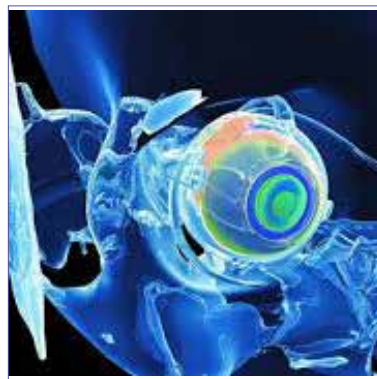
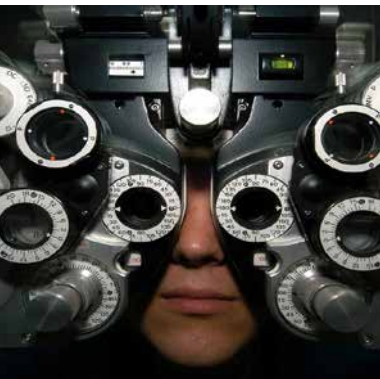


---

# Posters

---

## *Eye 2017*



3<sup>rd</sup> International Conference on

# EYE AND VISION

August 21-23, 2017 | Holiday Inn Toronto International Airport

970 Dixon Road | Toronto, ON | M9W 1J9

Toronto, Canada

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## Cornea crosslinking with verteporfin nonthermal laser therapy

**Saleh. A. Al-Ageel**

Prince sultan medical city, Saudi Arabia

This study is to test if corneas treated with combined verteporfin non-thermal laser therapy can increase corneal mechanical stiffness and increase resistance to enzymatic degradation. Human research corneas were obtained from Tissue Bank International (Baltimore, Maryland) and from North Carolina Eye Bank (Winston-Salem, North Carolina). Riboflavin 5'-phosphate sodium salt hydrate, 20% (w/w) dextran solution (from Leuconostoc mesenteroides) and collagenase A (from Clostridium histolyticum, E.C. 3.4.24.3) were obtained from Sigma Aldrich (St. Louis, Missouri). Barron R artificial anterior chambers were purchased from Katena Eye Instruments (Denville, New Jersey). The VEGA LED-based UV emitter was purchased from Costruzione Strumenti Oftalmici (Firenze,

Italy). Untreated corneas were dissolved in collagenase A in  $5.47 \text{ h} \pm 0.21$  hours. Cross-linked corneas demonstrated a slower rate of dissolution ( $20.06 \text{ h} \pm 1.23$  hours). We report for the first time that verteporfin non-thermal photodynamic laser increases corneal mechanical stiffness and resistance to enzymatic collagenase degradation. Although a clinical study of this methodology in human patients is still needed, our results suggest that verteporfin non-thermal photodynamic laser induces crosslinking cornea tissue that is like collagen crosslinking (CXL) using ultraviolet-A (UVA) irradiation combined with riboflavin. V-NLT could represent an alternative treatment for cornea ectatic diseases.

e: dr.salehalageel@gmail.com

 Notes:

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## Influence of orthokeratology lens on axial length elongation and myopic progression in childhood myopia

Su-Young Kim  
South Korea

**Objectives:** The objective of this study is to investigate the clinical effects of orthokeratology lens wear on inhibition of the myopic progression and axial length elongation in Korean children with myopia.

**Methods:** The authors reviewed out-patient records of 37 eyes of 19 patients wearing orthokeratology lenses. The 46 eyes of 23 patients wearing spectacles were included into the control group. We evaluated the relationship between orthokeratology lens wearing people and control group according to age, initial myopia, initial astigmatism and axial length elongation.

**Results:** There were no significant differences between two groups as for age, initial myopia, astigmatism, spherical

equivalent and axial length at baseline (t-test,  $p>0.05$ ). Significant reduction of refraction was shown in patients with wearing lenses after 1 year (t-test,  $p<0.001$ ). The mean axial length before and after 1 year was  $24.62\pm 1.39$  mm and  $24.73\pm 1.28$  mm respectively after lens wearing, and  $24.59\pm 0.74$  mm and  $24.80\pm 0.71$  mm respectively after wearing glasses. The axial length elongation was  $0.11\pm 0.12$  mm, and  $0.21\pm 0.07$  mm in patients with wearing lenses and glasses, respectively, which showed statistically significant difference (t-test,  $p<0.0001$ ).

**Conclusions:** The orthokeratology lens was found to be effective in suppression of myopic progression through less axial length elongation, compared with the glasses.

e: [pearlksj@gmail.com](mailto:pearlksj@gmail.com)

 Notes:

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## The impact of sub specialization in Ophthalmology on service delivery in a developing country

Oseluese Dawodu and Valentina Okeigbemen  
University of Benin Teaching Hospital, Nigeria

Sub specialization in different aspects of Ophthalmology has been the norm in developed countries for many decades. Many ophthalmologists practicing in developing countries including Nigeria are general ophthalmologists

The impact of additional training (Fellowship in Paediatric Ophthalmology and Adult Strabismus) on service delivery is elucidated in this paper.

The training resulted in acquisition of new skills resulting in expansion of the scope of practice, improvement in the management of medical and surgical ophthalmology patients with better outcome of surgeries.

This improved quality of care resulted in a rapid uptake of services leading to an increase in the number of children attending the outpatient clinics, and those having surgeries and in-patient care.

Challenges in bridging the gap between the practice of ophthalmology in developed and developing countries remain, the most important of which is lack of equipment due to high cost and difficulties with maintenance.

**Conclusion:** Training is a very strong component of service delivery. Donor agencies who wish to assist developing nations improve their eye care program would best serve by using available resources in human capacity development (Training) and provision/maintenance of valuable equipment.

e: oselused@yahoo.com

 Notes:

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## Causes of childhood blindness at National Eye Centre Kaduna, Nigeria from January 2011 to December 2015

Ezinne Ngozika Esther, Nnadi and Onoikhua  
Madonna University Nigeria

**Objectives:** The objective of this study is to determine the causes of blindness among children (aged 0-18 years) seen at National Eye Centre, Kaduna from January 2011-December 2015.

**Methods:** The study involved review of case files of 2145 records of children aged 0-18 years who visited National Eye Centre, Kaduna from January 2011-December 2015. Those diagnosed based on WHO criteria for blindness as been blind were identified and causes of blindness among them were categorized according to gender, age and laterality, preventable, treatable and avoidable causes of blindness. Frequencies and descriptive tables were generated using the Statistical Package for Social Sciences (SPSS) version 16.0. Chi squared test, student's t-test were used to compare means and values were considered statistically significant at  $p < 0.05$ .

**Results:** A total of 2145 children case files were reviewed, 789 (36.8%) children had childhood blindness. The major causes of childhood blindness were cataract (52.6%), retinal disorders (14.1%), glaucoma (10.3%), corneal opacity (5.7%), refractive error (5.6%) and others (11.8%). 19.5% were visually impaired, 14.5% were totally blind (NLP) and 5% had low vision/reduced vision in at least one eye. Childhood

blindness was more prevalent among children aged 5 to 12 years (38.1%) and birth to 1 year (20.7%). There was statistically significant difference in gender males (57.4%) and females (42.3%). 58.2% of the causes of blindness found in the study are treatable, 16.0% are preventable while 25.8% are avoidable.

**Conclusion:** Blindness is a serious public health problem in the northern part of Nigeria, and there is urgent need to implement comprehensive childhood blindness prevention programs. Further surveys are essential to confirm these findings and determine the causes of childhood blindness in other parts of Nigeria to achieve VISION 2020 objectives.

### Speaker Biography

Ezinne Ngozika Esther is a Nigerian. She studied optometry at Abia State University Uturu Nigeria and obtained the Doctor of Optometry Degree in 2006. She is very Passionate about Optometry Profession and has worked with Orbis International and Brien Holden vision Institute. She is interested in Pediatric optometry and Low vision. She has worked as a lecturer at the University of Gondar Ethiopia, Mzuzu University Malawi and Madonna University Nigeria. Currently, she is a postgraduate student of University of Kwa Zulu -Natal Durban South Africa. She has eight Research Publications, has 5 siblings and likes reading, watching television and listening to music.

e: ezinne.ngozi@gmail.com

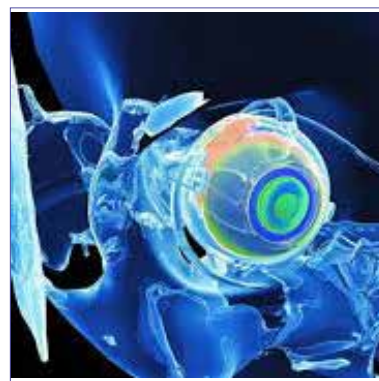
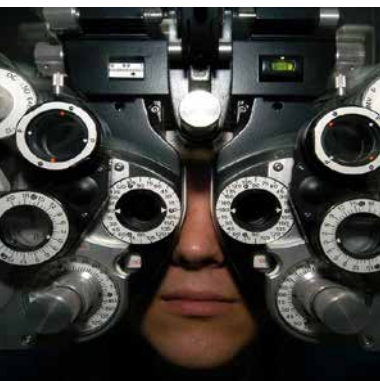
 Notes:

---

# e-Posters

---

## *Eye 2017*



3<sup>rd</sup> International Conference on

# EYE AND VISION

August 21-23, 2017 | Holiday Inn Toronto International Airport

970 Dixon Road | Toronto, ON | M9W 1J9

Toronto, Canada

## OCT-Angiography: an essential diagnostic system

Javier Ruiz Lopez, Angel Garcia Garrigos, Andres Navarro Mingorance, Claravision, ESPANA.  
Optometry in University of Granada, Spain

**Purpose:** Showing the clinic relevance for the ocular professionals of this innovative technique, dye-less OCT-Angiography, to diagnose and follow up retinal and choroid all vascular diseases. Methodology & Theoretical Orientation: To get Angio-Oct, we have used the 3D Optical Coherence Tomography DRI OCT Triton of TOPCON. OCT- Angiography is a technique that allows us to follow-up vascular retinal pathologies, without injecting any dye. In this way it is possible to obtain information about the intravascular flow of the different internal and external layers of the retina, as well as the choroid using the same procedure as the capture of an optical coherence tomography. Its ability to display a detailed map, layer selective, of the capillary plexus makes this technique to consolidate as a reference at the diagnosis tests of pathologies. Clinic cases: Three clinical cases will be reported showing different pathologies of different patients with relevant vascular affection, to show the performance of this new test. We report a case of venous thrombosis combined with diabetic retinopathy, another case of age-related macular degeneration, and

at last a case of glaucoma. Retinography images, optical coherence tomographies and angiography-OCT (Figure 1) will be shown from the three patients. Conclusion: The use of OCT-Angiography for the diagnosis of retinal pathologies is of high impact, its advantages over known techniques: dye-less, non-invasive, layer selective, repeatability of the test, rapid technique, more comfortable for the patient, costs of follow-up study decrease, among others.

### Speaker Biography

Javier Ruiz López1: Performs his profesional as optometrist in Ópticas Claravisión. Got his degree in Optics and Optometry in University of Granada in 2015. Master in Advanced Optics and Optometry.

Angel García Garrigós2: Performs his profesional as optometrist in Ópticas Claravisión. Got his degree in Optics and Optometry in UGR in 2002, Master in clinical Optometry.

Andrés Navarro Mingorance3: Performs his profesional as optometrist in Ópticas Claravisión. Got his degree in Optics and Optometry in UGR in 1999, Master in clinical Optometry. Expert in Orthoqueratology and Scleral lenses by UA.

e: j\_ruizlo@hotmail.com

 Notes:

**Effect of Anti-inflammatory treatment on intraocular pressure after selective laser trabeculoplasty**

Laura Palmero Fernandez  
Hospital Clinico San Carlos, Spain

**Statement of the Problem:** Topical steroids are known to increase intraocular pressure (IOP). The purpose of this study is to analyze the effect of anti-inflammatory drops (i.e. comparing topical corticosteroids versus non-steroidal anti-inflammatory drugs - NSAIDs) on intraocular pressure following Selective Laser Trabeculoplasty (SLT).

**Methodology & Theoretical Orientation:** 37 consecutive patients with open-angle glaucoma were randomly allocated into 2 treatment groups after a SLT procedure: ketorolac 0.5% (Acular®, N = 19) and fluorometholone 0.1% drops (FML®, N = 18). IOP was measured 1h, 24h, 1 week, and 1, 3 and 6 months after SLT.

**Findings:** IOP reduction was significant in both groups (mean reduction  $5.22 \pm 3.55$  mmHg in the ketorolac group, and  $5.19 \pm 3.57$  mmHg in the fluorometholone group,  $p < 0.001$ ). There were no statistically significant differences in IOP between both groups through follow-up, except significantly lower IOP in the ketorolac group at 3 months ( $18.14 \pm 2.49$  mmHg) than in the fluorometholone group ( $20.88 \pm 3.24$  mmHg,

$p = 0.009$ ), with no differences at 6-month follow-up (mean IOP in both groups  $19.09 \pm 3.08$  mmHg, and  $19.69 \pm 2.85$  mmHg, respectively,  $p = 0.575$ ). There were no statistically significant differences in mean IOP in the first 24 hours following the procedure ( $22.26 \pm 4.73$  in the ketorolac group and  $24.36 \pm 5.76$  mmHg in the fluorometholone group,  $p = 0.236$ ).

**Conclusion & Significance:** The anti-inflammatory treatment after SLT does not seem to have a short-term effect on the ocular hypotensive efficacy of selective laser trabeculoplasty, nor on the incidence of hypertensive peaks in the early post-treatment follow-up.

**Speaker Biography**

Laura Palmero Fernandez is an Ophthalmologist based in Madrid, Spain. She currently combines her work at King Juan Carlos University Hospital with a private practice. Her subfield of expertise includes cornea and ocular surface diseases, and cataract and refractive surgery. Her research is focused on keratoplasty techniques, keratoconus and challenging cornea cases.

e: laurapalmerof@gmail.com

 Notes:

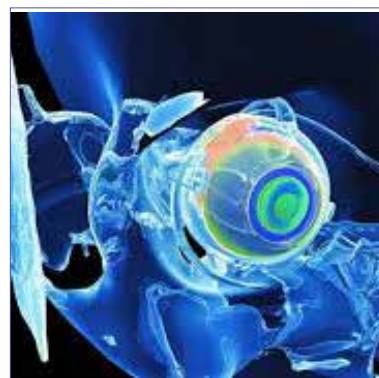
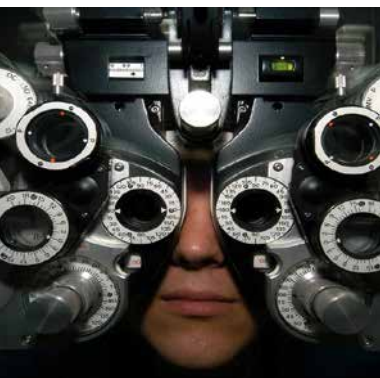


---

# Accepted Abstracts

---

## *Eye 2017*



3<sup>rd</sup> International Conference on

# EYE AND VISION

August 21-23, 2017 | Holiday Inn Toronto International Airport

970 Dixon Road | Toronto, ON | M9W 1J9

Toronto, Canada

3<sup>rd</sup> International Conference on

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## Your Website Probably Sucks

**Daniel Feldman**

Dbadesigns/The Visionaries Group, USA

Like most optical businesses, you probably have a website. It was probably built years ago by someone you haven't chatted with in just as long. While your website lounged about online, the world changed around it. Your competitors have moved ahead with new sites. New competitors that didn't even exist when you last updated your website have now taken market share from you and continue to erode your market share, whether you are in a city of one thousand or ten million. There are 3 ½ billion people online around the world. Over 80% of the population of the US and Canada have an internet connection. Your website is your online brochure, your practice concierge, serving your prospective and current patients and customers 24 hours a day, 7 days a

week, 365 days a year. Does your website live up to the look, the feel, the experience of your practice or is it some cheap distant facsimile of what you never were, are not today and certainly will not be tomorrow? In this class, we will explore modern optical websites. We will discuss what every ECP website should have and shouldn't. We will discuss SEO (Search Engine Optimization). We will talk about the mobile revolution and why your website must be mobile friendly. We will learn how to get people to visit your website and how your website should convert a browser into a patient and consumer.

e: [daniel@dbadesigns.com](mailto:daniel@dbadesigns.com)

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## Prevalence and pattern of refractive errors among secondary schools students in sulaimaniya city-kurdistan region-iraq

Ali A Taqi

University of Sulaimani, Iraq

**A**wareness of poor visual acuity that can be treated easily and effectively in the student groups can add positively for their quality of life and quality of their study

**Study design and test sample:** a descriptive cross-sectional study done among students aged 14–19 years in secondary schools in sulaimani city from six secondary schools both male and female are enrolled

**Aim and objectives:** to determine the prevalence and pattern of refractive errors in this students group and determine the prevalence of different types of refractive errors which include (myopia, hypermetropia & astigmatism),

**Subjects and methods:** the total of 848 students aged 14–19 years, were examined. Examination included visual acuity testing by e chart, and refraction was done for those having visual acuity less than 6/6. The refractive errors of the students' eyes were measured using streak self-luminous retinoscopy and non-cycloplegic auto-refraction

**Results:** out of 848 students, 737 (86.9%) were emmetropic (normal visual acuity) and 111 (13.1%) were ametropic. Of

those 111 students, myopia with myopic astigmatism was the commonest types: 41(36.9%), and 52(46.8%) students respectively. Hypermetropia found in 14(12.6%) students. Anisometropia was found in seven (6.3%) students, represents (0.8%) of the sample. Amblyopia was found in 11(10%) students, of overall sample (1.3%) had amblyopia. Only one had bilateral amblyopia. Bilateral vision correction to 6/6 was found in 81(73%) students, (9.6%) of the study sample, six (5.4%) students (0.7%) had unilateral correction to 6/6, nine (8.1%) students (1.1%) had bilateral correction to 6/9, and 15(13.50%) students, overall represents (1.8%) of them, their vision was correctable to less than 6/12. Those having glasses earlier were 35(31.50%) students represent (4.1%) of the sample while 76(68.50%) student need glasses.

**Conclusion:** prevalence of refractive errors was 13.1% of the sample. Simple myopia was the most prevalent refractive errors that corrected to 6/6, while. Amblyopia was more common in hypermetropic. Anisometropia was the least common of the sample.

e: [ali.taqi@univsul.edu.iq](mailto:ali.taqi@univsul.edu.iq)

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## Visual-manual tracking in antiorthostatic hypokinesia (“BedRest”)

**Dmitrii O. Glukhikh**

Ssc of rf – ibmp of ras, Russia, University caen basse, France

During examinations of 23 subjects (12 in the control group) in antiorthostatic hypokinesia (lying position in experimental bed with  $-70^\circ$  angle) of 2 months model experiment “BedRest”, visual-manual tracking (VMT) parameters were studied. In the study of VMT eye movements were recorded by electrooculography method (EOG), hand movements – by a joystick using biological visual feedback (on the screen represented the current angle/position of the joystick). Examinations were conducted using computerized stimulation programs, which were presented on the screen of the hardware-software complex “Sensomotor” (smoothly linearly and sinusoidally on the horizontal and vertical planes, with a 0.16 Hz frequency in  $\pm 10^\circ$  range). We analyzed time, amplitude and velocity characteristics of the visual and manual tracking (VT and MT), including efficiency ratio and gain as ratios of respectively amplitudes and velocities of eyes/hand movements to the stimulus movement. Studies were carried out once before the experiment (on 9-10 days before the bedrest - baseline data collection), during the experiment on 3, 5, 10, 25, 40, 58 days of BedRest. After completion of the experiment,

examinations of VMT were carried out on 1, 3(4), 7-10 days. According the results, during assessment of the parameters of VMT it follows that antiorthostatic hypokinesia affects not only on the characteristics of eye movements tracking, as evidenced by an increase in the latency of reaction, change in accuracy and velocity of visual stimulus tracking but also changes in accuracy of important indicator of the operating activity - manual tracking. Total reaction time of the VT was significantly lower (!) than the BDC during stay in experimental bed and in the first days after experiment, same reaction we can see and after SF. It was found that the conditions of antiorthostatic hypokinesia have a greater impact on the accuracy of the VT than the accuracy of MT. Full return of characteristics of the VMT to the baseline was observed only on R+10 days after experiment. Comparison of the results obtained at cosmonauts after long-duration space flight, with the results of “BedRest” experiment showed the similarity of character changes of measured parameters of VMT, but changes after SF were more pronounced than after «BedRest».

e: [dmitry.glukhikh@gmail.com](mailto:dmitry.glukhikh@gmail.com)

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## Scleral Lenses, Mexican Experience

Jose Luis Monroy  
Mexico

Statement of the Problem: Keratoconus is a progressive and idiopathic disease in which the cornea develops into an irregular and conic shape. The clinical signs include thinning of the cornea in its central or paracentral region, an apical protrusion that result an irregular astigmatism, and this condition can progress 1 . Keratoconus is the most common form of dystrophy or corneal ectasia, with an incidence of 50–230 per 100,000 persons<sup>2</sup>. In Mexico, the research on keratoconus is scarce; the articles published show statistics that are similar to those in international literature, which indicates a higher prevalence in male patients with a mean age of 24.5 years<sup>3</sup>. The incidence is about 1/2000 people in the general population in Mexico<sup>4</sup>. Medical management with scleral lenses is a viable treatment for vision rehabilitation. Methodology & Theoretical Orientation: Retrospective, cross-sectional, observational, descriptive study of 66 patients with diagnosis of keratoconus and other secondary ectasias post refractive surgery those who were

followed from 2014 and we fitting them with scleral contact lenses. Findings: We have found two particular situations in patients fitted with scleral lenses in Mexico: in 80% of cases a significant impingement occurs in the scleral area with lens diameter of 15.8 mm and above and due to this peripheral areas need very flat for better alignment of the edge with the sclera or smaller diameters. The other situation is that in 34% of cases have made the adjustments to the front surface due to the presence of residual astigmatism resolving this situation with Toric designs. Conclusion & Significance: Scleral lenses provide excellent vision correction and superior comfort compared to traditional contact lens options for the management of keratoconus and other ectasias post refractive surgery. In most of cases Scleral lenses provide a really visual rehabilitation. Scleral lens should be considered before surgical intervention. However lens designs should be improved especially in the landing zone.

e: jlmonroy\_99@yahoo.com

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## Trifocal lenses for patients with glaucoma. A controversial decision

Angela Maria Garces Valencia  
Choco - Colombia

There is great controversy about the use of advanced technology lenses such as toric lenses and trifocal lenses in patients with glaucoma, since the interface of this type of lens causes a loss of energy in the transition zone that could mean a decrease of Visual gain and decreased sensitivity to contrast in patients where the decrease in contrast may be had been altered by the disease. However, these patients are entitled to consider the implantation of a better technology intraocular lens, such as trifocal lenses, in order to obtain the benefit of the independence of the frame lenses using an intraocular lens that allows them to improve the visual quality at Different distances. The purpose of our study was to evaluate visual outcomes in patients with glaucoma suspected and mild glaucoma

candidates for cataract surgery and trifocal intraocular lens implantation. A longitudinal, prospective, experimental and analytical study was performed. In the methodology: Patients with cataract and diagnosis of mild or glaucoma suspected who had visual field, optic nerve tomography and contrast sensitivity study were included and underwent cataract surgery by phacoemulsification with intraocular lens implantation (Trifocal AT LISA tri 839 MP). It was concluded that Visual results obtained at different distances with the trifocal design indicate that this emergent technique is an alternative for candidates with mild glaucoma or glaucoma suspected without the procedure altering its follow-up or modifying the sensitivity to contrast.

e: [angelagarces21@hotmail.com](mailto:angelagarces21@hotmail.com)

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## Use of non-pedicled conjunctival flap in corneal perforations

Robin Rios, M.D.

Hospital Luis Vernaza, Ecuador

**Objective:** Available treatments of corneal perforations can range from temporary or short-term solutions to more complex repair. The cornea surgeon will choose about it depending on the underlying disease and taking in count the size, extent of stromal involvement, location of the perforation and visual potential. When there is a deficit in access to a corneal tissue and you are facing an emergency to solve, but you want to maintain an integrated ocular surface, thinking about the possibility of a new surgical intervention, the use of non-pedicled conjunctival flap could be a good alternative.

**Methodology:** We described the use of non pedicled conjunctival flap in 8 cases of non-traumatic corneal perforations and impending perforations. This kind of

treatment has not previously been described. All patients had been treated first for microbial keratitis, and nonetheless progressed to corneal ulceration with stromal thinning.

**Results:** Six (6) patients had a cure or complete remission of their disease within 4 to 8 weeks of their surgery, leaving an ocular surface intact, and ready for a corneal transplant in a future. The other two patients did not have a good evolution and their flaps disintegrated by advancement of the ulcer so they needed a new surgery (a new flap or a scleral patch).

**Conclusions:** Non pedicled conjunctival flaps are a very good option for the treatment or corneal perforations especially when donor tissue is not timely available..

e: robinrios@hotmail.com

# EYE AND VISION

August 21-23, 2017 | Toronto, Canada

## IND enabling study of transplanting clinical grade neural progenitor cells for the treatment of retinal degeneration

Shaomei Wang  
Los Angeles, CA

**Statement of the problem:** Age related macular degeneration (AMD) is the major cause of blindness with huge financial and social impact. Unfortunately, treatment is still very limited. Advance in stem cell biology offers real promise to save vision. Current stem cell-based therapies in clinical trials to treat AMD aim to replace retinal pigment epithelium (RPE). However, reported efficacies have been inconsistent, often poor, and the mechanisms of retinal protection remain poorly defined. RPE replacement strategy is complexed by several factors. Grafting early on is prohibited by diseased RPE cells still occupying Bruch's membrane (BM), whereas the problem with grafting too late is that insufficient numbers of functional photoreceptors remain. The co-dependency between RPE and photoreceptors leaves a narrow window of time in which interventions have the best chance of success. Another important consideration for RPE cell grafts is that BM undergoes progressive degeneration in AMD. Studies have clearly demonstrated that healthy RPE fails to resurface BM in both animal experiments and clinical trials.

An alternative cell type that does not require attachment to BM, preserves vision, and reduces the burden of aging RPE cells may be a viable option for treating AMD.

**Methodology & Theoretical Orientation:** Clinical grade NPCs were injected into the sub retinal space of rodent model for retinal degeneration to validate its efficacy and large animal model-Yucatan mini pig to test the feasibility of delivering viable NPCs. At several time points, visual function was examined by electro retinography (ERG and optokinetic

response (OKR); retinal lamination and graft distribution was evaluated by spectral domain optical coherence tomography (SD-OCT). Histological correlation with visual function was performed.

**Findings:** NPCs survived for long term, migrated extensively in the sub retinal space and offered dramatic preservation of photoreceptors. NPCs preserved RPE cell integrity, self-assembled as a layer in graft-secreted extracellular matrix (ECM) that did not require attachment to BM while offering vision preservation. NPCs reduced the burden of RPE cells by phagocytizing and degrading

Photoreceptor outer segments. NPCs were successfully delivered to the sub retinal space of Yucatan mini pig in the setting similar to human clinic; visual function was not affected by sub retinal injection of NPCs as measured by ERG. Retinal detachment due to the initial sub retinal injection was quickly reattached as revealed by SD-OCT.

**Conclusion & Significance:** As an alternative cell type to RPE cells, NPCs offer dramatic photoreceptor and vision preservation without needing to the attachment to the BM. NPCs survive for long term and migrate extensively from injection site. NPCs can be successfully delivered to large animal model without affecting retinal function. NPCs hold real potential for preserving existing retinal anatomy and function.

e: Shaomei.Wang@cshs.org