

# Information for Registrants

## Venue

The conference will be held in the Department of Biochemistry & Molecular Biology at the University of Melbourne. This is located in the south-west part of the campus on Royal Parade. The nearest entry is Gate 12 on Royal Parade.

## Registration

Registration will be in the main foyer of the Biochemistry building, just outside the Small Lecture Theatre, which will be the venue for all lectures. The foyer and lecture theatre are located at the eastern end of the building (i.e. furthest from Royal Parade). The registration desk will open on Friday morning November 29<sup>th</sup> commencing at 8:30 am.

At registration you will receive this abstract book, and, if appropriate a ticket for the conference dinner.

## Social Program

A **Mixer** will be held on Friday evening from about 6:30 pm after the poster session. Drinks and nibbles are included in your registration fee.

The **Conference Dinner** will be held on Saturday night from 7:30 pm at the restaurant Masani. \$55 covers the cost of a two-course dinner, coffee, biscotti and drinks. This is *not* covered in registration and if you wish to attend and did not indicate on registration please contact Frances Separovic. The address of Masani is 313 Drummond St Carlton (east of the University, between Elgin and Faraday).

## Lunch, Morning and Afternoon Teas

These are included in your registration. Lunch will be in the Poster area or outdoors depending on the weather.

## Parking

Metered parking is available on the outside of the University. The easiest and most secure option is the underground parking at University Square (\$7/day). Entry into this car park is Berkley St, which is off Grattan St. See the maps on the website <http://www.pb.unimelb.edu.au/other/maps/>.

## Messages

FAX messages may be sent to (03) 9347 7730 (Please mark c/o Paul Gooley). On Friday, phone messages may be left at (03) 9344 5911 (Biochemistry enquiries counter). There will be no public email facilities during the meeting.

## Talks

All oral sessions will be held in the Biochemistry building. PowerPoint facilities are available for presentations (both PC Powerpoint 2000 and MAC PowerPoint 2001). Although PowerPoint presentations are preferred a slide projector and an overhead projector will be available. All speakers should load their talks and preview them well before their session.

Speakers and session chairs are asked to familiarize themselves with the presentation facilities in the lecture theatre. Terry Mulhern will be available to assist.

**Posters**

Posters will have an area of 1.2 m wide x 1.0 m high. Posters should be attached by Velcro-type material. Please provide your own Velcro. Posters will be displayed for the entire meeting, so please put them up on Friday morning (the area will be available from 8:30 am).

**Voting for Victorians**

A reminder that the 30<sup>th</sup> November is state elections for the Legislative Assembly in Victoria. A polling booth is at University High School, which is close by to the University.

# Programme

Friday 29<sup>th</sup> November

8:30-9:20 am Registration in foyer of Biochemistry Department.

9:20-9:30 am Opening (Conference Convenor – Paul Gooley)

## **Session 1      Biomolecular Structure and Dynamics (Chair: Terry Mulhern)**

9:30 - 10:15    Art Palmer (Dept. Biochem. and Mol. Biophys., Columbia University)  
*NMR Methods for Characterizing Protein Motions and Folding*

10:15 - 10:40    Mark Hinds (Walter and Eliza Hall Institute of Medical Research)  
*The Structure of Bcl-w, a Pro-survival Bcl-2 Family Member, Reveals an Unexpected Role for the C-terminal Hydrophobic Residues in Modulating Biological Activity*

10:40 – 11:00    Louise Brown (School of Physics, UNSW)  
*Structure of the Inhibitory Region of Troponin I in the ternary complex by Site-Directed Spin Labeling EPR Spectroscopy*

## **Coffee**

11:00 - 11:30

## **Session 2      Fluorescence (Chair: Ken Ghiggino)**

11:30 - 12:00    Andrew Clayton (Ludwig Institute for Cancer Research)  
*Measurement of Protein-Protein Interactions and Dynamics in Live Cells Using Frequency-Domain Dynamic Depolarization Imaging Microscopy*

12:00 – 12:20    Deepak Chhabra (Institute for Biomedical Res, University of Sydney)  
*Intracellular Interactions of Actin*

12:20 – 12:40    Michelle Gee (School of Chemistry, University of Melbourne)  
*Partial Denaturation of Silica-Adsorbed Bovine Serum Albumin as Determined by Time-Resolved Evanescent Wave-Induced Fluorescence Spectroscopy*

12:40 - 1:00    Sharon Finger (Institute for Biomedical Research, University of Sydney)  
*Evaluation of Heavy Metal Toxicity in a Rapid Fluorescent DNA Damage Determination Assay*

## **Lunch (provided) and Poster Preview**

1:00 – 2:00

## **Session 3      Protein and Peptide Structure (Chair: Mibel Aguilar)**

2:00 – 2:30    Steve Bottomley (Dept. of Biochem. and Mol. Biol., Monash University)  
*Biophysical Insights into the Folding and Misfolding of  $\alpha_1$ -Antitrypsin*

- 2:30 – 2:50 David Keizer (Walter and Eliza Hall Institute of Medical Research)  
*Interactions of Phage-Display Peptides and the Malarial Merozoite Surface Protein, Apical Membrane Antigen 1*
- 2:50 – 3:10 Jacqui Mathews (School of Mol. and Micro. Biosciences, University of Sydney)  
*Probing Transcriptional Complexes Involved in Development and Disease*
- 3:10 – 3:30 Paul Pallaghy (Dept. of Biochemistry, University of Melbourne)  
*Biased Collapse and Substructure Accessibility Imply the Kinetic Hypothesis of Protein Folding*
- 3:30 – 3:50 Philip Kuchel (School of Mol. and Micro. Biosciences, University of Sydney)  
*NMR and the Platypus: Protein-Structural Surprises from an Animal of Surprises*

**Coffee**

4:00 - 4:30

**Session 4 Posters in Biochemistry Department**

4:30 - 6.30

**Mixer**

6.30 – 7:30

Saturday 30<sup>th</sup> November

8:45 – 9:30 **Robertson Lecture (Chair: Ray Norton)**

**Session 5 Membranes and Ion Channels (Chair: Jacqui Gulbis)**

- 9:30 – 9:55 Jamie Vandenberg (Victor Chang Cardiac Research Institute)  
*HERG K<sup>+</sup> Channels: A New Paradigm for Ion Channel Gating*
- 9:55 – 10:20 Paul Curmi (Centre for Immunology, St Vincent's Hospital and UNSW)  
*Crystal Structure of the Soluble Form of the intracellular Chloride Ion Channel CLIC1 (NCC27)*
- 10:20 – 10:40 Boris Martinac (Dept. of Pharmacology, University of Western Australia)  
*Gating of Mechanosensitive Channels by Bilayer Deformation Forces: Open Channel Structure of MscL*
- 10:40 - 11:00 Ron Clarke (School of Chemistry, University of Sydney)  
*Synthesis of Steady-State Patch-Clamp and Transient Stopped-Flow Kinetic Data of the Na<sup>+</sup>,K<sup>+</sup>-ATPase*

**Coffee**

11:00-11:30am

**Session 6 Photosynthesis and Plant Biophysics I (Chair: Christa Critchley)**

- 11:30 – 12:00 Ron Pace (School of Chemistry, ANU)  
*Artificial Photosynthesis*

- 12:00 – 12:20 Reza Razeghifard (Research School of Biological Sciences, ANU)  
*The Binding of Zn-Chlorin to a Synthetic Four-Helix Bundle Peptide through Histidine Ligation*
- 12:20 – 12:40 Sam Hay (Research School of Biological Sciences, ANU)  
*Protein Engineering of E. coli Cytochrome b562 for Chlorophyll- and Quinone-Binding*
- 12:40 - 1:00 Sergey Shabala (School of Agricultural Science, University of Tasmania)  
*Ionic Basis of Blue Light Control of Plant Elongation*

**Lunch (provided)**

1:00 – 1:50

**Session 7      Photosynthesis and Plant Biophysics II (Chair: Karin Ahrling)**

- 1:50 – 2:15 Ben Hankamer (Institute of Molecular Bioscience, University of Qld.)  
*Three-Dimensional Structure of the Photosystem II Core Dimer of Higher Plants Determined by Electron Microscopy*
- 2:15 – 2:35 Sindra Petersen (Research School of Chemistry, ANU)  
*A Comparison of Different Photosystem II Preparations from Plants and Cyanobacteria by Absorption, CD and MCD Measurements*
- 2:35 – 3:00 Markus Rokitta (Dept. of Botany, University of Qld.)  
*Monitoring of Salt Uptake in Living Plants Using NMR Microimaging*
- 3:00 – 3:20 Igor Pottosin (Centro Univ. de Investigaciones Biomédicas, Univ. de Colima)  
*K<sup>+</sup> Control of the Bipolar Gating in Plant Vacuolar Channel*

**Coffee**

3:20 – 3:40

**Session 8      Bionanotechnology and Biomaterials (Chair: John Ramshaw)**

- 3:40 – 4:05 Ratnesh Lal (Neuroscience Research Institute, University of California)  
*Application of Atomic Force Microscope in Nano-Biotechnology: Nanoscale Structural and Physical Analysis of Biomembranes and Macromolecules*
- 4:05 – 4:30 Justin Cooper-White (Dept. of Chemical Engineering, University of Melbourne)  
*Soft Tissue Engineering for Organ Replacement: Design and Manufacture of 3D Biomimetic, Biodegradable Polymer Scaffolds*
- 4:30 – 5:05 Frank Caruso (Dept. of Chemical Engineering, University of Melbourne)  
*Nanoscale Coated and Encapsulated Colloids for Biological Applications*
- 5:05 – 5:15      **Closing Comments and Awards: Ray Norton**

**Annual General Meeting**

5:25 - 6:30 pm

**Conference Dinner (Ristorante Masani, 313 Drummond St, Carlton)**

7.30 pm - late