



SCHOOL OF MEDICINE
CASE WESTERN RESERVE
UNIVERSITY



STRATEGIC PLAN

2021–2026

Updated April 2023



Case Western Reserve University School of Medicine



It all starts with a plan—and I’m pleased to present an update of the Case Western Reserve University School of Medicine’s strategic plan encompassing 2021–2026.

While first posted in mid 2021, our update now adds elements focused on diversity, equity and inclusive excellence. This pervades all that we do in recruitment, education research and community engagement and impact. Inclusive of the interests of our faculty across our five campuses at Case Western Reserve University School of Medicine, Cleveland Clinic, Louis Stokes Cleveland VA Medical Center, MetroHealth System and University Hospitals, our plan encourages interdisciplinarity and a focus on health benefits. In January 2023, I noted our initiation of three broad interdisciplinary efforts that bring together our faculty of medicine and other CWRU Schools:

- Population and Community Health
- Artificial Intelligence and Machine Learning in Medicine
- Therapeutic Discovery and Development of CWRU

Each aligns with our research and education programs, mindful of our healthcare environment and attentive to impact on our communities and our emphasis on diversity.

Our strategic plan links together our academic community priorities in advancing our trainees, staff and faculty through a culture that emphasizes our diversity and cultivates inclusive excellence towards our mission to improve global health by linking research to populations in a superb educational environment.

This outline of our goals and aspirations is instructive to a far deeper conversation through planning and evaluation for each element of our research, education and academic community priorities. These guide our programs, investments and scholarly discourse.

Welcome to the School of Medicine’s roadmap!

Stan Gerson, MD
Dean, Case Western Reserve University School of Medicine



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Planning Process

Key to building a successful plan was ensuring faculty and staff felt engagement with and ownership of the plan. Once the school's leadership team built the draft, we shared it with the basic science chairs, presented it to the clinical chairs in each department and held town halls with our hospital affiliate partners, as well as the school's faculty and staff.

We reviewed the plan with each group, asking them to evaluate the contents and share their comments with the dean's leadership team. After gathering and analyzing the data received from the town halls, we developed objectives and measurable results for each of these areas and finalized the strategic plan.

Executive Summary

In July 2020, Case Western Reserve University (CWRU) School of Medicine embarked on a journey to develop a five-year strategic plan encompassing 2021 through 2026. We categorized six fundamental elements/areas that affect the school's overall performance and outcomes with leaders from each area:

- Research
- Medical Education
- Graduate Education
- Academic Community
- Diversity and Inclusive Excellence
- Regional and National Community
- Philanthropy



About the School of Medicine

Founded in 1843, Case Western Reserve University School of Medicine has been at the forefront of medical education and world-class biomedical research, combining its faculty across Cleveland's preeminent healthcare network to educate students, develop breakthrough discoveries and treatments for diseases, and work toward eliminating health disparities around the world. **Ranked as one of the top-25 medical schools in the country, and both the No. 1 medical school and largest biomedical research institution in Ohio**, the school boasts over two dozen program and degree options and consistently ranks in the top tier of medical schools for National Institutes of Health (NIH) research funding.

Focused on interdisciplinarity, the School of Medicine nurtures and promotes collaborative education and research efforts through its faculty at five campuses: Case Western Reserve University School of Medicine, Cleveland Clinic, Louis Stokes Cleveland VA Medical Center, MetroHealth System and University Hospitals. Our 477,000-square-foot Health Education Campus with Cleveland Clinic opened in 2019, bringing together medicine, nursing, dental, physician assistant and social work students from across the university under one roof to promote interprofessional education (IPE) and synergistic practice.

School and Faculty Innovations

- **2nd woman in the U.S. to earn a Doctor of Medicine (MD) degree**, Emily Blackwell, graduated from Western Reserve in 1852.
- Initiated the most **advanced medical curriculum in the country** in 1952, pioneering integrated education, a focus on organ systems and team teaching in the preclinical curriculum—an approach that transformed into the Western Reserve2 curriculum, based on small group, student-based learning that's now in use.
- At least **11 Nobel Prize holders** with ties to the School of Medicine.
- **1st MD/PhD dual-degree program in the country**, upon which the NIH and others modeled their programs, with one of the longest-standing MD/PhD NIH-supported programs in the country.
- **1st successful defibrillation of the human heart.**
- **1st stool DNA tests for early detection of colon cancer** and another for esophageal cancer.
- Developed **Magnetic Resonance Fingerprinting.**



Learn more about the School of Medicine's notable people, scientific advancements and institutional events at: case.edu/medicine/about/history.



Strategic Vision

Case Western Reserve University School of Medicine is the intellectual glue for health education and research faculty across Cleveland's academic medical centers—Cleveland Clinic, Louis Stokes Cleveland VA Medical Center, MetroHealth System and University Hospitals—coordinating a network of transdisciplinary effort that touches myriad diseases and empowers diversity and inclusive excellence.

Our Mission

To improve global health by linking research to populations in a superb educational environment.

Approach

We utilize an extraordinary consortium of medical school faculty across all Cleveland medical institutions to create integrated teams of diverse experts to educate our trainees, link disciplines to discover the mysteries and treatment of serious diseases, and understand and eliminate health inequities in Cleveland and across the world.

Alignment with CWRU'S Think Big Strategic Plan

The School of Medicine embraces inclusive excellence, encompassing humanity and technology through interdisciplinarity in discovery, scholarship, education and career enhancement, engaging the entire university in the process.

THINK BIG PATHWAYS

- Ignite Interdisciplinarity
- Integrate Humanity and Technology
- Achieve Social Impact
- Shape the Agora

Strategic Principles

We seek a high degree of impact in all endeavors of research, training, and cross-institutional, transdisciplinary efforts by moving our discoveries to implementation, policy changes and societal benefit.

Our departments maintain excellence in their specialty area while promoting cross-discipline education, discovery and impact.

Our efforts will be focused through critical choices and selective investments.

Our policies and actions will increase diversity and equity in research, education, and implementation, and we will excel in recruitment, career development and retention, while remaining attentive to the social, cultural, and financial needs of our community of learners.

We recognize that health benefits of biomedical discoveries are tied to their impact on the social determinants of health and to our ability to engage our diverse community in their health needs.





Programmatic Research and Education Priorities



Research

- Cancer
- Immunity, Immunotherapy, Infectious Diseases, Emerging Infection and Global Health
- Therapeutic Discovery and Development—Small Molecules, Gene Therapies, Vaccines, Cell Therapies
- Neurological and Psychiatric Disorders
- Genomics, Human Genetics
- Physiologic Basis of Disease—Molecular Structure, Metabolic
- Public and Community Health—Social Determinants of Health, Health Policy and Implementation
- Artificial Intelligence and Machine Learning in Medicine

Education

- Cultivate a diverse and inclusive environment for our students, faculty and staff.
- Engage our community in partnerships that train and retain highly talented individuals in Northeast Ohio.
- Foster innovation in curricular design for educational programs and joint degrees by encouraging experiential learning and competency-based education.
- Establish a continuum of training—from high school to post-doctoral education—that emphasizes mentoring and broad career advancement.
- Increase regional and national recognition of medical and graduate education through faculty involvement in national groups and scholarship.
- Provide a supportive environment to train leaders in education.

New Education Programmatic Priorities

- Master of Science in Regulatory Science and Entrepreneurship
- Master of Science in Biotechnology
- Master of Science in Aerospace Physiology



Key Results / Metrics

Research



Objectives

Measurable Results

- | | |
|--|---|
| <p>1. Increase national reputation as a research-intensive school of medicine while supporting top faculty to promote innovation</p> | <ul style="list-style-type: none"> ▪ Increase publications in high-impact journals (IF>10) from 13% to 17% ▪ Increase research expenditures per faculty member by 15% over 3 years ▪ Increase large multi-investigator and transdisciplinary grants by 20% (P, U other) ▪ Increase faculty participation on national study sections, in leading medical societies, and national guideline committees and in the receipt of national and societal awards ▪ Increase number and involvement of faculty members on health, community and patient organization boards |
| <p>2. Increase net basic science faculty member count by 10% over five years, with a goal of 15% hires from groups who are Underrepresented in Medicine (URiM)</p> | <ul style="list-style-type: none"> ▪ Current count: 277 FT, with turnover approximately 4-5% ▪ 10% increase in each category: tenure track and non-tenure track ▪ Target: 20 per year; 16 tenure-track and 4 non-tenure-track; 3-4 URiM per year |
| <p>3. Increase discovery-based patent applications, licenses, startups and commercialization income</p> | <ul style="list-style-type: none"> ▪ Target 10% increase per year ▪ Return on Investment (ROI) as licenses, venture funding |
| <p>4. Develop and build interdisciplinary and programmatically focused research space promoting cross-department and institution coordination, between basic and clinical/translational researchers</p> | <ul style="list-style-type: none"> ▪ Establish program-clustered research space for interdisciplinary teams ▪ Add 50,000 square feet in additional research space over five years to accommodate cluster programs and new faculty |
| <p>5. Increase investments in existing faculty through bridge grants, program expansion and pilot funding initiatives</p> | <ul style="list-style-type: none"> ▪ Focus investments on new initiatives and grant opportunities, link to department priorities and strategic plan, with ROI assessed by grants, publications and IP |
| <p>6. Invest in enabling and emerging technologies that support the school's research priorities with cost-effective shared resources</p> | <ul style="list-style-type: none"> ▪ Match investments to grants and impact, increase S10 grant applications, and increase philanthropy for technology acquisition |



Key Results / Metrics

Medical Education

Objectives

Measurable Results

<p>1. Cultivate and foster a diverse and inclusive environment</p>	<ul style="list-style-type: none"> ▪ Increase pipeline training program for MD admits to 10 students per year ▪ Sustain URiM enrollment to above 20% in MD program ▪ Mitigate bias in admissions, curriculum, clerkships with real time assessments ▪ Train residents and faculty in micro-aggressions
<p>2. Curricular innovation in competency-based medical education</p>	<ul style="list-style-type: none"> ▪ Establish and map core competencies in curriculum ▪ Customize curriculum to student career exploration ▪ Enhance ways to report high performance of students in clinical space ▪ Pivot to early scientific inquiry in MD curriculum to promote scholarship in graduates
<p>3. Provide exceptional well-mentored research experiences for students</p>	<ul style="list-style-type: none"> ▪ Provide mentoring skill training to at least 50% of MD thesis mentors ▪ Build database of research opportunities (accomplished)
<p>4. Expand our simulation programs and educational technologies</p>	<ul style="list-style-type: none"> ▪ Include interprofessional education training in Simulation Center (accomplished) ▪ Add Master of Science in Anesthesia and Physician Assistant programs to the Simulation Center (accomplished) ▪ Augment education with AR/VR/MR technologies
<p>5. Manage the cost of medical education</p>	<ul style="list-style-type: none"> ▪ Reduce relative tuition in AAMC private medical school rankings ▪ Create revenue stream for medical education (Continuing Medical Education, Simulation Center, HoloLens) ▪ Increase donor scholarship support by greater than 10% a year, target \$10M in annual support
<p>6. Engage with the local community for partnerships</p>	<ul style="list-style-type: none"> ▪ Link Pathways, interprofessional education, and community outreach to MD, PA, MSA students ▪ Create opportunities for students in Midtown Population Health initiative ▪ Expand geriatric education program across Cleveland ▪ Increase capacity for students in Student Run Health Clinics
<p>7. Elevate national recognition of education excellence</p>	<ul style="list-style-type: none"> ▪ Increase faculty education-focused publications to 10 per year ▪ Create brand awareness for Continuing Medical Education and innovative education (Simulation Center, HoloLens) ▪ Recognition for education in recognizing and avoiding racism in medicine ▪ Train and support medical educators across the five campuses



Key Results / Metrics

Graduate Education

Objectives

Measurable Results

<p>1. Improve student experience (post-baccalaureate, master's and doctoral) in career development</p>	<ul style="list-style-type: none"> ▪ Implement mentor training for thesis advisors in career development, mental health support, diversity and inclusion and microaggressions ▪ Promote and expand participation of trainers on training grant and fellowship study sections and national committees ▪ Metric: Student satisfaction with graduate education to at least 80%
<p>2. Support non-academic biomedical science careers for PhD and Master's students</p>	<ul style="list-style-type: none"> ▪ Embed career exploration opportunities into programs ▪ Implement PhD alumni seminars on their career paths ▪ Use "Alumni Connect" to link students to alumni coaches ▪ Expand translational fellows program and track placement ▪ Metric: Achieve 50% trainee participation in career development activities
<p>3. Career guidance for PhD students and postdoctoral fellows interested in academic career</p>	<ul style="list-style-type: none"> ▪ Develop a career development program focused on Add teaching, mentoring and leadership ▪ Implement structured grant writing courses in the PhD program in year 2 to encourage fellowship submission ▪ Develop support for postdoctoral fellow career development awards that lead toward independence ▪ Metric: Increase of 50% submission
<p>4. Offer URiM postdoctoral fellows path to faculty</p>	<ul style="list-style-type: none"> ▪ Implement Dean's Scholars Program Pathway to Faculty Program (DSP) ▪ Train faculty mentors and establish career mentoring ▪ Admit two to three post-doctoral students each year to DSP ▪ Evaluate continuity toward independence at year four
<p>5. Increase master's programs matriculation and add offerings</p>	<ul style="list-style-type: none"> ▪ Establish regulatory science and entrepreneurship, aerospace and physiology programs ▪ Monitor placement and career progression for graduates
<p>6. Increase graduate student diversity</p>	<ul style="list-style-type: none"> ▪ Recruit from historically Black colleges and universities (HBCUs) and develop a pathway from Cleveland Metropolitan School District, Cleveland State University and CWRU students ▪ Participate in CWRU's North Star program to draw in candidates from HCBUs and other minority-serving institutions ▪ Recruit PhD students from CWRU's North Star initiative and Postbaccalaureate Research Education Program

The Case Western Reserve University School of Medicine culture is based on the norms of integrity, respect, inclusive excellence and kindness. These values are mirrored in the university's North Star strategic vision. Adherence to these normative values helps support a community of diverse scientists and physicians committed to transdisciplinary (or interdisciplinary) research which will reduce health care disparities and lead to healthier communities for all.

Objectives

Measurable Results

<p>1. Expand collaborative efforts across the faculty members of medicine at our five institutions (Case Western Reserve, Cleveland Clinic, Louis Stokes Cleveland VA Medical Center, MetroHealth System, University Hospitals)</p>	<ul style="list-style-type: none"> ▪ Develop Strategic Leadership groups with each site ▪ Pursue Multi-PI grants in priority areas ▪ Leverage institutional competencies: genomics, tissue, EHR data, populations ▪ Balance financial support
<p>2. Increase interdisciplinarity initiatives between faculty members in the SOM and other faculty throughout the University to benefit our communities</p>	<ul style="list-style-type: none"> ▪ Provide opportunities for diverse faculty to engage in public discussions that benefit from interdisciplinary perspectives ▪ Broaden cross-school links: patents, social justice-School of Law; populations-the Jack, Joseph and Morton Mandel School of Applied Social Sciences; technology-Case School of Engineering; discovery-the College of Arts and Sciences
<p>3. Increase diversity, equity and inclusion (DEI) of our trainees, faculty, chairs and leadership</p>	<ul style="list-style-type: none"> ▪ Target >15% from URiM ▪ Promote DEI through school seminars, education and dialogue ▪ Train all in DEI with assistance from the CWRU Office of Inclusion, Diversity and Equal Opportunity
<p>4. Develop ongoing programs for inclusive excellence</p>	<ul style="list-style-type: none"> ▪ Unconscious bias training ▪ Mentor and thesis student committees training in DEI ▪ Review curriculum for bias
<p>5. Provide comprehensive mentoring, career advancement and leadership training for all, from trainees through senior professors</p>	<ul style="list-style-type: none"> ▪ Faculty leadership training: pre-tenure, post-tenure, professor ▪ Mentoring of URiM groups: women, trainees in pipeline program ▪ Grant writing, career mentoring for junior faculty ▪ Provide skills based training to leadership and other faculty in best practices for inclusive excellence
<p>6. Establish a responsive, cultivating learning and work-place environment</p>	<ul style="list-style-type: none"> ▪ Provide outlets for trainees and faculty to seek advice mentoring and problem solving through offices of faculty and students ▪ Advocate a Speak-up culture where trainees and junior faculty feel safe

Key Results / Metrics

Academic Community



Key Results / Metrics

Diversity, Equity and Inclusive Excellence

Objectives

Measurable Results

1. Enhance the overall climate to reflect, promote, and welcome diversity principles—the School of Medicine embraces a climate of inclusive excellence at every level.

- Improve climate through a regularly scheduled climate/culture/engagement survey
- Create/sustain the Inclusive Excellence Advocate program
- Implement and support employee education and engagement activities
- Implement incident portal system to facilitate responsive, transparent and easy reporting of bias-based behavior
- Create opportunities for faculty identity-based groups and student identity-based groups to collaborate

2. Improve and expand content and format of Diversity, Equity and Inclusion training for faculty, staff and students in the context of professionalism.

- Enhance and expand best/next practice professional development and training for search, promotion, tenure and student-facing committees
- Expand and enhance current career development and academic pathway programs

3. Expand efforts to recruit Under Represented in Medicine faculty, staff and students to School of Medicine—retain, develop and promote strategies to diversify faculty, staff, student and trainees.

- Enhance and expand current mentoring and leadership training programs, tools and networks
- Modify tenure and promotion standards to consider and give credit for diversity-related service and scholarship
- Enhance and expand Diversity, Equity and Inclusion-oriented networking events, lectures and training
- Establish a working group for minority faculty tasked with increasing (and securing) philanthropic, institutional, foundation-based and public funding for research
- Coordinate research and education scholarship about Diversity, Equity and Inclusion, and under-resourced communities conducted by diverse faculty and students

4. Increase the diversity of the School of Medicine to reflect the changing health-equity needs of an increasingly diverse population and support all students for success in academic medicine and our new national/cultural milieu.

- Increase the number of minority students entering School of Medicine programs
- Revise School of Medicine curriculum content over time to best reflect the changing demographics and to better integrate cultural humility
- Prepare students for success in and needs of a diversifying patient population and caregiver population
- Support increased participation in student identity-based groups

Objectives

1. Increase faculty engagement in the SOM across all five campuses (Metrics: # of events and participants, #applications, #faculty running/ appointed/serving across all five campuses)

2. Support the professional and personal development of all faculty across their career span with specific attention to individual differences (Metrics: customer reviews/surveys, course evaluations; long-term metrics: retention of diverse faculty, climate survey data, #DEI-related complaints logged into portal, increased diversity in leadership)

3. Establish a culture that reflects the highest ideals of professionalism (Metrics: #clicks on professionalism page/inquiries directed to professionalism resources, % completion of professionalism reflections in annual reviews, # and outcome of requests to the PCC, customer surveys, recruitment and retention of faculty)

Measurable Results

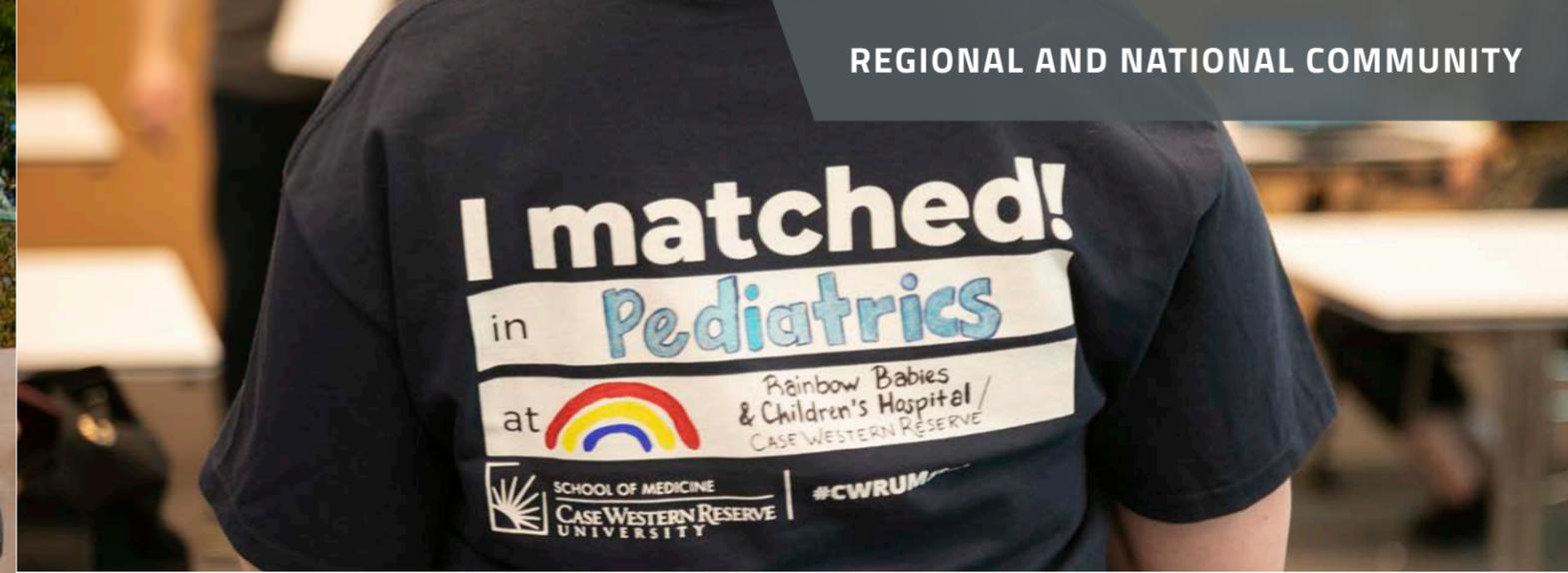
- Regularly meet with and recognize faculty contributions across all five campuses
 - Increase number of faculty appointment and promotion applications across all five sites
 - Increase faculty involvement in faculty governance and professional service across all five sites
 - Increase faculty participation in faculty development initiatives across all five sites
- Provide efficient and customer-centered support for faculty to ensure compliance with SOM and University guidelines
 - Incorporate best practices for diversity, equity, and inclusive excellence in all faculty development curricula
 - Continue to refine existing and develop new curricula to address the professional development needs of faculty in different demographic groups and at different stages of their careers
 - Facilitate the development of safe, cohort communities for faculty who have been traditionally under-represented in academic medicine with input from the Committee on Women and Minorities and the Dean’s ad hoc Committee on DEI
 - Provide training opportunities to all faculty on best practices for establishing and maintaining a culture of inclusive excellence
- Develop and disseminate a SOM Professional Code of Conduct
 - Explicitly establish expectations and accountability for professionalism
 - Establish resources to promote professionalism in the SOM



Key Results / Metrics

FACULTY





Key Results / Metrics

Regional and National Community

Objectives

Measurable Results

1. Develop Population and Community Health initiative with programs in education, research and policy change with national impact

- Link Population Health and Health Policy initiative (with MetroHealth, VA) to Urban Health Center of Cleveland State University and Cleveland Clinic
- Expand Tech Transfer through JobsOhio to commercialization of Innovation District
- Expand visibility of the nationally recognized Case Comprehensive Cancer Center, National Center for Regenerative Medicine, and Clinical and Translational Science Collaborative

2. Expand school-linked community outreach engagements to Boards of Health, schools, and nonprofit groups focused on improving health of our region

- Increase direct faculty participation in community programs and policy and guideline committees
- Engaged the advice and input of the local community in large research projects
- Develop community health initiatives and implementation programs
- Create community education efforts for public health

3. Develop partnered programs in education, research and policy change for community benefit

- Establish school-wide Community Advisory Board to develop awareness of community health needs and potential interventions





Key Results / Metrics

Philanthropy

Objectives

Measurable Results

1. Align philanthropy to each research strategic priority

- Expand faculty and URiM faculty through endowed professorships; including Dean's Scholars Program
- Support growing research activities into funded centers
- Provide philanthropic support for new research initiatives

2. Raise scholarships for the school's MD and graduate student programs

- Increase scholarship support per year to medical and graduate students through philanthropy
- Increase support for Pathway programs including stipend and student project support

3. Raise unrestricted dollars for the Dean's Catalytic Fund

- Support emerging needs at the direction of the the Dean of the Medical School
- Raise more than \$3 million per year in unrestricted funding





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