gynecol Oncol* 83: 305-309, 2001.
33. Steinmetz MP, Barnett GH, Kim B, Chidel MA, Suh JH. Metastatic seeding of the stereotactic biopsy tract in glioblastoma multiforme: Case report and review of the literature. *J Neuro-Oncol* 55:167-171, 2001.
34. Mahmoud-Ahmed AS, Suh JH, Mayberg MR. Gamma knife radiosurgery for acromegaly: a review. *Pituitary* 4:223-230, 2002.
35. Mahmoud-Ahmed AS, Kupelian PA, Reddy CA, Suh JH. Brain metastases from gynecological cancers: factors that affect overall survival. *Tech Ca Res Treat* 4: 1-6, 2002.

36. Buchsbaum JC, Suh JH, Lee, SY, Chidel MA, Greskovich JF, Barnett GH. Survival by RTOG recursive partitioning analysis (RPA) group and treatment modality in patients with malignant melanoma brain metastases: a retrospective study. *Cancer* 94:2265-2272, 2002.
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3. Barnett GH, Suh JH. Radiosurgery for Glial Tumors. In The Technique and Evaluation of Contemporary Stereotactic Radiosurgery. BE Pollock, editor. pp. 265-281. Armonk, NY, Futura Publishing Company, Inc., 2002.
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53. Kotecha R, Chao ST, Murphy ES, Suh JH. Benign Tumors of the CNS. Target Delineation and Field Setup- – A Practice Guide for Conformal and Intensity-Modulated Radiation Therapy, Second Edition. Lee NY, Liu JJ, Yu Y. eds. Springer. Submitted 2019
54. Kotecha R, Chao ST, Murphy ES, Suh JH. Malignant Tumors of the CNS. Target Delineation and Field Setup- – A Practice Guide for Conformal and Intensity-Modulated Radiation Therapy, Second Edition. Lee NY, Liu JJ, Yu Y. eds. Springer. Submitted 2019

### **Textbook**

1. Radiation Oncology Self-Assessment Guide. Suh J, ed. Demos Medical 2013.
2. Adult CNS Radiation Oncology Principles and Practice. Eds. Chang EL, Brown PD, Lo SS, Sahgal A, Suh JH. Cham, Switzerland Springer 2018
3. Strategies for radiation therapy treatment Planning. Eds. Xia P, Godley A, Shah C, Videtic GMM, and Suh JH, New York, NY: Demos Medical Publishing 2019

### **Current Research Projects**

1. Principal investigator: Brain metastases registry (IRB 6989).
2. Principal investigator: Low-grade glioma registry (IRB 6990).
3. Principal investigator: Pituitary adenoma registry (IRB 6991).
4. Principal investigator: Meningioma registry (IRB 7044).
5. Principal investigator: Heterotopic bone registry (IRB 7045).

### **Grants / Funding:**



1. Title: Radiation Therapy Oncology Group (institution #6001)  
Source: NCI Grants CA21661, CA 32115, and CA37422  
Funds: About \$100,000/year. Used to support nursing and data management.  
PI: John H. Suh, M.D.  
Full member institution since 2000
2. Title: Neurocognitive sequelae and quality of life following whole brain radiotherapy (IRB#2828).  
Source: Cleveland Clinic Grant  
Funds: \$6,000. Used to cover research costs.  
PI: John H. Suh, M.D.
3. Title: Phase I/II high dose Tamoxifen dose escalation study in combination with reduction of thyroid hormone levels in failed malignant glioma patients. (IRB #2893).  
Source: CCF Research grant. Used to cover lab costs.  
Funds: \$ 13,000  
PI: John H. Suh, M.D. and Aleck Hercbergs, M.D.
4. Title: Feasibility study of CT, MRI, and PET registration for radiation treatment planning for malignant brain neoplasms (IRB#4442).  
Source: Cleveland Clinic grant  
Funds: \$12,000. Used to cover the cost of PET scans.  
PI: John H. Suh, M.D.  
Dates: Completed.
5. Title: Phase II study of high-dose Tamoxifen with induction of chemical (subclinical) hypothyroidism as an adjunct to XRT in newly diagnosed GBM. (IRB #4473).  
Source: Astra-Zeneca  
Funds: Received drug supply from Astra-Zeneca for Tamoxifen (Estimated cost \$800/month per patient)  
PI: John H. Suh, M.D.  
Dates: 8/16/01 to 2005.
6. Title: An open-label phase II trial to evaluate the safety and pharmacokinetics of motexafin gadolinium and cranial irradiation in the treatment of newly diagnosed GBM patients (IRB #4181)  
Source: Pharmacyclics  
Funds: \$100,000. Used for start-up costs, IRB fees, data management, nursing support, MRI scans and labs  
PI: John H. Suh, M.D.
7. Title: A phase II study to evaluate the efficacy and safety of RSR13 administered to patients receiving standard cranial radiation for brain metastases (IRB#2488)  
Source: Allos Therapeutics  
Funds: \$30,000. Used for start-up costs, IRB fees, data management, nursing support, MRI scans and labs  
PI: John H. Suh, M.D.
8. Title: A companion phase II study to evaluate the efficacy and safety of repetitive daily IV doses of RSR13 administered to patients receiving cranial radiation therapy for GBM (IRB#2492)  
Source: Allos Therapeutics  
Funds: \$40,000. Used for start-up costs, IRB fees, data management, nursing support, MRI scans and labs  
PI: John H. Suh, M.D.
9. Title: Phase III of RSR13 and whole brain radiation therapy for brain metastases (RT-009)  
Source: Allos Therapeutics  
Funds: \$230,000. Used for start-up costs, IRB fees, data management, nursing support, MRI scans and labs  
PI: John H. Suh, M.D.

10. Title: Phase III randomized trial of motexafin gadolinium (PCI-0120) injection as a radiation sensitizer in patients receiving whole brain radiation therapy for the treatment of brain metastases.  
Source: Pharmacyclics  
Funds: \$230,000. Used for start-up costs, IRB fees, data management, nursing support, labs, MRIs  
PI: John H. Suh, M.D.
11. Title: Double-blind, placebo-controlled, randomized phase III trial to determine the efficacy and safety of Isegran HCL oral solution in reducing the severity of oral mucositis in patients receiving RT for head and neck malignancies.  
Source: Intrabiotics  
Funds: \$24,000. Used for start-up costs, IRB fees, data management, nursing support, and labs.  
PI: John H. Suh, M.D.
12. Title: Phase III, multicenter, randomized, double-blind, placebo-controlled study to assess the efficacy and safety of cevimeline in the treatment of xerostomia secondary to radiation therapy for cancer in the head and neck region.  
Source: Daiichi Pharmaceuticals  
Funds: \$12,000. Used for start-up costs, IRB fees, data management, nursing support, and labs  
PI: John H. Suh, M.D.
13. Title: Principal investigator (international): A phase 3 randomized, open-label comparative study of standard whole brain radiation therapy with supplemental oxygen, with or without concurrent RSR3 (efaproxiral), in women with brain metastases from breast cancer.  
Sponsored by Allos Therapeutics.  
Funds: \$70,000. Used for start-up costs, IRB fees, data management, nursing support, and labs  
PI: John Suh, M.D.
13. Principal investigator: Prospective study on the short-term adverse effects from Gamma Knife radiosurgery (IRB 8078).
14. Principal investigator: Prospective analysis of wellness for patients with non-malignant conditions (IRB 7992).

### National Groups

#### Radiation Therapy Oncology Group (RTOG)

-Principal investigator for the Cleveland Clinic	1994-2014
-Full member institution principal investigator	2000-2014
-Member of the RTOG Brain Tumor Committee	1999-2014
-Full member committee	2000-2014

#### NRG (NSABP, RTOG, GOG)

-Institutional PI for radiation oncology section of NRG for CCCC	2014- present
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#### New Approaches to Brain Tumor Therapy (NABTT)

-Investigator for NABTT	2001-2008
-Member of the radiation oncology committee	2001-2008

#### American Brain Tumor Consortium (ABTC)

-Investigator	2009- present
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#### International Stereotactic Radiosurgery Society (ISRS)

-Member of the ISRS	1995-present
-Board member	2016-present
-Board member	2001-2008
-Director of membership committee	2003-2005

#### Korean American Society for Therapeutic Radiology and Oncology

-Board of Trustees	2005-present
	2007-present

-Vice President	2010-2011
-President	2011-2013
American College of Radiology (ACR)	
-Member	1991-present
-ACR Appropriateness Criteria Expert panels on Radiation Oncology (Brain metastases)	2005-2011
American Board of Radiology (ABR)	
--Written exam writer	2005-2019
-Oral board examiner	2008-2019
-Section head for CNS/peds section of oral exam	2008-2019
-Board of Trustees, Radiation Oncology	2019-present
American Society of Therapeutic Radiology and Oncology (ASTRO)	
-Member	1996-present
-Member of Education Committee	2010-2017
-Member, NRC Subcommittee of the Government Relations Committee	2010-present
Society of Chairman of Academic Radiation Oncology Programs	2006- present
Society of Neuro-Oncology	
-Member	1999-2011
Leksell Gamma Knife Society	
-Member	1997-2017
American Radium Society	
-Member	2004-2012
-Reviewer of abstracts	2010-2012
American Society for Clinical Oncology	2004-2015
-Member	

Cleveland Clinic Lerner College of Medicine - Faculty List			
Radiation Oncology			
Last Name	First Name	Credentials	CCLCM Appointment
White = Have a Faculty Appointment		Gray = Will apply in the future	
Amarnath	Sudha	M.D.	Assistant Professor
Balagamwala	Ehsan	M.D.	Clinical Instructor
Blair	Henry	M.D.	Clinical Assistant Professor
Canavan	Joycelin	M.D.	Clinical Assistant Professor
Cherian	Sheen	M.D.	Assistant Professor
Cho	Young Bin	Ph.D.	
Ciezki	Jay	M.D.	Professor
Djemil	Toufik	Ph.D.	Assistant Professor
Donaghue	Jeremy	MS	Adjunct Assistant Professor
Engeler	George	M.D.	
Greskovich	John	M.D.	Assistant Professor
Guo	Bingqi	Ph.D.	Assistant Professor
Huang	Long	Ph.D.	
Joo	Jaewook	Ph.D.	
Keller	Lanea	MD	Assistant Professor
Kolar	Matthew	MS	Clinical Assistant Professor
Kost	Susan	Ph.D.	
Koyfman	Shlomo	M.D.	Associate Professor
Lee	Daesung	M.D.	Clinical Assistant Professor
Lu	Lan	Ph.D.	
Magnelli	Anthony	MS	Clinical Assistant Professor
Mastroianni	Anthony	M.D.	Clinical Assistant Professor
Muhieddine Mossolly	Lama	MS	Clinical Assistant Professor
Murphy	Erin	M.D.	Associate Professor
Naik	Mihir	D.O.	
Neyman	Gennady	Ph.D.	Assistant Professor
Obi	Betty	M.D.	Clinical Assistant Professor
Qi	Peng	Ph.D.	Assistant Professor
Rajan	Saju	MD	Clinical Assistant Professor
Reece	Curtis	MSc	Clinical Assistant Professor
Rybak	Maria	MS	Clinical Assistant Professor
Shah	Chirag	MD	Associate Professor
Sherman	Justin	M.S.	
Staley	Noah	M.S.	
Stephans	Kevin	M.D.	Associate Professor
Strongosky	Michael	MMSc	Clinical Assistant Professor
Suarez	Eva	MD	Clinical Assistant Professor
Suh	John	M.D.	Professor
Tendulkar	Rahul	M.D.	Associate Professor
Tischler	Eric	MS	Clinical Assistant Professor

Vassil	Andrew	M.D.	Clinical Assistant Professor
Videtic	Gregory	M.D.	Professor
Vossler	Matthew	MS	Clinical Assistant Professor
Wang	Zhendong	PhD	Adjunct Assistant Professor
Weller	Michael	MD	Clinical Assistant Professor
Wilkinson	Douglas Allan	Ph.D.	Assistant Professor
Woody	Neil	M.D. M.S.	Assistant Professor
Xia	Ping	Ph.D.	Professor
Yu	Jennifer	M.D, Ph.D.	Associate Professor
Yu	Naichang	Ph.D.	Assistant Professor

## Department of Radiation Oncology funding (2017-2019)

### 2017

1. Abazeed M (PI). Precision targeting of therapeutic resistance in non-small cell lung cancer. NIH KL2 Career Development Award. 07/01/2015 – 06/30/2019. \$425,000
2. Abazeed M (PI). Center of Excellence for Precision Radiotherapy. 05/01/2017-04/30/2020. \$675,000
3. Abazeed M (PI). Targeting the Achilles' shield of TNBC by androgen blockade. ASCO Conquer Cancer Foundation. 07/01/2017-06/30/2020. \$450,000
4. Abazeed M. Engrafting the un-engraft able, a cholangiocarcinoma resource. The Cholangiocarcinoma Foundation 07/01/2017. \$60,000.
5. Abazeed M (PI). Cancer avatars, hype or hope? VeloSano Impact Award. 7/01/2016-06/30/2019. \$450,000
6. Abazeed M (PI). Phase II Study of IMRT Re-irradiation with concurrent/adjuvant Nivolumab in locally recurrent curable squamous cell carcinoma of the head and neck. Pathology & Translational Research Bristol-Myers Squibb \$235,000 04/01/2017-06/30/2019.
7. Abazeed M (PI). Investigations of the Genetic Vulnerabilities of Cancer to alpha Particle Irradiation. Bayer AG. 06/30/2017-01/31/2018. \$132,000
8. Abazeed M (PI). Radiomics of Lung Cancer. Siemens Healthcare. 1/15/2017-01/14/2018. \$87,643
9. Almasan A (PI). Therapeutic resistance in leukemic cells: targeting BCL-2 family and autophagy. RO1 CA184137. 9/25/15-9/25/20. \$1,812,845
10. Almasan A (PI). Epigenetic control of the 14q32 miRNA mega-cluster is a determinant of therapeutic refractory lymphoid malignancies. VeloSano pilot award. 3/1/17-2/28/18. \$100,000
11. Almasan A (Co-I). Co-leader, Program 2: "Molecular Oncology". Comprehensive Cancer Center Support Grant. NCI (NIH) 5P30CA043703-17. Total Direct Costs (23-28): 01-08-1997 – 03/03/2023. \$ 5,104,000
12. Chao S (PI). Robert and Barbara Kerscher Grant. 1/1/18-12/31/21. \$234,390
13. Koyfman S. Phase I Dose Escalation Study of Stereotactic Body Radiotherapy (SBRT) for Squamous Cell Carcinoma of the Head and Neck in High Risk Patients Who are Ineligible/Refuse Standard of Care Therapy. EPCRS Grant - \$45,360.00
14. Mian O (Co-I). Circulating cell free tumor DNA as a biomarker of therapeutic response in hepatocellular carcinoma \$10,000
15. Mian O (PI). Establish a shared patient derived xenograft and organoid biobank for urothelial cancer. ase Comprehensive Cancer Center GU Pilot. 3/1/2017-3/1/2018. \$75,000
16. Scott J (PI). Charitable Donation from Carson Sarcoma Foundation. \$25,000
17. Shah C (PI). Evaluating the Cost-Effectiveness of Image Guided Stereotactic Body Radiation Therapy. 9/16/2016 to Present. \$75,000.
18. Shah C (PI), Xia P. Surface Imaging in Breast Cancer Radiotherapy. VisionRT. \$50,000.
19. Shah C (PI). Cianna Medical- TRIUMPH-T Trial. \$30,000.
20. Xia P (PI). Optimizer Project-Exhibit B-033. Philips Medical Systems, 8/1/2015-8/1/2-18. \$90,000

21. Yu JS (PI). Hypoxia Regulates Notch Turnover in Glioma Stem Cells Through Vascularin. RO1NS094199-01 NIH/NINDS 9/30/15-7/31/20. \$1,730,000
22. Yu JS (PI). Selective Targeting of Glioma Stem Cells Through Sema3C/PlexinD1. R01NS092641. NIH/NINDS. 7/1/16 – 3/31/21. \$1,730,000
23. Yu JS (Co-Investigator – 5%). Bao (PI). Glioblastoma Stem Cell-Derived Pericytes and Cancer Invasion. R01NS091080. NIH/NINDS. 7/15/16 – 4/30/21. \$1,730,000
24. Yu JS (Co-Investigator – 5%). Bao (PI). Functional Inhibition of Deubiquitylase HAUSP to Disrupt Glioblastoma Stem Cells. R01CA184090 NIH/NCI. 4/1/15-3/31/20. \$1,800,000
25. Yu JS (Co-Investigator- 5%). Bao (PI) Ubiquitination and Deubiquitination of c-Myc in Glioblastoma . R01NS099175 NIH/NINDS. 9/30/16-6/30/21. \$1,730,000.
26. Yu JS (PI). Radiomic Risk Score to Identify Tumor Progression on MRI in Brain Metastases. The Dana Foundation. \$66,667/yr
27. Yu JS (PI). piRNA Regulation of Glioma Stem Cells. Lerner Research Institute. 1/1/17-12/31/17 . \$50,000/yr

## 2018

1. Abazeed M (PI). Precision targeting of therapeutic resistance in non-small cell lung cancer. NIH KL2 Career Development Award. 07/01/2015 – 06/30/2019. \$425,000
2. Abazeed M (PI). Center of Excellence for Precision Radiotherapy. 05/01/2017-04/30/2020. \$675,000
3. Abazeed M (PI). Targeting the Achilles' shield of TNBC by androgen blockade. ASCO Conquer Cancer Foundation. 07/01/2017-06/30/2020. \$450,000
4. Abazeed M. Engrafting the un-engraft able, a cholangiocarcinoma resource. The Cholangiocarcinoma Foundation 07/01/2017-6/30/18. \$60,000.
5. Abazeed M (PI). Cancer avatars, hype or hope? VeloSano Impact Award. 7/01/2016-06/30/2019. \$450,000
6. Abazeed M (PI). Phase II Study of IMRT Re-irradiation with concurrent/adjuvant Nivolumab in locally recurrent curable squamous cell carcinoma of the head and neck. Pathology & Translational Research Bristol-Myers Squibb \$235,000 04/01/2017-06/30/2019.
7. Abazeed M (PI). Investigations of the Genetic Vulnerabilities of Cancer to alpha Particle Irradiation. Bayer AG. 6/30/17-12/31/2019. \$132,000
8. Abazeed M (PI). Radiomics of Lung Cancer. Siemens Healthcare. 1/15/2017-01/14/2018. \$87,643
9. Abazeed M. (PI) A biomarker-driven strategy to guide the use of radiotherapy in non-small cell lung cancer. NIH/NCI RO1 CA222294-01A1. \$2,137,000,000. 07/01/2018-07/01/2023
10. Abazeed M. (PI). A biomarker-driven strategy to guide the use of radiotherapy in non-small cell lung cancer. NIH/NCI RO1 CA222294-01A1. \$900,000. 07/01/2023-07/01/2025
11. Almasan A (PI). Therapeutic resistance in leukemic cells: targeting BCL-2 family and autophagy. RO1 CA184137. 9/25/15-9/25/20. \$1,812,845

12. Almasan A (PI). Epigenetic control of the 14q32 miRNA mega-cluster is a determinant of therapeutic refractory lymphoid malignancies. VeloSano. 03/01/2017 – 05/28/2018. \$100,000
13. Almasan A. (PI). Molecular Oncology (MO) research program. NCI (NIH) 2P30CA043703-28. 10/05/2018 – 3/31/2019. \$46,272
14. Almasan A. (co-PI- 10%). Center of Excellence in Lymphoid Malignancies Research. 04/2018 – 03/2021. \$300,000. Provide \$31,000
15. Balik S. New era for SBRT lung and liver patient setup: IGRT with 4D-CBCT. Varian grant for 4D-CBCT research, 1/1/19-12/31/19. \$74,000
16. Koyfman S (Co-PI- 5%;PI: Anant Madabhushu, Ph.D.) Quantitative Histomorphometric Risk Classifier (QuHbIC) in HPV + Oropharyngeal Carcinoma. 3/8/18-2/28/23. R01CA220581-01. \$3,149,529
17. Mian O (Co-investigator). Circulating cell free tumor DNA as a biomarker of therapeutic response in hepatocellular carcinoma \$3,000
18. Mian O (PI). Establish a shared patient derived xenograft and organoid biobank for urothelial cancer. Case Comprehensive Cancer Center GU Pilot. 3/1/2017-3/1/2018. \$75,000
19. Mian O (PI) Prospective validation and functional characterization of a gene expression signature for identification and risk stratification of small cell (neuronal type) bladder cancer. VeloSano Grant 3/1/18-3/1/19. \$100,000
20. Mian O. Targeting HSD3B1-Associated Extragonadal Androgen Biosynthesis to Sensitize Lethal Prostate Cancer. Department of Defense Office of the Congressionally Directed Medical Research Programs (DCMRP), Prostate Cancer Research Program. 5/15/18-5/14/22. \$816,400
21. Parsai, S. Temporally Feathered Intensity Modulated Radiation Therapy: Clinical Implementation of Techniques to Reduce Normal Tissue Toxicity. RPC 303, \$25,000. (notified of approval 5/30/18)
22. Scott J. Charitable Donation from Carson Sarcoma Foundation. \$12, 500
23. Scott J. K12 CA076917 award. 7/1/18-6/30/21. \$390,000.
24. Scott J. ACS-IRG pilot award. 6/1/18-5/31/19. \$30,000
25. Scott J. Construction of a morbidostat for mammalian cells to study temporal genomics during the evolution of resistance. VeloSano research grant. 4/1/2018 – 06/30/2019. \$100,000
26. Shah C. Evaluating the Cost-Effectiveness of Image Guided Stereotactic Body Radiation Therapy. 9/16/2016 - 12/31/19. \$75,000.
27. Shah C. Assessing the Impact of the Microbiome on Breast Cancer Radiotherapy Toxicity. \$30,000
28. Stephans K. DFCI 1Y17-Experimental Therapeutics of Anti-Cancer Agents with Phase 1 Emphasis. \$ 16,264
29. Suh J. (2% effort ) LAP grant U10CA180853 LAPS grant, 3/1/18-2/28/19. \$1,187,291 (\$4000/pt enrolled)
30. Tom M. A Prospective Pilot to Evaluate the Diagnostic Assessment of 18F-Fluciclovine Positron Emission Tomography to Distinguish Radiation Necrosis from Tumor Progression Following Stereotactic Radiosurgery for Brain Metastases. RPC 326. \$25,000. September 2018.
31. Xia P. Optimizer Project-Exhibit B-033. Philips Medical Systems, 8/1/2015-3/1/19. \$115,000



32. Yu JS (PI). Hypoxia Regulates Notch Turnover in Glioma Stem Cells Through Vascularin. RO1NS094199-01 NIH/NINDS 9/30/15-7/31/20. \$1,730,000
33. Yu JS (PI). Selective Targeting of Glioma Stem Cells Through Sema3C/PlexinD1. R01NS092641. NIH/NINDS. 7/1/16 – 3/31/21. \$1,730,000
34. Yu JS (Co-Investigator – 5%). Bao (PI). Glioblastoma Stem Cell-Derived Pericytes and Cancer Invasion. R01NS091080. NIH/NINDS. 7/15/16 – 4/30/21. \$1,730,000
35. Yu JS (Co-Investigator – 5%). Bao (PI). Functional Inhibition of Deubiquitylase HAUSP to Disrupt Glioblastoma Stem Cells. R01CA184090 NIH/NCI. 4/1/15-3/31/20. \$1,800,000
36. Yu JS (Co-Investigator- 5%). Bao (PI) Ubiquitination and Deubiquitination of c-Myc in Glioblastoma. R01NS099175 NIH/NINDS. 9/30/16-6/30/21. \$1,730,000.
37. Yu JS (PI). Radiomic Risk Score to Identify Tumor Progression on MRI in Brain Metastases. The Dana Foundation. 9/7/17-9/6/20. \$66,667/yr .
38. Yu J (Co-investigator 0.3 calendar effort) Autonomic nervous system activity and the implications on breast cancer metastasis. Dept of Defense 9/1/18-8/31/21, \$193,633/yr (\$12,000 direct cost)
39. Yu J. Hypoxia Drives Glioma Stem Cell Migration and Invasion Via VASN-TGF-beta Signaling. VeloSano research grant. 4/1/18-3/31/19. \$100,000

## 2019

1. Abazeed M (PI). Precision targeting of therapeutic resistance in non-small cell lung cancer. NIH KL2 Career Development Award. 07/01/2015 – 06/30/2019. \$425,000
2. Abazeed M (PI). Center of Excellence for Precision Radiotherapy. 05/01/2017-04/30/2020. \$675,000
3. Abazeed M (PI). Targeting the Achilles' shield of TNBC by androgen blockade. ASCO Conquer Cancer Foundation. 07/01/2017-06/30/2020. \$450,000
4. Abazeed M (PI). Cancer avatars, hype or hope? VeloSano Impact Award. 7/01/2016-06/30/2019. \$450,000
5. Abazeed M (PI). Phase II Study of IMRT Re-irradiation with concurrent/adjuvant Nivolumab in locally recurrent curable squamous cell carcinoma of the head and neck. Pathology & Translational Research Bristol-Myers Squibb \$235,000 04/01/2017-06/30/2019.
6. Abazeed M (PI). Ameliorating treatment resistance by selective subclonal depopulation in lung adenocarcinoma. ALA Lung Cancer Discover Award (LCD-565365). 7/1/2018-6/30/2019. \$100,000
7. Abazeed M. (PI) A biomarker-driven strategy to guide the use of radiotherapy in non-small cell lung cancer. NIH/NCI RO1 CA222294-01A1. \$2,137,000. 07/01/2018-07/01/2023
8. Abazeed M. (PI). A biomarker-driven strategy to guide the use of radiotherapy in non-small cell lung cancer. NIH/NCI R37 CA222294-01A1. \$900,000. 07/01/2023-07/01/2025
9. Almasan A (PI). Therapeutic resistance in leukemic cells: targeting BCL-2 family and autophagy. RO1 CA184137. 9/25/15-9/25/20. \$1,812,845
10. Almasan A. (PI). Molecular Oncology (MO) research program. NCI (NIH) 2P30CA043703-28. 10/05/2018 – 3/31/2019. \$46,272

11. Almasan A. (co-PI-10%). Center of Excellence in Lymphoid Malignancies Research. 04/2018 – 03/2021. \$300,000. Provide \$31,000
12. Amarnath S. (co-PI). Neoadjuvant Immunotherapy in Rectal Cancer: A Pilot Study Examining the Safety and Feasibility of PD-1 Blockade in Rectal Cancer. VeloSano 2019 Pilot Award Grant Recipient \$100,000
13. Campbell S. Awarded \$750 Case Comprehensive Cancer Center, Office of Cancer Training, Education, and Research; Trainee Travel Award, ASTRO Chicago, IL, September 2019
14. Harr B, Woody N, Joshi N, Campbell S, Koyfman S. Caregiver Catalyst Award “Use of a Pen-Tablet User-Input Device to Improve Quality of Head and Neck Radiation Oncology Contouring.” AF2019015 Funding Period: July 1, 2019-June 30, 2020. \$9,756
15. Koyfman S (Co-PI- 5%;PI: Anant Madabhushu, Ph.D.) Quantitative Histomorphometric Risk Classifier (QuHbIC) in HPV + Oropharyngeal Carcinoma. 3/8/18-2/28/23. R01CA220581-01. \$3,149,529
16. Manyam B. NRG Oncology/RTOG/ACT New Investigator Travel Award Recipient, Phoenix AZ 2019. \$1,000.
17. Mian O (Co-investigator). Circulating cell free tumor DNA as a biomarker of therapeutic response in hepatocellular carcinoma. \$20,000 (2018-2020)
18. Mian O (PI). Establish a shared patient derived xenograft and organoid biobank for urothelial cancer. Case Comprehensive Cancer Center GU Pilot. 3/1/2017-3/1/2018. \$75,000
19. Mian O (PI) Prospective validation and functional characterization of a gene expression signature for identification and risk stratification of small cell (neuronal type) bladder cancer. VeloSano Grant 3/1/18-3/1/19. \$100,000
20. Mian O. Targeting HSD3B1-Associated Extragonadal Androgen Biosynthesis to Sensitize Lethal Prostate Cancer. Department of Defense Office of the Congressionally Directed Medical Research Programs (DCMRP), Prostate Cancer Research Program. 5/15/18-5/14/22. \$816,400
21. Mian O. RES513870 – MBD2 as a novel therapeutic target in TET2 deficient cancer. Sponsor: CWRU – Co-Laboratories Pilot Award Originator of Funds: NIH 2P30CA043703. 2/1/2019 – 3/31/2020 \$120,000
22. Mian O. L30 CA220908: NIH Loan Repayment Program, National Cancer Institute (NIH/NCI) 7/1/2017 – 6/30/2020 LRP Program. \$75K / 2 years, renewal Award: 35K / 1 year
23. Parsai, S. Temporally Feathered Intensity Modulated Radiation Therapy: Clinical Implementation of Techniques to Reduce Normal Tissue Toxicity. RPC 303, \$25,000. (notified of approval 5/30/20, now extended through 2020)
24. Qi P. New era for SBRT lung and liver patient setup: IGRT with 4D-CBCT. Varian grant for 4D-CBCT research, 1/1/19-12/31/21. \$74,000
25. Scott J. Charitable Donation from Carson Sarcoma Foundation. \$12, 500
26. Scott J. K12 CA076917 award. 7/1/18-6/30/21. \$390,000.
27. Scott J. Construction of a morbidostat for mammalian cells to study temporal genomics during the evolution of resistance. VeloSano research grant. 4/1/2018 – 06/30/2019. \$100,000

28. Scott J. Sarcoma Research Foundation 06/01/2019 – 05/31/2020 \$50,000
29. Scott J. R01 CA244613-01 Exploiting Ecology and Evolution to Prevent Therapy Resistance in EGFR-Driven Lung Cancer 12/01/2019 – 11/30/2024 NIH/NCI \$331,808 annual direct cost
30. Shah C. Value of Time to Treatment in Breast Cancer. Brander Beacons. 7/1/2019-Present. \$25,000
31. Shah C. Evaluating the Cost-Effectiveness of Image Guided Stereotactic Body Radiation Therapy. 9/16/2016 to 12/31/19. \$75,000.
32. Shah C. Assessing the Impact of the Microbiome on Breast Cancer Radiotherapy Toxicity. Breast Programming. 9/2018-present. \$30,000
33. Shah C. Prospective Registry with VeraForm Tissue Marker to Deliver Partial Breast Irradiation. Breast Programming. \$10,000
34. Shah C. DCISionRT registry. 12/2019- present. \$11,850.
35. Shah C. Triumph-T PI. Cianna Medical. 1/2017-12/2019. \$30,000
36. Shah C. Surface imaging in breast cancer technology. VisionRT. 11/2006-11/2019. \$50,000.
37. Stephans K. DFCI 1Y17-Experimental Therapeutics of Anti-Cancer Agents with Phase 1 Emphasis. \$16,264
38. Suh J. (2% effort ) LAP grant U10CA180853 LAPS grant, 3/1/18-2/28/19. \$1,187,291 (\$4000/pt enrolled)
39. Tom M. A Prospective Pilot to Evaluate the Diagnostic Assessment of 18F-Fluciclovine Positron Emission Tomography to Distinguish Radiation Necrosis from Tumor Progression Following Stereotactic Radiosurgery for Brain Metastases. RPC 326. \$25,000. September 2018.
- 40.** Tom M. Awarded \$750 Case Comprehensive Cancer Center, Office of Cancer Training, Education, and Research; Trainee Travel Award, ASTRO Chicago, IL, September 2019
41. Xia P. Optimizer Project-Exhibit B-033. Philips Medical Systems, 8/1/2015-3/1/19. \$115,000
42. Yu JS (PI). Hypoxia Regulates Notch Turnover in Glioma Stem Cells Through Vascular. R01NS094199 NIH/NINDS 9/30/15-7/31/20. \$1,730,000 (\$218,750/year)

## Department Publications in Radiation Oncology 2017-2019

### 2017

1. Abbott AM, Valente SA, Loftus L, Tendulkar RD, Greif JM, Bethke KP, Donnelly ED, Lottich C, Ross DL, Friedman NB, Bedi CG, Joh JE, Kelemen P, Hoefer RA, Kang SK, Ruffer J, Police A, Fyles A, Graves GM, Willey SC, Tousimis EA, Small W, Lyons J, Grobmyer S, Laronga C. A multi-institutional analysis of intraoperative radiotherapy for early breast cancer: does age matter? *Am J Surg.* 2017;214(4):629-633.
2. Abu-Gheida I, Fleming C, Ramia P, Mian O, Tendulkar R, Ciezki J. Current controversies in prostate brachytherapy for prostate cancer, *Applied Radiation Oncology*, September 2017, pg 6-11.
3. Agrawal S, Lacy JM, Bagga H, Angermeier KW, Ciezki J, Tendulkar RD, Reddy CA, Wood HM. Secondary urethral malignancies following prostate brachytherapy. *Urology* 2017 Dec;110:172-176.
4. Ahluwalia MS, Bou-Anak S, Burgett ME, Sarmey N, Khosla D, Dahiya S, Weil RJ, Bae E, Huang P, Bae E, McGraw M, Grove LM, Olman MA, Prayson RA, Suh JH, Gillespie GY, Barholtz-Sloan J, Nowacki AS, Barnett GH, Gladson CL. Correlation of Higher Levels of Soluble TNF-R1 with a Shorter Survival, independent of age, in Recurrent Glioblastoma. *J Neurooncol* 131(3): 449-458, 2017.
5. Amin NP, Nalichowski A, Campbell S, Hyder J, Spink R, Konski AA, Dominello M. Helical Therapy is Safe for Lung Stereotactic Body Radiation Therapy Despite Limitations in Achieving Sharp Dose Gradients. *Technol Cancer Res Treat.* 2017 Dec;16(6):1173-1178.
6. Amoush A, Long H, Subedi L, Qi P, Djemil T, Xia P. Dosimetric Effect of Multileaf Collimator Leaf Width on Volumetric Modulated Arc Stereotactic Radiotherapy for Spine Tumors. *Med Dosim* 42:111-115 (2017).
7. Angelov L, Mohammadi AM, Bennett EE, Abbassy M, Elson P, Chao ST, Montgomery JS, Habboub G, Vogelbaum MA, Suh JH, Murphy ES, Ahluwalia MS, Nagel SJ, Barnett GH. Impact of 2-staged stereotactic radiosurgery for treatment of brain metastases  $\geq 2$  cm. *J Neurosurg.* 2017 Sep 22:1-17.
8. Ayala-Peacock, DN, Attia A, Braunstein SE, Ahluwalia MS, Hepel J, Chung C, Contessa J, Peiffer AM, Lucas Jr. JT, Isom S, Pajewski NM, Kotecha R, Stavos M, Ebner D, Taylor R, Onyeuku NE, Chao ST, Corso C, Ruiz J, Watabe K, Tatter SB, Zadeh G, Chiang VLS, Sneed PK, Fiveash JB, Chan MD. Prediction of New Brain Metastases after Radiosurgery: Validation and Analysis of Performance of a Multi-Institutional Nomogram. *J Neurooncol* 2017;135(2):403-411.
9. Aziz HA, Al Zahrani YA, Bena J, Lorek B, Wilkinson A, Suh J, Singh AD. Episcleral brachytherapy of Uveal Melanoma: Role of Intraoperative Echographic Confirmation. *Br J Ophthalmology* 101: 747-751, 2017
10. Balasubramanian SK, Sharma M, Silva D, Karivedu V, Schmitt P, Stevens GH, Barnett GH, Prayson RA, Elson P, Suh JH, Murphy ES, Chao ST. Longitudinal Experience with WHO Grade III (Anaplastic) Meningiomas at a Single Institution. *J Neurooncol* 131(3): 555-563, 2017.
11. Basch E, Pugh SL, Dueck AC, Mitchell SA, Berk L, Fogh S, Rogak LJ, Gatewood M, Reeve BB, Mendoza TR, O'Mara AM, Denicoff AM, Minasian LM, Bennett AV, Setser A, Schrag D, Roof K, Moore JK, Gergel T, Stephans K, Rimner A, DeNittis A, Bruner DW. Feasibility of Patient Reporting of Symptomatic Adverse Events via the Patient-Reported Outcomes Version of the Common Terminology Criteria for Adverse Events (PRO-CTCAE) in a Chemoradiotherapy Cooperative Group Multicenter Clinical Trial. *Int J Radiat Oncol Biol Phys* 98(2): 409-418, 2017.
12. Bellerive C, Aziz HA, Bena J, Wilkinson A, Suh JH, Plesec T, Singh AD. Local Failure after Episcleral Brachytherapy for Posterior Uveal Melanoma: Patterns, Risk Factors and Management. *Am J Ophthalmol* 177: 9-16, 2017
13. Bennett EE, Angelov L, Vogelbaum MA, Barnett GH, Chao ST, Murphy ES, Yu JS, Suh JH, Jia X, Stevens GHJ, Ahluwalia MS, Mohammadi AM. The prognostic role of tumor volume in the outcome of patients with single brain metastasis after stereotactic radiosurgery. *World Neurosurg* 2017 Aug;104:229-238
14. Bennett EE, Berriochoa C, Habboub G, Brigeman S, Chao ST, Angelov L. Rapid and complete radiological resolution of an intradural cervical cord lung cancer metastasis treated with spinal stereotactic radiosurgery: case report. *Neurosurg Focus* 42(1):E10, 2017.

15. Berriochoa C, Weller M, Berry D, Reddy CA, Koyfman S, Tendulkar R. Program director and chief resident perspectives on the educational environment of US radiation oncology programs. *Pract Radiat Oncol*. 2017 Jan – Feb 7(1):e65-e70.
16. Berriochoa C, Bohnak C, Chahine N, Shah C. Should Radiation Therapy After Surgery for Ductal Carcinoma in Situ be Standard Practice?- Adjuvant radiation therapy remains the standard of care at this time. *Oncology* 2017 31:637-41.
17. Chabot P, Hsia TC, Ryu JS, Gorbunova V, Belda-Iniesta C, Ball D, Kio E, Mehta M, Papp K, Qin Q, Qian J, Holen KD, Giranda V, Suh JH. Veliparib in combination with whole-brain radiation therapy for patients with brain metastases from non-small cell lung cancer: results of a randomized, global, placebo-controlled study. *J Neurooncol* 131(1): 105-115, 2017.
18. Berriochoa CA, Weller MA, Berry D, Reddy CA, Koyfman SA, Tendulkar RD. Program Director and Chief Resident Perspectives on the Educational Environment of U.S. Radiation Oncology Programs. *Pract Radiat Oncol* 7:e65-e70, 2017
19. Chao S. American Society for Radiation Oncology 2016 Annual Meeting: Central Nervous System Abstracts. *Am Soc Clin Oncol Educ Book* 37:171-174, 2017.
20. Ciezki JP, Weller M, Reddy CA, Kittel J, Singh H, Tendulkar R, Stephans KL, Ulchaker J, Angermeier K, Stephenson A, Campbell S, Haber GP, Klein EA. A Comparison between Low-Dose-Rate Brachytherapy With or Without Androgen Deprivation, External Beam Radiotherapy With or Without Androgen Deprivation, and Radical Prostatectomy With or Without Adjuvant or Salvage Radiotherapy for high-Risk Prostate Cancer. *Int J Radiat Onc Biol Phys* 97(5): 962-975, 2017.
21. Ciezki JP, Reddy CA. In Reply to Morris and Tyldesley. *Int J Radiat Oncol Biol Phys*. 2017 Sep 1;99(1):242-243.
22. Chowdhury, I., Parsai, S., Gandhidasan S., Kotecha, R., Suh, J. Optimization of stereotactic radiosurgery for the treatment of brain metastases. *Applied Radiation Oncology* 2017;6(1):11-17.
23. De M, Oleskie AN, Ayyash M, Dutta S, Mancour L, Abazeed ME, Brace EJ, Skiniotis G, Fuller RS. The Vps13p-Cdc31p complex is directly required for TGN to late endosome transport and TGN homotypic fusion. *J Cell Biol*. 2017; 216(2):425-439.
24. Dhawan A, Nichol D, Kinose F, Abazeed ME, Marusyk A, Haura EB, Scott JG. Collateral sensitivity networks reveal evolutionary instability and novel treatment strategies in ALK mutated non-small cell lung cancer. *Sci Rep*. 2017; 27;7(1):1232.
25. Edelman MJ, Hu C, Le QT, Donington JS, D'Souza WD, Dicker AP, Loo BW, Gore EM, Videtic GMM, Evans NR, Leach JW, Diehn M, Feigenberg SJ, Chen Y, Paulus R, Bradley JD. Randomized Phase II Study of Preoperative Chemoradiotherapy +/- Panitumumab Followed by Consolidation Chemotherapy in Potentially Operable Locally Advanced (Stage IIIa, N2+) Non-small Cell Lung Cancer: NRG Oncology RTOG 0839. *J Thorac Oncol* 12(9):1413-1420, 2017.
26. Fogh SE, Deshmukh S, Berk LB, Dueck AC, Roof K, Yacoub S, Gergel T, Stephans K, Rimner A, DeNittis A, Pablo J, Rineer J, Williams TM, Bruner D. A Randomized Phase 2 Trial of Prophylactic Manuka Honey for the Reduction of Chemoradiation Therapy-Induced Esophagitis During the Treatment of Lung Cancer: Results of NRG Oncology RTOG 1012. *International Journal of Radiation Oncology, Biology & Physics*, 2017 Mar 15;97(4):786-796.
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## **Radiation Oncology Trainees**

### **Total of Trainees and number from each of the following:**

- Medical Students (CCLCM, CWRU, and other institutions)
  - CCLCM- 3, CWRU 8, other 19 over past 3 years
- Graduate students (name of institutions)
  - None
- Residents
  - 12 medical residents/year
  - 4-5 medical physics residents/year
- Fellows
  - 1/year
- Number of CCLCM vs. SOM students trained per year
  - 1 CCLCM vs 3 SOM