HDR Co-ordinators

- A/Prof Jane Black
  Anatomy and Developmental Biology
- Prof Mibel Aguilar
  Biochemistry and Molecular Biology
- A/Prof Hans Netter
  Microbiology
- A/Prof Sharon Ricardo
  Monash Immunology and Stem Cell Laboratories
- Prof Wayne Hodgson
  Pharmacology
- Dr Michal Schneider-Kolsky
  Medical imaging and Radiation Sciences
- Dr James Bourne
  Australian Regenerative Medicine institute (ARMI)
MBio Graduate School

A/Prof Sharon Ricardo

Dr Shae Lee-Cox
School of Biomedical Sciences
Biosciences Precinct
Monash Biosciences (MBio)

- MBio Graduate School
  - Anatomy and Developmental Biology
  - Biochemistry and Molecular Biology
  - Microbiology
  - Monash Immunology and Stem Cell Laboratories
  - Pharmacology
  - Medical imaging and Radiation Sciences
  - Australian Regenerative Medicine institute (ARMI)

- Academic and Student Management Committee
MBio Graduate School at a glance

- MBio is biomedical sciences at Monash University
- *Times Higher World University Rankings* placed 25th in the world for Life Sciences and Biomedicine
- 510 research and teaching staff
- 278 PhD students
- MBio’s research income totalled $47 million in 2009
MBio Location

Monash University, Clayton Campus

CSIRO

Bioengineering

Psychology, Psychiatry and Psychology medicine

The Australian Synchrotron

MBio
Monash Health Research Precinct

Monash Institute of Medical Research

Monash Medical Centre

Prince Henry’s Institute
Collaboration: AMREP

- Baker/IDI
- Burnet Institute
- School of Public Health and Preventative Medicine
- Australian Centre for Blood Diseases
- Central Clinical School
- Alfred Hospital
MBio core facilities

- **Animal models**: mice, zebra fish, sheep, non-human primates
- **Flow Cytometry**: cell sorting
- **Micromon**: DNA sequencing
- **Monash Antibody Technologies Facility**
- **Flowcore**
- **Monash Micro Imaging**: microscopy and imaging support

Confocal microscope

MATF

MONASH University
Faculty of Medicine, Nursing and Health Sciences

www.med.monash.edu.au
MBio core facilities continued

- **Protein Production**: high-throughput protein purification
- **Structural Biology and Bioinformatics**: protein crystal isolation and sequence analysis
- **Proteomics Facility**: protein identification and analysis
- **In vitro and in vivo diagnostics**: Biochip and molecular imaging
- Important links with campus facilities

Protein Production Unit

X-ray crystallography
MBio Website

Programs and Events

• Career information sessions
• Leadership programs
• Social events and student lounge
• Information Sessions
• Mentorship opportunities
• Three minute thesis competition
• Workshops
• Multidisciplinary research platforms (themes)
MBio Research Themes

- Cancer Biology
- Cardiovascular function and disease
- Developmental Biology
- Diagnostic imaging and radiation therapy
- Immunology, immunity and infection
- Neurosciences
- Obesity and metabolic diseases
- Stem cells and regenerative medicine
- Structural biology and drug design
Job versus Career

- A job is a means to an end
- A career in Science is more
  - Science means ‘to know’
  - PhD is the start of a career
  - Dedicated to the search for knowledge
Qualities of a Scientist

- Curiosity and enthusiasm
- Creativity and motivation
- Patience, persistence and precision
- Troubleshooting (scepticism) – lateral thinking
- Accountability (honest and objective)

Communication
- Publications
- Presentations
- Conferences
- Networking and collaborations
The Student-Supervisor relationship

- Requires commitment from supervisor and student
- Level of commitment, ground rules and expectations need to be established early
- **Supervisors:**
  - Expect their students to be independent
  - To produce written work that is not just a first draft
  - Have regular meetings with their research students
  - Expect students to be honest when reporting on their progress
  - Supervisors expect their students to follow the advice that they give and be excited!
The Student-Supervisor relationship

- Requires commitment from supervisor and student
- Level of commitment, ground rules and expectations need to be established early

Students:
- Expect their supervisors to be available and read their work in a timely manner
- Expect their supervisors to be constructively critical
- Expect their supervisor to have a good knowledge of the research area
- Expect the supervisor to advise, exchange ideas and have interest in the research project
Advice for Students

- be honest
- be reasonable
- be calm but assertive
- be aware of your rights and responsibilities
- understand your role
- understand your supervisor’s role
- don’t make assumptions
- discuss concerns with your supervisor
Problems…

Sources of assistance:

• Graduate Coordinator
• Head of Department
• Other postgraduates
• Monash Postgraduate Association
• University Counselling
Top Ten Tips

- Get involved and take responsibility for your project
- Work hard
- Enjoy yourself
- Read the literature
- Plan your days and weeks carefully - deadlines
- Keep a good lab book
- Be active, not passive in your approach
- Go to seminars
- Make the most of opportunities for conferences
  - Join societies, take courses
- Healthy body, healthy mind!
Monash Sport

- Gym
- Group Fitness Classes
  - Monash Sport offers a range of group fitness classes
- TeamMONASH™ Events
  - You can volunteer too to be a part of the event!
- Doug Ellis Swimming Pool
- Casual Court Hire

Visit www.sport.monash.edu
‘I am still learning’
**MBio Graduate School**

- **Enhancement of scientific and professional development**
  - Provide opportunities for interaction and collaboration
- **Enrichment of the PhD experience and preparation for a range of future careers**
  - Professional Development Portfolios to broaden skill base
- **Provide mentorship and leadership programs**
- **Provide increased interactions and collaborations**
  - Emphasis on multidisciplinary and HDR graduate attributes
    > eg. EMBL and A-STAR (Singapore)
  - Workshops and access to platform technologies
MMI Facilities and Services

- **Training (Instrument operation, research methodology)**
- **Research Support**
  - Experimental design & Planning
  - Project development (pilots)
  - *Data handling*
- **Application development**
  - Specimen prep, labelling and immuno techniques
  - Quantitative image analysis
  - Visualisation, 3D rendering and analysis
- **Supervision of Projects and Staff / Students**
- **Live cell and fluorescence imaging techniques**
- **Facilities at Clayton, MIMR, Southern Clinical School, Burnett and Baker Institutes**