MEDICAL STUDENT RESEARCH

2018-2019

CONTACT INFORMATION

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OVERVIEW

- Timeline For Research
- Credentialing and HIPAA for Clinical Research
- Finding Research Mentors
- Research & Scholarship Requirements
- Presentation Opportunities



RESEARCH AND SCHOLARSHIP

- Why is there a requirement for the MD Thesis?
- Promote evidence based medicine
- Acquisition of knowledge and research skills.
- Completing a MD thesis also can give you a competitive edge when applying for residency.

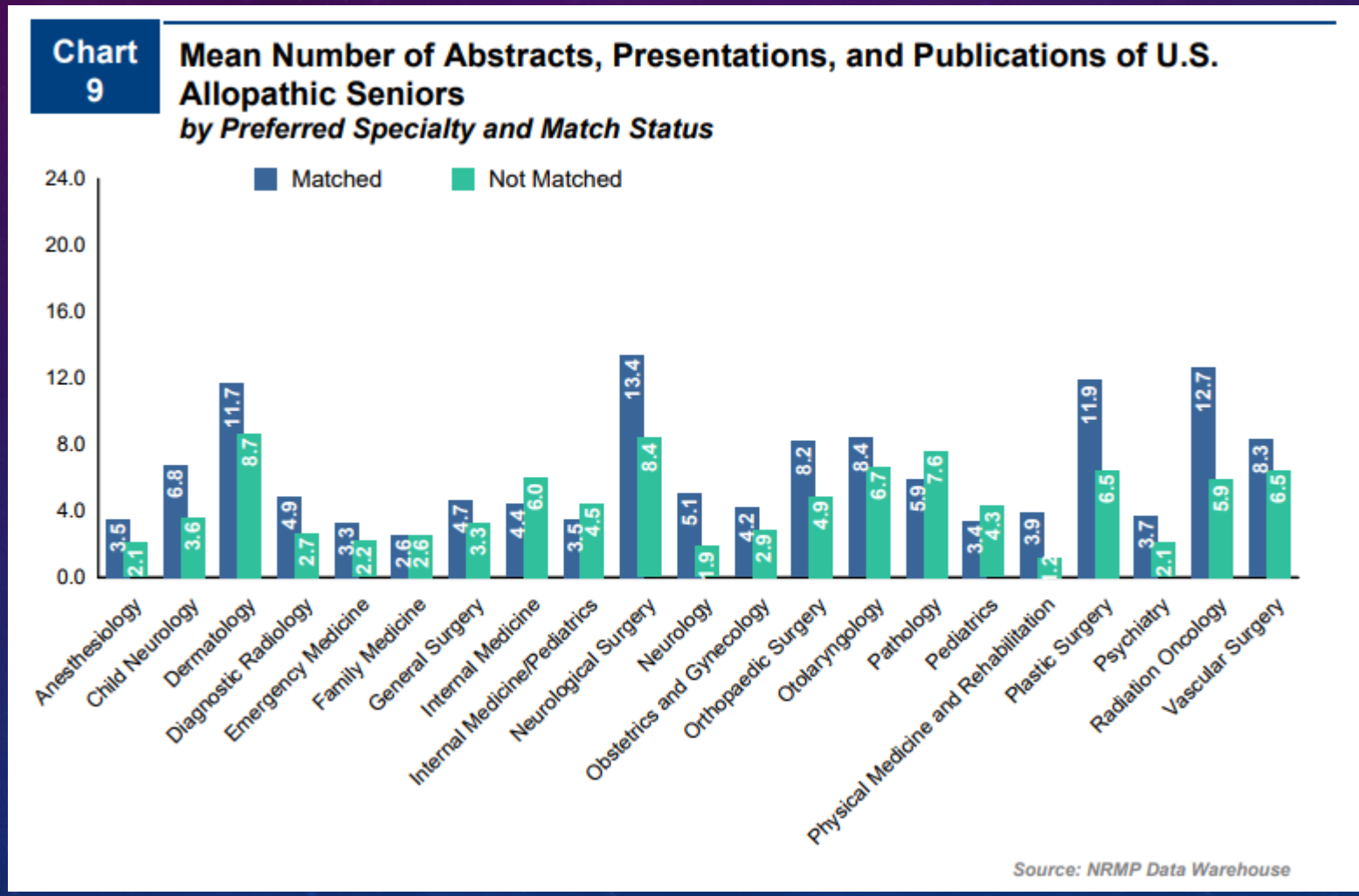
RESEARCH IS CONSIDERED FOR MATCHING IN THE FOLLOWING SPECIALTIES

Anesthesiology- 51%

- Child Neurology-63%
- Dermatology- 53%
- Emergency Medicine-43%
- Family Medicine-10%
- Internal Medicine-28%
- Neurological Surgery -80%
- Neurology-49%
- OB/GYN-43%
- Orthopedic Surgery-69%
- Ortolaryngology-64%
- Pathology-60%
- Pediatrics-23%
- Plastic Surgery-82%
- Psychiatry-45%
- Radiation Oncology-86%
- Surgery -47%
- Thoracic Surgery-58%
- Vascular Surgery -75%

Source: NRMP Program Director Survey report 2015

ABSTRACTS, PRESENTATIONS, & PUBLICATIONS BY SPECIALTY



WHAT TYPES OF RESEARCH CAN I DO?

- Clinical- Retrospective studies, prospective studies
- Translational
- Basic Science
- Medical Education
- Quality Improvement
- Public Health

TIMELINE FOR RESEARCH

Class of 2019	8 weeks				Total 48 weeks				
M3 year	**March**	**April**	**May**	**June**	**July**				**Jun**
	2017			**2017**	**2017**				**2018**
	USMLE1 Board Study 8 weeks								
40 weeks clerkship			8 weeks Research						
8 wks (Res/AI)					40 weeks clerkship			8 week Research	
16 weeks Research Block									
Total 48 weeks									

	Total 44 weeks								
M4 Year	**July**								**4-May**
	2018								**2019**
8wks AI	8 weeks AI								
20weeks Clinical			22 Weeks Clinical Electives					6 weeks Vacation	
8 weeks nonclin						8 weeks (Research)			
Total 44 weeks						Non Clinical Elective			

***Not drawn to scale

SUMMARY OF REQUIREMENTS TO GRADUATE

1) Submit research schedule dates to Medical Student Research Office (MSRO) by 12/31/18
2) Perform 16 weeks research
3) Upload research proposal research block dates form to e-curriculum- 6 weeks before research starts
4) Upload 2 research summaries to e-curriculum. One after each 8 weeks of research
5) Upload MD thesis on e-curriculum
6) Have Mentor complete Mentor Assessment Form

CREDENTIALING

PREPARING FOR THE RESEARCH BLOCK

- Why do I need to start so early?
  - Need to be credentialed
  - Often students were unaware that credentialing needs to be done before any work can begin.
  - Need to be added to IRB or IACUC protocols can take months-depends on project
    - These review boards meet monthly

IMPORTANT!! ELECTRONIC MEDICAL RECORDS AND PUBLIC HEALTH INFORMATION (PHI)

- When doing research with patient data- you must **NEVER download patient files to your own laptop**
  - This is a criminal offence!
  - You cannot analyze Cleveland Clinic data at Case or Case data at home or at Starbuck's.



IMPORTANT POINTS ON CREDENTIALING AND HIPAA (HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT)

- Start Credentialing Process BEFORE your research block
  - Need HIPAA training for research (Clinical HIPAA is different than Research HIPAA)?
  - The New Physicians Compliance Training (completed with Denise Carter O'Gorman) is not for Clinical Research!!!!!
  - Are you added to the IRB (Institutional Review Board, human research) or IACUC (Institutional Animal Care and Use Committee, animal research) protocols of PI?
  - Cannot start research until you are on an approved protocol
  - Do you need to write your own IRB or IACUC (if so please contact the research office for guidance)?
- Each hospital has a different process for credentialing.
- Your initial background check done during admissions process to Case is on file and available for credentialing process. Case will give this information to the appropriate administration at the hospitals.

MSRO WEBSITE

- https://casemed.case.edu/msr/
- Under credentialing Tab



SUMMARY OF HOSPITALS HIPAA PROCESS

1.University Hospital Medical Center

Contact: April Kolodoka (april.kolodka@uhospitals.org)

***Note do not need to do CITI or HIPAA online modules (NEW)**

2. Cleveland Clinic

Contact:Penny Thompson (thompsp@ccf.org) (216-444-0673) for required paperwork

ONLY for Summer Research/4 month research block/year out

SUMMARY OF HOSPITALS HIPAA PROCESS

Contact: Research Course Management and Dual Program Coordinator

All others will register through the department they are doing research in

- Get sponsoring faculty member signature on paperwork
- Immunizations records
- HIPAA, compliance, patient safety on Center for On line Medical Education Training (COMET)
- Badge/parking are good for up to 4 months
- SOM Registrar has 3 forms (Attestation, Confidentiality, Research Forms)

SUMMARY OF HOSPITALS HIPAA PROCESS

3. **MetroHealth Medical Center**

Contact Kay Hatch (khatch@metrohealth.org) (216-778-5369)

Need HIPAA training before going to MetroHealth

EPIC/Network

Parking for research Block only

4**. VA Hospital**

Work with the Research Office (http://www.clevelandvaresearch.org/) not GME

Contacts:

For CITI training and additional VA modules contact : Mary Ekert 216-792-3800 (ext 4650)

For credentialing contact Holly Henry 216-792-3800 (ext 4657)

RESEARCH WITH ANIMALS

- Case Western Reserve University (can take up to 3-4 weeks)
- PI of lab needs to add you to their animal protocol (Institutional Animal Care and Use Committee, IACUC)
  - Fill out Occupational Health Survey Form (http://students.case.edu/health/forms/doc/occ_historyform.pdf)
  - Contact Tami McCourt (txm9@case.edu) for training (depends on study)

General Lab training required

  - Ask the PI if they use radioactivity, hazardous chemicals (etc. formaldehyde)
  - Contact DOES (https://www.case.edu/ehs/Training/)
  - May need Radiation, chemical or biological training depending on the study
- Cleveland Clinic (process takes ~1-2 weeks)
  - Contact Janice Mayer (mayerj@ccf.org) for required paperwork
  - Get sponsoring faculty member signature on paperwork
  - Immunizations records
  - Center for On line Medical Education Training (COMET) will have animal training, radiation safety, chemical safety
  - Badge/parking are good for up to 4 months
  - SOM Registrar has 3 forms (Attestation, Confidentiality, Research Forms)

GOOD MENTORS

- How much time will the mentor have to direct your research and interact with you? Will your mentor guide you in scientific writing?
- Will there be a contact person in lab to answer your questions/train you on techniques/help with statistics?
- Does the mentor have a good track record? Mentored other medical or PhD students. Publishes in scientific journals regularly.
- Are you looking for a mentor and project that will extend beyond 4 months of research?
- Ask what the research mentor expects of you? (For example will the project work if you need to split it into 2- 8 weeks of research time)

HOW TO FIND A RESEARCH MENTOR

Medical Student Research Office Website
(https://casemed.case.edu/msr/)

Under research mentor>Other sites to explore
Lepow Day abstracts
Year 4 peer handoff
Class 2017(data from Class of 2017 research)
Class 2018(data from Class of 2018 research)

RESEARCH & SCHOLARSHIP REQUIREMENTS FOR GRADUATION

SUMMARY OF REQUIREMENTS TO GRADUATE

1) Submit research schedule dates to Medical Student Research Office (MSRO) by 12/31/17
2) Perform 16 weeks research
3) Upload research proposal to e-curriculum- 6 weeks before research starts
4) Upload 2 research summaries to e-curriculum. One after each 8 weeks of research
5) Upload MD thesis on e-curriculum (6-8 page manuscript style)
6) Have Mentor complete Mentor Assessment Form

MSRO IS HERE FOR YOU

- If you change your research block dates for any reason you MUST complete a form (Research Schedule Change Form) and submit to MSRO. You CANNOT use your research block time for additional USMLE study time.
- Send reminders by e-mail about missing required documents and deadlines
  - PLEASE RESPOND TO E-MAILS
- Answer questions
- Help with problems that arise
- Act early!!!!!!! Don't wait till 4th year if you are having difficulties

NEW THIS YEAR- NON-CURRICULUM RESEARCH

- Non-curriculum research is any research outside of the M1 Summer Research or the 16 week research block
- Hospitals want to know you are coming in advance of your start date
- Complete Non-curriculum Research Form and submit to Research and Scholarship Office

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***Not drawn to scale									

WRITING YOUR PROPOSAL

- Get advice from your research mentor when writing your proposal
- Write a short (~1000 words) research proposal that describes your plan for the research block.
- The proposals will be evaluated and must include:
    - A short rationale for the project
    - The hypothesis to be tested /question being asked
    - The methods or approach to be taken to test the hypothesis
    - Is the experiment feasible in 4 month research block?
    - A thorough description of the your specific role in the project
- Research Date and Proposal Form (MSRO website) must be signed by your research mentor stating that the mentor approves of the proposal

RESEARCH DEADLINES

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Credentialing
Research Dates
Proposal 12/31/17

Progress Report #1

Progress Report #2

	Total 44 weeks								
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MD Thesis
Feb 28, 2018

***Not drawn to scale

PROGRESS REPORTS

- Deadlines for the progress reports:
  - You must enter deadlines into the Medical Student Website after you have scheduled your 3rd year and research block by 12/31/2017
- One to two page progress report on your research is due at the end of each 2 month of research.
  - Include the hypothesis/question being asked
  - What have you tested
  - What have you found
  - Future directions
- Mentor must read and sign the progress report

RESC 5001M NON CLINICAL RESEARCH ELECTIVE

Class of 2019	8 weeks		Total 48 weeks						
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	2017			2017	2017				2018
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40 weeks clerkship			8 weeks Research						
8 wks (Res/AI)					40 weeks clerkship			8 week Research	
16 weeks Research Block									
Total 48 weeks									

THIS 8 WEEKS OF NON CLINICAL ELECTIVE IS AFTER YOU HAVE COMPLETED YOUR 16 WEEK RESEARCH BLOCK

	Total 44 weeks								
M4 Year	July								4-May
	2018								2019
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20weeks Clinical			22 Weeks Clinical Electives					6 weeks Vacation	
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Total 44 weeks						Non Clinical Elective			

***Not drawn to scale

RESC 5001M NON CLINICAL RESEARCH ELECTIVE

- Students can schedule up to 8-weeks of additional research AFTER they have completed their 16 week research block
- Complete Application for RESC 5001M Medical Student Research Elective form (http://casemed.case.edu/msr/resources/forms/APPLICATION%20FOR%20RESC%205001M%20MEDICAL%20STUDENT%20RESEARCH%20ELECTIVE%20(1).pdf)
    - Located on Research and Scholarship Webite
        - Research Block tab→ Research Elective

WRITING THE THESIS

A student's research is presented as a formal written thesis during the fourth year and must fulfill the following minimal requirements:

- Title Page
- Summary (in abstract form)
- Critical review & citation of the work of previous investigators (introduction)
- Valid research design (methods)
- Evidence of mastery of appropriate methodology, including description (methods)
- Presentation & analysis of research data (Results)
- Conclusions supported by the data (Discussion)
- Literature presentation & complete bibliography (References)

GENERAL GUIDELINES

- Formatting requirements:
  - 8.5-by-11-inch paper size.
  - Double-spaced text throughout.
  - Single-column format for abstract through discussion sections. Single-column format for title, references, footnotes, figure legends and tables. One-inch left and right margins and 0.25-inch spacing between columns.
  - 11-point Arial font.
  - Number all pages, including those with figures.

MD THESIS EXEMPTIONS

- Completion of dual degree during medical school (upload capstone or scholarly project to e-curriculum)
- Publication of first author paper in peer reviewed journal (still must complete 16 weeks research, proposal, first and second progress report, and mentor evaluation form- all uploaded to e-curriculum)
    - Upload PDF of paper to e-curriculum
    - Must be reviewed by Research and Scholarship Office for exemption

OPPORTUNITIES FOR PRESENTATIONS

- Spring 2019- Research Show Case (usually in April, http://case.edu/research/showcase/)
- March 19, 2019 Medical Education Retreat Poster Session (Medical Education Research)
- September 2019 Lepow Day (poster and oral presentations)

LEPOW MEDICAL STUDENT RESEARCH DAY

- Irwin H. Lepow Medical Student Research Day celebrates research done by medical students at the CWRU School of Medicine.
- This symposium includes posters and oral presentations by students enrolled in M.D., M.D./M.S., M.D/M.A., M.D./M.P.H. or M.D./Ph.D. programs at CWRU.
- A seminar is presented by a guest speaker who is an outstanding physician/scientist, has made sentinel contributions, and is interested in the research education of medical students.
- All students are invited to present research they have done since entering medical school. Medical students supported in their summer research by a funding agency are required to participate.
- **Important dates:**
  - **Abstracts submission deadline TBA**
  - **Lepow Medical Student Research Day September 2019**

SUCCESS STORIES



<u>Awarded Fellowships for the School of Medicine</u>

AΩA-Carolyn Kuchein Student Research Fellowship

2018 Jaret Karnuta

The Rottman Family Fund

2018 Isabela Janmey

Gouri Sadananda

Chelsea Wright

NIH Medical Research Scholars Program

2018 Trent Chiang

SCHOOL OF MEDICINE
CASE WESTERN RESERVE UNIVERSITY

SUCCESS STORIES



Publications (74 total)

- 63 First Authored Publications
- 9 Second Authored Publications
- 2 (3rd and 4th) Authored Publications

Types of Research Published

- 84% Clinical Research
- 8% Medical Education Research
- 8% Basic Science

Dual Degrees (Fulfills R&S Requirements)

- 8 MSTP (PhD)
- 2 Master of Science in Applied Anatomy (MS)
- 3 Dental Medicine (DMD)
- 1 Master if Arts in Bioethics (MA)
- 1 Masters of Public Health (MPH)

SCHOOL OF MEDICINE
CASE WESTERN RESERVE UNIVERSITY