Center for Oral Biology

Wei Hsu, Ph.D.
Dean's Professor,
Center for Oral Biology and
Department of Biomedical Genetics

Studying bone formation, craniofacial developmental and birth defects

Catherine E. Ovitt, Ph.D.
Associate Professor,
Center for Oral Biology and
Department of Biomedical Genetics

Studying the repair and regeneration of salivary glands

Robert G. Quivey, Ph.D.
Director, Center for Oral Biology
and Margaret and Cy Welcher
Professor in Dental Research

Studying oral infectious disease and the oral microbiome in health and disease

Improving Oral and Overall Health

For 100 years, the University of Rochester has been committed to pursuing oral health research and its intimate connection to people's overall health, as well as training dentists and scientists for academic careers in oral health research.

The Center for Oral Biology takes a highly interdisciplinary approach to research that promises to advance our knowledge of a wide variety of diseases. We are examining how embryos develop from a single cell to a complex organism, how genes control the development of organs, and how abnormal regulation of these genes results in human diseases. For example, our scientists discovered a defect in cellular pathways to impair skeletal stem cells that provides a new explanation for the earliest stages of abnormal skull development in newborns, known as craniosynostosis. This affects one in 2,000 babies, and can restrict normal brain growth and result in facial deformity, cognitive disability, and problems in vision, hearing, and breathing.

When salivary cells are damaged due to radiation treatment or chronic autoimmune diseases like Sjögren's Syndrome, people develop xerostomia or dry mouth. This causes difficulty eating, swallowing, talking, and sleeping, and puts sufferers at constant risk of developing bacterial and viral oral diseases. In the laboratory, our scientists have shown that small molecule transplants can protect mouse salivary glands from the effects of radiation therapy. Further development of this technology could help to prevent xerostomia in the more than 50,000 patients diagnosed with head and neck cancer each year. We are also working to establish therapeutic strategies—including the use of stem cells—to repair and regenerate salivary glands damaged by radiation treatments in cancer survivors.

Our scientists are studying how microorganisms in the mouth cause not only cavities and oral infectious diseases, but may also contribute to systemic diseases including heart disease, stroke, preterm birth, and diabetes. In addition, we are investigating how the oral microbiome—the healthy microbes that inhabit our mouths—plays a role in developing disease or maintaining health.

With your support, our research can improve people's overall health around the world, and help us recruit and train the best and brightest scientists in oral health.

Eastman Institute for Oral Health
Our First 100 Years
Leading. Caring. Discovering.

Your gift will help us *improve oral and overall health*

100 years ago, George Eastman recognized the vital importance of good oral health for your overall health. Today, your philanthropy can help us proudly carry on George Eastman's legacy, continuing our significant impact around the world in research and clinical training, and by helping the underserved and people with special needs. Join us today to have an impact in Rochester, across the nation, and around the world.

NAMING THE CENTER FOR ORAL BIOLOGY —$5,000,000

The 22,000 square foot Center is known for the quality of its collaborative research, and attracts extensive support from federal and industrial sources. The Center is also equipped with state-of-the-art instruments, making it an ideal place for students and postdoctoral fellows to gain the most modern training in oral science research. A named center will support the salary, benefits, and programming for our research team, leveraging the unique capabilities and talents of our scientists.

ENDOWED PROFESSORSHIPS—$1,500,000 *to* $2,000,000

Endowed professorships are permanent funds that honor acclaimed leaders who perform groundbreaking research, mentor junior faculty, and attract and retain talented fellows, residents, and students. They are among the most coveted and defining rewards that a faculty member can receive, recognizing and fostering excellence. Professorships also serve as a powerful recruitment tool, drawing new faculty of established distinction from around the world.

ENDOWED VISITING PROFESSORS—$1,000,000

Visiting professors conduct oral biology research, teach or lecture for a defined period of time, providing a continual source of new ideas that is vital to the intellectual life of the Medical Center.

ENDOWED FELLOWSHIPS—$750,000

Fellowships provide significant work experiences for scientists to conduct in-depth research that advances oral health. These fellowships provide permanent support that allows fellows to complete their training without having to devote time to working outside their field, or resorting to additional loans for support.

TEAM SCIENCE FUNDS—$500,000 *to* $1,000,000 (MULTI-YEAR)

Most scientific discoveries are the result of years of intensive work by teams of researchers that include graduate students, postdoctoral fellows, and laboratory technicians. You can support the contributions of our entrepreneurial, innovative research teams who have a legacy of working collaboratively across disciplines and with scientists from other institutions.

ENDOWED PROFESSIONAL TRAINING AND EDUCATION FUNDS—$250,000 *to* $500,000

Your support of professional training and continuing education opportunities for our scientists will help ensure that we encourage new ideas and lead the nation in amazing discoveries to improve people's health and quality of life.

PILOT PROJECTS/SEED FUNDS—$50,000 *to* $250,000 (ANNUALLY)

Gifts for seed funding are "risk capital" for a promising researcher who has the potential to make groundbreaking discoveries that will impact oral health here and around the world. They allow scientists to shift the direction of their research to follow promising leads, new ideas, or use new technology to propel scientific discoveries in new ways. Funds invested today in innovative research help scientists and clinicians provide state-of-the-art oral health care.

GEORGE EASTMAN CIRCLE—$10,000 *to* $50,000

Pledges to the George Eastman Circle of $10,000 to $50,000, payable for five years, provide crucial, flexible support for the Center for Oral Biology. Funds can help the Center take advantage of new opportunities in research, support postdoctoral fellows for one year, or allow our Master's and Ph.D. students, and postdoctoral fellows the opportunity to travel to national scientific seminars and conferences to present their work and learn from mentors in the field of oral health.

For more information about how your gift can make an impact, please contact Bryan Winters at:
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