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Bascom Palmer Eye Institute  
Second to None



# Bascom Palmer Eye Institute

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PALMER EYE INSTITUTE  
BASCOM PALMER EYE HOSPITAL



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*As Bascom Palmer Eye Institute celebrates its 50th anniversary, we look back on a history that is long and distinguished. It is impossible to mention all of the physicians, scientists, staff, donors, patients and friends who have made significant contributions to our success. Our strength is our people. They truly are second to none.*

## **ACKNOWLEDGMENTS**

Bascom Palmer Eye Institute gratefully acknowledges the many Bascom Palmer physicians, alumni and employees who contributed to this publication.

*A special thank you to our chapter editors: Eduardo C. Alfonso, M.D.; Douglas R. Anderson, M.D.; John G. Clarkson, M.D.; Victor T. Curtin, M.D.; John T. Flynn, M.D.; Richard K. Forster, M.D.; Steven J. Gedde, M.D.; Jean-Marie Parel, Ph.D., Ing. ETS-G; Richard K. Parrish II, M.D.; Carmen A. Puliafito, M.D., M.B.A.; and David T. Tse, M.D.*

*Special Recognition:* This commemorative golden anniversary book would not have been possible without the considerate and extraordinary assistance of Victor T. Curtin, M.D. As the "collective memory" of Bascom Palmer Eye Institute, Dr. Curtin proved invaluable regarding thorough reviews of the text, fact verification, and especially by offering priceless anecdotes and stories about the incredibly rich and unique history of our prestigious Institute. We extend to him our heartfelt thanks and will forever cherish all of his countless contributions to Bascom Palmer Eye Institute.

This account also draws on "The Chief"—a biography of Edward W. D. Norton, M.D., written by John T. Flynn, M.D., in 2002, and "Twenty-Five Years of Vision," a history of Bascom Palmer Eye Institute written by Todd Ellenberg in 1987.

Bascom Palmer Eye Institute is the department of ophthalmology for the University of Miami Leonard M. Miller School of Medicine and part of UHealth, the University of Miami Health System.

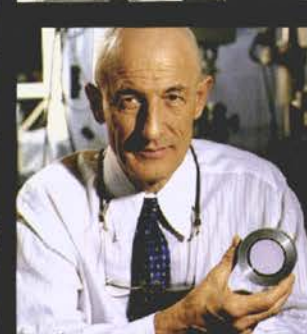
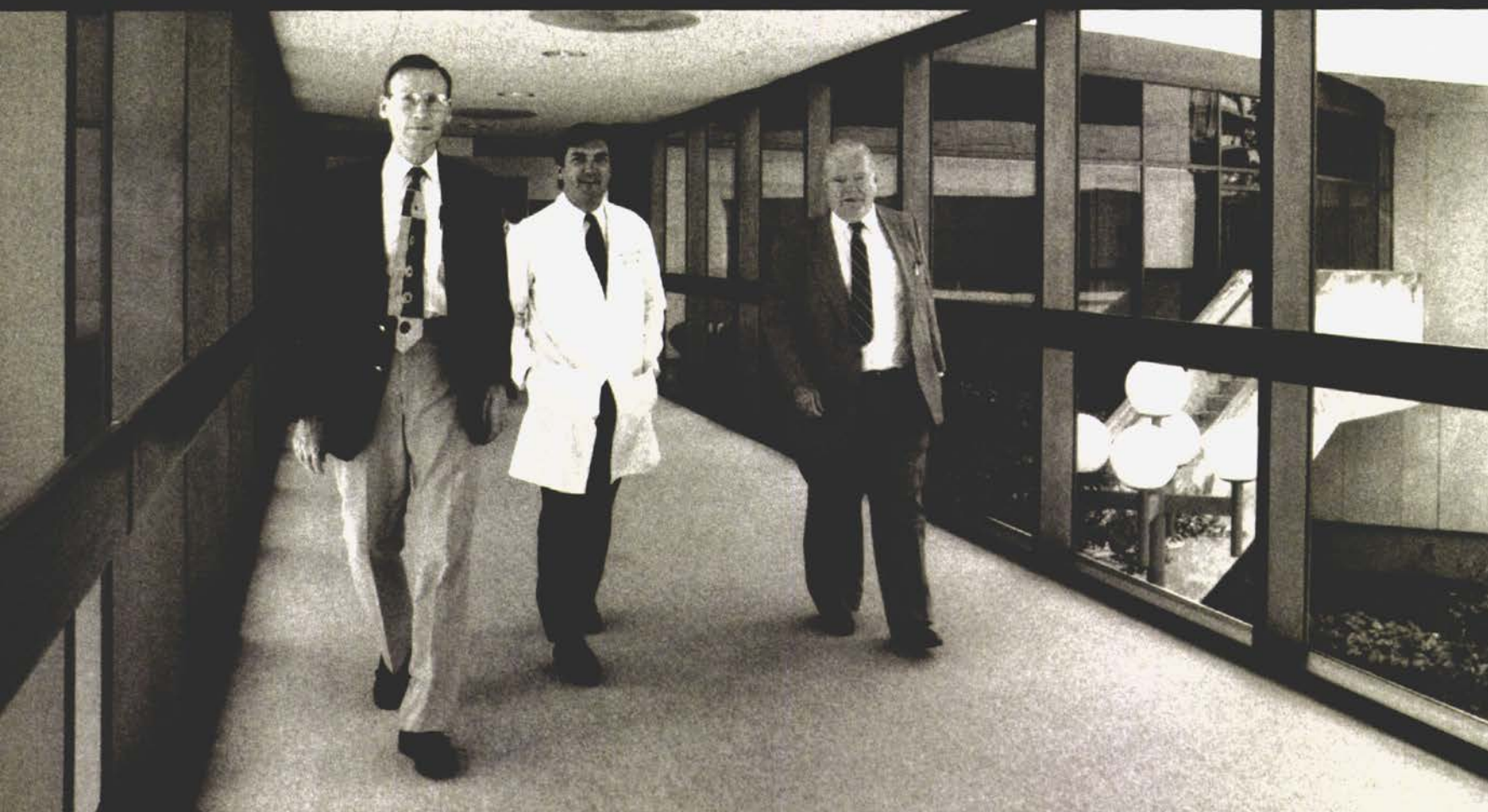


# Bascom Palmer Eye Institute 50 Years of Vision

*Global Leadership in Eye Care,  
Vision Research and Ophthalmology Education*

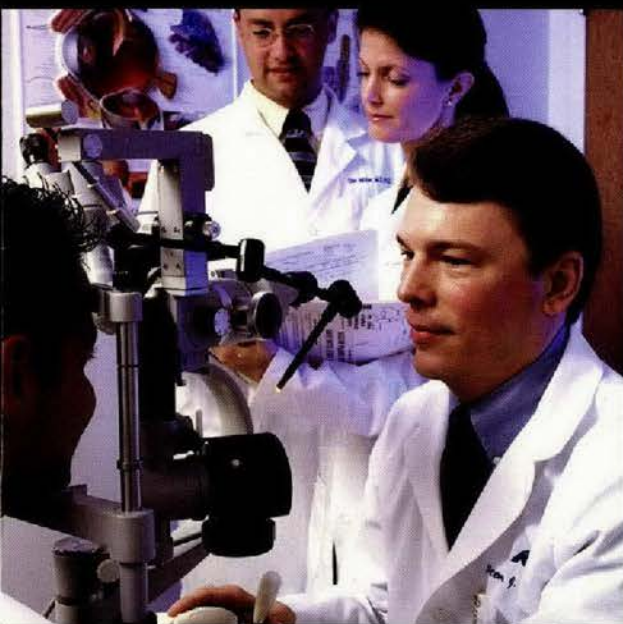






*Victor T. Curtin, M.D., Eduardo C. Alfonso, M.D., Edward W.D. Norton, M.D.*





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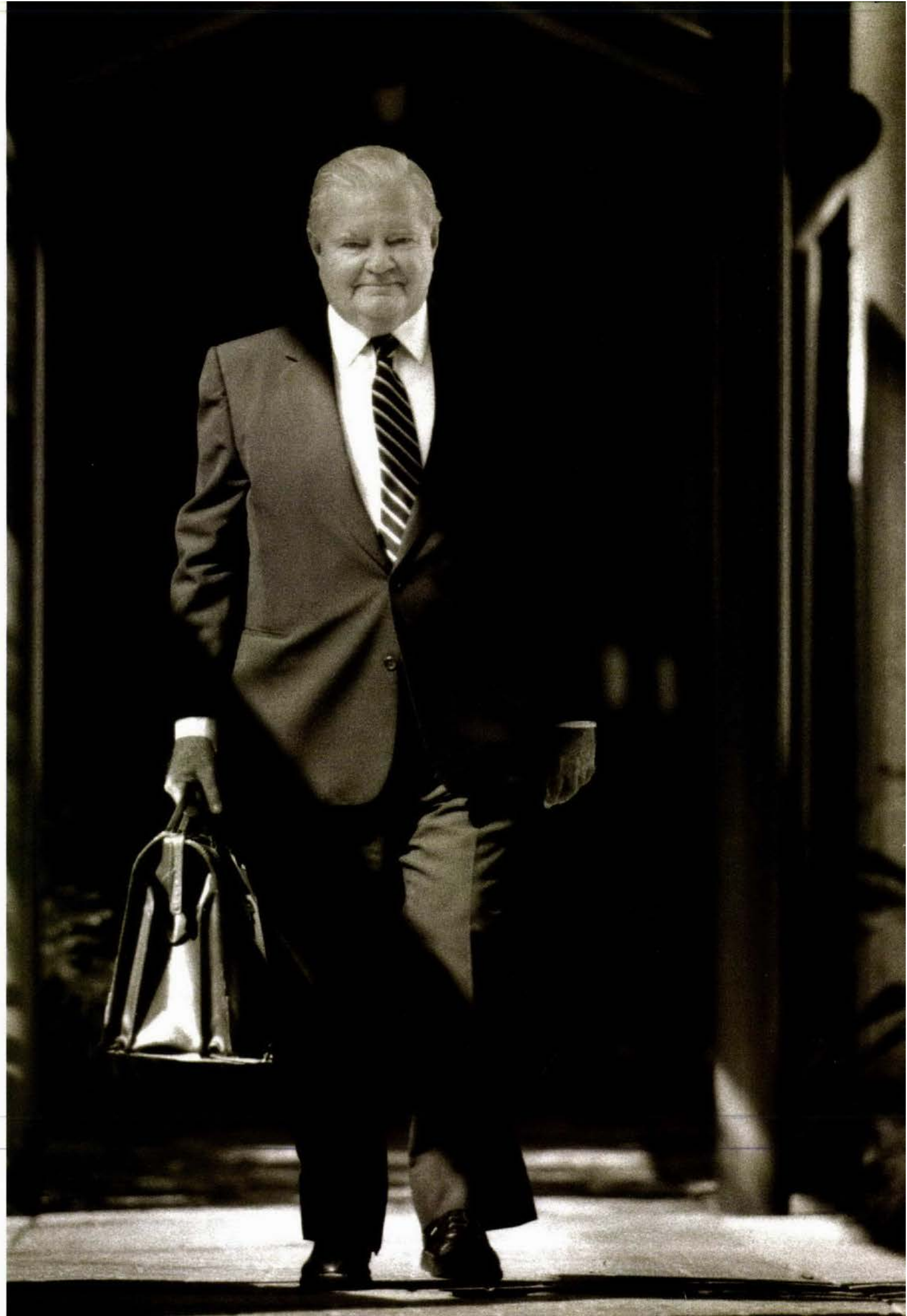
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## OUR MISSION

Bascom Palmer Eye Institute's mission is to enhance the quality of life by improving sight, preventing blindness, and advancing ophthalmic knowledge through compassionate patient care, innovative vision research and education.





This publication is dedicated to the memory of Edward W.D. Norton, M.D., the insightful ophthalmologist who founded Bascom Palmer Eye Institute and guided its growth for more than three decades.

*“Dr. Norton saw himself as a gardener. His role was to till the soil, plant the seeds, pull the weeds and stand back and watch the luxuriant growth. Right from the start, Dr. Norton inspired openness and trust. That transparency and integrity created a foundation that allowed Bascom Palmer to grow in reputation and strength.”*

— JOHN G. CLARKSON, M.D.





**BY EDUARDO C. ALFONSO, M.D.**

*Professor and Chairman, Bascom Palmer Eye Institute  
President, Bascom Palmer Alumni Association*

Since opening our doors on January 21, 1962, Bascom Palmer Eye Institute has been dedicated to providing the finest possible ophthalmic care, finding new ways to treat vision problems and prevent blindness, and educating the physicians and researchers of the future.

Our founder, Edward W.D. Norton, M.D., was a remarkable physician, professor and administrator, who succeeded in building an internationally recognized center of excellence in ophthalmology. All of us at Bascom Palmer Eye Institute today – as well as our alumni around the world – are proud to continue his legacy of providing compassionate patient care and advancing our understanding of ophthalmology.

For fifty years, Bascom Palmer Eye Institute has been a forum at which key issues and challenges confronting ophthalmology have been debated, where new technology has been unveiled and where ophthalmologists have come together to learn, discuss and teach the best care for patients. As the department of ophthalmology for the University of Miami Miller School of Medicine and part of UHealth, the University of Miami Health System, we are committed to providing the very best clinical care, medical education and vision research. Our tradition of excellence and our mission drive every aspect of our operation.

#### **CLINICAL CARE**

Bascom Palmer Eye Institute is committed to the protection and preservation of the treasured gift of sight. Our clinical faculty of 66 internationally respected physicians is skilled in every



# Welcome to Bascom Palmer Eye Institute

ophthalmic subspecialty. We serve more than 250,000 patients annually at our centers in Miami, Naples, Plantation and Palm Beach Gardens, Florida. We also provide ophthalmology care to patients at Jackson Memorial Hospital, University of Miami Hospital, Veterans Administration Health System, and Miami Children's Hospital. Since 1990, the first year that *U.S. News & World Report* published its rankings for Best Hospitals in the United States, the Bascom Palmer Eye Institute has been ranked in the top two spots, achieving the #1 rank 10 times while enjoying an eight consecutive year run since 2004. *Ophthalmology Times* has also ranked Bascom Palmer Eye Institute the best overall ophthalmology program in the nation with the best clinical care and residency programs. Additionally, many of our physicians are listed in "Best Doctors in America" and "America's Top Doctors." Our alumni are proud of their training at Bascom Palmer and many have achieved leadership positions in ophthalmology throughout the world.

## RESEARCH

Our scientists, physicians, and investigators search for the causes, preventive measures and most effective treatments for diseases and disorders of the eye. Current areas of clinical research include macular degeneration, glaucoma, diabetic retinopathy, artificial cornea development, ocular infections and cancers of the eye. Translational research projects in genomics, stem cells, gene therapy, and nanoparticles present new clinical research opportunities. Our faculty are leaders in worldwide ophthalmic research, with thousands of professional publications to their

credit. Our multidisciplinary research program covers a broad spectrum, from the most basic investigations into the nature of molecules, cells and tissues, to the development of devices for clinical and surgical application. We also serve as an umbrella organization uniting all eye and vision researchers at the University of Miami and neighboring academic institutions in a collaborative approach to research.

## EDUCATION

We regard the education of our ophthalmology residents and fellows, medical students and ophthalmologists from around the world as one of our highest priorities. Our outstanding faculty and high patient volume enable our physicians to build the skills and experience needed to become superb clinicians. We also offer an extensive calendar of continuing medical education programs for South Florida physicians as well as physicians located throughout the world on the most current treatment options.

It is our pleasure to invite you to learn about the remarkable history of Bascom Palmer Eye Institute, explore our latest achievements, and envision what we will accomplish in the future. We are committed to global leadership in patient care, vision research, and education in ophthalmology.





# The early years



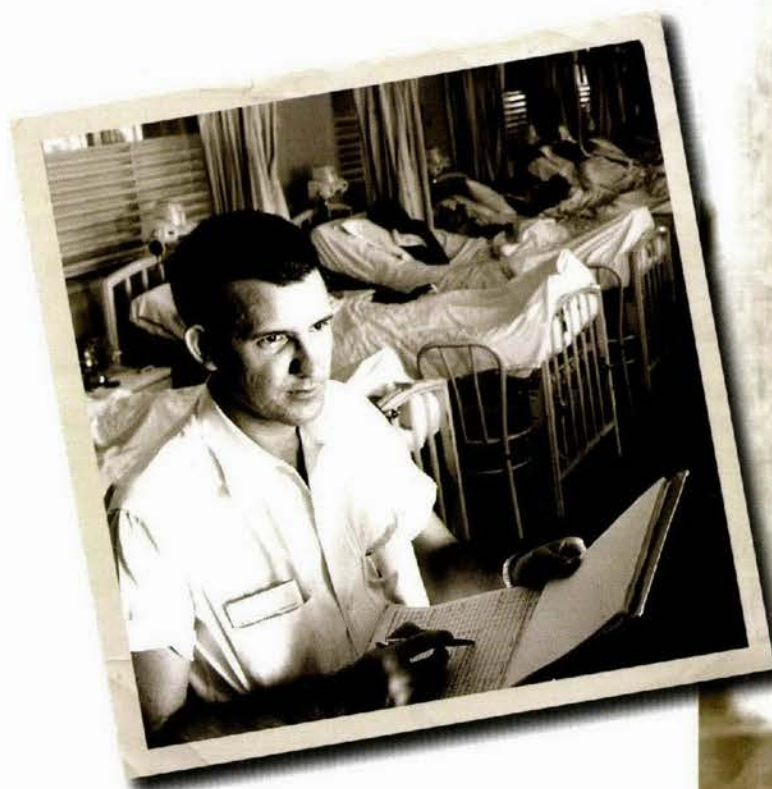


When Bascom Palmer Eye Institute opened its doors on January 21, 1962, no one could have foreseen that it would become one of the world's leading centers of ophthalmic medicine. But its insightful founder, Edward W.D. Norton, M.D., focused on building a center that would offer the highest level of clinical care, and bring advanced treatments to the south Florida region. Under his leadership, Bascom Palmer Eye Institute attracted a remarkable group of talented ophthalmologists who flourished in Miami. In less than a decade, Bascom Palmer became a national center of medical excellence, serving a rapidly growing volume of patients.



*"I predict that Miami will eventually be home to an ophthalmology institute in a medical center second to none in the nation."*

— BASCOM HEADON PALMER, M.D.



*A Jackson Memorial Hospital ward in 1956. The hospital, adjacent to the University of Miami School of Medicine, offered use of only one operating room for all ophthalmology patients.*

*Bascom Headon Palmer, M.D., in 1925*





## A long-time dream

Our Institute's story dates back to 1923 when Bascom Headon Palmer, M.D., opened one of Miami's first ophthalmology practices. After the founding of the University of Miami in 1925, Palmer became close friends with Bowman Ashe, the University's first president. The two shared a dream to one day establish a medical school at the young university.

A graduate of the College of Medicine at Tulane University in New Orleans, Palmer was the first surgeon in Florida to perform corneal transplants. He was also an active volunteer with the Lighthouse for the Blind and helped create community outreach programs for the poor during the boom and bust years of the 1920s and 1930s.

In 1943, in the midst of World War II, Palmer began discussing the feasibility of establishing an eye clinic in Miami dedicated to saving sight and preventing blindness. Five years later, the Lighthouse for the Blind purchased land for the proposed clinic; however, there were no funds available for design or construction.

Looking to the future with hope, in 1950 he predicted Miami would eventually be home to an ophthalmology institute in a medical center **second to none** in the nation. "It will be a clinic where both the indigent and others may be treated. It will serve this community as a clearinghouse for research and for reliable and dependable information on care of the eyes and conservation of sight," he said.

Palmer lived long enough to see the establishment of the University of Miami School of Medicine in 1952. Largely due to his influence, the school established the division of ophthalmology in the department of surgery for the 1954-55 school year. But he did not see his dream of a dedicated eye clinic come true, as he died on September 4, 1954.

At that time, there was no hospital dedicated to eye surgery in Florida or anywhere else in the Southeast United States. The largely voluntary faculty members of the division of ophthalmology had use of only one operating room at Jackson Memorial Hospital for eye surgery, three half-days per week. There were no specialized surgical tools for residents and the operating room was not configured or lighted for eye surgery. It was hardly an ideal situation for clinical care or medical education. Certainly, no one in 1958 would have guessed that Palmer's dream would come true within just a few years – thanks to a remarkable physician named Edward W.D. Norton.



*Bowman Foster Ashe, the first University of Miami president, persuaded the Veterans Administration to permit the University of Miami to lease the service and supply facility, formerly known as the servants' quarters, at the Biltmore Hotel in Coral Gables, Florida, to serve as a temporary medical school building. This portion of the Biltmore Hotel was the primary teaching site for the University's medical students until 1969.*



# Determination leads to success

Born on January 3, 1922, in Somerville, Massachusetts, Edward Walter Dillon Norton grew up in an Irish neighborhood in Boston with an older brother, Jack, and younger sister, Polly. His father was a school principal and education was an important value in the Norton family. As a boy, Norton overcame several bouts of rheumatic fever, an experience that may have pointed him toward a career in medicine. Although Norton's parents were not affluent, they enjoyed taking the family on winter vacations to Miami where the children could swim in the warm surf.

Norton's health improved as a teenager, and in 1939 he was admitted to Harvard College. He worked throughout his college years, taking the midnight shift at the FBI office in Boston, where he answered calls and handled the bureau's paperwork, demonstrating the stamina that would contribute to his professional career.

In 1943, he enrolled at Cornell Medical College, which was associated with New York Hospital. At that time, medical students earned their degrees in just three years. It was at New York Hospital at the end of his first year that he was inducted into the U.S. Navy's V12 program as a seaman apprentice.

In January 1945, Norton met Mary Knesnik, a young cadet student nurse. They began dating and were married later that year. After earning his medical degree in 1946, Norton became an intern at Cincinnati General Hospital. The following year he was inducted into the U.S. Navy as an ensign. He requested duty in an eye clinic as he was particularly interested in the visual and central nervous systems. However, the Navy ordered him to Oakland Naval Hospital and offered him the choice of working as a psychiatrist or a urologist – even though he had

no specialized training in either field. "I told them I'd rather be a plumber than a head shrinker," Norton recalled. When he was subsequently sent to serve on a division of destroyers stationed in San Diego, he found himself the only medical officer in a fleet comprised of more than 1,000 men.

"I'll never forget that first day, I had a thousand men and there were 40 officers. And when they introduced me, this guy said, 'You are going to be our doctor? How many appendectomies have you done?' It just floored me! I had only assisted on major surgery. But I kept my wits about me and replied that I had done enough. Fortunately, I never had to do any major surgery," Norton said.

In 1948, he was posted to San Diego Naval Hospital, where he contracted bulbar polio. This virulent epidemic was sweeping the nation, and Norton was one of only two survivors in San Diego that year. He made an almost complete recovery, but was bothered by unremitting headaches all of his life, taking aspirin several times a day.

The next year, Norton decided to focus on neuro-ophthalmology, a field with few practitioners at the time. He returned to New York to begin an 18-month residency with Harold Wolfe, M.D., one of the nation's most experienced and respected neurologists. As a resident at New York Hospital-Cornell Medical Center and the Veteran's Administration Hospital in the Bronx, Norton handled a wide spectrum of cases, including brain tumors and nerve injuries, and often collaborated with noted neurosurgeon Bronson Ray, M.D. In an era long before the advent of computed tomography or magnetic resonance imaging, Ray often planned surgical procedures based principally on Norton's clinical assessments.



*"Dr. Norton was the cornerstone of Bascom Palmer Eye Institute.  
In addition to being an exceptional physician and scientist, he was  
our teacher, father, creator and colleague."*

— DAVID T. TSE, M.D.



*Edward W.D. Norton and sister, Polly, sit astride a Florida alligator in 1934  
as their Aunt, Margaret Dillon, and two Native American children flank them.*

*Top: Edward Norton, M.D., U.S. Navy ensign, 1948.*



Norton continued to broaden his knowledge of neuro-ophthalmology under the tutelage of David Cogan M.D., at Harvard University and Frank Walsh, M.D., at Johns Hopkins University. While in Boston, Norton learned to use the indirect ophthalmoscope that Charles Schepens, M.D., had recently brought to the U.S. from Belgium via England. Immediately recognizing the value of this new technology, Norton mastered this instrument and the application of implant surgery to close breaks in the retina. As a result, he was able to cure retinal detachments, which had previously been thought to be almost irreparable. By the end of his fellowship year, Norton had trained himself as both an excellent neuro-ophthalmologist and a master retinal surgeon.

In 1954, Norton brought his ophthalmology knowledge and experience to Cornell Medical Center as a faculty member under John McLean, M.D. That same year, Norton performed his first retinal detachment surgery, and showed a series of movies demonstrating the effect of neurological diseases on the eye to the International Congress of Ophthalmology, which was meeting in New York. By 1957, Norton was an assistant professor of surgery at Cornell and rising star in the city's medical circles. On one cold winter morning at the medical center, Norton was riding up the elevator to the eighth floor, when McLean casually mentioned that there was an ophthalmology program in South Florida looking for a leader. The brief conversation changed the history of ophthalmology.

DEPARTMENT OF SURGERY

UNIVERSITY OF MIAMI  
SCHOOL OF MEDICINE  
JACKSON MEMORIAL HOSPITAL  
MIAMI 36, FLORIDA

January 13, 1958

Edward W. D. Norton, M.D.  
525 East 68th Street  
New York 21, New York

Dear Doctor Norton

It is with considerable personal pleasure that I am extending an official invitation to you to become Chief of the Division of Ophthalmology in the Department of Surgery of the University of Miami School of Medicine. As instructed by the Executive Faculty of the Medical School, the initial faculty rank would be that of Associate Professor. This rank carries a salary of \$10,000 a year with the University contributing an additional ten percent (\$1,000) annually into a retirement fund for you. The appointment also carries the position of Chief of Ophthalmology at the Jackson Memorial Hospital.

In addition to the \$10,000 salary from the school, you would be allowed to make an additional sum from referred private practice equal to your base salary. Monies from referred practice over the maximum would go into a departmental research fund credited to your division. Office space, secretary, equipment et al will be furnished by the school. One month's vacation with pay is the standard vacation time allowed by the University for those on a year 'round appointment.

I would appreciate a reply as early as feasible and if you indicate your willingness to join our exciting adventure in medical school development, a formal contract will be sent forthwith. We would like to have you as soon as possible but certainly on or before July 1, 1958.

Sincerely yours

John J. Ferrell, M.D.  
Chairman, Department of Surgery



Edward W. D. Norton, M.D.



University of Miami,  
Coral Gables, Florida,  
1960



*"When I looked at the city of Miami, I realized this city had great potential and I thought that we could develop a very good department here."*

— EDWARD W.D. NORTON, M.D.

## "The Chief" arrives

While contemplating Miami's young program, Norton contacted John McKenna, M.D., who served as acting chief of the ophthalmology division at the University of Miami while he maintained a private practice in Coral Gables, Florida. The rest of the division's faculty members were also local ophthalmologists who volunteered to teach medical students and residents.

"When I looked at the city of Miami, I realized this city had great potential and I thought that we could develop a very good department here," Norton said in December 1957, following his first visit to the University of Miami. In January 1958, he accepted the offer to become the new chief of the division of ophthalmology at an annual salary of \$10,000.

In 1958, John Farrell, M.D., chairman of the department of surgery, selected the 35-year-old Norton as chief of the division of ophthalmology with the approval of Homer Marsh, Ph.D., dean of the medical school, and the University's board of trustees. Prior to accepting the position, Norton wrote to Farrell with several conditions of employment, including upgrading to depart-

mental status within one year, building an eye institute with department funds, and retention of departmental earnings within the department. Farrell agreed to those terms, and Norton moved his family to Miami in the summer of 1958.

That fall, Norton took over the University's ophthalmology program, which included a small patient clinic in a two-story building on NW 10th Avenue. "There were several exam rooms for the residents with a tiny office for Norton next to it. That was the entire division," recalled Norman Sanders, M.D., (resident, 1961) who had recently completed an internship at Jackson Memorial Hospital and became one of the first to complete a three-year residency with Norton.

As he had been promised at the end of his first year, Norton expected that the division of ophthalmology, which operated under the auspices of the chief of surgery, would be expanded to become a more comprehensive department of ophthalmology giving him the autonomy needed to execute his ambitious plans. At the appointed time however, the chief of surgery resisted, so Norton sought the support of the dean and other medical school department chairmen. Finally, the ophthalmology division became its own "department," and with it Norton's title changed from "Chief" to "Chairman," though he would be known to all as "The Chief" until his death. His leadership laid the foundation for the department's rapid growth.



*Norman Sanders, M.D.*







Victor T. Curtin, M.D.



*This termite-infested, dilapidated building housed the faculty offices until the first hospital was constructed in 1962. The doctors traveled down the street to another building to treat their patients.*

Victor T. Curtin, M.D., was a medical student considering ophthalmology programs in Boston, New Haven and New York when he first met Norton in 1955. "Ed took my wife and me out to dinner and said that the best ophthalmology program was being offered in New York – which meant working with McLean and Norton," recalled Curtin, who took that advice. At Cornell Medical Center, Curtin completed his residency with Norton from 1955-1958 and developed an interest in retinal diseases and ophthalmic pathology. Curtin and Norton took and passed their Florida medical boards together in 1958. After Curtin finished his fellowships at Massachusetts Eye and Ear Infirmary and the Armed Forces Institute of Pathology in 1959, he became the first faculty member to be recruited by Norton.

When Curtin arrived in Miami, he and his wife, Mary Lou, rented a home near Tropical Park for five years, before buying

a house in unincorporated Dade County in what is now the Village of Pinecrest. "Ed told us we were so far out in the country that we were moving to the Everglades" said Mrs. Curtin. "But we wanted the land and needed a house with space for our five children. We also joined a tennis club and Vic got our whole family interested in the sport. Some of the kids have even developed their love of tennis in very productive ways."

Dating back to the 1960s, Mary Lou Curtin and Mary Norton hosted frequent social functions in their homes to celebrate achievement, recognize the end of the year for third-year residents, and simply to celebrate and share good times. The Nortons frequently had faculty parties at their home as did the Curtins.

Three years after Curtin's arrival in Miami, Jackson Memorial Hospital had completed its south wing. Soon after, it allocated 40 in-patient beds for the use of ophthalmology patients. As time went on, those beds were being offered to patients of other departments. "Our resident patients were going to be sent to another wing of the old hospital, so I inspected the rooms in the old hospital wing and found they were unacceptable. The ceilings were bad, the toilets were broken, the sinks were cracked, the walls and floors needed to be repaired and there was no air conditioning," Curtin said. "Since Ed Norton was in Europe with family for two months, I went to see Jackson's administrator and told him I was going to fix it. I had them hire a painter, carpenter, electrician, plumber and air conditioning technician. We cleaned up the rooms for about \$38,000. In the end, our hospital wing was in excellent condition and suitable for our patients."

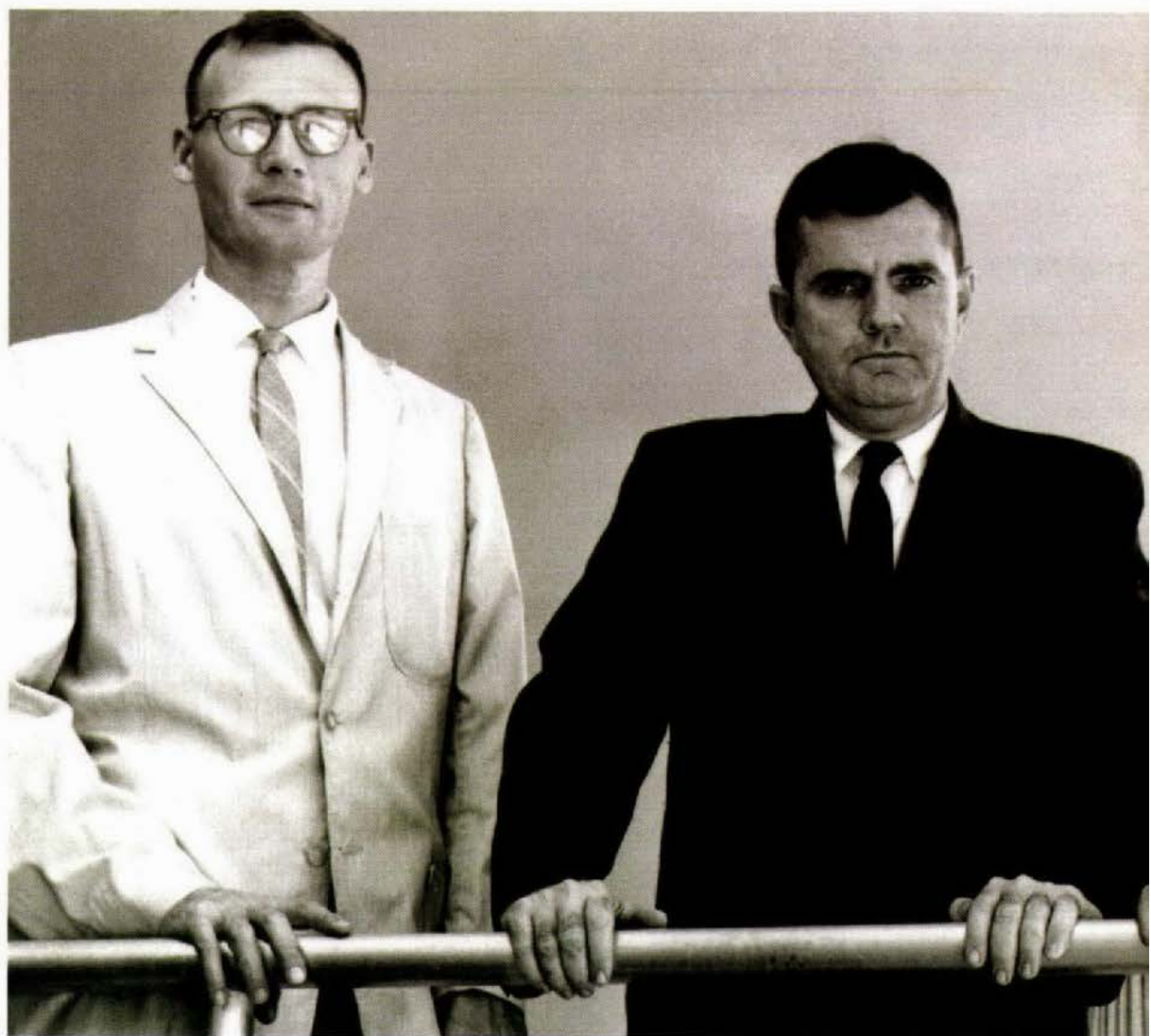


*“Dr. Curtin was also known as the conscience of Bascom Palmer Eye Institute. Whenever Dr. Norton faced an ethical dilemma, he would turn to Dr. Curtin for advice. Dr. Norton himself was a man of highest integrity, and he knew a discussion with Dr. Curtin would provide a consensus of two honest men.”*

— DOUGLAS ANDERSON, M.D.

At that time, the average ophthalmology patient spent seven days in the hospital following surgery. However, since other patients had a longer length of stay, the administration soon reclaimed some of the 40 beds they had previously allotted to the ophthalmology department. Further aggravating the surgical operations of the new department were staffing problems. Since Jackson Memorial Hospital did not have enough nurses to keep the operating room running for extended hours, surgical cases were not allowed to start after 1:00 p.m. “We decided to staff the two operating rooms ourselves,” Curtin said. “Our head nurse was excellent and she provided the surgical support we needed without the need to call upon any of Jackson’s OR staff. To sustain our autonomy in the OR, we went out and hired more nurses expressly for the ophthalmology program.” To maintain the goodwill of the local medical community, which was critical as the newly formed department started to spread its wings, Norton decided that the department of ophthalmology would not accept paying patients without referrals from ophthalmologists in private practice – a policy that continued for decades.

For the first three years, Norton and Curtin were the only full-time faculty members of the department of ophthalmology. They would discuss cases and bounce ideas back and forth. Throughout their long professional partnership, Norton relied on Curtin to handle a variety of administrative projects, while also seeing patients, interviewing residency candidates and maintaining the department’s high standards. As Douglas R. Anderson, M.D., a longtime Bascom Palmer faculty member, said, “Dr. Curtin was also known as the conscience of Bascom Palmer. Whenever Dr. Norton faced an ethical dilemma, he would turn to Dr. Curtin for advice. Dr. Norton himself was a man of highest integrity, and he knew a discussion with Dr. Curtin would provide a consensus of two honest men.”



*Victor T. Curtin, M.D., and Edward W.D. Norton, M.D., circa 1960*



# A rising star in ophthalmology

Norton was well aware of Dr. Bascom Palmer's dream of a stand-alone eye clinic to serve the South Florida community. Along with his clinical and teaching responsibilities, Norton began to reach out to local organizations and potential donors who could provide the needed funds. He soon established a close relationship with the Miami Lighthouse for the Blind, which set aside \$200,000 in 1959 to build an eye institute. Norton and Curtin also became friends with leaders of the Florida Lions Club, which led to the formation of the Florida Lions Eye Bank.

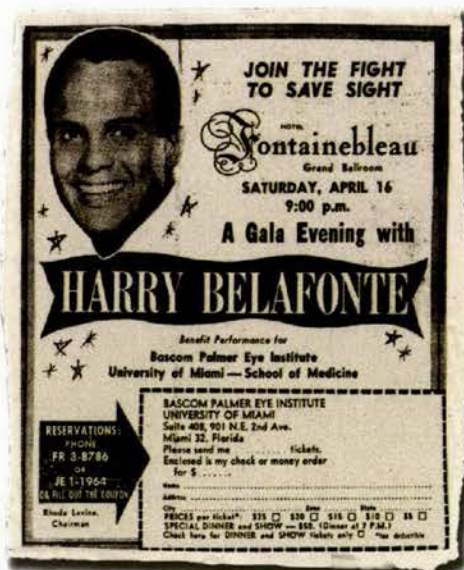
In his first three years in Miami, Norton focused more of his energy on raising funds from public and private sources, while Curtin and the voluntary faculty took over much of the clinical caseload. "Dr. Norton was the best fundraiser in the whole University, not just the medical school," said Curtin. "Everyone liked him." One of his fans was Harry Belafonte.

Back in 1957, internationally renowned calypso singer Harry Belafonte was having trouble with his vision. He sought out Edward W.D. Norton, M.D., who was still a faculty member at New York Hospital-Cornell Medical Center, and a fast-rising star in New York City's ophthalmologic community.

At that time, Norton was the only retinal surgeon in

New York City to use the new binocular indirect ophthalmoscope, which allowed for detailed examination of the interior of the eye. Prior to the development of this instrument, nearly all patients with retinal detachments went blind.

At Cornell Medical Center, Norton taught other ophthalmologists to use the new diagnostic instrument and treated patients from all walks of life. When Belafonte was diagnosed with a retinal detachment in his right eye, Norton was able to repair that condition and preserve the singer's sight.



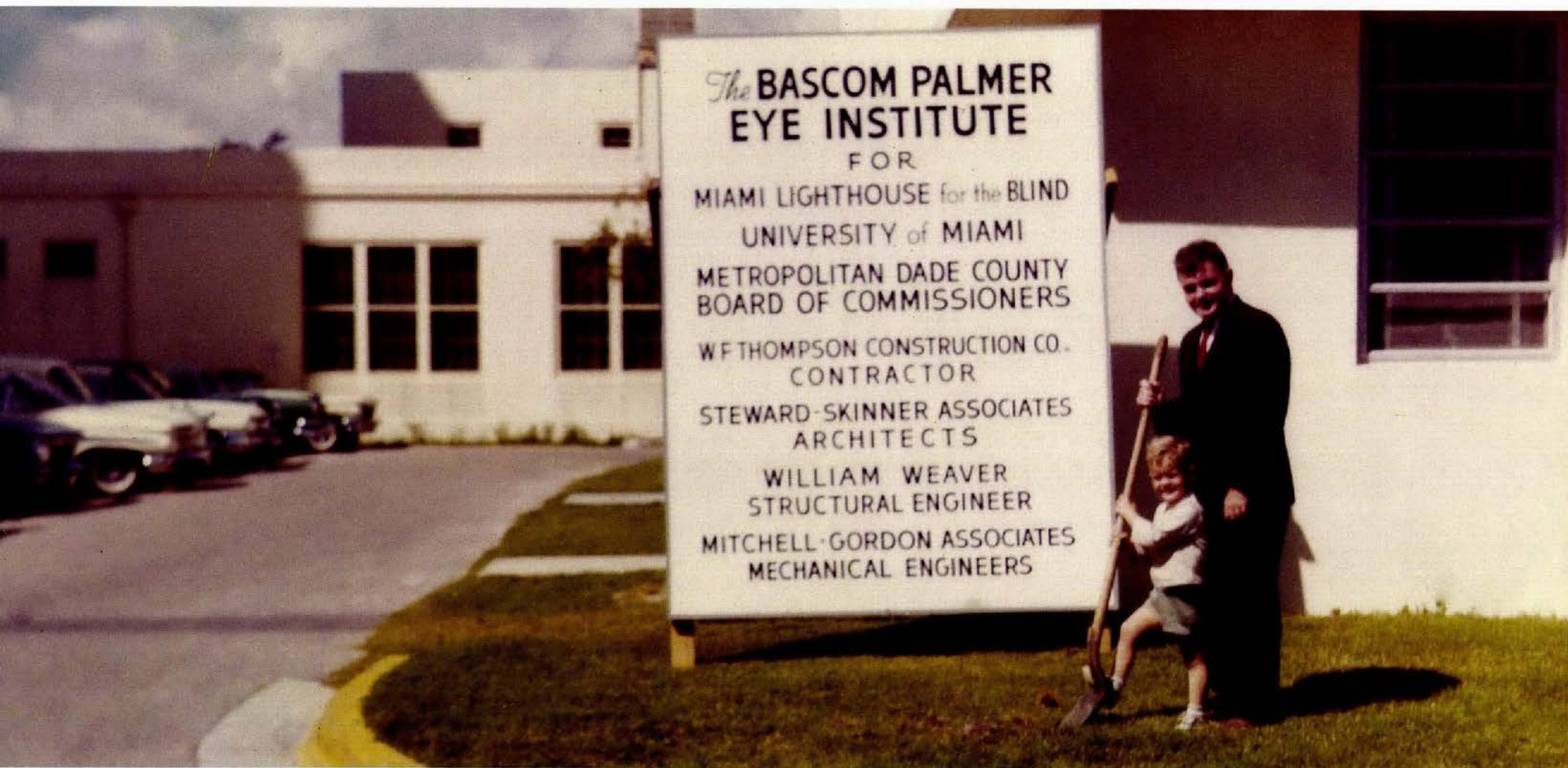
*This advertisement for a gala to benefit Bascom Palmer Eye Institute appeared in the Miami Herald in 1960.*



*The groundbreaking ceremony for Bascom Palmer Eye Institute was held March 6, 1961. At the event were Kenneth Whitmer, M.D., the first University of Miami School of Medicine chief of the division of ophthalmology; Moe R. Harrison, president of the Miami Lighthouse for the Blind; Helen Palmer, widow of Dr. Bascom H. Palmer; and Keith Phillips, past Lighthouse president.*

Belafonte never forgot Norton's professional skills, kindness and compassion. Throughout the 1960s and '70s, Belafonte would visit Norton in Miami for vision check-ups, and lend his talents for fundraising events. The Fontainebleau Hotel in





*Edward W.D. Norton, M.D., at the groundbreaking ceremony for Bascom Palmer Eye Institute with his son, Kevin Edward Norton.*

Miami Beach was the glamorous location of a 1960 gala starring Belafonte and benefitting the Institute.

While the donation from the Miami Lighthouse for the Blind funds had increased to \$305,000 by 1961, the low construction bid on the project was \$510,378 – \$200,000 more than they had in hand. In an effort to obtain the balance, Norton and Kenneth Whitmer, M.D., longtime Miami ophthalmologist,

paid a visit to Claude Hemphill, a founder and chairman of the CIT Finance Corporation in Tampa. Hemphill agreed to donate the needed funds on the condition that construction begin immediately. Ground was broken on March 6, 1961 and work began the next week. It took less than a year to complete the four-story medical building, designed by Miami architects John Skinner and Harold Steward.







On January 21, 1962, Bascom Palmer Eye Institute opened its doors as the first center in the Southeast United States devoted exclusively to the study and treatment of the eye. The new Institute, located where Bascom Palmer's Evelyn F. and William L. McKnight Vision Research Center now stands, had 26,600 square feet of space in its four floors. The first floor housed examining rooms, the library and offices. The second floor contained clinics and classrooms and the third floor was devoted entirely to research. As Norton explained at the time, "The Institute will encompass the areas of research, teaching and patient care."



*Gordon R. Miller, M.D.*



*Wayne E. Fung, M.D.*



*First residency class, 1962, with Drs. Curtin and Norton. Front row: Victor T. Curtin, M.D.; Norman Sanders, M.D.; Bernd Silver, M.D.; and Edward W.D. Norton, M.D. Back row: James C. Major, M.D.; Norman Ballin, M.D.; Robert C. Mickatavage, M.D.*

Always looking to the future, Norton made sure the building's foundation could support eight stories, even though the initial structure was only four stories tall. The fourth floor was left as an empty shell to allow for future expansion. At the time, the department of ophthalmology still had only two faculty members with a total staff of 12. But in that first year, Curtin and Norton, along with the residents, part-time faculty and the voluntary faculty from the Miami community, treated more than 8,000 patients.

Norton's love of teaching – including the division's first Grand Rounds – soon attracted young residents like Gordon R. Miller, M.D., (resident, chief resident, 1966) who went on to a long career in private practice in Miami. "Whenever we had a challenging case in the clinic, the residents would knock on Norton's door, and he would give an impromptu seminar," he said. "For me, it was a great introduction to ophthalmology."

"For Dr. Norton, patient care and safety were paramount," said Wayne E. Fung, M.D., (fellow, 1968) now a faculty member at California Pacific Medical Center in San Francisco. "He

would treat his patients with care and compassion, regardless of social or economic status."

Those same characteristics guided Norton's leadership of the Institute and his relationships with patients, faculty and residents. "He was a quiet, humble, kindly man who seemed to be an ordinary man to all outside appearance," said John T. Flynn, M.D., an early faculty member. "His love for the profession and his concern for his patients, forged through his illnesses and those of his family, provided him with a great deal of empathy. That spirit, combined with the right amount of common touch, meant that people from all walks of life, social strata and racial and ethnic backgrounds were drawn to him as a trusted friend. Many wanted to do nothing more than help him achieve his goals. And finally, there was his own sheer hard work that put Bascom Palmer Eye Institute on the road to where it is today."



## A glimpse of the Norton Family



*Norton family in 1964, Brian, Mary Beth, Patti, Carol Ann and Kevin standing with Mary and Edward.*

Dedication to family was one of Edward Norton's deepest values. With his wife, Mary, he raised five children – Carol Ann, Brian, Mary Elizabeth ("Marybeth"), Kevin and Patricia.

"Being the oldest, I was included in many of my parents' activities," recalled Carol Ann Rogers. "I was expected to take responsibility for myself, and with that came some parental rewards." For example, as a girl in New York, Rogers had a chance to meet Harry Belafonte. "He was doing a movie on

Wall Street, and we got to visit the set on a Sunday," she said. "A few months later, a huge box arrived for Christmas with a tricycle for my brother Kevin, who wasn't yet born, and every Belafonte record album."

In 1958, the Nortons packed up their cars and children and drove down to Miami. Norton purchased property in Coconut Grove and built a family home with a lush tropical atmosphere. "I think that whole excitement over the design and construction

of our home carried over to the creation of Bascom Palmer. Both my mother and father were involved in the Institute's design. They wanted it to be a beautiful place for patients, as well as the faculty and staff."

Rogers said her mother's artistic talents – including painting, writing and singing – complemented her father's scientific traits. "He valued mom's ideas and advice," she said. Mary Norton also enjoyed being a hostess, throwing parties at their home for friends, colleagues, residents, fellows and visiting ophthalmologists from around the world. "When new residents arrived, she would help them find a place to live, introduce them to the community and take them shopping," Rogers said.

Norton worked long hours at the Institute, including half-days on Saturdays. "I remember visiting Bascom Palmer on Saturdays and running around the old building," said Patricia Laird, who was born two years after the family came

to Miami. "My dad had a big wooden desk that was very cool," she said. "There was a skull with a mechanical jaw and lots of eyeballs in formaldehyde jars."

On weekends, Norton's main hobby was playing tennis on the courts of Everglades School for Girls, which was just across the street from his home. "When the school needed new nets, Dad would buy them and in turn the school gave him the key to the courts," Laird said. "On Saturday afternoon, he would play tennis with Gordie Miller or Joel Glaser or one of the other doctors. Then we would all sit by the pool, have lunch and swim."

"After Dad died, one of the security guards at Bascom Palmer came up to me and said, 'Your father was always very kind. He treated me as if I was the most important person in the world.' I believe that all five of us kids felt that same way. We knew our father was someone special."



*“Today, there’s nothing like saying you’re a Bascom Palmer graduate.”*

— DAN B. JONES, M.D.

## Attracting new faculty

With Bascom Palmer Eye Institute up and running, Norton turned to the next task: recruiting knowledgeable clinicians, educators and researchers who shared his values and vision. “Ed Norton was a genius at picking people,” said Dan B. Jones, M.D., (resident, chief resident, 1969) chairman of the Cullen Eye Institute at Baylor College of Medicine. “He was able to recruit the right people for the faculty, and train high-quality ophthalmologists to serve the community and contribute to academic medicine. Today, there’s nothing like saying you’re a Bascom Palmer graduate.”

Norton’s choice for the third faculty member was J. Lawton Smith, M.D., a neuro-ophthalmologist from Duke University who completed his residency and served as chief resident at Johns Hopkins University plus a fellowship at Massachusetts Eye and Ear Infirmary. “When I went into this field back then, there were probably only about 10 people practicing neuro-ophthalmology in the world,” said Smith, whose accomplishments include founding the *Journal of Clinical Neuro-Ophthalmology*. Smith spent 32 years at Bascom Palmer before retiring in 1994. “Now there are more than 500 members of the North American Neuro-Ophthalmology Society – a clear indicator of how this field has grown,” Smith said shortly before his death in 2011.

One of Smith’s early fellows was Norman J. Schatz, M.D., (fellow, 1966) who has been on the Bascom Palmer faculty for more than 40 years. Schatz was one of the first neurologists to move into the new neuro-ophthalmology discipline.

“Today, Lawton’s legacy,” said Schatz, “is a Bascom Palmer neuro-ophthalmology service that treats 4,000 patients a year and is regarded as one of the largest and most comprehensive in the world.”

But back in the 1960s, the primary tools for diagnosing neurological disorders were x-rays, arteriograms and air studies of the brain. Recognizing the need to improve physicians’ awareness and understanding of complex symptoms, Smith hosted the nation’s first clinical postgraduate educational session devoted to neuro-ophthalmology at Bascom Palmer Eye Institute in 1963. “We invited patients with very intriguing conditions and invited ophthalmologists and neurologists to attend the session on Miami Beach,” said Smith. The annual Bascom Palmer Neuro-Ophthalmology Course caught on at once and continued for more than 15 years. “Unlike most medical conferences where presenters give a lecture illustrated with slides, we had actual ophthalmologic patients who could be examined by physicians taking the course,” Smith said. “Our patients benefited by being able to get multiple opinions on their conditions.”

Recognized as one of the greatest neuro-ophthalmologists in the country, Smith was also an exceptional teacher. Nearly every Saturday morning, Smith would demonstrate diagnostic and treatment techniques for our residents. David Singer, M.D., (fellow, 1969) said Smith was “without a doubt, responsible for more medical students choosing ophthalmology as a life work than any other person in the field.” He added, “J. Lawton Smith was the perfect teacher, helping to stick information into our willing brains.”



Dan B. Jones, M.D.



J. Lawton Smith, M.D.



Norman J. Schatz, M.D.





*Named one of the 10 most influential ophthalmologists of the 20th century and pictured here in 1971, J. Donald M. Gass, M.D., spent nearly 40 years at Bascom Palmer Eye Institute. During that time, he revolutionized the diagnosis and treatment of more than a dozen macular and vitreo-retinal disorders.*



Bascom Palmer's fourth faculty member was J. Donald M. Gass, M.D., a graduate of Vanderbilt University School of Medicine who completed an ophthalmology residency at Johns Hopkins University and a fellowship at the Armed Forces Institute of Pathology. After joining the department in 1963, Gass became deeply interested in diseases of the macula. A quiet and reserved physician, Gass soon became a leader in this field, pioneering fluorescein angiography, a technique in which intravenously injected dye allows the blood vessels in the eye to be photographed in great detail. In that regard, he was assisted by Johnny Justice, Jr., a medical photographer who had joined the Institute in 1962. Soon after, medical illustrator and artist J. McGuinness Myers was hired to create approximately 100 paintings depicting dozens of ocular disorders. Two of them were included in a description of cystoid macular edema by Gass and Norton in the *Archives of Ophthalmology* in 1966. Known as the "Father of Macular Diseases," Gass conceptualized the way in which macular holes form, creating the foundation for surgery on a formerly untreatable condition. He also linked acute zonal occult outer retinopathy and other retinal syndromes, and advanced the treatment of a tropical parasitic disease, diffuse unilateral subacute neuroretinitis.

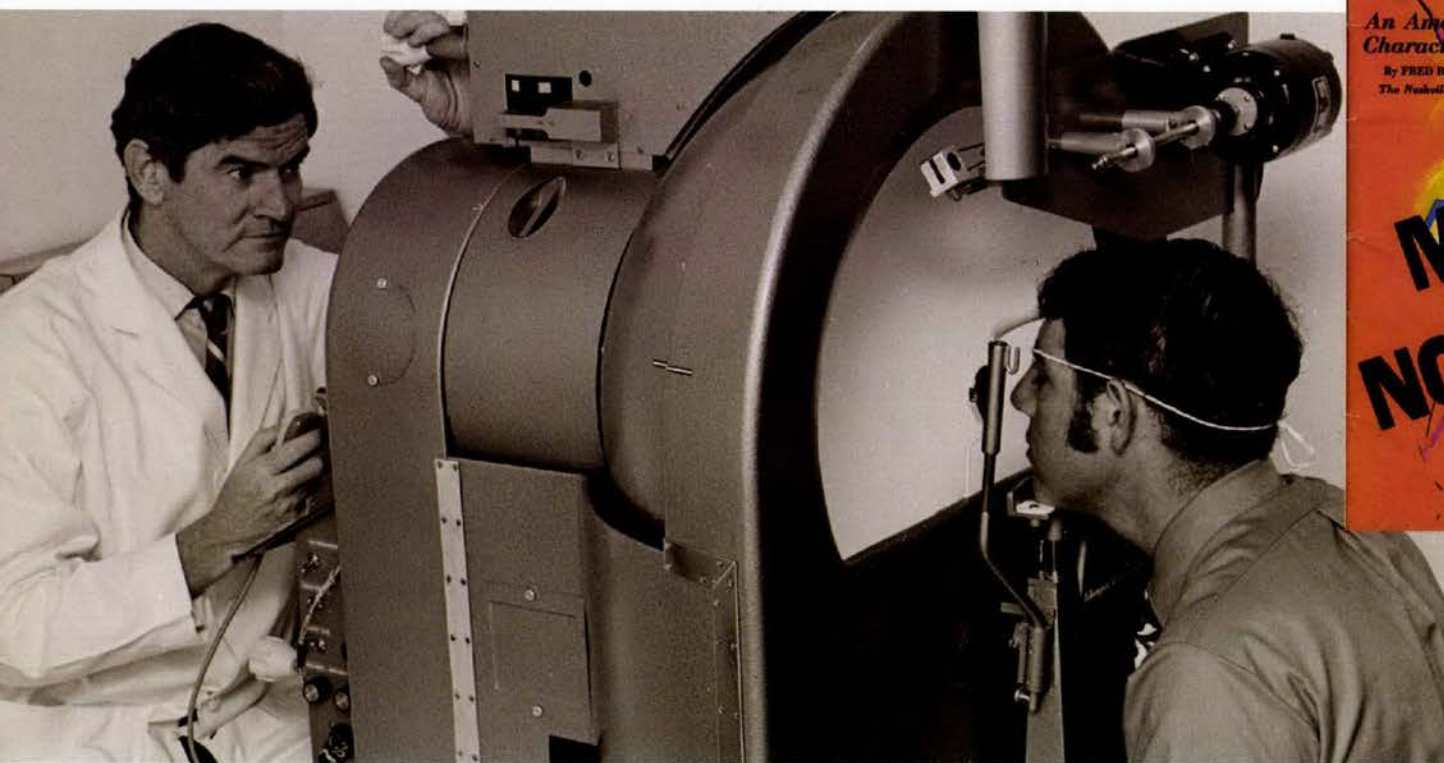
Working closely with residents and fellows, Gass, who published several books and more than 270 peer-reviewed articles, also led a weekly primary fluorescein conference for 20 years. "Having an office nearby, I was always amazed at his patience with residents and fellows," said faculty member Janet L. Davis, M.D., (fellow, 1987) after Gass' death in 2005. "One after the other, they would come to his office with questions regarding a clinical case, which he would carefully, and always correctly, answer."

Margy Ann Gass remembers her husband bringing fellows and residents to their waterfront home on Key Biscayne. "Don enjoyed boating and fishing with our four children as well as all our friends and his colleagues from Bascom Palmer," she said. The Gasses hosted an annual barbecue at their home where the faculty, residents and fellows were invited. "We were married for 55 years and he was the dearest man – quiet and humble, but always enthusiastic and optimistic."

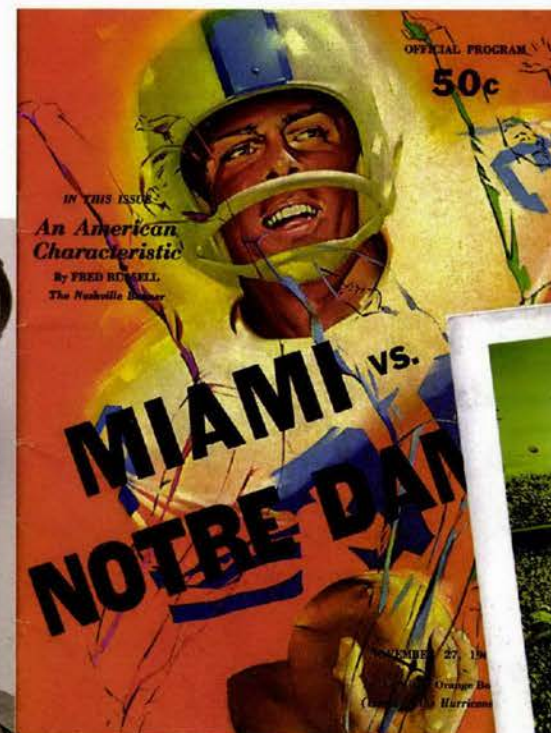
In his long Bascom Palmer career, Gass also wrote the *Stereoscopic Atlas of Macular Diseases: Diagnosis and Treatment*, one of the most important ophthalmological texts. When he needed to write a paper, he would sequester himself on the mezzanine of the library. "The books and bound journals containing the necessary references would stack up on a large table, interspersed with his handwritten notes and remain there for weeks, disturbed by no one, until he finished writing," Davis said. "When he was in the library, it was a gentlemen's agreement not to disturb him."

In a fitting tribute to his stellar career, the Association of Cataract and Refractive Surgeons in 1999 named Gass as one of the 10 most influential ophthalmologists of the 20th century. Gass, whose career in and knowledge of chorioretinal disease was unparalleled in the history of ophthalmology. He was a professor at Bascom Palmer until his retirement in 1995. He then returned home to Nashville and accepted an appointment at Vanderbilt where he could continue his research. Gass died in 2005.



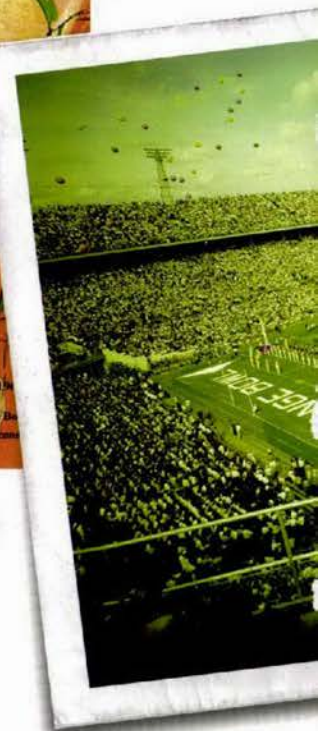


*Pediatric ophthalmologist John T. Flynn, M.D., started investigating retinopathy of prematurity in the 1960s. Here he uses a Tübingen perimeter to examine a patient.*



PHOTOS COURTESY OF  
HURRICANESPORTS.COM

*Miami vs Notre Dame,  
Orange Bowl 1965*



The fifth member of Bascom Palmer's faculty was John T. Flynn, M.D., who met Norton in 1961 as a second-year resident at Cornell Medical College. "I knew I was going into pediatric ophthalmology and strabismus," Flynn recalled. "I received a fellowship to study in Europe for a year. When I came back, I was planning to work at New York Hospital under Dr. John McLean." With a wife, a child and another on the way, that \$8,000 salary offer wasn't enough. After writing to several chairs around the country, Flynn got a call from Norton who offered a

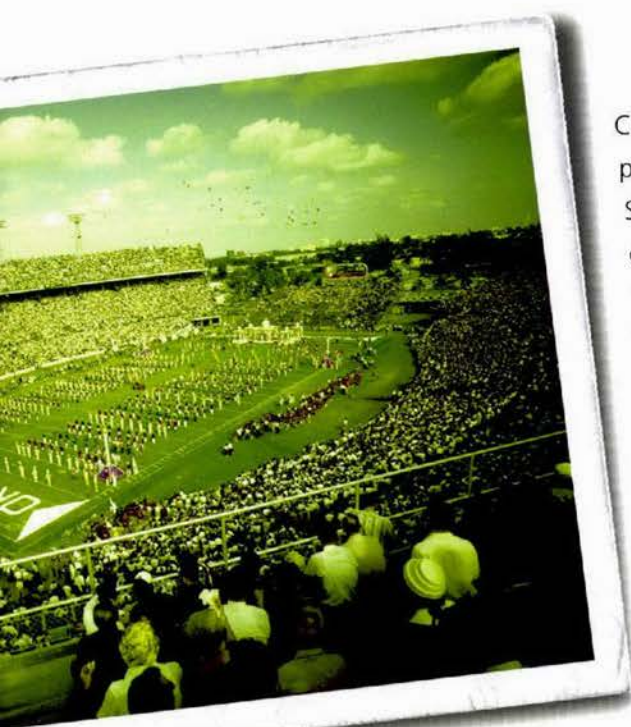
salary of \$16,000 if he would come to Miami. "I asked him where do I sign?" said Flynn. "I knew there was something special happening in Miami and this turned out to be absolutely the right place for me."

When Flynn arrived in Miami on a Sunday afternoon in the fall of 1965, Norton met him at the train station. "Miami had tied Notre Dame 0-0 the night before in the Orange Bowl, and he got a kick out of telling me the score," said Flynn, a loyal fan of the Fighting Irish. "Before long, I was ribbing him and Victor



*"I see that all the large and small things that make Bascom Palmer Eye Institute what it is today – its culture of honesty and integrity, passion for our profession, and compassion for afflicted patients – were embedded here by Dr. Norton's quiet example over the decades he served as chairman."*

— JOHN T. FLYNN, M.D.



Curtin about the poor Boston Red Sox, who would get clobbered by the Yankees each year." It was the start of Flynn's 35-year career at Bascom Palmer. In 2000, he moved to New York to become a faculty member at Columbia University.

"Dr. Norton told me to be the best doctor I could be and that he would fully support my efforts to do just that," Flynn said. "Looking back, I see that all the large and small things that make Bascom Palmer Eye Institute what it is today – its culture of honesty and integrity, passion for our profession, and compassion for afflicted patients – were embedded here by Dr. Norton's quiet example over the decades he served as chairman."

In the early days of his clinical practice, Flynn saw many pediatric patients and launched an amblyopia treatment program, which usually involved putting a patch over one eye to strengthen the other. He also tried pleoptic treatments, in which a technician provides a light treatment to the child's eye several times a

week to "wake it up" while the other was patched. "But I could see right away that pleoptics wouldn't work because it was too labor intensive," Flynn said. Instead, he began studying the causes of amblyopia and identified the site of the problem in the brain. "When you have a long-standing deprivation of the visual system, every portion of the chain of neurons from the retina to the visual cortex suffers," he said.

Flynn also began looking at retinopathy of prematurity (ROP), known in the 1960s as retrolental fibroplasia, a condition that causes abnormal development of blood vessels in the retina of a premature infant. The result can be scarring and retinal detachment, leading to blindness in serious cases.

Using techniques like fluorescein angiography and medical photography of the fundus, he developed a five-stage classification for ROP that incorporated illustrations by Bascom Palmer's medical artist Leona Allison. "Today, every ROP paper uses those international classifications," said Flynn. "It's provided the framework for worldwide research on ROP."

In the 1970s, Flynn developed the first accepted therapy for ROP, using cryotherapy. "We were able to provide with statistical certainty that this treatment of the newborn's eye was better than ignoring the condition," he said. Supported by a \$1.2 million grant from the National Eye Institute, he published a major study in 1984 examining the various risk factors for the condition. Noting his lifelong research interest in this condition, Flynn said in 2011, "I'm still working on ROP."





*1963 residents:  
John Holly, M.D.; John Crowder, M.D.; James Major, M.D.;  
Richard Oglesby, M.D.; Robert Magoon, M.D.*

With a small full-time faculty, Norton relied on volunteer ophthalmologists from the community to teach medical students and ophthalmology residents. Richard Tenzel, M.D., one of Florida's first oculoplastic surgeons, donated his time for 25 years to teach oculoplastics to residents. Other instructors were Harry Horwick, M.D. in ocular muscle surgery and Sanders in corneal transplant surgery.

Another key member of the voluntary faculty was David Kasner, M.D., who took time away from his private practice to teach the ophthalmology residents at the Veterans Administration Hospital.

The voluntary faculty tradition has continued through the decades. Ophthalmologists practicing in the South Florida community, including Norman Jaffe, M.D.; Ralph Kirsch, M.D.;

Henry Clayman, M.D., (resident, 1972); Lewis Dan, M.D.; Jerome Fisher, M.D., (resident, 1980); William Zambrano, M.D., (resident, 1988); Joseph Trentacoste, M.D., (resident, 1988); Raananah Katz, M.D., (resident and fellow, 1988); Henry Trattler, M.D., Myron Tanenbaum, M.D., (resident, 1985); Richard Shugarman, M.D.; Bruce Miller, M.D.; Stanley Braverman, M.D.; and David Singer, M.D., amongst others, have instructed residents in the clinics and surgery for years.

Malcolm N. Luxenberg, M.D., (resident, 1966) was the first former resident to become chairman of an academic ophthalmology program. Six years after his residency, he became chair at Medical College of Georgia. Luxenberg was also one of the early leaders in the Bascom Palmer Eye Institute Alumni Association. "A small group of people from Bascom Palmer got together for a dinner at a Chicago steakhouse in the fall of 1965 during the annual Academy meeting. One of the matters discussed was the establishment of an alumni association which was subsequently formalized the next year," recalled Luxenberg in 2011. Over the years, dedicated alumni have played an important role in the activities of the Bascom Palmer Alumni Association. These include: Carmen Bedotto, M.D., (resident, chief resident, 1970); Lee Duffner, M.D., (resident, 1969); Jerome Fisher, M.D.; Jan Kronish, M.D., (resident, chief resident, 1989); Gordon Miller, M.D.; Patrick Rubsamen, M.D., (resident, fellow, chief resident, 1991, former faculty); Joel Sandberg, M.D., (resident, 1974); J. Harold Stanley, M.D., (resident, fellow, 1997); and Wilson Wallace, M.D., (resident, chief resident, 1974).



The Bascom Palmer tradition of teaching was continued by its own alumni, many of whom would go on to become ophthalmology department chairs at medical schools and teaching hospitals throughout the world. In addition to Luxenberg, these 1960s notable graduates of Bascom Palmer's training programs include Thomas M. Aaberg, Sr., M.D., (fellow, 1969) Emory University; Froncie A. Gutman, M.D., (fellow, 1965) Cleveland Clinic; Dan B. Jones, M.D., (resident and chief resident, 1969) Baylor College of Medicine; and Robert Machemer, M.D., (fellow, 1968 and faculty) Duke University.

To support the expanding faculty the hospital staff also grew. One of those hired early in the Institute's history was Gaby Kressly, who joined as Norton's secretary in 1962. She gradually expanded her role to become department administrator – a position she would hold for more than 40 years.

"Through the years, Dr. Norton would conceive of an idea and I would execute it," Kressly said. "He was a remarkable man and I was lucky to work closely with him on so many projects."

Other key staffers were Wayne Hinecker, who joined in 1963 to manage the vivarium; Yvonne Karrenberg, who was Norton's secretary from 1965 until his retirement; and Jean Newland, who joined in 1967 and directed the billing and collections department. Betsy Barton served as Lawton Smith's secretary from 1962 until 1985. Her daughter, Kathy Corser, then joined the Institute in 1972 and became Curtin's secretary, a function she still upholds to this day in addition to her expanded role as ophthalmology residency/fellowship program coordinator.



*Reva Hurtes*

"Ed Norton was an extraordinary manager. He would ask everyone at the Institute, no matter how junior, about how to improve the Institute. That was one of the things I learned from him, and it's a technique that I still use today," said Alan C. Bird, M.D., (fellow, 1969) emeritus professor at London University and honorary consultant at Moorfields Eye Hospital in the United Kingdom.

As the Institute's library director, Reva Hurtes, hired in 1962, played a particularly important role. "Dr. Norton simply hired us, gave us a place to work, the tools that we needed to do our work and then left us alone to either sink or swim. As a result, we all soared. I don't think that any one of us expected that our lives would become so meaningful."

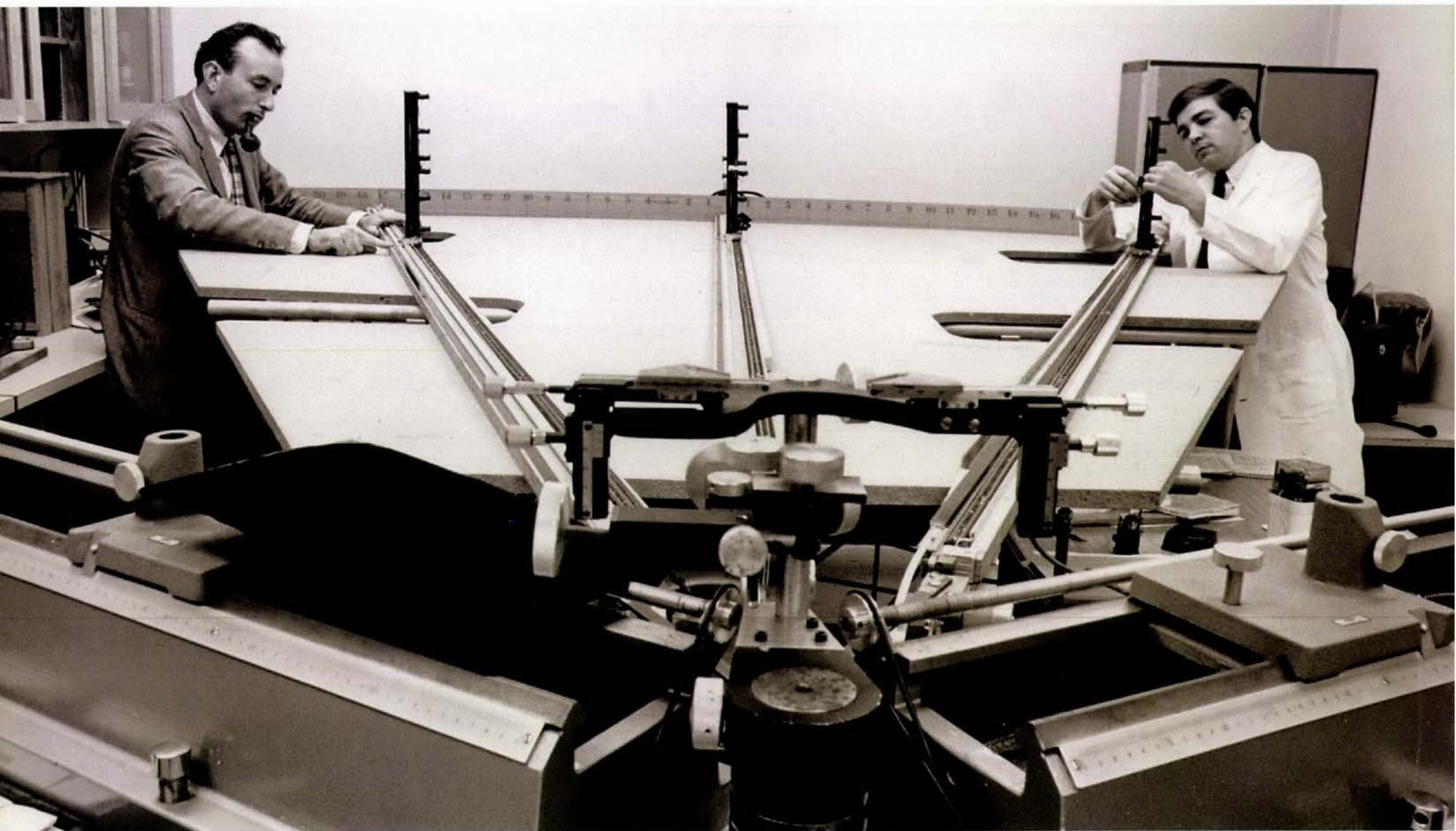


*Gaby Kressly*



*"Many things we do in patient care today we learned to do as a result of the research conducted by preceding generations. Therefore, this generation has an obligation to make its own contributions for future generations."*

— EDWARD W.D. NORTON, M.D.



*Thorne Shipley, Ph.D., and Sam Rawlings, Ph.D., in 1967 working on a haploscope.*



## Launching a research program

Along with clinical care and teaching, Norton launched the department of ophthalmology's research program soon after his arrival. In 1960, from the University of Miami's department of psychology, he recruited Thorne Shipley, Ph.D., an expert in binocular and color vision whose research focused on neurophysiology. "Shipley was interested in how people perceive the world," said long-time faculty member Douglas Anderson.

Two years later, Norton hired Duco I. Hamasaki, Ph.D., a researcher in neurophysiology who soon became known for his electrophysiological single-cell studies and his work on retinal pigments. "I came to Bascom Palmer because Dr. Norton had a strong commitment to research, as well as teaching and patient care," Hamasaki said. Using experimental models, he studied the cells of the retina, such as the photoreceptors, contributing to medical understanding of how the retina functions and amblyopia develops.

When John Flynn joined the faculty, Hamasaki became his research partner on a variety of projects, including electroretinography studies, measuring changes in the retina in response to exposure to light. "That's an optimal relationship, because the clinician can tell the scientist what matters the most, and the scientist can then look at those relationships in a manner the clinician can't," said Anderson. "With such partnerships, the differing backgrounds of a clinician and a laboratory scientist complement each other."

Norton himself took part in several research studies and contributed his insights to others. Wayne Fung said retinal surgeons in the mid-1960s were able to reattach a partial retinal tear, but when the tear was more than halfway around the circumference of the retina, it would flap over to the other side. "Ophthalmology did not have a game plan to handle that problem," said Fung.

"Dr. Norton was the first to think of injecting a gas bubble into the eye to unroll the loose retinal flap." That breakthrough soon led to another procedure called pneumatic retinopexy, where an inert gas would be injected into the vitreous cavity. The gas would expand overnight, preventing fluid from getting into the subretinal space during surgery the next day.

As Norton said in a 1984 interview, "Many things we do in patient care today we learned to do as a result of the research conducted by preceding generations. Therefore, this generation has an obligation to make its own contributions for future generations."



*Duco I. Hamasaki, Ph.D.*



# The Florida Lions Eye Bank

Chartered by Lions International in 1961, the Florida Lions Eye Bank was the first such initiative in the state of Florida. Realizing its importance, Norton requested that the eye bank be located in the pathology department of Bascom Palmer Eye Institute once the building was completed. Since then, Lions International – whose goal is “sight restoration” – has chartered dozens of other eye banks around the county.

With the opening of Bascom Palmer in 1962, Curtin became the first medical director of the Eye Bank. Since then nearly 40,000 people have received donor eye tissue for corneal transplantation. In recent years, ophthalmic surgeons have also used donor scleral tissue for transplantation.

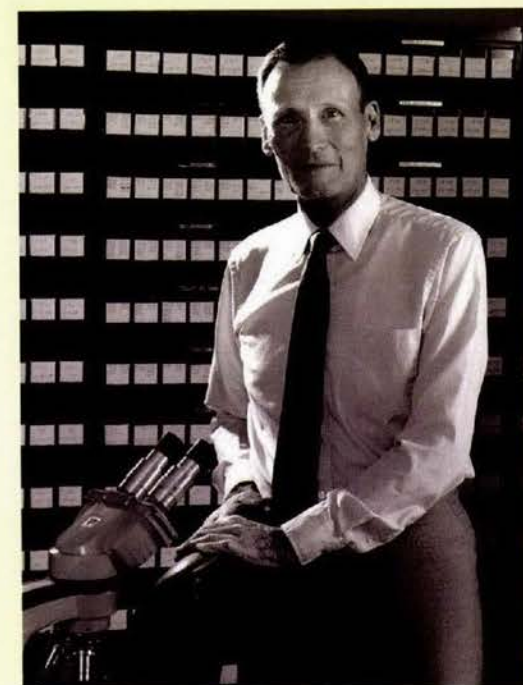
Physicians in the pathology department’s laboratory investigate

tumors, trauma, inflammatory and degenerative conditions, making valuable contributions for the treatment and eventual cure of blinding eye diseases. “Because I was running pathology at Bascom Palmer, the two roles of clinician and medical director integrated quite well,” said Curtin, who led the Eye Bank’s growth for nearly 40 years and, upon departing, left an endowment of more than \$12 million. Robert Rosa, M.D., (resident, fellow 1994) followed Curtin as director of the Florida Lions Eye Bank and pathology laboratory. Prior to joining Bascom Palmer Eye Institute, Rosa completed two fellowships: one in medical retina at Moorfields Eye Hospital in London and another in ophthalmic pathology at Wilmer Eye Institute. Today the Eye Bank’s third medical director is Sander R. Dubovy, M.D.

A retinal specialist, Dubovy is one of only a handful of physicians who is board-certified in ophthalmology and anatomic pathology. “If you understand the pathology, you better understand what you are seeing clinically,” Dubovy said. “It makes you a better diagnostic ophthalmologist.”

Dubovy joined the Bascom Palmer faculty following fellowships in ophthalmic pathology at Johns Hopkins University and the Armed Forces Institute of Pathology and in medical retina at Moorfields Eye Hospital in London.

In gratitude for Curtin’s loyalty and dedication, the South Florida Lions in 1983 made a gift of \$500,000 toward the endowment of the Victor T. Curtin Endowed Chair in Experimental Pathology. “It was a complete surprise to me,” said Curtin at the time.



*Victor T. Curtin, M.D., established the first eye bank in the Southeast United States in January 1962.*



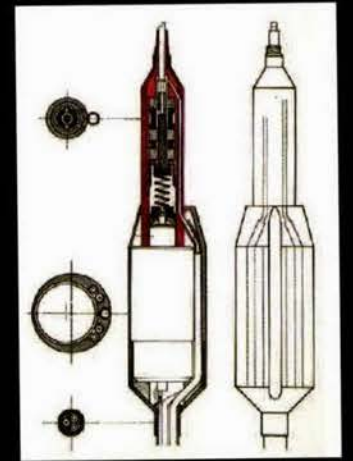
*Sander R. Dubovy, M.D. is the current medical director of the Florida Lions Eye Bank and Bascom Palmer's pathology laboratory.*





*Eastern Airlines flight attendant delivers styrofoam case containing human corneas to waiting police officer who transported the case to the Florida Lions Eye Bank at Bascom Palmer Eye Institute.*





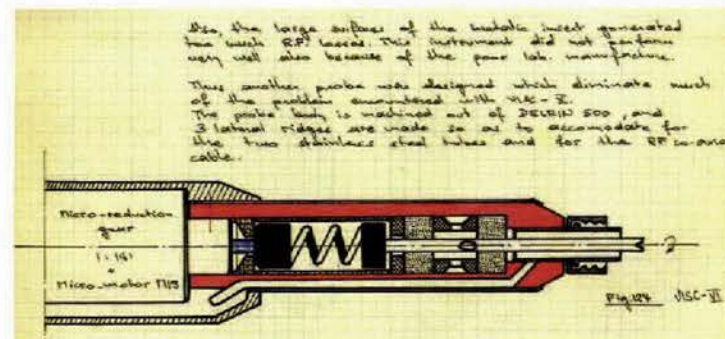
# Creating a Modern Ophthalmic Hospital



For Bascom Palmer Eye Institute, the 1970s was a decade of remarkable growth. Innovative procedures, research studies and a robust medical education program helped the Institute achieve international renown. For patients, the completion of the Anne Bates Leach Eye Hospital in 1976 provided a state-of-the-art facility for comprehensive ophthalmic services.



*The world's first pars plana vitrectomy was performed at Bascom Palmer Eye Institute on April 20, 1970.*

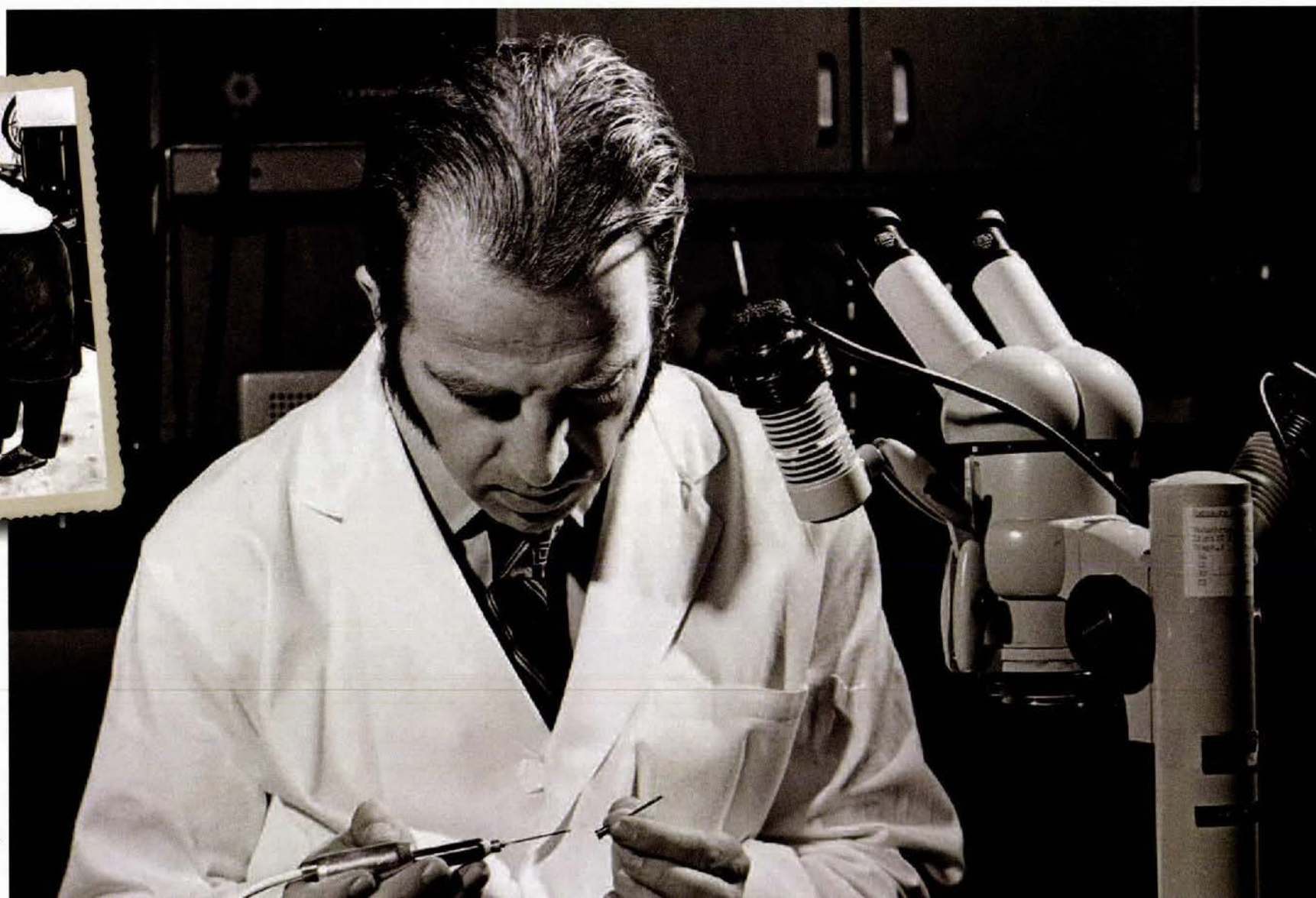


*Drawing from Jean-Marie Parel, Ph.D.'s handwritten records of the VISC VI in 1972.*



*Machemer in his workshop in 1969 trying to drill a perfect hole into an egg to remove the albumen.*

*Robert Machemer, M.D.*





# Surgery heard 'round the world'

On April 20, 1970, Bascom Palmer retinal specialist Robert Machemer, M.D., performed the world's first pars plana vitrectomy on a Miami patient who had not seen with his right eye for five years. Until then, ophthalmologists had considered the vitreous body forbidden territory because of the risk of causing a retinal detachment. Machemer's successful procedure opened the door to many new types of treatment.

This breakthrough was a decade-long team effort involving Bascom Palmer's clinicians, researchers, biomedical engineers and voluntary faculty. Back in 1961, David Kasner, M.D., a voluntary faculty member, was able to preserve some vision in a child's injured eye by removing a portion of the vitreous that had been filled with blood. In the next few years, Kasner developed "open-sky" vitrectomy – making an incision in the front of the eye, removing the vitreous and replacing it with a saline solution to restore the eye's lens and shape. However, the procedure was not widely adopted because of concerns for complications.

In the late 1960s, Machemer began considering a new approach: entering the vitreous through the sclera, also called the pars plana, rather than removing the cornea and lens in the front of the eye. This pars plana vitrectomy would allow surgeons to more successfully and safely remove the vitreous, repair retinal detachments and other vision conditions, while maintaining the eye's shape. "For a young researcher, Bascom Palmer offered an ideal environment, where credit was given to any individual who made a discovery," said Machemer in a

2007 interview. "It was in this supportive environment that the new art of vitreous surgery evolved."

In 1969, Machemer met Jean-Marie Parel, Ph.D., Ing., ETS-G, a Swiss-born biomedical engineer, who at that time was developing motorized microsurgical instruments in Melbourne, Australia. They conceived the idea for an instrument (later called the Vitreous Infusion Suction Cutter or VISC) that could be introduced through the pars plana, aspirate, cut and remove the diseased vitreous while maintaining the shape of the eye through the continuous infusion of saline solution. Machemer first tested this technique in his

garage, removing the white albumen from an egg with a drill rotating inside a metal sleeve. Helmut Buettner, M.D., (fellow, 1975) participated in the development of the early prototype of the VISC. Invited by Norton, Parel came to Bascom Palmer in early 1970 with the first production model of the VISC. "It was one tool that would do three different things," said Parel. "It provided the foundation for doing intraocular microsurgery while preventing the collapse of the eye."

Most importantly, the early prototype VISC made Machemer's surgery a success. "I used that little instrument and it worked," Machemer said. "The patient, who could only see hand movements, saw 20/40 after the operation."



*Jean-Marie Parel, Ph.D.,  
Ing., ETS-G*





*"When I arrived in 1969  
Dr. Norton told me  
that my job would  
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The assignment was no  
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He explained that his  
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the best environment  
within which that  
could happen."*

– DOUGLAS R. ANDERSON, M.D.

*Douglas R. Anderson, M.D.*



## Attracting young faculty

Throughout the 1970s, Bascom Palmer Eye Institute attracted new faculty members who would go on to leave their mark on the field of ophthalmology as clinicians, researchers, educators and administrators. "Dr. Norton chose quality people and then let them decide where they could make the greatest contribution," said Douglas R. Anderson, M.D. "When I arrived in 1969 Dr. Norton told me that my job would be simply to become the best academic ophthalmologist of which I was capable. The assignment was no more specific than that; the details were up to me. He explained that his job was to provide the best environment within which that could happen."

A native of Miami, Anderson completed a glaucoma research fellowship at Massachusetts Eye and Ear Infirmary of Harvard Medical School before returning to his hometown as Bascom Palmer's first glaucoma specialist. "Dr. Gass and others had been seeing those patients, but he was glad to pass them on to me," Anderson said.

In his first decade at Bascom Palmer, Anderson divided his time between clinical care and groundbreaking scientific research. He showed how a rise in intraocular pressure can damage the

optic nerve and contributed to the use of visual field testing to detect early optic nerve changes in glaucoma patients, later writing several books on the subject.

Another newcomer was Richard K. Forster, M.D., (resident and chief resident, 1970) who grew up in rural New Hampshire, and first came to Miami as a general medical officer with the U.S. Public Health Service. Following a cornea and external disease fellowship at the Francis I. Proctor Foundation for Research in Ophthalmology in San Francisco, he returned to Miami and joined the faculty in 1970. One of his early patients was Mrs. Helen Palmer, widow of the Institute's namesake. "She was an inspirational lady," he said. "Bascom Palmer Eye Institute was a reflection of the hopes and dreams of her husband, Dr. Bascom H. Palmer."

Forster focused his clinical and research work on the cornea and external eye diseases caused by fungi, bacteria, viruses and toxins. "I developed a unique practice that encompassed cataract and corneal surgery as well as clinical patient care and research in ocular microbiology and inflammatory diseases," Forster said. He went on to become a leading authority on en-

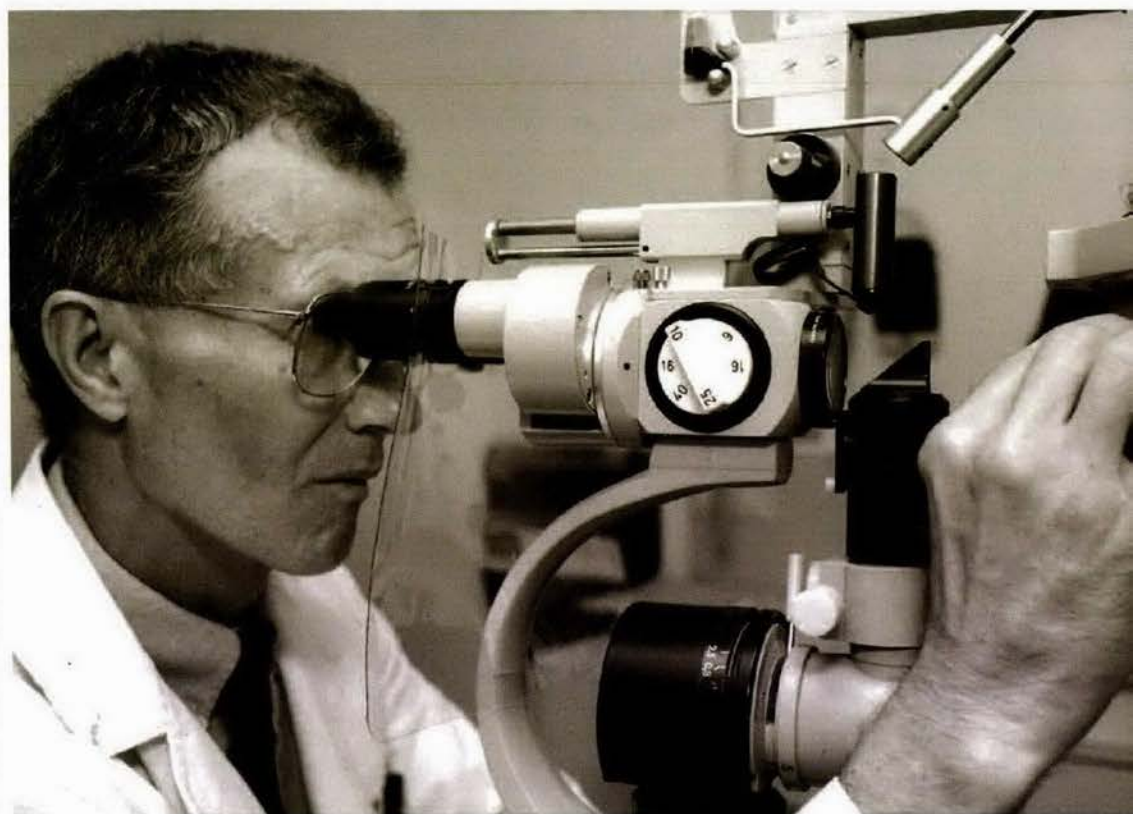


*Richard K. Forster, M.D.*





*Mary Lou Lewis, M.D.*



*Guy O'Grady, M.D.*

dophthalmitis, an infection of the vitreous body within the eye. He also initiated Bascom Palmer's corneal and external disease fellowship program in 1973.

"Ed Norton was like a father to me," Forster recalled. "One of the many things he taught me was that physicians tend to see only what they want to see – so you have to look beyond your expectations."

Another young Bascom Palmer trainee, Joel S. Glaser, M.D., (resident, 1967) joined the faculty as a neuro-ophthalmologist in 1970. He became well known as a lecturer and author, writing the textbook, *Neuro-Ophthalmology*, and more than 180 peer-reviewed articles. "More than 100 subspecialists around the world have received neuro-ophthalmology training at Bascom Palmer," Glaser said in a 2006 interview. "These men and women who carry on the tradition of excellence in patient service, clinical research and enthusiastic teaching are the most important contribution of Bascom Palmer to worldwide neuro-ophthalmology."

Guy O'Grady, M.D., (resident, 1971) joined the faculty after completing a residency. He worked closely with Machemer in the vitrectomy service before becoming head of the ophthalmology service at the Veteran's Administration Hospital in Miami. For years, the Miami VA hospital was the only U.S. government hospital performing vitrectomies. O'Grady led the VA program for more than 30 years and became professor emeritus of ophthalmology upon his retirement in 2006.

In 1972, Bascom Palmer Eye Institute hired its first female faculty member, Mary Lou Lewis, M.D., (fellow, 1972). "Bascom Palmer was a great place to work, but a few patients were uncomfortable because I was a woman," said Lewis. "I received a lot of support from the staff."

During the 1970s, Lewis primarily performed retinal detachment and vitreoretinal surgeries. In 1979, she began work on the Macular Photocoagulation Study, evaluating whether laser surgery could improve the vision in patients with macular degeneration. "Lasers are now passé, because it's easier to





*John G. Clarkson, M.D., and Victor T. Curtin, M.D.*

*"Perhaps the most remarkable thing about those early days was Dr. Norton's ability to choose that first group of faculty members. All five of them [Drs. Norton, Curtin, Smith, Gass and Flynn] were extraordinary clinicians and educators."*

— JOHN G. CLARKSON, M.D.

treat the condition medically with injections," said Lewis, who retired in 2001.

A retina specialist who would become chairman of Bascom Palmer Eye Institute, dean of the University of Miami School of Medicine and executive director of the American Board of Ophthalmology was John G. Clarkson, M.D., (resident, fellow, chief resident, 1975). He joined the faculty in 1977 following fellowships in ophthalmic pathology and vitreoretinal surgery at Johns Hopkins University. "I was introduced to Bascom Palmer Eye Institute shortly after it was established," said Clarkson. "As a medical student at the University of Miami in the late 1960s, I had the opportunity to work with Dr. Gass and attended his popular fluorescein conferences. Few attained the widespread respect and admiration that Gass amassed in his lifetime. He had the ability to translate and publish his clinical observations to enhance the treatment of eye diseases," Clarkson said. "As a result, millions of people

around the world benefit from them daily and are deeply indebted to him."

"Perhaps the most remarkable thing about those early days was Dr. Norton's ability to choose that first group of faculty members," added Clarkson. "All five of them [Drs. Norton, Curtin, Smith, Gass and Flynn] were extraordinary clinicians and educators. Through the years, the Institute's advances in clinical care, research and education have all begun by selecting people with skills and integrity who always put the patient first."

Clarkson also points to Miami's diverse patient base as another contributing factor in attracting top clinicians, researchers and educators.

"Our relationship with Jackson Memorial Hospital, serving patients regardless of ability to pay, created a wonderful teaching environment. Providing excellent clinical care to thousands of patients, each with unique eye problems, translated into an outstanding teaching program."



## Partners in patient care

*“Bascom Palmer played a pivotal role in the advance of intraocular lenses, and Dr. Norton was a great ally in what has been called one of the world’s greatest medical innovations as far as improving the quality of life.”*

– NORMAN S. JAFFE, M.D.

One of the earliest studies to bring international renown to Bascom Palmer involved the safety of intraocular lens implants. Miami ophthalmologist Norman S. Jaffe, M.D., was one of the first U.S. physicians to use the new plastic lenses in cataract surgery, implanting the first ones on December 4, 1967. “I did six cases and five more the following day,” he recalled. “These 11 patients were so excited to have a lens inside their eye rather than having to wear corrective eyeglasses.”

Jaffe began training other ophthalmologists in the community and presented his initial patients at weekly Grand Rounds presentations at Bascom Palmer Eye Institute. “There was a controversy about the procedure in Europe at the time,” he said. “I felt that the more patients we could help, the more cases we would have to study.”

The lens implants were also a controversial topic in U.S. academic medical centers. “The idea was not very popular back then,” said Anderson. “Many doctors felt the eye would reject the lens or that the implant would lead to problems later on.” A New York ophthalmologist even wrote that these implants were “intraocular time bombs.”

After 243 implant cases had been completed in Miami, Norton asked Jaffe to meet with him and decide how to proceed with this new and controversial procedure. After that meeting, the Miami ophthalmologists in private practice who were doing lens implants agreed to a two-year moratorium on new procedures from October 1, 1969 to October 1, 1971 so these 243 cases could be examined for any complications. “It was also decided that the ophthalmologists who would examine the patients would not be the same as the ones who had performed the surgery,” Jaffe said.



Anderson said the agreement showed Norton's influence on the Miami ophthalmic community, "The physicians in private practice went along, even though some doctors were making significant money from the procedure," he said. "The agreement worked only because Norton was able to convince every single ophthalmologist in the community not to do the procedure, so that there were none with the competitive advantage of offering the new type of surgery." After the two-year moratorium, the Bascom Palmer physicians found that the implants gave much better vision than the "Coke bottle bottom" eyeglasses previously used as an alternative for cataract surgery. Patients had normal side vision and enjoyed a higher level of satisfaction with the surgery.

When the favorable report was presented, ophthalmologists in Miami and around the world resumed the procedure with rigid guidelines for lens implants. Jaffe became president of the new American Intraocular Lens Society in 1974 and Norton chaired a 1975 symposium on lens implants for the American Academy of Ophthalmology, even though he was not a cataract surgeon himself.

The so-called Miami Study of Intraocular Lens Implants became a landmark, giving the implant credibility and respectability. "Nowhere else had there been a study where physicians would stop doing a certain procedure at the request of an academic medical center," said Jaffe. "Bascom Palmer played a pivotal role in the advance of intraocular lenses, and Dr. Norton was a great ally in what has been called one of the world's greatest medical innovations as far as improving the quality of life."



*Mark T. Dunbar, O.D.*

#### **OPTOMETRY PROGRAM BEGINS IN 1974**

Bascom Palmer Eye Institute's optometry program started in 1974 when

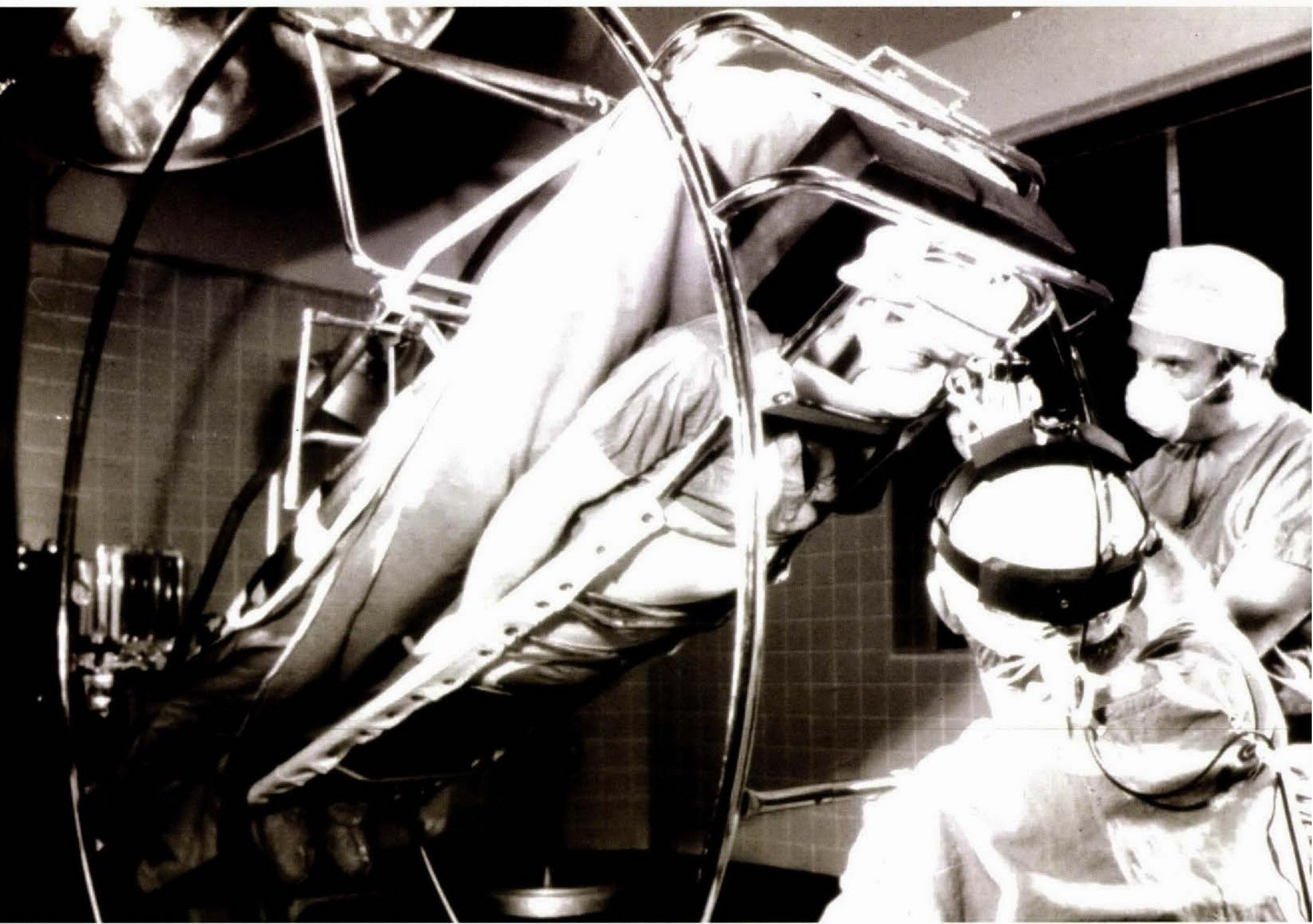


*Charles J. Pappas, O.D.  
in 1977*

optometrist Don Hoffer, O.D., was hired to deliver optometric care to Bascom Palmer's patients. Later that year, Charles J. Pappas, O.D., became the Institute's second optometrist. Over the ensuing decades, Pappas helped build Bascom Palmer's Low-Vision Service. He served as director of optometric services until 1999 when he was promoted to director of patient clinic services and currently serves as chief operations officer.

Currently, there are seven full-time optometrists who provide optometric services in all of the subspecialty services at Bascom Palmer Eye Institute. Mark T. Dunbar, O.D., who joined Bascom Palmer in 1986, currently serves as director of optometric services and optometric residency supervisor. Without Norton's steadfast support for the development of these programs they would not have been established and sustained. This relationship with optometry formed the basis for similar programs at many other academic institutions as well as private ophthalmology practices.





*In the early 1970s, Bascom Palmer's ophthalmic biophysics center made this rotating table for retinal detachment surgery. Gas was injected into the eye and the patient remained face down during the surgery.*



# Advancing vision research

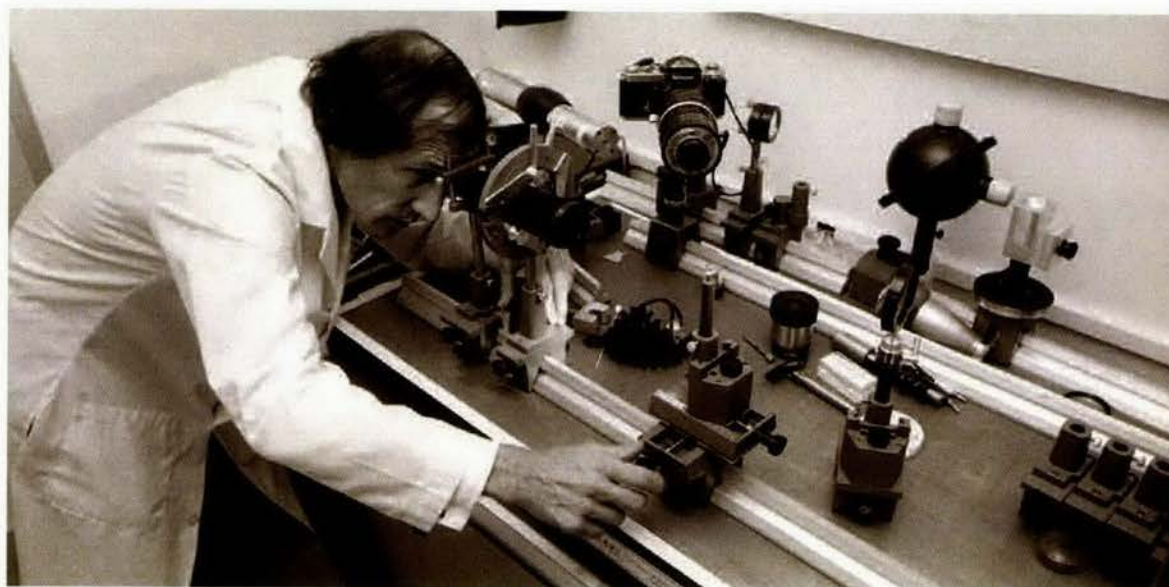
The 1970s was a fertile period for biomedical research and development at Bascom Palmer Eye Institute. Under Parel's leadership, the ophthalmic biophysics laboratory (later named for benefactor Walter G. Ross) began developing new equipment to advance clinical care. In its first decade, the laboratory team was responsible for inventing or improving more than 100 devices. At least once during Parel's career at Bascom Palmer, he had more patents than the rest of the faculty of the University of Miami School of Medicine combined.

"Dr. Norton had a view of the future so far reaching it was unbelievable," said Parel. "He recognized how biophysical engineering could make a huge difference in ophthalmology. He was much more interested in the instrumentation than many of his peers."

The University of Miami School of Medicine had developed a patient mannequin for first-year medical students in the early 1970s. However, the eyes were static and provided no diagnostic clues. At Norton's request, Parel developed the first modern programmable eye, with features like a sensor that would close the iris in response to light. "We were able to mimic conditions like retinopathy of prematurity," Parel said. "A student could recreate an intravenous injection and use fluorescein angiography to see the changes in real time."

Norton also helped to develop the Norton Slit Lamp, an instrument that made it possible for the ophthalmologist to look into the eye and obtain a series of three-dimensional pictures of anterior segment blood flow.

Other advances occurred in Bascom Palmer's research laboratories, where Bascom Palmer's clinicians and scientists studied a wide range of conditions. In the 1970s, Anderson was the first to demonstrate an abnormal physiologic



*Jean-Marie Parel, Ph.D., Ing., ETS-G*

process in the optic nerve. "We had known that pressure damaged the nerve, but were not sure if it was due to the blood flow or something else," he said. "We demonstrated a blockage of fast axonal transport – a vital process to the neurons. We found that elevation of pressure affected that nerve, and demonstrated that this was secondary, at least in part, to a deficiency in the blood flow."

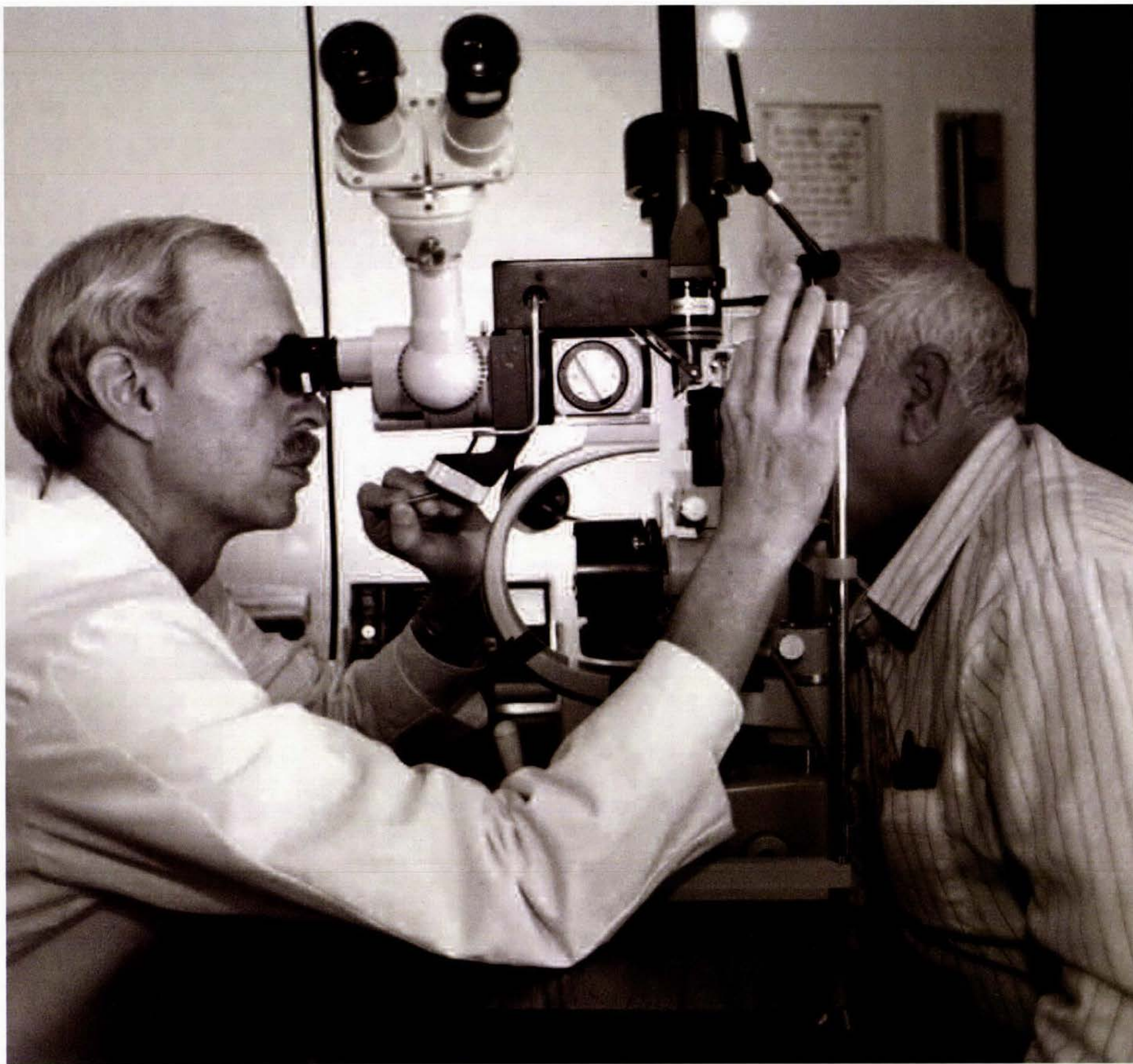
Anderson also worked closely with Ralph Kirsch, M.D., a member of the voluntary faculty, in reviewing photos of the optic nerve in his patients. "I had been taught that you couldn't tell an optic nerve damaged by glaucoma from a normal optic nerve until it had been totally damaged," Anderson said. "We spent many hours together looking at photos until we spotted the clue. In glaucoma patients, the upper and lower parts of the optic nerve were thin and in a normal nerve they were not."

After five years of work, Anderson mounted images taken by Bascom Palmer photographer Freddy Gonzalez and presented their findings at the 1975 meeting of the American Academy of Ophthalmology. Their paper won a gold medal



*Ralph Kirsch, M.D.*





*Harry W. Flynn, Jr., M.D.*



at the conference. Anderson became a leader in visual field research, and taught several generations of technicians how to test their patients. "That was a major part of my life," said Anderson, who wrote a textbook in the field.

Along with his clinical and administrative responsibilities, Victor Curtin also accomplished several medical advancements. For instance, he changed the color of sutures from white to blue for better visibility when removing them. He also advocated the use of thin, durable nylon sutures for the deep part of the cornea; those sutures are still used today.

One of his research interests was ocular tumors, especially melanomas, and how to treat them. With the assistance of Kathy Corser, Curtin tracked 100 patients from 1963-1978 who had small or medium tumors. "Most doctors would see a melanoma and remove the eye right away," he said. "Our study found that monitoring the tumor was a better strategy. If the tumor grows, you would remove the eye. But if there was no change and the eye was still functional, you didn't have to do that. So we were able to preserve vision in many patients."

In 1973, Robert W. Knighton, Ph.D., (fellow, 1979) joined the research faculty, and began studying how to improve clinical imaging of the tissues of the eye. "Back then, there weren't many independent researchers at Bascom Palmer," he recalled, noting that Bascom Palmer's first ultrasound laboratory was located next door. "Much of the work was being done by our clinician-scientists, like Doug Anderson and Robert Machemer, who both had their own labs."

Knighton was in charge of the clinical electrophysiology research program, exploring a technology then in its infancy. He looked for new ways to improve electroretinograms (ERGs) that provided clearer diagnostic images to ophthalmic surgeons. "In the early days of vitrectomies, the physicians needed ways to assess the retina when it was screened by dense blood in the vitreous body," he said. "It took brighter and brighter flashes of light to get an ERG to see if the retina was functioning," he said. "The hemorrhages from surgery

lasted longer in the 1970s than they do today – now that our ophthalmologists have better tools."

In 1978, vitreoretinal specialist Harry W. Flynn, Jr., M.D., joined the faculty, beginning a career as clinician, researcher and educator that continues today. "Dr. Norton asked me to take over the Early Treatment Diabetic Retinopathy Study (ETDRS), treat endophthalmitis patients and be a utility player for the retina service," Flynn recalled. "I have had a strong interest in clinical trials and have participated in a number of studies."

Collaborating closely with George W. Blankenship, M.D., Flynn worked on the 10-year multicenter ETDRS study, which showed laser treatment for diabetic macular edema provided a definite benefit to patients in terms of a reduced loss of vision. Flynn participated in other studies, including the use of silicon oil, rather than a gas bubble, in the treatment of complex retinal detachments. "Both modalities produced equivalent results, and the use of silicon oil became more prevalent in the U.S. after the study," he said.

This was a decade that brought to Bascom Palmer Eye Institute many bright individuals who worked with Machemer and his team to develop many of the concepts that would pave the way for the knowledge that exists today in the diagnosis and treatment of retinal detachments. Among them were Charles P. Wilkinson, M.D., (fellow, 1971); Steve Charles, M.D., (resident, 1973); Ron G. Michels, M.D., (fellow, 1973); pGary W. Abrams, M.D., (fellow, 1978); Stanley Chang, M.D., (fellow, 1979) and Mark S. Blumenkranz, M.D., (fellow, 1980) as well as many others. Summing up the Institute's contributions during the decade, Clarkson said, "In terms of research, our biggest impact was in clinical studies that involved comparing medications, surgical procedures or new devices. We helped keep ophthalmology moving forward."



*Robert W. Knighton, Ph.D., Irene Holmes, R.N., H. Thorne Shipley, Ph.D., and Edward W.D. Norton, M.D. celebrate Irene's 20th year of employment in 1979.*



*George W. Blankenship, M.D.*



*"Dr. Norton pointed to a parking lot next door to our building and said, 'We will put the hospital there.'"*

— JEAN-MARIE PAREL, PH.D., ING., ETS-G



*The site of the new eye hospital.*

## Building a new eye hospital



*At the March 22, 1971 Richard Tucker benefit concert are, standing, David Tucker, M.D., (resident, 1973) with his father, opera singer Richard Tucker, and seated, are Mrs. Richard Tucker and Edward W.D. Norton, M.D.*

In the early 1970s, Bascom Palmer's growing reputation in the community led to a steady increase in patient visits and surgeries. Doctors treated 32,000 patients in 1971, compared with 13,600 a decade earlier. Surgical procedures rose by more than 50 percent, from 1,300 to 2,000 in the same period.

Forster recalls that patients in the early 1970s

could choose physicians based on their reputations and experience in particular diseases and disorders. "There were no limitations on the services we could provide if we had the expertise," he said. "We were all happy with the arrangement. Later, we split into different practice areas because we needed a way to organize the clinical care and research efforts within our facilities."

In the 1970s, a typical hospital stay for cataract or glaucoma surgery was five or six days – down only slightly from the 1960s. "At the time, Ophthalmology had just six beds reserved for surgical patients, so we could only do one operation a day, rather than ideally doing half a dozen or more," said Anderson.

Finding enough space to examine patients was another problem. The Institute's ground floor had only four examination rooms, so faculty members traded days to hold their outpatient clinics. The second floor had a corridor that connected to Jackson Memorial Hospital's ambulatory care facility, so residents saw patients in the Jackson clinic rooms.

Fortunately, Highland Park Hospital, a psychiatric facility located across NW 9th Avenue, wanted to become a general acute-care hospital and needed non-psychiatric patients. That provided a temporary solution to the space problem. "We took the whole second floor, which had 17 beds, along with two operating rooms on the sixth floor," said Anderson. "For several years, we did our simplest surgeries there and the more complex cases and resident cases were done at Jackson."





*Entryway of "the Annex" in 1973 was directly in front of the hospital. The twin mobile trailers created much-needed temporary space for doctors and patients until the new building was completed.*

Meanwhile, Norton recognized a need for a separate eye hospital and began making plans. Parel recalls a 1972 conversation with Norton. "Dr. Norton pointed to a parking lot next door to our building and said, 'We will put the hospital there.'"

The next year, Norton found a temporary solution to Bascom Palmer's growing space shortage by putting two mobile trailers on the parking lot. "This created five examination rooms and a special room for visual field tests, along with a reception and waiting area," Anderson said. "He called it 'The Annex,' but we called it 'the trailer.' The air conditioning worked well most of the time, and it provided a short-term solution, but it was really just two tin boxes."

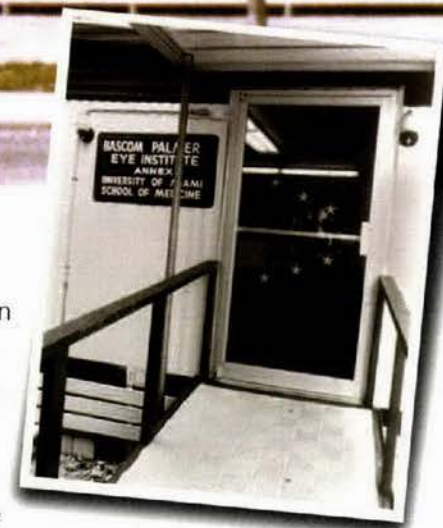
During the early 1970s, Norton again placed a high priority on fundraising. One event featured a famous singer: tenor Richard Tucker, an opera star whose son, David Tucker, M.D., (resident and chief resident, 1973) was then an ophthalmology resident at Bascom Palmer Eye Institute.

Norton also reached out to several Bascom Palmer patients. One of them was Anne Bates Leach, a resident of Palm Beach whose family had large holdings in the Coca-Cola Company. Leach had undergone a successful corneal transplant in 1970

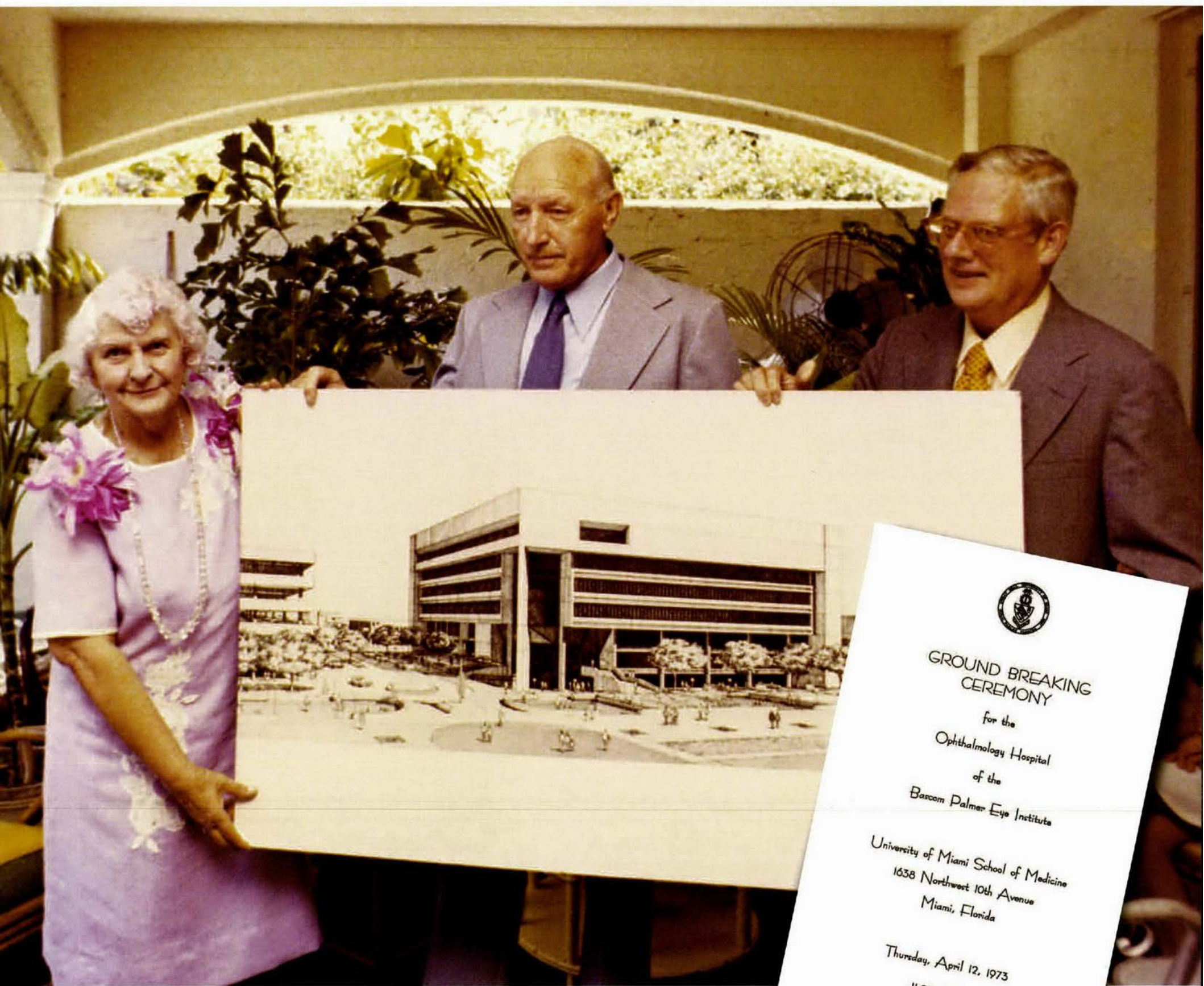
and recognized the need for an eye hospital. Clarkson recalls a memorable day when Leach had lunch with Norton and University of Miami President Henry King Stanford at The Breakers in Palm Beach. She and President Stanford discussed Bascom Palmer Eye Institute's needs for a larger facility and by the end of the conversation, the gift for the hospital was assured.

Leach contributed more than \$1.5 million for the construction of the hospital and another \$1 million for the Norton Professorship. She secured additional support from her friends in the Southern Dames of America, a charitable group of women in Palm Beach County that encouraged ophthalmic research and other educational programs. One of those benefactors was Celeste Sanford, who also donated more than \$1 million to the hospital fund.

Miami attorney, Robert Cole offered legal advice to Norton and Curtin that would prove invaluable in the future. Cole counseled Norton to protect their investment in the future hospital by purchasing surrounding properties. Cole also helped secure bonding for the new hospital. Meanwhile, Norton began talking with Hilario Candela, FAIA, lead architect of the Miami







Anne Bates Leach proudly displays a rendering of the new hospital named in her honor. With her is her husband, Willafor Leach (center) and Fred Barcroft, the first development officer for the Institute.





*"Dr. Norton would call me on weekends with his ideas. He wanted the hospital's design to have a human touch, welcoming patients and family members while incorporating the latest technology."*

– HILARIO CANDELA, FAIA

architectural firm Spillis Candela about designing a new eye hospital on an L-shaped site across from the Institute's current building. "Dr. Norton would call me on weekends with his ideas," recalled Candela. "He wanted the hospital's design to have a human touch, welcoming patients and family members, while incorporating the latest technology. We did mock-ups of the offices, examination rooms and the waiting areas so the physicians could try things out."

Norton called on Parel and Machemer for help in designing the operating rooms – a key component of the first free-standing eye hospital in the Southeast United States. He also sought assistance from Curtin and Gaby Kressly to design the inpatient rooms – where surgical patients spent considerably more time recovering during the 1970s than they do now. After talking with faculty of the University of Miami School of Architecture, Parel sketched out some of the requirements in terms of space, lighting and instrumentation. "The physicians needed both hands for surgery, but also needed to control the surgical microscope and surgical instruments," he said. "That was the primary challenge."

As for the exterior of the building, Candela proposed a poured concrete and steel design that reflected the mid-century modern architecture style with curves that softened the interior. The strong materials also allowed him to include an atrium and other open spaces inside the building. "The biggest issue was the small site," Candela said. "So we built to within six inches of the property line, and included two floors of expansion space for the future. Thirty-five years later, the building has stood the test of time," Candela said in 2011.

With private-sector support and bond money from the University of Miami, about \$6 million was available to build a seven-story, 220,000 square foot hospital on a 1.54-acre site at 900 NW 17th Street, across the street from Bascom Palmer's original location. With the success of the fundraising campaign, groundbreaking took place on April 12, 1973.

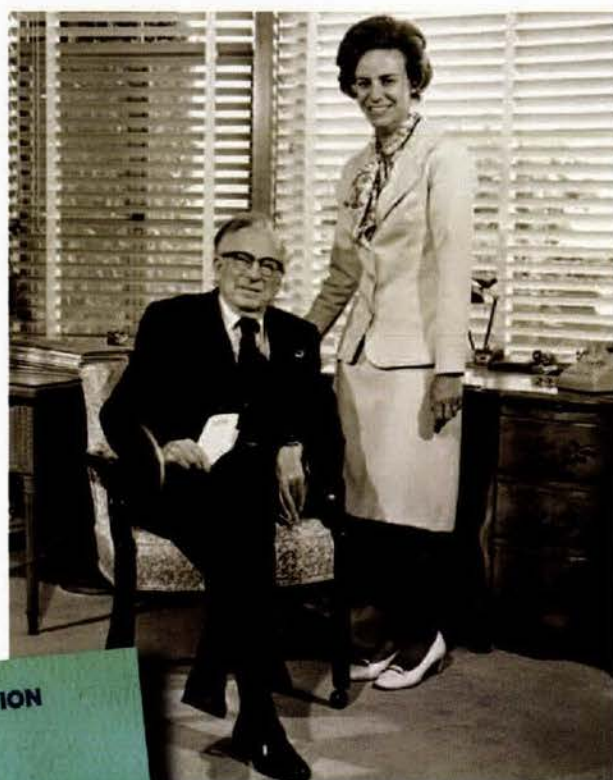
After construction began on the hospital, that would be named in honor of Anne Bates Leach, Norton and Curtin looked at the various options for managing the hospital's operations. Drawing on Don Gass' connections in Nashville, Norton talked with Thomas F. Frist, M.D., chairman of Hospital Corporation of America (HCA). "We selected HCA, which proved to be a very good decision," said Curtin.

In September 1974, Donald E. Strange arrived as HCA's management consultant. He took charge of the construction project, which was experiencing delays and cost overruns. "I think Don did a wonderful job seeing that the hospital got built," said Norton at the time. "He made some changes, which cost money of course, but they were much needed. He did an excellent job."

Eventually, the total cost was nearly \$14 million, far above the original estimate of \$9.5 million. "Ed Norton would say, 'It only took 13 months to build the Empire State Building, while our hospital construction went on and on to July 1976,'" Curtin said.

As a result of various construction delays, the new hospital was not finished in time for the opening ceremony planned for January 1976. Therefore, a dedication ceremony was held in July. Bascom Palmer's clinicians moved to the building that summer, leaving behind their research laboratories in the original building.

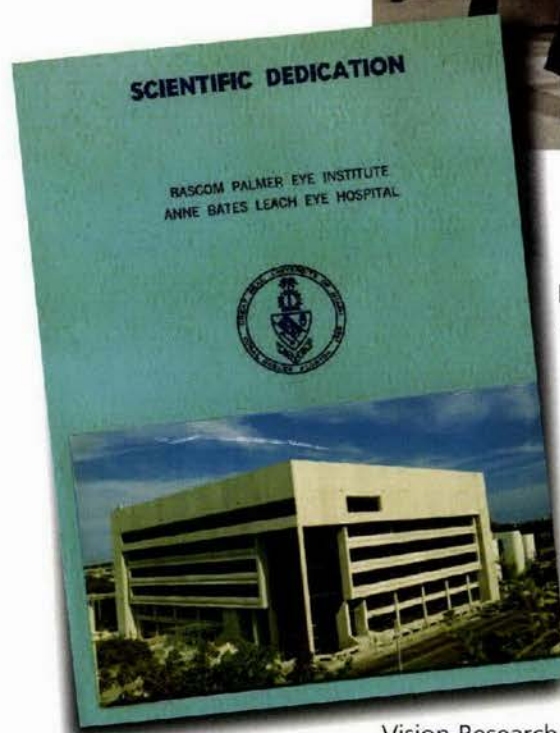




*William L. McKnight and  
Mary Lou Lewis, M.D.*



*1973 construction site would become the  
Anne Bates Leach Eye Hospital*



Blankenship completed the first procedure in the hospital's new operating rooms that October. "The faculty loved the new hospital," said Lewis. "It had well-designed examining rooms, and the operating suites were very well equipped. It provided a very nice, welcoming atmosphere for our patients."

With the opening of the Anne Bates Leach Eye Hospital, the Institute's original building was renamed the William L. McKnight

Vision Research Center. McKnight, retired chairman of the 3M Company and a grateful patient of Lewis, had donated \$2.5 million for vision research.

In November, the Bascom Palmer library was scheduled to be moved into the newly built hospital on the lower level, one floor below the lobby and first floor. "The day before we were to start moving the books, a large sprinkler system water main broke just outside of the library's back entrance door," said Reva Hurtes. "Within minutes, the patio area around the library became a moat. The windows buckled and the caulking

gave way. We had little jets of water streaming into the library, as well as large streams coming in under the back door." The flood delayed the library's move until March 1978.

"Believe it or not, the flood was a fortuitous happening," added Hurtes. "It gave us an opportunity to collect insurance on the old, unattractive, damaged furniture we had moved from the other building and start anew." In that regard, Norton found two young cabinetmakers in Coconut Grove, Florida, willing to refurbish the library. Over the next few years, expert craftsmen Bill Frohbose and Randy Beers designed and hand built the beautiful library interior, bookshelves and desks using exotic hardwoods.

When the hospital opened, floors one and two were used for outpatient clinics, floors three and four were uncompleted shell space, and floors five and six were dedicated to surgery and patient beds. "At the time, Dr. Norton could not foresee whether the Institute would need more space for surgery and inpatients or more space for outpatient clinical care. As it turned out, we eventually needed both of the shell floors for outpatient care," said Anderson. "In fact, while the hospital





*Flooding on the lower level.*

*Only a few months after its 1976 opening, the Anne Bates Leach Eye Hospital was struck by disaster when 40,000 gallons of water from a ruptured water main flooded the lower level of the hospital.*

was licensed for 100 beds, that eventually turned out to be too many for our needs. So, in later years many rooms have been converted to offices, but satisfied the licensure as long as the rooms could be turned into patient rooms within 24 hours. That's why the offices on the top floors have sinks and bathrooms. If need be, we could move out the file cabinets and desks and move in the beds, and we would be ready to go."

Norton's desire for Bascom Palmer to be in control of its own destiny, coupled with a strong sense of financial accountability, drove other key decisions in the 1970s. In a 1973 conversation, Norton asked Forster what he thought about forming a charitable foundation. "He told me that he wanted Bascom Palmer to maintain control over its future," Forster said.

At the same time, Norton's fundraising efforts were being hampered because some donors were refusing to contribute funds to the University of Miami which they felt would not directly benefit Bascom Palmer Eye Institute. The desire to better manage Bascom Palmer's finances, coupled with donors who resisted contributing to the University, led Norton to establish the Ophthalmology Research Foundation. The Foundation

accepted donations to support the department of ophthalmology/ Bascom Palmer's vision research, clinical care, capital projects and medical education. A few years later, Foundation money was used to buy 7.5 acres of land in Palm Beach County that would later become the site for Bascom Palmer's first campus outside of Miami.

In addition, Curtin points to Norton's strong sense of financial accountability as one of the enduring strengths of the Institute, allowing Bascom Palmer Eye Institute to contribute to the School of Medicine and the University as a whole. That sense of sharing extended to the faculty as well. During the 1970s and early 1980s, faculty members would get a bonus if their clinical income exceeded a level set by their employment contracts. "By tradition, anyone who received a bonus would donate those funds back to the Ophthalmology Research Foundation," said Anderson. "That provided an important source of funding for the department of ophthalmology to buy new equipment and support education or research. Everyone gave gladly because they recognized the importance of investing in our own Institute."



*“The day I left Bascom Palmer, I asked Dr. Norton what I could do to repay him and the Institute for the gift of learning they bestowed. His answer was just one word: ‘teach.’”*

— STEVE CHARLES, M.D.



## Training the trainers

Through the 1970s, Bascom Palmer's residency and fellowship programs attracted a growing number of physicians who wanted to learn from some of the top minds in the field.

"Dr. Norton was not just an ophthalmologist," said Parel. "He was an excellent teacher who knew medicine from head to toe. One day at Grand Rounds, one of the residents presented a case of a patient with a malformation of the eyelids that the resident could not explain. Dr. Norton asked the young physician if he had removed the patient's shoes and socks. Norton pointed out that an examination of the foot would have shown malformation of the toes (syndactyly), a possible symptom of Meyer-Schwickerath's syndrome."

In 1972, the world's top retinal surgeons gathered at Key Biscayne, Florida for the meeting of the prestigious Club Jules

Gonin. Norton invited Parel to demonstrate Bascom Palmer's new vitrectomy (VISC) system. "My engineer, Willy Aumayer, built a huge Plexiglas box to protect the equipment, and I held it on top of an open truck as we drove over the causeway to Key Biscayne," Parel recalled. After the presentation, every one of the attendees wanted to learn more about Bascom Palmer's innovative microsurgical system.

Responding to those requests, Norton launched a training program at Bascom Palmer for ophthalmologists who wanted to perform vitrectomies using the new equipment. "Dr. Norton felt this was the best way to help patients around the world," said Parel. "The patients could not all come to Bascom Palmer, but we could train the top clinicians to begin doing these procedures in their own countries."





*The Eastern Ophthalmic Pathology Society held its 9th annual meeting in Miami in February 1970. Pictured here are several Bascom Palmer Eye Institute faculty and alumni including J. Donald M. Gass, M.D. (second from right front row), Helmut Buettner, M.D., Robert Machmer, M.D., (first and second in back row), Victor T. Curtin, M.D., (8th in back row) and Douglas Anderson, M.D. (far right back row). Other notable attendees at the meeting included: David Cogan, M.D.; Ralph Eagle, Jr., M.D.; Ramon Font, M.D.; Stephen Ryan, M.D.; Paul Taylor-Smith, M.D.; Mark Tso, M.D.; Agnes K. Bunyor, M.D.; Barbara Streeten, M.D.; and Thom Zimmerman, M.D.*

Under Parel's direction, Bascom Palmer's ophthalmic biophysics center produced 13 automated VISC systems for its first course on vitrectomies. "Afterwards, we gave the equipment to those retinal specialists and asked them to tell us their results," Parel said. "I felt that was very generous of Dr. Norton, considering the time and cost we had invested in the equipment. But he told me, 'If they succeed in helping patients, you will have succeeded as well,' and he was absolutely right."

As a further example of "The Chief's" generosity and commitment to medical care, Norton gave the hand-drawn VISC designs and a prototype to a West German surgical instrument company rather than patent the system. Before long, several manufacturers had entered the market. "The process of commercialization allowed technology companies to try out new

materials like titanium, as well as miniaturizing portions of the system," said Parel. "They had the funds to accelerate development far beyond our capabilities."

During the 1970s, the Bascom Palmer faculty taught vitrectomy techniques to its fellows and residents, who helped disseminate that knowledge around the world. Mizuo Matsui M.D., (fellow, 1972) became the first ophthalmologist to perform vitrectomies in Japan, and later became president of the Japanese Ophthalmological Society. Australian Joseph Yeung, M.D., (resident, 1974) returned to Melbourne, where he was the first to perform vitrectomy and later pioneered this procedure in his native Hong Kong.

Charles, a mechanical and electrical engineer as well as a vitreoretinal surgeon, joined the National Institutes of Health

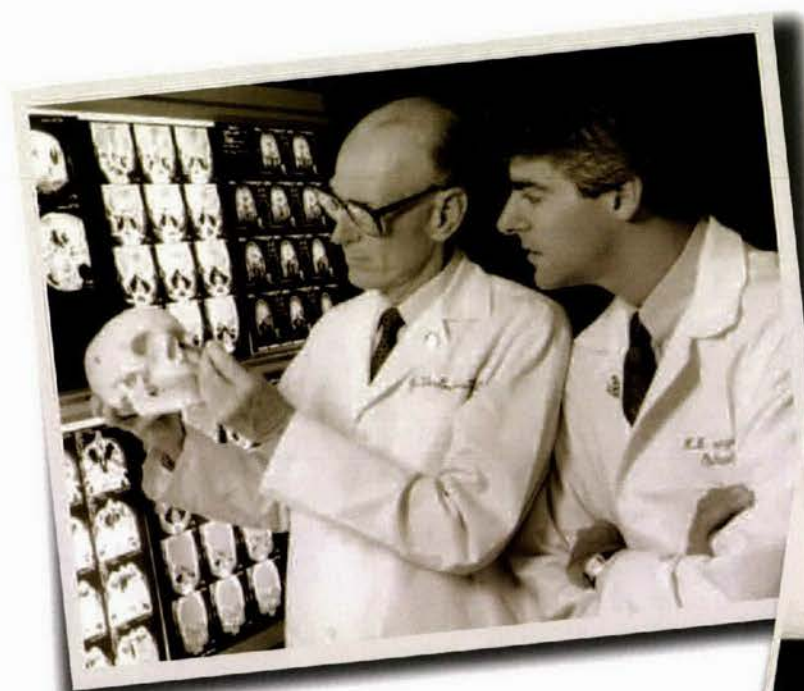


*Steve Charles, M.D.*



*"The driving force behind the Bascom Palmer Eye Institute is the high quality and energy of the residents and fellows. They are the true engine of Bascom Palmer Eye Institute."*

– HARRY W. FLYNN, JR., M.D.



*J. Lawton Smith, M.D., and Mitchell B. Strominger, M.D., (fellow, 1993) examine a real skull. "Alas, poor Yorick, I knew him well."*



*Joel S. Glaser, M.D.*

following his training at Bascom Palmer, and later entered private practice in Tennessee. "The day I left Bascom Palmer, I asked Dr. Norton what I could do to repay him and the Institute for the gift of learning they bestowed," said Charles. "His answer was just one word: 'teach.'"

Buettner went to the Mayo Clinic and become a leader in vitreous surgery for diabetic retinopathy and other vascular diseases. In 1978, Machemer left Bascom Palmer to become chairman of Duke University's department of ophthalmology.

Throughout his long tenure, Norton's focus on educational leadership helped advance worldwide understanding of ophthalmology. Since 1963, when Bascom Palmer hosted the nation's first clinical post-graduate educational session devoted to neuro-ophthalmology, medical education has become a Bascom Palmer tradition. Lawton Smith and Joel Glaser, each trained several fellows throughout the 1970s and continued

this into the '80s and '90s. In 1978, Smith launched the *Journal of Clinical Neuro-Ophthalmology* and during the same decade Glaser wrote *Neuro-Ophthalmology*, a landmark textbook in the field now in its third edition.

In the 1960s and 1970s, many notable international ophthalmologists trained in all specialties at Bascom Palmer including: Jose A. Berrocal, M.D., (fellow, 1964) Puerto Rico; Alan C. Bird, M.D., (fellow, 1969) London; Michel Gonvers, M.D., (fellow, 1977) Switzerland; O. Bruce Hadden, M.D., (fellow, 1975) New Zealand; Rolando A. Chanis, M.D., (fellow, 1974) Panama; Tadashi Fujino, M.D., (fellow, 1967) Japan; Mark Mandelcorn, M.D., (fellow, 1974) Canada; Rafael T. Cortez, M.D., (fellow, 1978) Venezuela; and Ernesto N. Rios-Montenegro, M.D., (resident, 1970) Peru.

John C. Merritt, M.D., (fellow, 1975) studied pediatric ophthalmology under John Flynn. "I thank my mentor for providing





*J. Donald M. Gass, M.D., Richard K. Forster, M.D., Wilson Wallace, M.D., John T. Flynn, M.D., and Joel Glaser, M.D., share scholarly discussion and a light meal.*

me this unique opportunity to receive hands-on surgical education in strabismus surgery," said Merritt. "He also exposed me to the 'art' of examining peripheral fundus with the indirect ophthalmoscope."

Merritt joined the faculty of Howard University College of Medicine in 1975. Three years later, he moved to the University of North Carolina School of Medicine, as the state's first pediatric ophthalmologist.

A number of Bascom Palmer graduates from the 1970s have gone on to become ophthalmology department chairmen at medical schools and teaching hospitals. These include: Gary W. Abrams, M.D., (fellow, 1978) Wayne State University; Stanley Chang, M.D., (fellow, 1979) Columbia University; John G. Clarkson, M.D., (resident and chief resident, 1975, chair, dean) University of Miami; Brian P. Conway, M.D., (fellow, 1976) University of Virginia; Lanning B. Kline, M.D., (fellow, 1979)

University of Alabama; Horst Laqua, M.D., (fellow, 1976) University of Lubeck; Raymond E. Records, M.D., (fellow, 1971) University of Nebraska; John Shock, M.D., (fellow, 1971) University of Arkansas and Charles "Pat" Wilkinson, M.D., (fellow, 1971) Greater Baltimore Medical Center.

"The driving force behind the Bascom Palmer Eye Institute is the high quality and energy of the residents and fellows," said veteran faculty member Harry Flynn. "They are the true engine of Bascom Palmer Eye Institute." Describing his approach to medical training, Flynn said he has emphasized the importance of listening to the patient and understanding the natural course of the disease. "Observation is an excellent choice for many conditions," he said. "Also, we teach our physicians to ask for a second opinion when facing a particularly complex problem with a guarded prognosis. By getting a second opinion, the patient will usually feel positive about the physician's personal concern to provide the best care."





*As president of the XII Pan American Congress of Ophthalmology in Miami, Edward W.D. Norton, M.D., addresses guests during the opening ceremony.*





*Attendees of the first Curso Interamericano in 1979.*

## Launching the Curso Interamericano

In 1979, Bascom Palmer Eye Institute hosted the Pan American Congress of Ophthalmology on Miami Beach, attended by 2,000 physicians. This medical education program soon evolved into Bascom Palmer's Curso Interamericano de Oftalmología Clínica, (Curso), an annual post-graduate course that grew steadily through the years, and now reaches physicians throughout the hemisphere.

Former faculty member, Don H. Nicholson, M.D., launched the program and guided it through the early 1990s. With the support of Paul F. Palmberg, M.D., Ph.D., Nicholson had groomed young residents to become involved in this teaching event. In 1981, one of these had been Eduardo C. Alfonso, M.D., who had joined the Institute as a resident. Eventually, Alfonso assumed the responsibilities of organizing this annual event from 1994 onward. Palmberg, who had a great interest in teaching in Latin America, became co-director. Several years later, Francisco E. Fantes, M.D., was also recruited as another co-director. Now, the annual course is organized by Alfonso, Palmberg, Fantes, and Victor L. Perez, M.D. In addition, alumni including Juan F. Batlle, M.D., (resident and chief resident, 1985) and Rafael Cortez, M.D., (fellow, 1978) actively participate in teaching at Curso. To reach physicians throughout the hemisphere, courses are translated simultaneously into English and Spanish. The attendance at the course has grown from less than 50 in the early years to more than 500 at present.





50 YEARS OF  
VISION

Bascom Palmer Eye Institute  
Second to None

RANKED #1  
Bascom Pal

*Attendees of Bascom Palmer Eye Institute's 2011 Curso Interamericano numbered more than 500 ophthalmologists from Latin American and Spanish-speaking Caribbean nations.*



THE U.S. AGAIN.  
by Institute

# 50 YEARS OF VISION

Bascom Palmer Eye Institute  
Second to None







# New Discoveries



The 1980s was a decade of continued growth in clinical services and educational programs, with an emphasis on basic scientific research in several new areas. The arrival of laser surgery – initially done on an experimental basis – opened the door to more effective vision correction and many other types of treatment. Bascom Palmer's reputation for high quality clinical care continued to grow, and for the first time, the Institute was ranked the #1 eye hospital in the United States in a 1984 survey of ophthalmologists by *Good Housekeeping*.



*“A patient’s problem is  
an opportunity to innovate.”*

— DAVID T. TSE, M.D.

## Innovation and discovery

Soon after David T. Tse, M.D., joined the Bascom Palmer faculty in 1986, he was faced with an extremely challenging case. A 21-year-old man, Steve Downey, and his wife were expecting their first child. However, this new father-to-be had a deadly cancerous tumor in the tear-producing lacrimal gland that extended all the way into his brain.

“Based on actuarial data at that time, 80 percent of all patients with this lethal orbital tumor would die within ten years,” said Tse. “We decided to try something new in order save this young man’s life.”

Tse had developed a different approach using chemotherapy to shrink the tumor before performing surgery. The first step involved inserting a catheter into the patient’s groin in order to deliver medication directly into the artery serving the lacrimal gland. That delivery method allowed the surgeon to use high concentrations of chemotherapy

while minimizing the drug’s toxic effects. “This protocol has produced a survival rate of more than 80 percent, a dramatic improvement over surgery alone,” said Tse.

Downey was the first patient to undergo Tse’s experimental cancer procedure. Within a year, the young man’s adenoid cystic carcinoma was gone, and 25 years later, he is still alive. “Short-term and long-term, Dr. Tse saved my life,” Downey said in 2011.

Since then, Tse has been working with other Bascom Palmer researchers to refine the intra-arterial cytoreductive chemotherapy procedure and treat other vision-threatening eye cancers. Their research looks at the molecular underpinnings of this lacrimal gland cancer. “By understanding the molecular clues, we can find even better ways to deliver a pinpoint strike to the tumor,” said Tse. “A patient’s problem is an opportunity to innovate.”







*In 1989, a patient with a particularly difficult pterygium required a surgical procedure that involved surgeons from three different ophthalmology subspecialties. From the left, with a head-mounted binocular magnifier, is pediatric ophthalmologist, John Flynn, M.D. Behind him is oculoplastic specialist, Jan Kronish, M.D., (resident, chief resident 1989). A medical student observes from the background and looking upward is cornea specialist, Eduardo Alfonso, M.D. The ability to perform collaborative, complex surgical procedures, such as this one, contributes to improved outcomes.*



*"There is a huge benefit to being a researcher in a clinical department. You can interact with the physicians and learn what would be most useful to them. Later on, you can see the results of your lab being put into practice in the patients' eye clinics."*

— ROBERT W. KNIGHTON, M.D.

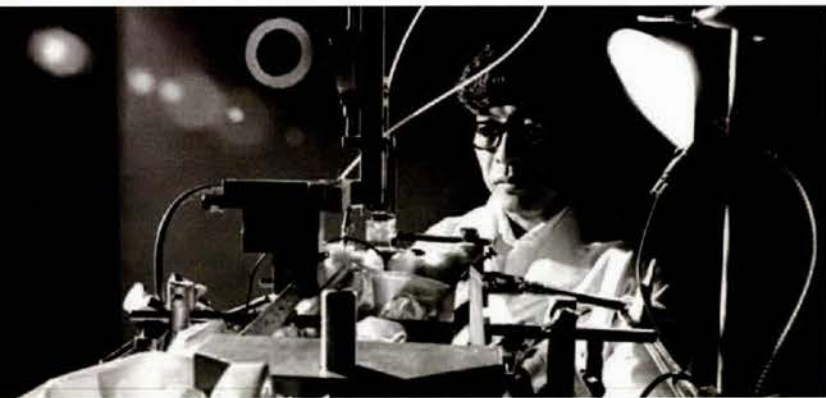
## Leading-edge research

Throughout the decade, the Institute was involved in leading-edge research on the eye. In 1980, Bascom Palmer Eye Institute was invited to participate in the Prospective Evaluation of Radial Keratotomy study by the National Eye Institute of the National Institutes of Health (NEI/NIH). Bascom Palmer was one of eight U.S. centers to test a Russian-developed surgical procedure to

William W. Culbertson, M.D., became principal investigator of the five-year \$2 million study, and contributed to a number of research papers on the findings. In a 10-year follow-up report, NEI confirmed that radial keratotomy reduced myopia but that the effectiveness of the outcome varied among patients. Culbertson also conducted studies on viral diseases of the retina, including chicken pox, herpes simplex and cytomegalovirus retinitis. He studied how to determine which virus is the cause of infection and tested different types of antiviral medications.

In 1983, Samuel G. Jacobson, M.D., founded the retinitis pigmentosa (RP) center at Bascom Palmer under the direction of "the Chief" to conduct research on this hereditary disease that leads to blindness. It was a project close to Norton's heart as his wife Mary had RP, an ongoing degeneration of the retina's light-sensitive rod and cone cells. "RP is not just one disease; it is a spectrum of conditions," said Jacobson at the time. "Research provides us with the only opportunity to develop sound treatments or cures."

Working in the Institute's neuro-physiology laboratory, Duco I. Hamasaki, Ph.D., studied disorders like strabismus, congenital cataracts and early refractive visual errors. "Most people believe that changes in the visual system are in the brain," he



*Duco Hamasaki, Ph.D.*



*Robert Knighton, Ph.D.*

correct myopia or near-sightedness. First introduced in the United States in 1978, radial keratotomy involves flattening the cornea by making tiny incisions with diamond-bladed micrometer knives. The NEI clinical trial was designed to evaluate the short- and long-term safety and efficacy of this radial keratotomy technique, a precursor to laser-based LASIK treatments.



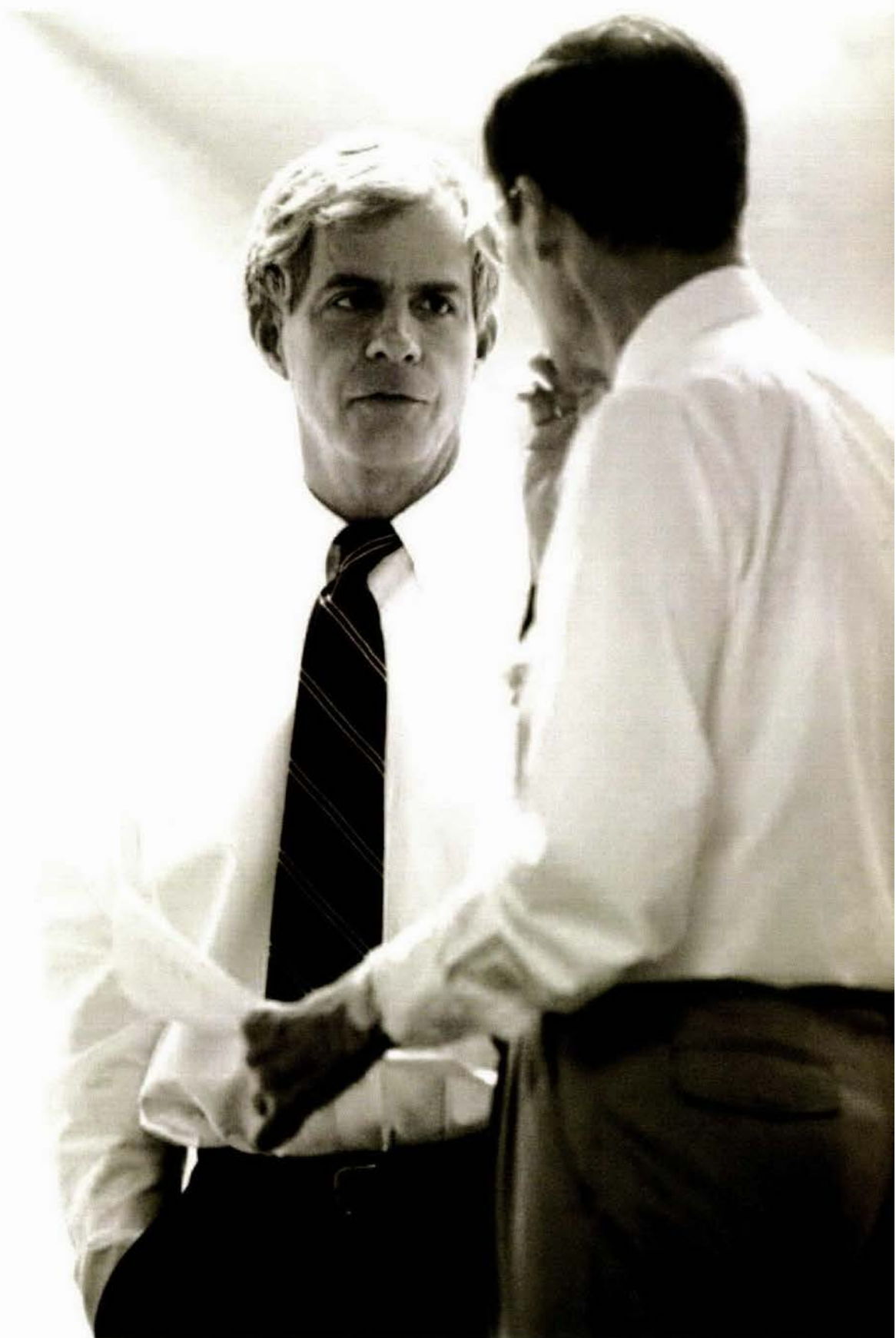
said in 1984 interview. "We feel that the changes in the retina are more subtle. Our experiments have shown that there is a critical period for the eyes, shortly after birth, for the visual system to develop properly."

In 1988, John Clarkson directed a multicenter central vein occlusion study, examining a retinal disorder that causes bleeding from retinal blood vessels. Funded by the NEI, the study looked at whether early photocoagulation (laser) therapy was the best treatment to prevent further complications and loss of vision. The findings, published in 1993, confirmed the importance of frequent follow-up examinations, including undilated slit-lamp examination of the iris in all patients with recent onset of central vein occlusion.

One of the Institute's many productive researchers in the 1980s was Robert Knighton who worked on projects involving molecular biology, retinal degeneration, biochemistry and imaging of the eye's anatomy. As part of Bascom Palmer's quantitative ophthalmic imaging group, Knighton also measured the visual pigments in the eye's photoreceptors to get insights into how the retina adapted to light and dark conditions.

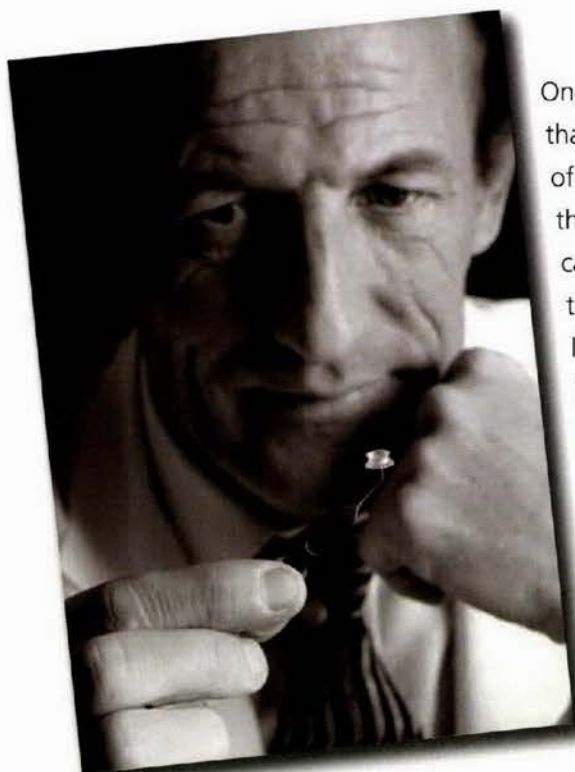
One of Knighton's main interests was studying the retinal nerve fiber layer, which is damaged by glaucoma at an early stage well before the loss of visual sensitivity. "I made the first measurements of the reflected spectrum in retinal nerve fiber areas and found more blue light was reflected than red, a clinically useful finding," he said. By using red filters, Knighton was able to make the "blue" nerve fibers stand out more clearly, leading the way to more detailed measurements and better explanations of why some nerve bundles worked better than others.

Because of his broad range of interests, knowledge and intellectual curiosity, Knighton also made important contributions to other researchers' endeavors. "There is a huge benefit to being a researcher in a clinical department," said Knighton, who retired in 2006. "You can interact with the physicians and learn what would be most useful to them. Later on, you can see the results of your laboratory work being put into practice in the patients' eye clinics."



*William W. Culbertson, M.D., and Victor T. Curtin, M.D.*





*Jean-Marie Parel, Ph.D.*

One of the most dramatic advances in ophthalmology in the 1980s was the growing use of lasers during surgery. First developed in the 1960s, the laser (short for Light Amplification by the Stimulated Emission of Radiation) creates a uniform beam of controlled light that can be focused on tiny spots. Lasers can emit different wavelengths of light (such as red or blue-green) in a continuous or pulsed beam, allowing them to be used in a wide range of medical applications.

Ophthalmologists began experimenting with lasers in the late 1960s and early 1970s for photocoagulation treatments, using first ruby-red light and later

argon blue-green lasers to heat tiny spots on the retina. In 1978, Bascom Palmer's ophthalmic biophysics center (OBC) added a laser research laboratory led by Jean-Marie Parel and Hanspeter Loertscher, the Swiss scientist who developed the infrared YAG laser earlier in the decade. Glaucoma specialist Richard K. Parrish II, M.D., (fellow, 1982) and Sidney H. Mandelbaum, M.D., (fellow, 1982) a Bascom Palmer faculty member at the time, clinically led the lab which is credited for the development of a non-contact laser trephination technique for corneal transplantation.

Throughout the decade, Bascom Palmer's researchers were studying how to use lasers to cut corneal tissue, treat diseased tissue inside the eye and prevent the growth of abnormal scar tissue or tumor cells inside the eye.

Meanwhile, Bascom Palmer's clinicians were quick to put this advanced technology to clinical use. In 1982, they performed approximately 4,000 laser procedures. "The availability of laser equipment allowed us to treat eye problems where there was previously no means of treatment," said George Blankenship.

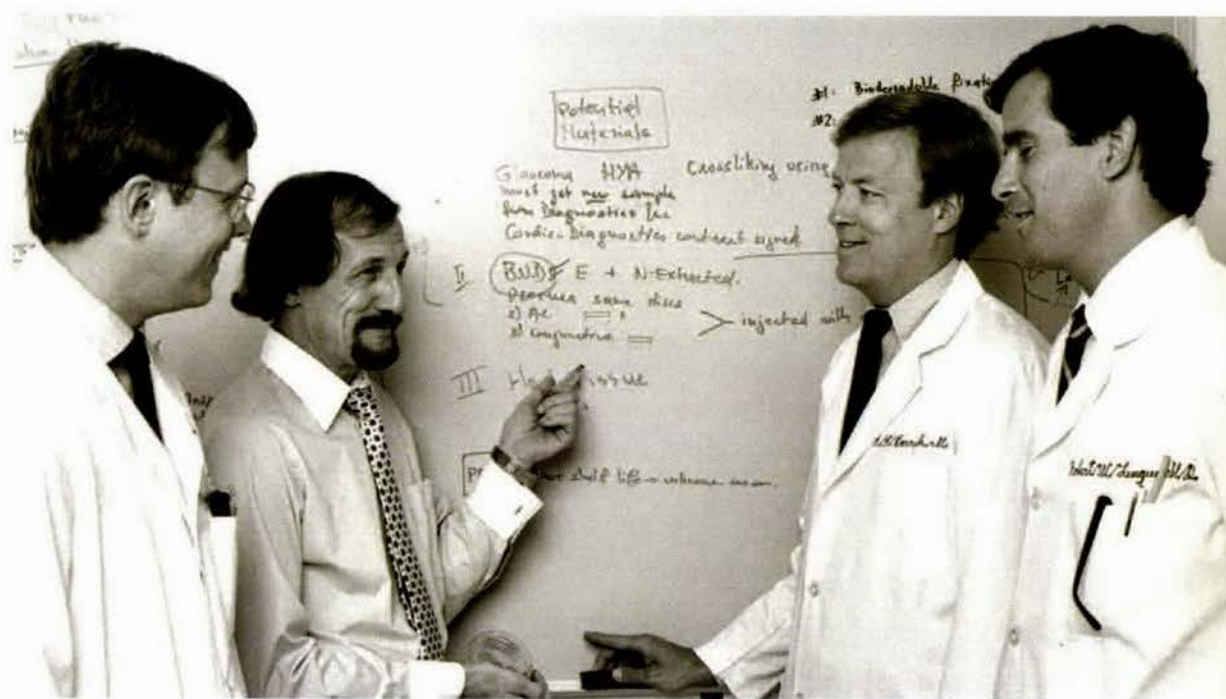
Ophthalmologists began using the excimer laser to reshape the cornea in a procedure known as photorefractive keratectomy. Because the excimer laser uses ultraviolet light, it did not heat the surrounding tissue, making it suitable for other surgical applications as well.

By 1985, the Institute's armory of lasers included argon, krypton and YAG. Because of the high costs – \$40,000 each for the argon and krypton systems and \$100,000 for the YAG laser at that time – Bascom Palmer made them available for community ophthalmologists as well as its own faculty.

Meanwhile, lasers helped Bascom Palmer's physicians treat many other types of vision problems. By the early 1990s, the U.S. Food and Drug Administration (FDA) had approved clinical trials with lasers for correcting nearsightedness, farsightedness and astigmatism. FDA approval for LASIK and other refractive surgeries came in 1995.

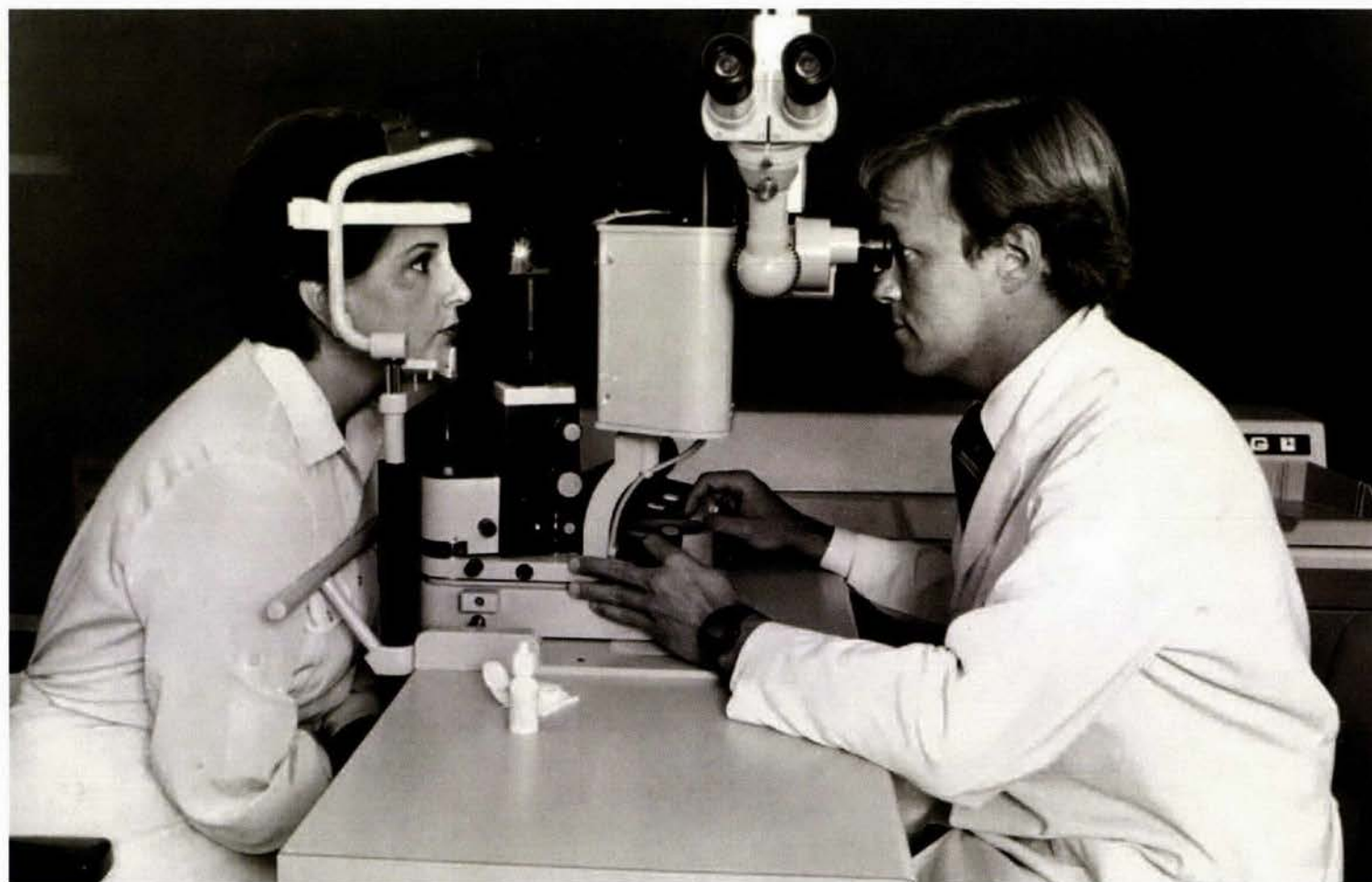


Throughout the 1980s, Parel continued to create new surgical instruments and diagnostic devices. For instance, in 1984 he designed and fabricated a system using stainless steel tacks to fix the torn or cut edge of a retina. Under Parel's guidance, the OBC team designed the world's smallest motorized scissors, which were used to cut retinal membranes that obscure vision. Parel also worked closely with Clarkson in developing a "next-generation" fluid control system that improved surgical precision in vitrectomies.



*Karl Olsen, M.D., Jean-Marie Parel, Ph.D., Richard K. Parrish II, M.D. and Robert Lingua, M.D.*





*Richard K. Parrish II, M.D.*

Parel and Parrish began developing a system to insert a controlled-release drug called 5-fluorouracil (5-FU) into the eye. The medication is often used in chemotherapy to inhibit cellular growth. Using the OBC's resources, Parel created tiny implants made from biodegradable synthetic polymers that released drugs at a constant rate for several days, weeks or months, depending on the desired outcome. Eventually, the biodegradable implants themselves are absorbed by the body.

This drug-delivery system also held the promise of more effective treatments for some glaucoma patients. Ophthalmologists frequently perform a glaucoma filtration procedure called a trabeculectomy to open a new exit passage for the fluid inside the eye, thereby lowering the pressure. However, the body's natural healing defenses sometimes respond by closing the passage. Inserting an implant carrying 5-FU or other medica-

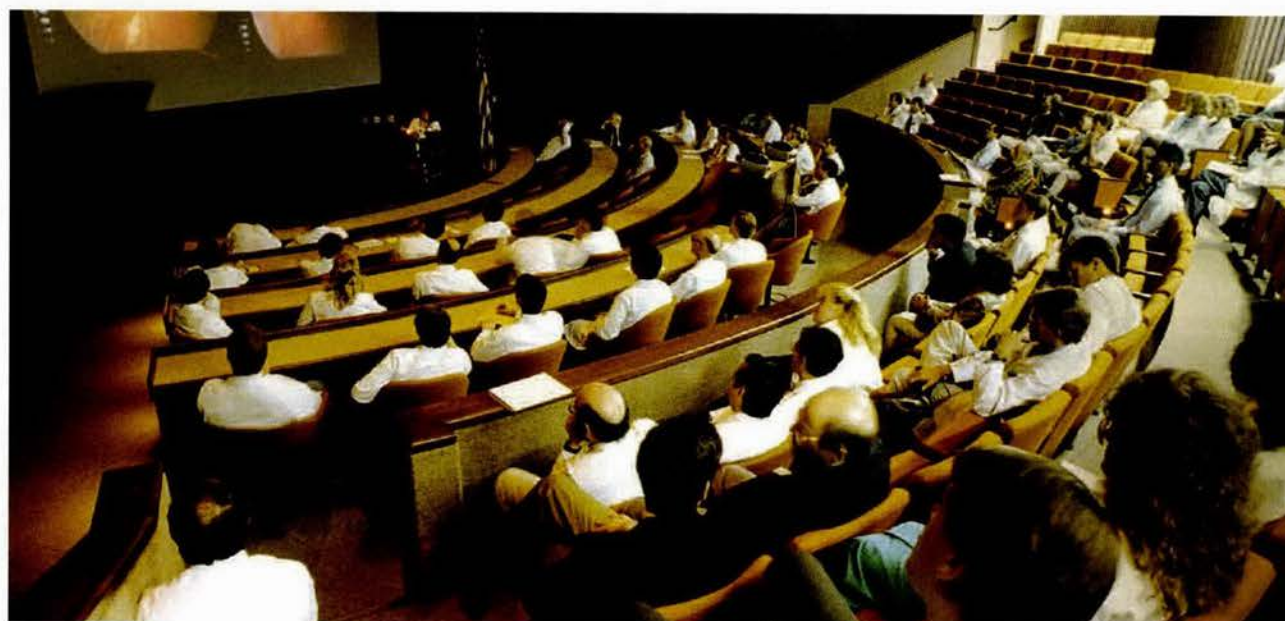
tion following the trabeculectomy can help keep the passage open so the eye drains properly. The concept of using 5-FU for glaucoma surgery was first tested in experimental models and then used in patients by Parrish, who had noted the successful use for retinal disease.

In the late 1980s, Parel worked with Norton and Francisco E. Fantes, M.D., (resident, fellow, 1987) on a study of the accommodative power of soft polymer lenses. "Dr. Fantes also completed a fellowship at Emory University, where he discovered that if you etch the cornea with an excimer laser, you lose transparency," Parel said. After rejoining Bascom Palmer as a faculty member, Fantes continued his work with lasers, creating the Fantes Scale for assessing corneal hazing – an assessment tool that is now used globally.





*The Edith and Earl Retter Educational Center at Bascom Palmer Eye Institute opened in 1980 expressly to facilitate ophthalmic education.*



*Grand Rounds are held every Thursday morning at the Institute.*

## Model of medical education

In the early 1980s, Bascom Palmer's faculty taught more than 100 University of Miami medical students each year, in addition to 18 residents, 15 to 20 fellows, and foreign observers seeking advanced training in ophthalmology. With its growing reputation for an outstanding, comprehensive ophthalmic training program, the Institute attracted physicians from around the world. Another indicator of the respect with which the world regarded Bascom Palmer was the selection of Norton as president of the American Academy of Ophthalmology in 1980.

However, Norton suffered a personal loss that year when his wife Mary passed away. After her death, the Mary K. Norton Memorial Fund was established to support research on retinitis pigmentosa, the inherited retinal disease from which she suffered.

On September 2, 1980, Bascom Palmer Eye Institute opened the Edith and Earl Retter Educational Center, a new building devoted entirely to medical education, connected to the eye hospital by an enclosed skywalk. The Retters, who were patients of Drs. Gass and Norton, donated \$800,000 toward the

construction of the state-of-the-art teaching facility. "The gift provided a major step forward for the medical education program and helped expand the Institute's mission of advancing ophthalmic knowledge."

The Center housed an auditorium with seating for 160 with a sophisticated closed-circuit TV system, making it possible to transmit real-time images of diagnostic and surgical procedures from the operating rooms to the auditorium.

For more than 30 years, the Center has been home to the Institute's Grand Rounds, held regularly each Thursday morning for Bascom Palmer's faculty, residents, fellows and South Florida physicians, attracting more than 100 ophthalmologists. Commenting shortly after the Center opened, James C. Major, M.D., (resident, chief resident 1963) a Coral Gables ophthalmologist, said, "I can bring interesting and unusual patient cases to Grand Rounds. This benefits the physicians because it increases our professional exposure to rare and unusual cases."





*Noted ophthalmologists from around the world often visited Bascom Palmer Eye Institute to establish scientific collaborations. Pictured here during the 1988 visit of the father-daughter team of ophthalmologists from the Barraquer Centro de Oftalmologia in Barcelona, Spain are, left to right: George Rosenwasser, M.D., Stephen Pfulgfelder, M.D., Jean-Marie Parel, Ph.D., Elena Barraquer, M.D., Scheffer Tseng, M.D., Thomas Roussel, M.D., George Blankenship, M.D., Joaquín Barraquer, M.D., and George Corrent, M.D.*

In 1983, Ana Luisa Hofling-Lima, M.D., Ph.D. (research fellow, 1984) and her husband, Michel Eid Farah, M.D. (fellow, 1984) came to Bascom Palmer to train – an experience that shaped their lives and professional careers.

For Farah, the highlights of their fellowship included learning about Miami's cultural diversity as well as the sense of collegiality among Bascom Palmer's faculty. "Dr. Norton set a good example in having an open door and talking with everyone," Farah said. "That approach lets you discover things you might never have imagined by yourself."

Today, she is chair of the department of ophthalmology at the Universidade Federal de São Paulo, where Farah is a professor of ophthalmology in their retina and vitreous department. "I carry the spirit of Bascom Palmer with me every day," said Farah. "The things I learned continue to influence my clinical care, teaching and research."

"There is a strong tradition at Bascom Palmer of training the leading vitreous surgeons of the world," said William E. Smiddy, M.D., a specialist in macular diseases and diabetic retinopathy. "Many of today's department chairs and senior

ophthalmologists around the world completed their training and fellowships here in the 1970s and 80s."

The list of notable national and international ophthalmologists who trained at Bascom Palmer during this decade and became ophthalmology department chairmen at medical schools and teaching hospitals includes: Eduardo C. Alfonso, M.D., (resident, 1984, faculty, chair) Bascom Palmer Eye Institute; Elena Barraquer, M.D., (fellow, 1989) University of Barcelona, Spain; Juan F. Batlle, M.D., (resident, chief resident 1985) Hospital Dr. Elias Santana, Dominican Republic; George W. Blankenship, M.D., (honorary alumnus, 1989, faculty) Pennsylvania State University; Mark S. Blumenkranz, M.D., (fellow, 1980) Stanford University; Donald J. D'Amico, M.D., (fellow, 1982) Cornell University; William T. Driebe, Jr., M.D., (fellow 1984) University of Florida; Dale K. Heuer, M.D., (fellow, 1984) Medical College of Wisconsin; William F. Mieler, M.D., (resident, chief resident, 1985) University of Chicago; Richard K. Parrish II, M.D., (fellow, 1982, faculty, chair) Bascom Palmer Eye Institute; Jose S. Pulido, M.D., (fellow, 1987) University of Illinois; Gregory L. Skuta, M.D., (fellow, 1987) University of Oklahoma; and Jui-Fang "Ray" Tsai, M.D., (fellow, 1988) Chuang-Gung Memorial Hospital, Taiwan.



*"The most important aspect of the growth and development of the department of ophthalmology is the high caliber of the residents and fellows who come to learn, to question, to stimulate and finally, to grow to full clinical maturity within the walls of the Bascom Palmer Eye Institute. They are the greatest achievement of our department."*

— EDWARD W.D. NORTON, M.D.

Bascom Palmer's diverse cultural connections flowed in other directions as well. In 1979, Forster traveled to the Middle East, helping to establish an eye bank in Amman, Jordan, and to introduce corneal surgeries. He returned to the Middle East a decade later, spending nearly five years as medical director of the King Khaled Eye Specialist Hospital in Riyadh, Saudi Arabia on a leave of absence from Bascom Palmer. "It was an incredible experience, culturally and medically," he recalled. "A clinician can see only so many patients in a career. But by helping to educate a resident or fellow, they can touch thousands of patients. In Saudi Arabia, I was able to help train 12 residents a year, and contribute to improving the quality of their national care."

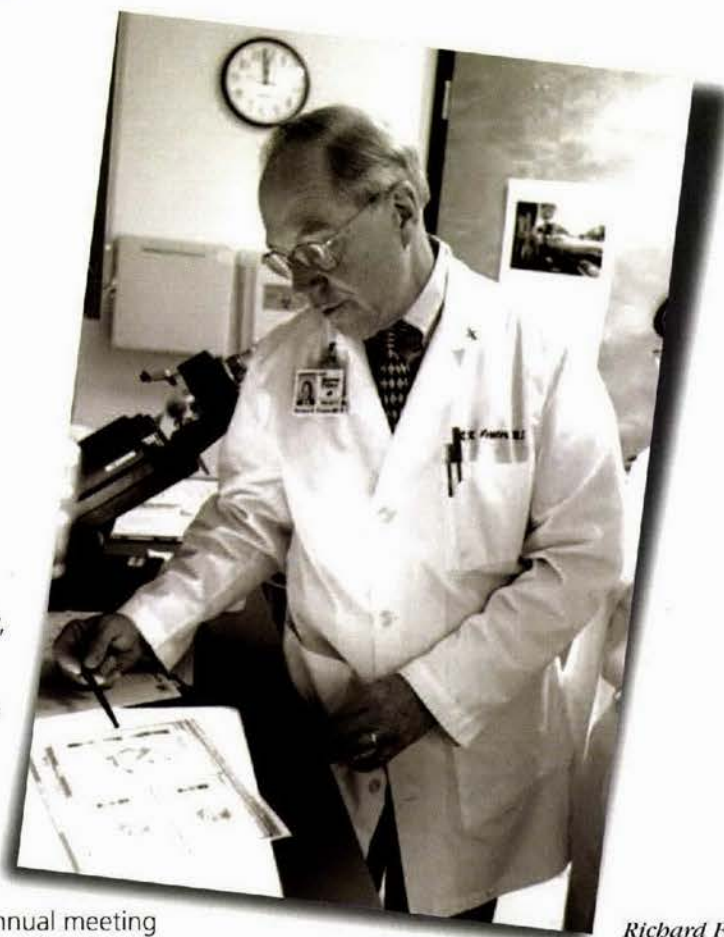
Reflecting on the importance of ophthalmic education, Norton said, "The most important aspect of the growth and development of the department of ophthalmology is the high caliber of the residents and fellows who come to learn, to question, to stimulate and finally, to grow to full clinical maturity within the walls of the Bascom Palmer Eye Institute. They are the greatest achievement of our department."

The educational contributions of Bascom Palmer Eye Institute at the national and international level rapidly grew during this

decade. The faculty, residents and fellows of the Institute contributed more educational activities to the American Academy of

Ophthalmology's annual meeting than any other academic ophthalmology program. Bascom Palmer faculty members were recipients of Academy honors such as Achievement Awards, Senior Achievement Awards and Lifetime Achievement Awards. Additionally, a number of faculty have been honored by being invited to deliver the prestigious Edward Jackson Memorial Lecture, including Drs. Donald Gass, Douglas Anderson and Richard Forster.

At the Association for Research in Vision and Ophthalmology (ARVO), a large portion of the material presented was based on work done at Bascom Palmer. Also, a number of faculty members were inducted into prestigious academic societies such as Club Jules Gonin and the American Ophthalmological Society.



Richard Forster, M.D.



*"This expansion will allow us to continue making vital contributions in all areas of ophthalmology on an international scale for the next decade and into the 21st century."*

— EDWARD W.D. NORTON, M.D.



*The ophthalmic biophysics center staff has invented hundreds of ophthalmic surgical and diagnostic instruments, many of which have revolutionized the management of eye care. Pictured with Jean-Marie Parel, Ph.D., (seated, center) are (left to right) William Moore, William Lee, David Denham and Izuru Nose.*

## Explosive growth

As Bascom Palmer entered the 1980s, it was clear that substantial additional funds were needed to support its growing research, education and clinical care programs. Therefore, a five-year capital campaign was launched in 1980. The goal was to raise \$23 million to complete the third floor "shell" of Anne Bates Leach Eye Hospital, add more laboratory and research facilities, and create endowed chairs to help attract and retain top faculty.

Meanwhile, two floors of the McKnight Vision Research Center were renovated, expanding the ophthalmic biophysics center and creating the ocular microbiology laboratory. This laboratory provides a unique resource for studying and better-defining the diagnosis and treatment of ocular infections. It was initially under the direction of Forster with microbiologist Gerber Rebel, followed by Alfonso and Darlene Miller, D.H.Sc. "Having a dedicated ocular microbiology lab on site is a vital clinical resource for our patients," said Miller. "Samples can come immediately to the lab and placed directly into the right culturing media for analysis."



*The original hospital building was expanded between 1985 and 1987 to add four more floors to accommodate additional basic laboratories. The newly expanded building was renamed the William L. McKnight Vision Research Center.*

In 1983, the Florida Lions Eye Bank, which met the needs of Bascom Palmer's physicians and community ophthalmologists by furnishing approximately 1,000 corneas each year for transplant surgery, and the ocular pathology laboratory were moved from the McKnight building to the third floor of the eye hospital.

Debra G. Durant, the Institute's director of development for 22 years, planned a multifaceted capital campaign. By 1983, more than \$15 million was already in hand. At that point, the goal was increased to \$28 million and extended until 1986. The centerpiece of the campaign was an expansion of Bascom Palmer's research enterprise. "This expansion will allow us to continue making vital contributions in all areas of ophthalmology on an international scale for the next decade and into the 21st century," Norton said at the time.

Bascom Palmer's clinical programs continued to grow throughout the decade. The number of patients rose from 56,000 in 1981 to 91,000 in 1990, while surgical procedures increased from 5,100 to 8,300.



In 1984, just 22 years after its founding, Bascom Palmer Eye Institute was named the number one eye hospital in the country by ophthalmologists surveyed by *Good Housekeeping* magazine. In addition, 10 Bascom Palmer physicians were named to the magazine's list of "Best Medical Specialists," including Drs. Edward Norton, Donald Gass, and Lawton Smith.

On October 17, 1985, ground was broken for the \$5.5 million expansion of the William L. McKnight Vision Research Center. Taking part in the ceremony was Evelyn F. McKnight, whose \$4 million gift in honor of her husband helped to fund the addition of four floors to Bascom Palmer's original building. The expansion project increased the building's total space to 70,000 square feet. However, no additional structural work was needed because of Norton's foresight. Back in 1962, the building's foundation had been designed to support an eight-story facility. Upon Mrs. McKnight's death in 1999, the building was rededicated as the Evelyn F. and William L. McKnight Vision Research Center.

In 1985, Charlotte Breyer Rodgers, a member of the Breyers Ice Cream family, donated more than \$5 million to establish a professorship in ophthalmology and the Charlotte Breyer Rodgers Research Pavilion in the McKnight Vision Research Center. She also created an endowment fund to establish a flower garden and tranquil walkway, fondly named "The Breyer Patch," located between the hospital and research center.

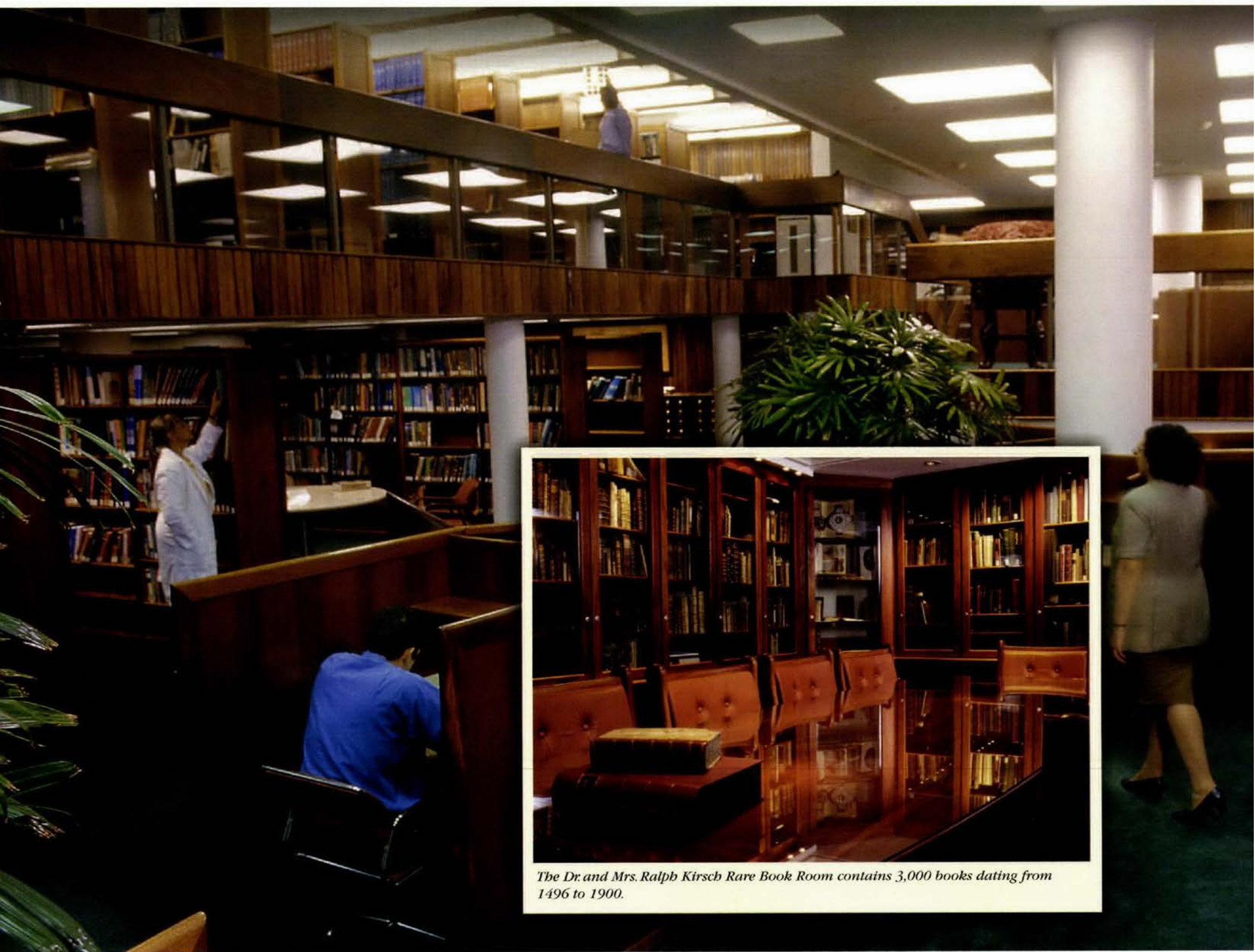
Another major gift came from James L. Knight, chairman emeritus of Knight-Ridder Newspapers, Inc. He contributed \$5 million to complete the addition of the McKnight Research Center in 1988, and endow its vision research activities.

Bascom Palmer celebrated its 25th anniversary in 1987 with a scientific conference. Reflecting on the Institute's silver anniversary, Norton said, "It has been a marvelous time to be in ophthalmology, to be able to grow with the changes. I don't think anyone, including myself, could have foreseen that we would have a department with a faculty so strong and physical facilities second to none. It's a pleasure to work with people you respect. It's been a marvelous experience."

*Edward W.D. Norton, M.D., and Evelyn F. McKnight*








*The Dr. and Mrs. Ralph Kirsch Rare Book Room contains 3,000 books dating from 1496 to 1900.*





*"Without a library, each generation must start from scratch. By studying the literature of the last half of the nineteenth and the first three-quarters of the twentieth century, one can readily appreciate the accelerated evolution of knowledge and easily predict that a similar process will continue at an ever-increasing rate into the 21st century."*

— EDWARD W.D. NORTON, M.D.

## Bascom Palmer's crown jewel

On the lower level of the eye hospital, Bascom Palmer's library of ophthalmology was quietly growing. Whenever Norton traveled, he would visit book shops searching for ophthalmic texts. In 1985, he purchased an astounding collection of 712 books from a Swiss family. A year later, he purchased 942 books from the private collection of Jean-Paul Wayenborgh of Bonn, Germany, an antiquarian book seller and ophthalmic publisher. This purchase included one of the highlights of the library's collection, an exceptionally rare copy of the second edition of Georg Bartisch: *Augen-Dienst* (1686), published 103 years after the original edition.

During the 1980s, Norton often expressed why access to a comprehensive library is important to ophthalmologists. "Without a library, each generation must start from scratch. By studying the literature of the last half of the nineteenth and the first three-quarters of the twentieth century, one can readily appreciate the accelerated evolution of knowledge and easily predict that a similar process will continue at an ever-increasing rate into the 21<sup>st</sup> century."

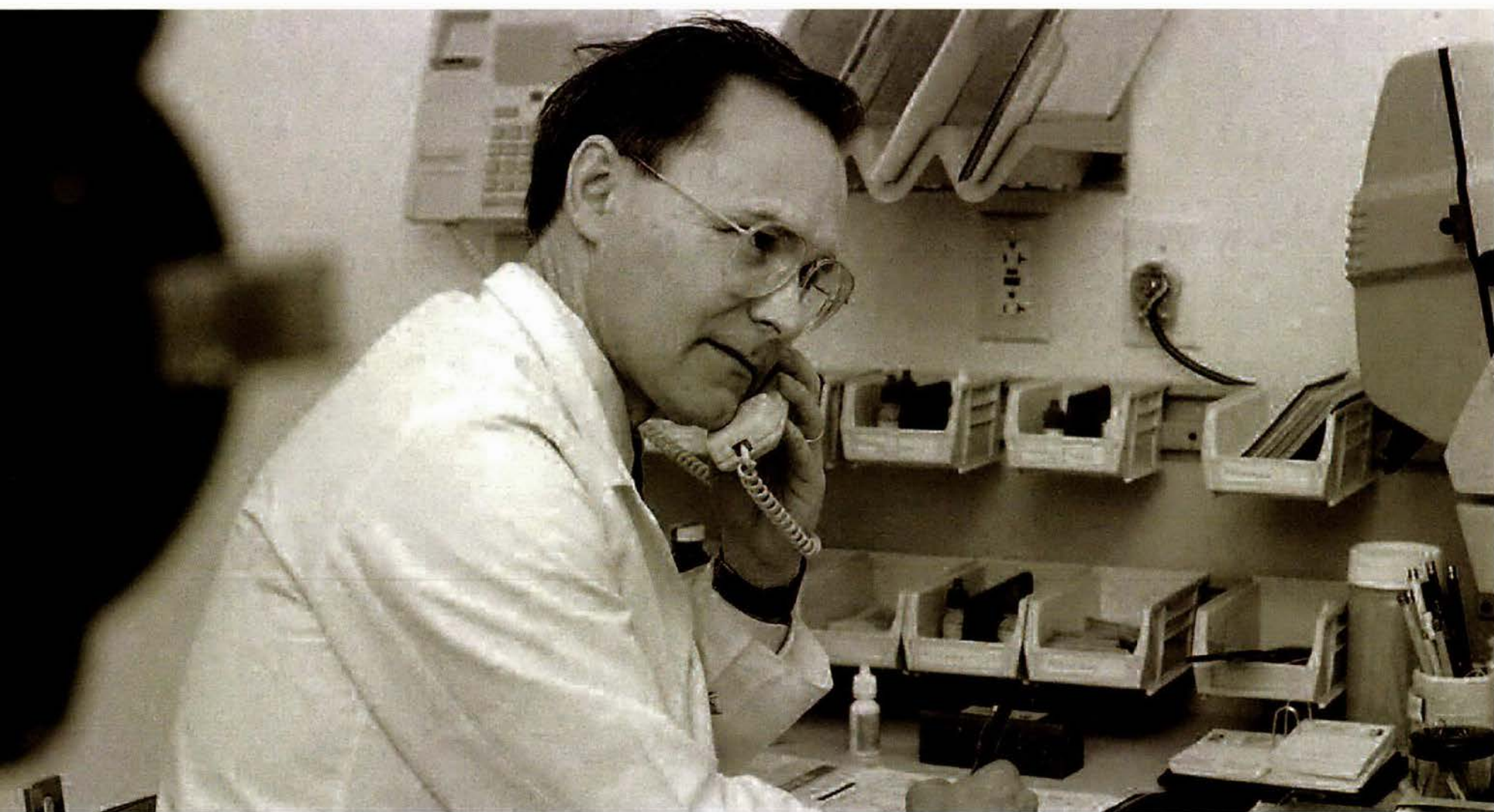
Building the library was always a central focus of Norton's vision. Through the years, more than 15,000 books have been collected, including rare and historical texts dating back to the 1400s – some not found anywhere else in the world. The Institute's collection also includes modern textbooks and more than 250 ophthalmic journals from countries including Russia, Brazil, Poland and China. Located within the Norton Library is its crown jewel, the Dr. and Mrs. Ralph Kirsch Rare Book Room, which contains 3,000 books dating from 1496 to 1900.

In 1987, on the 25th anniversary of the Bascom Palmer Eye Institute, the library was formally dedicated and named the Mary and Edward Norton Library of Ophthalmology.

Meanwhile, unbeknownst to Norton, Curtin and Durant had started an alumni campaign to establish an endowment fund for the library. The alumni responded overwhelmingly, and at the dedication, presented Norton with an endowment fund of more than \$1 million.







*Paul F. Palmberg, M.D., Ph.D.*



*"Bascom Palmer has always been a place where innovation and research are high priorities. There was always excitement among the faculty about making medical discoveries, translating them into patient treatments and publishing the results. It's a great culture."*

– STEPHEN C. PFLUGFELDER, M.D.

In 1980, Paul F. Palmberg, M.D., Ph.D., became Bascom Palmer's third glaucoma specialist. He began to compare different methods to detect retinopathy caused by diabetes. He found that early changes could be detected twice as well with careful scanning of photographs as with a live clinical examination, and that color photographs were just as good as a more invasive technique that required injecting a dye into the veins coupled with photographs. The findings convinced the National Institute's of Health to launch the Diabetes Control and Complications Clinical Trial.

Palmberg served for a decade on the monitoring committee for the trial, which found that tightly controlling blood sugar – guided by frequent home monitoring by diabetic patients – significantly lowered the risk of retinal and kidney damage.

Later in the decade, Palmberg helped to clarify the relationship between the level of pressure in the eye and how well a glaucoma patient retains peripheral vision. In 1988, he helped write the American Academy of Ophthalmology's guide to glaucoma treatment and coined the term "target pressure" to represent the goal in halting or slowing glaucoma damage.

Glaucoma specialist Parrish was particularly interested in filtering surgery, which lowers intraocular pressure in most glaucoma patients. He soon became involved in tissue culture studies that led to a randomized clinical trial funded by the National Eye

Institute called the Fluorouracil Filtering Surgery Study. The study demonstrated that using 5-FU resulted in substantially higher success rates in terms of controlling intraocular pressure.

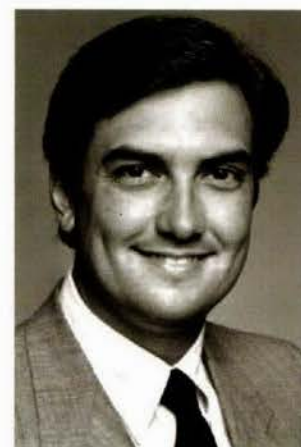
"Dr. Norton gave me the time to do the research," Parrish said. "That gave me the tremendous satisfaction of contributing to the advancement of glaucoma surgery." Parrish later served on the editorial board of *Archives of Ophthalmology*, and co-authored a glaucoma textbook with Anderson and Elizabeth Hodapp, M.D.

Stephen C. Pflugfelder, M.D., (fellow, 1986) spent much of his time studying the ocular surface, and wrote *Dry Eye and Ocular Surface Disorders*, the first textbook in this field. "Bascom Palmer has always been a place where innovation and research are high priorities," said Pflugfelder, who left the faculty in 2000 to become a professor at Baylor College of Medicine. "There was always excitement among the faculty about making medical discoveries, translating them into patient treatments and publishing the results. It's a great culture."

Eduardo Alfonso returned to Bascom Palmer in 1986 after completing a residency at the Institute and a fellowship at Harvard's Massachusetts Eye and Ear Infirmary. His research and clinical activities focused on corneal transplants, infections of the cornea and ocular pathology. Alfonso soon became medical director of the ocular microbiology laboratory and began



Richard K. Parrish II, M.D.



Eduardo C. Alfonso, M.D.



*“Dr. Norton invited me to start this service from scratch. The mandate he gave me was to establish one of the best programs in the country.*

*‘We want to be second to none,’ he told me.”*

– DAVID T. TSE, M.D.

studying artificial corneas, which could be used for patients awaiting transplants in developing nations where donor tissue is often scarce. His involvement with ophthalmology education in Latin America provided the region with Bascom Palmer’s educational resources. It also markedly expanded the referral of patients to the Institute. Alfonso also founded the Cornea and External Disease Academic Society which meets during the annual ARVO meeting to bring together young faculty specializing in this area. He dedicated significant time to Bascom Palmer’s Curso Interamericano and the Pan American Association of Ophthalmology. In 1989, Alfonso was asked to become director of the North American Course.

Scott W. Cousins, M.D., (fellow, 1987) joined the Institute’s faculty and ultimately became director of research. He was involved in clinical trials and innovative therapies for the treatment of macular degeneration and vitreoretinal diseases. Today, Cousins is the Robert Machemer Professor of Ophthalmology at Duke University.

In 1986, Bascom Palmer established an oculoplastic and reconstructive surgery service under Tse’s direction. “Dr. Norton invited me to start this service from scratch,” said Tse. “The mandate he gave me was to establish one of the best programs in the country. ‘We want to be second to none,’ he told me.”

“At that time, academic oculoplastic programs were very new. I could see the value of teaching the residents and fellows, and

giving the specialty a higher profile. I also wanted to do basic research that could be incorporated into clinical medicine.”

Tse’s specialty combines the disciplines of ophthalmology and plastic and reconstructive surgery. His aim is to maintain vision and function while transforming the appearances of accident victims and patients with disfiguring illnesses or congenital deformities.

Soon after his arrival, Tse introduced photodynamic therapy using laser to treat cancers of the eye and skin. “This technology has evolved into many other areas, from treating macro tumors to tiny blood vessels inside the eye.”

One of Tse’s patients was Patricia Kearns, a Fort Lauderdale resident who lost her right eye in a 1988 fireworks injury. She and her husband were hosting a dinner party at their home on a canal, when two 13-year-olds began shooting bottle rockets across the canal. Kearns received emergency treatment at

Bascom Palmer, and Tse led a reconstructive surgery team that eventually put in a hand-painted prosthetic eye. Later, the Kearnses became major donors to Bascom Palmer, helping to fund the Thomas and Patricia Kearns Center for Oculoplastics.

Reflecting on Norton’s leadership, Tse said, “He instilled the concept of teamwork, selecting people who share core values and have a high personal character. He found the right people, provided support, encouragement and guidance – then he let





Norton was frequently asked why the Institute was so successful. His response was always to credit his faculty. "I was in the audience at an Association of University Professors of Ophthalmology meeting when I heard Dr. Norton tell the group the key attributes that led to his success at the Institute," said Dan B. Jones, M.D. "After the meeting I asked him if I could have his list and he handed me the napkin upon which he had written it. I then typed the document and with Dr. Norton's permission, circulated it. This list of criteria has since become known as "The Norton Principles."

## The Norton Principles

- Integrity
- Organization
- Predictable Behavior
- Ability to Prioritize
- Credibility
- Flexibility
- Encouragement
- Development of Key Faculty
- Ability to Listen
- Capacity to Delegate
- Utilization of Support Personnel
- Role as Caretaker
- Implementation of Decisions
- Vision
- Loyalty to the Institution



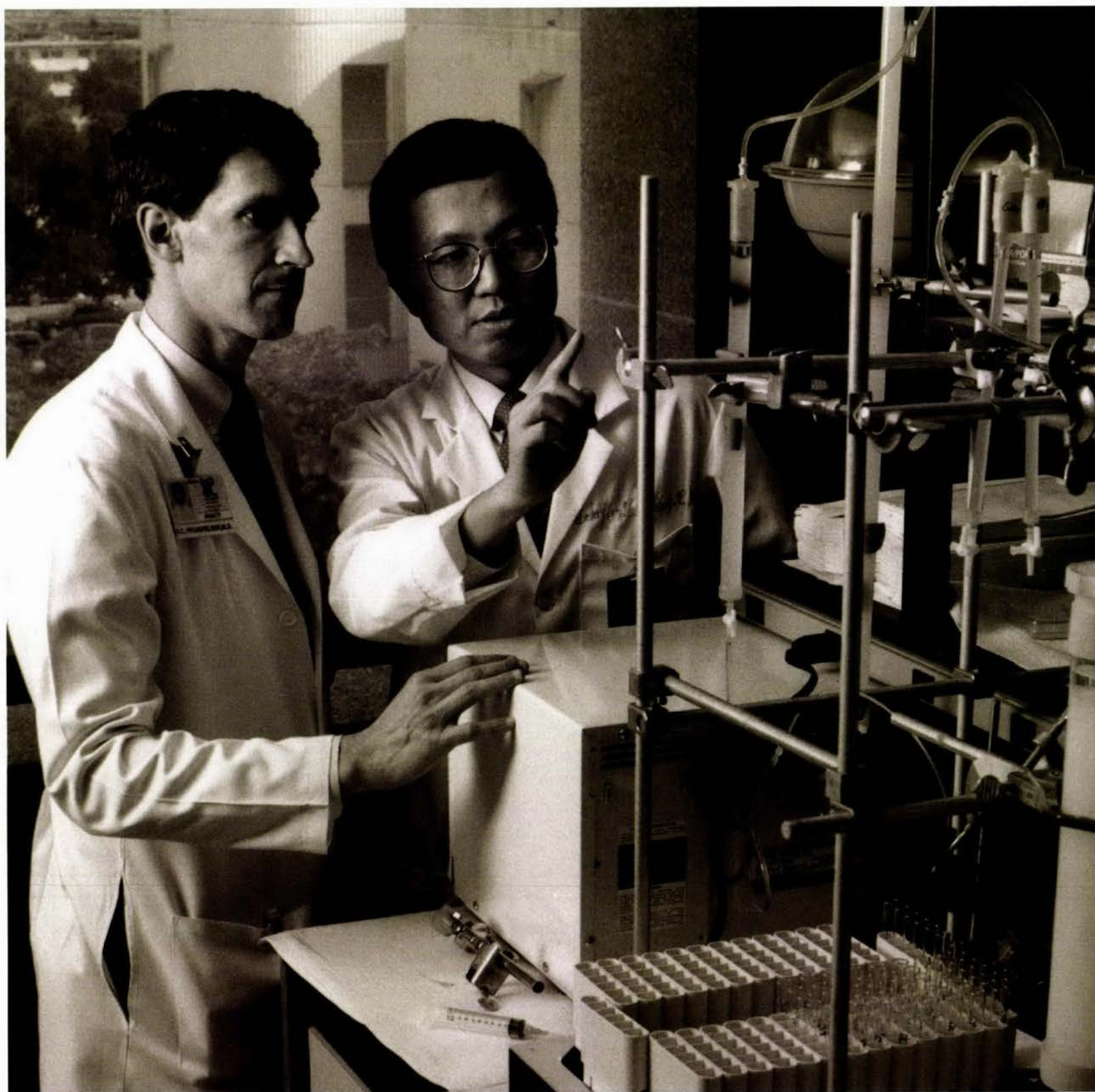
# Changing with the Times





For Bascom Palmer, the 1990s was a decade of transition. After more than 30 years at the helm, Edward W.D. Norton, M.D., retired as "The Chief," ushering in a new era for Bascom Palmer. He was succeeded as chair by John G. Clarkson, M.D., a retinal specialist who had been with Bascom Palmer for 16 years and would go on to become dean of the University of Miami School of Medicine. Meanwhile, the Institute expanded into Palm Beach Gardens, bringing its unique brand of specialized care to residents of Palm Beach County while maintaining its position in the forefront of ophthalmology care, education and vision research.







*"The therapy has made it possible for me to reclaim my life.  
Thank goodness for Bascom Palmer."* — PAT GLASS

## Diagnosis and treatment

For 14 years, Pat Glass lived with severe nightly pain in her eyes. A retired teacher, Glass was diagnosed with dry eye syndrome, and the only available treatment was lubricating eye drops, which didn't help. By 1987, her condition took a turn for the worse. "I began waking in the night with agonizing pain in both eyes," she said. "It was as if someone was pouring hot acid into them. I was afraid of going to sleep thinking the pain would give me nightmares." Meanwhile, her vision slowly deteriorated and the only advice she received from her doctors was, "learn to live with it."

In late 1993, a neighbor suggested that she call Bascom Palmer Eye Institute to see if anyone was studying her problem. "That call was the beginning of a miracle," said Glass, who was immediately referred to Scheffer C.G. Tseng, M.D. Tseng found that Glass' condition was complicated by recurrent cornea erosion – a loss of the layer of cells on the outside of the cornea. "Dry eye is an extremely complex problem to unravel because of the multiple dysfunctions that can be confused in its diagnosis," he said.

Studying the syndrome with Stephen Pflugfelder, Tseng had already developed a series of diagnostic tests. Meanwhile, Pflugfelder had been able to identify cellular changes on the eye's surface responsible for lack of the mucous lubricant. This was a major breakthrough, since ophthalmologists previously had focused on the quantity of tears rather than the mucin layer that binds the tear layer on the ocular surface.

Drawing on that research, Tseng inserted a protective contact lens in Glass' right eye in March 1994 and her left eye six months later. These lenses protected her corneas and deterred further erosion.

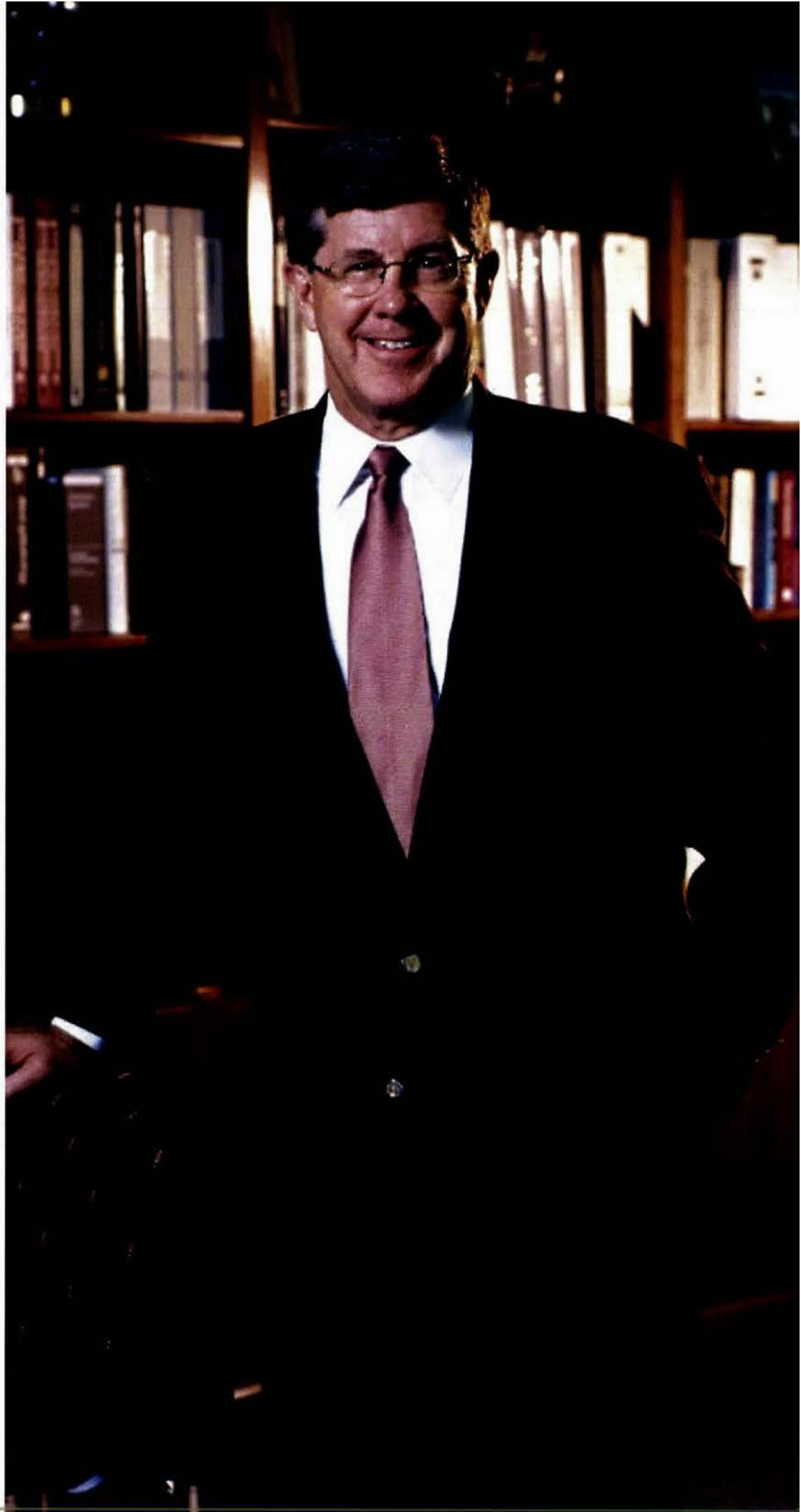
With the lenses and the use of natural eye drops, Glass finally regained comfort and clarity of vision. "I no longer have pain and I have my 20/20 vision back," she said. "The therapy has made it possible for me to reclaim my life. Thank goodness for Bascom Palmer."



*"We have an outstanding  
clinical faculty and facility,  
and we serve a highly  
diverse population base.  
That has translated into  
outstanding teaching and  
research programs.  
The fourth leg of our mission  
is community service, and  
Bascom Palmer is a leader  
in that area as well."*

— JOHN G. CLARKSON, M.D.

*John G. Clarkson, M.D.,  
Bascom Palmer Eye Institute  
chairman 1991-1996*





# A Time for Change

Bascom Palmer began the 1990s with a major announcement: Edward Norton was stepping down as chair. To honor its legendary "Chief," the University established a "Norton Chair" in the department of ophthalmology. "My goal in 1959 was to establish an eye center of ophthalmic excellence in patient care, research, and education," Norton said in his announcement. "The fact that I have reached that goal gives me a sense of tremendous pride and satisfaction. However, now it is time for a change – for me and for the Institute."

In 1991, Norton became chairman emeritus, and John Clarkson, a member of the faculty since 1975, was appointed the Institute's second chairman. In assuming his new position, Clarkson called for a renewed commitment to Bascom Palmer's mission and values. "Our people have consistently worked together to achieve excellence. This team approach is critical to Bascom Palmer's future," he said. "We have an outstanding clinical faculty and facility, and we serve a highly diverse population base. That has translated into outstanding teaching and research programs. The fourth leg of our mission is community service, and Bascom Palmer is a leader in that area as well."

Under Clarkson's leadership, the Institute continued to change with the times. For instance, Bascom Palmer steadily attracted more women residents, fellows and faculty members. "By the time I became chair, more than half of our residents were women," he said. "That reflects change – not just in our program, but in the medical community as well."

Recognizing the national shift to a managed care system, Clarkson developed the Bascom Palmer Eye Care Network, including ophthalmologists and optometrists who would provide primary care in their offices, and refer patients to Bascom Palmer for more complicated issues. "That network is still in existence," said Clarkson. As of year-end 2010, the network had 25,000 members served by 131 ophthalmologists and 56 optometrists.

In the early 1990s, the Institute's 45-member faculty was treating more than 90,000 patients annually at Anne Bates Leach Eye Hospital. As patient volume grew, a new \$10 million capital campaign was launched to complete the hospital's fourth floor, providing space for the expanding glaucoma, oculoplastics and pediatric ophthalmology services. Once again, with Debra Durant leading the development efforts, fundraising was successful and these projects were rapidly completed.





*John T. Flynn, M.D., spent almost 40 years at Bascom Palmer Eye Institute serving the youngest patients.*



*The clinical and research interests of Timothy G. Murray, M.D., M.B.A., focus on retinoblastoma.*

Among the first contributors to the 1990s capital campaign were William and Norma Horvitz, who had a special interest in pediatric eye care. "We hope that more children will have the opportunity to receive earlier ophthalmic treatment and thus avoid some of the vision miseries of later life," they said at the time. Their gifts strengthened Bascom Palmer's pediatric program, guided since the 1960s by John Flynn.

In the mid 1990s, more than 7,000 children a year were treated at the newly renamed William and Norma Horvitz Children's Clinic, including many referrals from the Caribbean and Latin America. Flynn and the other pediatric ophthalmologists

saw a wide range of conditions from congenital disorders, infections and tumors to blinding diseases like retinopathy of prematurity, and common disorders like amblyopia and strabismus.

Because a child's visual system develops gradually for the first 10-15 years of life, pediatric eye diseases and disorders can be devastating if untreated.

In 1991, Timothy Murray, M.D., M.B.A., joined the faculty, the last faculty member to be hired by Norton. A retinal specialist, Murray's clinical and research interests included retinoblastoma, a deadly malignant tumor in pediatric pa-

tients. At that time, treatment usually meant removal of the eye. Murray, in collaboration with oncologists at the school of medicine, found that radiation therapy could kill the tumor and save the eye.

Continuing the search for better treatments, Murray in the late 1990s introduced a new form of chemotherapy to shrink the tumor, followed by laser therapy to destroy the cancerous cells. "Through the years, our clinical goal has advanced from saving the child's life to saving the eye to saving functional vision," said Murray.





*Hilda Capó, M.D., performs surgical procedures on children with complex strabismus, often with amblyopia overlap.*





*Bascom Palmer Eye Institute opened its first patient care center outside of Miami in 1996 in Palm Beach Gardens, Florida.*

One of Clarkson's major contributions was to extend the Institute's services northward from Miami. In 1994, Bascom Palmer purchased 7.4 acres on PGA Boulevard in Palm Beach Gardens and made arrangements to open an eye care center nearby in leased office space until a new campus could be designed and built.

Many Bascom Palmer faculty members, including Norton and Clarkson, had treated patients from Palm Beach County since the 1960s. "Our concept was to have an ambulatory care center closer to their homes than our Miami hospital," Clarkson said. "Someone who needed a complicated procedure would still come to Miami, but many common surgeries could be done in Palm Beach."

There were other reasons 1994 was a milestone year for the Institute. For the first time, Bascom Palmer was ranked "Best in Oph-

thalmology" in the United States by ophthalmologists surveyed by *U.S. News & World Report* for its annual Best Hospitals issue.

Then, shortly after learning of that honor, Norton died at age 72. Reflecting on his mentor, Clarkson said, "Dr. Norton saw himself as a gardener. His role was to till the soil, plant the seeds, pull the weeds and stand back and watch the luxuriant growth. Right from the start, Dr. Norton inspired openness and trust. That transparency and integrity created a foundation that allowed Bascom Palmer to grow in reputation and strength."

After serving as chair of the department of ophthalmology and Bascom Palmer Eye Institute for five years, Clarkson accepted a 1996 appointment as senior vice president for medical affairs and dean of the University of Miami School of Medicine, while remaining on the department of ophthalmology faculty. "I've had at least three careers in medicine," said Clarkson. "For the first 15 years, I was a very busy clinician and clinical researcher. Then I became chairman of Bascom Palmer Eye Institute, followed by serving as dean of the medical school. But, I never stopped seeing patients in Miami and Palm Beach Gardens."

Since 1993, Richard Parrish had been serving as director of Bascom Palmer's residency education program, along with his research and clinical responsibilities. "In this capacity, I became acutely aware of Bascom Palmer's role as a center of ophthalmic education, not only in this hemisphere but throughout the world."

Three years later, he became Bascom Palmer's third chairman. While preserving Bascom Palmer excellence, Parrish asked the faculty, "How can we be even better stewards for our patients



and students?" "The consensus was to make decisions in the best interest of our patients and acquire new medical knowledge for society at large," he said.

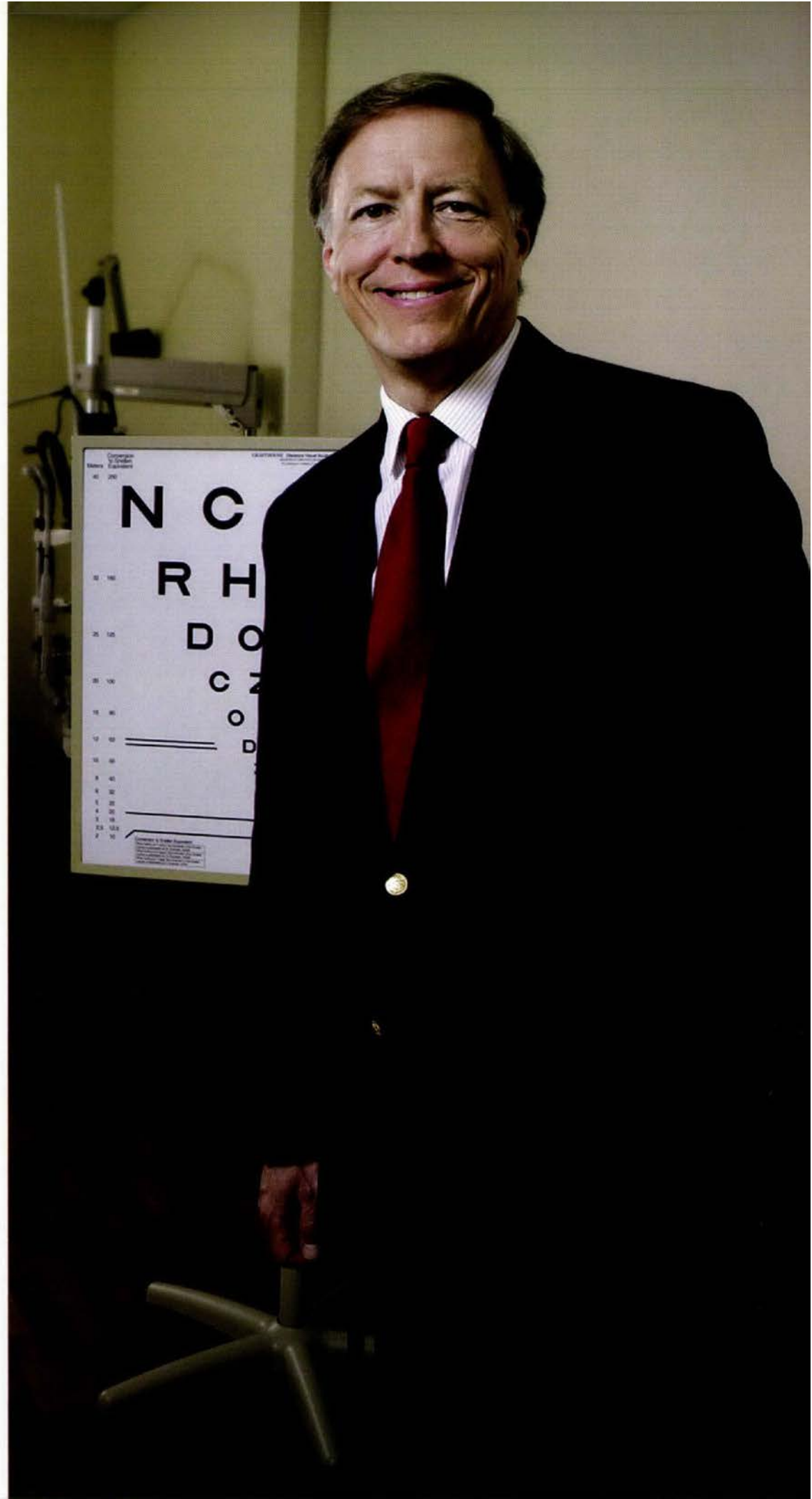
Parrish's priorities included improving the Institute's computer network, and taking advantage of the rapidly evolving Internet to connect with ophthalmologists in other countries. "I foresee having real-time interactive videos so that whether you're in Maracaibo, Moscow or Madrid, you'll be able to "key in" Bascom Palmer and find out what's being presented at Grand Rounds or in our medical educational courses."

Responding to the changing healthcare landscape, Parrish also recognized the importance of expanding to meet increasing patient demands. A key step in that direction was completing the Institute's first patient care center in Palm Beach County.

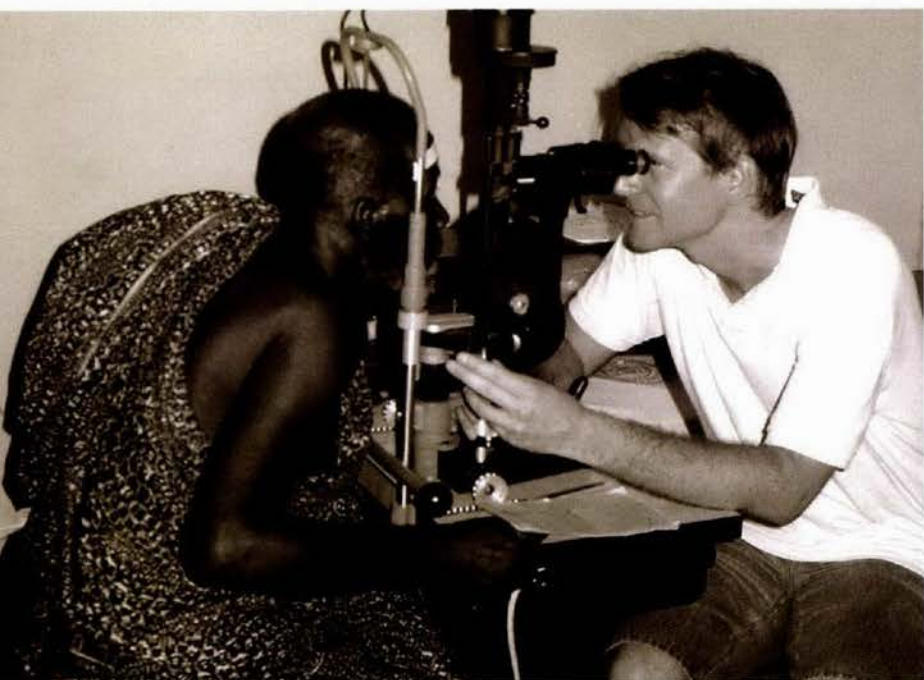
On November 17, 1996, Bascom Palmer celebrated the grand opening of the 5,000 square-foot Bascom Palmer Eye Institute of the Palm Beaches, made possible by generous gifts from the Walter G. Ross Foundation and The Jewish Guild for the Blind.

The Palm Beach Gardens offices were located just two blocks from Bascom Palmer's seven-acre property. It included examination rooms and suites for photography, fluorescein angiography, laser surgery, echography, and visual field screening – all furnished to address the comfort and needs of patients and visitors. "While these accommodations will serve patients for several years, the Institute ultimately will be located on the land we purchased. We will build one of the most prestigious eye hospitals in our nation," said Parrish.

*Richard K. Parrish II, M.D., was named the third chairman of Bascom Palmer Eye Institute in 1996.*







*Donald L. Budenz, M.D., M.P.H., examines a patient in Ghana, West Africa during a 1995 medical mission.*



*Richard K. Forster, M.D., served as Bascom Palmer's interim chairman from 1999-2001.*

From the time the facility opened, senior faculty members, including Drs. Eduardo Alfonso, Janet Davis, Richard Forster, Carol Karp, William Smiddy and David Tse traveled regularly to Palm Beach Gardens. "To help the department's outreach program be successful, we needed a strong presence," Smiddy said. "Having us there also helped in building ties with local ophthalmologists and showing them that we were not competing for patients. We were just making it easier for people who needed a specialist and didn't want to drive to Miami."

Bascom Palmer also extended its reach far beyond South Florida, in keeping with its community service mission. Donald L. Budenz, M.D., M.P.H., (fellow, 1992) a glaucoma specialist with an interest in public health, traveled to Ghana in 1995 to treat and perform surgery for patients in need of eye care. In this developing African country of more than 17 million peo-

ple, there were few surgical ophthalmologists to treat an estimated 70,000 people who could be helped by cataract or glaucoma surgery. He is one of many Bascom Palmer physicians who travel around the world performing surgeries and training local doctors and health care professionals on effective diagnosis and treatment options that can be carried out with success in their communities.

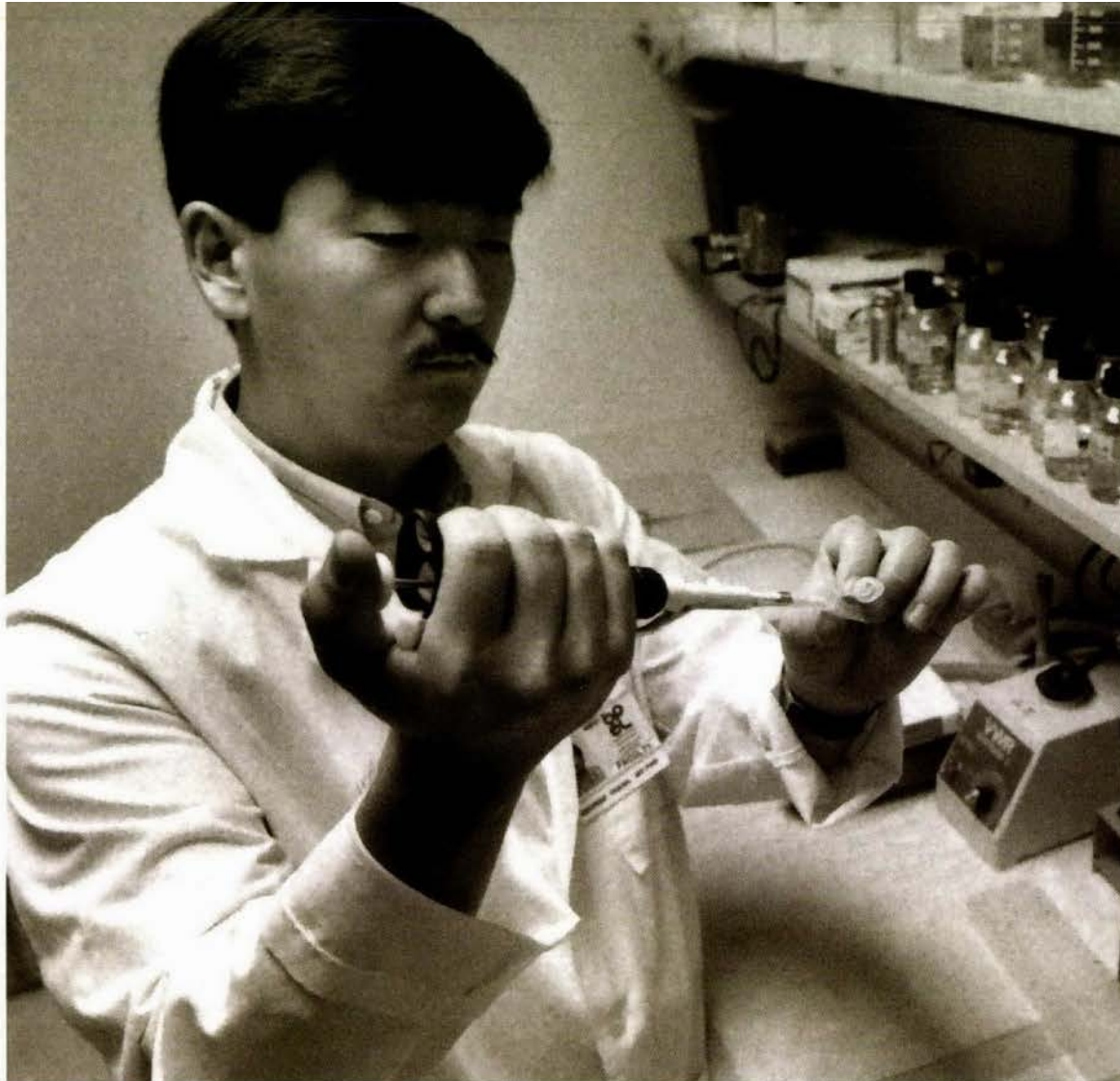
In 1999, Parrish stepped down as chairman and the next year, was named associate dean for graduate education for the University of Miami School of Medicine. One of Parrish's new projects was editing the *Bascom Palmer Atlas of Ophthalmology*, a collaborative effort

of the entire faculty that was published the following year.

"Profusely illustrated with pictures, it represented the best general reference for ophthalmology," Parrish said. "The goal was to convey as much information as possible using high-quality images with supporting text."

From 1999 to 2001, Forster served as Bascom Palmer's interim chairman as a nationwide search for a new chairman was conducted. During his tenure, he revised the faculty's compensation plan, making clinicians and researchers more financially responsible for their own activities. "We also took a serious look at Anne Bates Leach Eye Hospital to see whether it made sense to construct a new facility," he said. "That didn't seem feasible at the time, so we opted for renovations and other improvements instead."





*George Inana, M.D., Ph.D., uses molecular, cellular, genetic, and physiologic approaches to uncover the genes that cause retinal degeneration.*



*Janet L. Davis, M.D., M.A., a vitreoretinal specialist has particular expertise in the management of uveitis.*

## Studying eye disorders

Bascom Palmer's research programs also grew in the 1990s, taking advantage of scientific advances and evolving clinical tools like lasers and genetic therapy.

George Inana, M.D., Ph.D., joined the faculty as director of molecular biology and genetics. He began studying hereditary eye diseases, such as gyrate atrophy, which attacks the retina, causing blindness. In mapping genetic defects at the molecular level, Inana and his research team found a possible connection with retinitis pigmentosa. Collaborating with Samuel G. Jacobson, Inana studied the mechanism by which defects in the genes that affect vision can lead to retinal and macular degeneration.

Upon joining the faculty, vitreoretinal specialist Janet L. Davis, M.D., M.A., (fellow, 1987) has focused on the treatment and disease mechanisms of ocular inflammations and infections. She quickly became a leader in the fight to save sight in AIDS-related eye disease. "I was involved in taking care of HIV patients with ocular infections and participated in national research protocols for treatment," said Davis. After new treatments came on the market in the late 1990s, the number of these cases declined, and HIV patients had fewer visual complications. "We also have made real progress in treating uveitis since I began my practice," said Davis, who has treated thousands of these cases.

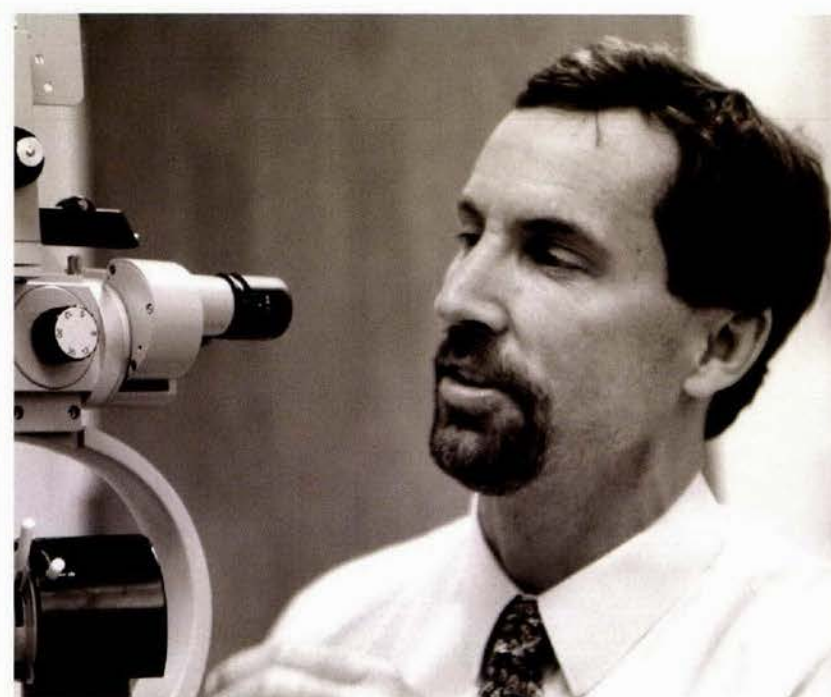




*Lori M. Ventura, M.D.*



*William E. Smiddy, M.D.*



*Thomas E. Johnson, M.D.*

"One of the strengths of Bascom Palmer Eye Institute is the collegiality and sense of teamwork," according to Davis. "Not only do we share knowledge, we can work together on complex surgical procedures involving more than one part of the eye," she said. "It's not uncommon for us to perform three or four procedures at once – a coordinated approach that clearly benefits the patient."

In that spirit, Lori M. Ventura, M.D., (fellow, 1986) joined the faculty in 1992 as the Institute's first comprehensive ophthalmologist. She spent six years in private practice before taking on the role of a general ophthalmologist. As such, she evaluates and refers patients to the ophthalmic subspecialist who can best meet the patient's needs. In one case, Ventura sensed something amiss when a 13-year-old patient came in for treatment of a sty on her eyelid. Proceeding with a careful line of questioning, Ventura discovered that the young girl had been abused by her stepfather. "She was too afraid to speak out,"

Ventura said. "It was almost as if this minor infection was her body's way of crying for help."

In the late 1990s, retinal specialist William E. Smiddy, M.D., contributed to the development of vitrectomy for the treatment of macular holes, which occur in the central part of the retina. Although only one-half millimeter or less in size, the holes can lead to loss or distortion of central vision.

Smiddy conducted clinical studies defining subgroups of patients that would respond best to treatment. The procedure to treat macular holes involves removing the vitreous gel from the eye and replacing it with a gas bubble that acts as a temporary bandage while the hole heals. Today, vitrectomy enables surgeons to close about 90 percent of macular holes, a condition previously thought untreatable.

Another of Smiddy's interests was treating complications of cataract surgery. He was the first to develop intraocular lens repositioning techniques for certain special situations, and has





*Carol L. Karp, M.D.*

published widely on surgical correction of incomplete cataract removal and intraocular infections.

In the oculoplastics service, Thomas E. Johnson, M.D., (fellow, 1993) treated orbital tumors, tear duct problems, skin cancers around the eye and multiple fractures from car accidents, blows to the eye, or sports injuries.

Among the complicated surgeries Johnson performs is optic nerve sheath fenestration. This is a procedure to relieve built-up pressure around the optic nerve that can lead to permanent vision loss and blindness. One of the muscles controlling movement of the eye is disconnected, allowing the surgeon to rotate the eye and gain access to the optic nerve. A window is then cut into the optic nerve sheath, allowing the excess fluid to escape. The results are immediate, often restoring most of the vision that was lost, and halting further vision loss.

Carol L. Karp, M.D., (fellow, 1994) focused her work on management of ocular surface tumors and cataract surgery. In the

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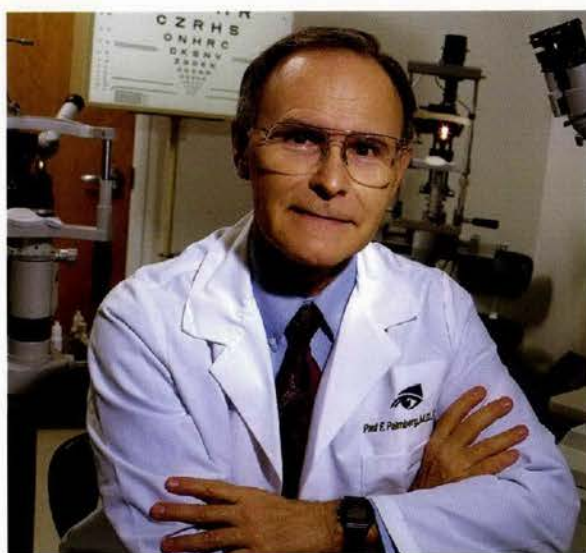
— JANET L. DAVIS, M.D., M.A.

late 1990s, Karp pioneered a medical treatment for ocular surface squamous neoplasia – cancers that grow on the surface of the eye. While studying the effectiveness of interferon on other diseases, Karp became interested in the drug's anti-viral and anti-neoplastic properties. She designed a protocol to study the drug in patients with ocular surface tumors, curing them of their cancer without surgery.

"The results were dramatic from the very first patient," said Karp, whose research has produced several landmark articles on the topic. Karp's work helped to change the standard of care for the treatment of ocular surface tumors.

In the 1990s, Bascom Palmer was one of 21 U.S. eye centers selected to participate in an Ocular Hypertension Treatment Study sponsored by the National Eye Institute of the National Institutes of Health (NEI/NIH). With Parrish the study co-chair, the goal was to determine whether medical therapy to reduce intraocular pressure prevents or delays the development of pri-





Paul F. Palmberg, M.D., Ph.D.

*"So many exciting things have happened in the past decade in the glaucoma field. We now have information from long-term studies to tell us what we need to achieve in order to stabilize patients with glaucoma, and we have very sensitive tests to monitor both the structure and the function of the optic nerve to confirm a stable course. Furthermore, we also have medical and surgical ways of achieving the needed reduction in eye pressure in nearly all cases, and we have learned how to avoid or to fix most complications of surgical treatment. That's radically good news."*

— PAUL F. PALMBERG, M.D., PH.D.

many open-angle glaucoma in patients with ocular hypertension. The results, published in 2002, indicated that eye drops used to treat elevated pressure inside the eye can be effective in delaying the onset of glaucoma. This is a significant finding for the 3 to 6 million Americans who have elevated eye pressure and are at increased risk for developing glaucoma.

Bascom Palmer's glaucoma researchers also took part in the Advanced Glaucoma Intervention Study (AGIS), a multi-center, randomized clinical trial sponsored by the NEI/NIH that examined outcomes of laser and surgical glaucoma treatment.

As a member of the AGIS Monitoring Committee, Paul Palmberg, suggested analyzing the relationship between pressure and vision loss. His long-term research at Bascom Palmer

included the important finding that in open-angle glaucoma, vision is gradually lost when an elevation of eye pressure causes injury to the optic nerve.

"So many exciting things have happened in the past decade in the glaucoma field. We now have information from long-term studies to tell us what we need to achieve in order to stabilize patients with glaucoma, and we have very sensitive tests to monitor both the structure and the function of the optic nerve to confirm a stable course. Furthermore, we also have medical and surgical ways of achieving the needed reduction in eye pressure in nearly all cases, and we have learned how to avoid or to fix most complications of surgical treatment. That's radically good news," Palmberg said in 2005.



*"I felt that being involved in their education allowed me to contribute to training the next generation of ophthalmologists. It also challenged my own depth of understanding, so it was an educational process for me as well."*

— STEVEN J. GEDDE, M.D.

## Transfer of Knowledge

"Bascom Palmer has the best reputation in the country for glaucoma fellowship training," said Steven J. Gedde, M.D., (fellow, 1996) as he was applying for a glaucoma fellowship. "While I enjoyed touring the facility and seeing Miami, I was most impressed with the Institute's glaucoma faculty; these were the thought leaders in the field."

Soon after joining the faculty, Gedde recognized he had an affinity for working with residents and fellows. "I felt that being involved in their education allowed me to contribute to training the next generation of ophthalmologists," he said. "It also challenged my own depth of understanding, so it was an educational process for me as well."

In 1997, Parrish asked Gedde to become program director of Bascom Palmer's residency program, a role Gedde holds to this day. Applications for Bascom Palmer's highly competitive three-year residency training program are offered in conjunction with Jackson Memorial Medical Center. At the time, Bascom Palmer accepted six new physicians annually for its program. In the early 2000s, the number of residents selected increased to seven each year. Bascom Palmer's one and two-year fellowships provide incomparable opportunities for excellence in all ophthalmic subspecialties, to approximately 25 doctors each year.

Approximately 60 percent of Bascom Palmer residents go into private practice and 40 percent select careers in academic settings. Through the years, about 80 percent of Bascom Palmer residents have chosen to pursue fellowship training, much higher than the national average of 50 percent, according to

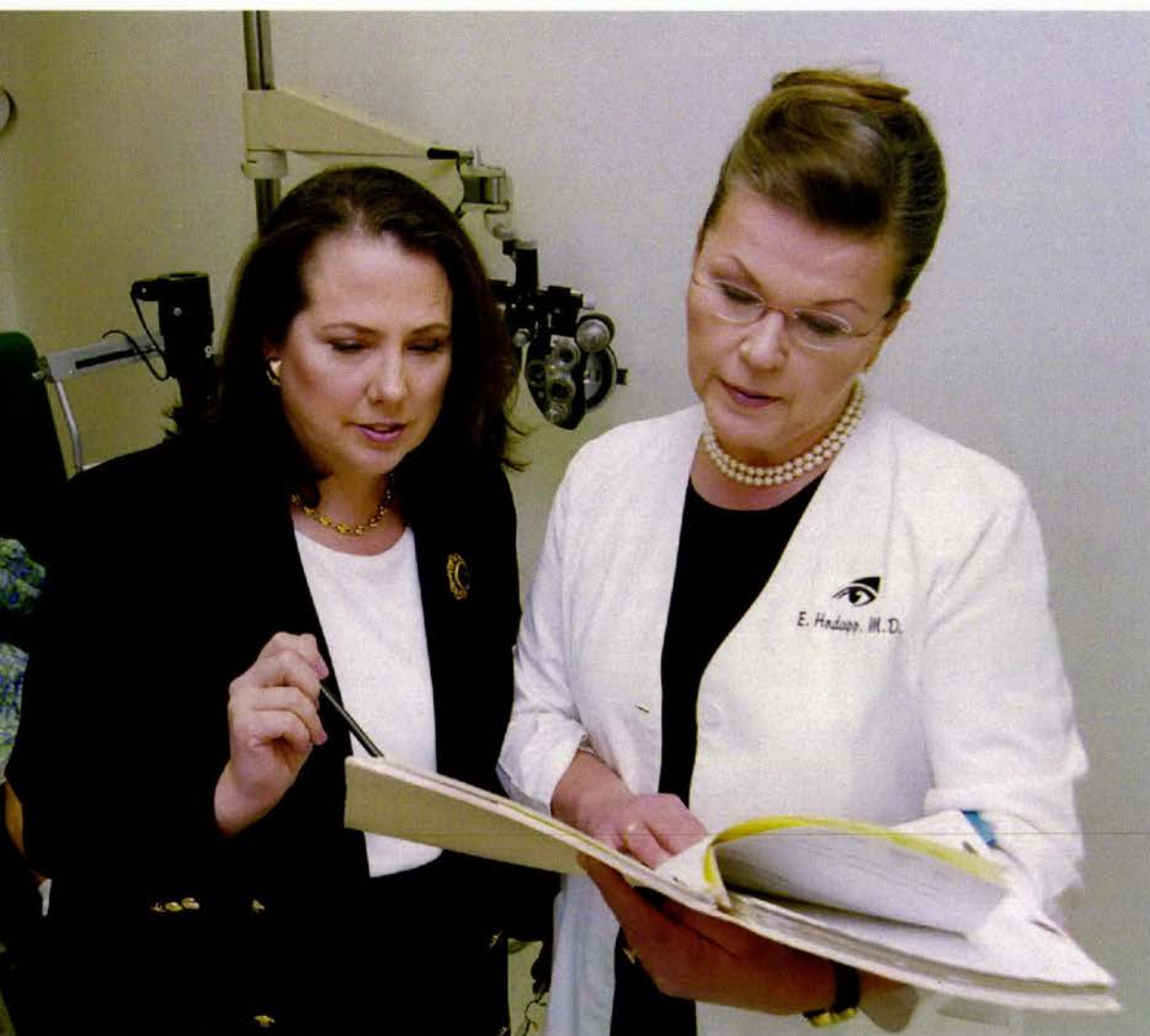


*Steven J. Gedde, M.D., with Daniel M. Miller, M.D., Ph.D., (resident, fellow, chief resident, 2006) and Krista K. Rosenberg, M.D., (fellow, 2006)*



*"I visited Bascom Palmer and was astounded at the level of the faculty. I believe in the Bascom Palmer philosophy of treating the person – not just the eye."*

— MARTINE JAGER, M.D., PH.D.



*Alana Grajewski, M.D., and Elizabeth Hodapp, M.D.*

Gedde. "That's been a function of the applicants we recruit, the stimulating environment here, and our excellent mentors in the subspecialty areas," he said.

Victor Curtin, who has been actively involved in the Institute's medical training since joining the faculty in 1959, said that competition for residency and fellowship positions remains intense, with hundreds of applications every year for a small number of positions. "After their training, these physicians apply their knowledge and skills, multiplying our Institute's impact," Curtin said. "The knowledge gained here knows no geographic boundaries and is spread to succeeding generations."

"In our residency and fellowship training programs, as well as our medical education events for South Florida physicians, we emphasize the importance of evidence-based medicine," noted Eduardo Alfonso. "That means implementing the most effective treatment option based on scientific research and clinical practice."

Bascom Palmer also offers a clinical observership program for ophthalmologists from other countries. Because they are not licensed in the United States and cannot participate in the care of patients, they can only observe physicians in a clinical setting. In working with glaucoma observers, Palmberg has returned with some to their own countries to teach them as they treat patients in addition to giving lectures to local ophthalmologists. In this way, many communities around the world now have specialized eye care that would otherwise be unavailable.



Throughout the years, a number of South Florida ophthalmologists in private practice have volunteered their time to assist Bascom Palmer's training programs, including former full-time faculty members Elizabeth Hodapp, M.D., and Alana Grajewski, M.D., (fellow, 1989). "Both have been unbelievably devoted to our program and run a pediatric glaucoma clinic weekly," said Douglas Anderson. "Dr. Hodapp attends almost every one of our weekly teaching seminars and contributes to the training of our glaucoma fellows. Dr. Grajewski attends the seminars as well, and also runs a foundation that pays for glaucoma evaluation and surgery for children whose families cannot afford treatment."

"Many of our alumni have become noted leaders in academic medicine around the world, and all of our graduates have gone on to provide outstanding care in their local communities," Gedde said.

Nineties graduates of Bascom Palmer's training programs who have become ophthalmology department chairmen at medical schools and teaching hospitals include: Donald L. Budenz, M.D., M.P.H., (fellow, 1992) University of North Carolina; Oscar A. Cruz, M.D., (fellow, 1992) St. Louis University; Jeffrey Henderer, M.D., (resident, 1998) Temple University; Freidrich Kruse, M.D., (research fellow, 1991) University of Erlangen, Germany; David Quillen, M.D., (fellow, 1995) Pennsylvania State University; Per Soderberg, M.D., (research fellow, 1995) Uppsala University, Sweden; and James Tsai, M.D., (fellow, 1994) Yale

University. Dilek Dursun, M.D., (fellow, 2001) from Baskent University, Turkey also joins this prestigious group.

Another international leader is Martine Jager, M.D., Ph.D., (fellow, 1993) who now heads the laboratory of the department of ophthalmology at Leiden University Medical Center in the Netherlands. Jager in 2007 became the first non-U.S. president of the Association for Research in Vision and Ophthalmology.

"After I had finished my training in Amsterdam to become an ophthalmologist, I realized I wanted to combine clinical care with research," Jager said. "I visited Bascom Palmer and was astounded at the level of the faculty."

Reflecting on her cornea fellowship, Jager said, "At Bascom Palmer, I learned to look not just at the cornea, but everything around it, and to listen to the patient in order to identify the problem. Today, I teach my residents to do the same thing. They need to investigate all the parts of the eye as well as the ocular surface. I believe in the Bascom Palmer philosophy of treating the person – not just the eye."

*"After their training, these physicians apply their knowledge and skills, multiplying our Institute's impact. The knowledge gained here knows no geographic boundaries and is spread to succeeding generations."*

— VICTOR T. CURTIN, M.D.



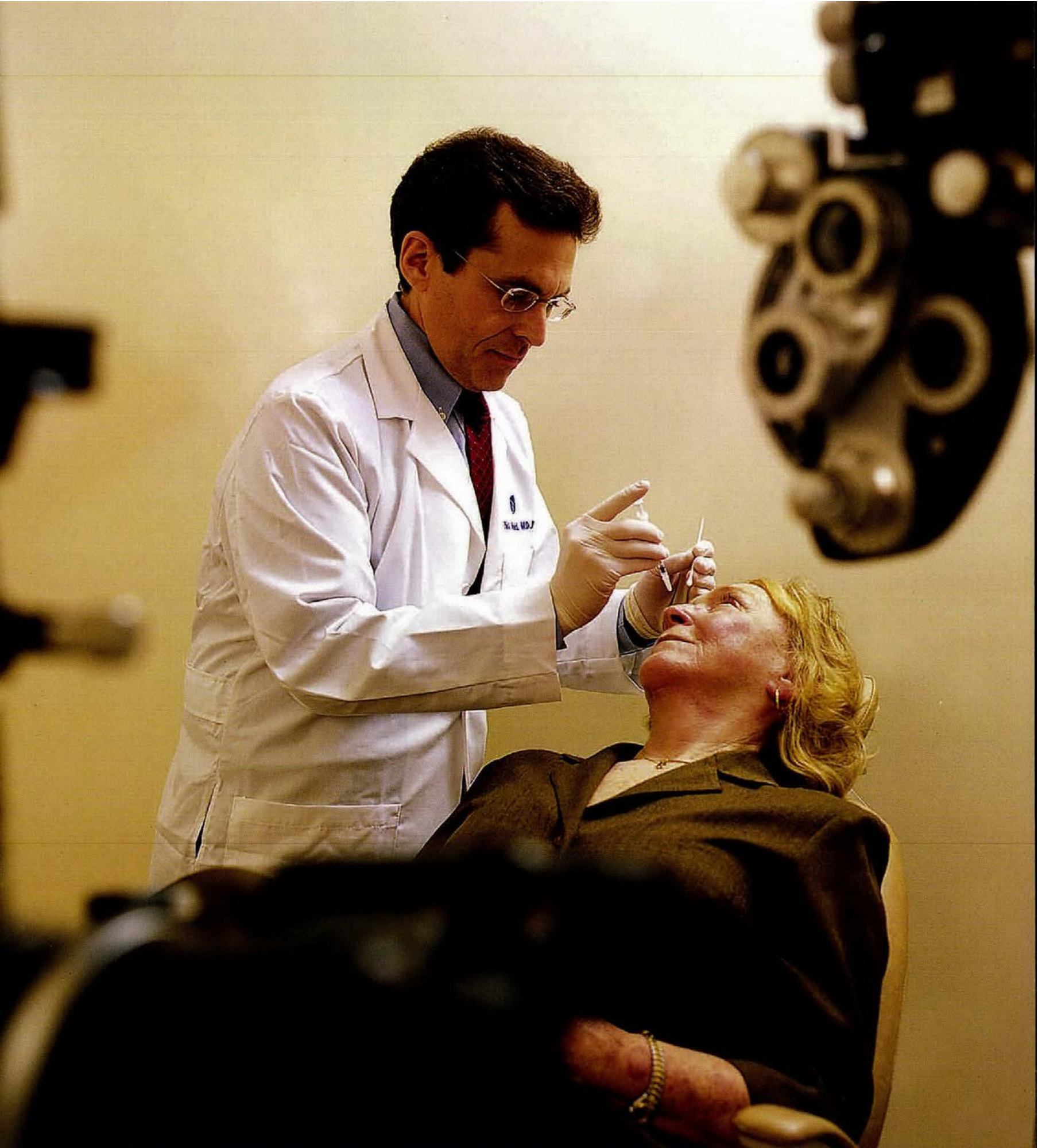


# Achieving Global Leadership



Bascom Palmer entered the decade of the 2000s with renewed vigor. Under chairman Carmen A. Puliafito, M.D., M.B.A., the Institute invested in clinical care, education and research programs, expanding its service area, and holding on to the top spot in national rankings. Since 2007, chairman Eduardo C. Alfonso, M.D., has strengthened Bascom Palmer's global reputation for excellence, while looking ahead to the future.









## Worldwide impact

Rosemary Kohler began losing her eyesight in the early 2000s. Her local ophthalmologist identified the 81-year-old Boca Raton resident's problem as age-related macular degeneration (AMD). He advised Kohler to go to Miami and see Bascom Palmer specialist Philip J. Rosenfeld, M.D., Ph.D., (fellow, 1996). "Two days later, I was in his office," said Kohler. "He was quickly able to stabilize my eyesight."

At that point, Rosenfeld had spent two decades seeking more effective treatments for the "wet" form of AMD. When he began studying this disorder at Bascom Palmer in the 1990s, AMD treatment involved thermal laser photocoagulation and photodynamic therapy to destroy abnormal blood vessels. However, Rosenfeld felt there had to be a better approach. Over the years he tested various medications, RETAANE™, Macugen® and Lucentis™, which target the body's vascular endothelial growth factor, a protein associated with the formation of abnormal blood vessels in the affected eyes. While these treatments proved to be effective in many patients, Rosenfeld kept searching.

In early 2005, Kohler became one of Rosenfeld's first patients to participate in his clinical study of Avastin™, a drug similar to Lucentis that had been approved for use in treating colon

cancer. Drawing on his medical insights, Rosenfeld felt Avastin could also be effective in repairing damaged blood vessels in the retina.

"The treatment options for patients with wet AMD had been limited. The results of Dr. Rosenfeld's pioneering observations were remarkable," said Puliafito. "Not only did Avastin halt the progression of wet AMD in his patients, many even regained vision just a few days or weeks after treatment." Key to the success of this major development is Serafin Gonzalez, PharmD, Bascom Palmer's director of pharmacy services and his staff. A specialist in ophthalmic compounding, Gonzalez was the first to compound bevacizumab for intraocular injection and his protocol is currently used worldwide. "Serafin immediately appreciated what we wanted to do, and he agreed to prepare Avastin so that we could easily inject the drug into the eye," said Rosenfeld. Ophthalmologists around the world quickly put Rosenfeld's findings into practice and have honored him for his major contribution to vision treatment and care. "I am honored to receive recognition, but what is even more important is that patients all over the world can now see because of these drugs," said Rosenfeld. "It is a great feeling to know we've had such an impact worldwide. What a great achievement for Bascom Palmer."

*Philip J. Rosenfeld, M.D., Ph.D.*





## A new century – a new chair

In 2001, Carmen Puliafito was chosen to lead Bascom Palmer into the new century. An author, inventor, teacher, surgeon and researcher, Puliafito is an internationally recognized retinal specialist. He was founding director of the New England Eye Center and served as professor and chairman for more than a decade of the department of ophthalmology at Tufts University School of Medicine where he co-invented optical coherence tomography – a technique that produces highly detailed images of the eye for diagnostic purposes.

“Bascom Palmer is one of the most important eye institutes in the world and its faculty has contributed more to the field of ophthalmology than any other institute,” Puliafito said at the time of his appointment, “I believe we have the greatest potential to make a major impact in the prevention of blindness. We’re aiming to be the very best eye institute – not only in the country, but in the world. ”

An agent of growth and development, Puliafito advanced Bascom Palmer’s mission of clinical care, education and vision research. His priorities as chair were to increase the number of faculty, residents and fellows; enhance the Institute’s ability to serve patients; develop a macular degeneration and imaging center; expand Bascom Palmer’s commitment to research, especially in the areas of vascular biology which includes macular degeneration, diabetic retinopathy, glaucoma and ophthalmic genetics; and expand professional educational programs for physicians.

*Carmen A. Puliafito, M.D., M.B.A., served as Bascom Palmer’s fourth chairman from 2001–2007.*



*“Bascom Palmer is one of the most important eye institutes in the world, and its faculty has contributed more to the field of ophthalmology than any other institution.”*

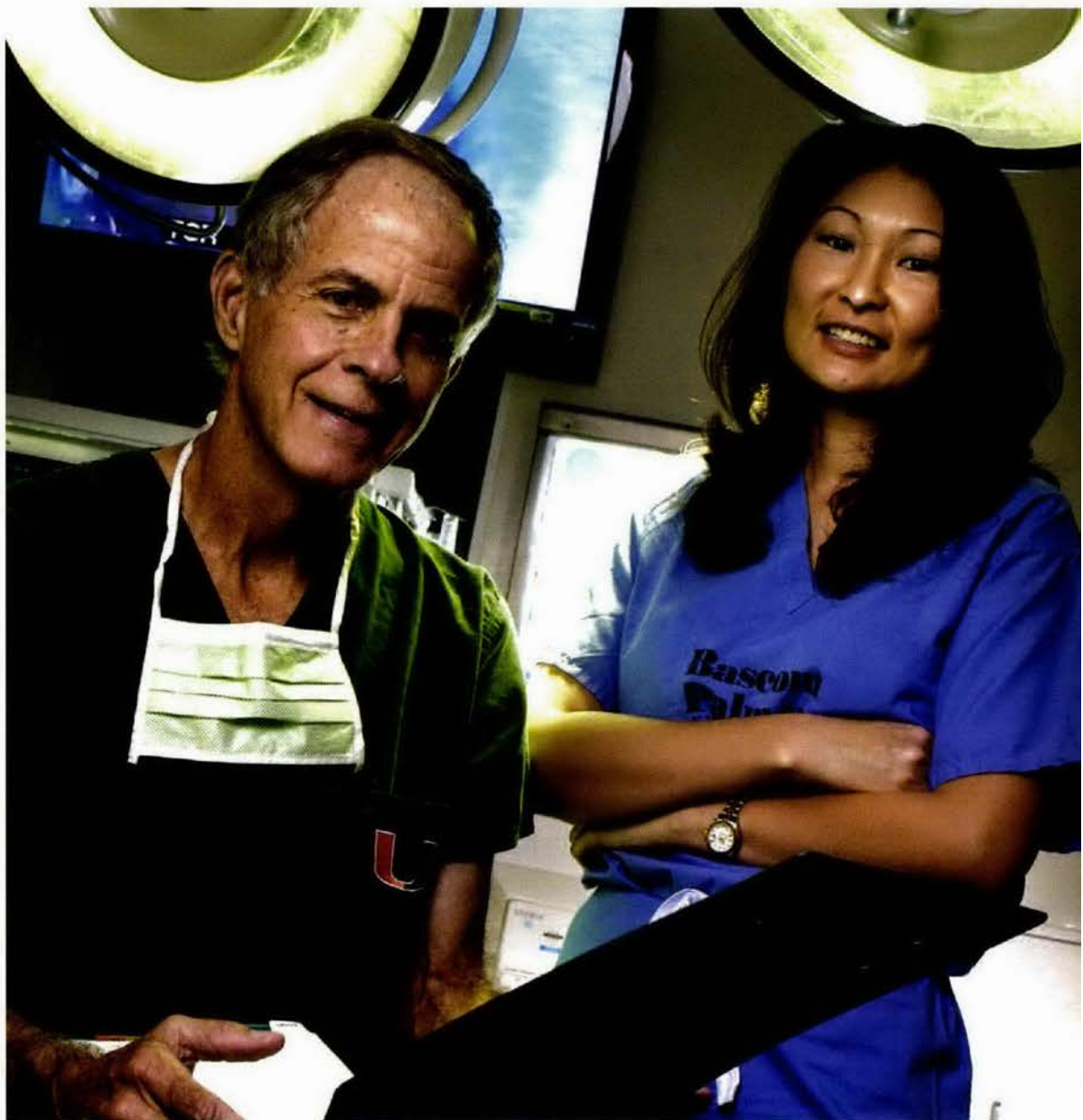
– CARMEN A. PULIAFITO, M.D., M.B.A.

During his tenure, Bascom Palmer took a leading role in the development of new ophthalmic imaging technologies. He also served as Rosenfeld’s co-investigator in the study of Avastin, which he called “a very powerful innovation that clearly shows the value of having clinicians directly involved in medical research.”

Sonia H. Yoo, M.D., joined the faculty in 2000 as a surgeon in corneal and refractive surgery. She has investigated the use of lasers to remove cataracts and has been involved in numerous studies aimed at improving the outcomes of patients undergoing cataract and refractive surgery. For example, advanced intraocular lens designs allow surgeons to correct for near-sightedness and far-sightedness with a single implant. “Many technologies are on the horizon that will bring cataract surgery to the next level,” she said.

Bascom Palmer has one of the world’s largest arrays of optical laser technology for treating vision problems. They include excimer lasers, which use ultraviolet light beams, and femtosecond lasers, which emit short pulses of infrared light lasting just one billionth of one millionth of a second. Each of these lasers has unique advantages and properties allowing the physicians to select the most appropriate laser for an individual patient based upon the patient’s needs and eye care condition.

“As cataract surgery evolves as significant technology, femtosecond laser-assisted cataract surgery is now providing



William W. Culbertson, M.D., and Sonia H. Yoo, M.D.





*Hilda Capó, M.D.*

greater precision compared with manual techniques and may be better for patients overall," said William Culbertson, who has been at the forefront of vision correction surgery since its earliest days.

Joining Hilda Capó, in Bascom Palmer Eye Institute's pediatric service in 2002 was Craig A. McKeown, M.D., who had held academic appointments at Harvard University and Tufts University medical schools before joining the Institute. A retired U.S. Air Force colonel, McKeown was a flight surgeon serving in the military prior to his ophthalmic training. While he sees patients ranging from one week of age to adults over 90 years old with double vision, children are a major focus of his practice, "Early diagnosis of eye disorders is critical," McKeown said.

Both McKeown and Capó, perform surgical procedures on children with complex strabismus, often with amblyopia overlap. This experience is a major advantage in treatment outcomes. So, too is Bascom Palmer's comprehensive approach to pediatric eye care – an approach that combines examination, diagnosis, treatment and education, as well as access to other specialists, like neurologists, for further consultation.

In 2002, the Institute was named "Best Residency Program" by *Ophthalmology Times*, which annually ranks the top ophthalmology programs in the United States. In subsequent years, Bascom Palmer would also add the recognition of having the "Best Clinical Care" and being named the "Best Overall Ophthalmology Program" in the country by the same periodical.





*"Combining surgical skills with scientific advances  
like an increasing ability to understand  
genetic diseases at a biochemical level,  
means better treatment early and  
a brighter outlook for our youngest patients."*

— CRAIG A. MCKEOWN, M.D.



*Craig A. McKeown, M.D.*







*"Our commitment remains unchanged – excellence in patient care, research and teaching, and unquestioned world leadership in the international field of ophthalmology."*

– CARMEN A. PULIAFITO, M.D., M.B.A.



Bascom Palmer had first been ranked #1 in ophthalmology by *U.S. News & World Report* in 1994, and had alternated the top position with Wilmer Eye Institute at Johns Hopkins University since the ranking first began in 1990. During Puliafito's tenure and under the direction of Marla Bercuson, Bascom Palmer's director of marketing and communications, the Institute regained the number one ophthalmology ranking in 2004, a position it has maintained for eight consecutive years to this date.

As the Institute's reputation continued to grow, patient volume continued to climb. In 2002, the Institute treated more than 180,000 patients and performed more than 8,000 surgical procedures. "We continued to treat patients from near and far, without regard for their financial status, as we have always done," said Puliafito.

To better serve those patients, in 2002, Puliafito planned a major renovation of the Anne Bates Leach Eye Hospital, which had benefited from the guidance of Stanley J. Glaser, longtime chairman of the hospital's board of governors (1975 – 1995) and his successor, Stanley Arkin (1995 – present). That initiative resulted in the expansion of the surgical suites and remodeling of patient care areas, lobby and waiting rooms. "Our commit-

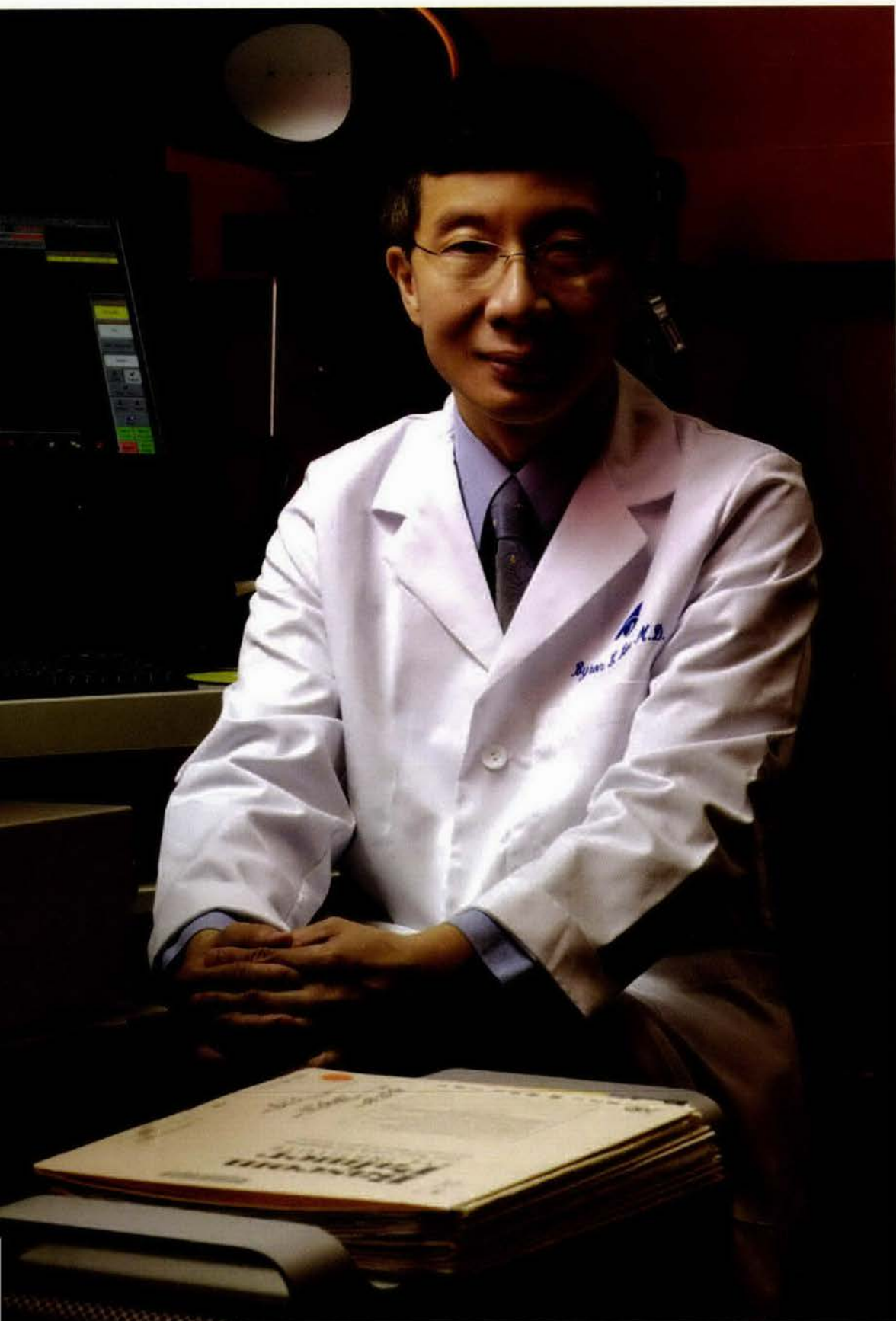
ment remains unchanged – excellence in patient care, research and teaching, and unquestioned world leadership in the international field of ophthalmology," said Puliafito. "Our facilities must reflect the same excellence as our patient care," he said when the remodeling began.

Under the direction of alumnus Gordon Miller, funds were raised from the alumni to renovate the Norton Library. In 2006, upon completion of the project, Reva Hurtes, founding director of the Library, retired following a stellar career that spanned more than four decades. Cynthia Birch, associate director of marketing, assumed the expanded role of director of the Library and Health Information Center.

Meanwhile, Bascom Palmer continued to invest in advanced clinical care in many areas including the neuro-ophthalmology service whose faculty includes Byron L. Lam, M.D., (fellow, 1991). Lam's work in retinal degeneration and hereditary eye diseases has added a new dimension to the busy service.

Lam treats many patients with unexplained visual loss. "Neuro-ophthalmologists have learned not to take anything for granted in the diagnosis process," said Lam. "And the more





*Byron L. Lam, M.D.*

you know more about the eye, the better you can identify these types of 'cross-over' conditions."

The 2000s marked a decade of explosive growth in the number of faculty members as new physicians were recruited to meet patient demand. Miami's far-reaching oculoplastic service was enlarged with the addition of Wendy W. Lee, M.D., M.S., (fellow, 2004). Lee specializes in ophthalmic plastic and reconstructive surgery as well as non-surgical cosmetic enhancements. She also directs Bascom Palmer's aesthetic center in Miami. Lee, Sara Tullis Wester, (resident, fellow, 2010) and Chris R. Alabiad, M.D., (resident, fellow, 2010) are among the team of oculoplastic surgeons including senior faculty members, David Tse and Tom Johnson, who see patients with tumors involving orbital and eyelid tumors. Alabiad serves as the department of ophthalmology's director of medical service education.

In 2005, Wen-Hsiang Lee, M.D., Ph.D., was recruited to develop a laboratory program in retinal research at Bascom Palmer's McKnight Vision Research Center and also to provide clinical services in Miami. A year later, Thomas Albini, M.D., joined the faculty as a specialist in uveitis, as well as vitreoretinal diseases and surgery. He said at the time, "To be able to work in a specialized environment in an eye hospital the size and caliber of Bascom Palmer was a huge draw. The infrastructure – everything from the social workers, surgical coordinators, nurses, operating room staff and basic science department, allows me to do things I would be unable to accomplish at other facilities."

"Bascom Palmer is the place to come for complex and unusual cases," said neuro-ophthalmologist Joshua Pasol, M.D., (fellow, 2007). Pasol, with a research interest in optic nerve diseases added, "We have experience even with the most rare neuro-ophthalmology conditions."





*Stephen G. Schwartz, M.D., M.B.A.*



*Kendall E. Donaldson, M.D., M.S.*

Following fellowships in ocular oncology and vitreoretinal surgery at Bascom Palmer, Amy C. Scheffler, M.D., (resident, fellow, chief resident, 2010), joined the faculty. A specialist in pediatric and adult ocular tumors, intraocular tumors and melanoma, Scheffler also treats Bascom Palmer's youngest patients with retinoblastoma.

The corneal and external disease service also expanded with the addition of Leejee H. Suh, M.D., (fellow, 2007); Richard M. Awdeh, M.D., (fellow, 2009); and Anne Ko, M.D. Comprehensive ophthalmologist, Lana Srur, M.D., joined the Institute in 2009. Awdeh, Bascom Palmer's medical director of technology transfer, and Suh are expert in the femtosecond-laser cataract surgery platforms. Michael R. Banitt, M.D., M.H.A., (fellow, 2009) joined the glaucoma service and also treats adults and pediatric patients with corneal and external diseases.

In 2005, a gift from Estelle and George G. Rosenfield led to the creation of the imaging and macula center. Containing the most advanced ophthalmic photographic and imaging equipment, the center allowed the Institute's ophthalmologists to perform a variety of diagnostic procedures, including optical coherence tomography, angiography fundus photography, photographic and fluorescein studies and slit lamp photography. These tests benefit a growing number of ophthalmology

patients with all types of eye diseases and disorders including those in the areas of retina, glaucoma, cornea and pediatric ophthalmology. Bascom Palmer and its photography department regularly participate in studies funded by the National Eye Institute of the National Institutes of Health and the images produced in the imaging and macula center play a vital role in these studies.

As the faculty continued to grow in order to meet patient demand, Puliafito, with the competent leadership of Michael Gittelman, also revamped Anne Bates Leach Eye Hospital's clinical systems and business processes, and substantially increased the amount of clinical space. Gittelman, who at the time had more than 20 years of health care management experience, was appointed as administrator for Anne Bates Leach Eye Hospital in 2004. Today, he is executive administrator of the hospital and the department of ophthalmology.

One of Puliafito's priorities was expanding Bascom Palmer's geographic reach in the South Florida region. In 2004, Bascom Palmer opened patient care centers in Naples (Collier County) and Plantation (Broward County). "These centers allowed us to bring Bascom Palmer closer to our patients to the north and west of Miami, in keeping with our strategic commitment to serving the region," Puliafito said.



*"Bascom Palmer Eye Institute at Palm Beach Gardens reflects the University of Miami's commitment to serve the region's fast-growing population, while continuing to provide the finest academic medical programs in the state."*

– UNIVERSITY OF MIAMI PRESIDENT DONNA E. SHALALA, Ph.D.





In addition to specialists practicing full-time in Naples and Plantation, many of Bascom Palmer's Miami-based faculty members travel to these other offices to offer a full complement of their services.

When Stephen G. Schwartz, M.D., M.B.A., joined the Institute in 2004 as the medical director of Bascom Palmer Eye Institute at Naples, he said, "I was given an opportunity to join the top eye department in the world and live in one of the most desirable locations in the world. It was an opportunity to grow a business from scratch, which is very unusual in academic medicine." The Naples facility opened early that year, with a focus of subspecialty referral care of macular and retinal disease. Naples now has three full-time faculty members and six more who travel from Miami on a monthly basis. The practice is now full service in size and scope.

Schwartz and medical retina specialist Jaclyn L. Kovach, M.D. (fellow, 2007) conduct clinical trials in Naples for patients living on the southwest coast of Florida. "People used to drive hundreds of miles for the type of advanced care that can only be offered in an academic medical center. Today, we are bringing that care to the people of Southwest Florida. We are bringing Bascom Palmer to them."

Schwartz, whose research interests include ophthalmic pharmacogenomics, was the first Bascom Palmer faculty member to be elected president of the Florida Society of Ophthalmology. However, Bascom H. Palmer, M.D., for whom the Institute is named, served as president in 1948.



In 2010, Bascom Palmer recruited nationally recognized corneal specialist, George F. Corrent, M.D., Ph.D., (fellow, 1988) as the latest step in its Naples and Collier County expansion. Corrent had been in private practice and had served as chairman of ophthalmology at Cleveland Clinic Florida prior to joining the faculty of Bascom Palmer.

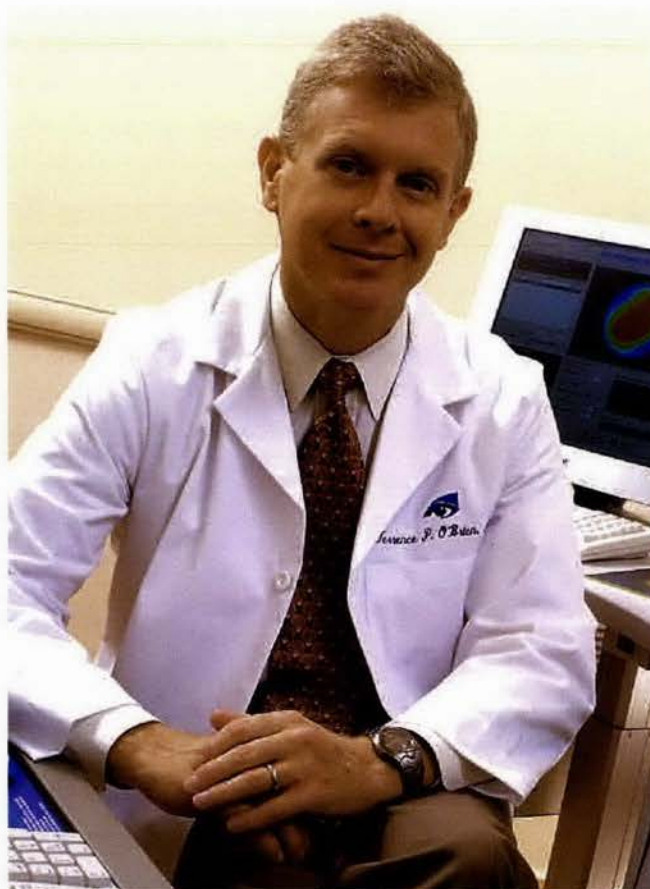
Just months after completing her corneal fellowship at Bascom Palmer Eye Institute in 2004, Kendall E. Donaldson, M.D., M.S., was named medical director of Bascom Palmer Eye Institute at Plantation. "The Plantation center is a microcosm of our facility in Miami," said Donaldson. "Patient demand has been far greater than we anticipated and an expansion of this facility to double its current size will be completed in 2012." In addition to the faculty members who travel from Miami to the Plantation office, are Sarah R. Wellik, M.D., (fellow, 2005) and Elena B. Roth, M.D., (resident, 1996).

On a larger scale, Puliafito led a \$22 million capital campaign to build a permanent Bascom Palmer campus in Palm Beach Gardens on the land that the Institute had purchased under the direction of John Clarkson in 1994.

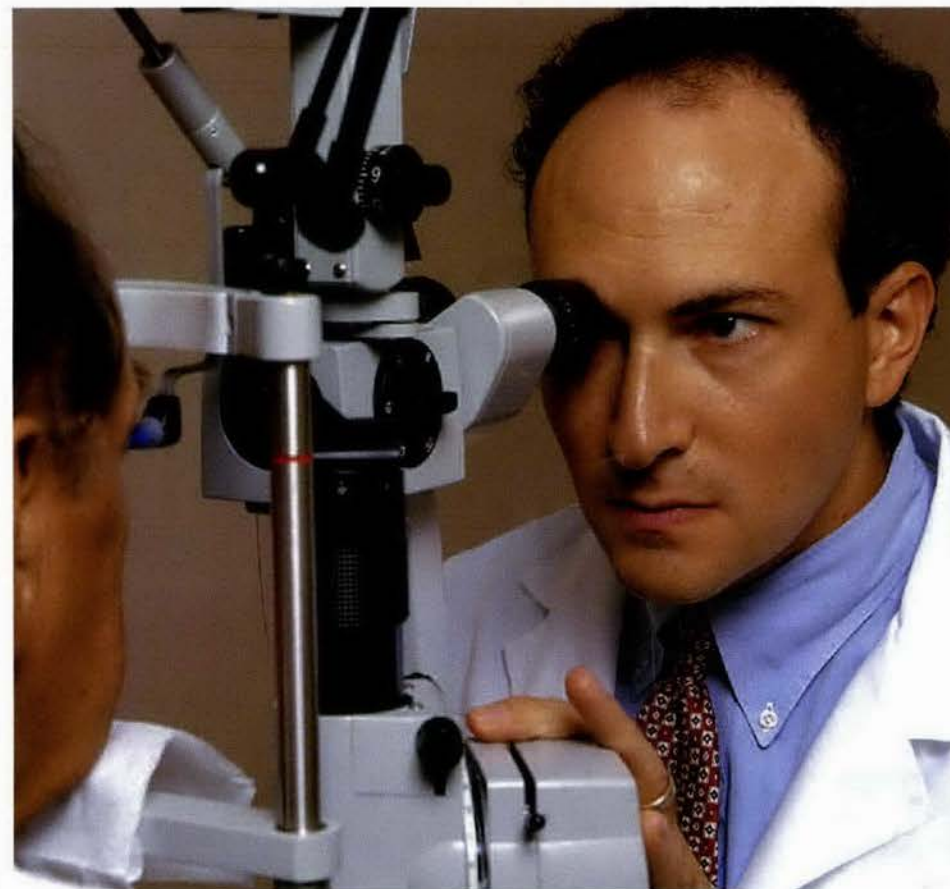
Florida governor-elect Charlie Crist joined more than 600 Bascom Palmer supporters in Palm Beach Gardens for a celebration of vision in 2006 dedicating the nation's most technologically advanced eye care center. Crist noted that the Institute's world class ophthalmologic research and clinical care have touched his own family. "I'm the son of a physician, Dr. Charlie Crist, Sr., who suffers from macular degeneration. We found out about the groundbreaking work Bascom Palmer is doing into macular

*Cutting the ribbon to dedicate the new Bascom Palmer Eye Institute at Palm Beach Gardens. Governor-Elect Charlie Crist; University of Miami President Donna E. Shalala; Pascal J. Goldschmidt, M.D., dean of the University of Miami Miller School of Medicine; and Carmen A. Puliafito, M.D., M.B.A.*





*Terrence P. O'Brien, M.D.*



*David S. Greenfield, M.D.*

degeneration. It has almost been a miracle that under Dr. Puliafito's care, my father's eyesight is becoming better than it was before the disease. I will forever be indebted to Bascom Palmer Eye Institute, the University of Miami and Dr. Puliafito."

Institute supporters made a lasting impact throughout the new campuses' 40,000 square-foot medical office building made possible with generous support of Milton and Tamar Maltz. Adjacent to the Maltz Center is the 10,000 square-foot ambulatory surgical center, the Frankino Pavilion at the Bascom Palmer Surgery Center, built with support by Connie and Sam Frankino.

"In addition to the latest technology, the new facilities were designed with our patients' safety, comfort and outcomes in mind," said Coreen Rodgers, assistant chairman of the department of ophthalmology at the time and project manager for the new campus. "We strongly believe that creating a beautiful

environment is equally as important as the latest technology in providing exceptional service to our patients as well as an ideal work environment for our faculty and staff."

"This state-of-the-art medical facility is the University of Miami's first major construction project outside Miami-Dade County," said Donna E. Shalala, Ph.D., president of the University of Miami. "It reflects our commitment to serve the region's fast-growing population, while continuing to provide the finest academic medical programs in the state."

At the expanding Palm Beach campus, David S. Greenfield, M.D., (fellow, 1995) leads a nationally recognized program in glaucoma imaging as he develops new approaches for early detection of the disease. "I've seen a number of changes in the field over the years. Among the most significant have been the realization that glaucoma is not synonymous with increased intraocular pressure and that glaucoma is a neurological disorder



whose common final pathway is optic nerve injury. Another key change has been in the area of pharmaceuticals and technological advances in ocular imaging. These have redefined how we think about and manage glaucoma."

Also involved in ophthalmic imaging techniques is vitreoretinal specialist, Andrew A. Moshfeghi, M.D., M.B.A. (fellow, 2006), medical director of Bascom Palmer Eye Institute at Palm Beach Gardens. "My role is to provide a medical perspective on the administrative management of our Palm Beach County operation," said Moshfeghi. In this capacity he works closely with Anthony Garand, the center's chief operating officer. Moshfeghi also serves as the Institute's medical director of tele-ophthalmology.

Also playing a key leadership role in Bascom Palmer's expansion into Palm Beach is Terrence P. O'Brien, M.D., a leading expert in the fields of refractive surgery and ocular infectious diseases. O'Brien joined the faculty in 2005 and heads the refractive surgery service in Palm Beach. As an international leader and lecturer in diagnostics and new treatment for severe infections of the cornea, he also conducts research into infectious ocular diseases working closely with his colleagues at Bascom Palmer's ocular microbiology laboratory in Miami.

Joining O'Brien in the refractive service is David A. Goldman, M.D., (resident, fellow, 2007), a corneal and external disease specialist whose research interests include advances in cataract and refractive surgery as well as Internet applications of ophthalmology.

In 2010, more than 55,000 patients were treated and 3,000 surgeries were performed at Palm Beach Gardens within the Maltz and Frankino Surgery Centers. When the clinical research building is completed in 2012 on the Palm Beach Garden campus, Bascom Palmer's faculty will conduct cutting-edge clinical research in glaucoma, macular degeneration, cataracts and diseases of the cornea.

Physicians participating in these trials will include Carolyn Quinn, M.D., (resident, fellow, 2005) a glaucoma specialist whose research interests include ocular pharmacology and imaging. Ocular imaging is also a focus of Krishna S. Kishor, M.D., (fellow, 2007) who specializes in the treatment of glaucoma. Trials on anti-angiogenesis therapeutics for the wet form of age-related macular degeneration and other retinal disorders are a major focus at Bascom Palmer at the present time. In addition to his interest in these trials, vitreoretinal surgeon, Jorge A. Fortun, M.D., specializes in complex retinal detachments while maintaining a research interest in innovative surgical techniques and instrumentation.

The Palm Beach Gardens campus is equipped with the latest diagnosis and treatment technology and is dedicated to the care and management of every eye disease and disorder. Pediatric ophthalmologist, Arlanna N. Moshfeghi, M.D., M.P.H., (fellow, 2006) treats our youngest patients in a clinic especially built for their eye care needs. Moshfeghi has a long-time interest in the public health impact of pediatric eye disease. Ophthalmic plastic and reconstructive surgeon, Erin M. Shriver, M.D., (fellow, 2008) provides evaluation and management of adult and pediatric patients with eyelid, tear drainage and orbital conditions, as well as offering the latest aesthetics treatments to the Palm Beach patients.



*Andrew A. Moshfeghi, M.D., M.B.A.*



## Alfonso at the helm

In 2009, for only the fifth time in its 47-year history, Bascom Palmer Eye Institute had a new chairman. In 2007, Puliafito left Bascom Palmer to become dean of the Keck School of Medicine at the University of Southern California. Eduardo Alfonso, known for his clinical expertise and pioneering research in eye diseases, corneal surgery and ocular microbiology, was named Bascom Palmer's new chairman. Alfonso had served as Bascom Palmer's interim chair since Puliafito's departure and following a national search, it was concluded that the strongest candidate was already at Bascom Palmer. "The University of Miami Miller School of Medicine is indeed fortunate to have someone as talented as Eduardo Alfonso at the helm of Bascom Palmer. His intellect, integrity and vision make him the perfect choice to lead the nation's best eye hospital into the 21st century," said Pascal Goldschmidt, M.D., vice president for medical affairs and dean of the University of Miami Miller School of Medicine.

A native of Cuba, Alfonso grew up in Puerto Rico before moving to the U.S. to attend college and medical school completing both degrees at Yale University. He was an ophthalmology resident at Bascom Palmer Eye Institute in 1981, and joined the faculty in 1986. A specialist in corneal transplants, Alfonso has been a world leader in the development and clinical applications of artificial corneas, a significant issue for patients in developing nations without readily available donor transplant tissue.

In 2006, he unraveled the mystery behind a worldwide outbreak of fungal infections among users of soft contact lenses. Working with the U.S. Centers for Disease Control, Alfonso and his colleagues notified the world's ophthalmologists about the findings, significantly reducing the number of new keratitis

cases caused by the fungus prior to a global product recall prompted by his findings. "Our laboratory team saw an increase in the number of cases of this unusual infection – something a non-ocular laboratory might have missed," said Alfonso. "Had it not been for our specialized laboratory resources under the direction of Darlene Miller, we would not have been able to alert the world to this epidemic."

Under Alfonso's leadership, Bascom Palmer continued to move forward with an aggressive agenda of internal and external growth. "We have made improvements in all of our systems to provide better patient care, nurture our researchers and enhance our education program," he said.

To enhance the patient's experience, Alfonso focused on updating Anne Bates Leach Eye Hospital. He also converted administrative offices into much-needed research space in the McKnight Vision Research Center as well as acquiring new space for Bascom Palmer's investigators in the University of Miami's Stem Cell Institute, the Clinical Research Building and the Life Science and Technology Park. He also embarked on the expansion of the Naples and Plantation patient care centers to provide for future growth.

"In Palm Beach Gardens, 2012 will mark the completion of the retina center, a 25,000 square-foot clinical research building," Alfonso said. The Fanjul family, owners of Florida Crystals Corporation, has pledged a \$1 million lead gift for the creation of the new clinical research center. As chairman and CEO, Alfonso Fanjul said, "Having benefited first-hand from the extraordinary skill of Bascom Palmer's physicians, my family and I feel fortunate to be able to assist in the advancement of the Institute's research to aid our community."



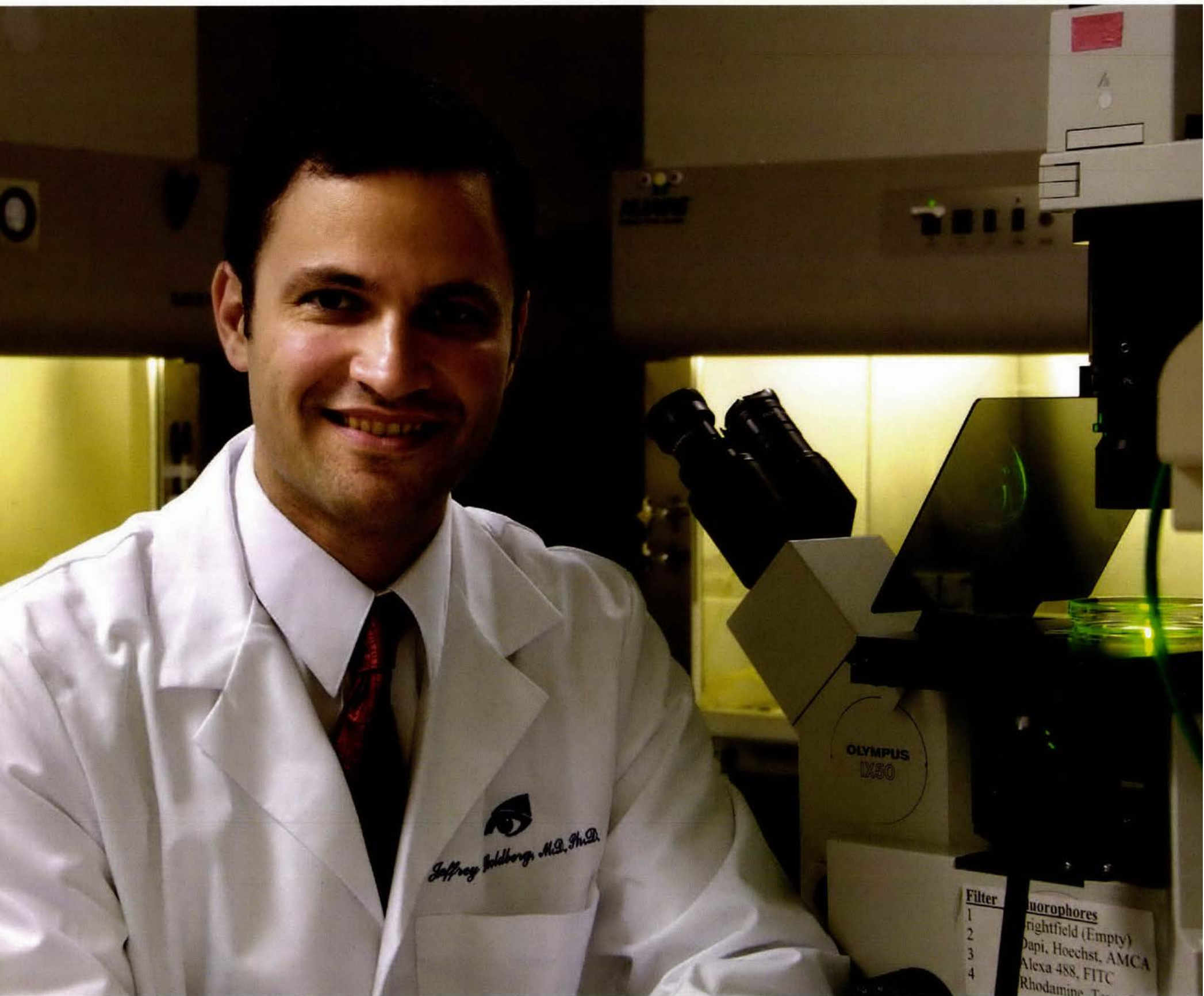
*"The University of Miami Miller School of Medicine is indeed fortunate to have someone as talented as Eduardo Alfonso at the helm of Bascom Palmer. His intellect, integrity and vision make him the perfect choice to lead the nation's best eye hospital into the 21st century."*

– PASCAL GOLDSCHMIDT, M.D.



*Eduardo C. Alfonso, M.D., became Bascom Palmer's fifth chairman in 2007.*





*Jeffrey L. Goldberg, M.D., Ph.D.*

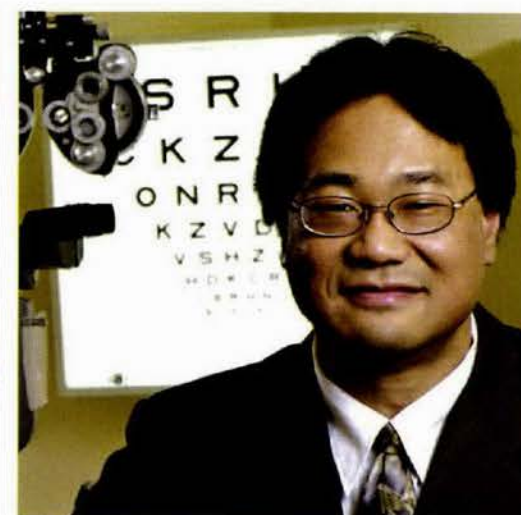




*Valery I. Shestopalov, Ph.D.*



*Abigail S. Hackam, Ph.D.*



*Richard K. Lee, M.D., Ph.D.*

## Advancing science

The 2000s saw a rapid expansion of research under the guidance of both Puliafito and Alfonso. Bascom Palmer's commitment to expanding the laboratory and clinical research programs included creating the center for molecular ophthalmology in 2002 with the arrival of M. Elizabeth Fini, Ph.D., as the new scientific director for the Evelyn F. and William L. McKnight Vision Research Center. New faculty members were hired and remodeling began in the McKnight center to support these research activities. "We want to preserve the gift of sight. This means finding ways to stop vision loss before it happens, to halt the course of blinding disease, and even to make blind people see," said Fini.

One of the early faculty recruits to the new research unit was Valery I. Shestopalov, Ph.D., a molecular cell biologist whose research focuses on cataract lens development and bioinformatics as applied to glaucoma. He was honored by President George W. Bush at a special White House ceremony when he was one of 57 researchers who received the nation's most prestigious award for promising young scientists, the

Presidential Early Career Awards for Scientists and Engineers.

Within the year Abigail S. Hackam, Ph.D., joined the faculty. Her research investigates genes and cellular pathways that lead to photoreceptor degeneration, including age-related macular degeneration and retinitis pigmentosa. Her main research focus is to identify novel treatments that increase photoreceptor survival.

In describing his work, physician-investigator Jeffrey L. Goldberg, M.D., Ph.D., (resident, fellow, 2010) explained, "I am looking at two potentially promising strategies for cellular regeneration. The first involves harvesting a patient's adult retinal stem cells from their peripheral retina, growing them in the laboratory and reimplanting them back into the patient as retinal neurons. The second approach is applying nanotechnology to ocular repair using magnetic nanoparticles to deliver stem cells to the back of the eye or to encourage retinal ganglion cells to grow through the optic nerve."

Another physician-scientist who joined the stellar group of researchers who continue to lay the groundwork for new thera-

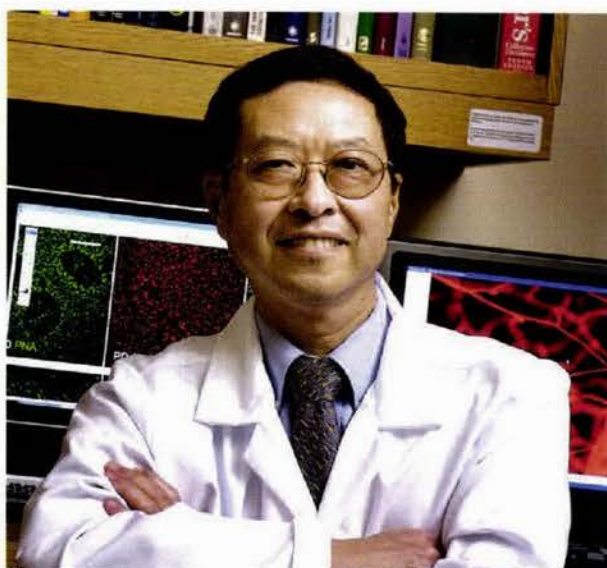








*Sanjoy K. Bhattacharya, Ph.D.*



*Rong Wen, M.D., Ph.D.*



*Victor L. Perez, M.D.*

pies and cures yet to be discovered for this and future generations was Richard K. Lee, M.D., Ph.D., (resident, fellow, 2004). A glaucoma specialist, Lee's research focuses on molecular, cellular, proteomic, and neurophysiologic basis of glaucoma. Using cutting edge experimental techniques and technologies, he is identifying pathways important for the development of glaucoma and retinal ganglion nerve cell death. These molecular pathways represent important new targets for the development of neuroprotective strategies to prevent blindness associated with the disease.

Also studying glaucoma and how the protein cochlin affects the outflow of fluid and is critical in controlling intraocular pressure is Sanjoy K. Bhattacharya, Ph.D. His research concentrates on the cell biology of the trabecular meshwork. An imbalance in aqueous outflow through this meshwork results in elevation of intraocular pressure which damages the optic nerve and is frequently associated with glaucoma.

Focusing on retinal degeneration is retinal cell biologist, Rong Wen, M.D., Ph.D. He has developed a novel technology to measure the renewal rate of photoreceptors in order to understand how they are affected by different pathological conditions. He believes this is a key to understanding this process

that could lead to the development of novel treatments for retinal degeneration.

Research continued aggressively in the laboratories and in the clinics. Another major Bascom Palmer Eye Institute study had a worldwide impact on glaucoma care. In 2006, a team consisting of Steven Gedde, Richard Parrish and Dale Heuer from the Medical College of Wisconsin, launched a multi-center, randomized clinical trial. The "Tube Versus Trabeculectomy" study compared the safety and efficacy of the two most commonly performed procedures in patients who have previously had ocular surgery.

In 2011, the researchers presented their five-year results at the annual meeting of the American Glaucoma Society. "Our collaborative study found a higher success rate with the tube shunt surgery compared to trabeculectomy with mitomycin C," Gedde said. "That has prompted a shift in practice patterns throughout the ophthalmology community. It shows the importance of continuing to study patient outcomes and sharing those findings with practitioners around the world."

An integral part of Bascom Palmer's clinical and laboratory research enterprise is the biostatistics program. Senior scientists Joyce Schiffman, M.S., and William Feuer, M.S., provide essen-





*John R. Guy, M.D.*

tial assistance to investigators through research protocol development for clinical trials and epidemiologic studies. They also help evaluate the feasibility of research projects; provide statistical coordination, data analysis and interpretation of research activities; and collaborate on numerous grant applications and funding requests. Schiffman and Feuer also teach residents and fellows how to evaluate journal articles.

Following Fini's departure to the University of Southern California in 2008, Vittorio Porciatti, D.Sc., tenured research professor of ophthalmology, was named vice chair and director of research of Bascom Palmer Eye Institute's Evelyn F. and William L. McKnight Vision Research Center. A neuro-scientist, electrophysiologist and biophysicist, his research focuses on prevention of glaucoma. "In research, Bascom Palmer Eye Institute has grown from half a dozen scientific researchers to more than 25 research faculty members, and we are one of the top ten ophthalmology labs in the country. My vision is for us to

continue moving up in the national research rankings as we contribute to a better understanding of ophthalmic diseases and disorders and the ways to treat and cure them. Using the tools of 21st century medicine, including genetics, cellular biology, molecular diagnostics and advanced imaging – we are understanding why the eye becomes susceptible to diseases like glaucoma or macular degeneration, and how biotechnologies will help in preventing such conditions," said Porciatti.

Under Alfonso's leadership, Bascom Palmer strengthened its robust research program. Bascom Palmer's core grant from NIH was renewed in 2008 for another five years, and overall NIH grants reached \$14 million in 2010. One of the world's leading experts in the field of neuro-ophthalmology, John R. Guy, M.D., was awarded a five-year \$4.7 million NEI grant in 2009. His research focuses on Leber hereditary optic neuropathy (LHON), an inherited genetic defect that affects the eye's retinal ganglion cells, leading to a progressive loss of central vision; optic neuritis; multiple sclerosis; and diseases caused by mutations in mitochondrial DNA. Guy has pioneered gene therapy techniques in the laboratory that will be used to treat people with visual loss from LHON.

Recognizing the value of the contribution of the Bascom Palmer Eye Institute faculty, the U.S. Department of Defense funded more than half a dozen vision research projects. "We are finding better ways to treat members of the armed forces who suffer an injury that affects their vision," Alfonso said. "We are developing techniques to rehabilitate vision after an



injury occurs, and to provide acute care at the scene when someone is injured on the battlefield.”

Under Alfonso’s direction in 2008, the Institute opened a center for ophthalmic clinical research. Designed to consolidate clinical trials and clinical outcomes research, the center provides “one-stop shopping” for implementing national clinical trials and serves as a platform for innovative research aimed at improving patient care.

Bascom Palmer’s researchers also work closely with other departments in the University of Miami Miller School of Medicine, including a coordinated initiative with the Dr. John T. MacDonald Foundation Department of Human Genetics and the John P. Hussman Institute for Human Genomics to translate laboratory findings into clinical care applications. Goldberg and Victor L. Perez, M.D., have laboratory facilities at the Stem Cell Interdisciplinary Institute to advance this discipline in retinal stem cells and ocular surface stem cells respectively.

As the founding director of the Institute’s center for hereditary eye diseases, Lam focuses his research on retinal degenerative and other blinding diseases. His work received support from Miami philanthropist Adrienne Arsht, who provided a \$1 million donation for research conducted in the Adrienne Arsht Hope for Vision Retinal Degeneration Research Laboratory. In addition, in 2011, Arsht provided a gift of \$500,000 in honor of Betti Lidsky, the Hope for Vision founder, to further enhance the research capabilities of the laboratory.

*Wei Li, Ph.D.*







*Jianhua (Jay) Wang, Ph.D.*

Bascom Palmer's commitment to its laboratory research program continued throughout the decade. Research faculty members include: M. Livia Bajenaru, Ph.D., who focuses on finding therapeutic treatments for optic neuropathies such as glaucoma; Maria E. Marin-Castaño, M.D., Ph.D., whose research interests include understanding the origin and development of age-related macular degeneration and then applying that knowledge to identify more effective preventive strategies and therapeutic approaches; and Fabrice Manns, Ph.D., (research fellow, 1997) who studies the optics of the eye and the use of lasers for the treatment and diagnosis of eye diseases.

Bascom Palmer is making great progress in the development of new retinal imaging tools, focusing in particular on spectral domain optical coherence tomography (OCT). Mathematician and optics specialist, Giovanni Gregori, Ph.D., has developed algorithms that for the first time allow the physician to visualize accurately the spatial geometry and anatomy of the retina, making it possible to measure and monitor changes over time. Biophysicist, Delia Cabrera DeBuc, Ph.D., also uses quantitative tools and measures in the analysis of OCT images using physical

and mathematical modeling to quantify treatment-induced changes in patients with ocular diseases. Mitra Sehi, O.D., M.S., Ph.D., is also using advanced ocular imaging. She evaluates the impact of damage due to glaucoma on the structure and function of the visual system over time. Biomedical engineer, Xiang Run Huang, Ph.D., is working on improving technologies for noninvasive imaging.

The next generation of OCT technology may hold the key to diagnosing dry eyes, one of the most common but least understood ophthalmologic disorders. In Bascom Palmer's anterior OCT laboratory, Jianhua (Jay) Wang, Ph.D., one of the world's foremost dry eye researchers, is using spectral domain OCT to study the frontal structures of the eye as well as the tear process.

Yiwen Li, M.D., researches photoreceptor cell biology, retinal vascular disorders and retinal degeneration that could one day lead to new therapies to save sight. Wei Li, Ph.D., with an interest in molecular therapeutics for eye diseases involving the immune system, is investigating molecules that control the clearance of metabolic products by retinal pigment epithelium cells. His studies look at the therapeutic potential of these molecules to facilitate the clearance of the products and to prevent retinal aging.

The research interests of Esdras Arrieta-Quintero, M.D., include the development of new glaucoma devices, novel polymers and laser systems, and the study of optical and mechanical properties of ocular tissues. Dmitry Ivanov, Ph.D., concentrates on understanding the role of inflammation in the pathophysiology of retinal age-related disorders, with a specific interest in the contribution of a signal for damage-associated molecular patterns and pattern recognition receptors.

Bascom Palmer's researchers continue to lay the groundwork for new therapies and cures yet to be discovered for this and future generations.



Bascom Palmer has maintained a commitment to physician education since its founding in 1962. Bascom Palmer's continuing medical education (CME) department sponsors a variety of postgraduate CME programs to meet the needs of ophthalmologists in the region and beyond. Under the direction of Maria Serrano Brosco, the CME department offers a vigorous schedule of exceptional CME programs including the Glaucoma Symposium; Angiogenesis, Exudation and Degeneration; Cataract and Refractive Surgery Congress; and Residents' Days held each year in June. The Institute also hosts a number of named lectures including the Edward Norton, Randy Campo, and Robert Haimovici Lectures. More than 8,000 professionals annually attend CME programs, the Institute's weekly Grand Rounds, frequent lectures, seminars and workshops and bilingual Curso Interamericano. To commemorate the Institute's 50th anniversary, a world-class scientific meeting was held at Bascom Palmer Eye Institute and the Biltmore Hotel in nearby Coral Gables featuring 185 globally-recognized faculty members, alumni and invited guest speakers.

In addition, faculty members are regularly invited to make presentations at professional conferences and seminars around the world. "Our faculty members give up their personal and family time to participate in these important national and international meetings," Alfonso said. "They know that a crucial part of our mission is to educate other medical professionals. These conferences provide a great opportunity for our faculty to exchange information with other ophthalmologists, in turn they bring back fresh ideas and approaches to patient care."

Another integral part of Bascom Palmer's teaching program is the affiliation with the Miami Veterans' Affairs Medical Center (Miami VA) located adjacent to the medical school campus. Under the direction of retinal specialist Ninel Z. Gregori, M.D., (fellow, 2006) the resident and fellow eye clinic at the Miami VA treats more than 20,000 patients annually and performs more than 500 major eye surgeries.



*Philip J. Rosenfeld, M.D., Ph.D., Angiogenesis 2004 course director (front row) and the distinguished group of speakers gather on the steps of the Biltmore Hotel during Bascom Palmer's first angiogenesis meeting.*

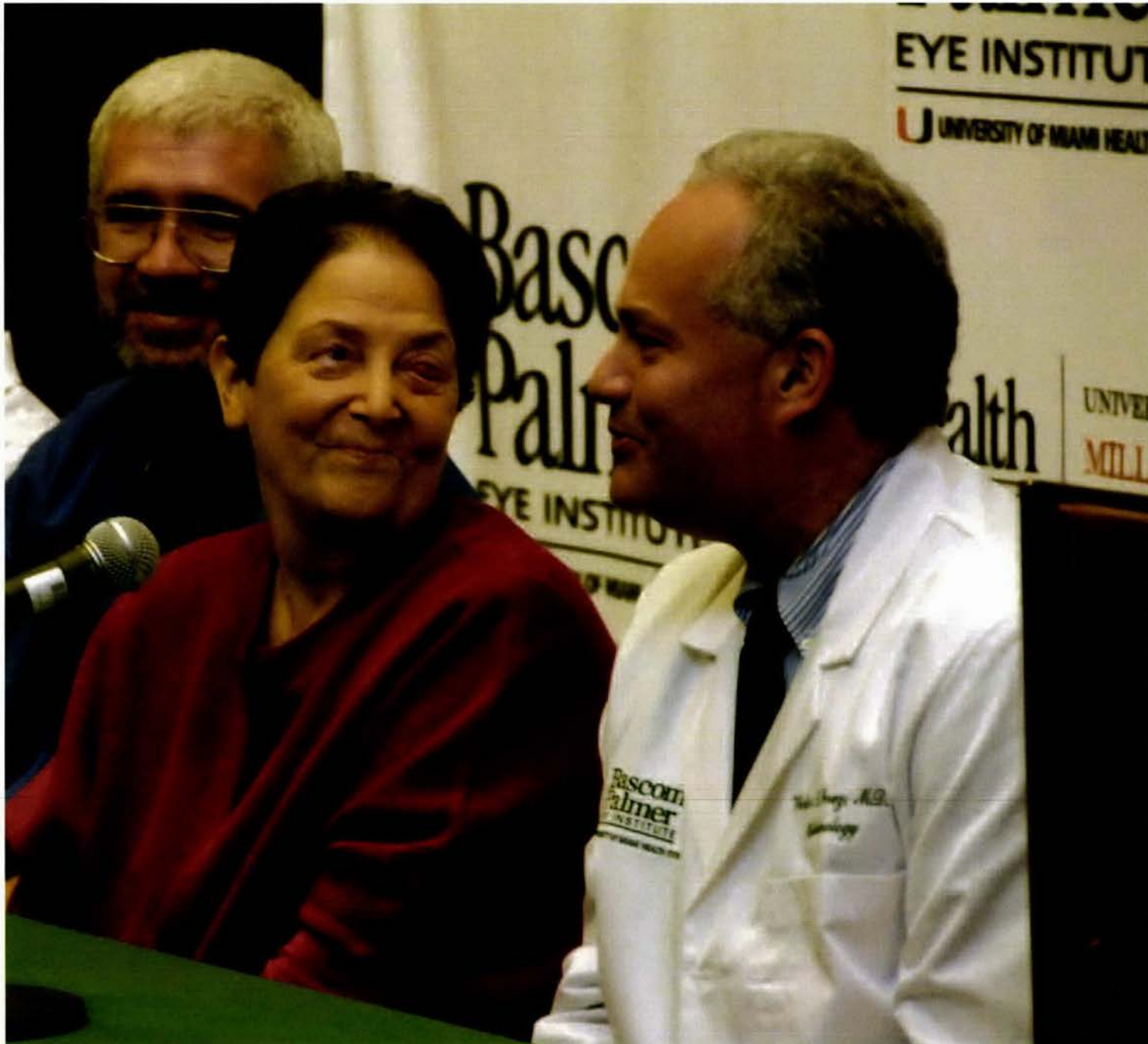
Gregori is joined at the Miami VA by corneal specialists Anat Galor, M.D., (fellow, 2008) and Anita Gupta, M.D., (fellow, 2009), retina specialist Raquel Goldhardt, M.D. (fellow, 2010) and glaucoma specialist Anna K. Junk, M.D.

"We are privileged to take care of our nation's veterans. Our purpose is to ensure we provide these brave men and women the highest level of care and access to the very newest treatments," Gregori said.



*"I'm so thankful that the doctors at  
Bascom Palmer never gave up on me.  
They kept searching for an answer and they found one."*

— SHARRON "KAY" THORNTON





# Seeing through an eye tooth

Unable to see for nine years, Sharron "Kay" Thornton regained her sight in 2009 thanks to a surgical procedure that was performed for the first time in the United States at Bascom Palmer Eye Institute. The complex series of procedures – called modified osteo-odonto-keratoprosthesis (MOOKP) – involved implanting Thornton's canine tooth or "eyetooth" into her eye as a base for a prosthetic lens.

"I'm looking forward to seeing my seven youngest grandchildren for the first time," said Thornton, who was blinded by Stevens-Johnson syndrome in 2000. Among other afflictions, the rare, serious skin condition destroys the cells on the surface of the eye causing severe scarring of the cornea. "I'm so thankful that the doctors at Bascom Palmer never gave up on me. They kept searching for an answer and they found one."

Alfonso asked corneal specialist Victor Perez to lead a multidisciplinary team that dedicated several months to carry out the MOOKP process, which was originally developed in Italy more than 50 years before. Alfonso and Jean-Marie Parel had worked with Giancarlo Falcinelli, M.D., in Rome and Miami to set the stage for the implementation of this procedure at the Institute. In MOOKP, the patient's tooth and surrounding bone are carefully removed from the mouth. The canine tooth is usually used because it has just a single root and can be easily accessed by a dental surgeon. An optical lens is inserted into the extracted tooth, which is then implanted under the patient's skin to create a biointegrated unit the body will accept.

The complex MOOKP procedure is implemented over a span of many months and requires the involvement of many proficient medical professionals including ophthalmic surgeons, dental surgeons, anesthesiologists and nurses. Assisting Perez during surgery was Steven Gayer, M.D., M.B.A., who joined Bascom

Palmer Eye Institute as chief of anesthesia services in 1994 and today serves as medical director of surgery. Ophthalmic anesthesiologists provide anesthesia management for patients undergoing eye surgical procedures though the subspecialty is relatively new. A former president of the Ophthalmic Anesthesia Society and author on the topic, Gayer established an education program for residents and anesthesiologists at the University of Miami, then disseminated it to other academic institutions.

Throughout its history Bascom Palmer Eye Institute's nursing directors have been pivotal in developing a strong surgical department. Tui Uffenorde, R.N., Norton's first operating room nurse, served as operating room supervisor for 26 years. Today, the chief nursing officer is Joanne Martin, R.N., M.S., M.B.A. "Surgery at Bascom Palmer, either routine or groundbreaking, could not be accomplished without our highly-skilled faculty and our exceptional support team in the operating rooms," said Gayer.

Like many Bascom Palmer patients through the years, Thornton was thrilled to regain her vision. Within a few months following her surgery, her vision was 20/30 with glasses for distance and 20/25 with glasses for near vision. "We tend to take sight for granted, not realizing that it can be lost at any moment," she said. "This truly is a miracle."



*Some members of the Bascom Palmer surgical team (top row): Victor Perez, M.D.; Linda Bourinot, R.N.; Jean-Marie Parel, Ph.D.; Barbara Hidalgo; Janet Moreno, R.N.; Rhonda Barnes, R.N.; and Eduardo Alfonso, M.D., join (bottom row) Kay Thornton and her family friend, Rick Brister.*



*"The Vision Van program improves access to care for indigent, underserved, uninsured populations who are at risk for eye disease, at no cost. The results include the promotion of proper eye care and the provision of treatment for various conditions, some of which, if left undetected, could lead to blindness."*

— RICHARD K. LEE, M.D., PH.D.

## Global service

Bascom Palmer's outreach extends far beyond South Florida to Asia, Africa, Europe and Latin America. One of many faculty members who volunteers to serve on numerous medical missions around the world is oculoplastic and reconstructive specialist Thomas Johnson. He has traveled to Paraguay aboard the ORBIS Flying Eye Hospital, a converted DC-10 aircraft that transports an operating room and training facility to developing countries. In one volunteer mission, Johnson instructed 130 of Paraguay's ophthalmologists on the most effective procedures for managing and surgically treating eyelid, tear duct or orbital diseases and cancers around the eyes.

Not only do Bascom Palmer's full-time faculty members participate in these much-needed ophthalmic missions in locations scattered across five continents, but residents participate through a medical service elective that was added to their educational curriculum in 2005 under Gedde's supervision.

"There is no better teacher than first-hand experience. These trips allow residents to provide ophthalmic care in underserved areas of the world. As a result, they return with an even stronger understanding of the complexities involved, including the overwhelming challenges other populations face very day in trying to alleviate vision loss and prevent blindness. It's a learning experience they will draw upon throughout their careers," Gedde added.



*Japanese ophthalmologists treated more than 3,300 patients in the Vision Van following the March 2011 disaster.*





*Bascom Palmer's Vision Van traveled to New Orleans to treat first responders and victims of Hurricane Katrina.*



*A Bascom Palmer team prepares for travel to Haiti with medications, eyeglasses and medical instruments: Thomas Shane, M.D.; Thomas Johnson, M.D.; Richard Lee, M.D., Ph.D.; Eduardo Alfonso M.D.; Ashlee Vainisi, R.N.; and Emmanuel Paz, C.R.N.A.*



*Thomas E. Johnson, M.D.*

Medical necessity is not only found halfway around the world. It oftentimes, exists right next door. "Community outreach remains a vital part of our mission," said Alfonso. Under the leadership of Richard Lee, medical director for the Institute's community outreach and volunteer programs, Bascom Palmer's faculty, staff and volunteers conduct free vision screenings throughout South Florida.

In 2004, the Bascom Palmer Vision Van was donated to the Institute by the Josephine Leiser Foundation. Initially conceived as a tool for reaching underserved populations in South Florida, it was soon realized that this 40-foot, mobile, self-contained eye clinic could travel to areas in need of emergency medical services.

In 2005, days after Hurricane Katrina devastated the Gulf Coast of the United States, Puliafito mobilized Bascom Palmer's resources to provide help to the storm's victims and first responders. In New Orleans and Baton Rouge, Louisiana, three medical relief teams of doctors and ophthalmic technicians dispensed more than \$100,000 worth of eye medications, prescription glasses and contact lenses to those in need at no cost. The teams spent a total of 18 days living aboard the Vision Van with its comprehensive examination room, three screening stations, a waiting room and state-of-the-art ophthalmic equipment. Lt. General Russel L. Honoré, Commander of Joint Task

Force Katrina, presented Bascom Palmer Eye Institute with a medallion "First in Deed For Excellence – Presented by Commanding General First United States Army."

Providing emergency assistance to victims of natural disasters has been one of the most important uses of the Bascom Palmer Vision Van. "It is uniquely suited for use in environments where the health care and public works infrastructure is essentially nonexistent," said Lee, a glaucoma specialist who has traveled halfway around the world with the Vision Van.

While the Vision Van was unable to travel to Haiti following its devastating earthquake in January 2010 due to the destruction of major roadways, Alfonso quickly assembled a response team under Lee's direction. Ocular trauma specialist James T. Banta, M.D., (resident, 2003) was the first Bascom Palmer physician to arrive in Haiti just 48 hours after the earthquake. Banta brought ophthalmic equipment and supplies, offering general medical aid and eye surgery. In ensuing months, Bascom Palmer physicians, nurses, technicians and employees brought medications, eyeglasses and medical instruments to Haiti to provide ophthalmic and trauma care.





米国フロリダ州マイアミ市のバスコムパーマー眼科研究所は慶應義塾大学と協力し、皆様のため最善の努力を致します。早急な健康回復のためにお役立て下さい。

In cooperation with Keio University, Bascom Palmer Eye Institute at Miami, Florida, USA, wishes to make every effort possible to assist you. Please accept our support and wishes for a quick and healthy recovery.



慶應義塾



Bascom Palmer  
Eye Institute  
UNIVERSITY OF MIAMI HEALTH SYSTEM



Standing in front of the Bascom Palmer Vision Van as it was loaded into a Volga-Dnepr Anatov 124 at Miami International Airport are Richard Lee, M.D., Ph.D., Eduardo Alfonso, M.D., and Kazusbi Miyatake, M.D., Medical Attaché with the Consulate-General of Japan in Miami. Lee accompanied the Vision Van to Japan.





Sendai region, Japan 2011

Banta was well-equipped to offer general medical aid and care for traumatic ocular injuries in Haiti. A comprehensive ophthalmologist and medical director of Bascom Palmer's emergency services department, Banta said, "The extent and severity of cases we see in our emergency room on a regular basis is unparalleled anywhere in the country. Our ER covers an incredibly wide spectrum of eye problems, from the relatively simple like conjunctivitis, to the more severe like open globe injuries. Our ER covers a geographic territory that spans Florida, the Caribbean and Central and South America," he added.

Ashlee Vainisi, R.N., a Bascom Palmer surgical nurse who accompanied Thomas Shane, M.D., (resident, fellow, chief resident 2012), Johnson and other Bascom Palmer volunteers to Haiti explained, "We had one blood pressure cuff for 150 patients, no oxygen and no running water to wash our hands in between cases. We used bleach to sterilize the instruments which left them rusty and dull. Most of the patients had gangrenous limbs. Amazingly, our makeshift surgical team showed such ingenuity and talent that out of the scores of procedures not one patient was lost during surgery. The Bascom Palmer "Klinik Je" ("eye clinic" in Creole) was a bright spot in the misery. There were lots of smiles; the patients were so happy to have replacement glasses for the ones they lost while running for their lives."

Within days following the earthquake and tsunami that hit northern Japan in March 2011, Kazuo Tsubota, M.D., chief of the department of ophthalmology of Keio University School of

*"Bascom Palmer Eye Institute is a testimonial to human ingenuity, energy and commitment, expressed by example more than words."*

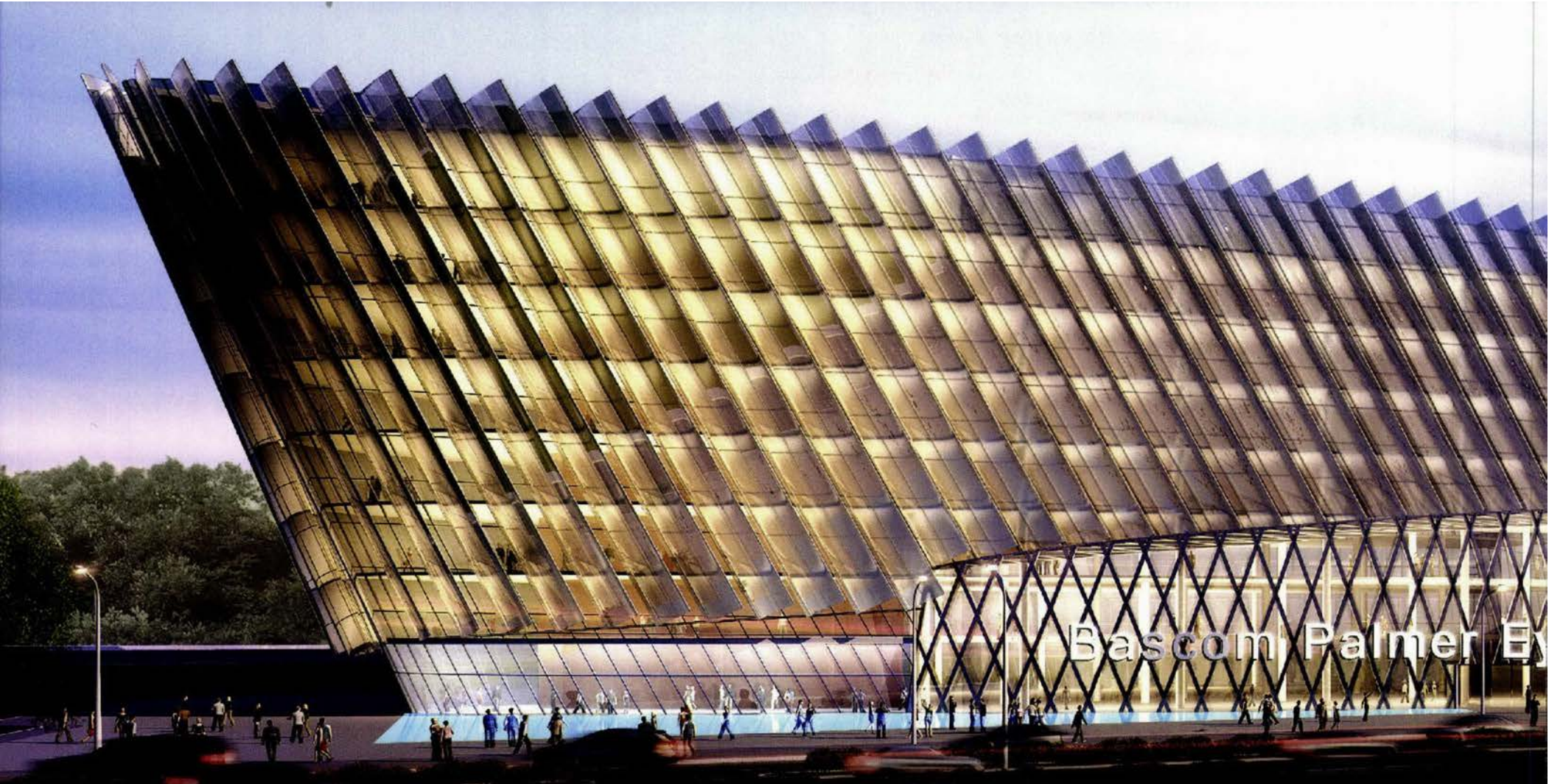
— EDWARD W.D. NORTON, M.D.

Medicine in Tokyo and a former classmate of Alfonso, recalled having seen media articles of Bascom Palmer's Vision Van in action. He contacted Alfonso and inquired if the Vision Van would be available for use in Japan. Arrangements were quickly made by the Japanese government for the Vision Van and Lee to board a cargo jet flight to carry out the first international rescue mission to the hard-hit Sendai region. Once on the scene, they joined forces with Iwate University School of Medicine, Tohoku University School of Medicine and the Japanese Ophthalmological Society in a special Japan Eye-Rescue Mission. The Vision Van remained in Japan for seven months visiting remote areas hardest hit by the natural disasters.

Speaking of Bascom Palmer's decades-long commitment to the dissemination of medical training and patient care, founding chairman Edward Norton said at his retirement, "Bascom Palmer Eye Institute is a testimonial to human ingenuity, energy and commitment, expressed by example more than words."

"As we enter our sixth decade, we will continue to emulate the example set by Dr. Norton. We will send more medical teams from Bascom Palmer to travel around the world to fill gaps where there are shortages of eye care services or ophthalmic education. Using our medical expertise in a sustainable manner and providing compassionate medical care to help the victims of natural disasters, underserved populations and patients of this and future generations, will remain the highest priority for the faculty and staff of Bascom Palmer Eye Institute," said Alfonso.





# Into the Future

*Rendering, courtesy of Perkins + Will, of the new, proposed  
Bascom Palmer Eye Institute, to be built in Miami on property  
located across the street from the current facility.*





On its 50th anniversary, Bascom Palmer Eye Institute looks to the future with confidence. For five decades, the Institute has been a leader in providing clinical care and community services to the dynamic south Florida region, while building a national reputation for excellence. In addition, Bascom Palmer's medical training and education programs attract ophthalmologists from around the world, multiplying the Institute's impact on patient care. With its robust scientific research programs and biomedical innovations, Bascom Palmer will continue to lead the field of ophthalmology in the 21st century.



**BY EDUARDO C. ALFONSO, M.D.**

*Professor and Chairman, Bascom Palmer Eye Institute  
President, Bascom Palmer Alumni Association*

Since 2007, it has been an honor to lead this extraordinary Institute, which is known worldwide for its remarkable record of innovation and excellence in vision care. It is a privilege to work with Bascom Palmer Eye Institute's outstanding faculty and staff who are committed each day to delivering exceptional patient care, cutting-edge research and the finest medical education.

Many people have asked me why Bascom Palmer is a recognized world leader in ophthalmic clinical care. I believe there are many reasons for our success, including a long tradition of providing personalized care and addressing the most complex types of cases. Another reason is that we understand the importance of working as a team that focuses on needs of the individual patient. We have exceptional clinicians and healthcare professionals who share their knowledge and expertise in order to diagnose complex vision conditions and develop the most effective treatment plan.

In addition to our traditional leadership in patient care, education and research, our Institute is building strong ties with ophthalmologists and hospitals around the world. Our recent memorandums of understanding to explore future collaboration between King Saud University (Saudi Arabia), LV Prasad Eye Institute (India), Universidad del Valle (Columbia), and Clinica la Trinidad (Venezuela), are examples of these far-reaching partnerships.

In today's environment, we know that high-quality care must be delivered in a cost-effective manner. Every Thursday, at our weekly medical conference, our team analyzes a patient's case in order to see what we did right and what we could have done better. As part of the discussion, we look at cost factors

and the financial consequences of rendering this care. Of course, we also address the key clinical question: Is this the best treatment for the patient? We also consider whether our laboratory research could lead to discoveries and more effective clinical treatment in the future.

As the nation moves to electronic medical records (EMR) for healthcare, Bascom Palmer is also moving ahead to develop and implement a robust EMR system. In addition to providing a convenient and comprehensive source of information for the physician, the electronic medical record will be very empowering for the patient. Our hope is that it will increase the patient's engagement with the physician and their care.

As expansion plans continue throughout the region, we are planning for a 2014 opening of Bascom Palmer Eye Institute to be located in a new University of Miami clinical facility located on the University's Coral Gables campus.

To accommodate the growing demand for our services, we are also developing a master plan to use nearby land we acquired decades ago. The leading design firm, Perkins+Will, has designed a spectacular, innovative and efficient patient care, education and research facility that looks toward future advances in medical care and technology. The new 500,000 square-foot complex, which would double the size of our current Miami facility, reflects the forward-thinking leadership role that Bascom Palmer plays in the world of ophthalmology. This ambitious effort will allow us to exceed the needs of our next generation of patients from South Florida, the Caribbean, Latin America and beyond. It will provide an exceptional venue for us to train future ophthalmologists and conduct ground-breaking vision research.

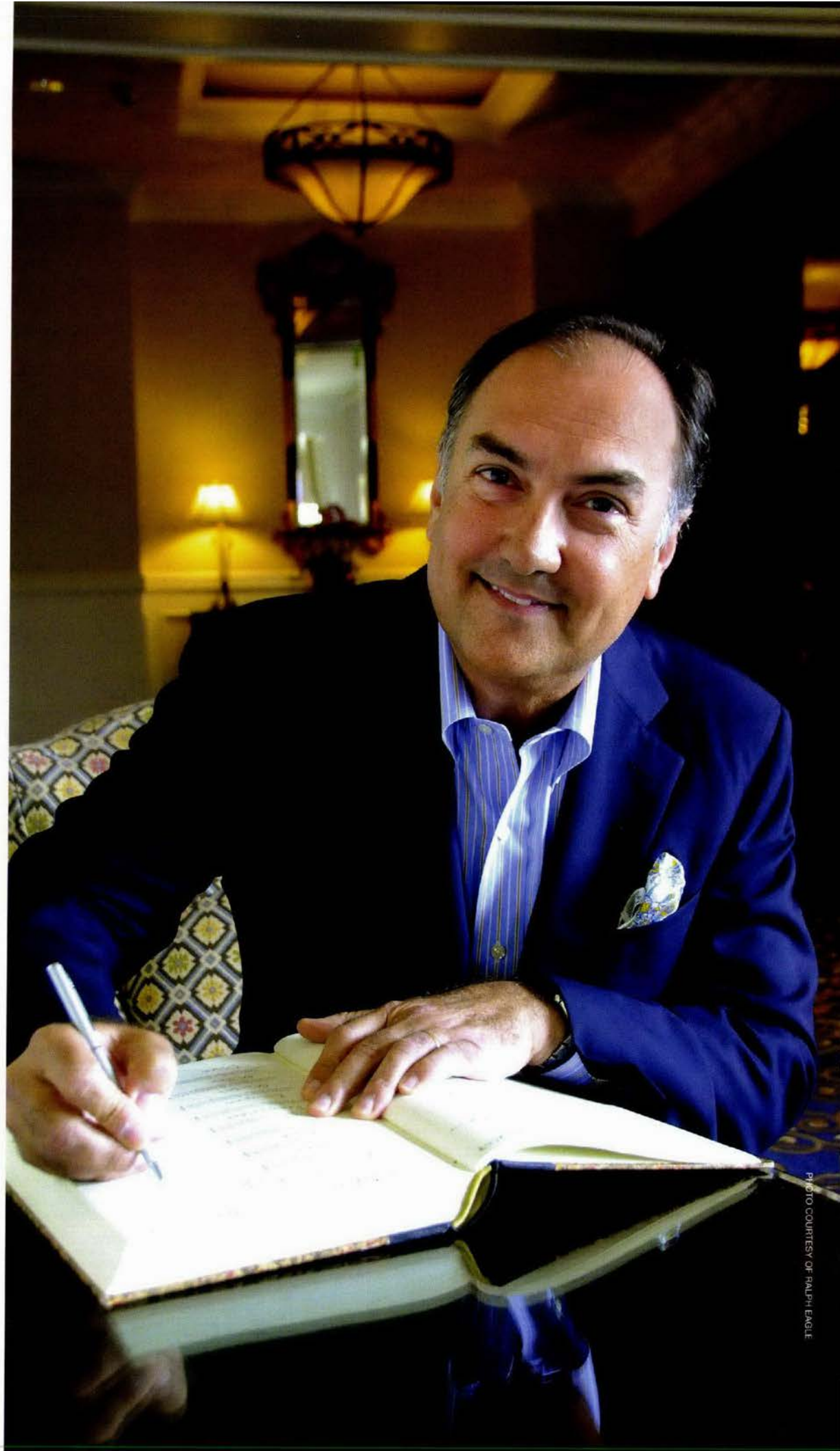


We hope to embark on this momentous project within the next few years.

From a broad perspective, our biggest challenges involve the changing U.S. health care environment and the uncertain state of the national and world economies. Like many other not-for-profit healthcare organizations, our ability to carry out our mission depends a great deal on private philanthropy. Fortunately, we have thousands of patients, physicians and corporate donors who recognize our need to constantly invest in technology and infrastructure to best serve our patients. We thank our donors for their continued support and their generosity.

Just as Bascom Palmer has flourished in the past five decades, the University of Miami School of Medicine will celebrate a landmark 60th anniversary in 2012. Now, known as the Leonard M. Miller School of Medicine in honor of a historic \$100 million gift from the Miller family in 2004, the school has graduated more than 7,600 medical doctors. As Bascom Palmer Eye Institute looks ahead to the next 50 years, I believe that making high-quality health-care available to everyone worldwide is an extremely worthy goal. In that context, we will continue to educate physicians, strengthen research partnerships and provide the finest possible clinical care, guided always by our founder, Edward W.D. Norton, M.D., who said, "The patient's needs always come first."

*Edwards Alzme*





# Department of Ophthalmology Chairs

An academic endowed chair is the ultimate tribute to a faculty member. It provides an uninterrupted source of income and underwriting for continued research. Most endowed chairs are established by gifts of \$2.5 million or more and are dedicated to specific areas of research. Bascom Palmer Eye Institute is the fortunate recipient of gifts that have created 14 endowed chairs.





*Douglas R. Anderson, M.D.*

### **The Douglas R. Anderson Distinguished Chair in Ophthalmology**

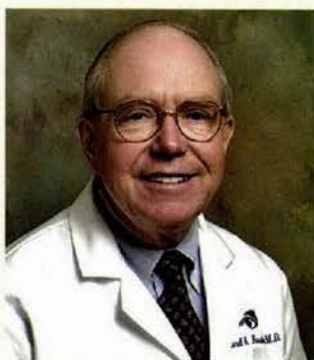
Named in honor of one of Bascom Palmer Eye Institute's premier glaucoma authorities, provides funding for the research and clinical work of a specialist in glaucoma.

*Established 1995.*

**CURRENT HOLDER:** *Douglas R. Anderson, M.D.*

### **The Victor T. Curtin Chair in Ophthalmology**

Honors the landmark achievements of one of Bascom Palmer's founders and supports research in experimental ocular pathology. The composite of data available through pathology provides a foundation for advances in ophthalmic medicine. *Established 1986.*



*Richard K. Forster, M.D.*

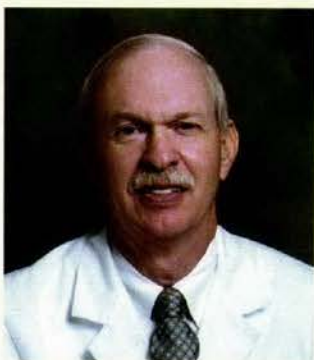
### **The John T. Flynn Professor of Ophthalmology Chair**

Pays tribute to the Institute's founder of the pediatric ophthalmology service and emphasizes programs dedicated to resolving strabismus, amblyopia and other childhood eye diseases and disorders. *Established 1981.*

### **The Richard K. Forster Distinguished Chair in Ophthalmology**

Recognizes the achievements of one of Bascom Palmer Eye Institute's leading faculty members while supporting the research and clinical work of a renowned specialist in external and corneal diseases. *Established 1993.*

**CURRENT HOLDER:** *Richard K. Forster, M.D.*



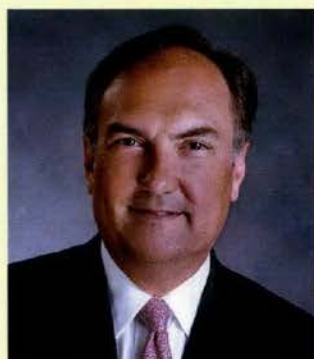
*Harry W. Flynn, Jr., M.D.*

### **The J. Donald M. Gass Distinguished Chair in Ophthalmology**

Honors the clinical, educational and research excellence of one of Bascom Palmer's first faculty members by focusing on studies in retinal and macular diseases, including macular degeneration. *Established 1992.*

**CURRENT HOLDER:** *Harry W. Flynn, Jr., M.D.*



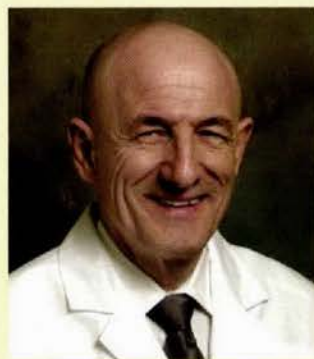


*Eduardo C. Alfonso, M.D.*

#### **The Kathleen and Stanley J. Glaser Chair in Ophthalmology**

Honors the memory of Stanley J. Glaser, a former chairman of the Anne Bates Leach Eye Hospital Board of Governors, and his wife Kathleen. The chair supports the patient care, research and educational activities of the chairman of the University of Miami's department of ophthalmology. *Established 1997.*

**CURRENT HOLDER:** *Eduardo C. Alfonso, M.D.*



*Jean-Marie Parel, Ph.D.,  
Ing. ETS-G*

#### **The Leach Distinguished Chair in Ophthalmology**

The first chair established in the University of Miami School of Medicine. It was created from a gift by Anne Winship Bates Leach and was held by Bascom Palmer's founder, Edward W.D. Norton, M.D., until his retirement. The Leach Chair sustains laboratory and clinical research conducted for the improvement of patient care. *Established 1984.*

#### **The Henri & Flore Lesieur Chair in Ophthalmology**

Created to advance Bascom Palmer Eye Institute's Ophthalmic Biophysics Laboratory and the work of its creator, Jean-Marie Parel, Ph.D., Ing. ETS-G. *Established 1997.*

**CURRENT HOLDER:** *Jean-Marie Parel, Ph.D., Ing. ETS-G*



*Terrence P. O'Brien, M.D.*

#### **The Edward W.D. Norton, M.D., Chair in Ophthalmology**

Established through many gifts from alumni, patients and friends in tribute to their mentor and inspiration - the founding chairman of Bascom Palmer Eye Institute - whose lifelong mission was excellence and advancement in ophthalmology. *Established 1990.*

#### **The Charlotte Breyer Rodgers Chair in Ophthalmology**

Created by one of Bascom Palmer's most generous benefactors, is dedicated to ophthalmic research and its fundamental role in resolving eye disease and blindness. *Established 1989.*

**CURRENT HOLDER:** *Terrence P. O'Brien, M.D.*





*Jeffrey L. Goldberg, M.D., Ph.D.*

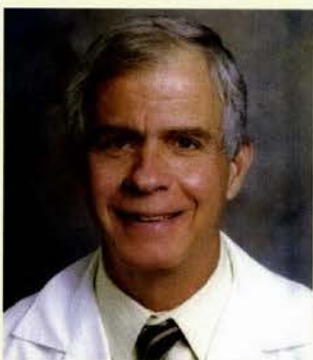
#### **The J. Lawton Smith Chair in Ophthalmology**

Honoring one of Bascom Palmer's pioneer neuro-ophthalmologists, was established through gifts from Bascom Palmer alumni who studied with Dr. Smith and now practice ophthalmology worldwide. *Established 1990.*

#### **The Walter G. Ross Chair in Ophthalmic Research**

Creates an endowed chair in ophthalmic research that perpetuates an innovative scientific environment to attract eminent scientists and support an internationally recognized ophthalmologist to continue top-quality research. *Established 2000.*

**CURRENT HOLDER:** *Jeffrey L. Goldberg, M.D., Ph.D.*



*William W. Culbertson, M.D.*

#### **The Lou Higgins Distinguished Chair in Ophthalmology**

Created by a Broward County real estate investor, was established to recognize the achievements of one of Bascom Palmer's faculty members in external and corneal diseases. *Established 2006.*

**CURRENT HOLDER:** *William W. Culbertson, M.D.*



*David T. Tse, M.D.*

#### **Dr. Nasser Ibrahim Al-Rashid Chair in Ophthalmic Plastic, Orbital Surgery and Oncology**

Created to advance the work of Bascom Palmer's ophthalmic plastic, orbital surgery and oncology service. *Established 2008.*

**CURRENT HOLDER:** *David T. Tse, M.D.*



# Bascom Palmer Eye Institute Faculty

## FULL-TIME FACULTY



**Chrisfouad Alabiad, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Esdras Arrieta-Quintero, M.D.**  
Research Assistant  
Professor of Ophthalmology



**Michael R. Banitt, M.D., M.H.A.**  
Assistant Professor of  
Clinical Ophthalmology



**Sanjoy Bhattacharya, Ph.D.**  
Associate Professor of  
Ophthalmology



**Thomas A. Albin, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



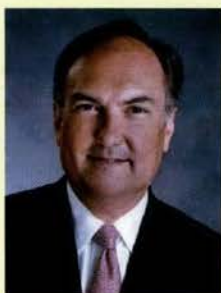
**Richard M. Awdeh, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**James T. Banta, M.D.**  
Associate Professor of  
Clinical Ophthalmology



**Hilda Capó, M.D.**  
Professor of Clinical  
Ophthalmology



**Eduardo C. Alfonso, M.D.**  
Professor of Ophthalmology  
and Chairman



**M. Livia Bajenaru, Ph.D.**  
Research Assistant  
Professor of Ophthalmology

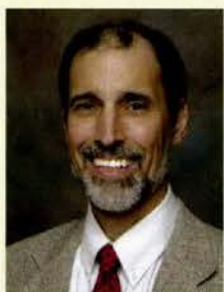


**Audina M. Berrocal, M.D.**  
Associate Professor of  
Clinical Ophthalmology



**John G. Clarkson, M.D.**  
Professor of Ophthalmology





**George F. Corrent, M.D., Ph.D.**  
Assistant Professor of  
Clinical Ophthalmology



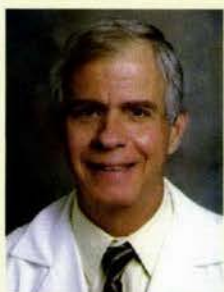
**Delia DeBuc, Ph.D.**  
Research Associate  
Professor of Ophthalmology



**Francisco E. Fantes, M.D.**  
Professor of  
Clinical Ophthalmology



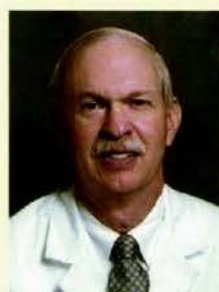
**Jorge A. Fortun, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**William W. Culbertson, M.D.**  
Professor of Ophthalmology



**Kendall E. Donaldson, M.D,  
M.S.** Assistant Professor of  
Clinical Ophthalmology



**Harry W. Flynn Jr., M.D.**  
Professor of Ophthalmology



**Anat Galor, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Janet L. Davis, M.D., M.A.**  
Professor of Ophthalmology



**Sander R. Dubovy, M.D.**  
Associate Professor of  
Ophthalmology



**Richard K. Forster, M.D.**  
Professor of Ophthalmology



**Steven J. Gedde, M.D.**  
Professor of Ophthalmology





**Jeffrey L. Goldberg, M.D., Ph.D.**  
Associate Professor of  
Ophthalmology



**David S. Greenfield, M.D.**  
Professor of Ophthalmology



**Anita Gupta, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Xiang Run Huang, Ph.D.**  
Research Associate  
Professor of Ophthalmology



**Raquel Goldhardt, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Giovanni Gregori, Ph.D.**  
Research Assistant  
Professor of Ophthalmology



**John Guy, M.D.**  
Professor of Ophthalmology



**George Inana, M.D., Ph.D.**  
Professor of Ophthalmology



**David A. Goldman, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Ninel Z. Gregori, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Abigail S. Hackam, Ph.D.**  
Associate Professor of  
Ophthalmology



**Dmitry Ivanov, Ph.D.**  
Research Assistant  
Professor of Ophthalmology





**Thomas E. Johnson, M.D.**  
Professor of Clinical  
Ophthalmology



**Krishna S. Kishor, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Byron L. Lam, M.D.**  
Professor of Ophthalmology



**Wen-Hsiang Lee, M.D., Ph.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Anna K. Junk, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Anne Ko, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Richard K. Lee, M.D., Ph.D.**  
Associate Professor of  
Ophthalmology



**Wei Li, Ph.D.**  
Research Assistant  
Professor of Ophthalmology



**Carol L. Karp, M.D.**  
Professor of Clinical  
Ophthalmology



**Jaclyn L. Kovach, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Wendy W. Lee, M.D., M.S.**  
Assistant Professor of  
Clinical Ophthalmology



**Yiwen Li, M.D.**  
Research Assistant Professor  
of Ophthalmology





**Maria Marin-Castaño, M.D., Ph.D.** Research Associate  
Professor of Ophthalmology



**Andrew A. Moshfeghi, M.D., M.B.A.** Assistant Professor of  
Ophthalmology



**Terrence P. O'Brien, M.D.**  
Professor of Ophthalmology



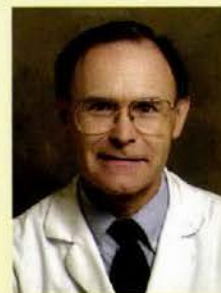
**Richard K. Parrish II, M.D.**  
Professor of Ophthalmology



**Craig A. McKeown, M.D.**  
Professor of Clinical  
Ophthalmology



**Arlanna N. Moshfeghi, M.D., M.P.H.** Assistant Professor of  
Clinical Ophthalmology



**Paul F. Palmberg, M.D., Ph.D.**  
Professor of Ophthalmology



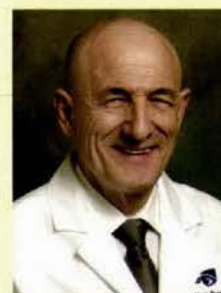
**Joshua Pasol, M.D.**  
Assistant Professor of Clinical  
Ophthalmology



**Darlene Miller, D.H.Sc.**  
Research Assistant Professor of  
Ophthalmology



**Timothy G. Murray, M.D., M.B.A.** Professor of  
Ophthalmology



**Jean-Marie Parel, Ph.D., Ing.**  
ETS-G Research Associate  
Professor of Ophthalmology



**Victor L. Perez, M.D.**  
Associate Professor of  
Ophthalmology





**Vittorio Porciatti, D.Sc.**  
Professor of Ophthalmology



**Elena Roth, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Valery I. Shestopalov, Ph.D.**  
Associate Professor of  
Ophthalmology



**William E. Smiddy, M.D.**  
Professor of Ophthalmology



**Carolyn D. Quinn, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Amy C. Scheffler, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Erin M. Shriver, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Lana Srur, M.D.**  
Assistant Professor of Clinical  
Ophthalmology



**Philip J. Rosenfeld, M.D.,  
Ph.D.** Professor of  
Ophthalmology



**Stephen G. Schwartz, M.D.,  
M.B.A.** Associate Professor  
of Clinical Ophthalmology



**Mitra Sehi, O.D., M.S., Ph.D.,  
F.A.A.O.** Research Assistant  
Professor of Ophthalmology



**Leejee H. Suh, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**PART-TIME FACULTY**



**David T. Tse, M.D.**  
Professor of Ophthalmology



**Rong Wen, M.D., Ph.D.**  
Professor of Ophthalmology



**Sonia H. Yoo, M.D.**  
Professor of Ophthalmology



**Yale L. Fisher, M.D.**  
Professor of Ophthalmology



**Jianhua (Jay) Wang, Ph.D.**  
Associate Professor of  
Ophthalmology



**Sara Wester, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Alana L. Grajewski, M.D.**  
Professor of Ophthalmology



**Sarah R. Wellik, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Zohar Yehoshua, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



**Elizabeth Hodapp, M.D.**  
Professor of Ophthalmology



## PROFESSOR EMERITUS



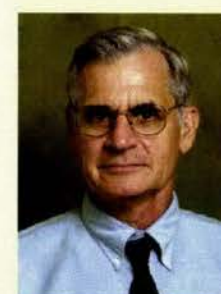
**Carmen A. Puliafito, M.D.,  
M.B.A.** Professor of  
Ophthalmology



**Mark Werner, M.D.**  
Assistant Professor of  
Clinical Ophthalmology



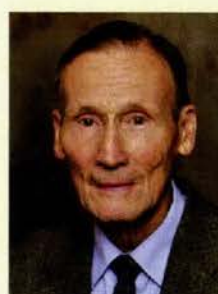
**Douglas R. Anderson, M.D.**  
Professor Emeritus of  
Ophthalmology



**Robert W. Knighton, Ph.D.**  
Professor Emeritus of  
Ophthalmology



**Norman J. Schatz, M.D.**  
Professor of Ophthalmology



**Victor T. Curtin, M.D.**  
Professor Emeritus of  
Ophthalmology



**Mary Lou Lewis, M.D.**  
Professor Emerita of  
Ophthalmology

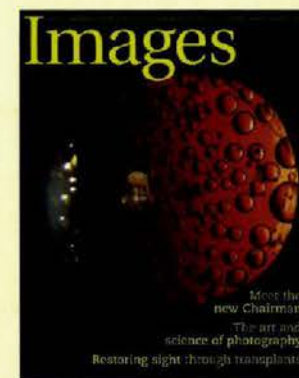
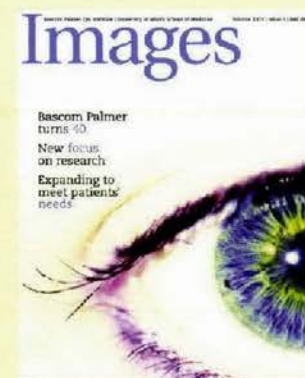


**Lawrence Singerman, M.D.**  
Professor of Clinical  
Ophthalmology



**Duco I. Hamasaki, Ph.D.**  
Professor Emeritus of  
Ophthalmology





## SECONDARY APPOINTMENTS IN OPHTHALMOLOGY

Steven Gayer, M.D., M.B.A.  
David Lee, M.D.  
Arnold M. Markoe, M.D.  
Fabrice Manns, Ph.D.  
Peter J. Milne, Ph.D.  
Keyvan Nouri, M.D.  
Judith D. Post, M.D.  
Robert Quencer, M.D.  
Michael Vigoda, M.D.

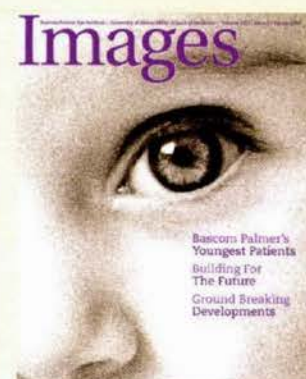
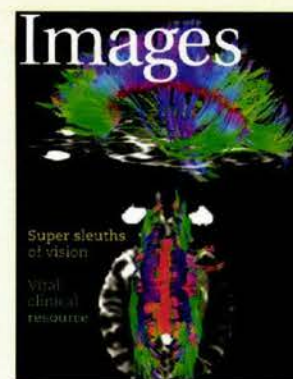
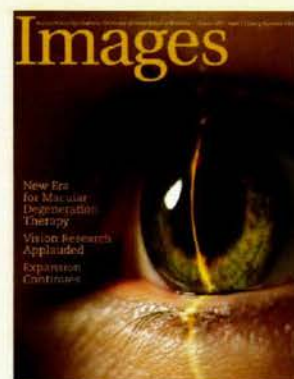
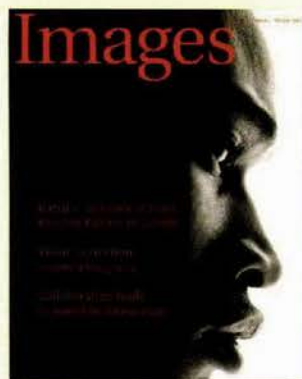
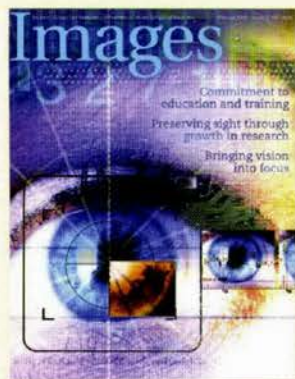
## VOLUNTARY FACULTY

Luma Al-Attar, M.D.  
Armando Alegret, M.D.  
Warren Anderson, M.D.  
Brett Bielory, M.D.  
Stanley Braverman, M.D.  
Carlos Buznego, M.D.  
Colleen M. Cebulla, M.D.  
Liping Chen, M.D.  
Henry Clayman, M.D.  
Lewis Dan, M.D.  
Howard A. Doyle, M.D.  
Lee Duffner, M.D.  
Fouad El Sayyad, M.D.  
Elizabeth Fini, Ph.D.  
Jerome Fisher, M.D.  
Ronald Frenkel, M.D.  
Edward C. Gelber, M.D.  
Richard W. Grodin, M.D.  
Norman R. Grover, M.D.  
Lawrence Halperin, M.D.  
Samuel Jacobson, M.D.

Norman Jaffe, M.D.  
Daniel A. Jewelewicz, M.D.  
Charles Kaiser, M.D.  
Louis Kasner, M.D.  
Raananah Katz, M.D.  
Lawrence B. Katzen, M.D.  
Jan Warren Kronish, M.D.  
Stacey J. Kruger, M.D.  
Stephen Kulvin, M.D.  
Dolena R. Ledee, Ph.D.  
Yunhee Lee, M.D.  
Michael Levine, M.D.  
Steven Litinsky, M.D.  
Elias Mavrofrides, M.D.  
Julie L. McCarty, M.D.  
Bruce Miller, M.D.  
Gordon R. Miller, M.D.  
Jeffrey Moore, M.D.  
Emanuel Newmark, M.D.  
Jesse Pelletier, M.D.  
Henry Ring, M.D.

Steven Rosenfeld, M.D.  
Enrique Salero-Coca, Ph.D.  
Joel Sandberg, M.D.  
Michael A. Schaffer, M.D.  
Richard Shugarman, M.D.  
Joseph Singer, M.D.  
Alfred Smith, M.D.  
David A. Snyder, M.D.  
J. Harold Stanley, M.D.  
Myron Tanenbaum, M.D.  
Barry Taney, M.D.  
Henry Trattler, M.D.  
William Trattler, M.D.  
Joseph Trentacoste, M.D.  
Stephen R. Uhlhorn, Ph.D.  
Anil Vedula, M.D.  
Roberto Warman, M.D.  
Ira G. Weiner, M.D.  
Frank Weinstock, M.D.  
Marc Winnick, M.D.  
William Zambrano, M.D.





# Bascom Palmer Eye Institute Directors

**Eduardo C. Alfonso, M.D.**  
Chairman

**Michael Gittelman**  
Executive Administrator

**Charles Pappas, O.D.**  
Chief Operating Officer

**Harry Rohrer**  
Chief Financial Officer

**Mario Almeida**  
Executive Director of Patient Services

**Marla Bercuson**  
Director of Marketing and Communications

Executive Director, Bascom Palmer Alumni Association

**Cynthia Birch**  
Director of Health Information Center and Library

Associate Director of Marketing

**Ruben de la Vega**  
Executive Director of Quality Management

**Mark T. Dunbar, O.D., F.A.A.O.**  
Director of Optometric Services

**Fiona Ehli**  
Director of Echography

**Anthony Garand**  
Chief Operating Officer, Bascom Palmer Eye Institute at Palm Beach Gardens

**Serafin Gonzalez, PharmD**  
Director of Pharmacy Services

**Aida Grana**  
Director of Laser Vision Center

**Joanne Martin, R.N., M.S., M.B.A.**

Chief Nursing Officer

**Tracy Moté**  
Director of Supply Chain

**Nayla Muñiz**  
Director of Ophthalmic Clinical Services

**Alicia Muñiz**  
Director of Laboratory Services

**Lily Orticio, R.N.**  
Director of Nursing

**Belinda Quinta**  
Director of Research Administration

**Isabel Rams**  
Director of Ophthalmic Photography

**Maria Serrano Brosco**  
Director of Continuing Medical Education

**Casey Simpkins C.P.A., M.B.A., M.S.**  
Director of Fiscal Affairs

**Chuck Smith, R.N., M.B.A.**  
Director of Nursing and Surgery Center

**John P. Soucy, J.D.**  
Executive Director of Development

**Karen Stimmel**  
Executive Director of Medical Human Resources

**Cristina Stoyles**  
Director of Health Information Management

**Michelle Taveras, M.S.I.E.**  
Executive Director of Physician Logistics



## It's a family affair



*The Jose Berrocal Auditorium opened in December 2011.*

In 1964, Jose A. Berrocal, M.D., was the first fellow to train under "The Chief." He chose to go into private practice in his native Puerto Rico, as the island's first retina specialist. He was affiliated with the University of Puerto Rico School of Medicine in San Juan, and is now retired.

A generation later, his daughters, Maria H. Berrocal, M.D., (fellow, 1992) and Audina "Nina" Berrocal, M.D., (fellow, 2001) trained at Bascom Palmer Eye Institute. Maria entered practice with her father and became an assistant professor at the University of Puerto Rico. Nina joined the Bascom Palmer faculty as a specialist in vitreoretinal diseases and pediatric clinical care, serving as medical director of the retinopathy of prematurity

service. Many of her patients are premature babies, born as young as 23 weeks of gestation.

"My dad and Dr. Norton were very good friends. The Norton family would come to Puerto Rico in the summer, and their kids would spend time with us. My sister and I got to know Dr. Curtin and Dr. Gass as well. We would also visit the Nortons on our trips to Miami," Nina recalled.

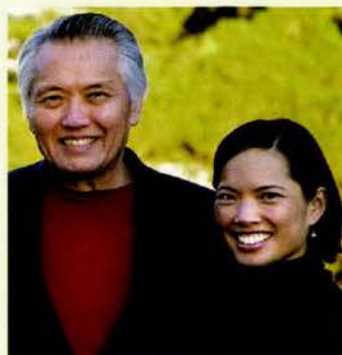
In fact, Maria trained under Gass, learning the latest retinal surgery techniques from one of the field's most highly regarded teachers. "Being able to consult with the best ophthalmologists on every aspect of a patient's eye condition was one of the most wonderful things about my education at Bascom Palmer," she said. "It's also very service oriented – the patient still comes first in everything."

Nina agrees, calling Bascom Palmer "a mecca for ophthalmology training." "It's a pleasure to work with colleagues who are at the top of their fields," she said. "At the same time, they are still humble about their work and love to teach students."

To honor the ophthalmology legacy started by Jose Berrocal and his almost 50-year relationship with Bascom Palmer, in 2011, the Berrocal family provided the leading gift to completely renovate the auditorium in the Edith and Earl Retter Educational Center. It is now known as the Jose Berrocal Auditorium.



*Over the years, Bascom Palmer has had the privilege of training many members of the same family. Brothers and sisters, parents and children, and husbands and wives make up this select group:*



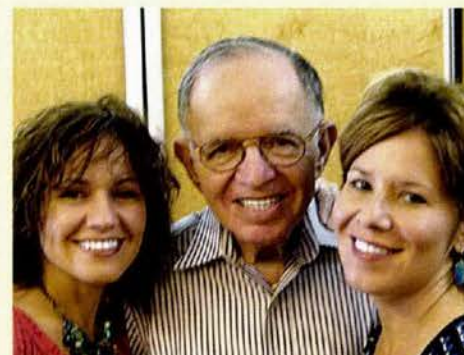
*Wayne Fung, M.D., and daughter, Anne Fung, M.D.*



*James Major, Jr., M.D., and father, James Major, Sr., M.D.*



*Thomas Aaberg, Jr., M.D., and father, Thomas Aaberg, Sr., M.D.*



*Jose Berrocal, M.D., and daughters, (left) Audina Berrocal, M.D., and (right) Maria Berrocal, M.D.*



*Efrem Mandelcorn, M.D., and father, Mark Mandelcorn, M.D.*

## **TWO GENERATIONS**

**Thomas M. Aaberg, Sr., M.D.**  
(fellow, 1969)

**Thomas M. Aaberg, Jr., M.D.**  
(resident, fellow, chief resident, 1995)

**Jose A. Berrocal, M.D.**  
(fellow, 1964)

**Maria H. Berrocal, M.D.**  
(fellow, 1992)

**Audina M. Berrocal, M.D.**  
(fellow, 2001, faculty)

**Stanley Chang, M.D.**  
(fellow, 1979)

**Jonathan S. Chang, M.D.**  
(current resident)

**Wayne E. Fung, M.D.**  
(fellow, 1968)

**Anne E. Fung, M.D.**  
(fellow, 2005)

**Alexander Irvine, M.D.**  
(fellow, 1970)

**W. David Irvine, M.D.**  
(resident, chief resident, 1992)

**Scott Jaben, M.D.**  
(resident, chief resident, 1982)

**Korey Jaben, M.D.**  
(resident, 2015)

**James C. Major, Sr., M.D.**  
(resident, chief resident, 1963)

**James C. Major, Jr., M.D.**  
(resident, fellow, chief resident, 2009)

**Mark S. Mandelcorn, M.D.**  
(fellow, 1974)

**Efrem D. Mandelcorn, M.D.**  
(fellow, 2010)

**Donald G. Puro, M.D., Ph.D.**  
(resident, 1980)

**Cynthia Puro Nix, M.D.**  
(resident, fellow, 2010)

**Joel S. Sandberg, M.D.**  
(resident, 1974)

**Amy C. Scheffler (Sandberg), M.D.**  
(resident, fellow, chief resident, 2010, faculty)

**Arthur L. Schwartz, M.D.**  
(fellow, 1973)

**Kenneth S. Schwartz, M.D.**  
(fellow, 2003)

**Richard Tenzel, M.D.**  
(honorary alumnus)

**Jack Tenzel, M.D.**  
(resident, 1987)

**David Tenzel, M.D.**  
(fellow, 1990)

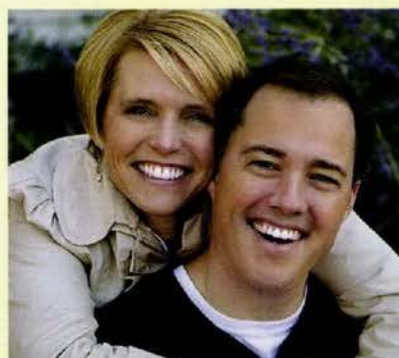




*Barbara Blodi, M.D., and  
husband, Justin Gottlieb, M.D.*



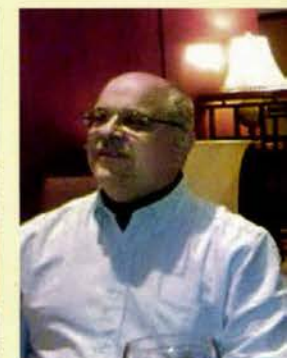
*Jeffrey Goldberg, M.D., Ph.D., and  
brother, Roger Goldberg, M.D., M.B.A.*



*Melissa Meldrum-Aaberg, M.D., and  
husband, Thomas Aaberg, M.D.*



*Andrew Moshfegbi, M.D., M.B.A., and  
wife, Arlanna Moshfegbi, M.D., M.P.H.*



*Juan Batlle, M.D.,  
and brother,  
Ivan Batlle, M.D.*

### **BROTHERS AND SISTERS**

**Juan F. Batlle, M.D.**  
*(resident, chief resident, 1985)*

**Ivan R. Batlle, M.D.**  
*(resident, 1989)*

**Maria H. Berrocal, M.D.**  
*(fellow, 1992)*

**Audina M. Berrocal, M.D.**  
*(fellow, 2001, faculty)*

**Christopher H. Blodi, M.D.**  
*(resident, 1983, former faculty)*

**Barbara A. Blodi, M.D.**  
*(resident, fellow, 1992)*

**Jeffrey L. Goldberg,  
M.D., Ph.D.**  
*(resident, fellow, 2010, faculty)*

**Roger A. Goldberg, M.D., M.B.A.**  
*(current resident)*

**Brandon Lee, M.D.**  
*(fellow, 2011)*

**Bradford Lee, M.D.**  
*(current resident)*

**Pedro Schuchovski, Ph.D.**  
*(research fellow, 1989)*

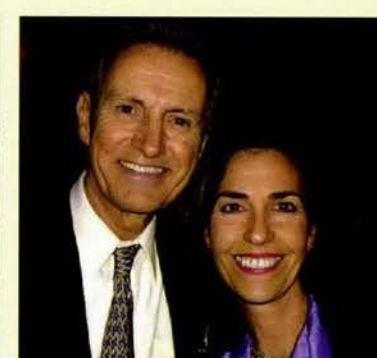
**Plinio Schuchovski, Ph.D.**  
*(research fellow, 1989)*

**Jack R. Tenzel, M.D.**  
*(resident, 1987)*

**David P. Tenzel, M.D.**  
*(fellow, 1990)*



*Bascom Palmer is a family. It gets into your blood and each time you come here you feel like you are coming home. Where else would you want to send your children?*



*Joel Sandberg M.D.,  
and daughter-in-law,  
Amy Schefler M.D.*

*R. Michael Siatkowski, M.D., and  
wife, Rhea Siatkowski, M.D.*

*Christopher Blodi, M.D., and  
sister, Barbara Blodi, M.D.*

*Michael Yen, M.D., and wife,  
Kimberly Yen, M.D.*

*Vittorio Porciatti, D.Sc., and  
wife, Lori Ventura, M.D.*

#### **HUSBANDS AND WIVES**

**Melissa Meldrum-Aaberg, M.D.**  
*(resident, fellow, 1993)*

**Thomas Aaberg Jr., M.D.**  
*(resident, fellow, chief resident,  
1995)*

**Michael R. Banitt, M.D.**  
*(fellow, 2009, faculty)*

**Anne Ko, M.D.**  
*(faculty)*

**Barbara A. Blodi, M.D.**  
*(resident, fellow, 1992)*

**Justin L. Gottlieb, M.D.**  
*(fellow, 1995)*

**Scott R. Anagnoste, M.D.**  
*(fellow, chief resident, 2000,  
former faculty)*

**Kendall E. Donaldson,  
M.D., M.P.H.**  
*(resident, fellow, 2004, faculty)*

**Takeshi Iwata, Ph.D.**  
*(research fellow, 1991)*

**Fumino Ara Iwata, Ph.D.**  
*(research fellow, 1993)*

**Hong Jiang, M.D., Ph.D.**  
*(fellow, 2011)*

**Jianhua "Jay" Wang, M.D.  
Ph.D., M.S.**  
*(faculty)*

**R. Michael Siatkowski, M.D.**  
*(fellow, 1993, former faculty)*

**Rhea (McDonough)  
Siatkowski, M.D.**  
*(resident, fellow, 1999)*

**Andrew A. Moshfeghi,  
M.D., M.B.A.**  
*(fellow, 2006, faculty)*

**Arlanna N. Moshfeghi,  
M.D., M.P.H.**  
*(fellow, 2006, faculty)*

**Lori M. Ventura, M.D.**  
*(fellow, 1986, faculty)*

**Vittorio Porciatti, D.Sc.**  
*(faculty)*



37 graduates of Bascom Palmer's training programs  
have become ophthalmology department chairs at medical schools  
and teaching hospitals throughout the world.





## UNITED STATES

### **University of Miami**

John G. Clarkson, M.D.

Richard K. Parrish II, M.D.

Eduardo C. Alfonso, M.D.

### **Baylor College of Medicine**

Dan B. Jones, M.D.

### **Cleveland Clinic**

Froncie A. Gutman, M.D.

### **Columbia University**

Stanley Chang, M.D.

### **Cornell University**

Donald J. D'Amico, M.D.

### **Duke University**

Robert Machemer, M.D.

### **Emory University**

Thomas M. Aaberg, Sr., M.D.

### **Greater Baltimore**

### **Medical Center**

Charles P. Wilkinson, M.D.

### **Louisiana State University**

Jayne S. Weiss

### **Medical College of Georgia**

Macolm N. Luxenberg, M.D.

### **Medical College of Wisconsin**

Dale K. Heuer, M.D.

### **Pennsylvania State University**

George W. Blankenship, M.D.

David Quillen, M.D.

### **St. Louis University**

Oscar A. Cruz, M.D.

### **Stanford University**

Mark S. Blumenkranz, M.D.

### **Temple University**

Jeffrey Henderer, M.D.

### **University of Alabama**

Lanning B. Kline, M.D.

### **University of Arkansas**

John P. Shock, M.D.

### **University of Chicago**

William E. Mieler, M.D.

### **University of Florida**

William T. Driebe, Jr., M.D.

### **University of Illinois**

Jose S. Pulido, M.D.

### **University of Nebraska**

Raymond E. Records, M.D.

### **University of North Carolina**

Donald L. Budenz, M.D. M.P.H.

### **University of Oklahoma**

Gregory L. Skuta, M.D.

### **University of Virginia**

Brian P. Conway, M.D.

### **Wayne State University**

Gary W. Abrams, M.D.

### **Yale University**

James Tsai, M.D.

## INTERNATIONAL

### **Universidade Federal**

### **de São Paulo, Brazil**

Ana Hofling-Lima, M.D.

### **Hospital Dr. Elias Santana,**

### **Dominican Republic**

Juan Batlle, M.D.

### **Chuang-Gung Memorial Hospital,**

### **Taiwan**

Ray Jui-Fang Tsai, M.D.

### **University of Barcelona,**

### **Spain**

Elena Barraquer, M.D.

### **University of Lubeck,**

### **Germany**

Horst Laqua, M.D.

### **University of Erlangen,**

### **Germany**

Freidrich Kruse, M.D.

### **Uppsala University,**

### **Sweden**

Per Soderberg, M.D.

### **Baskent University,**

### **Turkey**

Dilek Dursun, M.D.



# Bascom Palmer Eye Institute Alumni

**Thomas M. Aaberg Sr.**  
Fellow 1969

**Thomas M. Aaberg Jr.**  
Resident, Fellow, Chief Resident  
1995

**Richard L. Abbott**  
Fellow 1978

**Amany Abdelaziz**  
Research Scholar 2011

**Mohamed F. Abou Shousha**  
Fellow 2011

**Gary W. Abrams**  
Fellow 1978

**Adele Abri**  
Research Fellow 2004

**Ali Abri**  
Research Fellow 2004

**Ana Carolina Acosta**  
Research Fellow 2005

**John C. Affeldt**  
Fellow 1983

**Dan Agness**  
Fellow 1979

**Byung-Joon (BJ) Ahn**  
Fellow 2008

**Luma Al-Attar**  
Resident, Fellow, Chief Resident  
2005, Former Faculty

**Nabih Al-Sheikh**  
Fellow 2002

**Chrisfouad R. Alabiad**  
Resident, Fellow 2010,  
Faculty

**Vicente Alcaraz**  
Fellow 1981

**William V. Aldred**  
Resident 1981

**Paul Alecce**  
Resident 1959

**George Alexandrakis**  
Resident 2000

**Eduardo C. Alfonso**  
Resident 1984, Faculty, Chair

**Elias Aliprandis**  
Fellow 2005

**Arthur W. Allen Jr.**  
Fellow 1975

**Kyle J. Alliman**  
Resident, Fellow 2010

**Rene Altamirano**  
Resident 1958

**Gustavo M. Alvira**  
Fellow 1986

**Wallace L.M. Alward**  
Fellow 1987

**Mohamed Aly**  
Research Fellow 2006

**Arezo Amirikia**  
Fellow 1999

**Scott R. Anagnoste**  
Fellow, Chief Resident 2000,  
Former Faculty

**Jean-Louis Anctil**  
Fellow 1981

**Douglas R. Anderson**  
Honorary Alumnus

**Lee S. Anderson**  
Fellow 1982

**Roger A. Anderson**  
Fellow 2008

**Warren Anderson**  
Fellow 2007

**Roberto Andreu**  
Resident 1986

**Husam Ansari**  
Fellow 2007





1962

**Bertrand M. Anz**  
Resident 1979

**Rachid Aouchiche**  
Fellow 1976

**Antonio V. Aragon**  
Fellow, Chief Resident 2001

**Jaime Arango**  
Resident 1961

**Martha L. Araujo**  
Fellow 1989

**Ahmad A. Aref**  
Fellow 2011

**Roberto Arguello**  
Resident 1982

**Donald Arkfeld**  
Fellow 1979

**Jodie A. Armstrong**  
Former Faculty 2005

**Claudia Arroyave O'Brien**  
Fellow 2001, Former Faculty

**Luiz G. Assis**  
Research Fellow 1986

**Geetha K. Athappilly**  
Fellow 2010

**Richard M. Awdeh**  
Fellow 2009, Faculty

**G. William Aylward**  
Fellow 1994

**Susan E. Azar**  
Fellow 2011

**Amy Babiuch**  
Fellow 2010

**Brian Bachynski**  
Fellow 1985

**Frank Bajandas**  
Fellow 1975

**Evelyn L. Baker**  
Resident 2003



1965

**Norman Ballin**  
Resident 1964

**Michael R. Banitt**  
Fellow 2009, Faculty

**James T. Banta**  
Resident 2003, Faculty

**Derek L. Barker**  
Fellow 2004

**Charles C. Barr**  
Resident, Chief Resident 1979

**Elena Barraquer**  
Research Fellow 1989

**Debra A. Barrett**  
Resident 1991

**Michael Barricks**  
Resident, Fellow 1976

**Keith Barton**  
Fellow 1996

**Norma B. Barton**  
Fellow 1980

**Jim Bastek**  
Fellow 1983

**Edgar Batista**  
Resident 2004

**Kenneth Batko**  
Fellow 1980

**Ivan R. Batlle**  
Resident 1989

**Juan F. Batlle**  
Resident, Chief Resident 1985

**Lisa Battat**  
Fellow 1999

**Joseph O. Beauchamp**  
Resident 1968

**Bruce H. Becker**  
Fellow 1977

**Carmine Bedotto**  
Resident, Chief Resident 1970





1967

**William E. Benson**  
Fellow 1975

**Matthew S. Benz**  
Resident, Fellow, Chief Resident  
2003

**Leonard Berg**  
Fellow 1964

**Audina M. Berrocal**  
Fellow 2001, Faculty

**Jose A. Berrocal**  
Fellow 1964

**Maria H. Berrocal**  
Fellow 1992

**Dana Beyer**  
Resident 1982

**Anjali M. Bhorade**  
Fellow 2004

**Christian D.J. Billotte**  
Research Fellow 2002

**Alan Bird**  
Fellow 1969

**Charles J. Blair**  
Fellow 1969

**George W. Blankenship Jr.**  
Former Faculty

**Barbara A. Blodi**  
Resident, Fellow 1992

**Christopher F. Blodi**  
Resident 1983, Former Faculty

**Louis Blumenfeld**  
Fellow 1996

**Mark S. Blumenkranz**  
Fellow 1980

**Donald D. Bode**  
Fellow 1982

**Dan Bohen**  
Fellow 1972

**George T. Boozalis**  
Fellow 1992



1969

**Francois Borruat**  
Fellow 1993

**Mark D. Borup**  
Resident 1992

**Remi Bougaran**  
Research Fellow 1998

**Charles B. Bowman**  
Resident 1993

**James Boynton**  
Fellow 1976

**Reagan Bradford Jr.**  
Fellow 1985

**Peter J. Branden**  
Fellow 1991

**Robert A. Braunstein**  
Fellow 1979

**Bruce Brauston**  
Resident 1962

**R. Larry Brenner**  
Resident 1969

**Roy Bresky**  
Resident 1970

**Dean C. Brick**  
Fellow 1980

**Jonathan Briggs**  
Fellow 2002

**Gregory S. Brinton**  
Resident 1980

**Roy D. Brod**  
Fellow 1988

**James Brown**  
Fellow 1975

**Reay H. Brown**  
Fellow 1983

**David J. Browning**  
Fellow 1986

**Nancy M. Buchser**  
Fellow 2009

**Edward G. Buckley**  
Fellow 1983



**Donald L. Budenz**  
Fellow 1992, Former Faculty

**Michael J. Bueche**  
Fellow 1993

**Helmut Buettner**  
Resident 1975

**Frank Buffam**  
Fellow 1976

**George Bullwinkel**  
Resident 1967

**Walter E. Bundy III**  
Resident 1977

**Carlos Buznego**  
Resident 1991

**Christine E. Callahan**  
Fellow 2004

**David G. Callanan**  
Fellow 1992

**Randy V. Campo**  
Resident 1981

**Salvatore Cantolino**  
Fellow 1970

**Thomas J. Carlow**  
Fellow 1972

**Mont J. Cartwright**  
Fellow 1987

**Anthony Castelbuono**  
Fellow 2001

**Lourdes A. Casuso**  
Resident, Fellow 2002

**Brian Cavallaro**  
Fellow 1999

**John Cavender**  
Fellow 1972

**Kara M. Cavuoto**  
Resident, Fellow 2011

**Elizenda Ceballos**  
Fellow 2001

**Colleen M. Cebulla**  
Resident, Fellow 2009

**James Cerasoli**  
Resident 1969

**Joseph G. Chacko**  
Fellow 2005

**You-Ching Chan**  
Research Fellow 1990

**Peter T. Chang**  
Fellow 2004

**Robert T. Chang**  
Fellow 2009

**Stanley Chang**  
Fellow 1979

**Ta Chen (Peter) Chang**  
Fellow 2010

**Tom S. Chang**  
Fellow 1994

**Warren Chang**  
Fellow 1998

**Rolando A. Chanis Jr.**  
Fellow 1974

**Pascal Chapon**  
Research Fellow 2000

**Steve T. Charles**  
Resident 1973

**Nauman Chaudhry**  
Fellow, Chief Resident 1999

**Percival Chee**  
Resident 1968

**Jei-Yuan Chen**  
Research Fellow 1990

**Philip P. Chen**  
Fellow 1996

**Sachin (Shawn) Chhabra**  
Fellow 2008

**Fred Y. Chien**  
Fellow 2008

**Iain Chisholm**  
Fellow 1976

**Mark Chiu**  
Resident 1986

**James Chodosh**  
Fellow 1993

**Gabriel T. Chong**  
Fellow 2011

**Christopher Chow**  
Fellow 1996

**Stephen P. Christiansen**  
Fellow 1991

**Murray D. Christianson**  
Fellow 1980

**Nancy Christmas**  
Resident 1999

**David H. Chu**  
Fellow 2010

**Elaine L. Chuang**  
Fellow 1985, Former Faculty

**Yun S. Chung**  
Research Fellow 2011

**Gerhard W. Cibis**  
Fellow 1977

**Joseph M. Civantos**  
Resident 1993

**Steven Civileto**  
Resident, Chief Resident 1979

**Hollis W. Clark**  
Fellow 1986

**Robert Clark**  
Fellow 1971

**S. William Clark III**  
Resident 1983

**W. Lloyd Clark**  
Resident 1999

**John G. Clarkson**  
Resident, Chief Resident 1975,  
Faculty, Chair

**Henry M. Clayman**  
Resident 1972, Former Faculty

**Charles Clevenger**  
Resident, Chief Resident 1964

**Michael Cobo**  
Resident, Chief Resident 1980

**Steven M. Cohen**  
Fellow 1994

**Claudia Colomine**  
Fellow 2003

**Howard Conn**  
Fellow 1982

**Brian Conway**  
Fellow 1976

**Ghassan Cordahi**  
Fellow 1999

**Richard Corey**  
Resident 2001

**George F. Corrent**  
Fellow 1988, Faculty

**Rafael T. Cortez**  
Fellow 1978

**John A. Costin**  
Fellow 1979

**Andrew J. Cottingham**  
Fellow 1975

**Thomas Coulter**  
Resident 1971

**Scott W. Cousins**  
Fellow 1987, Former Faculty

**Stephen S. Couvillion**  
Resident, Fellow, Chief Resident,  
2007

**Shelley A. Cross**  
Fellow 1982

**Benjamin M. Crowder**  
Resident 1970



**John I. Crowder**  
Resident, Fellow 1963

**Oscar Cruz**  
Fellow 1992

**Vanessa Cruz-Villegas**  
Fellow 2003

**William W. Culbertson**  
Fellow 1979, Faculty

**Frank J. Culotta**  
Fellow 1984

**Victor T. Curtin**  
Honorary Alumnus

**Philip L. Custer**  
Fellow 1984

**David L. Cute**  
Fellow 2008

**Oscar Cuzzani**  
Fellow 1980

**Donald J. D'Amico**  
Fellow 1982

**Charles K. Dabbs**  
Resident 1988

**Mark Daily**  
Resident 1977

**Melvyn Damast**  
Fellow 1972

**Deborah Darnley-Fisch**  
Resident 1987

**Sonal Davé**  
Resident 2007

**Dale G. Davis**  
Fellow 1971

**Helen A. Davis**  
Resident 1982

**Janet L. Davis**  
Fellow 1987, Faculty

**Ronald Prince Davis II**  
Resident, Fellow 2010

**Vincent P. De Luise**  
Resident 1981

**Gil De Venecia**  
Resident 1960

**Peter DeBry**  
Fellow 2001

**David R. DeMartini**  
Fellow 1983

**Derek W. Delmonte**  
Fellow 2011

**Anna Maria Demetriades**  
Fellow 2010

**Patrick Dennehy**  
Fellow 1988

**Manishi A. Desai**  
Fellow 2008

**Daniel Desjardins**  
Fellow 1985

**Gilles Desroches**  
Fellow 1980

**Eric S. Dessner**  
Fellow 2008

**Amr Dessouki**  
Fellow 2000

**George Dinter**  
Resident 1969

**Richard D. Dix**  
Former Faculty 1999

**Erin Doe**  
Fellow 2000

**Bernard H. Doft**  
Resident 1978

**Kendall E. Donaldson**  
Resident, Fellow 2004, Faculty

**Mark J. Douglas**  
Fellow, Chief Resident 2001

**Richard Dreyer**  
Fellow 1984

**William T. Driebe Jr**  
Fellow 1984

**Daniel B. Driscoll**  
Resident, Fellow 2011

**Joseph Ducharme**  
Fellow 1998

**Bernard Duchesne**  
Research Fellow 1996

**Kathleen M. Duerksen**  
Resident 1989

**Lee R. Duffner**  
Resident 1969

**Pravin U. Dugel**  
Fellow 1993

**Dilek Dursun**  
Fellow 2001

**William W. East**  
Resident, Chief Resident 1974

**Daniel Eichenbaum**  
Resident 1973

**Charles W. Eifrig**  
Resident, Fellow, Chief Resident,  
2003

**Aziza El Aouni**  
Research Fellow 1997

**Norman Ellerman**  
Resident, Chief Resident 1964

**Geoffrey Emerick**  
Fellow 1998

**Mazen Eneyni**  
Fellow 1996

**Jonathan Erickson**  
Fellow 2011

**Edgar M. Espana**  
Research Fellow 2005

**Diego G. Espinosa-Heidmann**  
Research Fellow 2005

**Thomas F. Essman**  
Fellow 1994

**Jonathan R. Etter**  
Fellow 2010

**Manuel Falcao**  
Research Fellow 2010

**Frank Fankhauser II**  
Research Fellow 1993

**Lilia Fannin**  
Fellow 2001

**Francisco E. Fantes**  
Resident, Fellow 1987, Faculty

**Michel E. Farah**  
Research Fellow 1984

**Bradley K. Farris**  
Fellow 1986

**Herbert P. Fechter III**  
Fellow 2003

**Michael R. Feilmeier**  
Resident 2009

**Daniel K. Ferguson**  
Resident, Fellow 2005

**Viviana Fernandez**  
Research Fellow 2005

**Renato Ferreira Pires**  
Research Fellow 2000

**Edward Fineberg**  
Resident 1975

**M. Elizabeth Fini**  
Former Faculty

**Jeffrey L. Fischer**  
Resident 1996

**Barron C. Fishburne**  
Resident 1995

**Jerome P. Fisher**  
Resident 1980

**Daniel Fishkoff**  
Resident 1961

**Jane Fishler-Martinez**  
Resident, Fellow 2011





1970

**Richard Flindall**

Fellow 1970

**Robert A. Flores**

Fellow 1993

**John T. Flynn**

Honorary Alumnus

**Jerry G. Ford**

Fellow 1996

**Richard K. Forster**

Resident, Chief Resident 1970,  
Faculty, Interim Chair

**Robert E. Foster**

Fellow 1993

**Gregory M. Fox**

Resident, Fellow 1992

**Martin J. Fox**

Fellow 1983

**Stephen Fransen**

Fellow 1990

**Beth R. Friedland**

Resident 1984

**Tadashi Fujino**

Fellow 1967

**Eriko Fujiwara**

Research Fellow 2000

**Masakatsu Fukuda**

Research Fellow 1989

**Dwain Fuller**

Fellow 1975

**Anne E. Fung**

Fellow 2005

**Wayne E. Fung**

Fellow 1968

**Walter Gager**

Fellow 1968

**Jaime R. Gaitan**

Resident, Fellow 2008

**Anna Galanopoulos**

Fellow 1997



1976

**Steven L. Galetta**

Fellow 1988

**Paul Gallogly**

Resident, Fellow, Chief Resident  
2008

**Anat Galor**

Fellow 2008, Faculty

**Mark S. Gans**

Fellow 1986

**Gail L. Ganser**

Resident 1996

**Thomas W. Gardner**

Fellow 1984

**J. Donald M. Gass**

Honorary Alumnus

**Morgan Gaunt**

Fellow 2008

**Sandrine Gautier**

Research Fellow 1997

**Gregg Gayre**

Resident 1999

**Steven J. Gedde**

Fellow 1996, Faculty

**Edward C. Gelber**

Fellow 1975

**Henry Gelender**

Fellow 1977

**Mohamed Gendy**

Research Fellow 2009

**JoAnn A. Giaconi**

Fellow 2003

**Steven Gilberg**

Fellow 1992

**Walter R. Gilbert Jr.**

Fellow 1968

**Arthur Gillman**

Resident 1960





1976

**Joel S. Glaser**  
Resident, Fellow 1967, Faculty

**David G. Godfrey**  
Fellow 1999

**Kong Yong Goh**  
Fellow 1995

**Jeffrey L. Goldberg**  
Resident, Fellow 2010, Faculty

**Yochanan Goldhammer**  
Fellow 1974

**Raquel Goldhardt**  
Fellow 2010, Faculty

**David A. Goldman**  
Resident, Fellow 2007, Faculty

**James M. Goldman**  
Fellow 2007

**Subba R. Gollamudi**  
Fellow 1992

**Iuri Golubev**  
Research Fellow 2009

**Michel Gonvers**  
Fellow 1977

**Christine R. Gonzales**  
Resident 1999

**Roy A. Goodart**  
Fellow 1979

**Todd Goodglick**  
Fellow 1993

**Margot L. Goodkin**  
Fellow 2009

**James Goodwin**  
Fellow 1976

**Justin L. Gottlieb**  
Fellow 1995

**Alana L. Grajewski**  
Fellow 1989, Faculty

**Trevor Gray**  
Fellow 1997

**Stuart N. Green**  
Fellow 1979

**Paul B. Greenberg**  
Former Faculty

**David S. Greenfield**  
Fellow 1995, Faculty

**Ninel Z. Gregori**  
Fellow 2006, Faculty

**Michael G. Gressel**  
Fellow 1984

**Kevin W. Greulich**  
Fellow 2004

**Michael R. Grimmett**  
Former Faculty

**Baird S. Grimson**  
Fellow 1977

**Davinder Grover**  
Fellow 2010

**R.K. Guerry**  
Resident 1977

**Matthew G. Guess**  
Fellow 2005

**James H. Guildford**  
Fellow 1988

**Medhat F. Guirgis**  
Fellow 2001

**Nishi Gulati**  
Fellow 2011

**Anita Gupta**  
Fellow 2009, Faculty

**Joseph R. Gussler**  
Fellow 1994

**Froncie A. Gutman**  
Fellow 1965

**Jeffrey R. Haag**  
Fellow 1984

**Takahiko Hachiya**  
Research Fellow 1992



**O. Bruce B. Hadden**  
Fellow 1975

**Eduard A. Haefliger**  
Research Fellow 1986

**Ivan O. Haefliger**  
Fellow 1994

**Payman Haft**  
Resident, Fellow 2009

**Robert Haimovici**  
Resident 1990

**Bryan C. Hainline**  
Fellow 2008

**Amy B. Halikman**  
Fellow 1991

**Duco I. Hamaski**  
Honorary Alumnus

**Harry A. Hamburger**  
Fellow 1984

**Latif M. Hamed**  
Fellow 1989

**Ralph Hamilton**  
Resident 1981

**William M. Hammonds**  
Fellow 2006

**J. William Harbour**  
Fellow 1995

**David Hardy**  
Fellow 1998

**Russell Harner**  
Resident, Fellow 1972

**Thomas W. Harper**  
Resident, Fellow, Chief Resident  
2009

**Michael Harris**  
Fellow 1985

**Kristen L. Hartley**  
Resident, Fellow, Chief Resident  
2007

**Andy Hay**  
Resident 1991

**John T. Heffernan**  
Fellow 1988

**David Heidemann**  
Fellow 1987

**Thomas J. Heigle**  
Resident 1996, Former Faculty

**Todd W. Heilskov**  
Resident 1990

**Jeffrey Henderer**  
Resident 1998

**Ginger L. Henson Rattan**  
Resident, Fellow 2009

**Jonathan Herschler**  
Former Faculty

**Leonard Hershkowitz**  
Fellow 1975

**Dale K. Heuer**  
Fellow 1984

**George Hilton**  
Fellow 1967

**Tony W. Ho**  
Fellow 1992

**Brian Hoar**  
Fellow 1976

**Jubran Hoche**  
Fellow 1985

**Joseph I. Hoffman**  
Resident 1985

**Kara B. Hoffman Harbick**  
Resident, Fellow 2002

**Rodrigo Hoffmann**  
Research Fellow 2009

**Ana L. Hofling-Lima**  
Research Fellow 1984

**Richard Hoft**  
Fellow 1988

**Simon P. Holland**  
Fellow 1987

**John H. Holly**  
Resident 1963

**Gary Hopen**  
Fellow 1983

**Tsugihiko Horiuchi**  
Fellow 1975

**Patrick Hostyn**  
Research Fellow 1992

**Cleve Howard**  
Fellow 1980

**Hugo Y. Hsu**  
Fellow 2004

**Andrew J.W. Huang**  
Resident, Fellow 1991

**Suber S. Huang**  
Fellow 1990

**Jennifer I. Hui**  
Resident, Fellow 2008,  
Former Faculty

**Jan Hummer**  
Resident 1997, Former Faculty

**David M. Hunter**  
Resident 1970

**Steven Hunter**  
Resident 1979

**Saunders Hupp**  
Resident 1984

**Reva Hurtes**  
Honorary Alumnus

**Judy D. Hustead**  
Resident 1988

**William L. Hutton**  
Fellow 1973

**Camille M. Hylton**  
Fellow 2004

**Maggie Hymowitz**  
Fellow 2011

**Takeshi Ide**  
Research Fellow 2008

**Nauman Imami**  
Fellow 1997

**Alfonso Iovieno**  
Research Fellow 2009

**Alexander Irvine**  
Fellow 1970

**W. David Irvine**  
Resident, Chief Resident 1992

**Ryan F. Isom**  
Resident, Fellow 2011

**Charles Israel**  
Fellow 1971

**Fumino Iwata**  
Research Fellow 1993

**Takeshi Iwata**  
Research Fellow 1991

**Haneen Y. Jabaly-Habib**  
Fellow 2004

**Scott L. Jaben**  
Resident, Fellow, Chief Resident,  
1982

**Robert L. Jack**  
Fellow 1973

**Don J. Jackson**  
Fellow 1982

**David J. Jacobs**  
Fellow 2011

**Samuel G. Jacobson**  
Former Faculty

**Gary Jaffe**  
Resident 1982

**Martine J. Jager**  
Fellow 1993

**Valerie Jallet**  
Research Fellow 1995



**Sulayman E. Jallow**  
Fellow 1981

**Brien P. James**  
Fellow 1977

**O. Edward James**  
Resident 1971

**Glen D. Jarus**  
Fellow 1983

**Golnaz Javey**  
Fellow 2009

**Hong Jiang**  
Fellow 2011

**John C. Johnson**  
Fellow 1976

**Katherine E. Johnson**  
Resident 2007

**Mark W. Johnson**  
Fellow 1990

**Robert N. Johnson**  
Fellow 1988

**Thomas E. Johnson**  
Fellow 1993, Faculty

**Dan B. Jones**  
Resident, Chief Resident 1969

**David T. Jones**  
Resident 1998

**Wesley Jones**  
Resident 1972

**Brian C. Joondeph**  
Fellow 1989

**Karen M. Joos**  
Fellow 1994

**Eugene E. Joyce**  
Resident 1967

**Peter K. Kaiser**  
Fellow 1997

**Manish Kalaria**  
Fellow 2007

**Nicholas H. Kalvin**  
Resident 1966

**Se Wo Kang**  
Research Fellow 1998

**Tracy A. Kangas**  
Fellow 1995

**Andrew A. Kao**  
Fellow 2011

**Namrata Kapoor**  
Fellow 2009

**Carol L. Karp**  
Fellow 1994, Faculty

**David Kasner**  
Honorary Alumnus

**Louis Kasner**  
Fellow 1996

**Oscar Kasner**  
Fellow 1988

**Hirohiko Kato**  
Research Fellow 1995

**Hasan M. Kattan**  
Fellow 1990

**Harold Katz**  
Fellow 1984

**Raananah Katz**  
Resident 1981

**Edward Kazarian**  
Fellow 1978

**Gary Keoleian**  
Fellow 1991

**Gerard N. Kervick**  
Fellow 1990

**Pooja Khator**  
Fellow 2006

**Earl Kidwell**  
Fellow 1978

**Gerhard Kieselbach**  
Research Fellow 1999

**Jeremy Z. Kieval**  
Fellow 2009

**Daniel K. Kim**  
Fellow 1989

**Elma E. Kim**  
Fellow 2011

**Judy E. Kim**  
Fellow 1994

**Michael Kim**  
Fellow 2000

**Richard U. Kim**  
Fellow 2002

**Won I. Kim**  
Fellow 2009

**Nancy M. Kirk**  
Resident 1982

**Ralph Kirsch**  
Honorary Alumnus

**Krishna S. Kishor**  
Fellow 2007

**John W. Kitchens**  
Fellow, Chief Resident 2005

**Jane Kivlin**  
Fellow 1981

**Atsuko Kiyosawa**  
Research Fellow 2010

**James W. Klein**  
Fellow 1976

**Lee I. Klein**  
Resident 1986

**Ronald Klein**  
Resident 1976

**Lanning B. Kline**  
Fellow 1979

**Robert Knighton**  
Fellow 1979, Former Faculty

**Akira Kobayashi**  
Research Fellow 1992

**Bruce Kohrman**  
Fellow 1989

**Gregg T. Kokame**  
Fellow 1988

**Hiroyuki Kondo**  
Research Fellow 1997

**Wei Kong**  
Research Scholar 2009

**Aaleya F. Koreishi**  
Fellow 2005

**Andrea Lora Kossler**  
Resident, Fellow 2011

**Jaclyn L. Kovach**  
Fellow 2007, Faculty

**Martina Kralinger**  
Research Fellow 2000

**Joel H. Kramer**  
Resident 1971

**Kenneth Krantz**  
Fellow 2006

**Rohit Krishna**  
Fellow 1999

**Jan W. Kronish**  
Resident, Chief Resident 1989

**Friedrich E. Kruse**  
Research Fellow 1991

**Anup A. Kubal**  
Fellow 2010

**Francois Kuhne**  
Research Fellow 1992

**Stephen M. Kulvin**  
Resident 1970

**Joseph Kurstin**  
Resident, Chief Resident 1968

**Burton Kushner**  
Fellow 1974

**Roger P. La Rue**  
Resident 1960





1979



1982

**Pierre Laflamme**  
Fellow 1976

**Karren Laird**  
Resident 1997

**Robert J. Laird**  
Resident, Chief Resident 1975

**Geeta Lalwani**  
Fellow 2007, Former Faculty

**Byron L. Lam**  
Fellow 1991, Faculty

**Horst Laqua**  
Fellow 1976

**Eric Larson**  
Resident, Fellow 2003

**Paul R. Layman**  
Resident 1974

**Brandon Lee**  
Fellow 2011

**John P. Lee**  
Fellow 1984

**Richard K. Lee**  
Resident, Fellow 2004, Faculty

**Steven Lee**  
Fellow 1995

**Wendy W. Lee**  
Fellow 2004, Faculty

**Jean-Marc Legeais**  
Research Fellow 1991

**Hana Leiba**  
Fellow 1995

**Theodore Leng**  
Resident 2009

**John A. Leon**  
Fellow 1989

**Robert E. Leonard**  
Resident, Fellow, Chief Resident  
1996

**Frederick Lepore**  
Fellow 1980

**Andrew Levada**  
Resident, Fellow 1982

**David Levenson**  
Fellow 1965

**Ira K. Levine**  
Fellow 1987

**Ivor Levy**  
Fellow 1974

**James R. Lewis**  
Fellow 1990

**Mary Lou Lewis**  
Fellow 1972, Former Faculty

**Richard A. Lewis**  
Fellow 1975

**Kam-Fa Li**  
Research Fellow 1989

**Douglas F. Lieb**  
Fellow 2002

**Thomas J. Liesegang**  
Resident, Chief Resident 1976

**Michele C. Lim**  
Fellow 2000

**Richard C. Lin**  
Fellow 2006

**John T. Lind**  
Fellow 2009

**Ahila Lingappan**  
Resident 2010

**Robert W. Lingua**  
Former Faculty

**William J. Lipham**  
Resident 1997

**Grant T. Liu**  
Fellow 1993

**Louis A. Lobes**  
Resident 1976

**Neal Logan**  
Fellow 1982





1985

**Roy Loo**  
Fellow, Chief Resident 2002

**Christina Lopez**  
Research Fellow 1996

**McGregor N. Lott**  
Fellow 2008

**Wojciech Lubinski**  
Research Fellow 1992

**James G. Luetkemeyer**  
Resident 1993

**Brandon J. Lujan**  
Fellow 2008

**Susan Luscombe**  
Resident 1980

**Rajiv Luthra**  
Former Faculty

**Malcolm N. Luxenberg**  
Resident 1966

**Robert Machemer**  
Fellow 1968, Former Faculty

**Brian Madow**  
Fellow 2009

**James M. Magnusen**  
Fellow 1979

**Robert C. Magoon**  
Resident 1963

**James C. Major, Sr.**  
Resident, Chief Resident 1963

**James C. Major Jr.**  
Resident, Fellow, Chief Resident  
2009

**Nayla Malek**  
Research Fellow 1993

**Kim S. Mallick**  
Fellow 1985

**John D. Mallon Jr.**  
Resident 1977



1987

**Sidney Mandelbaum**  
Fellow 1982

**Efrem D. Mandelcorn**  
Fellow 2010

**Mark Mandelcorn**  
Fellow 1974

**Fabrice Manns**  
Research Fellow 1997, Faculty

**Tomiya Mano**  
Research Fellow 1989

**Fabiola Mansur de Carvalho**  
Fellow 1991

**Lisa Kay Mao**  
Resident 1992

**J. Richard Marion**  
Fellow 1978

**Peter Marsh**  
Resident 1997

**John J. Martin Jr.**  
Fellow 1987

**Jose A. Martinez**  
Fellow 1993

**Yukihiko Mashima**  
Research Fellow 1991

**Steven L. Maskin**  
Fellow 1991

**Benjamin L. Mason**  
Resident, Fellow 2006

**Mizuo Matsui**  
Research Fellow 1972

**Elias C. Mavrofrides**  
Fellow, Chief Resident 2004

**John McBeath**  
Resident, Fellow 1978

**Catheleen McCabe**  
Resident 2000

**John A. McCrary III**  
Fellow 1967

**Brooks W. McCuen II**  
Resident 1978



**Timothy J. McCulley**  
Fellow 2000

**Rhea McDonough Siatkowski**  
Resident, Fellow 1999

**Brian McKillop**  
Fellow 1981

**Edward B. McLean**  
Fellow 1972

**Walter C. McLean Jr.**  
Fellow 1982

**William McLeish**  
Resident 1989

**Alexander R. McLeod**  
Fellow 1973

**Fred L. McMillan**  
Fellow 1974

**Mario Meallet**  
Fellow 2002

**Carlos Medina**  
Research Fellow 2009

**Calvin Mein**  
Fellow 1982

**Jerry Meislik**  
Fellow 1978

**Melissa Meldrum-Aaberg**  
Resident, Fellow 1993

**Alan D. Mendelsohn**  
Fellow 1987

**John Merritt**  
Fellow 1975

**Kenneth H. Messner**  
Fellow 1972

**Rike Michels**  
Research Fellow 2004

**Ron Michels**  
Fellow 1973

**Stephan Michels**  
Research Fellow 2005

**Robert C. Mickatavage**  
Resident 1964

**William F. Mieler**  
Resident, Chief Resident 1985

**Solange Milazzo**  
Research Fellow 2004

**Daniel M. Miller**  
Resident, Chief Resident,  
2006

**Gordon R. Miller**  
Resident, Fellow, Chief Resident  
1966

**John J. Miller**  
Resident, Fellow, Chief Resident  
2006

**Michael P. Miller**  
Resident 1996

**James Mitchell**  
Fellow 1981

**Atsushi Mizota**  
Research Fellow 1990

**Kenneth P. Moffat**  
Fellow 1983

**Antonio Montalbo**  
Fellow 1971

**Jeffrey K. Moore**  
Resident, Fellow, Chief Resident  
2004

**Alexei L. Moraczewski**  
Resident, Fellow 2007

**Diany S. Morales**  
Resident, Fellow 1999

**Rebecca Morgan**  
Fellow 1990

**Robert Morris**  
Fellow 1978

**Andrew A. Moshfeghi**  
Fellow 2006, Faculty

**Arlanna N. Moshfeghi**  
Fellow 2006, Faculty

**Marcus S. Muallem**  
Fellow 2003

**Jay Mulaney**  
Fellow 1990

**Paul M. Munden**  
Fellow 1992

**Wuqaas M. Munir**  
Fellow 2006

**Michelle Muñoz**  
Former Faculty

**Akira Murakami**  
Research Fellow 1992

**J. Frank Murchison**  
Fellow 1991

**Fernando H. Murillo-Lopez**  
Fellow 1995

**Lejla Mutapcic**  
Resident 2011

**Yasunobu Nagae**  
Research Fellow 1994

**Natsushi Nakagawa**  
Research Fellow 1999

**Mohit Nanda**  
Fellow, Chief Resident 1990

**Arvind Neelakantan**  
Fellow 2007

**Ann G. Neff**  
Fellow 2000, Former Faculty

**Christine Nelson**  
Fellow 1984

**Juan A. Nevarez**  
Fellow 1985

**David A. Newsome**  
Fellow 1977

**Jackie K. Nguyen**  
Fellow 2006

**Quang H. Nguyen**  
Fellow 1997

**Don H. Nicholson**  
Former Faculty

**William Nicol**  
Fellow 1969

**Cynthia P. Nix**  
Resident, Fellow 2010

**Edward W.D. Norton**  
"The Chief"  
Honorary Alumnus

**Patrick O'Conner**  
Fellow 1978

**Guy E. O'Grady**  
Resident 1971,  
Former Faculty

**Jeffrey Odel**  
Fellow 1977

**Rafael Oechsler**  
Research Fellow 2009

**Richard B. Oglesby**  
Resident 1963

**Constance Okeke**  
Fellow 2005

**Lisa C. Olmos**  
Resident, Fellow, Chief Resident  
2010

**Karl R. Olsen**  
Resident, Chief Resident  
Former Faculty 1986

**John C. Olson**  
Fellow 1982

**Cassandra B. Onofrey**  
Resident, Fellow 2002

**Avinoam Ophir**  
Fellow 1981

**Robert H. Osher**  
Resident, Fellow 1981

**Angela Oster**  
Resident 1999



**Ray T. Oyakawa**  
Fellow 1981

**James D. Paauw**  
Fellow 2010

**Elba Pacheco**  
Resident 1989

**Jean-Marie Parel**  
Honorary Alumnus

**Paul W. Park**  
Fellow 2005

**David Wilkin Parke II**  
Resident, Fellow 2011

**James L. Parker**  
Fellow 1977

**Richard K. Parrish II**  
Fellow 1982, Faculty, Chair

**Michael Brandon Parrott**  
Resident, Fellow, Chief Resident 2010

**Kambiz K. Parsa**  
Fellow 2006

**Joshua Pasol**  
Fellow 2007, Faculty

**Scott E. Pautler**  
Fellow 1986

**Jonathan Pederson**  
Fellow 1978

**Jesse S. Pelletier**  
Fellow 2008

**Ivonildo C. Pereira**  
Fellow 1989

**Gerardo M. Perez**  
Fellow 1986

**Gary A. Pesicka**  
Fellow 1986

**Stephen C. Pflugfelder**  
Fellow 1986, Former Faculty

**Pittaya Phamonvaechavan**  
Research Fellow 2009

**Renata Picciani**  
Research Fellow 2009

**Alejandra M. Piniella**  
Resident 2000

**David E. Poeltl**  
Resident 1992

**Timothy Polk**  
Fellow 1995

**Samuel E. Poppell**  
Fellow 1982

**Sreedhar Potarazu**  
Fellow 1995

**Stanley Potter**  
Resident 1959

**James O. Powell**  
Resident 1974

**Antonio Prado**  
Resident 1994

**Carmen A. Puliafito**  
Chair

**Jose S. Pulido**  
Fellow 1987

**Lutz E. Pullinat**  
Fellow 1994

**Donald Puro**  
Resident 1980

**Hui Qiu**  
Research Fellow 2000

**Harry A. Quigley**  
Fellow 1977

**David Quillen**  
Fellow 1995

**Yousuf A. Qureshi**  
Resident 2009

**Stephen M. Rabinowitz**  
Fellow 1989

**Janet Rader**  
Fellow 1991

**Ronald Radius**  
Fellow 1979

**Henry M. Ramseur**  
Resident, Chief Resident 1971

**Pradeep Y. Ramulu**  
Fellow 2007

**Rumya Rao**  
Fellow 2011

**Paul A. Raskauskas**  
Fellow 1991

**Frederick M. Rauscher**  
Resident, Fellow 2008

**Tracy B. Ravin**  
Resident 2003

**Raymond Records**  
Fellow 1971

**Rahul Reddy**  
Fellow 2004

**Usha P. Reddy**  
Resident 2009

**Nelson Redfern**  
Resident 1979

**Lawrence T. Reese**  
Fellow 1978

**Ann M. Renucci**  
Fellow 2002

**Maria Cecilia Reyes**  
Fellow 2010

**Dale S. Reynolds**  
Fellow 1997

**Michael Reynolds**  
Fellow 1997

**Douglas J. Rhee**  
Fellow 2000

**Leonard S. Rich**  
Fellow 1980

**Ryan M. Rich**  
Fellow 2008

**David W. Richards**  
Fellow 1987

**Preston P. Richmond**  
Resident 1986

**Ernesto Rios-Montenegro**  
Fellow 1970

**John P. Ritchey**  
Fellow 1973

**Al Rivera**  
Resident 1985

**Dennis M. Robertson**  
Fellow 1969

**James C. Robinson**  
Fellow 1995

**Edward Rockwood**  
Fellow 1986

**Jill F. Rodila**  
Fellow 2004, Former Faculty

**Robert Rosa Jr.**  
Resident 1994, Former Faculty

**Alexandre Rosen**  
Research Fellow 2003

**Krista D. Rosenberg**  
Resident, Fellow 2006

**Michael L. Rosenberg**  
Fellow 1981

**Michael A. Rosenberg**  
Resident 1973

**Philip J. Rosenfeld**  
Fellow 1996, Faculty

**Steven I. Rosenfeld**  
Fellow 1985

**George O.D. Rosenwasser**  
Fellow 1988

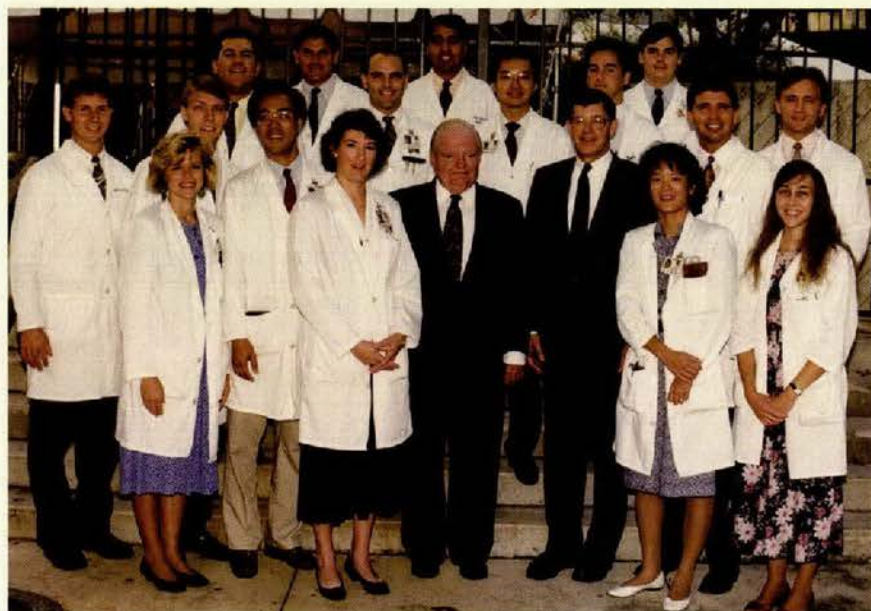
**Daniel Roth**  
Resident 1998

**Elena B. Roth**  
Resident 1996, Faculty

**Paul M. Rougraff**  
Resident 1996

**Patrick E. Rubsamen**  
Resident, Fellow, Chief Resident 1991, Former Faculty





1991

**Ryan B. Rush**  
Fellow 2009

**Stephen Russell**  
Resident 1986

**William I. Sabates**  
Fellow 1980

**Avinoam B. Safran**  
Fellow 1978

**Hady Saheb**  
Fellow 2011

**Mark Salevitz**  
Fellow 1995

**Ruben F. Salinas-Garcia**  
Resident 1978

**David B. Samimi**  
Resident 2011

**Joel S. Sandberg**  
Resident 1974

**Norman Sanders**  
Resident, Chief Resident 1961

**Helga Sandoval**  
Fellow 2001

**Mikio Sasoh**  
Research Fellow 1995

**Roger M. Saulson**  
Resident 1989

**Tim Saunders**  
Fellow 1986

**Peter J. Savino**  
Fellow 1974

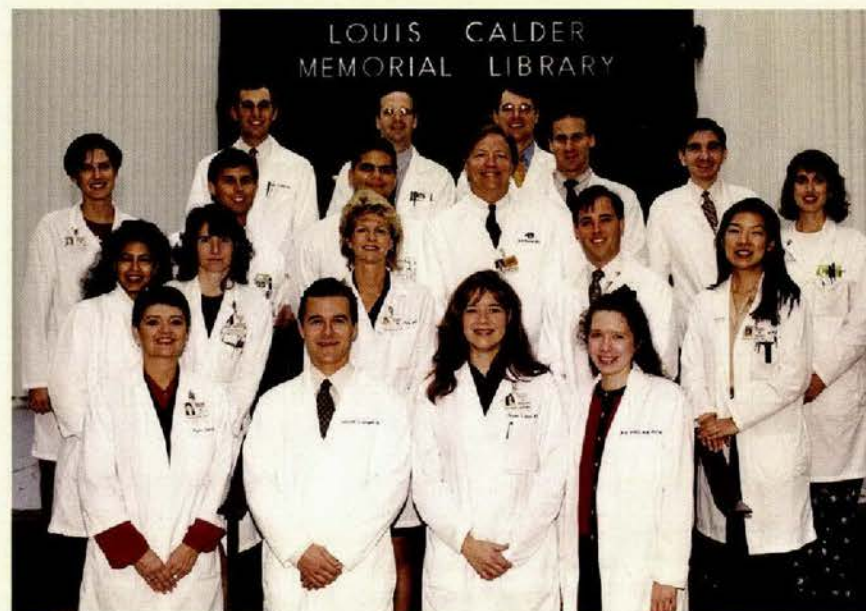
**Ronald J. Scelfo**  
Resident 1975

**Norman J. Schatz**  
Fellow 1966, Faculty

**Amy C. Scheffler**  
Resident, Fellow, Chief Resident  
2010, Faculty

**Vivian Schiedler**  
Resident 2005

**John J. Schietroma**  
Fellow 1986



1995

**Lawrence Schoch**  
Resident 1975

**Gerald R. Schultz**  
Honorary Alumnus

**Arthur L. Schwartz**  
Fellow 1973

**Daniel M. Schwartz**  
Fellow 1989

**Geoffrey Schwartz**  
Fellow 2003

**Kenneth S. Schwartz**  
Fellow 2003

**Lee K. Schwartz**  
Fellow 1980

**Marc F. Schwartz**  
Fellow 1986

**Joan Schwoer-Borruat**  
Research Fellow 1992

**Ingrid U. Scott**  
Resident, Fellow, Chief Resident  
1997, Former Faculty

**Kevin Scott**  
Fellow 1991

**Joseph Scuderi**  
Fellow 1981

**Ronald L. Seeley**  
Fellow 1971

**Ernesto I. Segal**  
Fellow 1991

**Tony P. Sellitti**  
Resident 1994

**Ausra Pond D. Selvadurai**  
Fellow 2010

**Karen Senikowich-Morgan**  
Resident 1984

**Robert C. Sergott**  
Fellow 1980

**Raymond J. Sever**  
Resident, Chief Resident 1967

**Lavanya Shah**  
Fellow 1994





2000

**Milan Shah**  
Fellow 2011

**Pulin A. Shah**  
Fellow 2007

**Thomas S. Shane**  
Resident, Fellow, Chief Resident  
2011

**James A. Sharkey**  
Fellow 1994

**Ashish Sharma**  
Research Fellow 2009

**James A. Sharpe**  
Fellow 1973

**Lauren J. Shatz**  
Fellow 2003

**Harold E. Shaw Jr.**  
Fellow 1979

**Arthur H. Shedden**  
Fellow 1985

**Clinton W. Sheets**  
Fellow 2008

**Jin-Hui Shen**  
Research Fellow 1994

**Bobby J. Shewmake**  
Resident, Chief Resident 1974

**Hiroyuki Shimada**  
Research Fellow 1989

**Paul Shipkin**  
Fellow 1979

**Thorne Shipley**  
Former Faculty

**Anita R. Shirodkar**  
Resident, Fellow, Chief Resident  
2011

**John P. Shock Jr.**  
Fellow 1971

**Erin M. Shriver**  
Fellow 2008, Faculty

**Magdalena F. Shuler**  
Resident 2000



2002

**Harold Shutt**  
Fellow 1970

**R. Michael Siatkowski**  
Fellow 1993, Former Faculty

**Nouman Siddiqui**  
Fellow 2005

**Joseph Sidikaro**  
Fellow 1983

**Ariadna Silva-Lepe**  
Fellow 1995

**Bernd Silver**  
Resident 1962

**Bruce Silverstein**  
Fellow 1995

**David W. Sime**  
Resident 1966

**David P. Simon**  
Resident 1975

**Gabriel Simon**  
Research Fellow 1993

**Mark W. Simon**  
Resident 1993

**Brad Simons**  
Fellow 1998, Former Faculty

**David J. Singer**  
Fellow 1969

**Joseph A. Singer**  
Resident 1967

**Kuldev Singh**  
Fellow 1992

**Jack Sipperley**  
Resident, Chief Resident 1978

**Robert A. Sisk**  
Fellow 2009

**Virgil E. Sklar**  
Resident 1984

**Ruta J. Skrinska**  
Fellow 1988

**Gregory L. Skuta**  
Fellow 1987



**Michael Slavin**  
Fellow 1981

**Allan R. Slomovic**  
Fellow 1985

**J. Lawton Smith**  
Honorary Alumnus

**Jess Smith**  
Fellow 1976

**Scott R. Sneed**  
Resident 1987

**Lucia Sobrin**  
Resident 2003

**Per Soderberg**  
Research Fellow 1995

**Abraham Solomon**  
Fellow 2001

**Joern B. Soltau**  
Fellow 1998

**Alice Song**  
Resident 2002

**Dae Song**  
Resident 1990

**Sabine Sparfel**  
Research Fellow 1992

**Kenneth O. Sparks**  
Fellow 1984

**John C. Sparrow**  
Resident 1976

**Robert H. Spector**  
Fellow 1976

**Robert T. Spector**  
Fellow 1983

**Frank A. Spellman**  
Fellow 1983

**Nehemiah E. Spencer**  
Fellow 2010

**Thomas J. Stafford**  
Fellow 1966

**Natalie A. Stanciu**  
Resident, Fellow 2011

**J. Harold Stanley**  
Resident, Fellow 1977

**Boris Stanzel**  
Research Fellow 2002

**John R. Stechschulte**  
Fellow 1985

**Kimberly E. Stepien**  
Fellow 2007

**William Stewart**  
Fellow 1977

**William R. Stiles**  
Resident 1974

**Josef Stoiber**  
Research Fellow 2002

**Warren C. Stout**  
Fellow 1985

**Mitchell B. Strominger**  
Fellow 1993

**James Stuart**  
Fellow 1964

**R. Doyle Stulting**  
Resident 1981

**Rodney Sturm**  
Fellow 1963

**Eric Suan**  
Fellow 1991

**Brandon K. Suedekum**  
Fellow 2006

**Joseph H. Sugg**  
Fellow 2004

**Gentaro Sugita**  
Fellow 1978

**Leejee H. Suh**  
Fellow 2007, Faculty

**Kevin K. Suk**  
Fellow 2011

**Paul B. Sullivan**  
Fellow 1967

**Jennie Sung**  
Resident 1998

**John Susac**  
Fellow 1973

**Ivan J. Suñer**  
Resident 1996, Former Faculty

**David E. Swanson**  
Fellow 1980

**Mary Szatkowski**  
Resident 1980

**Homayoun Tabandeh**  
Fellow 1998

**Hassan Tahi**  
Research Fellow 2000

**Yoshiko Takesue**  
Research Fellow 1993

**William L. Taldone**  
Resident 1985

**Myron Tanenbaum**  
Resident 1985

**Wimolwan Tangpagasit**  
Research Fellow 2009

**Yasuo Tano**  
Fellow 1978

**Garth A. Taylor**  
Fellow 1977

**Mike Taylor**  
Resident 1965

**William Taylor**  
Fellow 1968

**Masoud Teimory**  
Fellow 1994

**Martin Ten Hove**  
Fellow 1994

**David Tenzel**  
Fellow 1990

**Jack Tenzel**  
Resident 1987

**Richard Tenzel**  
Honorary Alumnus

**Gerald Terris**  
Resident 1958

**Matthew A. Thomas**  
Resident 1985

**Martin L. Thomley**  
Resident, Fellow, Chief Resident  
1994

**Keith P. Thompson**  
Resident 1988

**William Scott Thompson**  
Resident, Fellow, Chief Resident  
1993

**Seng-Ei Ti**  
Research Fellow 2001

**James S. Tiedeman**  
Fellow 1982

**Rollins Tindell**  
Fellow 1981

**Donald Tingley**  
Fellow 1990

**Robert L. Tomsak**  
Fellow 1980

**Trexler Topping**  
Fellow 1978

**Justin H. Townsend**  
Resident 2011

**Michael K. Tracy**  
Fellow 2005

**Fritis Treffers**  
Research Fellow 1981

**Giora Treister**  
Fellow 1976

**Joseph Trentacoste**  
Resident 1988

**John Tribble**  
Fellow 1995

**Jonathan D. Trobe**  
Fellow 1977

**James Truitt**  
Resident, Chief Resident 1977

**Ray Jui-Fang Tsai**  
Fellow 1988



**Enoch Tsai**  
Fellow 1973

**James C. Tsai**  
Fellow 1974

**Elmer Y. Tu**  
Fellow 1993

**David N. Tucker**  
Resident, Chief Resident 1973

**Sonal Tuli**  
Fellow 2001

**Yasutaka Uchihori**  
Research Fellow 1990

**Saul Ullman**  
Resident 1987

**Stephen C. Ume**  
Fellow 2006

**Jean Vahey**  
Resident 1992

**Carlos A. Valdes-Lora**  
Resident 1983

**Mylan Van Newkirk**  
Fellow 1991

**Stephanie L. Vanderveldt**  
Resident, Fellow, Chief Resident  
2008

**Robin Vann**  
Resident 1998

**Carlos Vazquez**  
Fellow 1998

**Anil S. Vedula**  
Resident, Fellow 2011

**Michaela Velikay-Parel**  
Research Fellow 1996

**Lori M. Ventura**  
Fellow 1986, Faculty

**Alan M. Verm**  
Resident 2001

**Nancy F. Vilar**  
Fellow 1998

**Franck Villain**  
Research Fellow 1993

**Carlos M. Villanueva**  
Fellow 1994

**Natalia Villate**  
Fellow 2003

**M. Louella Vivino**  
Fellow 1999

**Monika Voigt**  
Research Fellow 2000

**Irene Voo**  
Resident, Fellow 2005

**David T. Vroman**  
Fellow 2000

**Edward C. Wade**  
Fellow 1989

**Gary R. Wallace**  
Resident 1972

**Kenneth Wallace**  
Resident 1972

**Wilson K. Wallace**  
Resident, Chief Resident 1974

**Thomas Walsh**  
Fellow 1965

**Ming X. Wang**  
Fellow 1997

**Roberto Warman**  
Fellow 1987

**Yaffa Weaver Brown**  
Resident 1997

**Stephen M. Weinstock**  
Fellow 1974

**Mark A. Weisbrod**  
Fellow 2008

**Paul D. Weishaar**  
Resident, Fellow, Chief Resident  
1996

**Jayne S. Weiss**  
Resident 1983



2005

**Roger Welch**  
Fellow 1986

**Sarah R. Wellik**  
Fellow 2005, Faculty

**John A. Wells**  
Fellow 1965

**Jane C. Werner**  
Fellow 1978

**Mark A. Werner**  
Fellow 2006, Faculty

**Sara T. Wester**  
Resident, Fellow 2010, Faculty

**Carl Wetzig**  
Fellow 1981

**Garth Wilbanks**  
Fellow 1991

**Ron Wilbur**  
Resident 1960

**Daniel Wilhelm**  
Resident 1965

**Charles P. Wilkinson**  
Fellow 1971

**Delyse B. Williams**  
Fellow 1989

**Frank M. Williams**  
Fellow 1971

**John Williams**  
Fellow, Chief Resident 1986

**Stu Willner**  
Resident 1965

**J. Philip Wilmeth**  
Resident 1985

**Deanna K. Wilson**  
Resident 1988

**Louis Wilson**  
Fellow 1966

**Tom Wilson**  
Fellow 1976

**Kirk E. Winward**  
Resident, Chief Resident 1990





2006

**Robert S. Wirthlin**  
Resident 2004

**Ted H. Wojno**  
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Fellow 1985

**George C. Wong**  
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**Norman F. Woodlief**  
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**Elaine I. Wu**  
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**Darrell Wu Dunn**  
Fellow 1995

**Charles C. Wykoff**  
Resident, Fellow,  
Chief Resident 2010

**Katsuya Yagasaki**  
Research Fellow 1988

**Tashihiro Yajima**  
Research Fellow 1994

**Shalini Yalamanchi**  
Fellow 2011

**Mitsumo Yamamichi**  
Research Fellow 1997

**Hideo Yamamoto**  
Research Fellow 2010

**Akifumi Yamanaka**  
Research Fellow 1995

**Uichi Yamanouchi**  
Fellow 1968

**Chung-Mei Yang**  
Fellow 1991

**David L. Yarian**  
Fellow 1979

**Zohar Yehoshua**  
Fellow 2011, Faculty



2010

**Kimberly G. Yen**  
Resident 2000

**Michael T. Yen**  
Resident 2000

**Joseph Yeung**  
Resident 1974

**Zhoug Yixiong**  
Research Fellow 2009

**Daniel M. Yoder**  
Resident, Fellow 2003

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Research Fellow 2001

**Kenichi Yoshino**  
Research Fellow 1994

**J. Edward Ysasaga**  
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Thank you



The word “philanthropy” comes from the Greek words, “philo anthropos.” It means goodwill to members of the human race, especially, an active effort to promote human welfare. To trace the history of the Bascom Palmer Eye Institute is to recognize the important role that philanthropy has played in our creation and development.

Bascom Palmer’s success in patient care, vision research and medical education is often focused on the achievements of our physicians and scientists. However, these accomplishments would not be possible without the help of our friends who have provided philanthropic support since our opening in 1962. We thank each and every one of our supporters, whose gifts and investments in us, have played a key role in Bascom Palmer’s success.



# The Bascom Palmer Society

The Bascom Palmer Society honors the Institute's most generous benefactors – those whose extraordinary gifts are in excess of \$1 million. The Society was created in memory of the Institute's namesake, Bascom H. Palmer, M.D., an ophthalmologist who pioneered eye care in Miami.

**Alcon Laboratories** provides ongoing support for education, research, and clinical care.

\* **Anne Bates Leach** provided early support to help with the construction of our Anne Bates Leach Eye Hospital.

**Dr. Nasser Ibrahim Al-Rashid** established the Dr. Nasser Ibrahim Al-Rashid Endowed Chair in Ophthalmic Plastic, Orbital Surgery and Oncology.

**Carl & Iris Apfel & \*Sayde Barrel** established the "Iris Barrel Apfel Optical Shop" at Bascom Palmer Eye Institute at Palm Beach Gardens and the Barrel and Apfel Family Waiting Room at the Anne Bates Leach Eye Hospital in Miami.

**Adrienne Arsht & Hope for Vision** established the Adrienne Arsht Hope for Vision Retinal Degeneration Research Laboratory at Bascom Palmer and the Betti Lidsky Retinitis Pigmentosa Endowed Research Fund.

**Bascom Palmer Eye Institute Alumni Association** provides unrestricted support for the priorities of the Institute.

**Michele R. Bowman & Col. Joseph E. Underwood** provided support for macular degeneration programs and research.

**Charlotte Breyer Rodgers** established the Charlotte Breyer Rodgers Professorship in Ophthalmology and the endowment for the Charlotte Breyer Rodgers Research Pavilion in the Evelyn F. and William L. McKnight Vision Research Center.

\* **George C. & \*Mary Brosius** provided endowment for development and marketing activities.

\* **Robert & \*Virginia Buck** provided endowment and supported education.

\* **Helen & \*George Clarke** provided significant support for the Ophthalmology Academic Fund.





*William and Norma Horvitz  
with Richard K. Parrish II, M.D.*



*Connie Frankino*



*Bettl Lidsky with Adrienne Arsht*



*George and  
Estelle Rosenfield*

\* **William & Isabel Collier Read** provided major funding for construction and completion of Bascom Palmer Eye Institute at Palm Beach Gardens.

**The Faculty of the Department of Ophthalmology of the University of Miami Miller School of Medicine** provides unrestricted support for priorities of the Institute.

\* **Werner F. Farnell** provided significant funding for the Macular Degeneration Research Fund.

**Florida Crystals Corporation** dedicated the main lobby in the Clinical Research Building at Bascom Palmer Eye Institute at Palm Beach Gardens.

**Florida Lions Eye Bank** founded in conjunction with the creation of Bascom Palmer in 1962, continues to provide generous support of our Biophysics Laboratory and serves Bascom Palmer's pathology program.

**The Foundation Fighting Blindness** supported retinitis pigmentosa research.

**Samuel J. & Connie M. Frankino Foundation** established the Frankino Surgery Pavilion at Bascom Palmer Eye Institute at Palm Beach Gardens.

\* **Stanley & Kathleen Glaser** established the Kathleen and Stanley Glaser Chair in Ophthalmology. This endowed Chair supports the Chairman of the Bascom Palmer Eye Institute.

\* **Nancy J. & Robert C. Greene** provided endowment for vision research.

\* **Helen Herold** established the Helen Herold Ophthalmology Research Fund.

\* **W. Pruett & Audrey M. Hickman** established the W. Pruett & Audrey M. Hickman Ophthalmology Endowment.





*Raymond and Ruth Perelman with  
Carmen A. Puliafito, M.D.*



*Isabel Collier Read*



*Alfonso and Raysa Fanjul with Molly Alfonso and  
Eduardo Alfonso, M.D.*



*Evelyn McKnight*

\* **Lou Higgins** established the Lou Higgins Distinguished Chair in Ophthalmology.

\* **William & Norma Horvitz** established the William and Norma Horvitz Children's Center at Bascom Palmer Eye Institute.

\* **W. Starr & Alvira Johnston** provided support for the Ophthalmology Academic Fund and the Anne Bates Leach Eye Hospital.

\* **William M. Kennedy** provided unrestricted funds for the Academic Ophthalmology Fund.

\* **James L. Knight** provided a major gift for the expansion of the Institute's Research Center in support of research programs.

\* **Clara Kresge / The Kresge Foundation** provided substantial support to Bascom Palmer's Ophthalmology Research Foundation as well as to support the construction of the Anne Bates Leach Eye Hospital.

\* **Hugh & Sally Lalor** established the Lalor Retina Center at Bascom Palmer Eye Institute at Palm Beach Gardens.

**Henri & Flore Lesieur Foundation** established the Henri & Flore Lesieur Chair in Ophthalmology. This chair supports Bascom Palmer Eye Institute's Ophthalmic Biophysics Laboratory.

**The Joe & Emily Lowe Foundation, Inc.** provided resources to support pediatric ophthalmology.

**Maltz Family Foundation** dedicated the Maltz Center at Bascom Palmer Eye Institute at Palm Beach Gardens and funded the Maltz Family Glaucoma Research Endowment.

\* **Daniel & Goldie Marks** provided support for the first floor patient clinic.

\* **Evelyn F. & William L. McKnight** provided the lead gift to name the Evelyn F. and William L. McKnight Vision Research Center.

\* **Estate of Dorothy S. Munn** provided unrestricted support for priorities of the Institute.

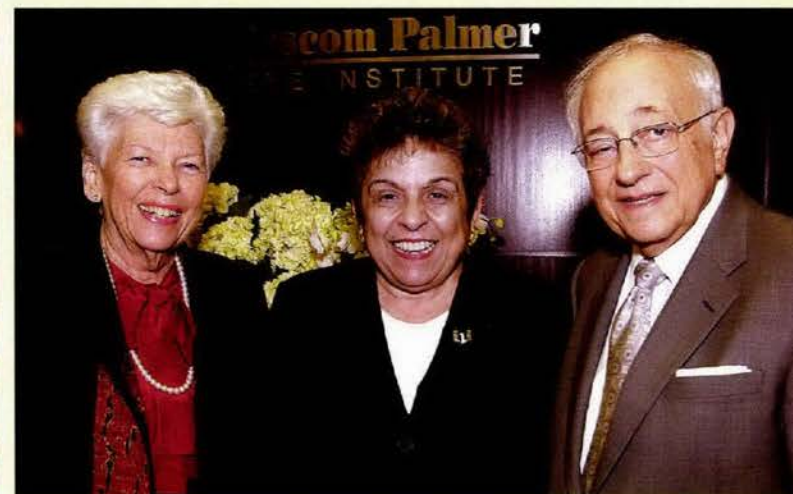




*Tolly and Elsie Vinik with Edward Norton, M.D.*



*Carl and Iris Apfel*



*Tamar Maltz, UM President Donna Sbalala, Milton Maltz*

**The Murray Foundation** provided unrestricted support for the campus expansion in Palm Beach Gardens.

**Ophthalmology Research Foundation** supports Bascom Palmer Eye Institute. Its funds may only be used to support the activities of the department of ophthalmology of the University of Miami, School of Medicine. The Ophthalmology Research Foundation played a key role in establishing the Palm Beach Gardens campus.

**Raymond G. & \*Ruth Perelman** dedicated the Raymond and Ruth Perelman Lobby at Bascom Palmer Eye Institute at Palm Beach Gardens.

**Research to Prevent Blindness** provides unrestricted support for the Ophthalmology Research Training Fund.

\* **Edith & \*Earl Retter** donated the funds to create the Edith and Earl Retter Educational Center.

\* **George G. & Estelle Rosenfield** established the George and Estelle Rosenfield Imaging and Macula Center in Miami.

**Walter G. Ross Foundation** established the Walter G. Ross Endowed Chair in Vision Research.

\* **Richard D. Siegal** provided significant funding for glaucoma research.

**Anne & Matthew Smith** established the Anne and Matthew Smith Family Endowed Research Fund.

\* **Elsie & \*Tolly Vinik Trust** provided significant funding for research during their lifetime and through their trusts.

\* **Morty & \*Gloria Wolosoff Foundation** dedicated the Wolosoff Cornea Center at Bascom Palmer Eye Institute at Palm Beach Gardens.

\* **Shlomo Yeminy** established an endowed fund to support vision research.

\* **Miles Zisson** provided significant funding for the Ophthalmology Academic Fund.

*In loving memory \**



# The Norton Society

The Norton Society honors the vision and leadership of the Institute's founder, Edward W.D. Norton, M.D. Members of the Norton Society have given Bascom Palmer Eye Institute generous donations in the amount of \$100,000 to \$999,999 cumulatively.



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*In loving memory \**



# The Vision Society

Donors are honored for cumulative gifts between \$10,000 and \$99,999 that provide critical funds needed for vision research, clinical care and medical education.

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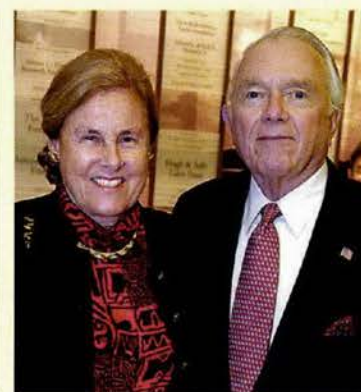
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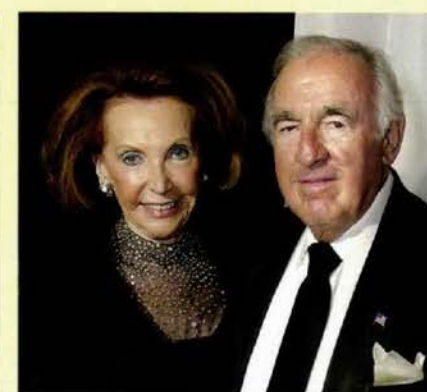
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