

## A round-up of the eye related hot topics that have been trending on social media over the last few weeks.

Happy New Year! Goodbye 2020, a year no one could have imagined, with our lives and headlines dominated by COVID-19 as the main course, with a side of Brexit. This time I bring you the last stories to cap off 2020, as we look forward to what the new year may bring.

### #cornealbeesting

Think you had a bad year? This chap fared worse. A 22-year-old male patient presented to the emergency department with redness, pain and decreased vision from 6/6 to hand movements. The culprit was a bee stinger causing a corneal penetrating injury. Ouch. His wound required suturing, after removal of the stinger, and with additional medical treatment, he made a good recovery with vision of 6/12 at three months' follow-up. To be fair, the bee fared worst of all [1].

### #partiallysighted #abusebypublic #socialdistancing

An unfortunate theme that has surfaced already during the pandemic is the verbal abuse that partially sighted individuals have suffered from the general public due to the unique challenges faced by these individuals in the new social distancing norms. Linda Johnson was interviewed on the BBC in November 2020, where she explained that she has been called all sorts of names, "some not repeatable on air", when members of the public perceive that she is breaking social distancing rules or queue jumping. She explained that guide dogs are trained to avoid obstacles, which includes queues, in order to keep their human safe. Therefore, a guide dog will bypass a queue and take their human directly to the door of an establishment and inside. Furthermore, guide dogs do not know what "social distancing" is. What's worse, Johnson describes that no one has ever defended her when someone starts to have a go at her for accidentally queue jumping. She described one scenario where it took two staff members in the shop to deescalate a situation, and despite this, she had to leave because of the continuing verbal abuse. In a time of such stress and distress for all, let's aim to be kind to one another in 2021 [2]!

### #blindness #cobra #COVID-19

British charity worker Ian Jones was admitted to hospital in India in November 2020 with suspected COVID-19. Instead, it transpired that his health problems were due to a cobra bite. His COVID-19 test was negative. He was in India, running the charity Sabirian, a social enterprise which aims to help support Indian craftspeople to help them sell their crafts in the UK, to support them to work

their way out of poverty [3]. According to the GoFundMe page that was set up to help raise funds to cover the cost of his medical bills in India and help bring him back to the UK, he has unfortunately been left permanently blind and with lower limb paralysis [4].

### #wetAMD #AI #earlydetection

Professor Cordeira's group at the University College London and Imperial College London published promising results utilising artificial intelligence (AI) and a Detecting Apoptosing Retinal Cells (DARC) biomarker in detecting wet age-related macular degeneration (AMD) up to 36 months in advance of patient symptoms, with positive predictive values, specificities and sensitivities over 70%. This was a phase 2 clinical trial. DARC utilises a novel fluorescent biologic marker (fluorescent-labelled annexin V), that binds to exposed phosphatidylserine on apoptotic or stressed cell membranes. The mechanism is presumed to be related to the fact that phosphatidylserine is exposed on retinal endothelial cells early in the neovascularisation process. In the rabbit model, the group showed that DARC activity was demonstrated two days prior to vascular leakage in the eyes that were induced to angiogenesis. In the human eyes, DARC activity predicted new areas of formation of subretinal fluid, and furthermore there was an association with greater DARC activity and larger subretinal fluid accumulation [5-8].

### #genetherapy #unexpectedresults #LHON

Mr Patrick Yu-Wai Man and collaborators recently published some unexpected findings. REVERSE is a phase 3 clinical trial investigating gene therapy in Leber Hereditary Optic Neuropathy (LHON), where only right eyes were randomly injected with treatment or sham. The left untreated eye was designated as the control. Much to the investigators' surprise, the untreated eye demonstrated sustained visual improvement (13+ ETDRS letters in the untreated eye versus 15+ ETDRS letters in the treated eye with no significant difference in final vision between the two eyes at week 48 of the study). By week 96, 78% had bilateral visual improvement. They subsequently conducted a non-human primate study, which showed evidence that the injected viral vector DNA had transferred to the ocular tissues (including retina and optic nerve) of the untreated eye. Previous work has suggested transneuronal spread of a viral vector is possible, but the exact cause for why a bilateral visual improvement was observed is yet to be elucidated [8-9].

### #eyemassager #wfh #eyestrain

Working from home is not going away any time soon. I saw a funny tweet that summed this up exactly, "another day of staring at the big screen while scrolling through my little screen so as to reward myself for staring at the medium screen all week" [10]. All these screens are enough to give you eye strain. Fear not, the RENPHO Eye Massager may be able to help. (Note: this is not medical endorsement for this product). The massage effect results from kneading, trigger point therapy, oscillating pressure and rhythmic percussion. RENPHO states that the product was "designed to target acupoints to relax tension and reduce headache". It also has built-in speakers with pre-recorded nature sounds, or you can connect with Bluetooth to your own music. RENPHO also say that if you have cataracts, have undergone ocular surgery, retinal conditions and "etc", you should not use this. Reviewers state this device helps with migraines / headaches, sleep, eye strain and relaxation [11-13].

### References

- <https://arstechnica.com/science/2020/12/heres-what-happens-when-a-bee-stings-you-directly-in-your-eyeball/>
  - [www.bbc.co.uk/news/av/uk-54911640](http://www.bbc.co.uk/news/av/uk-54911640)
  - [www.independent.co.uk/news/world/asia/man-blind-snakebite-covid-paralysed-b1759083.html](http://www.independent.co.uk/news/world/asia/man-blind-snakebite-covid-paralysed-b1759083.html)
  - [www.gofundme.com/help-ian-fight-deadly-cobra-bite-amp-covid19](http://www.gofundme.com/help-ian-fight-deadly-cobra-bite-amp-covid19)
  - [www.tandfonline.com/doi/full/10.1080/14737159.2020.1865806](http://www.tandfonline.com/doi/full/10.1080/14737159.2020.1865806)
  - [www.imperial.ac.uk/news/211233/predicting-wet-macular-degeneration-with-darc/](http://www.imperial.ac.uk/news/211233/predicting-wet-macular-degeneration-with-darc/)
  - [www.dailymail.co.uk/sciencetech/article-9067647/Eye-test-uses-AI-predict-macular-degeneration.html](http://www.dailymail.co.uk/sciencetech/article-9067647/Eye-test-uses-AI-predict-macular-degeneration.html)
  - <https://stm.sciencemag.org/content/12/573/eaaz7423>
  - [www.the-scientist.com/news-opinion/gene-therapy-in-one-eye-improves-vision-in-both-eyes-68255](http://www.the-scientist.com/news-opinion/gene-therapy-in-one-eye-improves-vision-in-both-eyes-68255)
  - [https://twitter.com/delia\\_cai/status/1330597127131684870](https://twitter.com/delia_cai/status/1330597127131684870)
  - [www.health.com/condition/headaches-and-migraines/renpho-heated-eye-massager](http://www.health.com/condition/headaches-and-migraines/renpho-heated-eye-massager)
  - [www.amazon.co.uk/RENPHO-Massager-Compression-Bluetooth-Rechargeable/dp/B07SM61FCT?th=1](http://www.amazon.co.uk/RENPHO-Massager-Compression-Bluetooth-Rechargeable/dp/B07SM61FCT?th=1)
  - <https://renpho.com/products/eye-therapy-massager>
- (All links last accessed January 2021)

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