

WITHIN SIGHT OF THE TOP

The School of Ophthalmology and Optometry at Wenzhou Medical University (WMU) has great vision in its field. Among its breakthroughs is the first proof that scleral hypoxia — a lack of oxygen in the white of the eye — can cause myopia. Their hypothesis has led to new treatments.

In 1988 WMU was the first university to combine ophthalmology and optometry in a department, and in 1998 it built China's first dedicated hospital for these specialisms. Now the school has become one of the world's largest ophthalmology institutions, integrating teaching, research, medical care, research translation, industrial promotion and public services.

With nearly 1,500 faculty and staff, the school and its affiliated hospital have built China's largest multi-level and comprehensive higher education system for ophthalmology and optometry. Due to WMU's efforts, optometric medicine (combining ophthalmology and optometry) was recognized as an undergraduate subject programme by the Chinese Ministry of Education, and the school was approved to confer doctoral degrees in 2006.

Tackling visual impairments and major eye diseases, ophthalmology and optometry researchers at WMU are dedicated to the fundamental science and key technological issues of eye disease pathogenesis and diagnosis, visual function and optometry, visual genetics and development, and medical materials, drugs and devices for optometry. The team investigating scleral hypoxia suggested that external visual stimuli may cause hypoxia in the scleral micro-environment by regulating choroidal blood flows, leading to myopia.

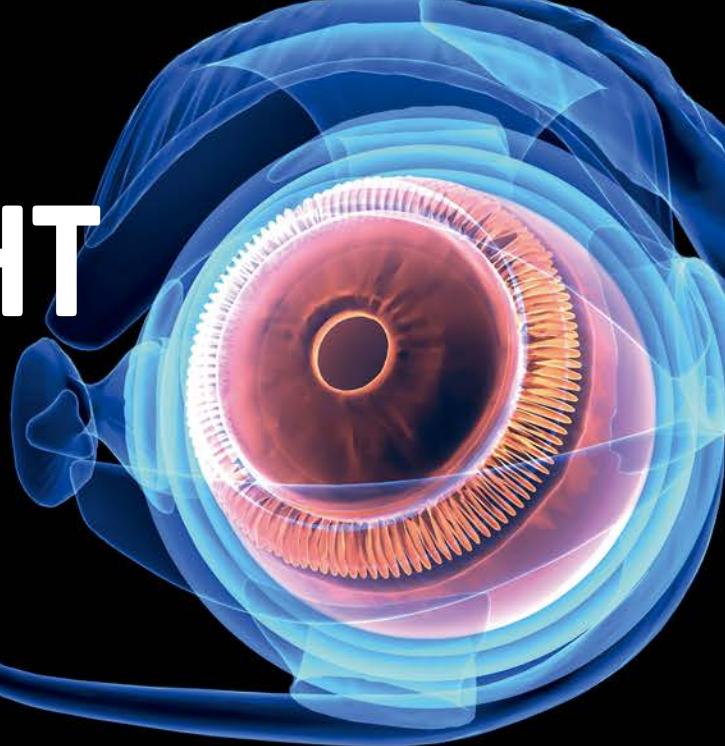
In another study of early-onset childhood high myopia, the team discovered a new pathogenic gene and used a mouse model to verify its pathogenic mechanism. The study established the genetic basis for preventing and controlling early-onset childhood high myopia and was selected by China Medicinal Biotech Association as one of China's top ten biotechnology advances in 2017.

As China's only organization that houses both a national key laboratory and a national engineering research centre for ophthalmology, the school and its affiliated hospital have undertaken many national science projects. Its results have led to 328 corresponding/first-author papers in Science Citation Index (SCI) journals from 2015 to 2017, two second prizes of the National Science and Technology Progress Award, and a first prize of the Chinese Medical Science and Technology Award.

These research achievements have lifted the school to the top of the list of Chinese medical institutions in ophthalmology based on 2017 and 2018 Nature Index data. It is also ranked first for academic impact in the Science and Technology Impact Ranking of Chinese Hospitals (Ophthalmology), compiled by the Chinese Academy of Medical Sciences.

Active in building university-industry partnerships, the school has organized several industrial consortiums. It boasts more than 100 patents for invention, including six international patents, and has independently developed seven medical devices that gained governmental licensing, including an excimer laser corneal refractive machine, a corneal topographer, and an ultrasound bio microscope.

With 11 annexes and 19 subspecialty clinical departments, the affiliated hospital has more than 800,000 annual outpatient visits, and conducts more than 63,000 medical operations annually. Having served people in 16 provinces and cities, the school is also actively engaged in public services to promote visual health. Its medical team has made annual trips to Western China since 2012, providing medical services to people suffering with eye diseases, and training local eye doctors. ■



Qu Jia
President of the Eye Hospital, WMU

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OUR RAPID GROWTH IS ATTRIBUTABLE TO OUR BIG VISION FOR THE FUTURE OF OPHTHALMOLOGY, AND ITS INTEGRATION WITH OPTOMETRY. A COMMITMENT TO FUNDAMENTAL RESEARCH, AND CUTTING-EDGE TECHNOLOGY, ALONG WITH OUR INNOVATIVE SPIRIT, WILL HELP US ANSWER MORE SEEMINGLY IMPOSSIBLE QUESTIONS.

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