



SCHOOL OF MEDICINE
CASE WESTERN RESERVE
UNIVERSITY



STRATEGIC PLAN

2021–2026



Case Western Reserve University School of Medicine



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

A strategic plan should have its base and evolve with the times. In fall 2020, school leaders, basic science chairs and department representatives developed the plan’s outline and first draft. Then, to ensure the successful implementation of the plan, we shared it with faculty and staff in a series of meetings and town halls, engaging them in the process as owners and asking for their feedback.

In October, 2021, Case Western Reserve University President Eric W. Kaler appointed me as dean of the School of Medicine. We have gathered input across the faculty of medicine at our five campuses: Case Western Reserve University School of Medicine, Cleveland Clinic, Louis Stokes Cleveland VA Medical Center, MetroHealth System and University Hospitals. This 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 World Health
- Therapeutic Discovery and Development—Small molecules, Genomic, Vaccines, Cellular
- Neurological and Psychiatric Disorders
- Genomics and Human Genetics
- Physiologic Basis of Disease—Molecular Structure, Metabolic
- Public and Community Health—Social, Ethical, Behavioral and Humanistic
- 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 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
- Master of Science in Biotechnology
- Master of Science in Entrepreneurship
- Master of Science in Aerospace Physiology



Key Results / Metrics

Research

Objectives

Measurable Results

1. Increase national reputation as a research-intensive school of medicine while supporting top faculty to promote innovation

- Increase publications in high-impact journals (IF>10) from 13% to 17%
- Increase research expenditures per faculty member by 15% over 3 years
- Increase multi-investigator and transdisciplinary grants by 20% (P, U other)
- Increase faculty participation on national study sections, leading medical societies, and elected societies such as American Society for Clinical Investigation and the American Association of Physicians, receipt of national and societal awards
- Increase faculty members on health, community and patient organization boards

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)

- Current count: 277 FT, with turnover approximately 6%
- 10% increase in each category: tenure track and non-tenure track
- Target: 23 per year; 4-6 URiM per year

3. Increase discovery-based patent applications, licenses, startups and commercialization income

- Target 15% increase per year
- Return on Investment (ROI) as licenses, venture funding

4. Develop and build programmatically focused research space promoting cross-department and institution coordination

- Establish program-clustered research space for teams
- Add 50,000 square feet in additional research space over five years to accommodate incremental faculty

5. Increase investments in existing faculty through bridge grants and program expansion

- Focus investments on new initiatives and grant opportunities, link to department priorities and strategic plan, ROI linked to grants and publications

6. Invest in enabling and emerging technologies that support the school's research priorities with cost-effective research shared resources

- Match investments to grants and impact, increase S10 grant applications, add philanthropy for technologies



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 to MD to 10 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 ▪ Use technology to improve Post-Graduate Year 1 performance (according to Association of American Medical Colleges metrics)
<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
<p>4. Expand our simulation programs and educational technologies</p>	<ul style="list-style-type: none"> ▪ Add two HoloLens curriculum programs per year ▪ Include interprofessional education training in Simulation Center ▪ Add Master of Science in Anesthesia and Physician Assistant programs to the Simulation Center
<p>5. Manage the cost of medical education</p>	<ul style="list-style-type: none"> ▪ Reduce relative tuition ranking to middle of comparable institutions ▪ Create revenue stream for medical education (Continuing Medical Education, Simulation Center, HoloLens) ▪ Increase donor support of student scholarships to more than \$10 million per year
<p>6. Engage with the local community for partnerships</p>	<ul style="list-style-type: none"> ▪ Link Pathways, interprofessional education, and community outreach to med ed WR2 curriculum ▪ Increase time students spend in Student-Run Health Clinic
<p>7. Elevate national recognition of education excellence</p>	<ul style="list-style-type: none"> ▪ Increase faculty education-focused publications to 10 per year ▪ Brand Continuing Medical Education and innovative education (Simulation Center, HoloLens) ▪ Training in recognizing and avoiding racism in medicine ▪ Train and support medical educators and Academy of Scholars



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 MS graduate students</p>	<ul style="list-style-type: none"> ▪ Implement internship and career exploration opportunities ▪ 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 EnRICH internships
<p>3. Career guidance for PhD students interested in academic career</p>	<ul style="list-style-type: none"> ▪ Add teaching, mentoring and lab group leadership ▪ Encourage grant writing in the PhD program years three-five toward F&K awards (increase of 50%)
<p>4. Offer URiM PhD students path to faculty</p>	<ul style="list-style-type: none"> ▪ Implement Dean's Scholars Program (DSP)—2-3 post docs/year ▪ 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, pharmacology, aerospace physiology and entrepreneurship 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 pipeline 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, Postbaccalaureate Research Education Program, and other university master's programs

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.



Key Results / Metrics

Academic Community

Objectives

Measurable Results

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)

- 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

2. Increase interdisciplinarity of the faculty members of medicine with faculty of other schools within the university

- Broaden cross-school links: patents, social justice and School of Law; the Jack, Joseph and Morton Mandel School of Applied Social Sciences and populations; technology and Case School of Engineering; discovery and the College of Arts and Sciences

3. Increase diversity, equity and inclusion (DEI) of our trainees, faculty, chairs and leadership

- Target 15% recruits 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

4. Develop ongoing programs for inclusive excellence

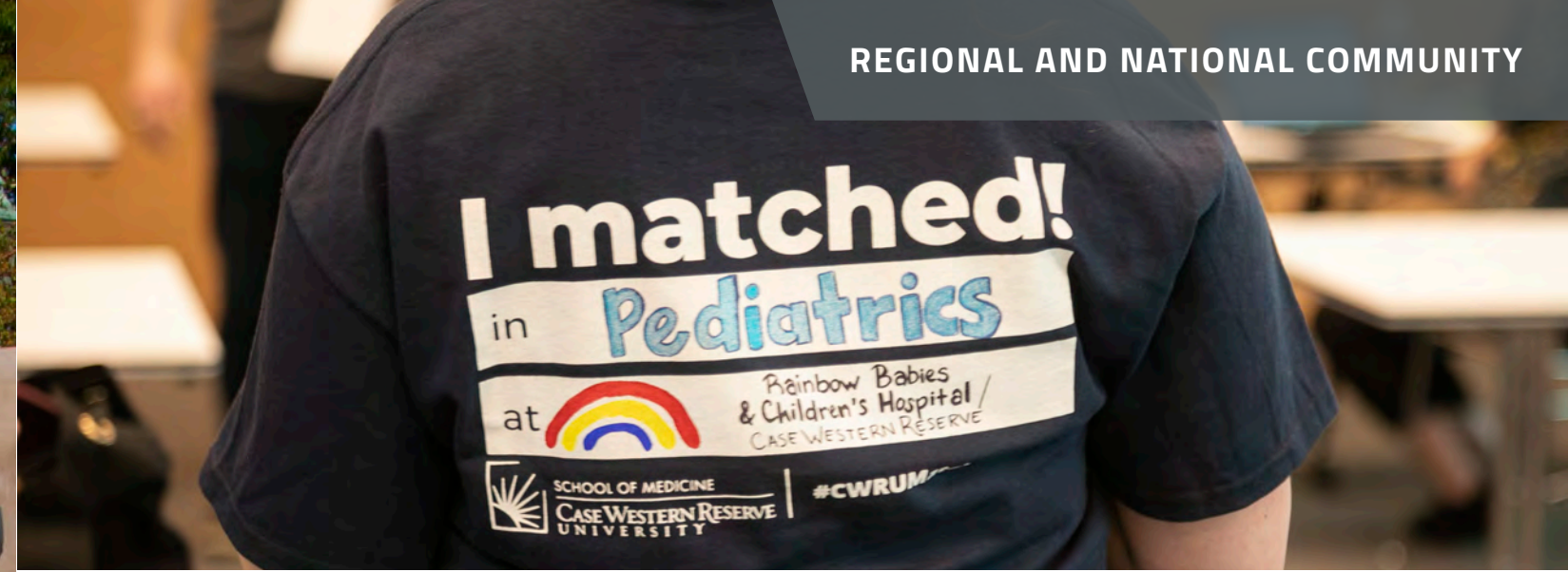
- Unconscious bias training
- Mentor and thesis student committees training in DEI
- Review curriculum for bias

5. Provide comprehensive mentoring, career advancement and leadership training for all, from trainees through senior professors

- Faculty leadership training: pre-tenure, post-tenure, professor
- Mentoring of URiM groups: URiM, women, trainees in pipeline program
- Grant writing, career mentoring for junior faculty

6. Establish a responsive, cultivating learning and work-place environment

- Provide outlets for trainees and faculty to seek advice mentoring and problem solving through offices of faculty and students



Key Results / Metrics

Regional and National Community

Objectives

Measurable Results

1. Develop partnered 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
- 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
- Evolve growing research activities into funded centers
- Provide topical support for priority new initiatives

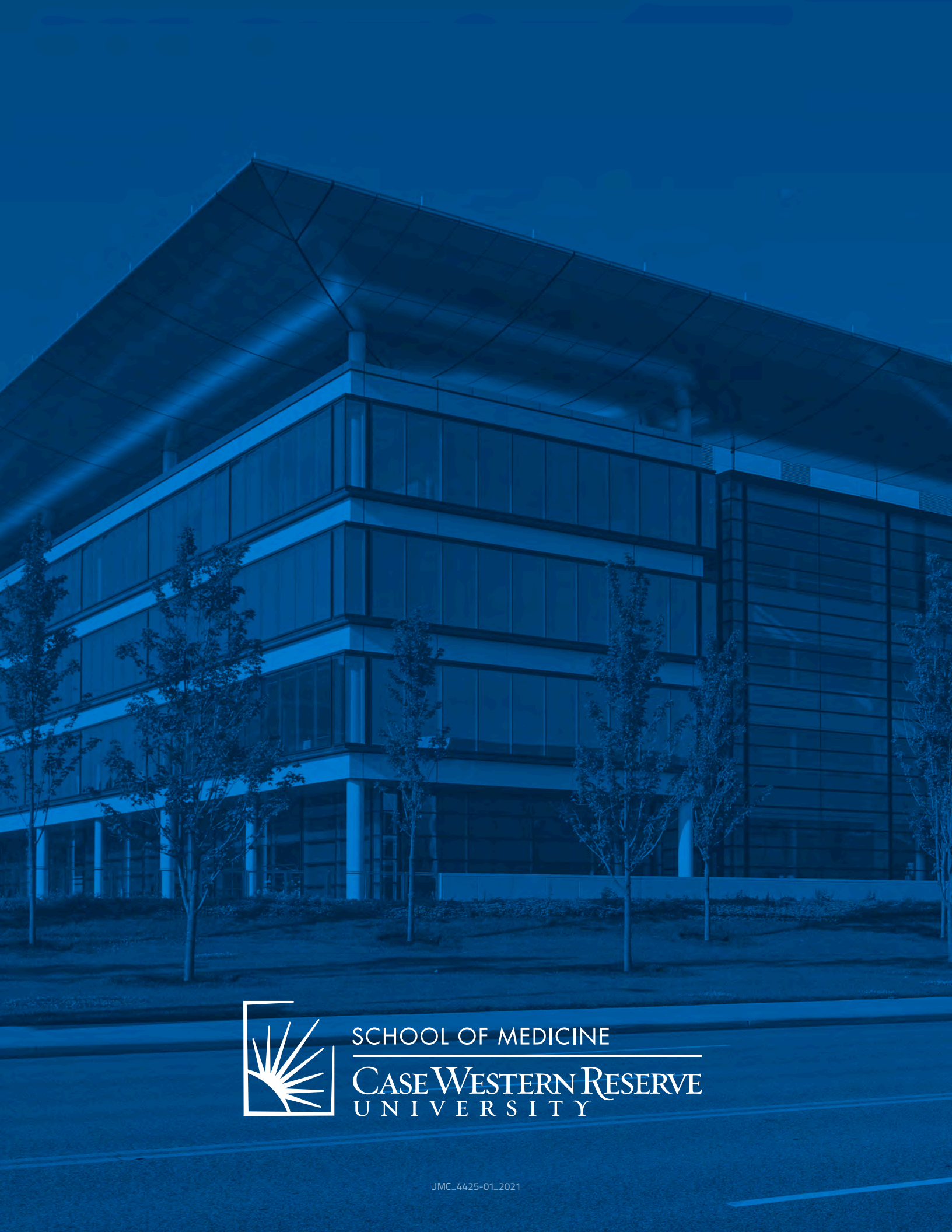
2. Raise scholarships for the school's MD University Program

- Add more than \$8 million per year in scholarship endowments (\$400,000 spendable)
- Grow funds for expansion of Pathway programs and stipends for student projects

3. Scholarship and research support for graduate student programs and for transition to faculty

- Scholarships for graduate education and master's to offset student stipends
- Endow URiM Dean's Scholars Program for URiM path to faculty





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