



Department of Medicine (RMH)

MELBOURNE MEDICAL SCHOOL

Faculty of Medicine, Dentistry & Health Sciences
University of Melbourne

MASTER OF BIOMEDICAL SCIENCE 2018 HANDBOOK

<http://mdhs-study.unimelb.edu.au/degrees/master-of-biomedical-science/overview#overview>

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WELCOME

DEPARTMENT OF MEDICINE AT THE ROYAL MELBOURNE HOSPITAL

**Melbourne Medical School
Faculty of Medicine, Dentistry & Health Sciences
University of Melbourne**

MASTER OF BIOMEDICAL SCIENCE PROGRAM

It is a pleasure to welcome you to the start of your Master of Science year with the University of Melbourne.

Being a University Department situated in a large public hospital, we have a strong focus on clinically relevant research. We are particularly keen on research projects at the interface of basic science, clinical medicine and population health. We hope you will have the opportunity to hear about other research involving your own supervisor's group as well as the diverse activities of others in the Department.

Our Department of Medicine at RMH and affiliated institutes, have a philosophy of a "learning organisation" so that we all learn from each other in a supportive environment from which we all benefit. In order to create this environment, we encourage you to participate in seminars and discussion groups, as well as bringing to our attention any concerns that you have that may prevent you from gaining the maximum possible from your year within our Departments.

Please let the course coordinators or other senior members of your Department, know of any issues that arise so that we may do our best to correct them, to ensure you have a most fulfilling year.

Best of luck for the year ahead.

Professor Stephen Rogerson
Interim Head of Department
Department of Medicine (RMH)
Melbourne Medical School, FMDHS
University of Melbourne

2018 RMH Honours/MBiomedSc PROGRAM

STUDENT WELCOME/ORIENTATION

MONDAY 12TH FEBRUARY

9.30am – 11:45am

Ewing Lecture Theatre, 5th Floor, Clinical Sciences Building,
Royal Melbourne Hospital

| | | |
|-----------------|---|---|
| 9.30 – 9.35am | Welcome | Prof Stephen Rogerson Interim Head of Department Department of Medicine |
| 9:35 – 9:40am | Introduction | Dr Chris French Faculty Honours Coordinator, Department of Medicine, RMH |
| 9.40 – 9.50am | Dept Student Association (StoRM) | Ka Man Li (President 2017) Juliana Silva (Vice president 2017) Philip Haraka (new committee member 2018) |
| 9.50 – 10.10am | Overview of Honours Program and administration | Dr Adrian Achuthan Department Honours Coordinator, Department of Medicine at RMH |
| 10.10 – 10.30am | MORNING TEA - Students, Supervisors Dept of Medicine (RMH), 4 th Floor, Clinical Sciences Building, RMH. | |
| 10.30 – 11:45 | Parkville Hospital Sites OHS / Lab Induction | Dr Jordanna Master, OHS advisor and Lab Manager |

12:00 – 1:30

Master of Biomedical Science Orientation

Seminar Rm 1 and 2, Ground Floor Peter Doherty Institute

2:15 – 5:15

BIOM40001 – Introduction to Biomedical Research

Medical Wright Theatre, Medical Building, Room C403, 4th Floor.

HONOURS/MBIOMEDSC COORDINATORS CONTACT INFORMATION

Dr Chris French and Dr Adrian Achuthan are the Honours/MBiomedSc Coordinators for students enrolled with Department of Medicine RMH, University of Melbourne.

Their contact details are:

Chris French: Office: 9035 6376
 Mobile: 0427 327 505
 Email: frenchc@unimelb.edu.au

Adrian Achuthan: Office: 8344 3298
 Email: aaa@unimelb.edu.au

Should you wish to make a time to meet with Chris or Adrian, please contact them by email to make an appointment. Please use the mobile phone number for urgent matters only.

Alternatively you can contact your departmental Honours/MBiomedSc coordinators listed below or the Honours/MBiomedSc Administrator Ms Kimberly Yu yu.k@unimelb.edu.au

Medicine RMH:

Adrian Achuthan aaa@unimelb.edu.au;

Psychiatry RMH:

Lisa Dell lisa.dell@unimelb.edu.au

Surgery RMH:

Hong-Jian Zhu Hongjian@unimelb.edu.au

Dept of Obstetrics & Gynaecology, Royal Women's Hospital

Harry Georgiou harrymg@unimelb.edu.au

Participating affiliates please contact the Melbourne Academic Centre Honours Coordinators or the Honours/MSc Administrator Kimberly Yu E: yu.k@unimelb.edu.au

MBiomedSc IMPORTANT DATES – 2018/2019

<http://medicine.unimelb.edu.au/school-structure/medicine-and-radiology/study/current-student-resources>

Please note all dates and times are subject to change.

YEAR 1 - 2018

| | |
|--|---|
| Monday, 12 February – Friday, 23 February | BIOM40001: Biomedical Research Course Module 2:15pm – 5:15pm (Mon-Fri) Medical – Wright Theatre, Medical Building, Rm C403 |
| Friday, 2 March | MEDI40004: RMH Academic Seminar Series commences 11.30am – 12.30am Ewing Lecture Theatre, 5 th Floor, Clinical Sciences Building, Royal Melbourne Hospital. <i>Light lunch will be provided from 12:30</i> |
| Monday 5 March - Tuesday 17 April | MEDI40004: Advanced Coursework Research Lecture Program. <i>'Seminars in Translational Medicine'</i> Compulsory subject for students enrolled through Dept. of Medicine. (5, 13, 19, 20, 26, 27 March – 9, 10, 16, 17 April) Ewing Lecture Theatre, Dept. of Surgery, 5 th Floor, Clinical Sciences Building, RMH. Lectures are held on Mondays and/or Tuesdays. |
| Thursday 1 March | BIOM40001: Essay synopsis due |
| Thursday 15 March | BIOM40001: Essays due |
| Thursday 29 March | BIOM40001: Statistics and Experimental Design Assignment due |
| Wednesday 16 May | MEDI40004: Advanced Coursework Theory Examination (MCQ format) 9.30am – 11.30am Location: PAR-Kwong Lee Dow-100 Exam Space Level 1, 234 Queensberry Street. |
| Wednesday 29 August | HONOURS/MBiomedSc INFORMATION EVENING for 2019 students. 4.00-6.00pm. Seminar Room 1&2, Function Centre, Ground Floor, RMH |
| August | Thesis Writing Workshop TBC Ewing Lecture Theatre |

STUDENTS COMMENCING SEMESTER 1 2018

YEAR 1 – 2018

| | |
|-----------------------------|---------------------------------------|
| 2pm, Monday 29 October 2018 | Literature Review: due |
| Thursday 8 November 2018 | Introductory oral presentation |

YEAR 2 – 2019

| | |
|-----|--------------------------------|
| TBC | Final thesis: due |
| TBC | Final oral presentation |

STUDENTS COMMENCING SEMESTER 2 2017

YEAR 1 – 2017/2018

| | |
|-------------------------|---------------------------------------|
| 2pm, Monday 4 June 2018 | Literature Review: due |
| Thursday 14 June 2018 | Introductory oral presentation |

YEAR 2 – 2018/2019

| | |
|-----|--------------------------------|
| TBC | Final thesis: due |
| TBC | Final oral presentation |

STUDENTS COMMENCING SEMESTER 1 2017

YEAR 1 – 2017

| | |
|-----------|---------------------------------------|
| Completed | Literature Review: due |
| Completed | Introductory oral presentation |

YEAR 2 – 2018

| | |
|------------------------------|--------------------------------|
| 2 pm, Monday 29 October 2018 | Final thesis: due |
| Thursday 8 November 2018 | Final oral presentation |

STUDENTS COMMENCING SEMESTER 2 2016

YEAR 1 – 2016/2017

| | |
|-----------|---------------------------------------|
| Completed | Literature Review: due |
| Completed | Introductory oral presentation |

YEAR 2 – 2017/2018

| | |
|--------------------------|--------------------------------|
| 2 pm, Monday 4 June 2018 | Final thesis: due |
| Thursday 14 June 2018 | Final oral presentation |

MASTER OF BIOMEDICAL SCIENCE COURSE STRUCTURE

Students must complete 200 points comprising of:

| | |
|-------------|----------------------------|
| 125 points: | Major Research Project |
| 50 points: | Discipline Subjects |
| 25 points: | Professional Tool Subjects |

MAJOR RESEARCH PROJECT. 125 points

- A literature review of up to 6,000 words.
Assessment hurdle: Due end of 2nd semester Year 1. The grade assessed provides indicative student feedback but does not form part of the final Research Project grade.
- One 15 minute (introductory) and one 20 minute (final) oral presentations.
Assessment hurdle: Due end of 2nd semester Year 1 (15 min) and final semester Year 2 (20 min).
Ewing Lecture Theatre, 5th Flr, CSB, RMH.
- Major research report of up to 20,000 words. Due end of final semester Year 2.
As this project is a larger body of research work than an Honours research project (75pts) the expectation about the extent of work undertaken is adjusted and more research output is expected to be achieved. More supervisor input is required but this is over the 2 year duration.

DISCIPLINE SUBJECTS. 50 points

4 subjects x 12.5 points each.

- **BIOM40001.** Introduction to Biomedical Research. Semester 1.
Assessment: Essays
- **MEDI40004.** Advanced Coursework 'Seminars in Translational Medicine' Lecture Program.
Assessment: Multiple Choice Question examination undertaken in Semester 1.
This is a compulsory module to be undertaken by students enrolled in the Department of Medicine (RMH).

Students need to select an additional two subjects.

PROFESSIONAL TOOL SUBJECTS. 25 points

- 2 subjects x 12.5 points each

BIOM40001 - INTRODUCTION TO BIOMEDICAL RESEARCH

(Semester 1)

Subject Overview:

This core subject contributes 12.5% to the total mark of the Honours and Master of Science year and uses a structured approach in a series of 10 x 2 hr tutorials to introduce students to processes and strategies at the core of modern biomedical research. Students are guided through the need for – and tools of – testable hypothesis formulation, data management and evaluation, data presentation, and research outcome communication. Specific case examples of experimental design and statistical testing techniques are considered. In the course of this, students are introduced to appropriate statistical approaches and software. Ethical practices relevant to both animal and human experimental biomedical research are reviewed and inculcated. Broad issues relating to research conduct and management are addressed in the context of Discussion Workshops. These topics include critical reading skills, management of intellectual property, scientific integrity and fraud, conflict of interest, e-research, publication production, reference management and archiving of data.

The subject is delivered intensively between 2:15pm and 5:15pm each afternoon for two weeks from **Monday 12 February to Friday 23 February** inclusive. The topics covered are divided into four main themes:

- Health and Safety
- Experimental Design and Statistics
- Ethics and Research Conduct
- Literature and Data Management
- Communication of Research Outcomes

Objectives:

To develop a mature understanding of experimental design, experimental implementation, data evaluation and communication as it relates to modern biomedical research, in a broad ethical context. To acquire competency in statistical analysis, hypothesis testing and data presentation. To generate awareness of, and appropriate behaviours relating to, ethical conduct of animal and human experimental ethics, including regulatory requirements. To appreciate the need for the active management of intellectual property issues, scientific integrity and conflict of interest in a contemporary biomedical research context. To become aware of the scientific and technical basis of selected advanced techniques in biomedical research

Assessment:

This subject will be assessed by two take-home, written essays (each 3000 words or equivalent, each worth 50%) as follows:

1. Health & safety/ethics/literature & data management/communication essay **due Thursday 15th March, 5pm.**
2. Experimental design and statistics assignment **due Thursday 29th March, 5pm.**

BIOM40001 TIMETABLE:

Venue: Wright Theatre, 4th Floor, Medical Building (cnr Grattan St/Royal Parade)

| | | | | |
|-----|--------|------|---|-------------------------|
| | | | Health and Safety | |
| | | | Experimental design and statistics | |
| | | | Ethics and Research Conduct | |
| | | | Literature and Data Management | |
| | | | Interpretation and Communication of research outcomes | |
| Mon | 12-Feb | 2:15 | Introduction | Dr Rene Koopman |
| | | 3:15 | Oral communication skills | A/Prof Tony Hughes |
| | | 4:15 | Writing a thesis | A/Prof Tony Hughes |
| Tue | 13-Feb | 2:15 | Laboratory Safety | Ira Tedja |
| | | 3:15 | Statistics I: Holey sea shells, Batman! | Dr Michael Lew |
| | | 4:15 | Statistics II: Holey sea shells...cont. | Dr Michael Lew |
| Wed | 14-Feb | 2:15 | Understanding and interpreting scientific literature | Dr Rene Koopman |
| | | 3:15 | Interpreting scientific data | Dr Michael Lew |
| | | 4:15 | NO LECTURE | |
| Thu | 15-Feb | 2:15 | Searching medical databases and managing references | Jim Berryman |
| | | 3:15 | Publication | Patrick Condon |
| | | 4:15 | CORTELLIS WORKSHOP | Amabel Tam |
| Fri | 16-Feb | 2:15 | Code of conduct for research and laboratory notebooks | Cath and Kim |
| | | 3:15 | Statistics III: Sea shells – are they different? | Dr Michael Lew |
| | | 4:15 | NO LECTURE | |
| Mon | 19-Feb | 2:15 | Ethics in research involving humans | A/Prof Lyn Gillam |
| | | 3:15 | Ethics in research involving humans | A/Prof Lyn Gillam |
| | | 4:15 | NO LECTURE | |
| Tue | 20-Feb | 2:15 | Statistics IV: Statistics for heroes | Dr Michael Lew |
| | | 3:15 | Animal ethics and welfare | A/Prof James Brock |
| | | 4:15 | Animal ethics and welfare | Animal Welfare Officers |
| Wed | 21-Feb | 2:15 | Intellectual property and its management | Lachlan Wilson |
| | | 3:15 | Statistics V: More than one comparison | Dr Michael Lew |
| | | 4:15 | Statistics VI: People and schools | Dr Michael Lew |
| Thu | 22-Feb | 2:15 | Statistics VII: Who is the best batsman? | Dr Michael Lew |
| | | 3:15 | Statistics VIII: Great errors I have known | Dr Michael Lew |
| | | 4:15 | NO LECTURE | A/Prof Fiona Fidler |
| Fri | 23-Feb | 2:15 | Ten rules for the presentation and interpretation of data in publications | Prof David Vaux |
| | | 3:15 | Ten rules, continued | Prof David Vaux |
| | | 4:15 | Conclusions and farewell | Dr Rene Koopman |

If you are unable to attend lectures as indicated you will be able to check the Learning and Management System (LMS) site on which lecture notes and other materials will be posted as the lecturers see fit. The lectures will also be recorded. ***It will be up to you to check as you will be required to hand in the assessments by the due dates.***

Recorded lectures - some of the lecturers may have arranged for their lectures to be recorded. These recordings are not a substitute for lecture attendance. These recordings are intended to help you with revision during the semester and for the end-of-semester exam.

- Recordings are normally available on the same day as the actual lecture, usually via your LMS subject.
- Some lecturers may make their recordings available only during the exam recess.
- Most recordings will be available for download to your personal laptop
- Your lecturer determines whether download versions of the recording will be made available.
- Most recorded lectures are the visual presentation sync-ed with the lecturer's voice.
- Recordings for some subjects may be audio only.
- To access recordings, you must have [Flash player plugin](#) installed in the internet browser

For access to recorded lectures see the Student IT and eLearning Support website:

<http://studentit.unimelb.edu.au/>

MEDI40004: ADVANCED COURSEWORK

(Semester 1)

Note that students enrolled through department of Medicine are required to take this subject.

This subject contributes 12.5% to the total mark.

Aim:

To give a broad introduction to research approaches to major human diseases. You will gain an understanding of how basic science contributes to advancing our understanding of disease and its treatment.

Structure:

Thematic topics of approximately 1 hour each. Each seminar has a focus on a major research approach to understanding human disease and will often cover both basic and medical science.

- **Seminars in Translational Medicine.** Approximately 20 lectures / 2-4 lectures per week from 5 March to 17 April held on Monday and/or Tuesday. *Attendance at the lecture program is compulsory and forms part of a MCQ examinable assessment.*
- **RMH Academic Weekly Research Seminar (March-November).** This is held every Friday – attendance is compulsory but not examinable.

Assessment:

Wednesday 16th May. MCQ style paper covering the Seminars in Translational Medicine Lecture Program examinable course work (12.5%).

SEMINARS IN TRANSLATIONAL MEDICINE

Research Lecture Program

Research Lecture Program

Venue: Ewing Lecture Theatre,
Department of Surgery, 5th Floor, Clinical Sciences Building
(unless indicated otherwise)

Note: lecture details are subject to change. Students will notified by email.

| | |
|--------------------------|---|
| Monday 5 March | Ewing Lecture Theatre, Dept of Surgery, Lvl 5, CSB, RMH |
| 9.30 – 10.30 | Professor Andrea Maier <i>'Geroscience'</i> |
| 10.30 – 11.30 | A/Professor Chris Reid <i>'Ion channels in genetic epilepsy'</i> |
| Tuesday, 13 March | Ewing Lecture Theatre, Dept of Surgery, Lvl 5, CSB, RMH |
| 9.30 – 10.30 | Dr Sam Emmanuel John <i>Brain Computer Interfaces: From thought to robotic control'</i> |
| 10.30 – 11.30 | Dr Louise Randall <i>'The Placenta: Biology, Complications and Pathogens'</i> |
| Monday 19 March | Ewing Lecture Theatre, Dept of Surgery, Lvl 5, CSB, RMH |
| 9.30 – 10.30 | Dr Stella Clark <i>'Postgraduate Student to.....Translation to a Career'</i> <i>Not examinable</i> |
| 10.30 – 11.30 | Professor Judy Savage <i>'Genetics for non-geneticists'</i> |
| Tuesday, 20 March | Ewing Lecture Theatre, Dept of Surgery, Lvl 5, CSB, RMH |
| 9.30 – 10.30 | Professor Mary Galea <i>'Translational research in neurological rehabilitation'</i> |
| 10.30 – 11.30 | A/Professor Caroline Marshall <i>'Clinical Research in Infection Control'</i> |
| Monday 26 March | Ewing Lecture Theatre, Dept of Surgery, Lvl 5, CSB, RMH |
| 9.30 – 10.30 | Dr Ben (Zhibin) Chen <i>'Evaluation of pharmacogenomics policy in practice: closing the translational loop'</i> |
| 10.30 – 11.30 | Dr Tomas Kalincik <i>'Notes from the Plato's cave: how to befriend statistics'</i> |
| Tuesday 27 March | Ewing Lecture Theatre, Dept of Surgery, Lvl 5, CSB, RMH |
| 9.30 – 10.30 | Dr Adrian Achuthan <i>'Emerging therapeutic strategies for rheumatoid</i> |

| | |
|-------------------------|---|
| | <i>arthritis'</i> |
| 10.30 – 11.30 | Professor Chris Hovens <i>'From tracking metastasis in living patients to new therapeutics for neurodegeneration'</i> |
| Monday 9 April | Ewing Lecture Theatre, Dept of Surgery, Lvl 5, CSB, RMH |
| 9.30 – 10.30 | Professor Stephen Rogerson <i>'Treatment and prevention of malaria'</i> |
| 10.30 – 11.30 | Professor Bruce Campbell <i>'Current management for stroke'</i> |
| Tuesday 10 April | Ewing Lecture Theatre, Dept of Surgery, Lvl 5, CSB, RMH |
| 9.30 – 10.30 | Dr Rhys Brady <i>'Neurological heterotopic ossification: from bench to battlefield'</i> |
| 10.30 – 11.30 | Dr Pablo Miguel Casillas Espinosa <i>'Developing new disease modifying therapies for neurological diseases'</i> |
| Monday 16 April | Ewing Lecture Theatre, Dept of Surgery, Lvl 5, CSB, RMH |
| 9.30 – 10.30 | Dr Mastura Monif <i>'The Immunology of Multiple Sclerosis'</i> |
| 10.30 – 11.30 | Professor Sanjoy Paul <i>'Translational Clinical Research – Clinical Trials and Further'</i> |
| Tuesday 17 April | Ewing Lecture Theatre, Dept of Surgery, Lvl 5, CSB, RMH |
| 9.30 – 10.30 | Dr Andrew Fleetwood <i>'Metabolism as a regulator of immune function'</i> |
| 10.30 – 11.30 | Dr Rodney Luwor <i>'Cancer Signalling'</i> |

Assessment: 16 May - 9.30am – 11.30am. Multiple Choice Question exam (MCQ)
Location: PAR-Kwong Lee Dow-100 Exam Space, Level 1, 234 Queensberry Street.

WHAT TO EXPECT FROM YOUR SUPERVISOR

1. To organize and supervise a Research Project, the goals of which can reasonably be expected to be fulfilled within the Master of Science research period.
2. it is your responsibility to meet deadlines but your supervisor can help with:
 - Draft Background for thesis submitted 2nd Semester Year 1.
 - Thesis completed by 2nd Semester Year 2
 - Oral presentations
3. To be available for and to have regular meetings (usually at least one per week) with you to discuss your Project and other problems.

If your Supervisor is absent for more than two weeks, another person or persons should be nominated and available.

4. To ensure that you actively participate in Data Club/Research-in-Progress meetings with your Research Group and to ensure that you fulfil the requirements; ie
 - Present at least two journal articles
 - Deliver two presentations of your Research Project.
5. To guide you on the intricacies of writing your thesis.
6. To review your thesis. Remember your supervisor cannot write this for you, it has to be your work but they will help.

In the unlikely event of these expectations not being met, please discuss the issues with your Departmental Coordinators. Any concerns or issues discussed will be kept strictly confidential.

GUIDELINES FOR PREPARATION OF MASTER OF SCIENCE THESIS

SUBMISSION, STRUCTURE AND SETTING OUT OF THE THESIS

1. THESIS SUBMISSION

- **Two copies of the thesis are to be submitted for examination.** Your thesis must be submitted using spiral binding with a soft cover (preferably clear).
- **One additional copy of the abstract is to be submitted.** Your name and student ID must be inserted on the top right hand corner.
- **Electronic copy of your thesis.** This is to be submitted by email/usb to Kimberly Yu E: yu.k@unimelb.edu.au Save your copy in the following format: Surname_Firstname_ID#
- **Your thesis must be submitted by the nominated Hurdles date (Year 2, Semester 2) no later than 4.00pm** to Kimberly Yu, , Honours/MSc Administrator, Department of Medicine (RMH) yu.k@unimelb.edu.au. **WARNING.** *It is not possible to grant extensions except in the case of serious illness or bereavement. Late work must be stamped "Late" and will have a grading penalty applied.*

After they are examined, a thesis copy will be deposited in the Department of Medicine (RMH) Library. You may need, therefore, additional copies for your supervisor/s, yourself or another person (e.g. parent, friend).

2. The thesis must be laser-printed, single-sided using a standard word processing software program (e.g. Microsoft Word) on A4 paper. You may use either **Arial** or **Times New Roman** fonts only. The use of font-spacing or other text compressing software, eg Pagemaker or other desk-top publishing software is not permitted.

Note: The Department of Medicine (RMH) has a laser colour printer located on the 4th Floor, Clinical Sciences Building which is available for printing copies of your thesis – as an access code is required please contact Mary Ljubanovic. In addition a coil binding machine is available – which must be booked prior – please allow at least 30 mins to bind 2 copies.

3. You must submit an electronic version of your thesis saved as a Word document. This electronic version must exactly match your written version. The electronic version will be randomly audited using “anti-cheating” software that detects plagiarised material. **IMPORTANT: plagiarism is an extremely serious offence at the University of Melbourne- penalties include failure with no right to resubmit or expulsion from the University. You will be required to formally declare in writing that your thesis is your own work. Being found guilty of plagiarism can have life-long consequences for you.**

4. Text must be double-spaced throughout.
Tables and Figures and legends are not required to be double-spaced. .

Figures, tables and their legends do not constitute body text.

5. Pagination.

- Title Page. Page numbering not preferred but is permitted.
- Number the Dedication, Declaration, Acknowledgement, Table of Contents, Abstract and Abbreviation pages in Roman numerals (i, ii, iii, iv etc.)
- Number the Body of the Thesis in Arabic numerals (1, 2, 3 etc).
Number the Appendix (if any) in Roman numerals

- Use a minimum font size of 11.
- Leave a minimum 2.5 cm margins all round the text.
- Number Tables, I, II, III, IV, etc. and Figures 1, 2, 3 etc. in order of first mention in the text.

6. The order of presentation in the thesis is:

Title page
Dedication page ie to Parents (optional)
Declaration (must be signed)
Acknowledgements
Table of contents
Abstract
Abbreviations used (if any)

Introduction)
Aims) BODY OF
Methods, acknowledging appropriate ethics clearances) THESIS
Results)
Discussion)

References
Tables*
Figures*, with legends
Appendix

** You may include as many figures and/or tables as you deem necessary. Figures and tables should be on separate pages labeled with their sequential number (i.e. Figure 1....Table I, II etc). Do not mix figures or tables within your body text.*

7. **Title page:** This should contain the thesis title, your full name and degree(s), what the thesis is being submitted for (i.e. "Thesis submitted to University of Melbourne for the Degree of Master of Biomedical Science"), and the date of submission, and student ID.
8. **Abstract:** Special attention should be paid to the abstract at the front of the thesis since this is an especially important part upon which your examiners make their judgment. It should be factual and informative, summarizing the main purposes and results of the work. It should be 1 to 2 pages long (ie longer than a normal paper abstract and more informative). It should enable anyone who has not read the full thesis to understand the objective of the research, the approach used, the results found and their significance. It is best written when the rest of the paper is completed. Avoid using abbreviations and references in the Abstract.
9. **Abbreviations:** These should be kept to a minimum. List abbreviations used on a separate page after the Abstract and consult the Department of Medicine or journals such as *Cell* or for approved abbreviations and also for any uncertainties in style.
- 10 **Body of the thesis (Introduction, Methods, Results and Discussion):** This should be approximately 20,000 words (before 2014: 15,000 words) of typed text, double-spaced (A4 pages). **You should aim to make your body text concise and use it to give a complete account of your project.**

For appropriate material, you may use one or more appendices at the end of the thesis. Lengthy experimental procedures description, mathematical derivations, etc. could be placed

in this section. Appendices facilitate future ready reference to valuable details without impairing the readability of the thesis. Where appropriate, references should be made to the original source when established techniques are used, mentioning only innovations in any detail. Important: do not use the Appendix for material that should be included in the body text. Appendices are very rarely needed. You should concentrate on writing clearly and concisely.

All data should be shown in some form. "Data not shown" is not acceptable for a thesis.

You may divide the introduction, methods, results and discussion into numbered subsection if desired eg.

1. Main heading
 - 1.1 subsection
 - 1.2 subsection etc

11. Acknowledgements: You must honestly acknowledge help from associates, etc, at the end of the thesis, pointing out clearly those measurements, calculations, diagrams, etc, which were executed by persons other than the writer of the thesis.

12. Ethics: You must acknowledge in your Methods section that the project had received prior ethical clearance(s) and was performed in accordance with the appropriate Hospital, University and NMHRC guidelines. Projects involving human subjects must acknowledge conformity with the Helsinki guidelines.

13. References: These should include all authors, the title, and inclusive page numbers. One of two systems can be used:

- (a) The "name and year" system is the preferred form (to follow instruction to Authors for **Cell**). For example "..... as shown previously (Miller, 1989; Fallon and Loughlin, 1993)"

The references should be listed alphabetically at the end of the text in the following style:

Fallon, J.H., and Loughlin, S.E. (1993). Functional implications of the anatomical localization of neurotrophic factors. In *Neurotrophic Factors*, S.E. Loughlin and J.H. Fallon, eds. (San Diego, California: Academic Press), pp. 1-24.

Miller, C. (1989). Genetic manipulation of ion channels: a new approach to structure and mechanism. *Neuron* 2, 1195-1205.

- (b) **Alternatively**, the references may be numbered in order of appearance in the text as :
"..... as shown previously [7]."
"..... as shown by Miller [7]."

The references are listed at the end of the text in numerical order in the same style as above.

Copies of the journal **Cell** are available in the Department to consult for referencing.

Note that bibliographic software such as Endnote makes this process relatively easy as complete references can be downloaded over the web and inserted directly into your Endnote library. Endnote also allows you to use a template with the preferred "Cell" citation formation. Endnote is supported by the University of Melbourne and may be downloaded

centrally from the University's website. The Brownless Medical Library also provides assistance in the use of Endnote.

- 14. Tables:** Give them fully explicit titles centered at the top of the Table and provide footnotes as superscripts, denoted as lower case letter (ie "a", "b", "c") in order of appearance where necessary. Avoid presenting the same data in a Figure and Table. Give all units in Table headings in the text and make sure they are consistent throughout. Tables are not required to be double spaced.
- 15. Figures:** Pay great attention to the preparation of figures. Give fully explicit titles and an adequate legend either underneath the Figure or on the opposite (facing) page so that it can be easily referred to while studying the Figure. Give all units on Figure ordinates and make sure they are consistent throughout. The four submitted copies of the thesis must have originals of all half tone photographs or of laser scanned images (eg Northern and Western blots). Paste photographs on non-transparent paper. Do not draw curves beyond data points unless you have special justification.

Figures, tables and their legends do not constitute body-text

DOS AND DON'TS

Writing the thesis will take much longer than you think. In order to make it easier:

- Discuss the content and format with your Supervisor before starting.
- Read the literature from the start of the year and read deeply and widely. Make an Endnote reference entry for each paper you read.
- Make an outline and a timetable for writing and discussing each chapter.
- Make a style sheet specifying all the detail of layout, formatting, graphs, tables, abbreviations. Use of a style sheet ensures you have consistency over the whole thesis.
- Make sure you know how to use your word-processing program and learn how to use the Table of Contents function. The university supports Microsoft Word but not other programs.
- Show your Supervisor a draft of each section as you write it and get his/her criticisms and suggestions.
- Submit a complete draft to your Supervisor one month before final submission.
- Save regularly and make backups.
- Write the thesis in your own words - it must be your original work. It is forbidden at all times to use sentences or paragraphs from other authors' works - such plagiarism is readily detected and constitutes a very serious offence that carries severe penalties. Under University guidelines, students found guilty of plagiarizing the work of others may be failed without rights or ability to resubmit or may be expelled.
- Carefully check for omissions, spelling errors, typographical errors, inconsistencies (especially in units used).
- When using computers, remember to keep back-up copies of all the work you prepare on a CD or USB stick in order to avoid any disastrous accidents!

DECLARATION TO ACCOMPANY THESIS SUBMISSION

This page should be copied and included with your thesis

DECLARATION BY SCHOLAR:

I, (student's name)

certify that

- the thesis comprises only my original work, except where indicated in the accompanying Acknowledgement statement *
- the thesis conforms to the specifications outlined in the Handbook.

Signature: _____

Date: _____

DECLARATION BY SUPERVISOR:

I confirm that the declaration above
of.....(student's name) thesis are a true and fair
representation of the student's work.

Signature: _____

Date: _____

ACKNOWLEDGEMENT

*Your Acknowledgement page must declare, as appropriate:

- the extent to which the student has used the work of others
- the contribution of the student to work carried out in collaboration with others
- a description of work submitted for any other qualification
- a description of work carried out prior to enrolment in MSc.

GUIDELINES FOR EXAMINERS - MBIOMEDSC

LITERATURE REVIEW

Satisfactory evaluation (ie \geq Pass). The Literature Review is a 'hurdle' requirement for the Research Project component of the MSc (BHS). The grade assessed provides indicative student feedback but **does not** form part of the final Research Project grade (which is based entirely on the Research Project Report). If the Review is considered **unsatisfactory** (ie Fail), re-submission and re-evaluation is necessary. If two unsatisfactory evaluations are determined then consultation involving the Student, Supervisors, MSc (BHS) Coordinator and Stream Coordinator should be initiated by the MSc (BHS) Coordinator.

An examiner will be nominated by the Supervisor. Feedback will be provided to the student.

CRITERIA :

- 1) Understanding and exposition of relevant issues
- 2) Structure and development of argument
- 3) Standard of critical analysis
- 4) Relevance and design of figures and tables (if used)
- 5) Evidence of wide and relevant reading
- 6) Evaluation and synthesis of material
- 7) Citation of references
- 8) Context for and articulation of Research Project goals
- 9) Quality of written text
- 10) Overall design and presentation

Class H1 (80-100%)

Student displays an excellent understanding and exposition of relevant issues in the field. The argument is clearly structured and logically developed and the review has only minor (low H1) or no (high H1) obvious weaknesses. Relevant data are clearly presented, figures and tables (if used) are relevant and are part of the overall argument and their sources are acknowledged. The evaluation and synthesis of a wide range of material is excellent and the standard of critical analysis throughout is high. References are correctly cited and conform to the style of a discipline-appropriate scientific journal. The text is clearly written in unambiguous, readable English. Overall design and presentation of the literature review is good. Rationale and segue to Research Project goals very clear.

Class H2A (75-79%)

Overall the student displays a good understanding and exposition of the relevant issues, but there are notable weaknesses in a few areas. For example, the review may not be well structured, the argument not fully developed or some of the relevant data has been omitted. Figures and tables (if used) are appropriate (but may not integrated into the argument) and there is evidence of further reading. The critical analysis is of an adequate standard. References are correctly cited and conform to the style of an appropriate scientific journal. The text is clearly written in unambiguous, readable English. Overall design and presentation are good. Annotate the document to indicate areas for development, correction and/or improvement.

H2B (70-74%)

Overall the student shows an adequate understanding and exposition of relevant issues but there are notable weaknesses in several areas. For example, the argument is reasonably clear but isn't fully developed and there is a limited presentation and explanation of relevant research. Figures and tables are not well presented or are not part of the argument (i.e., they serve a decorative purpose only). Limited amount of relevant reading mostly of secondary sources (reviews, etc.) and the material has been insufficiently evaluated. References are mostly correct and appear in both the text and reference list. Writing is not consistently clear and there is a need for some sentences to be reworded. Overall presentation is adequate.

Class H3 (65-69%) and Pass

Overall the student shows a poor understanding of the relevant issues and there are major weaknesses throughout the review. The arguments are unclear and the relevant data often lacking. There is poor use of figures and tables and little evidence of relevant reading. The evaluation of material is superficial and the synthesis is poor. There are frequent errors and omissions in the text and the writing style is poor, with many sentences in need of correction. Overall presentation of the review is substandard.

Fail

The work is of unacceptable standard and indicates that the student has insufficient grasp of the research field, minimal capacity to synthesize material, inadequate expression skills and inability to contextualize the Research Project. The evaluation indicates that the student would not be expected to be able to produce a Research Project Report of adequate standard.

GUIDELINES FOR EXAMINERS - MBIOMEDSC THESIS

Examiners are asked to consider several issues when assessing the thesis. They will keep in mind this is a Master of Science Thesis which has for most students been completed over a 2 year period. The quality and quantity of the work will be assessed in the light of the relative difficulty of the techniques applied and/or the systems in which the work was performed. The nature of the project may have a major influence. An Examiner's assessment will make the following considerations:

CRITERIA:

- 1) Explanation of aims of study
- 2) Logic and critical thought
- 3) Clarity and conciseness
- 4) Extent of body of work undertaken
- 5) Interpretation of data
- 6) Soundness of rationale and methodology
- 7) Evaluation and use of literature
- 8) Implications of findings
- 9) Presentation
- 10) Style, grammar and syntax

The following marking scheme is applied:

| | |
|----------|-------|
| N (fail) | <50 |
| P (Pass) | 50-64 |
| H3 | 65-69 |
| H2B | 70-74 |
| H2A | 75-79 |
| H1 | ≥80 |

The Examiner's awarded mark will reflect the **thesis only**. Examiners are invited to attend the student's oral presentation and their input at this time is valued, but the thesis will be read and the Examiner's impression formed before the presentation.

Class H1 (80-100%)

A Report graded as 'upper H1' (>85%) is strong in all areas of assessment. Overall the Report shows:

- outstanding command of expression and logical argument in a skillfully structured manuscript;
- superior evaluation and integration of existing literature;
- evidence of significant insight and original thought in dealing with the critical issues;
- sophisticated understanding of research methods, with evidence of careful attention to critical design issues in the execution of the project;
- outstanding presentation and reporting of a body of work;

- thoughtful and appropriate choice of analytical approach (where appropriate) and clear and coherent interpretation of the Report data;
- comprehensive understanding of the importance of the results in the context of the theoretical framework.

A 'lower H1' (80-85%) student displays many of the same strengths but is less well-balanced with weakness in some areas.

Overall: An H1 Report (upper or lower) is written by a student obviously capable of undertaking a PhD. *Grading over the entire range of 80-100% is essential.* The habit has been for examiners to grade between 80-85% for outstanding submissions, with 90% being a rare exception. A grade of 90% and above implies the Report is at the standard expected of an academic/researcher in the field and could be published in an appropriate journal.

Class H2A (75-79%)

A H2A Report shows a good understanding and exposition in most areas although with some notable weaknesses. The Report has most of the following characteristics:

- the manuscript is well written, logically argued and generally well structured;
- the evaluation and integration of the existing literature is very sound without being outstanding;
- reasonable insight and some evidence of original thought in dealing with the critical issues
- evidence of a solid understanding of research methods;
- adequate design of the research project, although possibly containing minor but retrievable errors;
- choice of data analysis that is appropriate for the design (although less well justified than might be expected of H1 standard), and clear presentation of results;
- generally sound but pedestrian interpretation of results and their relevance to the published literature.

Overall: An H2A Report is written by a student who is capable of undertaking a PhD or MPhil. The report should highlight areas where the work can be improved.

H2B (70-74%)

A H2B Report has most of the following characteristics:

- generally competently written, although some problems exist in the logical organisation of the text and expression;
- provides an adequate coverage of the literature, although it is more descriptive than interpretive, and arguments are often disjointed;
- occasional evidence of insight into the issues underlying the Report or essay, but little evidence of original thinking;
- basic but somewhat limited understanding of research methods;
- the design of the research project is generally adequate but is marred by some errors and oversights;
- reasonable choice of data analysis, although other approaches may have been more appropriate or powerful;
- presentation of results lacks clarity;
- interpretation of results or other studies is adequate but limited.

Overall: The Report shows an adequate understanding and exposition of relevant issues but there are notable weaknesses in several areas. An H2B Report is written by a student who may be capable of undertaking an MPhil under close supervision.

Class H3 (65-69%) and below

Theses that are graded at H3 and below have most of the following characteristics:

- the work is not well written and shows flaws in the structuring of logical arguments;
- coverage of the literature is weak, with insufficient information provided to support the arguments made, or conclusions drawn;
- little evidence of insight and ideas are highly derivative;
- knowledge of research methods is deficient;
- serious flaws exist in the design of the research project, making it difficult for the research to meet its aims;
- data analysis techniques are inappropriate;
- the results are poorly presented;
- interpretations are superficial, show a weak understanding of the results and their relevance to the theoretical framework.

Overall: The student shows a poor understanding of the relevant issues and there are major weaknesses throughout the Report. The student has not mastered the higher-order skills required at this level and would likely not be able to undertake further research.

ADVICE FOR PREPARING A JOURNAL PRESENTATION

The following is meant to be a simple guide to presenting a journal article. One normally takes between 10-20 minutes for such an activity. There will definitely be differences in opinion between people on some of these issues, but the following guide should satisfy most people.

Choice of the article:

You would normally be advised specifically on this. In general, it should be a significant paper of interest or relevance to the group. It should normally be recent (last 3 months). It need not necessarily be specifically in your own area of expertise or research, and often it is better to choose one outside your area so that you learn something about other techniques. Always confirm the suitability of your choice with someone else in the group.

Presentation:

You will normally be given guidelines for this by whoever is organizing the session. In general, make sure that you present information in a way which is easily read by all present. The use of materials which require projection apparatus which is noisy, out of focus, and poorly lit is often not satisfactory; and it is better to use technologies which are effective.

Format of the presentation:

1. Ensure that you indicate where the journal comes from, who the researchers were, and where they worked. This may be meaningless to you, but of significant relevance to others.
2. Present briefly the necessary background, to ensure that the audience knows enough about the area to understand the rest of the presentation. In general, this will mean a brief presentation of the Introduction in the paper itself.
3. Present the aims of the study as provided in the paper. You will need to comment as to whether or not these aims are clearly presented and focused, and whether they really were what was aimed at in the experimental procedure.
4. Give a brief outline of the Methods. This can be cut down severely, if you only have a small amount of time to present the article. If the research work was done in different segments, then you might like to present the Methods and the Results, and the discussion of that segment before going on to the next segment. Ensure that you cover any methods which were novel, comment on their accuracy, ensure that the design of the experiments were appropriate, with sufficient numbers in the experimental groups, and good selection of controls. Methods are all about end-points; ensure that these end-points are appropriately evaluated in the Methods section.
5. Then present the results. Where possible, show the actual figures or tables out of the article itself, but highlight or focus on those which are most relevant. Make sure that you agree with the interpretation of the results. Check the statistics for suitability; look for consistency within the results. Make sure that you feel the results make sense in terms of what is already known.
6. The analysis of the paper should then be based primarily on the conclusions that can be drawn from the results in the paper. You should not simply re-present the Discussion in the paper itself. Focus on the principal conclusions (which should be expressed in the Abstract), making it clear which of the conclusions are drawn by the researchers, and which are yours. Consider if the Conclusions relate back to the Aims of the paper and consider if the Conclusions are fully justifiable on the basis of the results. If not, suggest what other

experiments may need to be done. Finally, put this work into perspective by considering its importance to science/medicine.

Conclusion:

While the above details might sound considerable, it is remarkable how quickly a complex paper can be presented by just picking out the key features of the above, and moving systematically through them. Note that, when you do present a journal, you do not have to present everything in the paper. This point applies particularly to the Results section. Really, you only need to present those results which are directly pertinent to the key conclusion. After all, you are presenting the article because of the interest or importance of the key conclusion.

GUIDELINES FOR INCOMING STUDENTS

These Guidelines are presented to incoming students with the intent of avoiding potential misunderstandings by setting out what is expected of them, and what they might expect of the Department, during the course of their study. The majority of information contained here is aimed at PhD students, but some is also of relevance to all students in the Department.

These Guidelines, of course, are subject to the official regulations of the University:

The “PhD Handbook”

<https://handbook.unimelb.edu.au/subjects/asia80001>

contains a large amount of information regarding the PhD degree and you should familiarise yourself with this important information and review it regularly. Information relating to Master of Medicine and Doctor of Medicine is available from the Faculty. Honours/MBiomedSc students are provided with specific information relating to their course requirements by the Honours/MBiomedSc Co-ordinator.

RESPONSIBILITIES OF THE STUDENT

The chief goals of the student are :

1. To produce a completed thesis within a reasonable time frame (Honours ~9 months, MBiomedSc ~2 years, PhD 3 to 4 years).
2. To produce and publish independent and collaborative research relevant to the goals of this Department.

Subsidiary to the above primary goals, the Department expects that each student will abide by the rules of the Department, and in particular, will:

- Ensure that the Principal Supervisor and Co-supervisor are kept well-informed of the student’s research progress and any major problems that are obstructing that progress, by means of regular meetings.
- Abide by any specified conditions for access to particular data or samples.
- Be in regular attendance at the Department.
- Attend Departmental seminars and relevant specialist group seminars.
- Archive and catalogue samples, data and/or computer programs before departing.
- Undertake duties/responsibilities as deemed appropriate by and within their laboratory.
- Observe the University of Melbourne Environment, Health & Safety Policies

Paid Employment

There are no guidelines relating to work outside office hours for MBiomedSc but common sense should allow you to judge if it will interfere with progress of your research project.

Academic Seminars

The Department runs a weekly Departmental Academic Seminar series covering any and all topics relevant to the research of the Department. All Honours students are **required** to attend these seminars as part of their Honours course. *MBiomedSc students enrolled in MEDI40004 are **required** to attend as part of this course module.* PhD, other MBiomedSc and MMed students are **expected** to attend these seminars and contribute to the discussion..

In addition, most research groups run specialist research seminars of particular interest to those groups and all group members are expected to participate in these seminars and discussions.

MBiomedSc students are required to give an oral presentation (15 min + 5 min discussion) of their work to the Department as part of their assessment..

Participation in National and International Conferences

It is of course highly desirable for students to present research results at national and international conferences. Unfortunately there is no Departmental funding available for Honours and MBiomedSc students.

Research Publications

It is unfortunate but true that probably very few people will ever read your thesis following its examination. For that reason you should be aiming to produce research papers describing your thesis work. The progress of an academic career is usually reckoned primarily by the quality and number of research publications, and the sooner you start producing papers, the better. Any published papers on your Curriculum vitae will certainly help your immediate post-PhD employment prospects.

It is difficult to prescribe how many publications should come out of a 3-year PhD, as it depends on the subject and the style of paper. However, three substantial publications from a thesis project would be a quite respectable result, even if some PhD projects result in twice that number. It is less common for an Honours/MBiomedSc project to result in a published paper, although your results may be included with other work at a later date, on which you would be a co-author.

During the second and later years of a PhD, you should certainly be continually evaluating your research as to whether any part of the project can be written up as a self-contained research publication. Writing up awards are available for preparation of research articles after your thesis has been submitted and this may be a useful way of producing valuable papers prior to taking up a post-doctoral position.

Thesis / Scientific Writing

Scientific writing is an acquired art (acquired mainly by the process of writing numerous drafts, obtaining and accepting constructive criticism). Most of us find it difficult to see our latest written masterpiece covered with red ink/corrections/criticisms, but offering a manuscript up for such treatment is the best, most cost-effective way to improve it quickly. Technical writing courses are offered within the University and if you have trouble putting pen to paper, either because English is not your first language, or just because you are out of practice with writing, then you should avail yourself of these courses.

There are various guidelines relating to the preparation and submission of your thesis. For example, it is no longer permissible to submit a thesis for examination which is permanently bound. Make sure you are aware of the guidelines BEFORE you submit your thesis. The cost of preparation of a PhD thesis can be considerable. There are limited funds available for printing and binding expenses included in many scholarship awards and these should be investigated

fully as sometimes it is not immediately obvious (eg NHMRC, APAs etc). In cases where the student is unable to gain any support, the Department offers a grant of \$400 to PhD students toward thesis preparation costs.

Ethics and Research Code of Conduct

All research projects that involve human or animal subjects must be approved by the appropriate Campus/Hospital Ethics Committee. Your supervisor will ensure that this is the case, it is your responsibility to ensure that you are aware of, and adhere to, the set guidelines. A brief outline of this subject will be given during orientation.

The University has a Code of Conduct for Research which is outlined in the PhD handbook. It is important that students are aware of the code and comply with its principles

- Research is the pursuit of truth
- Research workers should, in all aspects of their research
 - demonstrate integrity and professionalism
 - observe fairness and equity
 - avoid conflicts of interest
 - ensure the safety of those associated with the research
- Research methods and results should be open to scrutiny and debate

Safety

Safety is an important concern of the Department and to assist in maintaining appropriate safety standards the Department has formed a Safety Committee. This Committee is made up from members of staff from all groups within Department and includes a student representative. Any safety concerns you have should be brought to the attention of your group's safety representative or the student representative, or if this is not possible, the Laboratory Manager. It is your responsibility to abide by the safety rules of the Department and the University and failure to comply with safety directives could ultimately result in suspension of candidature. Students located outside the Department of Medicine campus are required to determine emergency policies and procedures for the institution in which they are based. The Department recommends that students are immunised against Hepatitis B and, for those working with animals, tetanus.

RESPONSIBILITIES OF THE SUPERVISOR

PRINCIPAL SUPERVISOR

The Principal Supervisor is identified as the supervisor in the interpretation of any relevant University regulations, and he/she will take primary responsibility for the progress of student, project and aspects such as administration of grant funds.

The duties of a supervisor include providing adequate, timely supervision. This concept means different things to different people and would be expected to be different for Honours/MBiomedSc students versus post-graduate students. In some cases, depending on the course and the particular student and project, supervision will be close. In other cases, close supervision would be regarded as unnecessarily intrusive by both student and supervisor. The system has to provide for a range of different project types and personalities. It should be recognised here that the post-graduate student is regarded as an independent researcher, who ultimately is responsible for their own research progress and direction. The supervisor(s) act principally in an advisory capacity.

There are many minor problems that arise in the course of a post-graduate degree, simply because the student is breaking new ground as the research project progresses. Solving or working around these problems is just part of the training process that is the part of a post-graduate degree. Supervisors are expected to provide advice on the handling of technical problems or assistance with the direction of resources, but in the final analysis, it is the student's responsibility to see these problems solved or to find a way to work around them. Occasionally a project will undergo a major change of direction, perhaps because new data or published research findings pre-empt the original definition of the project. Major re-adjustments such as these can usually be accommodated by an appropriate re-definition of the project, making best use of any work completed to date.

Duties of the Principal Supervisor

The minimum duties of a Principal Supervisor as perceived by the RMH Academic Centre are:

1. The supervisor should be adequately aware of how the student is presently using his or her research time and research resources.
2. The supervisor should advise the student if the supervisor sees ways for the student to improve his or her use of research time and research resources.
3. The supervisor should, whenever possible, read and provide feedback on (within a reasonable time frame) manuscripts written by the student for publication.

Supervisors are not automatically entitled to co-authorship of manuscripts written by their students. Co-authorship should only apply when both parties have made a significant contribution to either the research described by the manuscript, or to the writing. When the supervisor is not an author of the manuscript he should act as a reviewer, providing objective advice and constructive criticism. It is wise to determine the authorship before commencing the project. The University has guidelines which detail how authorship of publications is to be determined. These guidelines can be found in official PhD regulations available from the School of Graduate Studies.

A student should take the initiative to ask for meetings with the Principal Supervisor whenever advice is required, usually at least once a week. Regular meetings of at least this frequency are necessary to maintain good communication between student and Supervisor. In

addition, the PhD student should feel free to consult with their PhD committee on any matters of academic relevance.

CONFLICT

As described above, a student should discuss technical problems with their supervisor. If, in the unlikely event that a student feels, at any stage, that the supervisors are not providing adequate support and supervision, we outline below a procedure to resolve such problems with minimum expense of time and energy.

1. First, the student should discuss the problem with the Principal Supervisor.
2. If the supervisor is unable or unwilling to assist, the student should then approach their Departmental Coordinator or RMH Academic Honours/MBiomedSc Coordinator for advice and assistance.
3. If a problem of poor communication, personality conflict, or other ill-feeling between supervisor and student should arise then a student may request a change of supervisor. However, we emphasise to both supervisors and students that it is not in anyone's best interests to let such a situation develop. Disputes between supervisor and student may be simply avoided by ensuring that each party is better informed of expectations and intentions.
4. If the student feels that none of the above channels is working, or are not appropriate to the circumstances, then the student should immediately discuss the matter with the Head of the Department.

ABSENCE OF SUPERVISOR

Supervision is guaranteed by the Department even in the temporary absence of a Supervisor. In the event of your Principal Supervisor leaving the Department an alternative supervisor will be appointed who is acceptable to yourself and the Department.

RESPONSIBILITIES OF THE DEPARTMENT

The Department has a responsibility to provide to its students adequate facilities and supervision for the duration of candidature.

FACILITIES

The Department undertakes to provide adequate facilities to students, but the definition of adequate facilities depends on available departmental resources and on relevant external project funding.

At present, students can expect to be allocated a desk and bookshelf space in a shared office. In the event of large numbers of enrolled students, desks for students may be accommodated within laboratories, but where possible this is avoided. Access to University and Department computers, library and image processing facilities (eg 35mm slide production) is also available to all students without charge. In addition, the Department provides access to departmental research facilities such as the animal house, centrifuges and autoclaves, where these are required for your research. The Department also provides tea and coffee for morning and afternoon teas.

All reasonable photocopying, laser printing and stationery are provided by the Department of Medicine (RMH). There are two photocopiers within the Department of Medicine (RMH). Access to both copiers is controlled by a "PIN" system. PIN numbers can be obtained from the General Office. There is also a photocopier in the Brownless Medical library reserved for use by staff and students of the Faculty of Medicine, Dentistry & Health Sciences (FMDHS). Stationery is available from the General Office between the hours of 9.00am – 4:00 pm. Please remember that photocopying, stationery and laser printing is a major expense to the Department, so make an effort to be efficient in your use of these facilities

It is also expected that, in return for access to and use of some Departmental facilities, students may be called on to assist with the maintenance and operation of those facilities. Such assistance by students will be at a minor level unless it is officially recognised and paid appropriately.

It is usually best to check with your supervisor as to your entitlement to resources. However, if you feel that certain resources are essential to your research and are at present not available to you, you should raise the matter firstly with your supervisor(s) and then, if necessary, with the RMH AC Manager. The Department does not like to see good research activity blocked by minor resource problems.

Students are provided with internet access but are reminded of the obligation to use such services for University business **only**. Email accounts are provided to all students by the University and you should arrange this through Information Technology Services as soon as possible. Computer training courses are available for students at ITS, and the majority of basic courses are free to students. Those courses for which a fee is charged will not, in general, be funded by the Department but many supervisors will be happy to pay such fees from external funds if use of the particular software is fundamental to the research undertaken by the student.

To access IT support for computer related incidents only please use the online help support–see link below. This can be found on the Department of Medicine website under Resources

Log a request for IT support : <https://it.mdhs.unimelb.edu.au/it-request/?id=it-request&job=1>

GENERAL INFORMATION

SECURITY

The location of the Department within the Hospital campuses does bring security problems associated with public institutions. To assist us in making the Department as secure as possible, you are requested to wear your Hospital ID badge at all times when in the Department. In addition you are required to ensure that individual labs are secure when working after hours and to check that areas are locked on departure. Friends must report to the front office when visiting rather than wandering through the Department to look for you and will be signed in as visitors. If at any time you feel threatened or in danger when working in the Department security personnel can be contacted on RMH 9342 7716. Students located at other campuses should check with local area procedures.

STUDENTS' SOCIETY

Students of the Royal Melbourne – StoRM

President: Ka Man Li (2017 President) E: km.li@student.unimelb.edu.au

A Students' Society has been formed to represent the students within the Department to keep them informed of Departmental and University issues affecting them and to organise social activities. The Department has allocated \$1,000 per annum to this committee to help fund its activities. Regular meetings are held and all students are welcome to attend. An Honours/MBiomedSc Social Representative from the Honours and MBiomedSc Programs will be asked to join the StoRM committee.

HARASSMENT / DISCRIMINATION

The University of Melbourne is committed to creating and maintaining a work and learning environment free from sexual harassment:

<https://policy.unimelb.edu.au/MPF1328#section-4.6>

If students feel they may have been sexually harassed or discriminated against, they are encouraged to contact the "Safer Community program".

<http://safercommunity.unimelb.edu.au/>

They can also access advice and support services at the following link:

<http://safercommunity.unimelb.edu.au/discrimination-sexual-harassment-and-bullying>

The Department has a formal Student Committee which aims to ensure the Department fulfils its obligations to students enrolled in the Department. If you have any student issues which you think need to be resolved at a Departmental level, please inform the Department Manager or the student representative on this Committee.

STOP 1

- **Phone:** 13 MELB (13 6352)
- **In person:** 757 Swanston Street (Parkville), 234 St Kilda Road (Southbank)

Stop 1 is the home of student services online, on the phone and in person. Stop 1 can help you with admissions, enrolment, course planning, administration, support services and skills and development <http://students.unimelb.edu.au/stop1>

Check online and save some time

Students.unimelb is the comprehensive website for current students at Melbourne

<http://students.unimelb.edu.au/>

Ask.unimelb is the University's knowledge database, with answers to more than 800 frequently asked questions

<http://ask.unimelb.edu.au/>

DEPARTMENT OF MEDICINE (RMH)

General Office: T: 8344 6252 F: 9347 1863

Location: 4th Floor, Clinical Sciences Building, Royal Melbourne Hospital.
Entry from Royal Parade.

Web page: <http://www.medrmhwh.unimelb.edu.au/>

STUDENT INFORMATION

The following information can be found on the Department's Current Students Honours/Master of Biomedical Science website : <http://www.medrmhwh.unimelb.edu.au/Students/Studentinfo/>

Noticeboard

Course Structure

- Important Dates
- BIOM40001 : Introduction to Biomedical Research Timetable
- MEDI40004 : Seminars in Translational Medicine Lecture Program
- Academic Centre Seminar Series
- MSc Handbook 2018
- Literature Review Guidelines – Year 1
- Literature Review Evaluation Proforma – Year 1
- Oral Presentation Evaluation Proforma – Year 1 & 2
- Thesis Guidelines – Year 2
- Thesis Template – Year 2
- Thesis Evaluation Proforma – Year 2