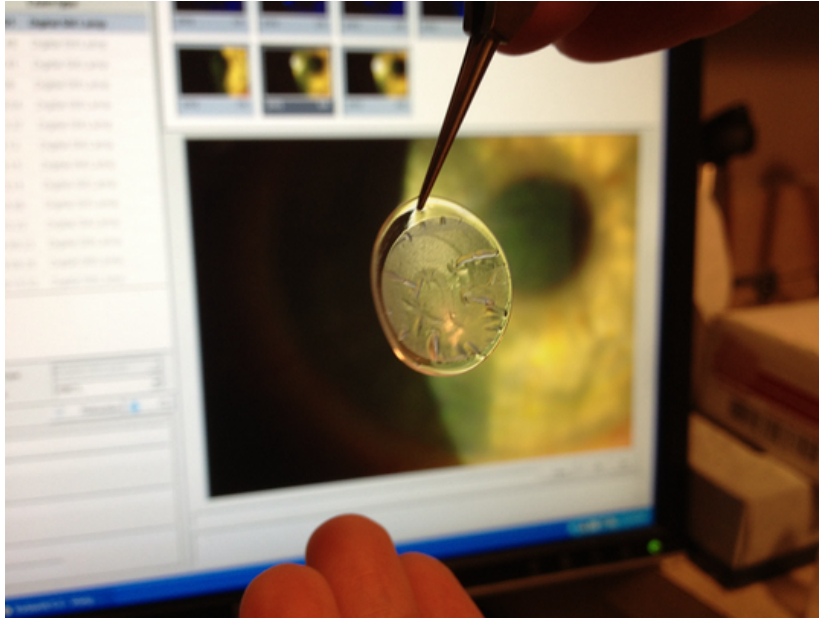


World's first amniotic membrane contact lens was created in Nashville

Dr. Ming Wang, MD, PhD and Dr. Joshua Frenkel, MD, MPH, Wang Vision Institute

Published 5:00 a.m. CT Dec. 16, 2019



The world's first amniotic membrane contact lens, courtesy of Dr. Ming Wang, Harvard & MIT (M.D.); PhD (laser physics). (Photo: Wang Vision Institute)

As human beings, we scar after an injury, which is a normal wound-healing response. However, scarring on the surface of the eye, called the cornea, often causes subsequent blindness. But how do we stop our body from scarring? This has been a challenge to medicine for hundreds of years.

Unlike an adult, a fetus actually does not scar inside a mother's womb. The baby is in a sterile environment, so he or she has the sufficient amount of time for a layer-by-layer regeneration. After birth, however, we have to heal quickly in an open environment to reduce bleeding and the risk of infection. And the price that we have to pay for the speed of healing is scarring, or fibrosis.

But how do we tap into that secret of the fetus's fantastic scarless wound-healing process without injuring the baby?

[Wang Vision Institute \(https://adserver.pressboard.ca/c/link?](https://adserver.pressboard.ca/c/link?c=200956&w=174254&l=226856&ref=https%3A%2F%2Fwww.tennessean.com%2Fstory%2Fsponsor-story%2Fwang-vision-institute%2F2019%2F12%2F16%2Fworlds-first-amniotic-membrane-contact-lens-created-nashville%2F2630706001%2F&s=236616&p=15453&uid=53b69cf2-9b5d-4e1d-8173-84ad278dbbe5&tz=-5)

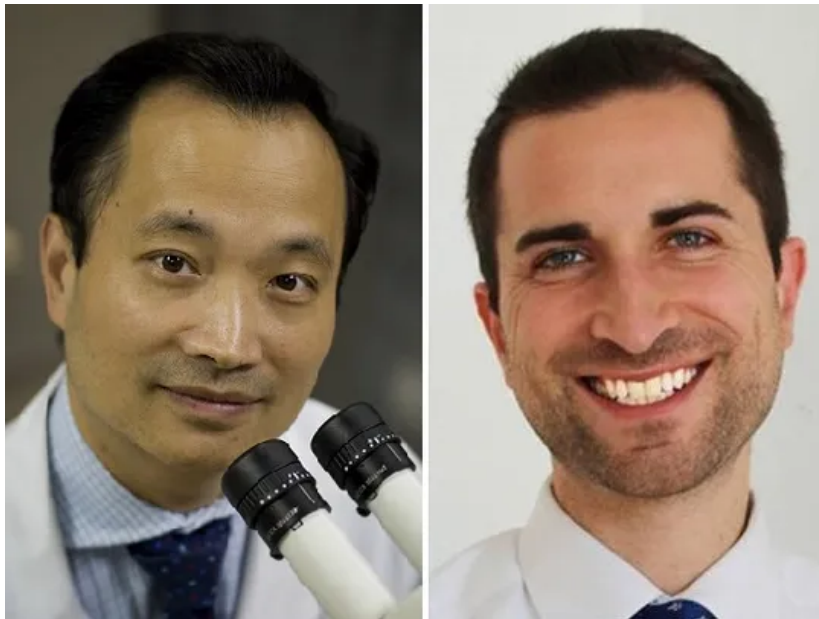
[c=200956&w=174254&l=226856&ref=https%3A%2F%2Fwww.tennessean.com%2Fstory%2Fsponsor-story%2Fwang-vision-institute%2F2019%2F12%2F16%2Fworlds-first-amniotic-membrane-contact-lens-created-nashville%2F2630706001%2F&s=236616&p=15453&uid=53b69cf2-9b5d-4e1d-8173-84ad278dbbe5&tz=-5](https://adserver.pressboard.ca/c/link?c=200956&w=174254&l=226856&ref=https%3A%2F%2Fwww.tennessean.com%2Fstory%2Fsponsor-story%2Fwang-vision-institute%2F2019%2F12%2F16%2Fworlds-first-amniotic-membrane-contact-lens-created-nashville%2F2630706001%2F&s=236616&p=15453&uid=53b69cf2-9b5d-4e1d-8173-84ad278dbbe5&tz=-5)

[nashville%2F2630706001%2F&s=236616&p=15453&uid=53b69cf2-9b5d-4e1d-8173-84ad278dbbe5&tz=-5](https://adserver.pressboard.ca/c/link?c=200956&w=174254&l=226856&ref=https%3A%2F%2Fwww.tennessean.com%2Fstory%2Fsponsor-story%2Fwang-vision-institute%2F2019%2F12%2F16%2Fworlds-first-amniotic-membrane-contact-lens-created-nashville%2F2630706001%2F&s=236616&p=15453&uid=53b69cf2-9b5d-4e1d-8173-84ad278dbbe5&tz=-5)), worked on this for many years without success. Then we came across a special piece of tissue: the placenta and amniotic membrane. It surrounds and nourishes a baby before birth, but then the amniotic membrane is actually discarded after delivery. So we started thinking: Is it possible that the amniotic membrane might be the tissue that contains the secret of fetal scarless wound healing? After nearly 20 years of work in the laboratory, we made the discovery.

The amniotic membrane did in fact reduce corneal scarring after injury!

We then invented the world's first amniotic membrane contact lens, published the first paper in the scientific literature, and obtained two U.S. patents for our invention.

To date, thousands of eye doctors from around the world have used the magical amniotic membrane contact lens to help with cornea conditions and hundreds of thousands of patients have had their sight restored.



Dr. Ming Wang (left), M.D., PhD., and Dr. Joshua Frenkel, M.D., MPH, Wang Vision Institute. (Photo: Wang Vision Institute)

Dr. Ming Wang, Harvard & MIT (MD, magna cum laude); PhD (laser physics), is the CEO of Aier-USA and Director of Wang Vision 3D Cataract & LASIK Center. He has received many honors including the Honor Award from the American Academy of Ophthalmology, the Lifetime Achievement Award from the Association of Chinese American Physicians, and Kiwanis Nashvillian of the Year Award for this lifetime dedication to help blind orphan children worldwide. **Dr. Joshua Frenkel**, MD, MPH received training in microsurgical glaucoma surgeries from the #1 training program in the country. He graduated with an MD and MPH and completed his ophthalmology residency from the prestigious Tulane University.

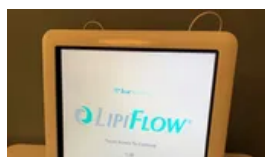
Wang Vision doctors (Drs. Joshua Frenkel, Marianne Johnson, Nathan Rock and Ming Wang) have performed over 55,000 procedures (including on over 4,000 doctors). They have published nine textbooks, hold several U.S. patents and performed the world's first laser artificial cornea implantation. Wang Vision is currently the only center in the state that performs 3D SMILE & 3D LASIK (18+), 3D Implantable Contact Lens (21+), 3D Forever Young Lens (45+) and 3D Laser Cataract Surgery. They have founded a 501(c)(3) nonprofit charity, Wang Foundation for Sight Restoration, which to date has helped patients from over 40 states in the U.S. and 55 countries with all sight restoration surgeries performed free-of-charge.

For info about Wang Vision Institute: 1801 West End Ave, Ste 1150, Nashville, TN, 37203, 615-321-8881, www.WangVisionInstitute.com (<https://adserver.pressboard.ca/c/link?c=200956&w=174254&l=226856&ref=https%3A%2F%2Fwww.tennessean.com%2Fstory%2Fsponsor-story%2Fwang-vision-institute%2F2019%2F12%2F16%2Fworlds-first-amniotic-membrane-contact-lens-created-nashville%2F2630706001%2F&s=236616&p=15453&uid=53b69cf2-9b5d-4e1d-8173-84ad278dbbe5&tz=-5>).

Members of the editorial and news staff of the USA TODAY Network were not involved in the creation of this content.

Read or Share this story: <https://www.tennessean.com/story/sponsor-story/wang-vision-institute/2019/12/16/worlds-first-amniotic-membrane-contact-lens-created-nashville/2630706001/>

MORE STORIES FROM WANG VISION INSTITUTE (/SPONSOR-STORY/WANG-VISION-INSTITUTE/)



[\(/story/sponsor-story/wang-vision-institute/2019/10/21/nashville-eye-doctors-offer-top-treatments-dry-eye-meibomian-gland-dysfunction/3978364002/\)]((/story/sponsor-story/wang-vision-institute/2019/10/21/nashville-eye-doctors-offer-top-treatments-dry-eye-meibomian-gland-dysfunction/3978364002/))

Advanced treatment for dry eye, meibomian gland dysfunction [\(/story/sponsor-story/wang-vision-institute/2019/10/21/nashville-eye-doctors-offer-top-]((/story/sponsor-story/wang-vision-institute/2019/10/21/nashville-eye-doctors-offer-top-)

This article is FREE to your community.
\$3 for 3 months. Save 90%.

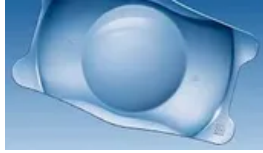


[\(/story/sponsor-story/wang-vision-]((/story/sponsor-story/wang-vision-)

[institute/2019/09/16/microinvasive-glaucoma-surgery-advanced-treatments-glaucoma-now-available/2266356001/\)](institute/2019/09/16/microinvasive-glaucoma-surgery-advanced-treatments-glaucoma-now-available/2266356001/))

Advanced treatments for glaucoma are now available [\(/story/sponsor-story/wang-vision-institute/2019/09/16/microinvasive-glaucoma-surgery-]((/story/sponsor-story/wang-vision-institute/2019/09/16/microinvasive-glaucoma-surgery-)

Story from Wang Vision Institute



[\(/story/sponsor-story/wang-vision-institute/2019/08/18/wang-vision-first-offer-3-d-implantable-contact-lens-](https://www.wangvisioninstitute.com/2019/08/18/wang-vision-first-offer-3-d-implantable-contact-lens-state/1985970001/)

[state/1985970001/\).](https://www.wangvisioninstitute.com/2019/08/18/wang-vision-first-offer-3-d-implantable-contact-lens-state/1985970001/)

Wang Vison offers 3D implantable contact lens that never needs to be removed ([/story/sponsor-story/wang-vision-institute/2019/08/18/wang-vision-first-offer-3-d-implantable-contact-lens-state/1985970001/](https://www.wangvisioninstitute.com/2019/08/18/wang-vision-first-offer-3-d-implantable-contact-lens-state/1985970001/)).

Story from Wang Vision Institute

[advanced-treatments-glaucoma-now-available/2266356001/](https://www.wangvisioninstitute.com/2019/07/22/center-performed-worlds-first-3-d-lasik-procedure-calls-nashville-home/1754048001/)

Story from Wang Vision Institute



[\(/story/sponsor-story/wang-vision-institute/2019/07/22/center-performed-worlds-first-3-d-lasik-procedure-calls-nashville-](https://www.wangvisioninstitute.com/2019/07/22/center-performed-worlds-first-3-d-lasik-procedure-calls-nashville-home/1754048001/)

[home/1754048001/\).](https://www.wangvisioninstitute.com/2019/07/22/center-performed-worlds-first-3-d-lasik-procedure-calls-nashville-home/1754048001/)

The world' s first 3D LASIK procedure in Nashville ([/story/sponsor-story/wang-vision-institute/2019/07/22/center-performed-worlds-first-3-d-lasik-procedure-calls-nashville-home/1754048001/](https://www.wangvisioninstitute.com/2019/07/22/center-performed-worlds-first-3-d-lasik-procedure-calls-nashville-home/1754048001/)).

Story from Wang Vision Institute