

ARC Centre of Excellence in Vision Science
Scientific Retreat, 10-12 February 2007

DRAFT PROGRAM

SATURDAY, 10 Feb 2007

- 10:00 **Bus departs RSBS for Murramarang**
12:30 Arrival and check-in at Murramarang Resort
- 13:00 – 14:00 **Lunch**
- 14:00 – 14:10 **Welcome and announcements**
- Session 1 Theme 2 “Vision for Action and Robotics”**
- 14:10 – 14:30 Edwards Integration of form-based motion signals
14:30 – 14:50 Ibbotson Neural processing in cortex
14:50 – 15:10 Srinivasan Role of the polarization compass in honeybee navigation
15:10 – 15:30 Srinivasan Machine vision and robotics
15:30 – 15:50 Zhang Visual cognition in honeybee navigation
- 15:50 – 16:20 **Tea**
- Session 2 Theme 2 “Vision for Action and Robotics” (continued)**
- 16:20 – 16:40 Ibbotson Neural basis of odometry in honeybees
16:40 – 17:00 Zeil Spectral and polarization properties of fiddler crab photoreceptors
17:00 – 17:20 Zeil Structure and processing of natural optic flow in insects
17:20 – 17:50 **General Discussion, Theme 2**
- 19:30 **Dinner**

SUNDAY, 11 Feb 2007

- 7:30 – 8:30 **Breakfast**
- Session 3 Theme 1 “Vision for Living: Eye and Brain”**
- 9:00 – 9:20 Lamb Dark adaptation of human retinal cells measured from the ERG
9:20 – 9:40 Lamb Human psychophysical dark adaptation
9:40 – 10:00 Lamb Mammalian rod photoreceptor shut-off kinetics
10:00 – 10:25 Vaney Parallel processing in the retina
10:25 – 10:40 Vaney Brain regulation of retinal function in the bird retina
- 10:40 – 11:10 **Coffee**
- Session 4 Theme 1 “Vision for Living: Eye and Brain” (continued)**
- 11:10 – 11:30 Maddess Applications of multifocal methods to vision in disease and health
11:30 – 11:50 James Analysis of hierarchy of human visual cortical areas
11:50 – 12:10 Dreher Organization and reorganisation of visual cortex
12:10 – 12:30 Maddess Multifocal pupillography for glaucoma
12:30 – 13:00 **General Discussion, Theme 1**
13:00 – 14:00 **Lunch**
- 14:00 – 15:30 “Informal Discussions”

Centre Staff & Students	Bus
1. Adnan Syed Muhammad	N
2. Ali Alkaladi	Y
3. Allison Cameron	Y
4. Andrew James	N
5. Ben Sivyier	N
6. Cecile Bordier	Y
7. David Vaney	N
8. Diana Kirk	Y
9. Elizabeth Shelley	Y
10. Emily Baird	Y
11. Fivos Vogalis	Y
12. Ian Morgan	Y
13. Jan Hemmi	Y
14. Jan Provis	N
15. Jochen Smolka	Y
16. Jochen Zeil	Y
17. Jonathan Stone	Y
18. Joshua Van Kleef	N
19. Keely O'Brien	N
20. Krisztina Valter	N
21. Mandyam Srinivasan	Y
22. Maria kolic	Y
23. Mario Pahl	Y
24. Mark Edwards	N
25. Martin Wilson	N
26. Michael Ibbotson	N
27. Michael Pianta	N
28. Misha Vorobyev	Y
29. Nathan Crowder	Y
30. Nick Nacsa	N
31. Norbert Boeddeker	N
32. Partha Bhagavatula	Y
33. Peter Corke	N
34. Peter Kozulin	Y
35. Pinar Letzkus	N
36. Rasa Ruseckaite	Y
37. Refik Kanjhan	N
38. Regan Ashby	Y
39. Riccardo Natoli	Y
40. Ryan Taylor	Y
41. Sae Shin	Y
42. Shaowu Zhang	Y
43. Shunpeng Wang	Y
44. Siobhan McCarthy	Y
45. Suzanne Petratchkov	Y
46. Ted Maddess	N
47. Terri Warner	Y
48. Tiberio Caetano	Y
49. Trevor Lamb	Y
50. Vicki Chrysostomou	Y
51. Wiebke Ebeling	Y
52. William Sponsel	N
53. Yuan Zhu	Y

Guests	Bus
1. Angie Rickard	N
2. Anton Agafonoff	Y
3. Johannes Letzkus	N
4. Ruth Wilson	N
5. Johannah Henderson	N
6. Tobias van Kleef	N

SUNDAY (continued)

15:30 – 16:00	Tea	
Session 5	Theme 3	“Vision for Life: The Challenge of Degenerative Diseases”
16:00 – 16:20	Stone	Oxygen-induced gene expression in the adult retina
16:20 – 16:40	Stone	Impact of hyperoxia on the ERG in rat and human retina
16:40 – 17:00	Valter	Effects of near-infrared light in healthy and degenerative retina
17:00 – 17:15	Valter	The effects of saffron on the degenerating retina
17:15 – 17:30	Valter	The role of mitochondria in retinal degeneration
17:30 – 17:50	Valter	Light restriction as a measure in slowing retinal degeneration
19:30	Dinner	

MONDAY, 12 Feb 2007

7:30 – 8:30	Breakfast	
Session 6	Theme 3	“Vision for Life: The Challenge of Degenerative Diseases” (cont)
9:00 – 9:25	Provis	Retinal patterning: Siting the fovea and the rod-free area
9:25 – 9:50	Provis	Indicators of retinal stress and receptor degeneration in AMD
9:50 – 10:00	Provis	FGF regulation of cone differentiation in marmoset
10:00 – 10:20	Morgan	Molecular mechanisms of control of eye growth
10:20 – 10:50		General Discussion, Theme 3
10:50 – 11:20	Coffee	
Session 7	Major equipment acquisitions/approvals: Reports	
11:20 – 11:25	Vaney	Gene gun and recording rig
11:25 – 11:30	James	fMRI visual stimulator and eye-tracker
11:30 – 11:40	Maddess	Stratus OCT; 32-channel recording system
11:40 – 11:45	Dreher	Argon laser and Peltier devices
11:45 – 11:50	Ibbotson	Optical imaging equipment for cortex
11:50 – 11:55	Srinivasan	Milling machine
11:55 – 12:00	Hemmi	Monochromator
12:00 – 12:10	Provis	Confocal microscope; Tissue embedding station; Bioanalyzer
12:10 – 12:15	Stone	ERG stimulator
12:15 – 13:15	Chief Investigators’ meeting	
13:15 – 14:15	Lunch	
15:00	Bus departs Murramarang for RSBS	

Notes:

1. Only the name of the lead CI for each funded project is listed above.
2. Each session will be chaired by the relevant Theme Leader.
3. For sessions 1-6, speakers will have 15 minutes for presentation + 5 mins for discussion.
4. The schedule is tight, and in fairness to all speakers the allocated timings will be enforced.
5. Presentations should be progress reports on achievements in 2006, plus plans for 2007.
6. The general discussion for each theme is intended to be wide-ranging, and input and suggestions for future directions and collaborations will be welcomed.