
SATURDAY, 1 DECEMBER 2007

LIGHT BREAKFAST

08:00-09:00

Foyer

ORAL SESSION 1

09:00-10:00

PSYCHOPHYSICS AND VISUAL PROCESSING

Chair: Ted Maddess

Finkel Lecture Theatre

Paper 1

09:00 Spatial biases and computational limits on the cortical encoding of local image structure
Taylor, R., Maddess, T.

Paper 2

09:10 Signal noise ratio in human multifocal visual evoked potentials with slow and fast reversal rates
Kaushik, S., Vaegan

Paper 3

09:20 Effect of contrast 9 or 17 areas and three viewing distances on multifocal steady state visual evoked potentials (mfssVEPs)
Abdullah, S.N., Al-Dahlawi, N., Vaegan.....

Paper 4

09:30 Photoresponses in zebrafish rods expressing a cone-specific GRK
Vogalis, F., Jarvinen, J.L.P., Wada, Y., Kawamura, S., Shiraki, T., Kojima, D., Fukada, Y., Lamb, T.D.....

Paper 5

09:40 Waveguide correction for modelling of human central cone sensitivities
Fischer, L., Plakhotnik, T., Vorobyev, M.

Paper 6

09:50 An ideal observer model of sensitivity to luminance and colour
Vorobyev, M.....

MORNING TEA

10:00-10:30

SATURDAY, 1 DECEMBER 2007

SYMPOSIUM 1

10:30-12:00

PERSPECTIVES ON BIONIC EYES

Chair: Michael Ibbotson
Finkel Lecture Theatre

10:30 Introduction
Michael Ibbotson

Paper 1

10:35 The history of visual prostheses
Suanning, G.J.

Paper 2

10:55 Australian work towards a useful vision prosthesis for the blind
Lovell, N.

Paper 3

11:15 Retinal prostheses - a surgical perspective
Kerdraon, Y.

Paper 4

11:35 Establishing a functional interface between prosthetic devices and visual neurons.
Morley, J.

11:55 General Discussion

PLENARY 1

12:00-12:45

THE FRED HOLLOWS PLENARY LECTURE

Chair: Ian Morgan
Finkel Lecture Theatre

Why are people still going blind from trachoma?
Hugh Taylor (Centre for Eye Research, Australia)

LUNCH

12:45-14:00

SATURDAY, 1 DECEMBER 2007

SYMPOSIUM 2

14:00-15:28

GLAUCOMA - FROM THE BROWN MOUSE TO THE BLUE MOUNTAINS

Chairs: Nigel Barnett, Glyn Chidlow

Finkel Lecture Theatre

Paper 1

14:00 *In vitro* imaging of sick and dying retinal ganglion cells

Crowston, J.

Paper 2

14:22 Does diabetes make ganglion cells more susceptible to iop challenge?

Bui, B.V., Tolcos, M., Loeliger, M., Rees, S., Kozaki, K., Thomas, M., He, Z., Nguyen, C.,
Vingrys, A.J.

Paper 3

14:44 Multifocal pupillographic perimetry for glaucoma

Maddess, T., James, A., Goh, X.L., Kolic, M., Carle, C.

Paper 4

15:06 An update on the clinical management of glaucoma

Casson, R.J.

AFTERNOON TEA

15:30-16:00

SATURDAY, 1 DECEMBER 2007

ORAL SESSION 2

16:00-17:00

CLINICAL VISION, STRUCTURE AND FUNCTION

Chair: Krisztina Valter

Finkel Lecture Theatre

Paper 1

16:00 Visual attention in the recognition of facial affect: is there a gender difference?
Vassallo, S., Cooper, S., Douglas, J.

Paper 2

16:10 The effect of simulated accommodative dysfunction on reading eye movements in normal adult observers
Ayton, L., Abel, L., Fricke, T., McBrien, N.....

Paper 3

16:20 Repeatability and reproducibility of alternative measures of retinal structure
Jong, M., Pianta, M.

Paper 4

16:30 Differences between early and late corneal graft rejection
Perera, C., Constantinou, M., Semirli, H., Lamoureux, E., Pollock, G., Vajpayee, R.....

Paper 5

16:40 Factors associated with non-adherence to ocular hypotensive treatment
Rees, G., Leong, O., Crowston, J., Ghosh, S., Lamoureux, E.

Paper 6

16:50 Effect of repeated IOP challenges on retinal function
He, Z., Bui, B.V., Vingrys, A.J.....

CONFERENCE DINNER

19:00 for 19:30

National Museum of Australia

Buses and a walking group will leave from the front of the JCSMR at 18:30 (6:30 pm)

SUNDAY, 2 DECEMBER 2007

LIGHT BREAKFAST

08:00-09:00

Foyer

ORAL SESSION 3

09:00-10:00

OCULAR DISEASE AND RECOVERY

Chair: Hugh Taylor

Finkel Lecture Theatre

Paper 1

09:00 Photoreceptor dysfunction in transgenic Huntington's disease mice
Hussain Batcha, A., Nithianantharajah, J., Hannan, A., Fletcher, E.

Paper 2

09:10 IGF-I and IGFBP-3 display divergent effects on VEGF-165 secretion and phagocytosis by retinal pigmented epithelial cells
Harkin, D., Ainscough, L., Feigl, B.

Paper 3

09:20 The role of bone marrow-derived mesenchymal stem cells in corneal reconstruction
Zhu, M., Wen, L., Petsoglou, C., McClellan, K., Billson, F.

Paper 4

09:30 Retinal pigment epithelial cell culture on silk substrate for retinal tissue transplantation.
Cheng, S., Kwan, A., Barnard, Z., Zainuddin, Harkin, D., Chirila, T.

Paper 5

09:40 Effect of bone marrow-derived progenitor cells (BM-PCs) on human brain microvascular endothelial barrier function
Li, S., Shen, W., Gillies, M.C.

Paper 6

09:50 Retinal vascular changes after selective disturbance of Müller cell function in rats
Shen, W., Li, S., Gillies, M.C.

MORNING TEA

10:00-10:30

SUNDAY, 2 DECEMBER 2007

SYMPOSIUM 3

10:30-12:00

MYOPIA - PREVALENCE, CAUSES AND PREVENTION

Chairs: Ian Morgan, Paul Baird

Finkel Lecture Theatre

Paper 1

10:30 A genetic perspective on myopia

Baird, P.N.

Paper 2

10:48 Environmental effects on the development of myopia

Rose, K., Morgan, I.

Paper 3

11:06 Peripheral refraction and shape of myopic eyes

Atchison, D.A.

Paper 4

11:24 The sclera - a site for the prevention of myopia?

McBrien, N.

Paper 5

11:42 The prevalence of refractive error in secondary school students in Fiji

Lindquist, A., Rosenfeldt, F., Keefe, J.

PLENARY 2

12:00-12:45

THE PETER BISHOP PLENARY LECTURE

Chair: Jonathan Stone

Finkel Lecture Theatre

*Molecular motor transport in the photoreceptor and RPE cells:
cell biology and retinal degeneration*

David Williams (University of California, San Diego)

LUNCH

12:45-14:00

SUNDAY, 2 DECEMBER 2007

ORAL SESSION 4

14:00-15:00

OPTICS, LENS AND CORNEA

Chair: John McAvoy

Finkel Lecture Theatre

Paper 1

- 14:00 Identification and characterisation of the most abundant glycerophospholipid in the human lens
Deeley, J.M., Blanksby, S.J., Mitchell, T.W., Thomas, M.C., Truscott, R.J.W.....

Paper 2

- 14:10 Effect of orthokeratology on off-axis monochromatic aberrations
Mathur, A., Atchison, D.A., Scott, D.H.....

Paper 3

- 14:20 Effect of adaptive optics correction on visual performance with defocus
Guo, H., Atchinson, D.A., Carkeet, A.....

Paper 4

- 14:30 A model of dual-optic accommodating intraocular lens
Ale Magar, J., Smith, G., Ho, A.

Paper 5

- 14:40 Modelling retinal image quality for polychromatic light
Ravikumar, S., Bradley, A., Thibos, L.

Paper 6

- 14:50 Presbyopia and heat
Heys, K., Friedrich, M., Truscott, R.
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AFTERNOON TEA

15:00-15:30

AOVS AGM

15:30-16:30

POSTER VIEWING AND DRINKS

16:30-18:30

Foyer

- Poster 1 Calculation of the retinal projection of a distant scene via a wide angle schematic eye
Wei, X., Thibos, L.....

- Poster 2 Off-axis monochromatic aberrations in a wide-angle model eye
Shen, J., Thibos, L.

- Poster 3 Implementation and refinement of vision-related and health-related quality of life questionnaires in children with intellectual disabilities
Cui, Y., Stapleton, F., Suttle, C.

- Poster 4 Sensory ocular dominance for a range of spatial visual functions
Suttle, C., Alexander, J., Liu, M., Ng, S., Poon, J., Tran, T.....

- Poster 5 Face processing by miniature brains
Dyer, A.G.....

- Poster 6 Visual acuity measured with partial or complete occlusion of the fellow eye
Lai, X., Suttle, C., Alexander, J.....

- Poster 7 Evaluation of VEP diagram in victims of chemical warfare (delay effect)
Riazi, A., Naderi, M., Hafezi, R., Jadidi, K.

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- Poster 8** S/N ratios of steady-state (ss) and m-sequence multifocal visual evoked potentials (mfVEPs) with 9 or 17 fields at 3 distances.
Aldahlawi, N., Nurliyana, A.S., Vaegan
Poster 9 Scaling relationships between three electroretinogram (ERG) electrodes
Vaegan, Nilsson, J., Wright, T.
Poster 10 Light adaptation and dark adaptation of the human visual system
Ruseckaite, R., Cameron, A.M., Miao, L., Lamb, T.D.
Poster 11 Identification of phospholipids in human tears and their deposition on contact lenses
Saville, J.T., Zhao, Z., Willcox, M.D.P., Mitchell, T.W., Blanksby, S.J.
Poster 12 *Bombyx mori* silk fibroin membranes as potential substrata for epithelial constructs used in the management of ocular surface disorders.
Barnard, Z., Chirila, T.V., Zainuddin, Harkin, D.G., Schwab, I.R., Hirst, L.W.
Poster 13 Preliminary examination of the effects of short term orthokeratology lens wear on corneal sensitivity
Kaushik, G., Golebiowski, B., Swarbrick, H.
Poster 14 Does corneal wounding result in an increase of matrix-metalloproteinase in the lacrimal gland?
Petznick, A., Evans, M.D.M., Bojarski, B., Madigan, M.M., Garrett, Q., Sweeney, D.F.
Poster 15 Imaging of keratic precipitates using white light and laser confocal microscopy.
Chua, C.C., Setiobudi, C., Mackensen, F., Lim, L.L.
Poster 16 Lens changes with age: is it simply heat?
Friedrich, M., Heys, K., Truscott, R.
Poster 17 The contribution of growth factors in vitreous-induced lens fibre differentiation
Wang, Q., McAvoy, J.W., Lovicu, F.J.
Poster 18 SEF: a negative regulator of FGF signalling in the lens
Newitt, P., Boros, J., Robinson, M.L., McAvoy, J.W., Lovicu, F.J.
Poster 19 Direct evidence of dietary influences on the phospholipid composition of the rat lens: an electrospray ionisation mass spectrometric study
Nealon, J.R., Blanksby, S.J., Mitchell, T.W., Truscott, R.J.W.
Poster 20 Microarray analysis of the developing primate retina: differential gene expression in the fovea
Kozulin, P., Ohms, S., Natoli, R.C., Madigan, M.C., Provis, J.M.
Poster 21 Development of functional circuits within the retina precedes vascular development in the retina.
Hatzopoulos, K., Vessey, K., Fletcher, E.
Poster 22 *In vitro* effects of TGF- β and FGF on proliferation and migration of retinal endothelial cells and Müller cells
Romo, P., Madigan, M.C., Cullen, K., Provis, J.M.
Poster 23 Photoreceptor topography in the pigeon retina
Querubin, A., Bumsted O'Brien, K., Provis, J.M.
Poster 24 Stress response in the hyperoxia-challenged mouse retina
Natoli, R., Provis, J., Valter, K., Stone, J.
Poster 25 Dark rearing as a non-invasive treatment for retinopathy of prematurity
Yun, S., Bisti, S., Maccarone, R., Chan-Ling, T.
Poster 26 Light-regulated damage and repair of cones in the rhodopsin-mutant P23H-3 rat retina
Chrysostomou, V., Stone, J., Stowe, S., Barnett, N.L., Valter, K.
Poster 27 670 nm NIR-LED increases antioxidant production in the P23H-3 model of Retinal Distrophy.
Kirk, D.K., Stone, J., Eells, J.T., Valter, K.

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- Poster 28** Preconditioning with bright light evokes a protective response against hyperoxic damage in C57BL/6J retina
Zhu, Y., Valter, K., Stone, J,
- Poster 29** Effects of short-term bright light exposure on the albino rat retina: similarities to AMD histopathology
Rutar, M., Valter, K.....
- Poster 30** Retinal dopamine release is depressed by both negative and positive lens, despite different eye growth responses
Megaw, P., McCarthy, C.S., Morgan, I,
- Poster 31** Form deprivation and restoration of form vision changes the pattern of scleral glycosaminoglycan (sGAG) synthesis
Petratchkov, S.M., Maddess, T., Morgan, I.G.
- Poster 32** Stability of excimer laser surgery (SELS) study: methodology and recruitment
Ang, E.K., Couper, T., Dirani, M., Baird, P.N.
- Poster 33** IGF binding protein-3 regulates endothelial precursor cells: implications for vascular development and repair
McFarland, E., Chang, K.-H., Grant, M.B., Baxter, L.C., Afzal, A., Pan, H., Shaw, L.C., Caballero, S., Sengupta, N., Calzi, S.L., Sullivan, S.M., Chan-Ling, T.
- Poster 34** Significance of lesion morphology in the therapeutics of age-related macular degeneration.
Mathew, R.S., Beaumont, P., Kang, H.K.....
- Poster 35** A genetic contribution to central corneal thickness: the glaucoma inheritance study of Tasmania
Sherwin, J.C., Chen, C., Hewitt, A.H., Kearns, L.S., Scurrah, K.J., Stankovich, J., Mackey, D.A.
- Poster 36** Selective inner retinal dysfunction precedes ganglion cell loss in a mouse glaucoma model
Barnett, N.L., Holcombe, D.J., Lengefeld, N., Gole, G.A.....
- Poster 37** Expression of heat shock proteins in the rat retina and optic nerve in various models of ganglion cell death
Chidlow, G., Wood, J.P.M., Casson, R.J.
- Poster 38** High resolution multifocal pupillographic perimetry in glaucoma
Carle, C., James, A., Maddess, T.....
- Poster 39** Glial cell abnormalities occur concurrently with neural dysfunction and hypoxia in the retina during diabetes.
Ly, A., Yee, P., Fletcher, E.L.
- Poster 40** Time course of ganglion cell dysfunction in diabetic rats
Kozaki, K., Bui, B.V., Vingrys, A.J.....
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MONDAY, 3 DECEMBER 2007

LIGHT BREAKFAST

08:00-09:00

Foyer

ORAL SESSION 5

09:00-10:00

OCULAR DISEASE - GENETICS AND CELL BIOLOGY

Chair: Jan Provis

Finkel Lecture Theatre

Paper 1

09:00 MMP-9 immunoreactivity in normal and uveal melanoma-associated retinae
Lai, K., Conway, R.M., Crouch, R., Madigan, M.C.

Paper 2

09:10 Clinical, functional and cellular responses in a novel primate model of non-arteritic anterior ischemic optic neuropathy (pNAION)
Chen, C.S., Johnson, M.A., Flower, R.A., Slater, B.J., Miller, N.R., Bernstein, S.L.

Paper 3

09:20 Anti-VEGF treatment on human Tenons' fibroblasts scarring activity
Qin, Q., Van Bergen, N., Crowston, J.G.

Paper 4

09:30 Combined cytogenetic, molecular and functional studies in eye development
Jamieson, R., Storen, R., Chen, Y., Tam, P., Grigg, J., Billson, F., Mihelec, M.

Paper 5

09:40 Congenital cataract, familial exudative vitreoretinopathy, myopia and primary open angle glaucoma co-segregating in a family.
Mackey, D.A., Hewitt, A.W., Ruddle, J.B.

Paper 6

09:50 The role of education in refraction - the genes in myopia (gem) twin study
Dirani, M., Shekar, S.N., Baird, P.N.

MORNING TEA

10:00-10:30

MONDAY, 3 DECEMBER 2007

SYMPOSIUM 4

10:30-12:00

INVERTEBRATE VISION FUNCTION: FROM CELLS TO BEHAVIOUR

Chairs: Daniel Orsorio, Richard Payne
Finkel Lecture Theatre

Paper 1

10:30 The spatial-temporal profile of the light-induced Ca signal inside *limulus* ventral photo-receptors
Wang, Y., Payne, R.

Paper 2

10:48 Directional selectivity in the dragonfly median ocellus
Van Kleef, J., Berry, R., Stange, G.

Paper 3

11:06 Bee descending neurons and looming
Boeddeker, N.

Paper 4

11:24 The movement display signals in fiddler crabs
How, M.

Paper 5

11:42 Cuttlefish camouflage and object recognition.
Osorio, D.

PLENARY 3

12:00-12:45

THE ARC CENTRE OF EXCELLENCE IN VISION SCIENCE PLENARY LECTURE

Chair: Trevor Lamb
Finkel Lecture Theatre

The neurobiology of primate colour vision

Paul Martin (National Vision Research Institute, Australia)

LUNCH

12:45-14:00

WORKSHOP

14:00-15:00

GENE-ENVIRONMENT INTERACTIONS IN COMPLEX EYE DISEASES

Finkel Lecture Theatre

Moderator: Jonathan Stone

Panelists: David Mackey, Paul Baird, Ian Morgan, Mohamed Diriani,
Juleen Cavanaugh
