

Optometry DistList

Instance 2016: 28  
Wednesday, 15 June 2016

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- New drug speeds healing of eyes after surgery
- Skin stem cells were used to restore a patient's vision for the first time
- New Glaucoma treatment "Ring" shows promise
- Studies show Zika virus may cause more serious eye damage in babies than thought
- Inviting applications for post of three Junior Optometrists (Job opening)
- 15<sup>th</sup> Dr E Vaithilingam Memorial Scientific Session at Sankara Nethralaya, Chennai

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Date: Saturday, 4 June 2016  
From: Anuhya N ([anuhya.nalluri@gmail.com](mailto:anuhya.nalluri@gmail.com))  
Subject: **Amblyz™ digital glasses for restoring vision to children with Amblyopia**

Amblyopia, commonly known as *Lazy eye*, has the conventional ways of treating with eye patches, Atropine eye drops or sometimes surgery, based upon the ocular media condition. These conventional methods have their own challenges on the compliance as they are cumbersome to handle and remain a challenge to both vision therapists and parents to follow-up with their children under therapy. However, a new study shows that electronic programmable glasses that act like a digital eye patch are as effective as fabric eye patches for Amblyopia. The results suggest this device is the first new effective treatment for the condition, as it combines both vision correction and occlusion in its working principle.

In the study, researchers tested the effectiveness of the digital glasses compared to patching and found them comparable to the conventional therapy. They recruited 33 subjects with lazy eye between age 3 and 8 who wore spectacles to correct their vision. One group wore an adhesive patch for two hours daily. The other wore Amblyz™ occlusion glasses for 4 hours daily. In the study, the lens over the eye with better vision switched from clear to opaque every 30 seconds. After three months, both groups of children showed the same amount of improvement in the lazy eye, gaining two lines on the logMAR visual acuity chart.

The child needs to receive Amblyopia treatment by the age of 8 which is a critical period as their eyes and brain are still developing or the child could become visually impaired in the weaker (amblyopic) eye and beyond the critical age of development. This electronic glasses helps the child orient towards the therapy as the lens become occlusive and clear in regular intervals and the child gains compliance with the treatment.

Article source: <http://www.aao.org/eye-health/news/digital-glasses-lazy-eye>

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Date: Tuesday, 7 June 2016

From: Shweta Sharma ([shwetasharma.opt@gmail.com](mailto:shwetasharma.opt@gmail.com))  
Subject: **New drug speeds healing of eyes after surgery**

For a long time, scientists have been searching for ways to heal wounds faster. Recently, this search took an exciting turn when ophthalmologists tested a new drug Cacicol, which was originally developed to heal chronic skin wounds common in patients with diabetes and found it can heal the cornea which is made of collagen complex. Scientists decided to test the drug to see if it could heal wounds in the cornea, as little as two days after surgery.

This drug could potentially help millions of patients who undergo corneal transplants and refractive surgeries like LASIK. The initial results suggest these patients would heal faster with less discomfort and fewer complications, such as infection. DrKorayGumus, Associate Professor of Ophthalmology, Erciyes University School of Medicine, Turkey, presented his work on this medication at the American Academy of Ophthalmology's annual meeting, in November 2015.

The researchers involved in the study tracked the recovery of 60 keratoconus patients for three days after corneal cross-linking surgery. The physicians randomly treated 30 eyes with drops containing the drug. On day two, 83 percent of eyes treated with the drug had healed significantly, compared to 13 percent of eyes that went untreated. Patients also reported less pain, stinging, tearing and up and light sensitivity in the eyes that received the medication. Researchers say they are exploring if the treatment will work for other eye conditions such as corneal ulcers, so that it can minimize the further complications.

Article source: <http://www.aaopt.org/eye-health/news/new-drug-speeds-healing-of-eyes-after-surgery>

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Date: Thursday, 2 June 2016  
From: Revanth Reddy ([revanth.kumar@indiavisioninstitute.org](mailto:revanth.kumar@indiavisioninstitute.org))  
Subject: **Japanese scientists have used skin stem cells to restore a patient's vision for the first time**

A team of Japanese scientists from Riken Centre for Developmental Biology under the project leadership of Masayo Takahashi, have reported the first successful skin-to-eye stem cell transplant in humans, where stem cells derived from a 70-year old woman's skin, diagnosed with age-related macular degeneration (AMD), were transplanted into her eye to partially restore lost vision. After two years of graft transplantation, the scientists are sharing the results.

The researchers took a 4mm diameter of skin graft from her arm and modified its cells, effectively reprogramming them into induced pluripotent stem cells, as it can differentiate into almost any type of tissue within the body. For a year and half, there were no signs of immune rejections or adverse reactions and improved the vision of the patient.

Similar studies showed positive results in restoring sight with stem cell treatments. Earlier in 2014, researchers in China and the US were able to improve the vision of babies with

cataracts by manipulating protein levels in stem cells. A woman in Baltimore who was blind for more than five years had some of her vision restored after stem cells were extracted from her bone marrow and injected into her eyes.

While it's definitely still early days for this experimental procedure, the signs so far are promising and many questions remain about that particular treatment, there's no denying that stem cell research is a hugely exciting field of study.

Article source: <http://www.sciencealert.com/japanese-scientists-have-used-skin-cells-to-restore-a-patient-s-vision-for-the-first-time>

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Date: Monday, 6 June 2016

From: D Vishnu ([vishnudinakar96@gmail.com](mailto:vishnudinakar96@gmail.com))

Subject: **New Glaucoma treatment "Ring" shows promise**

Nearly half of glaucoma patients fail to take their daily eye drops due to poor compliance, dependability on others in geriatric age group to administer the medication, making them more vulnerable to irreversible vision loss and blindness. A new study shows that a wearable time-release medication device, a medicated silicone ring placed on the eye which can release the drug for six months, can lower internal eye pressure by about 20 percent for half a year. These medicated rings are placed on the surface of the eye underneath the lids so that eye drops administration is not required. No surgery is needed to install it.

In phase 2 clinical trial, ophthalmologists tested the device on 130 patients with glaucoma or ocular hypertension. Eye pressure in 64 patients with the Bimatoprost ring fell 3.2 to 6.4 mm of Hg over six months. 66 patients in the Timolol group had eye pressure that fell 4.2 to 6.4 mm of Hg. Overall, eye pressure decreased in the group wearing the Bimatoprost ring by about 20 percent from the initial measurements over six months. The ring itself seemed comfortable enough as only 6 percent wearing the device reported discomfort. The ring can easily be removed if the patient wishes to discontinue treatment. A phase 3 study of a larger group of patients is expected to begin later in 2016.

If the device is approved after more research, it could be a boon to the 3 million people who have glaucoma in the United States and can be further applied to patients all over the world with the proven results and treat multiple eye ailments like eye allergies, dry eye and glaucoma simultaneously, with a single wearable device said by the author James D. Brandt, M.D., director of the UC Davis Medical Center Glaucoma Service.

Article source: <http://www.aaopt.org/eye-health/news/new-glaucoma-treatment-ring-shows-promise>

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Date: Friday, 10 June 2016

From: N Johnson Singh ([johncrtr94@gmail.com](mailto:johncrtr94@gmail.com))

Subject: **Studies show Zika virus may cause more serious eye damage in babies than thought**

New research on infants presumed to be affected by Zika virus in the womb shows that the infection can take a serious toll on a baby's eyes, causing harm that could lead to severe visual impairment. There was correlation and high chances of eye abnormalities in babies who were born with microcephaly due to the virus.

Two scientific papers about eye abnormalities possibly linked to the virus were recently published by Stanford University and Brazilian researchers. Dr Rubens Belfort Jr, Ophthalmologist, Federal University of Sao Paulo, Brazil had confirmed that they have seen over 200 children with microcephaly, from which over 40 percent of the confirmed Zika virus cases have severe ocular lesions.

As the outbreak continues, the number of children at risk of ocular and developmental issues from Zika virus appears to be growing. There are reports in USA that about 280 pregnant women have a risk of the manifestation of the Zika virus. The incidence rate in Brazil is approximately 20 times the rate recorded before the outbreak. Zika virus screening is a mandatory to those people who have travelled to the risk zones in the past one year are to be kept in observation. As a result of the widespread birth defects associated with the virus, the World Health Organization called a public health emergency.

References:

Expanded spectrum of congenital ocular findings in Microcephaly with presumed Zika Infection. *Ophthalmology*, published online on May 25, 2016.

Risk factors associated with eye abnormalities in infants with presumed Zika Virus Infection. *JAMA Ophthalmology*, published online May 26, 2016.

Article source: <http://www.aao.org/eye-health/news/studies-show-zika-virus-may-cause-more-serious-eye>

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Date: Monday, 6 June 2016

From: Vijay Kumar ([vijaykumar@lvpei.org](mailto:vijaykumar@lvpei.org))

Subject: **Inviting applications for post of three Junior Optometrists (Job opening)**

Brien Holden Institute of Optometry and Vision Sciences (BHIOVS) is inviting applications for 3 junior level optometrists for working as clinical tutors at its Bausch & Lomb School of Optometry (BLSO).

**Job profile:** In this role, the junior optometrist will function as a tutor for training students in clinical techniques at BLSO. In this role, the optometry staff will actively engage with students to teach several clinical skills, engage in classroom discussion, clarify questions and focus on students who are weak or experience language barriers. In addition, the staff optometrist will also participate in patient care activities as per the institute mandate.

**Eligible candidates:** Candidates with a four year degree in optometry with minimum two years of clinical experience are eligible to apply.

Interested candidates for the above advertised posts can apply with their latest CV and cover letter to Mr Vijay Kumar, Registrar, at [vijaykumar@lvpei.org](mailto:vijaykumar@lvpei.org)

Last date for applications is June 18, 2016 (Saturday). Interview date will be communicated to short listed candidates subsequently.

For further details, please write to [vijaykumar@lvpei.org](mailto:vijaykumar@lvpei.org)

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Date: Monday, 13 Jun 2016  
From: Anuradha N ([anun@snmail.org](mailto:anun@snmail.org))  
Subject: **15<sup>th</sup>Dr E Vaithilingam Memorial Scientific Session at SankaraNethralaya, Chennai**

Elite School of Optometry (ESO) has been encouraging optometry research in India for the last few years in many ways. One of the main activities of ESO in this regard is the annual conference on vision science and optometry. In 2002, in memory of the late Principal Dr. E. Vaithilingam, ESO, initiated a national scientific session to encourage optometrists and optometry students from all over India to present their research work. Every year, the quality and quantity of presentations have been increasing exponentially.

This year too, this session would be held on the August 6<sup>th</sup> and 7<sup>th</sup>, 2016 at V D Swamy Auditorium, Sankara Nethralaya, College road, Nungambakkam. Eminent speakers from all over the world would deliver key lectures. Around 200-250 delegates are expected.

Competitions for the students and practitioners are open.  
Link for the session 'Clinician to researcher' is provided below.  
Details of the competitions for the students would be uploaded in the website and registrations for the conference is now open.

For full article, please visit: <http://www.eso.sankaranethralaya.org/drev-2016-clinician-to-researcher.html>

For further details, please write to [anun@snmail.org](mailto:anun@snmail.org)

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