New Drugs for Many Diseases

If you have a disease affecting your heart, muscles, bones, or causing inflammation or pain, the University of Rochester Medical Center is developing the drugs to help you. The way we study protein molecules in the body's cells, how they serve as targets for drug therapies, and how disease develops and spreads—by examining cell receptors and ion channels—makes us a national leader in the development of innovative therapies and new drugs with high potency and minimal side effects. Within the next five years, our goal is to bring at least one new drug for cardiovascular, muscle, and/or inflammatory disease to a first-in-human clinical trial.

Heart failure is the leading cause of death in the developed world, yet the pharmaceutical-based approaches for treating this disease have not changed in 30 years. Our scientists are studying newly-identified receptor pathways—what drives the progression of heart disease—that could dramatically alter the way heart failure is treated. Similar innovative approaches will provide therapies to combat pain, immune disease, and many other disorders.

We are also studying defects in ion channels—tiny transportation tunnels into cells—that underlie many debilitating muscle disorders, and unraveling the molecular mechanisms that control their function. This information, together with powerful, cutting-edge drug discovery approaches, is helping us develop new, effective therapeutic interventions to improve muscle performance for people with disorders like myotonia, periodic paralysis, and fatigue.

Studies are already underway to better understand why saliva and tear formation do not function appropriately early in patients with Sjögren's syndrome, a common, debilitating inflammatory disease that causes severe dry mouth and eyes. Our goal is to design innovative approaches to restore fluid flow.

With your help, we can lead the nation in improving patients' lives by testing innovative therapies and drug discoveries for a variety of diseases.

New Treatments & Cures

Alan V. Smrcka, Ph.D.
Examining the basic mechanisms of cellular signaling and developing therapeutic strategies for heart disease, cancer, and inflammatory diseases.

Robert T. Dirksen, Ph.D.
Studying defects in ion channels which underlie a multitude of debilitating diseases such as heart failure, myotonia, and periodic paralysis.

David I. Yule, Ph.D.
Studying how calcium signals are important for the body's fluid and digestive enzyme secretion and to develop novel approaches to treat Sjögrens syndrome and pancreatitis.

The MELIORA CHALLENGE

THE CAMPAIGN *for the* UNIVERSITY OF ROCHESTER

Your Gift Will Help Us Develop New Drugs and Therapies for a Variety of Diseases

The pharmaceutical industry is increasingly focused on modifying and repositioning existing drug therapies. It is up to private philanthropists, like you, and leading drug and therapy programs at academic research universities, like ours, to partner together in the discovery and development of new and effective drugs. Join us today to have an impact on a wide variety of diseases for patients in Rochester, across the nation, and around the world.

CENTER FOR DRUG DISCOVERY—$3,000,000 *to* $7,000,000 *(minimum)*

A named center for drug discovery will take advantage of our expertise in cell receptors and ion channels, which serve as targets for nearly 50% of all drugs currently on the market, and our approach to developing new drugs and therapies for cardiovascular, neurodegenerative, musculoskeletal, and inflammatory diseases. The 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 OR MORE

Professorships are among the most coveted and defining rewards that a faculty member can receive, recognizing and fostering excellence. They also serve as a powerful recruitment tool, drawing new faculty and researchers of established distinction in medicinal chemistry from around the world.

ENDOWED RESEARCH FUNDS—$750,000 *to* $1,000,000 OR MORE

Supports mid-career scientists who have not yet attained the rank of full professor, providing a vital connection between the work of our most eminent scientists and tomorrow's future scientific leaders.

TEAM SCIENCE FUNDS—$500,000 *to* $1,000,000 *(multi-year)*

Most scientific discoveries are not made by one lone scientist. Generally, they are the result of years of intensive work by teams of researchers that include graduate students, post-doctoral 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. You can also support the technology needed to screen more drugs faster to help us develop more effective drugs and therapies.

RISING STAR FUNDS—$250,000 *to* $500,000 *(multi-year)*

Support at this level can help the best and brightest, early-career researchers fund promising science that may be too cutting-edge to attract external funding from traditional avenues of support like the National Institutes of Health (NIH); work that is vital to scientific discoveries and advances.

PILOT PROJECTS/SEED FUNDS— $50,000 *to* $100,000 *(annually)*

Gifts for seed funding are "risk capital." They allow scientists to shift the direction of their research to follow promising leads or new ideas, propelling scientific discoveries in new ways. You can help give researchers the time they need to push the boundaries of science and allow innovative ideas to reach their full potential.

POSTDOCTORAL AND STUDENT FELLOWSHIPS— $25,000 *to* $75,000 *(a one-year fellowship)*

Funds support an aspiring scientist while providing research training and mentorship in the laboratory setting.

UR MEDICINE

MEDICINE *of* THE HIGHEST ORDER

For more information about how your gift can make an impact, please contact Dianne Moll at:
(585)273-5506 • dianne.moll@rochester.edu