In Support of Hope

Cutting-edge treatments changed Ann A. Edwards’ life, and her gifts will help ensure scientific advancement continues. Find out how on page 3.
This has been a memorable year for the Kellogg Eye Center, and I thank you for being a part of it. The growth in our facilities has opened up exciting possibilities for growth in our research, educational, and patient care programs, and you are helping us make the most of those opportunities.

We have made several exciting faculty recruitments in recent months that will lead to advancements in our clinical programs and in our laboratories. We are bringing new expertise in Graves’ eye disease, diabetic retinopathy, and ophthalmic cancers to the Eye Center. Some of our new faculty members have settled into their practices and their laboratory space, and others are preparing to join us. We are proud to have these individuals on our faculty, and their enthusiasm for our future is inspiring.

Part of what has drawn them to Michigan from both the East Coast and the West Coast is the wonderful support we receive from the families we serve. Your gifts, whether they are large or small, made annually or through pledges and bequests, enable us to envision progress and to achieve it.

We appreciate your support.

Sincerely,

Paul R. Lichter, M.D.
F. Bruce Fralick Professor and Chair
University of Michigan
Department of Ophthalmology and Visual Sciences
Director, W.K. Kellogg Eye Center

Thank You for Your Partnership

Funding Research and Building for the Future

Friends of the Kellogg Eye Center generously supported our expansion, our endowment, and our research program in fiscal 2010. We received $5.8 million in gifts, including a large bequest from the late benefactor Edwin Meader, which helped fund our new laboratories. We also received two endowed professorship gifts that will support early career clinician-researchers as they become leaders in the field: the Edward T. and Ellen K. Dryer Inaugural Endowed Career Development Professorship in Ophthalmology and Visual Sciences and the Helmut F. Stern Career Development Professorship in Ophthalmology and Visual Sciences.

Donors made an important impact on our research budget as well (see chart). Philanthropic expendable research support, which enables us to fund innovative ideas and provide crucial resources to ongoing projects, totaled $1.35 million, $222,017 of which was given through the Annual Fund and the Alumni Annual Fund.
As Ann A. Edwards gardens, visits with neighbors in the Glacier Hills Retirement Community, and cares for her husband and her home, she appreciates all of the good that has come her way. Living in Ann Arbor since childhood, she and her husband, Joseph, raised four daughters and two sons in the University of Michigan’s hometown. Mr. Edwards was president for many years at Edwards Brothers, an Ann Arbor-based national book and journal manufacturer.

“We have always loved it here,” she says. “People come here from all over the world with such interesting backgrounds. I am especially grateful for access to the best health care. It’s right here—right down the street.”

Mrs. Edwards has relied on cutting-edge medical treatments at the University of Michigan to maintain her health and her independence. She has macular degeneration, a blinding eye disease, and she has battled esophageal cancer. “My experiences have opened a lot of new, interesting worlds to me, especially with the eye and the digestive system,” she says. “I have learned a lot about what is being done in both of those fields.”

It was only after losing the central vision in one of her eyes that Mrs. Edwards was referred to the University of Michigan’s Kellogg Eye Center. “I was losing the sight in my good eye, and my doctor recommended a retina specialist. She made the appointment with Dr. Stephen Saxe. That was three years ago.”

Dr. Saxe prescribed a new medication called Lucentis, which was approved by the Food and Drug Administration just months after she began receiving it. Faculty members at Kellogg have been involved in a variety of clinical trials for macular degeneration, including for Lucentis.

“I decided that the money should go to the Kellogg Eye Center rather than to Uncle Sam,” she says. “Let’s put it to work where I know it is doing some good.”

Mrs. Edwards has maintained her vision in her good eye. “I am doing well—I still drive and I can read,” she says.

Since she became a patient, she has made increasingly generous gifts to the Eye Center’s Annual Fund. She also supported the expansion campaign for the new Kellogg building. “I decided that the money should go to the Kellogg Eye Center rather than to Uncle Sam,” she says. “Let’s put it to work where I know it is doing some good.”

Mrs. Edwards believes that her mother, who loved to read, lost her vision as she grew older. “She never complained, but she would take my arm when we walked and at one point said she did not want to read any longer.”

Ann and Joe Edwards have supported the University of Michigan for many years. In addition to research at the Kellogg Eye Center, they also currently support the University of Michigan Comprehensive Cancer Center and the work of Mark B. Orringer, M.D., co-director of the Thoracic Oncology Program, who pioneered two successful surgical techniques for esophageal cancer.

The couple is grateful that physicians are continually striving to develop and test more effective treatments. And physicians are grateful for the annual support that makes progress possible. Says Dr. Saxe: “Mrs. Edwards is a very special lady.”
Gifts to the Kellogg Eye Center Annual Fund and the Alumni Annual Fund provide important support to vision scientists pursuing a wide range of objectives. This year, your gifts furthered the understanding of how eye muscles develop, funded new retina research, helped answer a decades-old question about why certain diseases go into remission during pregnancy, and enabled a unique collaboration between faculty members.

Philip J. Gage, Ph.D., Associate Professor of Ophthalmology and Visual Sciences and Associate Professor of Cell and Developmental Biology

Dr. Philip J. Gage studies the key regulatory networks and associated genes required for normal eye development. Over the past year, he and his laboratory were able to establish that a specific gene is critical in two stages of the development of normal extraocular muscles, the six muscles that control the movement of the eye.

The gene, PITX2, is required to both ensure that pre-muscle cells survive long enough to become extraocular muscles and to initiate the series of events that takes place to turn such cells into muscle cells.

Dr. Gage plans to continue his research regarding PITX2 and look at the structures that are most likely to be involved with the development of glaucoma. The availability of resources from our Annual Funds enabled this research. Results from Dr. Gage’s laboratory will extend our understanding of eye development as well as glaucoma and other eye diseases.

Bret A. Hughes, Ph.D.

Bret A. Hughes, Ph.D., Professor of Ophthalmology and Visual Sciences and Professor of Molecular and Integrative Physiology

Dr. Bret Hughes is a national expert on the fundamental physiological processes of vision. His laboratory receives much of its funding from the National Eye Institute—grants that result from the careful collection of data, the submission of detailed proposals, and a long review process in which scientists around the country evaluate his ideas. Such funding is the backbone of vision research, but it does not allow researchers to respond quickly to new information and ideas.

The Annual Funds enabled Dr. Hughes to do just that as he applied his expertise to specific disease research that was stimulated by an article in the *American Journal of Human Genetics*. This article was about a very rare inherited disease, Snowflake vitreoretinal degeneration, that causes increased risk of retinal detachment. Because of Annual Fund support, Dr. Hughes was able to launch a research project looking at how the mutation that causes this disease affects the potassium channels in the cell membrane. It is believed that these potassium channels play a role in eye disease. Without the Annual Fund support, Dr. Hughes, along with many other researchers, wouldn’t have the freedom to explore new ideas that are outside of the NIH funding he receives.
Howard R. Petty, Ph.D., Professor of Ophthalmology and Visual Sciences and Professor of Microbiology and Immunology

For nearly 20 years, Dr. Howard R. Petty has wondered why autoimmune diseases such as rheumatoid arthritis, type 1 diabetes, and uveitis—an inflammatory eye disease—go into remission during pregnancy. Dr. Petty this year answered that question with the help of support from the Annual Funds. Dr. Petty and his collaborators discovered a change in the immune system that results in the remission of these diseases, a decrease in activity of an enzyme called pyruvate kinase.

In individuals with autoimmune diseases the body has an overactive immune response to its own cells. In other words, the body attacks itself. Dr. Petty’s research found that during pregnancy the activity of pyruvate kinase is reduced, which slows the immune response in women. When activity of this enzyme decreases in women who have autoimmune diseases, the body no longer has an overactive immune response and the autoimmune disease abates. The decreasing of pyruvate kinase is nature’s own cure to autoimmune disease.

This is a project that has been funded by governmental grants, but support from the Annual Funds enabled Dr. Petty to devote extra resources to the project this year during a crucial stage, leading to the breakthrough.

Now that the biological mechanism has been pinpointed, Dr. Petty is looking ahead. “It may be possible to design drugs that mildly suppress pyruvate kinase activity as a means of replicating the immune status of normal pregnancy,” he says. This work could greatly improve the lives of individuals living with autoimmune diseases.

Julia E. Richards, Ph.D.

A unique collaboration took place this year between a geneticist, Dr. Julia E. Richards, and a clinician with a health services research background, Joshua D. Stein, M.D., M.S., Assistant Professor of Ophthalmology and Visual Sciences, thanks to the Annual Funds.

Dr. Stein works with a large health care claims database to study broad questions about eye disease. The database contains information on health care services received by more than 100 million individuals enrolled in a national managed care company. He and Dr. Richards looked at the risk of developing different forms of glaucoma among Asian Americans, the second-fastest growing minority in the United States. Prior to this study, it was thought that the most common form of glaucoma, primary open-angle glaucoma, did not affect Asian Americans much. Their research showed, however, that this type of glaucoma is more common in Asian Americans than in whites and that ophthalmologists should check for it regularly. This conclusion could lead to earlier diagnosis and treatment.

This same research project also revealed that certain types of glaucoma are more prevalent in different subsets of the Asian-American population. For example, Drs. Richards and Stein discovered that Japanese Americans are more likely to develop normal tension glaucoma, while Chinese Americans are more likely to get angle-closure glaucoma.

Dr. Richards is very grateful for the support of the Annual Funds. “Without this support,” she says, “Dr. Stein and I would not have had the time needed for the exchange of ideas, discussion of questions, building of models, and analysis of results that led to these findings.”
Influencing the Future of Health Care

On April 23 we celebrated the dedication of the new Brehm Tower at the W.K. Kellogg Eye Center. It was a wonderful day, full of excitement and promise for the future. Building the tower has significantly expanded the Eye Center and will enable us to serve a rapidly growing and aging patient population, as well as increase the number of scientists working to advance research aimed at preserving vision and preventing blindness.

I cannot overestimate the role individual donors play in our efforts to cure and mitigate the consequences of blinding eye diseases. Your generosity makes possible promising early-stage research that often leads to larger projects and significant grants from the National Eye Institute and private funding organizations. Dr. Howard Petty, one of the esteemed researchers featured in this publication, recently wrote in his thank-you letter to a donor: “Your contributions go directly toward research that has great potential to influence the future of health care.”

We are confident we are making a difference, and we could not do it without your support.

Many thanks, again, for your thoughtfulness and for the confidence you place in the exciting research programs here at Kellogg.

Becky Spaly
Donor Relations
bsp@umich.edu ~ 734.615.8625

Fralick Society Luncheon

Updates on glaucoma and macular degeneration research by Sayoko E. Moroi, M.D., Ph.D., (pictured at right) and Mark W. Johnson, M.D., were the highlights of the annual Fralick Society Luncheon held in October at Barton Hills Country Club. More than 80 people attended, including Cathy Curley and Myron Hepner (bottom right). The event celebrates annual giving to the Eye Center. Fralick Society members are recognized for gifts of $100 or more. Individuals who made gifts of $1,000 or more had the opportunity to visit with researchers in their laboratories. Our event this year will be held at the Kellogg Eye Center on Saturday, October 30.
More than 700 people helped celebrate the dedication on April 23 of the Brehm Tower at the Kellogg Eye Center. The building features new clinics and operating rooms as well as vision and diabetes research laboratories. Dorrit Jensen and donor Larry Miller enjoy the dedication ceremony (1), which featured keynote speaker Gail R. Wilensky, Ph.D., a nationally recognized health care economist and U-M alumna (2). Alumni and friends also enjoyed a reception following the ceremony (3, 4), and U-M President Mary Sue Coleman joined Dee and Bill Brehm and Paul R. Lichter, M.D., in cutting the ribbon (5). Alumnus W. Scott Wilkinson, M.D. (6), closed the evening by performing a song he wrote about philanthropy and working together to improve the future for everyone. His theme: Planting shade trees under which we know we’ll never sit.
Annual Giving Can Become a Legacy

**bequest**

1. The act of giving or leaving personal property by a will.
2. Something that is bequeathed; a legacy.

Your annual gifts to the Kellogg Eye Center make a tremendous difference in the progress researchers are able to achieve. Please consider continuing your commitment to improving the lives of people facing blinding eye diseases through a bequest.

You may designate a specific amount or a percentage of your estate to vision research programs, and you may request that this gift be expendable or placed in an endowment that will fund research in your name for years to come.

Please call our Development Office at 734.615.0243 to discuss how you envision your legacy—and how we can work together to achieve that vision.