

Optometry DistList

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- Indian Government to bring national policy on regulating eye care sector - PTI

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Date: 18 October 2017

From: Sneha Ananthkrishnan (iyers3012@gmail.com)

Subject: Scientists claim cause of Dyslexia may lie in the eyes – The Guardian

French scientists, Ropars and Albert le Floch, claim they may have found a physiological, and seemingly treatable, cause for dyslexia hidden in tiny light-receptor cells in the human eye.

In this study, the authors spotted a major difference between the arrangement of cones between the eyes of dyslexic and non-dyslexic people enrolled in an experiment.

In non-dyslexic people, the blue cone-free spot areas at the centre of the fovea in one eye – the dominant one, was round and in the other eye unevenly shaped. In dyslexic people, both eyes have the same, round spot, which translates into neither eye being dominant, they found. Each eye produces a slightly different image, which has the potential to confuse the brain.

“The lack of asymmetry might be the biological and anatomical basis of reading and spelling disabilities,” said the study’s authors.

The authors conclude: "The interplay between the lack of asymmetry and the development in the neural maturation of the brain pathways suggests new implications in both fundamental and biomedical sciences."

For full text article, please click here:

<http://rspb.royalsocietypublishing.org/content/284/1865/20171380>

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Date: 24 October 2017

From: Suharsha ([pvnsuharsha@gmail.com](mailto:pvnsuharsha@gmail.com))

Subject: An eye on autism – Optometry Today

A test that measures rapid eye movements could be used to identify a sub-group of patients with autism spectrum disorder was invented by scientist of University of Rochester.

Because of the wide range of symptoms expressed in individuals with autism spectrum disorder (ASD) and their idiosyncratic severity, it is unlikely that a single remedial approach will be universally effective. Resolution of this dilemma requires identifying subgroups within the autism spectrum, based on symptom set and severity, on an underlying neuro-structural difference, and on specific behavioral dysfunction. This will provide critical insight into the disorder and may lead to better diagnoses, and more targeted remediation in these subphenotypes of people with ASD.

Tracking rapid eye movements could help clinicians to identify a people with autism spectrum disorder (ASD) whose cerebellum structure is altered.

Research published in the European Journal of Neuroscience is based on a study where scientists tracked the eye movements of participants with ASD, who were asked to look at a moving target on a screen.

The task was designed so the focus of the participant would overshoot the target. In people without ASD, the brain adjusts eye movements as the experiment is repeated.

But those with ASD continued to miss the target suggesting that the motor controls in the part of the brain responsible for eye movement are impaired.

Study author, Dr John Foxe, said: "These findings build upon a growing field of research that show eye movement could serve as a window into a part of the brain that plays a role in a number of neurological and developmental disorders, such as autism."

For full text article, click here <http://onlinelibrary.wiley.com/doi/10.1111/ejn.13625/full>

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Date: 25 October 2017

From: Sandhya Shekar (sandhya.shekar@indiavisioninstitute.org)

Subject: The Thalamus Helps Regulate Binocular Vision Development – Reliawire

During childhood, the brain goes through critical periods in which its learning ability for specific skills and functions is strongly increased. It is assumed that the beginning and ending of these critical periods are regulated in the cortex, the outermost layer of the brain.

Now, scientists from the Netherlands Institute for Neuroscience have discovered that the thalamus, a brain region that passes on input from the eyes to the cortex, also plays a crucial role in opening the critical period of binocular vision.

### **Critical Developmental Periods**

Scientists have been investigating the mechanisms by which critical periods are switched on and off in the hope to extend or reopen them for the treatment of developmental problems. Half a century of research on how the brain learns to integrate visual inputs from the two eyes has provided important insights in critical period regulation, leading to the conclusion that it occurs within the cortex.

Using electrophysiological recordings in genetically modified mice, neuroscientist Christiaan Levelt and his team showed that this brain region, known as the thalamus, contains inhibitory neurons that regulate how efficiently the brain learns to integrate binocular inputs.

### **Binocular Vision and Albinism**

Levelt's team found that in contrast to what is generally assumed, plasticity of binocular vision also occurs in the thalamus itself, suggesting that this might be improved in children with albinism through training, who often have limited binocular vision due to misrouting of inputs from the eyes to the thalamus.

For complete article, click here <https://reliawire.com/thalamus-binocular-vision/>

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Date: 1 November 2017

From: Padhmanaaban Sampath (padhmanaaban.ivi@gmail.com)

Subject: New insight into photophobia – Optometry Today

A new study could aid understanding of why some people with eye disease, migraine headaches and concussions experience light sensitivity.

A recent research suggests that melanopsin plays a role in photophobia. Melanopsin is a blue-light sensitive protein in the eye that helps to establish circadian rhythms and restricts the pupil in response to bright light.

Researchers measured the pupil response and brain activity when they shone a pulse of light that stimulates melanopsin cells into the eyes of study participants.

They found that the visual pathway of the brain responded to the melanopsin stimulus. This is significant because the light used in the study only stimulates melanopsin cells and is invisible to the parts of the eye that are normally used for seeing.

Study participants also reported that the pulse of light was unpleasant, blurry, minimal brightening that quickly faded.

“Our results have clinical importance as melanopsin function may contribute to the discomfort that some people experience from bright light,” the authors concluded.

For complete article, please click here

<http://www.pnas.org/content/early/2017/10/30/1711522114>

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Date: 1 November 2017  
From: Dr Shrikant Bharadwaj (bharadwaj@lvpei.org)  
Subject: Clinical staff and Research optometrist positions vacant at LVPEI

The Hyderabad campus of Brien Holden Institute of Optometry and Vision Sciences (BHIOVS), L V Prasad Eye Institute is looking to hire smart, enthusiastic, energetic and academically inclined optometrists for various staff optometrist positions. The details of the positions are below:

1. Clinical staff optometrist for Ocularistry and Oculoplasty
2. Clinical staff optometrists for Cataract and Refractive surgery
3. Clinical staff optometrists for Comprehensive patient care clinics
4. Research optometrists for the visual optics and visual performance laboratories

BHIOVS offers a fantastic career opportunity for optometrists by providing a nurturing environment for pursuing academically oriented patient care, research and education. The optometrist for all aforementioned positions will be involved in patient care, research and mentoring of trainees.

The starting remuneration for the optometrist will depend on their experience level and will fit into the remuneration grid developed for optometrists at the institute. All staff optometrists have a transparent and robust annual performance appraisal and increments in remuneration will be dependent on the outcomes of the appraisal.

Interested candidates may apply with a cover letter and a latest copy of their CV to Dr Shrikant Bharadwaj at bharadwaj@lvpei.org by 15th November 2017.

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Date: 3 November 2017  
From: Apoorva Chauhan (apoo.rana@gmail.com)  
Subject: Indian Government to bring national policy on regulating eye care sector - PTI

The Union government is planning to frame a national policy to standardize the training and functioning of allied eye care professionals, including opticians, a health ministry official has said.

The allied eye care sector is unregulated and there is no uniformity in the standards of training for opticians. Thousands of unregulated opticians provide primary vision care ranging from sight testing to diagnosis and treatment, going beyond their brief.

According to government estimates, there are around 90,000 opticians who are neither registered under the National Programme for Control of Blindness (NPCB) nor have they completed a full-time graduate programme in optometry, a course which deals with the examination, diagnosis, treatment and management of diseases of the visual system.

The Union health ministry has decided to hold a meeting with various stakeholders including ophthalmologists, dispensing opticians, ophthalmic assistants, optometrists and other eye care providers in the country.

The aim of the meeting was to understand the variances in the standards in eye care related training particularly with respect to skills and competency of eye care providers who are non-doctors

As chemist shops are run under regulation and they have to have a pharmacist with them, even the optical shops should mandatorily have trained optometrists if they are prescribing spectacles and performing sight testing is what been recommended by various professionals.

One health ministry official said currently, several short-duration courses are being offered by institutes without appropriate didactic and practical guidelines and curriculum and those completing such courses lack knowledge and skills where they pose a great threat to the society," he said.

"The motto is to create a sustainable and effective policy for education and clinical care in the area of eye care, especially for the allied eye care professionals," the health ministry official said. All the stakeholders have been asked to prepare a three- minute presentation and express their views on issues and challenges in eye care, skills-based courses and any other policy recommendation.

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