Dedication
of the Robert H. and Clarice Smith Building
and Maurice Bendann Surgical Pavilion

October 16, 2009
Rich History, Bright Future

After years of planning, 24 months of actual construction, and two months of equipping and moving in, Wilmer’s new building is a reality. The Robert H. and Clarice Smith Building is everything we hoped it would be: spacious, functional, beautiful and welcoming. It is a dream come true.

The new building will not simply make Wilmer bigger. Rather, it is a harbinger of dramatic change, allowing significant improvements in how we care for patients, how we train the future generation, and how we make new discoveries.

For quite some time, due to space constraints, we have been unable to add new researchers with certain key areas of expertise. That limitation is now gone. The top five floors of the Smith building, dedicated to scientific investigation, increase our research space by 60 percent. Because of full operating room schedules, we have had difficulty bringing new surgeons to Wilmer, and we made patients wait to have surgery until late at night. Those limitations, too, are now gone. Our new Maurice Bendann Surgical Pavilion will enable us to perform 50 percent more operations annually. Patients will find Wilmer an easier place to come for care, with one location for registration and parking for our surgery patients within steps of the Pavilion.

Fittingly enough, we dedicate Wilmer’s new Robert H. and Clarice Smith Building 80 years to the day after the pioneering institute’s first building made its debut. Please join me in celebrating this important milestone—and looking ahead in anticipation to the breakthroughs in research and patient care that wait just around the corner.

Peter J. McDonnell, M.D.
William Holland Wilmer Professor and Director
Thank You! We gratefully acknowledge the generosity of the individuals and organizations listed below who have made commitments to the Robert H. and Clarice Smith Building and the Maurice Bendann Surgical Pavilion of the Wilmer Eye Institute. They inspire us and give us the confidence to dream of new possibilities.

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In honor of Bea and David Zack

*identifies donors who gave $100,000 or more
NO SINGLE GROUP of faculty has influenced ophthalmology worldwide more than Wilmer graduates. This isn’t hyperbole, but fact. More than 100 Wilmer alumni have gone on to become department chairs at academic medical centers across the country and around the world. This is leadership generation on an unprecedented scale, creating a rich pipeline of uniquely trained medical talent that allows the Institute’s ground-breaking research, clinical, educational, and technological findings to quickly become disseminated on a national and worldwide scale.

“The expectation—and it’s really long been a part of our culture here—is that our faculty and residents are being developed into leaders in their subspecialty, whether it’s as educators, surgical innovators, or scientists in the lab,” says Wilmer director Peter McDonnell, addressing why Wilmer faculty are so prized in the academic community. “I tell my faculty that part of their work here is training to be a stellar department head, should they ultimately choose that path.” It seems the rest of the academic world agrees.

One of Wilmer’s early wunderkinds, Bernie Becker would quickly establish an expertise in glaucoma and diabetic retinopathy even before finishing his residency training. In the early 1950s, Becker noticed that cardiac patients given a drug called Diamox to control fluid buildup around the heart appeared to enjoy another benefit: It often lowered the intraocular pressure associated with glaucoma. Working as chief resident with Jonas Friedenwald and Alan Woods, director of Wilmer from 1934 until his retirement in 1955, Becker would establish Diamox as the first effective oral treatment for glaucoma. It’s still being used today.

At the dedication of the Wilmer Institute on October 15, 1929, namesake William Holland Wilmer noted the tri-fold mission of the institution dedicated “to the furthering of medical education, the advancement of science and through them to the prevention and alleviation of human suffering.” He concluded his remarks by saying, “To the same high purposes, by God’s help, I dedicate all that is within me.”

Eight decades later, the accomplishments of the Wilmer Eye Institute may well have exceeded the world-renowned ophthalmologist’s greatest hopes. For in that time the institute and its researchers have had an unparalleled impact, saving the sight of millions of people around the globe. Today, as we rededicate ourselves to Wilmer’s original vision, we also commemorate those eight decades of advances by featuring the eight following breakthroughs.
Discovering How the Eye Signals the Brain

A PIONEER IN NEUROBIOLOGY, Wilmer’s Stephen Kuffler created the team in the 1950s that would discover how the eye—and specifically the retina—signals the brain. A brilliant investigator, Kuffler designed a multibeam ophthalmoscope that allowed scientists to precisely stimulate the retina with light while observing the eye’s reaction down to the cellular level. Kuffler’s influence is felt to this day; two members of his Wilmer team, David Hubel and Torsten Wiesel, went on to win the 1981 Nobel Prize for “their discoveries concerning information processing in the visual system.” Their work greatly impacted the understanding of how a dominant eye is established in early childhood, and how ophthalmologists treat thousands of cases of vision loss in children.

A Laser Solution to Diabetic Retinopathy

FOR THOUSANDS OF PEOPLE, diabetes once meant eventual vision loss and perhaps blindness due to diabetic retinopathy, a leakage of retinal blood vessels. That changed in the late 1960s when Arnall Patz commissioned the Hopkins’ Applied Physics Laboratory to build an argon laser (He reportedly mortgaged his home to raise the funds). The laser effectively sealed the leaks and preserved sight. Patz would go on to train scores of ophthalmologists in the use of laser treatment, making it the standard of care for many retinopathy patients.

Saving Sight (and Lives), Millions at a Time

WILMER’S FORAY INTO the international public health field took a quantum leap in the 1980s with a trio of discoveries that saved both the sight and lives of millions. Hopkins ophthalmologist Alfred Sommer won the Lasker prize for his research uncovering that a four-cent megadose of Vitamin A administered twice monthly not only prevented blindness, but reduced death rates in impoverished children by 30 percent. By some estimates the discovery has saved six million lives.

The work had such an impact that a team of Nobel Prize-winning economists now lists population access to Vitamin A as a key indicator of an emerging country’s progress. Complementing Sommer’s work were Sheila West’s and Hugh Taylor’s efforts attacking trachoma, the leading infectious cause of blindness in developing countries. Their finding that simple face-washing could greatly lessen trachoma risk became, according to Sommer, “a core, inexpensive, relatively easily implemented strategy” for trachoma reduction efforts. For those with advanced cases of trachoma, the West–Taylor team developed a simple, mobile surgical technique that, along with prophylactic antibiotics, keeps thousands of patients from losing their sight.

Improved Safety for Contact Lens Wearers

THE EXPLOSION OF contact lens use has brought convenience and comfort to many, but serious vision complications for some. Wilmer’s Oliver Schein has taken the lead in keeping contacts safe for the estimated 35 million American users. In the late 1980s Schein discovered that 30-day extended-wear soft contact lenses, then relatively new to the market, put users at risk for microbial keratitis. Left unchecked, this could lead to corneal ulcerative keratitis, a painful and potentially vision-robbing condition. The FDA reduced its approval of extended wear contact lenses from 30 to seven days, as Schein’s research showed that after a week the risk of contracting microbial keratitis greatly increased (as much as 1,500 percent compared to contacts removed daily). Schein continues to study the safety of new materials proposed for contact lens use, and his 2005 testimony before Congress helped craft a law increasing safety standards for lenses purchased through the Internet.
Among the leading causes of vision problems in children are strabismus ("crossed-eyes") and amblyopia ("lazy eye"). Fortunately for children everywhere, Wilmer ophthalmologists David Guyton and Michael Repka began addressing these disorders in the 1990s, with outstanding results. Guyton recently pioneered the routine use of adjustable suture surgery in children, and he’s developed a novel technique—binocular retinal birefringence scanning—that can catch strabismus, amblyopia, and other refractive errors earlier than ever before. “We expect the scanner will revolutionize screening of infants and young children, resulting in treatment at an early age that can be quick and more completely effective,” he says.

Those estimated 2 to 3 percent of children found to have amblyopia will have Repka to thank for an easy, effective treatment. Repka’s discovery that once-daily eye drops were as effective as hours of unsightly and uncomfortable eye patching revolutionized amblyopia treatment and sent patient compliance rates soaring. He’s also shown that children with amblyopia can benefit from treatment perhaps as late as the onset of adolescence, which is far beyond what ophthalmologists once considered the time period for effective treatment.

For decades, older Americans feared the onset of age-related macular degeneration (AMD), particularly the so-called “wet” (advanced) form of the disease that caused fluid leakage in the macula, often destroying central vision within just a few years. That was until Wilmer’s Neil Bressler began leading studies of a drug called verteporfin (Visudyne) in 1996. In a nod to his mentor, former Wilmer Director Arnall Patz, Bressler says Patz’s reputation for creating rigorous clinical trials became standard practice for him and his colleagues, making Wilmer the “go to” place for pharmaceutical companies interested in designing studies for potential vision-saving therapies. Such was the case with verteporfin, which halted substantial vision loss in 65 percent of wet AMD patients.

But that was just the beginning. Bressler was soon contacted by researchers wanting to duplicate the methodology and rigor of the verteporfin trials while using a different drug, ranibizumab (Lucentis). “The verteporfin trials provided the design for their studies,” says Bressler. The results were incredible: Ranibizumab stops blindness in 90 percent of wet AMD cases. And in a case of the wheel truly coming full circle, Bressler says he’s now applying that same clinical methodology to a multicenter trial he chairs, testing whether ranibizumab can be used as an alternative to laser treatment in diabetic retinopathy—the very treatment that Patz pioneered. “It’s wonderful,” says Bressler. “The trials that we conduct now are state of the art, and it’s just the natural evolution of what Arnall began with his trials all those years ago.”
Then & Now 1925-1926 Today

Wilmer Eye Institute Sites

| Gross square feet of clinical and research space (at the Johns Hopkins School of Medicine and Hospitals Only) | 67,200 | 500,000 |
| Number of beds | 72 | 0 |
| Inpatients treated | 1,150 | 300 |
| Outpatients treated | 10,200 | 200,000 |
| Major surgical operations performed | 550 | 8,792 |
| Number of publications | 9 | >200 |
| Residents | 7 | 21 |
| Fellows | 4 | 68 |
| Full-time faculty | 5 | 120 |
| Endowed professors | 1 | 30 |
| Annual operating budget | $83,500 | $70 Million |

Measuring Up

Thank You to those who have dedicated countless hours of time and energy to this building.

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The Tradition Lives On

Far left shows the original relationship between the top of the dome and the octogonal bases. Far right image shows the same proportion found in the new Robert H. and Clarice Smith Building Reflection window.