



THE UNIVERSITY OF  
MELBOURNE

FACULTY OF  
MEDICINE  
DENTISTRY  
& HEALTH  
SCIENCES

# Department Newsletter

April 2015

Optometry & Vision Sciences



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## Head's Report

A/Prof Allison McKendrick

Welcome to our first newsletter of 2015. The department is now settled into the Melbourne School of Health Sciences, within the Faculty of Medicine, Dentistry and Health Sciences (from January 1st) and we are enjoying exploring expanded opportunities for inter-professional engagement with the other health professions. Several initial examples of enhanced engagement with the other health professions are evident within this newsletter, including the report from our OD students (page 12) that describes some of their experiences on multidisciplinary student committees and also at the "Teddy Bear Hospital".

We are very pleased to be working with The Royal Melbourne Hospital via the RMH Ophthalmology@UMeyecare Clinic. We hope you enjoy reading about this initiative (page 4). It is providing a new, highly valuable, teaching experience for our OD students.

This newsletter also highlights some of our recent international activities. Of particular note is the formalisation of close ties with the Medical Research Foundation, Chennai, India. The Medical Research Foundation (Sankara Nethralaya) is a truly unique organisation with extensive patient facilities and internationally noted medical research. I was fortunate to visit MRF in January 2014 (along with a delegation of DOVS staff) and can attest to the unique environment for eye care and education provided by this facility. DOVS is building a programme of collaborative research and clinical teaching links with MRF and the associated Elite School of Optometry that we hope to expand over the coming years.

Our recent research activities are summarised in the publication list and short descriptions on page 10. Please contact us if you'd like more information, or a copy, of any of these works. The content of many of these papers has been presented at international conferences and the high representation of best-ranking international journals in the scientific discipline of "Ophthalmology and Optometry" is a testament to the hard work of our research staff and students.

Finally, we are hoping to engage more DOVS alumni in our activities in 2015. We are always happy to have alumni visit the department, visit UMeyecare, and to engage with our students. We would also welcome any "Alumni news" to highlight in our next newsletter. Please note the dates of our upcoming "Reunion Tours" (page 8). We hope to see you at these or other events during the year.

## Department

### Memorandum of Understanding signed with the Medical Research Foundation, Chennai

A Memorandum of Understanding was signed between the University of Melbourne represented by the Faculty of Medicine, Dentistry and Health Sciences and the Medical Research Foundation (Sankara Nethralaya), Chennai at a special function on the 7th of January 2015 in Chennai. The parties that made this possible were the Department of Optometry and Vision Sciences, University of Melbourne and the Elite School of Optometry, Sankara Nethralaya. The signatories on the day representing the two organisations were Dr. Badrinath for the Medical research Foundation and Professor Trichur Vidyasagar for the University of Melbourne. The occasion also included the inauguration of the Neuro-Optometry Clinic by the Chennai institution, which will involve ophthalmologists, optometrists and neurologists in research, diagnosis and management of ocular problems arising out of brain injuries of all sorts. With the eye hospital catering to around 250,000 patients a year and having excellent top-of-the-range facilities for eye care and expanding resources for cutting-edge research, the MoU heralds a new emerging phase of collaboration with the University of Melbourne in research, teaching and clinical practice.



Sagar also had the opportunity to witness first-hand the eye-screening programme run by the Elite School of Optometry. Thousands of children in public schools across Chennai get tested once every two years. As part of this programme, on 6th of January, 22 teams comprising 190 members (staff and students of ESO and ophthalmologists from Sankara



Nethralaya) tested a total of 2862 children in 39 schools located in some of the poorest sections of the city. It was a three-phase structured programme that consisted of basic vision screening including refraction and binocular vision and referral for other ocular and associated systemic or neurological conditions. Of the children tested, 111 (3.9%) will be given free spectacles and 120 (4.2%) were referred to the main hospital (Sankara Nethralaya) for various vision related issues.

## Department

### ASEAN Optometric Conference 2014

One of our lecturers, Dr Kwang Cham, has just returned from attending the 5th ASEAN Optometric Conference 2014 in Singapore.



***From left: Dr Tan Kah Ooi (Chairman of the Scientific Committee), Ms Shirely Loh (Professional Affairs Manager of J & J), Dr Cindy Tromans (FEAEO, College of Optometrists UK & Central Manchester University Hospitals NHS Trust, UK), Dr Kwang Cham***



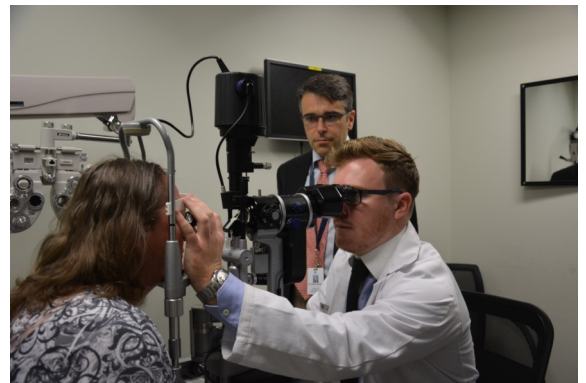
## Collaboration between UMeyeCare clinic and Royal Melbourne Hospital

It has been an exciting start to the year for UMeyecare, with The Royal Melbourne Hospital opening a satellite ophthalmology service at the clinic. The collaboration between The RMH and the University of Melbourne is aimed at increasing access to services for eye out-patients of The RMH, as well as providing DOVs students with valuable clinical experience. This is a significant clinic not only for The RMH and DOVS, but also represents a new level of engagement with the provision of public health care by the Faculty of Medicine, Dentistry and Health Sciences.

Through the initiative, students have the opportunity to conduct initial assessments, book patients into appropriate procedures at RMH and gain first-hand experience working with ophthalmologists, all within in a familiar environment.

Bruce Ma, an OD4 student, said of the RMH Ophthalmology@UMeyecare Clinic: "There is always some apprehension among optometry students when working with ophthalmologists however the RMH clinic at UMeyecare allowed me to see how an ophthalmologist works and thinks in a supportive environment."

Fellow student Jessica Truong added after her second session of being in the clinic. "The RMH Ophthalmology@UMeyecare Clinic was a great experience and opportunity to strengthen the optometry-ophthalmology relationship. It was great to see some interesting cases and have the link between optometry and ophthalmology – from working up the patient, making a diagnosis and management under the guidance of A/Prof Symons."



Clinic Director, Daryl Guest, commented "As with all new clinics there has been some logistical challenges. What has been noticeable is the goodwill in the clinic. The initial uncertainty of the hospital patients as they check to see if they are in the right building soon changes to engagement as they are greeted, registered and taken to the consulting rooms by the students. The liveliness, activity and energy of the clinic is infectious. The patients are appreciating the attention of the students and the focussed care overseen by Andrew Symons and the staff optometrists."

The patient journey in the clinic starts with the OD4 student taking a focussed history based on the referral, screening tests, tonometry and dilation, a refraction to get best corrected visual acuity and then assessment of ocular health. Staff optometrists oversee the students during this phase. OCT, Visual Fields and other specialised tests are done on indication. Dr Symons goes from room to room as the students are ready. The student presents to the patient to Dr Symons, who confirms the key findings and discussed the agreed management with the patient and student. If time allows the students gather at the end of the session



with Dr Symons to debrief on the important patients seen that day.

RMH ophthalmology and DOVS are currently engaged in conjoint research into adaptive optics in imaging microvascular retinal changes in disease and animal models of retinal disease. The establishment of the RHM satellite clinic at UMeyeCare further builds on this relationship in a way that benefits students, patients and the profession at large.

## Teaching & Learning

### Graduating Class of 2014

Congratulations to our first cohort of Doctor of Optometry students, who graduated at a ceremony at the Royal Exhibition Buildings on Wednesday December 17. All have secured optometry jobs and will be working in a number of different practice styles and locations—some in cities or rural locations, and some interstate.

We wish them all the best in their future careers.

Ms Julie Martin

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Dr Michael Pianta

[mjp@unimelb.edu.au](mailto:mjp@unimelb.edu.au)





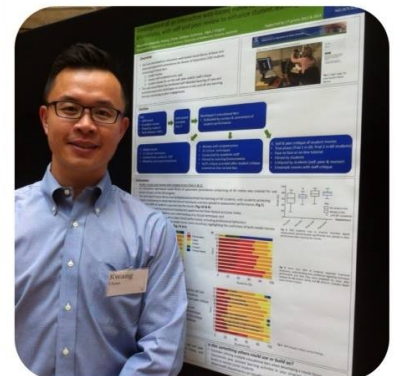
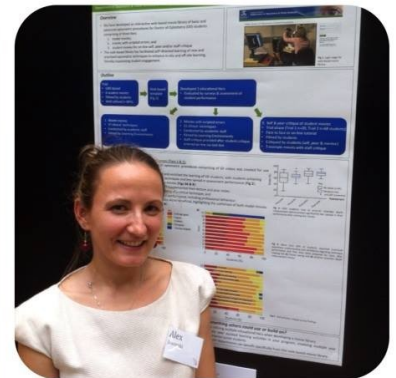
## Teaching & Learning

### Innovation and Excellence in Learning and Teaching Seminar

The department were very honoured to have 2 poster presentations at the Innovation and Excellence in Learning and Teaching seminar when only 30 projects were invited across the whole University!

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martinja@unimelb.edu.au

Dr Michael Pianta  
mjp@unimelb.edu.au



## Teaching & Learning

### Successful Application for STMP (Short Term Mobility Program Grant) for Final Year Optometry Students

In 2014 the the Department of Optometry and Vision Sciences was successful in a grant application to the Australian Government for STMP funding. This \$21500 grant will assist 10 2015 OD4 students with funding of \$2000 each to toward their overseas capstone experience. The 10 successful students and the sites they are travelling to are:

Ms Julie Martin

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Dr Michael Pianta

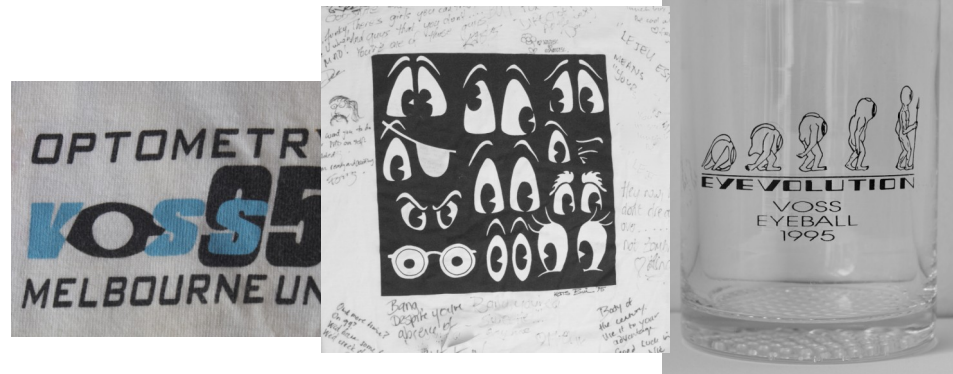
[mjp@unimelb.edu.au](mailto:mjp@unimelb.edu.au)

- ⇒ Michelle Lucas, State University of New York
- ⇒ Elton Phung, University of Waterloo
- ⇒ Dean Garnett, University of Waterloo
- ⇒ Mahsa Hassanpour, Connecticut Dr Jim Thimmons
- ⇒ Marline Sery, University of Waterloo
- ⇒ Marguerita Worm, University of Waterloo
- ⇒ Jessica Truong, University of Illinois
- ⇒ Victoria Grimsey, Connecticut Dr Jim Thimmons
- ⇒ Ayesha Senadeera, University of Illinois
- ⇒ Sebastian Cheung, Connecticut, Dr Jim Thimmons

# Alumni

## Upcoming reunion tours

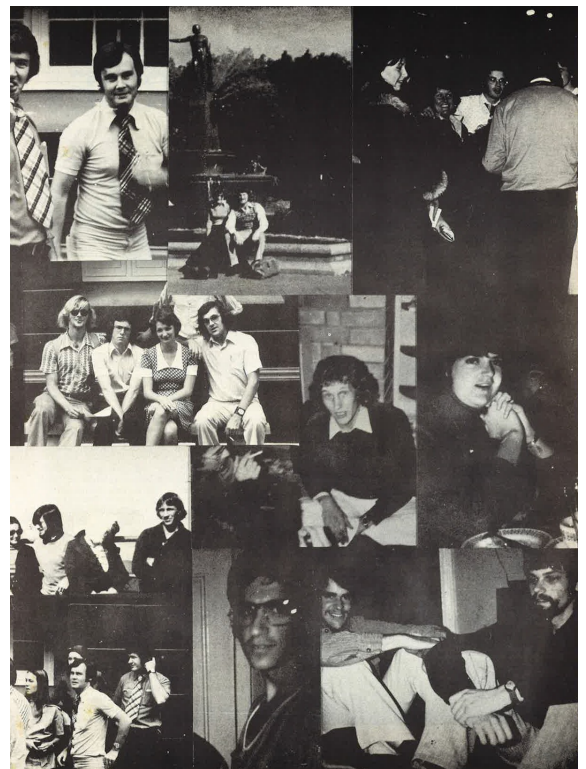
Is there something familiar about these objects?



Dr Bang Bui

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Do you recognise these faces?



Were you part of the graduating class of '75, '85, '95 or 2010?

If so, the department warmly invites you to return in 2015 for a reunion tour!

The reunion tours offer an opportunity for department alumni to explore the new on-campus training facilities, the expanded UM EyeCare clinic, and research laboratories. If attendees wish to, they are also invited to a dinner nearby, which is a chance to catch up and reconnect with old friends from the department.

Reunion dates are as follows:

5 Year Reunion Tour—Tuesday June 9, 6:30-7:15

20 Year Reunion Tour—Thursday June 11, 6:30-7:15

30 Year Reunion Tour—Tuesday June 16, 6:30—7:15

40 Year Reunion Tour—Thursday June 18, 6:30—7:15

\*There is no 10 year reunion as there was no graduating class in 2005.

If you are interested in upcoming reunion tours, or wish to be added to the alumni mailing list, please contact Thomas Cougan ([tcougan@unimelb.edu.au](mailto:tcougan@unimelb.edu.au), Ph. 8344 7003)





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2015

# Graduate Programs for Optometrists



## Department of Optometry & Vision Sciences

*Evidence based training leading  
to a specialist qualification*

<http://www.commercial.unimelb.edu.au/optometry>

Specialist Certificates offer optometry clinicians the opportunity to keep abreast of new developments in specialised areas of optometry. All components are conducted exclusively online in a supportive and collaborative environment. The following units are beginning in second semester 2015:

**OPTO90006 Management of Anterior Eye Disease** This Specialist Certificate/subject will allow optometrists to advance their clinical capabilities in the day-to-day management of eye disease by affording them the opportunity to review the most current theories on the pathophysiology, diagnosis and management of anterior eye disease, thus preparing them to better embrace changes in the scope of optometric practice.

**OPTO90010 Management of Paediatric Patient** This Specialist Certificate/subject covers central issues within the field of paediatric optometry, with the aim of developing each enrolled optometrist's capacity for highly evolved communication and co-management with other professionals involved in paediatric assessment and care.

For more information on specialist certificates visit: [www.optometry.unimelb.edu.au/courses/Special\\_Cert](http://www.optometry.unimelb.edu.au/courses/Special_Cert)

## Research & RHD Matters

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Dr Andrew Anderson

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Prof Trichur Vidyasagar

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### Departmental & Staff Publications (August 2014—November 2014)

- ⇒ **Older age results in difficulties separating auditory and visual signals in time**  
Chan YM, Pianta MJ, McKendrick AM. J Vis. 2014 Sep 24;14(11).  
*We find that the impact of age on audiovisual synchrony perception cannot be explained by decline in unisensory (i.e. auditory or visual) sensitivity alone.*
- ⇒ **Reduced audiovisual recalibration in the elderly**  
Chan YM, Pianta MJ, McKendrick AM. Front Aging Neurosci. 2014 Aug 27;6:226.  
*Perceived synchrony of visual and auditory signals can be altered by exposure to a stream of temporally offset stimulus pairs. We find that audiovisual synchrony perception adapts less with advancing age.*
- ⇒ **TLR9 and TLR7/8 activation induces formation of keratic precipitates and giant macrophages in the mouse cornea**  
Chinnery HR, Leong CM, Chen W, Forrester JV, McMenamin PG. J Leukoc Biol. 2015 Jan;97(1):103-10  
*Treatment with TLR9 ligand CpG-ODN and the TLR7/8 ligand R848/Resiquimod leads to an accumulation of macrophages on the corneal endothelium and formation of multinucleated giant macrophages in the corneal stroma.*
- ⇒ **Contrast-dependent phase sensitivity in V1 but not V2 of macaque visual cortex**  
Cloherty SL, Ibbotson MR. J Neurophysiol. 2015 Jan 15;113(2):434-44  
*Assessment of the relationship between contrast and phase sensitivity in the two brain regions supports the view that V1 combines both subcortical and cortical input, whereas V2 receives input purely from cortical circuits.*
- ⇒ **Visual Contrast Detection Cannot be Predicted from Surrogate Measures of Retinal Ganglion Cell Number and Sampling Density in Healthy Young Adults**  
Denniss J, Turpin A, McKendrick AM. Invest Ophthalmol Vis Sci. 2014 Nov 18. [Epub ahead of print]  
*Relationships between contrast detection and surrogate measures of retinal ganglion cell numbers are weak, and are unlikely to be exploitable for improving clinical tests in healthy populations.*
- ⇒ **Making sense of the evidence from the age-related eye disease study 2 randomized clinical trial**  
Downie LE, Keller PR. JAMA Ophthalmol. 2014 Aug 1;132(8):1031.  
*This letter highlights an important and intriguing observation about the progression rate of the study population in AREDS2, which differs significantly from the matched group of the original AREDS study.*
- ⇒ **Monitoring of strain-dependent responsiveness to TLR activation in the mouse anterior segment using SD-OCT**  
Downie LE, Stainer MJ, Chinnery HR. Invest Ophthalmol Vis Sci. 2014 Nov 20;55(12):8189-99  
*Our findings demonstrate the value of spectral-domain OCT in providing high-resolution, in vivo imaging of the anterior segment, to longitudinally quantify and monitor ocular inflammation in an experimental animal model.*

## Research & RHD Matters

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### Departmental & Staff Publications (August 2014—November 2014)

- ⇒ **A Perimetric Test Procedure That Uses Structural Information**  
 Ganeshrao SB, McKendrick AM, Denniss J, Turpin A. *Optom Vis Sci.* 2015 Jan;92(1):70-82  
  
*On average, simulations show that using RNFL information to guide stimulus placement in a perimetric test maintains accuracy, improves precision, and decreases test duration for patients with less than 15% false-positive rates.*
- ⇒ **Chronic hypertension increases susceptibility to acute IOP challenge in rats**  
 He Z, Vingrys AJ, Armitage JA, Nguyen C, Bui BV. *Invest Ophthalmol Vis Sci.* 2014 Nov 4;55(12):7888-95  
  
*This study shows that having long-term hypertension can compromise the eye's capacity to cope with stress. Thus hypertension may be a risk factor for the development of glaucoma.*
- ⇒ **Quantitative spatial and temporal analysis of fluorescein angiography dynamics in the eye**  
 Hui F, Nguyen CT, Bedggood PA, He Z, Fish RL, Gurrell R, Vingrys AJ, Bui BV. *PLoS One.* 2014 Nov 3;9(11):e1111330.  
  
*By analyzing change in fluorescein brightness over time it is possible to identify and quantify areas of abnormal blood perfusion and leakage in the retina.*
- ⇒ **Sildenafil alters retinal function in mouse carriers of Retinitis Pigmentosa**  
 Nivison-Smith L, Zhu Y, Whatham A, Bui BV, Fletcher EL, Acosta ML, Kalloniatis M. *Exp Eye Res.* 2014 Nov;128:43-56.  
  
*Sildenafil can transiently impair vision. This study showed that the visual effects of Sildenafil are exacerbated in carriers (approximately 1 in 50 people) of recessive traits leading to retinal degeneration.*
- ⇒ **Improving high resolution retinal image quality using speckle illumination HiLo imaging**  
 Zhou X, Bedggood P, Metha A. *Biomed Opt Express.* 2014 Jul 10;5(8):2563-79.  
  
*We adapted a recently developed structured illumination microscopy technique called "HiLo" to an adaptive optics ophthalmoscope, demonstrating its ability to improve image contrast in retinal images by rejecting out-of-plane light.*



## Report from UMOSS president, Felix Tam

UMOSS

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2015 has been a busy yet exciting year so far. Following the success of student initiatives last year such as the OD Student Conference (ODSC), as well as collaboration with various health disciplines through the Interprofessional Education and Practice Health Students' Network (IPEP-HSN), work has already begun to improve on these great successes. In addition, the move into the Faculty of MDHS marks a new era for the Doctor of Optometry as it presents new opportunities to shape optometric education and optometry as a profession.

We began our calendar of events in March, where we hosted the annual start of year BBQ to welcome our OD1 students, and welcome back our OD2, 3, and 4 cohorts. Students also had the chance to learn about independent optometry from Reny Frighetto of Provision, who also provided generous support for the BBQ.

On April 1st, we held our third Eyemazing Race where each of the participating 23 teams of 4 were given a sheet of clues to destinations around the city to earn points. We are very thankful for Welch Allyn who again sponsored us a Panoptic Ophthalmoscope for each member of the winning team. Congratulations to OD3 students from the team "Victoria's Secret" (Laurence Fusillo, Hashini Seneviratne, Nuwan De Silva, Victoria Walters)!

After the Easter Break, OD3 and OD4 students were invited to the Luxottica Sundowner on April 16th to learn about graduate opportunities at Luxottica and meet with potential employers.

Our OD2 students began a new Big Brother Big Sister program, where volunteering OD2 students act as mentors to guide their OD1 peers on their learning throughout the year. Recently, they have hosted a workshop to introduce OD1 students to different diagnostic equipments and brands before they place their purchase orders at the end of semester 1.

Beside from starting their clinical placements at the ACO and UMEyeCare, some of our OD3 students have volunteered at the Teddy Bear Hospital as part of the Royal Children's Hospital Good Friday Appeal. The Teddy Bear Hospital aimed to make children more comfortable and familiar with the healthcare settings by running mock consultations on the teddy bears that children bring with them. Congratulations to the team leader Jade Lindsay and the rest of the committee for making the event a great success!

Many of the OD4 cohort are currently overseas or in the country for externships. For the rest of us at the ACO and UMEyeCare, students are enjoying a wide range of clinical exposure in general and specialty clinics, including paediatric, retina, glaucoma, and cornea. OD4's also have the opportunity to actively observe and assist at private ophthalmology clinics, and the ophthalmology unit at the Alfred hospital.

It is fantastic to see students' selfless attitudes in their learning, as well as taking the initiative to shape optometric education and the future of optometry. We look forward to the rest of the year, with many more events to come!

All the very best,  
Felix Tam

President, UMOSS  
2015



Eyemazing Race winners, 2015