

“Caring for patients with disease gives a continuing sense of urgency to our research efforts.”

David T. Tse, M.D.

David T. Tse, M.D., professor of ophthalmology and director of the ophthalmic plastic, orbital surgery and oncology service at Bascom Palmer Eye Institute, was just two years into his undergraduate degree at the University of Miami when he was accepted into the university’s prestigious School of Medicine. One year later he enrolled in medical school, aspiring to become a cardiologist.

“I had no clue I would eventually practice at Bascom Palmer,” he says. “When I was a medical student I had to go through a lottery to get into the ophthalmology rotation. I did not win.” Though he never set foot in Bascom Palmer during medical school, Tse was exposed to many fascinating ophthalmology-related problems during his medical internship in California. He soon realized the field suited his temperament well. “Ophthalmology is a proper blend of medicine and surgery,” he says. “I enjoy the practice of general medicine and the technical challenges of surgery.”

“My tenure in an academic department gave me the opportunity to appreciate first-hand the interrelationship between patient care and research.

Tse pursued his training in ophthalmology at Los Angeles County University of Southern California Medical Center and a fellowship in ophthalmic plastic, orbital surgery and oncology at the University of Iowa Hospitals and Clinics. He then joined the University of Iowa faculty in 1982 and stayed until 1986 when Dr. Edward Norton, founder of the Bascom Palmer Eye Institute, invited him to start the ophthalmic plastic service in Miami.

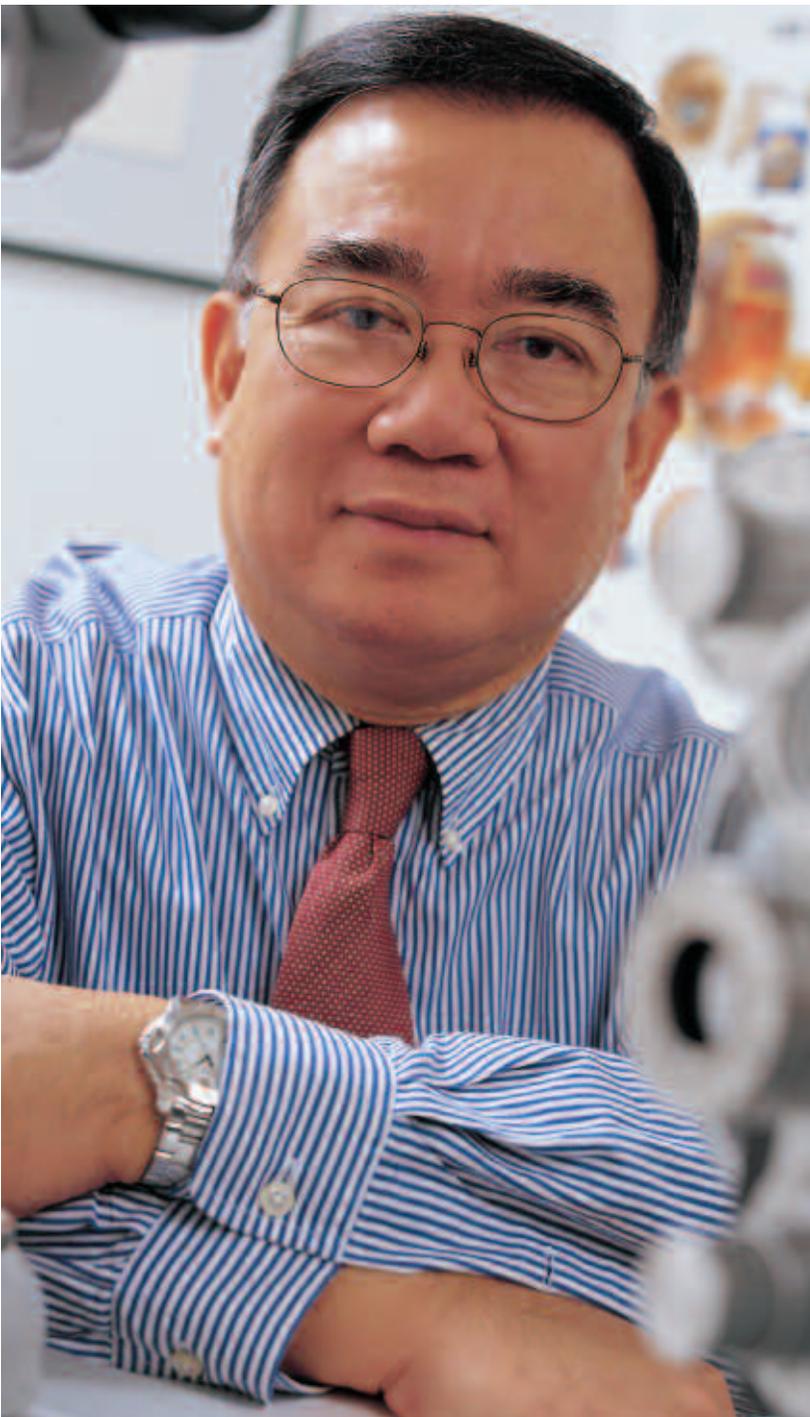
“Before I came to Bascom Palmer, there were only five or six academic ophthalmology programs in the country that had full-time oculoplastic surgeons,” he recalls. “Prior to my arrival, the oculoplastic service

here was staffed by community volunteer faculty members.”

Today, Bascom Palmer’s ophthalmic plastic, orbital surgery and oncology service has three full-time faculty members and is among the busiest in the nation. While Tse’s clinical interests include the full spectrum of lacrimal, eyelid and orbital reconstructive surgeries due to disease or injury, as well as aesthetic and rejuvenative surgeries, he developed a commitment to orbital oncology, thyroid-related eye conditions, optic nerve disorders, and developmental defects in children.

Caring for patients with disease helps direct and give a continuing sense of urgency to research efforts,” explains Tse. He subscribes to the philosophy that engaging in research activities is a stimulating and effective way of encouraging the imaginative thoughts necessary to avoid regimented treatment approaches. By participating in this dynamic interplay, he believes the standard of patient care can be advanced. This philosophy has shaped much of his research endeavors and spawned an interest in intra-arterial cytoreductive chemotherapy for treating the lethal lacrimal gland adenoid cystic carcinoma. He invented and patented an orbital tissue expander in treating children born without an eye and is developing a model for traumatic optic neuropathy.

Because the eye has a stimulatory effect on the growth of the bony eye socket, Tse explains, the bones surrounding the eye will not grow in children without an eye or with one very small eye. Children



with this condition have one eye socket which grows and one which does not, leading to facial asymmetry. The challenge for surgeons, Tse adds, is to find a cost-effective and least traumatic way to stimulate bony growth in a child.

The traditional treatment methods involve inserting a tiny acrylic implant similar to a marble into a child's socket to stimulate bony growth. The implant is replaced with a larger one every 6-12 months over a duration of several years. As such, multiple surgeries are required, and thus, the health care cost is great. Although the bone grows, it does not grow in the same manner as the other side, resulting in an asymmetric facial appearance.

Tse's orbital tissue expander, developed in collaboration

with a local biomedical company, is designed to overcome the shortcomings of traditional methods. The expander is anchored to the socket and inflated with fluid every three or four months to stimulate socket growth, preventing the need for multiple replacement surgeries associated with the old techniques.

Preliminary studies using this orbital tissue expander have recently been completed with dramatic results in terms of symmetrical bony growth. He is awaiting approval from the Food and Drug Administration to begin clinical use of this novel device.

While Tse is credited with the advance in the treatment of a lethal orbital cancer, he views the privilege to train the next generation of ophthalmologists and oculoplastic surgeons as an even more important and gratifying achievement. "I am most proud of being in a position to contribute to the quality of ophthalmic education," he says.

In addition to his research and clinical practice, Tse is a member of several major ophthalmologic professional societies, including the American Ophthalmological Society. He is on the editorial board of two national journals and currently serves as a director of the American Board of Ophthalmology. These roles, he says, allow him to participate in the national dialogues on resident education and maintenance of professional skills among practicing ophthalmologists.

As he teaches future physicians and surgeons, Tse emphasizes the need for compassion. "Patients come in with a problem," he says. "You absolutely need to respect their dignity. You need to render a proper medical opinion and provide emotional support."

Tse's patient, Patricia Kearns (see *story page 7*), who lost her eye to a bottle rocket in 1988, knows the importance of his approach. "He is an amazing man and an honorable human being; he is the very best," she says. "Dr. Tse has the ultimate respect for the dignity of the human body."

That respect is something he is passing on to his sons as well—one in medical school, and the other a college senior pursuing a degree in biomedical engineering.

Of Bascom Palmer, where he is now in his 20th year of practice, his vision for the oculoplastic service is to develop a world-class orbital research laboratory by integrating scientific discovery into clinical reality in terms of diagnostic and therapeutic approaches to oculoplastic and orbital diseases. Tse says, "We are on the leading edge of translational research, education and teaching. And more importantly, of providing high quality patient care."