

### Graduate Chemistry Program

Formal responsibility for the program rests with the Board of Studies, comprising Professor Chris Easton (RSC, Convenor), Dr Ray Withers (RSC, Associate Dean, Students), Dr Mark Humphrey (Department of Chemistry), Professors Martin Banwell and Leo Radom (RSC), students Ms Roberta Barbiellini and Mr Sean Yu-McLoughlin (RSC) and Mr Paul Huleatt and Mr Jason Chaplin (Department of Chemistry). There are fiftyfive students currently enrolled for the PhD degree within the program. Of these, three are full fee-paying students.

The information sheet *Information for Students in the Chemistry Graduate Program* and the booklet *PhD Supervision* were distributed at an induction session in April. Requirements regarding attendance at lecture courses, procedures for mid-term reviews, and student support services available, were discussed. A second function was held in December, in conjunction with the summer scholars program. Feedback from students is taken into account when setting up the lecture program. Exit interviews allow students to express their views about the program and ombudspersons assist students, should a conflict arise with a supervisor (see Internal Management section). PhD Planners are compiled in the Academic Secretary's office for all commencing PhD scholars to assist them with time management during their candidature.

The following lecture courses were presented in the program:

Dr Geoff Salem

*Inorganic Stereochemistry and the Role of Chiral Transition Metal Catalysts in Synthesis* (8)\*

Dr Ronald Pace

*Electron Transfer in Biological Systems* (8)\*

Professor Ben Selinger

*Chemicals, Health and the Law* (8)\*

Dr Paul Waring

*The Chemistry of Toxins* (8)\*

Mr Lee Welling

*Laboratory Safety for Practicing Chemists* (1)

*Methods for Structure Determination* (8)

Dr Alison Edwards – *Small Molecule Crystallography*

Dr Phil Jackson – *Mass Spectrometry*

Mr Anthony Herlt – *HPLC and GLC*

Dr Max Keniry – *NMR Spectroscopy*

### Founders' Commemoration Lectures

Craig Graduate Lecture Series – Professor Christopher Abell, Biological Chemistry, University of Cambridge, UK, to be delivered in 2003

Birch Lecturer: Professor Peter G. Schultz, Department of Chemistry, Scripps Research Institute, La Jolla, Ca. USA.

## PhD Degrees Awarded and Present Employment of Graduates

Eighteen scholars were admitted to the PhD degree in 2002. Those entitled Dr also had degrees conferred:

**Dr Matthew J. Byrnes**, BSc NSW

*The Coordination and Organometallic Chemistry of Bis( $\eta^2$ -diketonato) Ruthenium (II/III)*

Supervisor: Professor M.A. Bennett

Currently: Ohio State University

**Ms Nadine M. Di Bartolo**, BSc James Cook

*Radiolabelling Antibodies for Cancer Diagnosis and Treatment*

Supervisor: Dr N.E. Dixon

Currently: Radiopharmaceuticals R & D Division, ANSTO, NSW

**Dr Jeffrey A. Crowther**, BSc Queensland

*Subunits of Escherichia coli DNA Polymerase III Holoenzyme*

Supervisor: Dr N.E. Dixon

Currently: Environment Protection Authority (EPA), NSW

**Dr Belinda J. Haupt**, BSc Newcastle (NSW)

*Single Polymer Chains*

Supervisor: Dr E.M. Sevick

Currently: Postdoctoral Fellow, University of Leiden

**Dr Owen G. Jepps**, BSc ANU

*The Thermodynamic Temperature in Statistical Mechanics*

Supervisor: Professor D.J. Evans

Currently: Research Fellow, Griffith University

**Ms Connie K.Y. Lee**, BSc Sydney

*4-Acylisoxazoles as Masked Acrylate Synthons in Asymmetric Synthesis*

Supervisor: Professor C.J. Easton

Currently: Postdoctoral Fellow, Cambridge University, UK

**Dr Matthew M.W. McLachlan**, BSc Auckland

*Studies Directed Toward the Synthesis of the Galbulimima Belgraveana Alkaloids*

Supervisor: Professor L.N. Mander

Currently: The Chemical Laboratories, Cambridge University, UK

**Dr Kenneth J. McRae**, BSc Melbourne

*cis-1,2-Dihydrocatechols – Versatile Synthons for the Stereoselective Assembly of Natural Products*

Supervisor: Professor M.G. Banwell

Currently: Department of Chemistry and Chemical Biology, Harvard University

**Dr Emil J. Mittag**, BS MS Texas El Paso

*Applications of the Fluctuation Theorem*

Supervisor: Professor D.J. Evans

Currently: Centre for Bioinformatics, University of Hamburg

**Mr Timothy P. O'Sullivan**, BSc Limerick

*A New Approach to the Total Synthesis of Harringtonolide*

Supervisor: Professor L.N. Mander

Currently: Postdoctoral Fellow, School of Pharmacy, Trinity College, Dublin

## Post-Graduate Career Development, Education and Training

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**Mr Nicholas R. Perkins**, BSc NSW

*The Synthesis, Electrochemistry and Spectroscopy of Face-sharing Polynuclear Complexes*

Supervisor: Dr G.A. Heath

Currently: ACT Government Analytical laboratory

**Mr James B. Procter**, BSc York, MSc Leeds

*Representation and Comparison of Protein Structure*

Supervisor: Dr A.E. Torda

Currently: Postdoctoral Fellow, Centre for Bioinformatics, University of Hamburg

**Dr Steven L. Ramsay**, BSc Adelaide

*Structural Analysis of Complex Glycosaminoglycans*

Supervisor: Dr J.K. MacLeod

Currently: Department of Chemical Pathology, Women and Children's Hospital, Adelaide

**Ms Jo-Anne M. Rasmussen**, BSc Central Queensland

*The Synthesis of Some Novel Molecular Clefts*

Supervisor: Professor M.G. Banwell

Currently: Research Chemist, CSIRO, Melbourne

**Dr Jeremy L. Ruggles**, BSc New England

*Template Assisted Self-assembly of Mesoporous Silicate Films at the Air-water Interface*

Supervisor: Professor J.W. White

Currently: University of Queensland

**Dr George J. Vuckovic**, BSc Monash, Hons ANU

*Studies of the Effects of Biological Catalysts and Cyclodextrins on Chemical Transformations*

Supervisor: Professor C.J. Easton

Currently: Environment Australia

**Dr Ian Walker**, BSc Curtin

*Mutagenesis and Mechanistic Studies of Dienelactone Hydrolase: Conversion to Dienelactone Isomerase*

Supervisor: Professor C.J. Easton

Currently: University of Melbourne

**Mr David J. Wong**, BSc Sydney

*Studies in Natural Product Synthesis*

Supervisor: Professor M.G. Banwell

Currently: Department of Chemistry, Cambridge University

### MPhil Degree Awarded

**Mr Cy M. Jeffries**, BSc Canterbury NZ, Hons ANU

*Attempting a Functional Change of an Enzyme: The Directed Evolution of Dienelactone Hydrolase into a Parathionase*

Supervisor: Dr D. Ollis

Currently: Technician, University of Sydney

## Postdoctoral Fellows, Research Fellows and Fellows–Completions and Destinations

The School provides one of the very best environments for the education and research training of graduate students and postdoctoral fellows. Our interest in their welfare extends well beyond the time spent at the RSC, in part through a comprehensive alumni program. Although the School was founded only thirty-three years ago, many of our alumni now occupy senior positions in academia, government and industry, both in Australia and overseas.

Dr Ellen Beck Isotechnika, Edmonton, Canada  
Dr Nicola Brasch Lectureship, Kent State University, Ohio, USA  
Dr Zsuzsanna Dosztanyi Institute of Enzymology, Hungarian Academy of Sciences, Budapest  
Dr Mukta Gupta completed her postdoctoral fellowship in February  
Dr Rebecca Jacob Postdoctoral Fellow, Royal Melbourne Institute of Technology  
Dr Katrina Jolliffe QE11 Fellowship at the University of Sydney  
Dr Kitty Lee New Zealand Milk Products, Hamilton, NZ  
Dr Vanessa Masters Graduate Program, Department of Defence, Canberra  
Dr Emil Mittag Centre for Bioinformatics, University of Hamburg, Germany  
Dr Lasse Norén Technical Officer, Research School of Chemistry, ANU  
Dr James Procter Centre for Bioinformatics, University of Hamburg, Germany  
Dr Michael Sullivan Supercomputer Facility, Singapore  
Dr Andrew Torda Professorship, Bioinformatics, University of Hamburg  
Dr Xueqin Wang completed her postdoctoral fellowship in June  
Dr Eric Wenger Research Services Office, ANU  
Dr Wolfram Wielandt Research Assistantship, Karl-Franzens-University, Austria  
Dr Ling Xia Postdoctoral Fellowship with GlaxoSmithKline  
Dr Hong Yang The Walter and Eliza Hall Institute of Medical Research, Royal Melbourne Hospital

## Research Students

Alan Sargeson Merit Scholarship = ASM  
Australian Postgraduate Award = APA  
Australian Postgraduate Award (Industry) = APA(I)  
ANU Graduate School Scholarship = GSS  
Co-funded ANU Graduate School/Research School of Chemistry = GSS/RSC  
ANU PhD Scholarship = ANUPhD  
International Postgraduate Research Scholarship = IPRS  
Cotton Research Development Corporation = CRDC  
University-Industry Linkages in Chemistry = UniChe  
ANU PhD Scholarship = ANUPhD  
Deutscher Akademischer Austausch Dienst e.V. = DAAD

▪ Abraham, Mark BSc <i>Tasmania</i>	ANUPhD
▪ Adams, Joanne R. BSc <i>Flinders</i>	APA
▪ Banciu, Bogdan Dipl Cuza Univ Iasi, Romania	ANUPhD
▪ Barbiellini, Roberta BHSc <i>Griffith</i>	APA
▪ Barr, Lorna BSc <i>Strathclyde</i>	ANUPhD
▪ Barratt, Brendon BSc <i>Deakin</i>	ANUPhD
▪ Beck, Daniel BSc <i>RMIT</i>	APA
▪ Bernardo, Martha E. BS <i>Ateneo de Manila GradDipSc ANU</i>	ANUPhD
▪ Brink, Franciscus J. BAppSc <i>South Australia MAppSc LaTrobe</i>	
▪ Carberry, David M. BSc BEng Hons <i>ANU</i>	ANUPhD
▪ Cieslinski, Marta M. BSc <i>Adelaide</i>	GSS/R
▪ Chand, Satish BSc <i>USP MSc Macquarie</i>	ANUPhD

## Post-Graduate Career Development, Education and Training

▪ Chow, Leonie BSc Melbourne	APA
▪ Crow, James MChem Sussex	ANUPhD
▪ Dewhurst, Rian D. BSc Canterbury, NZ	ANUPhD
▪ Di Bartolo, Nadine M. BSc James Cook	ANSTO
▪ Dumanski, Paul BAppSc RMIT Hons Victoria UTech	APA(I)
▪ Duncan, Alexander H. BSc Macquarie	
▪ Evenhuis, Christian R. BSc Tasmania	APA
▪ Gebara-Coghlan, Mariana BSc Sydney Hons ANU	APA(I)
▪ Habermehl, Nicolle C. BSc ANU	APA
▪ Hamdan, Samir M. BSc Yarmouk MS West Michigan	ANUPhD
▪ Harfoot, Gwion BSc MSc Waikato	GSS/ASM
▪ Harvey, Michael J. MSc Waikato	ANUPhD
▪ Hutt, Oliver E. BSc Otago, NZ Hons ANU	ANUPhD
▪ Karunaratne, Ochitha BAppSc RMIT	APA
▪ Kitto, Heather J. BSc Canterbury, NZ	GSS/RSC
▪ Krenske, Elizabeth H. BSc Queensland	APA/VC
▪ Jury, Jasmine C. BSc Massey	ANUPhD
▪ Le, Thanh Phuoc BSc Cantho Vietnam MSc Amsterdam	ANUPhD
▪ Lee, Connie K. Y. BSc Sydney	APA(I)
▪ Loong, David T. J. BTech (ChemTech) Massey	ANUPhD
▪ Loscha, Karin V. BSc MSc Göttingen	DAAD
▪ Lupton, David W. BSc Adelaide	GSS
▪ Ma, Xing H. BSc Hanzhong ME Dalian, China	APA(I)
▪ Margerison, Samuel A. BSc Canterbury, NZ	GSS
▪ McLachlan, Matthew M. W. BSc Auckland	GSS
▪ McNabb, Stephen B. BSc Canterbury, NZ	
▪ Mittag, Emil J. BS MS Texas El Paso	IPRS
▪ Mortimer, Adam J. BSc Wollongong	ANUPhD
▪ Mulcair, Mark BSc Monash	ANUPhD
▪ Murphy, James M. BSc Canterbury, NZ	GSS/AMS
▪ Nguyen, Xuan T.T. BSc Melbourne	GSS/RSC
▪ O'Connor, Patrick D. BSc Massey	GSS
▪ Onagi, Hideki BSc Western Sydney Hons ANU	ANUPhD
▪ Park Ah Young BSc ANU	ANUPhD
▪ Perkins, Nicholas R. BSc New South Wales	
▪ Philbrook, Amy A. BSc Maine	UnIChe
▪ Ramsay, Steven L. BSc Adelaide	
▪ Rasmussen, Jo-Anne M. BSc C Queensland	
▪ Smith, Michael H. BSc Melbourne Hons Sydney	ANUPhD
▪ Stanislawski, Pauline C. BSc Monash	ANUPhD
▪ Stevenson, Bradley J. BSc Lincoln, NZ	GSS/VC
▪ Sydnes, Magne CandMag CandSc Oslo	ANUPhD
▪ Taylor, Rebecca M. BSc MSc Waikato	ANUPhD
▪ Tshabang, Never BSc Botswana MSc Sussex	U Botswana
▪ Thomson, Regan J. BSc Auckland Hons ANU	GSS
▪ Warr, Rebecca J. BSc Canterbury, NZ	GSS
▪ Watts, Zachary I. BAppSc RMIT	ANUPhD
▪ Wong, David J. BSc Sydney	APA(I)
▪ Wood, Geoffrey P.F. BSc Canterbury, NZ	GSS
▪ Yu McLoughlin, Sean BSc James Cook	ANUPhD
▪ Zhao, Chunjiu BSc Changchun MSc Beijing	IPRS/CSIRO
▪ Zuckerman, Michael L. BSc Adelaide	CRDC/CSIRO

## Visiting Scholars

As part of the recruitment program the School hosts international and Australian scholars for visits of two to six months to undertake research projects with individual staff members. In most instances the project forms part of their course requirements and the scholars are supported by their home institutions:

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|---|--------------|
| ▪ Corral, Ms Ines Dipl Madrid                         | L. Radom     |
| ▪ Fleck, Ms Karin Dipl Vienna                         | M.A. Bennett |
| ▪ Helmstedt, Ms Ulrike Dipl Leipzig                   | S.B. Wild    |
| ▪ Jergic, Mr Slobodan BSc Biochem/BiotechEng Belgrade | N.E. Dixon   |
| ▪ Kaspar, Ms Hannelore Pre Dipl Munich                | M.G. Banwell |
| ▪ Mangin, Ms Stefanie Tübingen                        | A.E. Torda   |
| ▪ Privér, Mr Steven BAppSc RMIT                       | M.A. Bennett |
| ▪ Wolf, Mr Robert MPhil Cambridge                     | S.B. Wild    |

## Honours Scholars

The following students undertook joint Honours projects with the School and the Chemistry Department, The Faculties:

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|---|--------------------------|
| ▪ Ho, Mr Junming BSc Chem Western Australia | M.A. Collins/R. Stranger |
| ▪ Perriman, Mr Adam BSc ANU                 | J.W. White/G. Fischer    |

## Summer Scholar Program

Summer Research Scholarships for eight to ten weeks, from November to February 2002-2003, were awarded to twenty-four undergraduate students from Australia and New Zealand. All were involved in research projects with individual staff members:

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|---|----------------------|
| ▪ Abernethy, Ms Robyn Massey                  | R.L. Withers         |
| ▪ Aitchison, Mr Tony Flinders                 | G.A. Heath           |
| ▪ Bilski, Mr Tomasz Curtin UTech              | M.G. Banwell         |
| ▪ Ciawi, Ms Envi Melbourne                    | E.M. Seveck          |
| ▪ Cruickshank, Ms Amy Canterbury              | C.J. Easton          |
| ▪ Dick, Mr Andrew Tasmania                    | E.R. Krausz          |
| ▪ Fischer, Mr Joshua Sydney                   | M.S. Sherburn        |
| ▪ Friend, Mr Martin Murdoch                   | M.G. Banwell         |
| ▪ Ho, Mr Junming UWA/ANU                      | L. Radom             |
| ▪ Jackson, Mr Colin Otago                     | D.L. Ollis           |
| ▪ Kay, Ms Hannah Flinders                     | N.E. Dixon/G. Otting |
| ▪ Kokas, Mr Okanya J Queensland               | M.G. Banwell         |
| ▪ Kristiana, Ms Ria Murdoch                   | S.B. Wild            |
| ▪ Lim, Mr Teck Hock Victoria U Wellington     | L.N. Mander          |
| ▪ Martin, Ms Lee New South Wales              | A.F. Hill            |
| ▪ Miller, Ms Natalie Sydney                   | M.S. Sherburn        |
| ▪ Mramor, Ms Tania Lee Massey                 | G.A. Heath           |
| ▪ Reid, Mr James Victoria Wellington          | D.J. Evans           |
| ▪ San, Ms Hy Huong Northern Territory         | C.J. Easton          |
| ▪ Szczepina, Mr Cody Wollongong               | A.F. Hill            |
| ▪ Watson, Mr Morgan A Canterbury              | D.L. Ollis           |
| ▪ Williams, Ms Leodrina Victoria U Wellington | R.D. Webster         |
| ▪ Wilson, Ms Adele Tasmania                   | A.F. Hill/S.B. Wild  |
| ▪ Wu, Mr Peter Queensland UTech               | G. Otting            |