



# Medicine Medicine

30 years later, Dr. Ming Wang once again picks up the Chinese violin (er-hu) and plays ... but this time, with an entirely different feeling.

t's almost impossible to believe that a young teenager from China, whose education was abruptly cut off after ninth grade and who faced the fate of deportation and a lifetime of hard labor, is now one of the world's foremost cataract and LASIK surgeons, as well as a laser physicist, researcher, inventor, entrepreneur, teacher, writer, champion ballroom dancer, accomplished musician, and a beloved philanthropist.

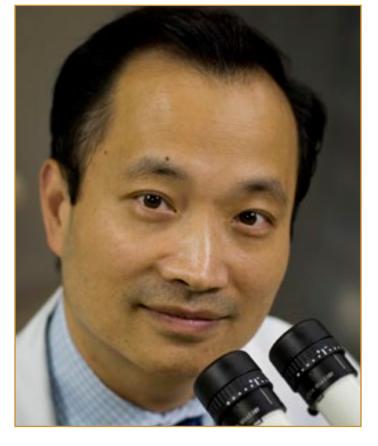
But it's true. And he lives right here in Nashville. This year, *Business Leader* listed his practice – Wang Vision Cataract & LASIK Center – as one of the top 300 Small Businesses of the South.

Ming Wang grew up in China during the "Cultural Revolution" (1966-1976), when the dictator Chairman Mao Zedong shut down most of the colleges, ending the education of all Chinese youth after high school, and sentenced them for life to peasantry work in remote parts of China. Wang's parents were doctors and were terrified that if their son went to high school, he too would be deported after his graduation, so though they were distraught, and had no choice but to take him out of school at the end of junior high. Therefore, at the age of 14, Wang's education ended hastily, and with it, he lost all hope of happiness and a good life.

Wang began to play the Chinese violin called the er-hu – a two-stringed music instrument with a soulful and gentle sound – in a desperate effort to escape deportation. The government of the day still had a need for musicians, since they used them in their song-and-dance troops for communist propaganda. In other words, if you could play a musical instrument, then you might have a chance to stay in the city and avoid being deported.

"So at age 14, I picked up the er-hu, not as a hobby but to survive," Wang says.

He knew he had to work very hard, as it was his only hope to avoid being sent away, so he practiced playing his *er-hu* 15 hours-a-day. There was no heater in his home, so in the winter, Wang suffered severe frostbite to all of



his fingers as he played the *er-hu* in sub-zero temperatures for hours on end each day.

The piece of music he played most frequently was "Two Springs Reflect the Moon," written by the famous blind Chinese composer, "Blind A-bin." It is one of the most beautiful pieces of music in the Chinese repertoire, not only because it describes a serene scene at night with two springs merging and reflecting the image of moon, but also because it is about an imagined scene, since the composer himself was blind and could not see. He could only imagine how beautiful it would be. It is a hauntingly enchanting piece, with a touch of melancholy, a deep sense of longing and unfulfilled desires and dreams.

So at an age when Wang should have been studying and looking forward to a future full of promise like every other young teen, he felt sad and hopeless being kept out of school and having lost all chances to study. These emotions resonated with those of the elderly composer because, while the blind artist could not see physically, Wang could not see mentally as far as any possible future for his life.

The government then discovered that he and other teenagers were playing musical instruments in order to avoid deportation, so they purposely chose not to accept any musicians from the city where Wang lived, which put an end to his er-hu playing. Once again, Wang's parents were terrified their son would soon be sent away!

Dr. Wang and his wife JJ at EyeBall.



high-definition

LASIK.



Dr. Wang and his idol, Dr. Albert Einstein.

## Smuggled into school

Not willing to give up and allow their son to face a life of destitution, Wang's parents came up with another plan – they would illegally smuggle him into the university where they were teaching (it was one of a small number of universities that were still open in China at that time), and he studied medicine, hoping to blend in with the other students so he would not be noticed by the government. But Wang's 15-year-old mind couldn't wrap itself around studying medicine, since he knew the government would never allow him to actually become a doctor. When Wang asked his father why he should be studying for no purpose, his father replied, "Knowledge is good, and knowledge will always be useful" Wang complied, and he studied medicine illegally for about a year before he was once again discovered by the government and expelled from the university, stripping him of the chance of even "acquiring knowledge for the sake of knowledge."

Just as Wang and his family were finally about to give up the struggle and reluctantly accept his inevitable fate of imminent deportation and a lifetime of hard labor, the dictator Mao Zedong died, and so did what Wang refers to as the "Cultural Holocaust."

It was 1976, the Cultural Revolution ended, and China realized what a tragic mistake it had made with the brutal 10-year youth deportation program, as it had destroyed the future of millions of youth! The universities throughout China were opened for the first time in 10 years, and millions of youth competed fiercely to earn one of the small number of precious freshman class spots. To have even a chance to get into college, Wang had to not only learn the entire high school curriculum that he had missed since his junior high graduation, but he also had to score among the top few percent of the graduating high school seniors, and he had to accomplish all of these in just two months.

Realizing how seemingly impossible a feat this was but also acknowledging that it might just be their son's only chance in his lifetime to attend college since the communist government could very well shut down all colleges again in the following year for another 10 years, they called on a number of local high school teachers, offering them and their family members free medical care if they would tutor Wang through all the necessary courses in such a short amount of time.

"I ended up being drilled 15-18 hours-a-day for two months to complete the entire high school curriculum so I could take part in the college entrance exams," Wang remembers. Fortunately, the crazy studying did pay off, as Wang did well on the exam and was admitted to the prestigious Chinese University of Science and Technology (the "MIT of China"). During his senior year there, he met a visiting American professor, Dr. James McNesby, who was impressed by the youngster's persistence and tenaciousness in asking him a question over and over, yet having little idea what the professor was saying to him in response (since Wang's knowledge of English was very limited). Wang knew that his only chance to be free and come to America was to impress the visiting American professor, and hopefully get him to help Wang get into an American college.

Wang's plan worked. McNesby was indeed impressed and arranged a teaching assistant position for Wang at the University of Maryland. So on Feb. 3, 1982, Wang arrived at the National Airport, Washington DC, with \$50 and a Chinese-English dictionary in his pocket, knowing no one in this vast new country but carrying a "big American dream" in his heart. He worked very hard, realizing how precious in life such an opportunity is for learning, and how close he once was to giving up all hope for studying and for a better life. Five years later, Wang graduated with a doctorate degree in laser physics and completed a post-doctoral fellowship at the Massachusetts Institute of Technology (MIT).

Dr. Wang then went on to receive his second doctorate degree – this time in medicine – from Harvard Medical School and MIT, graduating with an MD (*magna cum laude*). His graduation thesis received the award as the best thesis of his graduating class from Harvard that year. He then received his training in ophthalmology at three of the nation's top four ophthalmic institutions – Harvard Medical School in Boston, Wills Eye Hospital in Philadelphia (ophthalmology residency), and Bascom Palmer Eye Institute in Miami (corneal fellowship).

### Pioneer eye surgery

The world-renowned Wang Vision Cataract & LASIK Center is the state's only center that has the new 3D image-guided high-definition LASIK and 3D premium Forever Young Lens™ cataract surgery technologies. Dr. Wang has performed more than 55,000 cataract and LASIK procedures, including on over 4,000 doctors, and is known as the "doctors' doctor." He is also well-known in celebrity circles, having operated on stars such as Dolly Parton, Kenny Chesney and Naomi Judd. He was chosen as a designated LASIK surgeon by ABC's national hit reality TV show "Extreme Makeover." Wang Vision Cataract & LASIK Center offers world-class eye care, and state-of-the-art laser treatments for an entire range of vision problems, including cataracts, nearsightedness, farsightedness, astigmatism and presbyopia.

Dr. Wang is a researcher, pioneer and inventor. In all, he has performed more than 20 "first-of-its-kind" surgeries, including the world's first laser-assisted artificial cornea implantation, the world's first 3D image-guided high-definition LASIK, and the state's first 3D premium Forever Young Lens™ cataract surgery. He has restored sight to numerous blind patients, many who came to him after being told for years − or even decades − that they would never be able to see again. Dr. Wang's patients have come from all over the United States and from many countries and continents throughout the world.

Dr. Wang founded and served as the chief scientific officer of EyeVU, a joint venture biotech company with Vanderbilt University that began in 2001. It was at EyeVU that he ran a laboratory as the principle investigator, supported by an NIH grant, and developed the world's first amniotic membrane contact lens. He published five major textbooks – Corneal Topography in the Wavefront Era, Irregular Astigmatism, Keratoconus and Keratoectasia, Corneal

<u>Dystrophy and Degeneration</u> and <u>LASIK Vision Correction</u> – and holds or co-holds several U.S. patents, including the amniotic membrane contact lens, an adaptive infrared retinoscopie device for detecting ocular aberrations, and an ocular digital data bank system for virtual clinical trials. This year, Dr. Wang filed yet another new U.S. patent for a novel technology that he developed to perform cataract surgery. Currently, he is one of only three scientific investigators in the United States participating in an FDA clinical trial research study to treat age-related loss of near vision.

Dr. Wang's research interests include premium Forever Young Lens™ cataract surgery, corneal topography, keratoconus, and new eye reconstructive surgeries to restore sight such as the amniotic membrane graft, corneal stem cell transplantation and artificial cornea implantation. He performed the first new Intacs procedure in the United States to treat advanced keratoconus. He is also an internationally known specialist for premium lenses and was the first surgeon in Tennessee to implant a new generation premium lens for cataract surgery.

Dr. Wang is currently a clinical associate professor of ophthalmology for the University of Tennessee and director of Wang Vision Cataract & LASIK Center. He has published more than 100 peer-reviewed scientific papers and book chapters, including a major paper in the world renowned journal "Nature," which describes the development of a new molecular biological technique of studying in vivo DNA-protein interaction and gene expression regulation. He lectures frequently at major international conferences.

#### God has created this world

Among the issues that vexed Dr. Wang in his research to reduce corneal scarring after trauma and restore sight in adults was "how can one study the scarless fetal wound-healing process to benefit an adult's injured eye but without harming the fetus?" Dr. Wang saw this conflict as a reflection of a larger issue, i.e., research and faith sometimes do seem to clash in an apparently contradictory world. Dr. Wang is a Christian who believes that God has created this world, and that He would never create it with such contradictions.

"The world may appear to be contradictory to us because we do not know better," Dr. Wang said. "So I think we must persist, try even harder, and we should truly have faith and trust in Him, and believe that He will show us a way."

Hungry to understand the secret of the scarless fetal wound-healing process, Dr. Wang began a series of pioneering experiments with Professor Scheffer Tseng to transplant an amniotic membrane onto an adult-injured cornea, recreating a fetal-like healing environment on an adult eye. Their work was successful, and they published the first paper in scientific literature that demonstrates laboratory success in reducing corneal scarring with an amniotic membrane graft. Publishing the paper and obtaining a U.S. patent for the world's first amniotic membrane contact lens was exciting enough, but for Dr. Wang personally, even more fulfilling and meaningful was the validation of his belief that the world created by God is indeed perfect and without contradictions.

Dr. Wang believes that God does want us to pursue scientific research to improve our lives, but He wants us to do it in the right way. In the case of the study of fetal wound healing, God does not want us to touch any part of the fetus, but rather He wants us to use the amniotic membrane (which surrounds a fetus before birth, having similar properties as fetal tissue, but is not part of the baby and is discarded after a child is born) to understand the fetal scarless wound-healing process to help restore sight in adult but without injuring any part of the baby.

"The amniotic membrane is a great example that God has given to show us how to conduct scientific research while still maintaining our conscience, faith and moral principles," Dr. Wang said.

Dr. Wang's Christian faith is shown not only in his scientific work, but also in his effort to bring God's Word to the people of his native country China. He established a 501c(6) non-profit organization, the Wang Foundation for Christian Outreach to China, with a mission to bring a newly translated Bible to China. Dr. Wang said: "This is such an incredible, once-in-a-lifetime opportunity to help recruit for God's kingdom a quarter of the human race!"

# Helping hand

Dr. Wang is passionate about helping others, particularly those who do not have sufficient financial means to afford their medical treatments. He shares, "As an immigrant in this country, I am grateful for the opportunity that America has given me to study and learn, so I feel it is my obligation to do what I can to give back to America, particularly to help those who are in need."

Wang observed, "In every field of medicine today, there is always a huge gap between the high cost of the latest and most complex medical treatments and the low affordability by the sickest patients, for whom these most advanced treatments are precisely intended. There is no easy solution to this problem of course, but I feel that if we all do what we can to help, through a collective grass-roots effort, together we will indeed make a difference."

For his part, in 2003 Dr. Wang founded the Wang Foundation for Sight Restoration, a 501c(3) non-profit charity which provides financial support to patients for whom all conventional surgeries have failed and who may benefit from new eye reconstructive surgeries but cannot afford them. The foundation consists of a board of directors who are among the leaders in philanthropy in the United States, and also a medical council that includes over 30 leading eye doctors. To date, the foundation doctors have helped patients from over 40 states and 55 countries worldwide, with all sight restoration surgeries performed free-of-charge.

Drawing from his own experience of struggling to get a good education in his teen years in China, Dr. Wang firmly believes in the power of education and the opportunities that it creates. He established the Wang Foundation for Sight Scholarship, a 501c(6) non-profit organization which helps students who have demonstrated academic excellence, and who are candidates for advanced laser vision correction procedures, but cannot afford them. The foundation offers financial assistance to these students to enable them to have the vision surgeries and therefore enjoy a lifetime of visual freedom, which allows a broader choice of jobs and a chance for better lives.

Several times a year, Wang travels back to the country of his birth to help improve eye care for Chinese people. He is a co-owner of the Aier Eye Hospital Group, China's largest private hospital group, which holds 10 percent of the country's entire eyecare market, and he is also the international president of Shanghai Aier Eye Hospital, where he performed the first bladeless all-laser LASIK in 1.4 billion people. It was on one of these trips to Shanghai that he met his wife, JJ, an artist and businesswoman, with whom he shares his passion for classical ballroom dance.

# The Dancing Doctor

Back while he was studying at Harvard, Dr. Wang and few of his fellow Harvard students decided they wanted to get rid of the "bookworm" reputation of Harvard students, so they got together and started the Harvard Ballroom Dance Club, which ended up winning the U.S. national collegiate championships. Along the way, he learned to dance, and it quickly became a life-long passion. Dr. Wang is now an accomplished and award-winning ballroom dancer. In whatever spare time he can muster, He teaches ballroom dancing to friends, free-of-charge, considering it a personal mission to help others learn the beautiful art and sport of ballroom dancing, and benefit from it in their own lives.

Incorporating his love of ballroom dancing into his philanthropic endeavors, Dr. Wang created a unique medical charity gala – the "EyeBall" – a black-tie event held each October in Nashville, with all proceeds supporting the foundation patients. He came up with the idea for the ball while trying to bring the sight restoration efforts out of the four walls of his medical clinic to the forefront of society's awareness.

"The EyeBall is a unique event, merging music and medicine. The breathtaking beauty of classical ballroom dancing reminds us how precious God's given gift of sight to us is, and how much we need to help those who have lost that gift." he says. The 7th annual EyeBall will be held on October 1st at 5:30pm at Nashville's Renaissance Hotel and will feature a piano performance by the internationally acclaimed pianist, Graciella Kowalczyk, winner of the All-Poland Chopin Piano Competition. Dr. Wang himself is a vision to behold at these EyeBall events, usually appearing in a white tie and black tails, dancing and entertaining the guests with his lovely wife.

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— Dr. Ming Wang

Dr. Wang said that being involved in ballroom dancing also helps him become a better doctor. Through learning ballroom dancing — which requires connection and communication between two human beings since two people have to move together synchronously — he has learned to feel what a patient feels, to communicate better with his patients, and to be more sensitive and aware of their suffering and their needs. He explains that ballroom dancing is not just about music, movement and exercise, but perhaps more importantly, it is about one's sensitivity and awareness of another human being, and not only about another person's physical position but also about his/her emotional position.

# Picked up the er-hu again, 30 years later

Though he has lived here in America for more than 30 years, Dr. Wang has not forgotten the Chinese violin *er-hu* that he played as a teenager in China. At that time, he played the *er-hu* not as a hobby but to survive and to avoid the devastating fate of deportation and poverty. However, 30 years later, he picked up the *er-hu* again and played, but this time it was with an entirely different feeling and purpose.

"I learned to play *er-hu* as a way to escape poverty then," he says. "But now I play it for an entirely different reason. Today I play the *er-hu*, with its soulful, gentle and beautiful sound, to truly appreciate the music itself, to appreciate God's blessings, and the opportunities that He has given me to learn, and to help others."

Dr. Wang formed a band named "Music for Sight" with his good friend and classical guitarist, Carlos Enrique, and they play at various public gatherings in order to raise awareness to the cause of charitable

"30 years ago, I played this instrument to survive. Today I play it again, but it is now to express my appreciation for God's blessings, for the opportunities that He has given me to learn and to help others, and especially those who are blind, to go from darkness to light."

— Dr. Ming Wang

sight restoration. Dr. Wang even accompanied Dolly Parton on her 2005 CD, "Those Were the Days."

To show his appreciation to his adopted country America, Dr. Wang founded another 501c(6) non-profit organization, the Tennessee Chinese Chamber of Commerce, with a mission to help Tennessee companies export their products to China, the largest emerging market in the world. The chamber hosts an educational forum every other month to help its members learn about China - its history, culture and people – as well as who they are and what kinds of products that they need. Dr. Wang believes that learning about another country or culture is no longer just the right thing to do as citizens of the world, but it is now also in fact an economic necessity for us here in America, since our customers are now located elsewhere throughout the world, including China. Only through learning about other countries and people, their interests and needs, can we increase our export to these countries, and thus generating funds through positive foreign trade to enable us to truly accomplish what we need to do here in America, e.g., improving our education and health care.

Dr. Wang said that life is just like music. It has its ups and downs, its happy and sad moments. He has learned many things in life, among them, respect for teachers, parents, and the elderly, who have suffered and therefore have more wisdom; and also capturing one's opportunities in life and making the most of them. He says that life is often not

easy indeed. Sometimes we struggle and doubt if we will ever succeed, and we sometimes wonder what the purpose is of it all. However, Dr. Wang firmly believes that God does indeed have a purpose for each one of us. However, it is only through our dedication, hard work and doing our part to the best of our capabilities that we can have a chance of finding out what He has in store for us.

From music to medicine, Dr. Ming Wang lives life fully, meaningfully and gratefully.

When asked what actually drives him to work so hard every day, to excel in so many areas, and to help so many, all with such a drive and dedication, he replies, simply: "from once having not."



Kajal (a 5-yr-old Indian child) and Dr. Wang dancing at the EyeBall. Kajal was intentionally blinded by her own stepmother, who poured acid into Kajal's eyes when she was sleeping. The foundation helped Kajal and brought her to America.

To contact Ming Wang, MD, PhD: Wang Vision Cataract & LASIK Center, 1801 West End Ave, Ste, 1150, Nashville, TN, 37203; Tel. 615-321-8881; email: drwang@wangvisioninstitute.com; web: www.WangCataractLASIK.com.