

Optometry DisList

Instance 2015: 16  
Monday, 5 October 2015

Today's subjects

- Google's newest patent is a game changer for anyone who wears glasses
- A cure for blindness just might come from Algae
- App developed for new glaucoma patients
- Ten minutes of eye contact leads to hallucinations, monster sightings
- Optometrists (Job Opening)

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From: Jissa James ([jissa.james@indiavisioninstitute.org](mailto:jissa.james@indiavisioninstitute.org))

Date: Tuesday, 15 September 2015

Subject: **Google's newest patent is a game changer for anyone who wears glasses**

Glasses have a habit of not staying put. They slide down your nose, and you have to push them back, then they slide back down again—it's an unending game of cat-and-mouse that gets even worse if you're doing anything remotely active, like running. A new patent from Google, however, might put an end to the constant adjustments.

The patent, awarded to Google outlines a system built into a wearable device like Google Glass that uses motors and motion detectors to automatically tighten or loosen the glasses' arms depending on what the wearer is doing.

In Google's idea, the new glasses would have an actuator—a little motor for controlling movement—in each arm that could bend the arms in or out as needed, rather like the way a bendy straw works. When the glasses detect that their wearer is bobbing up and down at an increased rate—while running, for example—the arms contract to grip the wearer's head.

The motorized bendy parts are in the middle.(US Patent and Trademark Office/Google)

This could be a massive boon for athletes who choose not to wear their glasses when active, for fear of breaking them. It'd definitely be an improvement over other potential solutions, from [a life-saver](#).

The actuators could also help solve the one-size-fits-all approach that many glasses have to fitting—if the glasses are too wide for someone's face, the actuators could automatically resize the glasses so that they fit snugly.

The next version of Google Glass will reportedly [be released](#) in 2016, although it will just be for business customers, and will have few updates over the original Explorer addition.

There's no guarantee that Google will be looking to implement this particular patent in Glass—a Google spokesperson told Quartz that some patents turn into products, and some don't.

For full article, please visit: <http://qz.com/497363/googles-newest-patent-is-a-game-changer-for-anyone-who-wears-glasses/>

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Date: Thursday, 17 September 2015

From: Chandrashekher ([m.chandrashekher@indiavisioninstitute.org](mailto:m.chandrashekher@indiavisioninstitute.org))

Subject: **A cure for blindness just might come from Algae**

*Chlamydomonas reinhardtii* are simple, single-cell green algae that live in water and in dirt. They have a round body, two whip-like tails, and a single primitive eye—not even an eye, really, an eyespot—that they use to seek out sunlight for photosynthesis.

Like human eyes, though, that eyespot makes use of light-sensitive proteins. One of them is called channelrhodopsin-2, and it's this algal protein, transplanted into the human retina, that could one day restore sight to the blind. And this isn't just some far-out dream: Last month, the FDA [approved human clinical trials](#) for the Ann Arbor-based company RetroSense to do just that.

RetroSense is planning to use optogenetics in humans for the first time ever, recruiting 15 patients blinded by the genetic eye disease retinitis pigmentosa for its clinical trial.

RetroSense will use a virus to insert copies of the channelrhodopsin-2 gene into neurons of the inner retina, which normally are not sensitive to light. This is gene therapy, and gene therapy to cure genetic eye disease is not radically new idea. In several clinical trials, researchers have injected viruses carrying a normal copy of a gene to make up for a patient's faulty copy to restore sight. Herein lies the difference though: RetroSense isn't inserting a gene from another human, another mammal, or even another animal, but from an alga—this is cross-domain. RetroSense is licensing its technology from Zhuo-Hua Pan, a vision researcher at Wayne State University who studies how to restore sight when the rods and cones of the eye die off.

Retrosense targets only that last layer of neurons, called retinal ganglion cells. Make them light sensitive, the logic goes, and you can bypass the damaged or dead neurons that come before it. It's a simpler eye. One challenge for human trials will be making sure channelrhodopsin-2 gets into enough retinal ganglion cells. Pan says that's easy in rodents, but his primate experiments seem to show some sort of barrier that prevents easy insertion of channelrhodopsin-2.

Channelrhodopsin-2 has revolutionized how neuroscientists study neurons in mice, rats, zebrafish, and fruit flies. Getting optogenetics into humans was always going to be far trickier. A decade later, RetroSense is finally going to try.

For full article, please visit: <http://www.wired.com/2015/09/cure-blindness-just-might-come-algae/>

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From: Apporva Chauhan ([apoorva.chauhan@indiavisioninstitute.org](mailto:apoorva.chauhan@indiavisioninstitute.org))

Date: Thursday, 17 September 2015

Subject: **App developed for new glaucoma patients**

Researchers from City University London have partnered with Allergan to create an app for patients with glaucoma.

The app, designed for use on tablet computers, aims to provide newly diagnosed patients with the information they need about the condition.

It forms part of the 'Glaucoma in perspective' programme, which includes a partner app aimed at healthcare professionals.

The development was led by City's Professor David Crabb, professor of statistics and vision research, and postdoctoral researcher Dr Nicholas Smith.

Professor Crabb said: "If you have glaucoma, or someone you know has glaucoma, this app has been developed for you. By working in partnership with Allergan we hope we can help raise awareness of glaucoma and explain why people invariably have no symptoms in the early stages of the disease. We have deliberately kept the app simple to use and easy to understand. We also hope the app will help clinicians better explain the benefits of adhering to treatment."

For full Article visit: <http://www.optometry.co.uk/news-and-features/news/?article=7763>

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Date: Sunday, 20 September 2015

From: Mounika Deepa ([mounikav30@gmail.com](mailto:mounikav30@gmail.com))

Subject: **Ten minutes of eye contact leads to hallucinations, monster sightings**

They say the eyes are the windows to the soul. A recent study says staring through those windows a little too long can lead to some strange sightings.

Giovanni Caputo, a vision scientist from the University of Urbino in Italy, worked with two groups of young adults, each consisting of 20 people. Both groups were placed in dimly lit rooms. One group stared at a blank wall for 10 minutes, the other was paired off and asked to stare into each other's eyes for the same amount of time. Both groups were only told they were part of a study that was going to involve a "meditative experience with eyes

open," according to a report Wednesday by Christian Jarrett in the British Psychological Society's journal, [Research Digest](#).

The people in the group who looked at each other reported experiencing more dissociation states than the wall-gazing group. Dissociation is "a rather vague psychological term for when people lose their normal connection with reality," Jarrett explains. In this case, the dissociation was expressed in "reduced color intensity, sounds seeming quieter or louder than expected, becoming spaced out, and time seeming to drag on."

The answers got a lot more interesting though, when the study participants were asked to report on the experience of their partners' faces.

"On the strange-face questionnaire, 90 percent of the eye-staring group agreed that they'd seen some deformed facial traits, 75 percent said they'd seen a monster, 50 percent said they saw aspects of their own face in their partner's face, and 15 percent said they'd seen a relative's face," Jarrett said.

Caputo theorizes that the effect might have to do with what happens when we snap back to reality after zoning out.

"Strange-face apparitions may characterize the rebound to reality from a dissociative state induced by sensory deprivation," he writes in the study's abstract. "These phenomena may explain psychodynamic projections of the subject's unconscious meanings into the other's face." In other words, as we reenter reality, stuff that's normally hidden from our own view deep in our unconscious mind can get projected onto another person's face.

Cauputo also says, according to Jarrett, that this theory is speculative and that the study should be considered preliminary.

Article Source: <http://www.cnet.com/news/ten-minutes-of-eye-contact-leads-to-hallucinations-monster-sightings/>

Original article source: [http://www.psy-journal.com/article/S0165-1781\(15\)00321-2/abstract](http://www.psy-journal.com/article/S0165-1781(15)00321-2/abstract)

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From: Goutami Eye Institute ([madhu@goutami.org](mailto:madhu@goutami.org))

Date: Monday, 14 September 2015

Subject: **Optometrists (Job Opening)**

Goutami Eye Institute is looking for Optometrists with a minimum of two years of experience working in reputed institutes, and with interest in community ophthalmology and training vision technicians. The candidate may be either at Khammam (Telangana) or Rajahmundry (Andhra Pradesh).

Salary and incentives commensurate with experience and commitment.

Please mail your CV to [madhu@goutami.org](mailto:madhu@goutami.org)

**Company Name:** Goutami Eye Institute

**Vacancy:** 4

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