COLLEGE OF PUBLIC HEALTH, MEDICAL & VETERINARY SCIENCES

MOLECULAR BIOLOGY HONOURS 2016

Group Head: Prof. Alan Baxter
Program Coordinators: Dr Margaret Jordan and Dr Sandip Kamath
Useful Contact Information

<table>
<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Extension</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honours Coordinators</td>
<td>Dr Margaret Jordan</td>
<td>15965</td>
<td><a href="mailto:Margaret.Jordan@jcu.edu.au">Margaret.Jordan@jcu.edu.au</a></td>
</tr>
<tr>
<td></td>
<td>Dr Sandip Kamath</td>
<td>14554</td>
<td><a href="mailto:Sandip.Kamath@jcu.edu.au">Sandip.Kamath@jcu.edu.au</a></td>
</tr>
<tr>
<td>Head of Molecular &amp; Cell Biology</td>
<td>Prof. Alan Baxter</td>
<td>16265</td>
<td><a href="mailto:Alan.Baxter@jcu.edu.au">Alan.Baxter@jcu.edu.au</a></td>
</tr>
<tr>
<td>Building Safety Officer</td>
<td>Mr. David Jusseaume</td>
<td>14243</td>
<td><a href="mailto:David.Jusseaume@jcu.edu.au">David.Jusseaume@jcu.edu.au</a></td>
</tr>
</tbody>
</table>

Also have a look at the Comparative Genomics Centre web page:
http://www.jcu.edu.au/cgc

Here you will find information about the different research groups, safety and contact details.

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Note: Honours students enrol in BC4002 (SP1) and BC4003 (SP2) as these two subjects are "chained". At the end of semester 1 you will receive a "KU" for BC4002 which is an interim result for a subject that forms part of a subject chain.
1. Timetable 2016

<table>
<thead>
<tr>
<th>Event</th>
<th>Beginning Feb 2016</th>
<th>Beginning July 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apply to honours coordinator</td>
<td>16.11.2015</td>
<td>16.5.2016</td>
</tr>
<tr>
<td>Start</td>
<td>1.2.2016</td>
<td>4.7.2016</td>
</tr>
<tr>
<td>Introductory seminar</td>
<td>16.3.2016 *</td>
<td>17.8.2016 *</td>
</tr>
<tr>
<td>Literature review due (10%)</td>
<td>4.4.2016</td>
<td>12.9.2016</td>
</tr>
<tr>
<td>Mid-year seminar</td>
<td>13.7.2016 *</td>
<td>11.1.2017 *</td>
</tr>
<tr>
<td>Proposal due (5%)</td>
<td>8.8.2016</td>
<td>23.1.2017</td>
</tr>
<tr>
<td>Cessation of lab work</td>
<td>7.10.2016</td>
<td>24.3.2017</td>
</tr>
<tr>
<td>Poster due (5%)</td>
<td>14.10.2016</td>
<td>31.3.2017</td>
</tr>
<tr>
<td>Thesis due (45%)</td>
<td>28.10.2016</td>
<td>12.4.2017</td>
</tr>
<tr>
<td>Final seminar (10%)</td>
<td>16.11.2016</td>
<td>28.4.2017</td>
</tr>
<tr>
<td>Oral defence (10%)</td>
<td>18.11.2016</td>
<td>1.5.2017</td>
</tr>
<tr>
<td>Release of grades</td>
<td>21.11.2016</td>
<td>3.5.2017</td>
</tr>
</tbody>
</table>

(*) not assessed

Please note the dates for assessments. If a deferment is requested and granted as to the thesis deadline, the final seminar and oral defence will not take place until the deferred examination time of the third week in January of the following year for those stating in February intake.

2. What to Expect

Honours’ is essentially one year’s experience in a real research environment. The year is broken up by key assessment pieces but the main object of the year is to successfully complete a small independent piece of research.

You will be inducted into the laboratory and given guidance as to your starting point. You will need to become familiar with the current literature which means reading several papers per week, and you will be given assistance to get started on your preliminary experiments.

Regular discussions with your supervisor and everyday practical guidance will be offered as you design and carry out your own experiments.
3. Learning Objectives
The main aims of the honours program are:

a) To develop practical skills – students should emerge from their honours year with sound ability to perform a range of current techniques in molecular biology, biochemistry or cell biology with little or no supervision
b) To develop critical analysis skills - Is my observation real? Have I used appropriate controls / statistical methods?
c) To be able to comment on and put their own work into the wider context of current literature in the field
d) To develop scientific communication skills of a high professional standard – clear, succinct scientific writing and presentation of results, lucid and organised oral presentations using appropriate visual aids
e) The ability to propose ongoing research projects, design new experiments to test hypotheses to the level of a starting PhD candidate

4. Choosing a Lab
In choosing a laboratory to work in, you must consider what your interests are and, importantly, whether you will be able to work in that environment for a year. Talk to prospective supervisors about their projects, what techniques are used and what work ethic they expect. Speak with other students within the lab to find out what kind of supervision is offered and get some idea of the personalities you will be working with.

4.1 Projects offered
For details of lab groups within Molecular & Cell Biology go to the webpage (see page 1). A diverse range of projects relevant to medicine, agriculture and environment are offered. Joint supervision of projects between two or more supervisors within the discipline and with other departments at JCU or other universities is sometimes available. eg Joint honours in Molecular & Cell Biology and Chemistry or honours supervised jointly by a staff member from JCU and from the hospital or AIMS.
5. Assessment
There are five components of assessment for Molecular & Cell Biology honours at JCU. They are in the form of assignments and there is no coursework component. All assessment relates to skills relevant to working in research but the most important and most heavily weighted is the thesis. Sometimes the project may not generate results but the initiative shown by the student, performance in the lab and communication is what will be graded. All pieces of assessment (apart from the supervisor’s mark) will be graded by at least two (2) academics.

Five Components of assessment

5.1. Review of current and relevant literature (10%)

Format for literature review
The literature review should cover the literature relevant to the research project to be conducted by the student. It should contain references to papers describing original work, not just to reviews, and should include descriptions of some of the theory of the techniques to be used in the research project. Diagrams are likely to assist in the presentation of the material and particular care should be taken to avoid plagiarism. The literature review should resemble the introduction of a thesis and should include the aims of the research project. It should consist of no more than 4,000 words, and include

- **Background (literature review, hypotheses and aims),** and **References sections.** You should submit 5 copies and send a PDF to the honours co-ordinator. Due to the breadth of subjects presented, assessment will be made on scientific criteria; an excellent literature review will be one in which:
  - Background provides a literature review of sufficient depth to justify project
  - Appropriate citation of literature
  - Adherence to academic citation format
  - One or more hypotheses or aims is explicitly stated
  - The rationale for the work is provided
  - High standard of general presentation
  - Adequate binding

5.2. Application for PhD scholarship (5%)
(modified from NH&MRC NOI, see Appendix E for more information on assessment). Please submit 5 copies and a PDF to the honours co-ordinator.

**Scientific Title**
Ensure the title of your project reflects the topic, area and type of research to be undertaken.

**Aims**
Describe the aims of your project (maximum of three aims) and include your hypotheses.

**Background**
Describe the background of your proposal taking into consideration the minimum information that is required for the panel to understand your research proposal.

**Research Plan**
A short and concise plan of your research

**Significance**
This section should describe clearly the impact of your proposed project. Not more than 2 pages in total. This includes references!

**Marking Criteria**

1) **Significance**
Would the project, if successfully carried out, make an original and important contribution to a scientific discipline in the field of biochemistry, molecular biology, cell biology or genetics?

2) **Approach**
Is the experimental approach, model system, experimental methods and data analyses proposed well conceived and appropriate to the aims and hypotheses of the project?

3) **Feasibility**
Could the proposed project be accomplished by a single student within a 3 year timeframe with access to materials and resources costing less than $15,000 per year? Could the project be performed with currently available equipment and infrastructure at James Cook University?

4) **Presentation**
Is the assignment of two (2) A4 pages or less in length, written in 12 point Times New Roman Font, single-spaced, with margins no less than 2cm? Is the assignment clearly written and presented with a logical flow of information that includes background, hypotheses, aims and a research plan?

**5.3. Final seminar (10%)**

**Format for final seminar**
Twenty minute Powerpoint™ presentation and five minutes for questions. Due to the breadth of subjects presented, assessment will be made on scientific criteria; an excellent seminar will be one in which:

- One or more hypotheses or aims are explicitly stated
- The rationale for the work is provided
- Data are clearly presented
- Logic is sound
- Conclusions are justified by the data presented
- Future directions or final conclusion of the study are/is indicated

**5.4. Supervisor mark and lab book assessment (15%)**

**Laboratory book assessment**
Laboratory books are expected to be kept up to date, provide an accurate record of methods, work performed and results, and to conform to the standards required for the work within them to withstand patent defence. Specifically:

- Entries are to be dated
- Errors are not to be overwritten, covered over, deleted or removed, but are to be ruled out, corrected, dated and signed
• Pages are to be numbered
• Methods should be in sufficient detail to allow replication by a third party
• Blank spaces are to be ruled out
• Lab books MUST be handed to your supervisor 2 days before your oral defence

Your supervisor will provide a mark based upon your laboratory book but also your conduct and application throughout the year. This mark will reflect how effectively you have functioned in a laboratory environment and be based upon
• Your general laboratory skills
• Your ability to interpret data, design and conduct experiments
• Your ability to effectively communicate your results to your supervisor and other members of the laboratory where appropriate
• Your punctuality for meetings and other lab events
• Your general contribution to the laboratory, for example in lab meetings or lab maintenance
• Your professional conduct as a scientist, including how you interacted with other members of the lab

5.5. Poster, oral defence of thesis and thesis mark (60%)

5.5.1 Format for thesis (45%)
Between 10,000 and 20,000 words, consisting of Background (literature review, hypotheses, aims), Methods, Results, Discussion and Conclusions, References. Please submit four copies (and prepare one for yourself) and a PDF to the honours co-ordinator.

Due to the breadth of subjects presented, assessment will be made on scientific criteria; an excellent thesis will be one in which:
• Background provides a literature review of sufficient depth to justify the project
• Appropriate citation of literature
• Adherence to academic citation format
• One or more hypotheses or aims is explicitly stated
• The rationale for the work is provided
• Methods described with sufficient clarity to allow replication
• Data are clearly presented
• Logic is sound
• Conclusions are justified by the data presented
• Future directions or final conclusion of the study are/is indicated
• High standard of general presentation.
• Adequate binding

Assessment Criteria
The development of research aims and outcomes
Analysis and presentation of results
Use of literature in the thesis
Originality of the thesis and quality of argument
Quality and standard of illustrations, tables and overall production
Overall style and accuracy of the thesis
Overall understanding of the project and methods used during completion of the project

5.5.2 Format for viva (oral defence) (10%)
The poster will be used as a centre point for discussion. Staff will have already read it, but would appreciate a brief reminder of its major points. You will then be asked questions related to your work, but other scientific issues may be raised, such as those that have arisen from work presented in honours meetings, the CGC seminar series and your undergraduate biochemistry course.

5.5.3 Poster (5%)
The poster should be a clearly presented summary of your work for the year. Posters are often used at conferences to present research findings. It is advisable that you look at those posters that are present around the building and use these as a guide for your poster. Posters should be printed on **A0 size paper (portrait)** and be laminated. The poster will be assessed by a number of academics and examined on clarity of presentation and quality of the research. Remember to make sure that the text and figures are easily read from a distance.

6. Grades
The following is a broad guide to what the thesis grade and overall honours grade means. The points relate to the thesis quality and the general statement relates to the overall assessment of the student's potential for further study.

**The overall honours class and grades are given as follows:**

<table>
<thead>
<tr>
<th>Class</th>
<th>Grade</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1 or H1</td>
<td>Equivalent to High Distinction</td>
<td>85 - 100%</td>
</tr>
<tr>
<td>Class 2A or H2A</td>
<td>Equivalent to Distinction</td>
<td>75 - 84%</td>
</tr>
<tr>
<td>Class 2B or H2B</td>
<td>Equivalent to Credit</td>
<td>65 - 74%</td>
</tr>
<tr>
<td>Class 3 or H3</td>
<td>Equivalent to Pass</td>
<td>50 - 64%</td>
</tr>
</tbody>
</table>

**6.1 Class 1 (HD, 85-100%)**
All Class 1 students are considered to be capable of pursuing a higher research degree.
Outstanding command of expression and logical argument
Coherent use of research sources and data
Critical evaluation of extant literature appropriate to the topic
Strong sense of issue in relation to the discipline
Command over a particular theoretical approach
Originality of project and ideas
Excellent overall production including tables, illustrations, etc.
**Upper H1s (90-94 & 95-100) Display excellence in all these areas.**
**Lower H1s (85-87 & 88-89) Are still excellent, but less well balanced in overall quality.**

**6.2 Class 2A (D, 75-84%)**
Class 2A students are considered capable of pursuing a higher degree.
Well-written, logically argued and well-structured
Good use of sources and data, but a key example is missing
Strong sense of the literature and good integration with text
Sense of issue and demonstrated knowledge of discipline
Attempt to grasp an appropriate theoretical approach
Evidence of original thought but could be better integrated
Overall good production
6.3 Class 2B (C, 65-74%)
Overall, a 2B student is capable of pursuing postgraduate work, but would be encouraged to complete a Masters degree before attempting a PhD.
Generally good written expression and organisation of thesis
Adequate coverage of extant literature, but noteworthy omissions
Intimations of relevance of topic to the discipline
Weak understanding of appropriate theory or use of inappropriate theory
Little evidence of originality of thought
Solid overall production

6.4 Class 3 (P, 50-64%)
While a student undertaking an undergraduate degree may show evidence of suitability for honours, their performance in honours may raise doubts about their potential for higher degree research. Students awarded an H3 should consider pursuing a coursework Masters if they want to do further study.
Not well written with flaws in expression and logic, needs editing
Weak coverage of extant literature with glaring omissions
Weak understanding of research methods and analysis of data
No strong sense of overall issue and relevance to the discipline
Lacking in originality and superficial in interpretation
Inadequate grasp of theoretical approaches
Poor presentation of data
Serious flaws in the coverage of extant literature
Misunderstanding of key concepts
Misunderstanding of research techniques and data analysis
Inability to demonstrate the finding of the research in a clear manner

6.5 Penalties for late submission of work for assessment
Escalating penalties will be imposed for submission of an honours thesis or assignments after the date specified in the honours guide. The penalty is 5% per day including part-days, weekends and public holidays for late submissions. Extensions may be granted for genuine circumstances at the discretion of the honours co-ordinator and head of discipline, in consultation with the supervisor.

6.6 Extensions and Medical certificates
In extenuating circumstance extensions for submission of work MAY be granted, if in the opinion of course co-ordinator and head of discipline the circumstances have significantly affected the students ability to perform their study. If you are contemplating a request for an extension you should consult the honours co-coordinator as soon as possible, requests for extensions must be made at least 2 weeks prior to the due date.

Medical conditions which have affected your work may be used for an extension request however the honours co-ordinator and academics reserve the right to not grant an extension, or grant an extension for only part of the period of illness, if they feel the student was able to undertake some or all of their honours study during their illness.
Original medical certificates should be submitted to the honours co-ordinator within 1 week of the date in which you return to study. Medical certificates MUST include as a minimum:

i. The dates of illness
ii. The date you were seen by the doctor (this must be in the period you were ill or within 1 week of the illness)
iii. Within the bounds of patient privacy, clearly indicate which duties that you are able to complete and those which you cannot (e.g. The patient was unable to perform laboratory duties due to a broken leg but was able to use a computer). A general statement that you were unable to perform your studies will not be accepted.

7. Attendance
Honours students will normally be expected to attend during business hours. You will have after-hours access, but early starts are encouraged. For mid-year honours, the university shuts down for one week between Christmas and New Year.

You are strongly encouraged to attend seminars offered by the department and participate in normal lab routine.

8. Safety
All students will be required to attend a safety induction on or near their first day. Training in Biosafety is usual for Molecular Biology laboratories and depending on where you are working you may also require radiation safety training and induction into areas where radioisotopes are used.

General points to note:
- Fully enclosed footwear should always be worn in the building;
- People in the building between 6 pm and 6 am should always be signed in the after-hours book;
- You should not use equipment such as autoclaves, HPLC, gel tanks, ethidium bromide without first being trained by a member of staff;
- Gross breaches of safety are punishable by dismissal.

9. Plagiarism
Plagiarism means "publishing borrowed thoughts as your own" (OED). It has been defined by the university for disciplinary purposes as "Reproduction without acknowledgement of another person's words, works or thoughts (including a fellow student's) from any source... The definition of words, works or thoughts includes such representations as diagrams, drawings, pictures, objects, text artistic works and other such expressions of ideas." Plagiarism is a serious offence and will not be tolerated in any form - in the scientific community; people lose jobs if they are found guilty of plagiarism.

When you write your literature review, assignment and thesis (and scientific papers), you are obliged to express all of the material in your own words; read the background material, think about what it means and say what needs to be said in your way. If you use sentences from the background material (or from anywhere else) without acknowledging that the sentence is not yours by putting it in quotation marks (as well as including a citation at the end of the sentence), you are guilty of plagiarism. Note that this kind of device is hardly ever used in scientific writing, so use it sparingly in your own work; in general you will receive better marks if you use your own words on all occasions.
You may not copy any published (or unpublished) work of others without acknowledging that the sentence is not yours by putting it in quotation marks (as well as including a citation at the end of the sentence). If in any assessable material a student uses a single sentence that is demonstrably not their own, that student will be penalised severely.

**10. Professional Editing**

Below is the Universities policy on the use of professional editors for thesis. If you are using a professional editor please ensure that you discuss this with your supervisor and the honours co-ordinator before you proceed.

**The Editing of Research Theses by Professional Editors**

Policy developed by the Deans and Directors of Graduate Studies collaboratively with the Council of Australian Societies of Editors

**Background**

Professional editors need to be clear about the extent and nature of help they offer in the editing of research students’ theses and dissertations. Academic supervisors of research students also need to be clear about the role of the professional editor as well as their own editorial role. This policy has been developed primarily to give guidance to professional editors. It also provides a guide for academic supervisors. This document has been developed with close attention to the current Australian Standards for Editing Practice (ASEP).

**Proof-reading and Editing of Research Theses and Dissertations**

It is expected that the academic supervisors of research higher degree students will provide editorial advice to their students. This type of advice is covered in Standards C, D and E of ASEP:

- Standard C, Substance and Structure
- Standard D, Language and Illustrations
- Standard E, Completeness and Consistency.

Students may use a professional editor in preparing their thesis for submission, but they should discuss this with their principal supervisor and provide the editor with a copy of this policy before they commence work.

Professional editorial intervention should be restricted to:

- Standard D
- Standard E

Where a professional editor provides advice on matters of structure (Standard C), exemplars only should be given.

Material for editing or proofreading should be submitted in hard copy. In electronic copy it is too easy for the student to accept editorial suggestions without thinking about their implications.

When a thesis has had the benefit of professional editorial advice, of any form, the name of the editor and a brief description of the service rendered, in terms of Australian Standards for Editing Practice, should be printed as part of the list of acknowledgements.
or other prefatory matter. If the professional editor’s current or former area of academic specialisation is similar to that of the candidate, this too should be stated in the prefatory matter of the thesis.

The Australian Standards for Editing Practice is available on the following website: www.case-editors.org
Appendix

A. Thinking scientifically
Scientific inquiry revolves around designing controlled experiments specifically designed to test one or more hypotheses for a question. Conclusions can be drawn from reproducible, empirical observations. Ultimately you aim to generate publishable results that can withstand rigorous peer review. You must therefore be confident that you have interpreted your data correctly and presented them in a clear and detailed way.

Take care not to jump to conclusions and to account for alternative explanations. Understand the difference between an association and causation. An association might raise an hypothesis about causation, but the hypothesis will still need to be tested. Showing the same association under different circumstances does not do this.

When an occurrence elicits multiple possible explanations, the simplest explanation is usually correct (Ockham).

B. Controls
Experiments performed without controls are meaningless.

Controls are used to ensure that the experiment tests the hypothesis and is not influenced by extraneous factors. Positive and negative controls may be appropriate. Usually they involve the inclusion or exclusion of a component or step which predicts a negative or positive result. The fewer the variables the simpler this will be.

C. Writing
In general, good scientific communication is accurate, specific, concise and precise. You should pay close attention to the following:

• Make sure you understand and clearly state in your thesis the questions being asked in your study and the hypothesis/es being tested;
• Make sure that diagrams and figures are appropriate and clearly labelled;
• Avoid excessive wordiness – aim for lucid, succinct writing with a logical flow;
• Material must be referenced correctly;
• In summary the reader must be able to follow exactly what you did and be able to repeat the work if necessary.

D. Statistics - some preliminary advice
Great care must be taken in the application of statistical analysis. Make sure you understand the test you use and consult with others who use the techniques. Consideration of the statistic to be used is an integral part of the experimental plan. This decision affects how many replicates are needed.

Firstly: Are the data biologically significant?
Are they statistically significant?

The answers to these two questions are not always the same.
Statistical significance does not always correlate with what intuitively appears to be significant.

Often a small "look-see" experiment will allow you to predict outcomes with greater accuracy and more confidence. This allows better experimental design for large expensive experiments.

The following questions may be useful:

- Is the test valid? Are the mathematical assumptions satisfied?
- Is the sample size large enough, are there enough replicates? (A minimum of three is required for any measurement, many more may be required to achieve statistical significance depending on the type of experiment and analysis used).
- Is the experimental design robust?
- Are the controls adequate?

**To determine robustness:**

Enter the expected results into a statistical analysis program (InStat is best) and apply the appropriate test. What happens if the real results vary from your expectation? Use the program to determine how precarious your experimental design is. Try to have enough replicates that things need to diverge strongly from your expectation to change your conclusion.

**Some statistical tests that are commonly used in Biological research are:**

- Student's T-test – used to compare two means, or for regression analysis;
- Chi-square test – test statistic has a chi squared distribution when the null hypothesis is true;
- Analysis of variance (ANOVA) - a collection of statistical models which compare means by splitting variance into different parts.

A parametric test (such as a T test) is rarely appropriate unless you know the values are normally distributed (and to do that you need more than 21 replicates).

If the values of two samples do not overlap and there are 5 replicates in each sample, the p value is <0.05 by the Mann Whitney U test (a nonparametric test).

As a generalisation, if a Fisher's exact test can be used, it is better than a Chi squared test (because it provides an exact statistic).

Testing multiple hypotheses in a single experiment (for example, by measuring multiple parameters) creates particular statistical complications. Make sure you know how you are going to handle them before starting the experiment.

Your supervisor will help you choose appropriate methods and expert advice is readily available within the school.
E. Outline of criteria for the PhD proposal assignment

Students are required to submit a written assignment in the form of a 2 page PhD Funding proposal. These assignments, which can (but DO NOT have to) be extensions of the student’s current research project, will be marked using the following general criteria.

1) SIGNIFICANCE
   Would the project, if successfully carried out, make an original and important contribution to a scientific discipline in the field of biochemistry, molecular biology, cell biology or genetics?

2) APPROACH
   Is the experimental approach, model system, experimental methods and data analyses proposed well conceived and appropriate to the aims and hypotheses of the project?

3) FEASIBILITY
   Could the proposed project be accomplished by a single student within a 3 year timeframe with access to materials and resources costing less than $15,000 per year? Could the project be performed with currently available equipment and infrastructure at James Cook University?

4) PRESENTATION
   Is the assignment of two (2) A4 pages or less in length, written in 12 point Times New Roman Font, single-spaced, with margins no less than 2cm? Is the assignment clearly written and presented with a logical flow of information that includes background, hypotheses, aims and a research plan?
F. Structure for an Honours Thesis

- Title Page (see attached)
- Statement of Access (see attached)
- Statement of Sources Declaration (see attached)
- Abstract (300-500 words)
- Acknowledgements
- Table of Contents
- List of Figures
- List of Tables
- Chapter 1 – Introduction
  - Background information/literature review
  - Significance and Aims of Project
- Chapter 2 – Material and Methods *
  - Detail should be sufficient for someone to repeat your work
  - You are required to include details of chemical suppliers (Company, Country)
  - Common mistakes
    - Ensure you use g not rpm for centrifugation
    - DNA and proteins are not “run” on a gel
- Chapter 4 - Results*
- Chapter 5 – Discussion
  - This should include a discussion placing your data in context with the literature and a conclusions and future directions
- References
- Appendices (if necessary)

* Note that in some theses it may be more convenient to have the methods/results in a single chapter per sub-project if there are several different sub-projects in the thesis. Please discuss your options with your supervisor
Thesis Format

- 1.5 line spacing
- text: 12 pt font, headers/sub-headers: 12-16 pt
- Single-sided printing and copying, must be properly bound and a PDF submitted
Thesis Title

(22 pt)

Thesis submitted by

(Name of Student)

(16 pt)

In (Month Year)

Thesis submitted in partial fulfilment of the requirements for the
(Name of Degree) in the School of Pharmacy and Molecular
Sciences at James Cook University, Townsville, Queensland

(16 pt)
STATEMENT OF ACCESS

I, the undersigned, author of this work, understand that James Cook University will make this thesis available for use within the University Library and, via the Australian Digital Theses network, for use elsewhere.

I understand that, as an unpublished work, a thesis has significant protection under the Copyright Act and;

I do not wish to place any further restriction on access to this work.

Or

I wish this work to be embargoed until:

Or

I wish the following restrictions to be placed on this work:

…………………………………..

………………………………..

(Author’s signature) (Date)
DECLARATION

I declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

…………………………. ………………
(Author’s signature) (Date)
G. Review of Assessment


**Review of Assessment - Individual Piece of Assessment**

1. Students may request a remark of any piece of assessable work within two weeks of the mark for that work being provided to the student. In the case of oral presentation this is subject to section 9 below.

2. Prior to requesting a remark the student must have sought and received feedback about their performance for the assessment from the subject coordinator or lecturer concerned.

3. To request a remark, the student must provide in writing to the Head of School a substantial case to show how the mark awarded does not reflect their performance with respect to the published assessment criteria for that assessment.

4. In considering a request for a remark, the Head of School will be mindful of equity matters relating to other students in the subject. The Head of School will determine if grounds for a remark exist, and, where a request is granted, will nominate an alternative qualified person to mark the assessment.

5. Remarking is done only under exceptional circumstances. Where a remark is granted, in all cases the remark will replace the original mark in the calculation of the final grade, which may result in the grade going up, down or remaining the same as the original grade.

6. A student who, having followed the procedures above, remains dissatisfied with the outcome may appeal in writing to the Faculty Pro-Vice-Chancellor, who may authorise a second remark or deny the request. In the case of the latter, the Faculty Pro-Vice-Chancellor will provide the student with a written reply to explain why the request is denied. No further appeal will be permitted.

7. Where the Head of School is also the lecturer, the initial application for a remark may be directed to the Faculty Pro-Vice-Chancellor, with any appeal directed to the Chair of the Academic Board.

8. For a review of mark for participation, the staff member’s recorded comments on class participation will form the basis of the review.
9. Oral presentations

a. If the value of the presentation is over 20 per cent of the aggregate mark for the subject, staff must provide a means by which a remark is possible - for further details, see the ‘Assessment Practices Policy’.

b. Where the oral presentation is 20 per cent or less of the aggregate mark for the subject these review procedures are advisory only and reviews may be conducted by considering the oral presentation marks in the context of marks for all other pieces of assessment.

Review of Assessment - Final Subject Grade

1. Enquiries about subject results are to be directed in the first instance to the examiner of the subject or to the Subject Coordinator. In urgent cases the Head of School may be able to assist with enquiries.

2. If the matter is not resolved through discussions at school level or if it is not possible to consult the examiner or Head of School concerned, students may apply to the Director, Student Services for a review of assessment, observing the procedures and time limits set out below.

3. Enquiries should be made as soon as possible, and applications for review should normally be made no later than:

   a. 21 days after the Results Publication Date for the relevant Study Period; or

   b. 21 days after publication of deferred and supplementary results.

4. An application for review may be withdrawn at any point in the review process.

5. A student who seeks a review of a final result shall apply in writing using the appropriate application form, to the Director, Student Services stating the reasons for the application and naming the examiner or Head of School, if any, who has been consulted.

6. If consultation at school level has not already taken place, the Director, Student Services shall request that it be undertaken. This consultation may be omitted only on the advice of the appropriate Faculty Pro-Vice-Chancellor.

7. The Pro-Vice-Chancellor of the appropriate Faculty shall be advised of the application.

8. Where there is agreement between the Faculty Pro-Vice-Chancellor and the Director, Student Services that an application is frivolous, trivial or vexatious, then the application may be dismissed. Where no such agreement is reached, then the application will proceed in accordance with the procedures outlined below.
9. In consultation with the appropriate Pro-Vice-Chancellor, the Director, Student Services may accept a later application. If consultation between the student and the examiner or the appropriate Head of School has already taken place, the Director, Student Services shall proceed as in clause 11 below.

10. If consultation between the student and the examiner or the Head of School has been waived (see clause 2 above), the Director, Student Services shall request the Head of School’s comments on the application and shall report these comments to the student. If the student wishes to pursue the matter further, the Director, Student Services shall proceed as in clause 11 below.

11. On the advice of the appropriate Pro-Vice-Chancellor, the Director, Student Services shall inform the examiner concerned, in writing, of the application for review and of the grounds for it. Where possible this shall be done within 10 working days of the student confirming intention to pursue the matter further. The examiner shall respond to the application in writing and shall forward to the Director, Student Services all material relevant to the assessment. The Director, Student Services shall forward a copy of the examiner’s response and all relevant material to the student. If the student wishes to pursue the matter further, the Director, Student Services shall forward all relevant documentation to the Faculty Pro-Vice-Chancellor.

12. The request for review of final grade shall be considered by the Faculty Subject Result Review Committee. On receiving the documentation the Pro-Vice-Chancellor (or, if the Pro-Vice-Chancellor is also the examiner, his/her nominee) shall as soon as practicable convene a meeting of the Committee. The Faculty Subject Result Review Committee shall comprise:

   a. The Pro-Vice-Chancellor or nominee (Convenor);

   b. The Faculty Associate Dean, Teaching and Learning or nominee;

   c. The relevant Faculty Registrar or Associate Dean or nominee;

   d. The relevant Head of School or nominee; and

   e. The Chair, Academic Board or nominee.

The examiner of the subject shall not be a member of the Committee.

13. Except with the express permission of the Convener of the meeting of the Faculty Committee, no additional documentation shall be presented at the meeting.

14. An examiner who is a member of the Faculty Committee shall not attend the meeting except as provided for in clause 15.
15. The Faculty Committee shall consider the student’s application together with the statement prepared by the examiner and shall hear either of them in person if either wishes to be heard. The opportunity to be heard is available only if the person who wishes to be heard is available at the time and date fixed by the Pro-Vice-Chancellor for the meeting of the Faculty Committee. Normally neither the student nor the examiner may be present while the other is being heard, but if both parties agree and the Convener considers that such a procedure would facilitate the review, each may be present while the other is being heard. The student and the examiner shall be present only for such time as is necessary for them to be heard by the Committee.

16. A student who appears in person before the Faculty Committee may choose to be accompanied by a member of the University community, who may assist in presenting the case but may not undertake the presentation of it on the student’s behalf.

17. If the student or examiner satisfies the Convener of the meeting of the Faculty Committee that it is impracticable to appear in person before the Committee, the student or examiner may nominate a member of the University community to appear on his or her behalf.

18. After considering the application, the Faculty Committee shall confirm or amend the result or shall take or recommend such further action as it deems appropriate.

19. The result of the review shall be communicated to the Director, Student Services, who shall as soon as practicable inform the student and the examiner in writing of the result and take such other action as may be necessary.
H. Application Form

James Cook University

DISCIPLINE OF MOLECULAR AND CELL BIOLOGY

APPLICATION FORM TO ENTER HONOURS PROGRAMME IN 2015/16

The discipline of Molecular and Cell Biology incorporates the Comparative Genomics Centre and is one of the most research-active departments at James Cook University. Both basic fundamental and applied biotechnology research are conducted within the department and its research activities are supported by grants from national and international funding agencies such as the National Health and Medical Research Council, Australian Research Council, Multiple Sclerosis Research Australia, the March of Dimes Foundation, Sugar Research and Development Corporation, Welcome Foundation, Clive and Vera Ramaciotti Foundation as well as industry. These grants permit the department to engage in research that is at the cutting edge of the field and provides a vibrant and well-resourced environment for the development of research skills.

An active seminar program through the Comparative Genomics Centre brings distinguished scientists from Australia and overseas to JCU, and the honours and graduate students benefit immensely from this activity. The department has a very strong commitment to research and the students who have completed honours with us have had no difficulty in finding employment or being accepted into a Ph.D degree.

You are requested to speak with potential supervisors regarding prospective projects. It is particularly useful for prospective students to talk to as many staff members as possible so that an informed decision can be made regarding choice of project(s). Please note that project choices will be allocated on the basis of merit and discussions that you hold with the prospective supervisor.

SUPERVISORS IN THE DISCIPLINE OF MOLECULAR AND CELL BIOLOGY

<table>
<thead>
<tr>
<th>Supervisors</th>
<th>Contact Number</th>
<th>Email Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof Alan Baxter</td>
<td>x16265</td>
<td><a href="mailto:alan.baxter@jcu.edu.au">alan.baxter@jcu.edu.au</a></td>
</tr>
<tr>
<td>Dr Fiona Baird</td>
<td>x16507</td>
<td><a href="mailto:fiona.baird@jcu.edu.au">fiona.baird@jcu.edu.au</a></td>
</tr>
<tr>
<td>Prof Norelle Daly</td>
<td>x21815</td>
<td><a href="mailto:norelle.daly@jcu.edu.au">norelle.daly@jcu.edu.au</a></td>
</tr>
<tr>
<td>Dr Lionel Hebbard</td>
<td>x15684</td>
<td><a href="mailto:lionel.hebbard@jcu.edu.au">lionel.hebbard@jcu.edu.au</a></td>
</tr>
</tbody>
</table>
The closing date for application is **16th Nov 2015**. Applications received after this date may also be considered but this may result in missing out on your first choice project.

<table>
<thead>
<tr>
<th>Name</th>
<th>Student number</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr Margaret Jordan</td>
<td>x15965</td>
<td><a href="mailto:margaret.jordan@jcu.edu.au">margaret.jordan@jcu.edu.au</a></td>
</tr>
<tr>
<td>A/Prof Andreas Lopata</td>
<td>x14563</td>
<td><a href="mailto:andreas.lopata@jcu.edu.au">andreas.lopata@jcu.edu.au</a></td>
</tr>
<tr>
<td>A/Prof Bill Leggat</td>
<td>x16923</td>
<td><a href="mailto:bill.leggat@jcu.edu.au">bill.leggat@jcu.edu.au</a></td>
</tr>
<tr>
<td>Prof David Miller</td>
<td>x14473</td>
<td><a href="mailto:david.miller@jcu.edu.au">david.miller@jcu.edu.au</a></td>
</tr>
<tr>
<td>Dr. Alex Roberts</td>
<td>x13275</td>
<td><a href="mailto:alex.roberts@jcu.edu.au">alex.roberts@jcu.edu.au</a></td>
</tr>
<tr>
<td>A/Prof Patrick Schaeffer</td>
<td>x15567</td>
<td><a href="mailto:patrick.schaeffer@jcu.edu.au">patrick.schaeffer@jcu.edu.au</a></td>
</tr>
<tr>
<td>A/Prof Bill Warren</td>
<td>x16220</td>
<td><a href="mailto:bill.warren@jcu.edu.au">bill.warren@jcu.edu.au</a></td>
</tr>
</tbody>
</table>

**PERSONAL DETAILS:**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Student number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address*:</td>
<td>Telephone:</td>
</tr>
</tbody>
</table>

* contact address between 1\textsuperscript{st} Dec and 31\textsuperscript{st} Jan

**ACADEMIC DETAILS:**

<table>
<thead>
<tr>
<th>Completing BSc/ B.BioMed Sc. in 2015/2016?</th>
<th>Yes / No</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Third year subjects:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Semester 1:</th>
<th>Semester 2:</th>
</tr>
</thead>
</table>
Second year subjects completed (and grades):

<table>
<thead>
<tr>
<th>Subject</th>
<th>Grade</th>
</tr>
</thead>
</table>

PROJECT PREFERENCES:

<table>
<thead>
<tr>
<th>Choice</th>
<th>Project Title</th>
<th>Supervisor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: It is the responsibility of the applicant to contact potential supervisor to discuss details of potential projects before including them in the list.
Offers of Honours positions will be made at the end of December/beginning of January. Unsuccessful applicants will also be notified.

Please send this form to:

Attn: Dr Margaret Jordan and Dr Sandip Kamath
Honours Co-ordinators
Comparative Genomics Centre
Molecular and Cell Biology
Molecular Sciences Bld 21,
James Cook University
Townsville
4811
(Email: margaret.jordan@jcu.edu.au
and sandip.kamath@jcu.edu.au)
H. Assessment Forms: Form 1

MOLECULAR and CELL BIOLOGY
Honours Project Plan
2016

(N.B. Document should include the following headings (where appropriate) and must NOT exceed 4 pages in length)

Student

Name:........................................................................................................................................

Student Number:............................Room

No.:...............Phone:.................................

Supervisor(s):................................................................................................................................

................

Project

Topic:........................................................................................................................................

(Capital letters)

Does this plan involve?

Animal/Human Experiments
YES give: YES/NO

If

Experimental Ethics Approval
No:.................................

Use of Radioisotopes
YES/NO

If YES give: Isotope Approval

No:.................................

............
Use of Recombinant Organisms  YES/NO
If YES give: OGTR
Approval
No:...................

Have you passed Lab inductions/
Building Inductions/ Fire Safety etc

Summary Outline of Project
Relevance
(Not more than 200 words. Generally understandable by “educated”
layperson)

Use of special
equipment items
(e.g., FACS machine, QPCR machines, spectrophotometers, cell counters, cell harvesters etc. If
not available in Primary Laboratory please indicate sources and if permission to use has been
obtained from owners.)
<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Scientific information sufficient to introduce the topic and/or techniques</th>
<th>&lt;50</th>
<th>50 64 65 74 75 80 84 86 90 94 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>Scientific information sufficient to introduce the topic and/or techniques</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
</tr>
<tr>
<td>1.5 Rational for the work clearly indicated</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>1.0 One or more hypotheses or aims explicitly stated</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 Describes potential impact and/or potential clinical consequences</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>1.0 Outlines methods; describes sample, sample selection, data collection and data analysis</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 Outlined methods fit well with the projects aim and are adequate</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 Presents reasons for why the particular methodology is chosen</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 To what extent did the student understand possible difficulties with the project and had identified remediation options</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 To what extent did the speaker exhibit in-depth knowledge of topic area</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 To what extent did the student understand possible difficulties with the project and had identified remediation options</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 To what extent did the speaker engage with the audience? (Did they engage using eye-contact and tone of voice and was the speech clear and loud enough to be heard throughout the room?)</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 To what extent are slides easily understood? (Not cluttered and the font and images large enough and in colours easily able to be read from the back row of a large auditorium?)</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 To what extent are the number of slides appropriate and the pace easily followed</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 Were ideas presented in a logical order so that the presentation made sense and was easy to follow?</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
<tr>
<td>0.5 To what extent did the speaker provide sound answers to questions posed?</td>
<td>&lt;50</td>
<td>50 64 65 74 75 80 84 86 90 94 100</td>
<td></td>
</tr>
</tbody>
</table>

Overall contribution to final score: 0%
Comments to Student:

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________

____________________________________________________________________________
ADVICE TO ASSESSORS

Please put a circle around a numeric mark in each criterion (the summed total mark for the presentation is out of 100 but equivalent to 0% of the overall mark for the year).

The Entry Seminar is the first assessable component of the MCB Honours Program. While it doesn’t count towards their overall mark it is of importance because it
1. provides students with an opportunity to introduce their project to an academic audience
2. provides an early opportunity for experienced researchers to give feedback and suggestions for enhancing the quality and direction of projects

The Entry Seminar is undertaken approximately six weeks after formal commencement of the Honours Program. Each seminar should be assessed on its merits according to the criteria outlined here. It is not the intention of this assessment process to compare students, or to rank them.

The following notes may be of assistance to assessors:

• Even at this early point in the Program, students should have a relatively clear view of the topic, project rationale and aim/s, which they should be able to briefly but clearly outline in the introduction.
• This is honours project and thus can’t be compared with work from Masters or PhD students.
• The marks allocated for this seminar are weighted towards the insight & project management as well as presentation and appearance because these aspects are important to the success of a project
• A core focus of this seminar should be the proposed method/s by which the student is planning to conduct their research. The method/s to be used to collect and analyse data should be outlined in some detail, and appropriate for the project.
• The manner in which material is presented should be appropriate if the presenter is in Townsville and a marker is sitting in Cairns, being equivalent to be sitting on the back row of a very large auditorium. Beware of ‘gimmicky’ presentation methods that do not actually enhance the quality of the message being delivered.

To assessor: When finished scan and e-mail this form, or hand over this form to MCB Honours Co-ordinators – margaret.jordan@jcu.edu.au or sandip.kamath@jcu.edu.au
# DISCIPLINE OF MOLECULAR AND CELL BIOLOGY

**Honours Program 2016**

**Literature Review Assessment Form**

<table>
<thead>
<tr>
<th>Student name:</th>
<th>Assessor name:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project title:</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons III (Equivalent Credit)</th>
<th>Hons II A (Equivalent Distinction)</th>
<th>Hons I (Equivalent High Distinction)</th>
<th>Examiner score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>Breadth / depth of reading. Was there sufficient background information for ANY researcher to understand the proposed project? The information provided should also be of interest and relevance to a researcher in the field.</td>
<td>&lt;50</td>
<td>50 64</td>
<td>65 74</td>
<td>75 84</td>
<td>85-87</td>
</tr>
<tr>
<td>2.0</td>
<td>What was the degree of coherent, supportable argument development?</td>
<td>&lt;50</td>
<td>50 64</td>
<td>65 74</td>
<td>75 84</td>
<td>86</td>
</tr>
<tr>
<td>1.0</td>
<td>Were hypothesis stated and was there an explanation of aims for the project to be undertaken?</td>
<td>&lt;50</td>
<td>50 64</td>
<td>65 74</td>
<td>75 84</td>
<td>86</td>
</tr>
</tbody>
</table>

## BACKGROUND 50%

### English/vocabulary 10%

| 0.5 | Were sentences and paragraphs written using correct English grammar? | <50 | 50 64 | 65 74 | 75 84 | 86 | 90 | 94 | 100 |
| 0.5 | Was the academic writing style used appropriate (i.e. was it written in a scientific style)? | <50 | 50 64 | 65 74 | 75 84 | 86 | 90 | 94 | 100 |

## Figures /Images 10%

| 0.5 | Were figures clearly presented and understandable? | <50 | 50 64 | 65 74 | 75 84 | 86 | 90 | 94 | 100 |
| 0.5 | Were figure legends of appropriate length and detail? | <50 | 50 64 | 65 74 | 75 84 | 86 | 90 | 94 | 100 |

## Structure, Organisation and Referencing 30%

| 1.0 | Structure – was the overall structure of the literature review acceptable? | <50 | 50 64 | 65 74 | 75 84 | 86 | 90 | 94 | 100 |
| 1.0 | Clarity. Was the literature review clearly written? Were sentences, paragraph and sections clearly constructed and easy to understand and figures inserted appropriately? | <50 | 50 64 | 65 74 | 75 84 | 86 | 90 | 94 | 100 |
| 1.0 | Were the citations used appropriate, and did the referencing style conform to a scientific format? Was the referencing style consistent throughout and the reference list complete? | <50 | 50 64 | 65 74 | 75 84 | 86 | 90 | 94 | 100 |

Total weighted score _____/10

(* For a score less than 50, please specify the exact number)

Overall contribution to final score: **10%**
Comments to Student:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

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__________________________________________________________________________

To assessor: When finished scan and e-mail this form, or hand over this form to MCB Honours Coordinators – margaret.jordan@jcu.edu.au or sandip.kamath@jcu.edu.au
## DISCIPLINE OF MOLECULAR AND CELL BIOLOGY

**Honours Program 2016**

**Mid-Year Seminar Assessment Form**

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Student name:</th>
<th>Assessor name:</th>
<th>Project title:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Fall &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons III B (Equivalent Credit)</th>
<th>Hons II A (Equivalent Distinction)</th>
<th>Hons I (Equivalent High Distinction)</th>
<th>Examiner score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt;50*</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
</tr>
</tbody>
</table>

### BACKGROUND 15%

1.0 Scientific information sufficient to introduce the topic and/or techniques. Rational for the work clearly indicated

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

0.5 One or more meaningful hypotheses and/or aims explicitly stated

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

### METHODS and RESULTS 35%

1.0 Outlined methods fit well with the projects aim and are adequate

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

2.0 a) Data presented of high scientific quality  

b) Valid interpretation of data e.g. statistical analysis appropriate, controls included, data reproducible.

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

0.5 Data images/graphs/tables are easy to see/read/understand

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

### DISCUSSION AND CONCLUSIONS 25%

1.0 Logic of the discussion is sound

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

1.0 Conclusions are justified by the data presented in the context of extant literature

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

0.5 Future directions or final conclusions of the study are/is indicated

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

### PRESENTATION & APPEARANCE 25%

0.5 To what extent did the speaker engage with the audience? (Did they engage using eye-contact and tone of voice and was the speech clear and loud enough to be heard throughout the room?)

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

0.5 To what extent is slide number appropriate and are they easily understood? (Not cluttered and the font and images large enough and in colours easily able to be read from the back row of a large auditorium?)

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

0.5 Are ideas presented in appropriate order so the presentation makes sense and is easy to follow?

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

1.0 To what extent did the speaker provide sound answers to questions posed?

<table>
<thead>
<tr>
<th></th>
<th>&lt;50</th>
<th>50 64</th>
<th>65 74</th>
<th>75 84</th>
<th>86 90 94 100</th>
</tr>
</thead>
</table>

Total weighted score __________/10

* For a score less than 50, please specify the exact number*

Overall contribution to final score: __________%
The **Mid Year Seminar** is the third assessable component of the MCB Honours Program. It accounts for 0% of the overall mark, but is of particular importance for several reasons:

- Provides the student with an opportunity to present their project to an academic audience before submission of the written thesis.
- Provides the student with an opportunity to distil their project results and what they mean, particularly in terms of existing literature into a single piece of work.
- Provides an opportunity for experienced researchers to provide guidance and suggestions to the student with respect to their data analysis, discussion and conclusions prior to submission of their thesis.

Each seminar should be assessed on its merits according to the criteria outlined here. It is not the intention of this assessment process to compare students, or to rank them.

Please put a circle around a numeric mark in each criterion or state a number on scale of 0 to 100.

The following notes may be of assistance to assessors:

- This is an Honours student project and thus can’t be compared with work from PhD students.
- The marks allocated to aspects of this seminar are slightly weighted towards the results and discussion because this will likely be the only opportunity that students will have to present their entire project to an audience after submission of their thesis.
- At this point in their program, students should have a clear view of the topic, the project rationale and aim/s, which they should be able to succinctly outline as part of their introduction to the seminar.
- They should be able to clearly outline the methods used in a form that is comprehensible to a generalist audience. The method/s used to collect and analyse data should be outlined in detail, particularly specific analytical and/or statistical tests used, including their validity and reliability.
- Results should be presented appropriately and discussed in some detail, and discussion, conclusion and implications drawn from this.
- The discussion, including any conclusions or recommendations, should place the results within the existing knowledge base and, where appropriate, point to further research possibilities and/or recommendations for change or improvement. Therefore, students should discuss their findings with respect to existing literature, clearly outlining similarities and/or departures between their findings and those of other studies.

To assessor: When finished scan and e-mail this form, or hand over this form to MCB Honours Coordinators – margaret.jordan@jcu.edu.au or sandip.kamath@jcu.edu.au
### DISCIPLINE OF MOLECULAR AND CELL BIOLOGY

#### Honours Program 2016

**PhD Proposal Assessment Form**

<table>
<thead>
<tr>
<th>Student name:</th>
<th>Assessor name:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project title:</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II B (Equivalent Credit)</th>
<th>Hons II A (Equivalent Distinction)</th>
<th>Hons I (Equivalent High Distinction)</th>
<th>Examiner score</th>
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<tbody>
<tr>
<td></td>
<td>&lt;50*</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
</tr>
</tbody>
</table>

#### INTRODUCTION and BACKGROUND 35%

| 0.5 | Title reflects the project aims and type of research | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 1.0 | Appropriate length and level of details for a proposal of this type | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 2.0 | Background reflects aims and method | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |

#### AIMS and HYPOTHESIS 20%

| 1.0 | A hypothesis is present that is relevant to the aims and correctly phrased | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 1.0 | Aims are clearly defined. | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |

#### METHODS and SIGNIFICANCE 30%

| 1.0 | Methods are consistent with aims and appropriate | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 1.0 | Methods are feasible and sufficient details are given considering the length restrictions | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 1.0 | The significance of the project is made clear, either in the introduction or in a separate section | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |

#### ORGANISATION and PRESENTATION 15%

| 0.5 | Scientific style, correct grammar, spelling and appropriate language | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 0.5 | Appropriate size and length: (12pt Font size. Figures and figure legends present where appropriate and are legible. Margins not less than 2 cm) | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 0.5 | Logical flow of arguments throughout | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 1.0 | References correct & present where needed | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |

| Total weighted score | ____/10 |

*For a score less than 50, please specify the exact number*

**Overall contribution to final score: 5%**
Comments to Student:

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To assessor: When finished scan and e-mail this form, or hand over this form to MCB Honours Coordinators – margaret.jordan@jcu.edu.au or sandip.kamath@jcu.edu.au
# DISCIPLINE OF MOLECULAR AND CELL BIOLOGY
## Honours Program 2016
### Poster Marking Scheme

<table>
<thead>
<tr>
<th>Student name:</th>
<th>Assessor name:</th>
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<tbody>
<tr>
<td>Project title:</td>
<td></td>
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</table>

### Relative weight

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Score Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
<th>Hons I (Equivalent High Distinction)</th>
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<tr>
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<td></td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
</tr>
<tr>
<td>&lt;50*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### INTRODUCTION and BACKGROUND 20%

| 0.5 | Title reflects the project aims and type of research |
|     | <50 50 64 65 74 75 80 84 86 90 94 100 |
| 0.5 | Appropriate length and level of details for a poster |
|     | <50 50 64 65 74 75 80 84 86 90 94 100 |
| 1.0 | Background reflects aims and method and are clearly defined |
|     | <50 50 64 65 74 75 80 84 86 90 94 100 |

### METHODS, RESULTS and DISCUSSION 40%

| 1.0 | Methods are consistent with aims and appropriate and of sufficient detail considering length constrictions (may not be a separate section) |
|     | <50 50 64 65 74 75 80 84 86 90 94 100 |
| 1.5 | The results are logical and clearly presented |
|     | <50 50 64 65 74 75 80 84 86 90 94 100 |
| 1.5 | The discussion is logical and incorporates the data into the literature and the significance of the project is made clear (given the space limitation) |
|     | <50 50 64 65 74 75 80 84 86 90 94 100 |

### ORGANISATION and PRESENTATION 40%

| 1.0 | Amount of text is appropriate correct grammar, spelling and appropriate language, |
|     | <50 50 64 65 74 75 80 84 86 90 94 100 |
| 1.5 | Figures and figure legends are of suitable size and formatting and are appropriate (Standard Errors etc clear) |
|     | <50 50 64 65 74 75 80 84 86 90 94 100 |
| 0.5 | Acknowledgements are clear (author list is complete (not just themselves as author if others have contributed to the work) |
|     | <50 50 64 65 74 75 80 84 86 90 94 100 |
| 1.0 | Overall presentation |
|     | <50 50 64 65 74 75 80 84 86 90 94 100 |

**Total weighted score** ______ /10

* (* For a score less than 50, please specify the exact number)

Overall contribution to final score: 5%
ADVICE TO ASSESSORS

Please put a circle around a numeric mark in each criterion (the summed total mark for the poster is out of 10 but equivalent to 5% of the overall mark for the year).

The Poster is the final assessable component of the MCB Honours Program before the Thesis is due. It accounts for 5% of the overall mark and is of importance because it

1. provides students with an opportunity to portray their project to an academic audience
2. provides an opportunity for experienced researchers to give feedback and suggestions for enhancing the quality and direction of how best to convey their message in order to encourage others to engage with their work if this was presented at a conference.

The following notes may be of assistance to assessors:

- Students should have a clear view of the topic, project rationale and aim/s, which they should be able to briefly but clearly outline in the poster presentation.
- The marks allocated for this poster are weighted towards the insights necessary to convey their work to a scientific audience as if it was at a conference
- The poster should be of high quality, pleasing to the eye with good sized font and quality images while at the same time conveying their project in an easy to follow manner

To assessor: When finished scan and e-mail this form, or hand over this form to MCB Honours Coordinators – margaret.jordan@jcu.edu.au or sandip.kamath@jcu.edu.au
### DISCIPLINE OF MOLECULAR AND CELL BIOLOGY

**Honours Program 2016**

**Exit Seminar Assessment Form**

<table>
<thead>
<tr>
<th>Student name:</th>
<th>Assessor name:</th>
</tr>
</thead>
</table>

**Project title:**

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons III B (Equivalent Credit)</th>
<th>Hons III A (Equivalent Distinction)</th>
<th>Examiner score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
</tr>
<tr>
<td>1.0</td>
<td>Scientific information sufficient to introduce the topic and/or techniques</td>
<td>&lt;50</td>
<td>50</td>
<td>64</td>
<td>65</td>
</tr>
<tr>
<td>0.5</td>
<td>One or more meaningful hypotheses and/or aims explicitly stated</td>
<td>&lt;50</td>
<td>50</td>
<td>64</td>
<td>65</td>
</tr>
</tbody>
</table>

**BACKGROUND 15%**

**METHODS and RESULTS 35%**

| 1.0 | Outlined methods fit well with the project aim and are adequate | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 2.0 | a) Data presented of high scientific quality | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
|     | b) Valid interpretation of data e.g. statistical analysis appropriate, controls included, data reproducible | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 0.5 | Data images/graphs/tables are easy to see/read/understand | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |

**DISCUSSION AND CONCLUSIONS 25%**

| 1.0 | Logic of the discussion is sound | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 1.0 | Conclusions are justified by the data presented in the context of extant literature | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 0.5 | Future directions or final conclusions of the study are/is indicated | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |

**PRESENTATION & APPEARANCE 25%**

| 0.5 | To what extent did the speaker engage with the audience? (Did they engage using eye-contact and tone of voice and was the speech clear and loud enough to be heard throughout the room?) | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 0.5 | To what extent is slide number appropriate and are they easily understood? (Not cluttered and the font and images large enough and in colours easily able to be read from the back row of a large auditorium?) | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 0.5 | Are ideas presented in appropriate order so the presentation makes sense and is easy to follow? | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |
| 1.0 | To what extent did the speaker provide sound answers to questions posed? | <50 | 50 | 64 | 65 | 74 | 75 | 80 | 84 | 86 | 90 | 94 | 100 |

**Total weighted score** /10

*(For a score less than 50, please specify the exact number)*

Overall contribution to final score: **10%**
Comments to Student:

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The Exit Seminar is the fifth assessable component of the MCB Honours Program. It accounts for 10% of the overall mark, but is of particular importance for several reasons:

• Provides the student with an opportunity to present their entire project to an academic audience after submission of the written thesis
• Provides the student with an opportunity to distil their project results and what they mean, particularly in terms of existing literature into a single piece of work.
• Provides an opportunity for experienced researchers and clinicians to provide guidance and suggestions to the student with respect to their data analysis, discussion and conclusions prior to their final oral defense.

Each seminar should be assessed on its merits according to the criteria outlined here. It is not the intention of this assessment process to compare students, or to rank them.

Please put a circle around a numeric mark in each criterion or state a number on scale of 0 to 100.

The following notes may be of assistance to assessors.

• This is an Honours student project and thus can’t be compared with work from PhD students.
• The marks allocated to aspects of this seminar are slightly weighted towards the results and discussion because this will likely be the only opportunity that students will have to present their entire project to an audience after submission of their thesis.
• At this point in their program, students should have a clear view of the topic, the project rationale and aim/s, which they should be able to succinctly outline as part of their introduction to the seminar.
• They should be able to clearly outline the methods used in a form that is comprehensible to a generalist audience. The method/s used to collect and analyse data should be outlined in detail, particularly specific analytical and/or statistical tests used, including their validity and reliability
• Results should be presented appropriately and discussed in some detail, and discussion, conclusion and implications drawn from this.
• The discussion, including any conclusions or recommendations, should place the results within the existing knowledge base and, where appropriate, point to further research possibilities and/or recommendations for change or improvement. Therefore, students should discuss their findings with respect to existing literature, clearly outlining similarities and/or departures between their findings and those of other studies.

To assessor: When finished scan and e-mail this form, or hand over this form to MCB Honours Co-ordinators – margaret.jordan@jcu.edu.au or sandip.kamath@jcu.edu.au
### Self Directness & Independence 55%

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Item</th>
<th>Fail&lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons IIIB (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
<th>Hons I (Equivalent High Distinction)</th>
<th>Supervisor score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0</td>
<td>To what extent does/did the student: Show ability for laboratory bench-work?</td>
<td>&lt;50</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
</tr>
<tr>
<td>1.0</td>
<td>-Show own initiative in progressing project? -Seeks advice appropriately from advisors? -Works largely undirected between meetings?</td>
<td>&lt;50</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
</tr>
<tr>
<td>1.0</td>
<td>-Keep good records of experimental work/results in the format appropriate to the lab (Lab book and electronic records)?</td>
<td>&lt;50</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
</tr>
<tr>
<td>1.5</td>
<td>To what extent does/did the student show project and time management skills (working appropriate hours and using the time wisely)? To what extent are tasks completed consistently on schedule? How well does the student balance reading the literature, working in the lab, and completing the assessment tasks?</td>
<td>&lt;50</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
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</table>

### Commitment to Excellence 35%

<table>
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<tr>
<th>Relative weight</th>
<th>Item</th>
<th>Fail&lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons IIIB (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
<th>Hons I (Equivalent High Distinction)</th>
<th>Supervisor score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>To what extent does the student: Pay attention to detail?</td>
<td>&lt;50</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
</tr>
<tr>
<td>1.0</td>
<td>- Strive for excellence in scientific quality and presentation at all stages of project design, implementation and dissemination?</td>
<td>&lt;50</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
</tr>
<tr>
<td>1.5</td>
<td>Does the student demonstrate scientific scepticism and well developed critical thinking skills? Does the student apply these skills to critiquing and integrating the primary literature? Does the student apply these skills to their lab work and data?</td>
<td>&lt;50</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
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</tbody>
</table>

### Professional Conduct & Ability to Work with Others 10%

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Item</th>
<th>Fail&lt;50</th>
<th>Hons III (Equivalent Pass)</th>
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<th>Hons I (Equivalent High Distinction)</th>
<th>Supervisor score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>To what extent is the student able to cooperate with and work successfully within the colleagues?</td>
<td>&lt;50</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
</tr>
<tr>
<td>0.5</td>
<td>Does the student demonstrate professionalism and courtesy when interacting with other researchers? Does the student demonstrate professional conduct in dealing with their supervisor(s)?</td>
<td>&lt;50</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90 91-94 95-100</td>
</tr>
</tbody>
</table>

### Total Weighted Score

- ** Student name: 
- ** Assessor name: 
- ** Project title: 

Overall contribution to final score: **15%**
To assessor: When finished scan and e-mail this form, or hand over this form to MCB Honours Coordinators – margaret.jordan@jcu.edu.au or sandip.kamath@jcu.edu.au
## DISCIPLINE OF MOLECULAR AND CELL BIOLOGY

**Honours Program 2016**

**Honours' Thesis Assessment Form**

<table>
<thead>
<tr>
<th>Project title:</th>
<th></th>
</tr>
</thead>
</table>

### Conceptual Originality and Coherence 10%

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>To what extent does this thesis tie all elements of the project together into a coherent whole?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
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<td>88-90</td>
<td>91-94</td>
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</table>

### Technical Competence 15%

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>To what extent are methods used sound and appropriate to aims?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>To what extent are technical aspects of experimentation, data collection and/or observation performed appropriately? i.e. Is there sufficient detail so that the results could be replicated?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
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<td>88-90</td>
<td>91-94</td>
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</tbody>
</table>

### Data Quality & Analysis 15%

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>To what extent are results clearly and logically explained? Are they relevant to the aims and of good quality?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
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<td>91-94</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>To what extent is analysis of data appropriate for the aims and the type of data?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
<th>Hons I (Equivalent High Distinction)</th>
<th>Examiner score</th>
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<tr>
<td>0.5</td>
<td>&lt;50</td>
<td>50-64</td>
<td>65-74</td>
<td>75-84</td>
<td>85-87</td>
<td>88-90</td>
<td>91-94</td>
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### Interpretation & Discussion of Data 45%

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>To what extent does the student draw valid conclusions from own data?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
<th>Hons I (Equivalent High Distinction)</th>
<th>Examiner score</th>
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<td>88-90</td>
<td>91-94</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Does the student synthesise own findings in relation to findings from the literature?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
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<table>
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<th>Relative weight</th>
<th>To what extent does the student demonstrate an ability to comment and/or pursue important lines of investigation within the confines of the research framework?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
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</table>

<table>
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<tr>
<th>Relative weight</th>
<th>To what extent is the discussion a logical extension of the results and does it display sufficient reflection and criticism of the students’ own work.</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
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<td>88-90</td>
<td>91-94</td>
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</tbody>
</table>

### Quality of Written Work 15%

<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Is the thesis organised in the appropriate scientific style and format with correct punctuation/grammar and spelling? Were sentences, paragraphs and sections clearly constructed and easy to understand?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
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<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Were the citations used appropriate, and did the referencing style conform to a scientific format? Was the referencing style consistent throughout and the reference list complete?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
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<table>
<thead>
<tr>
<th>Relative weight</th>
<th>Does the student demonstrate clarity of presentation and technical competence of graphics (figures, tables) in thesis?</th>
<th>Fail &lt;50</th>
<th>Hons III (Equivalent Pass)</th>
<th>Hons II (Equivalent Credit)</th>
<th>Hons IIA (Equivalent Distinction)</th>
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| Total weighted score | 10 |

(* For a score less than 50, please specify the exact number)

Overall contribution to final score: 45%
Comments to Student:

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To assessor: When finished scan and e-mail this form, or hand over this form to MCB Honours Coordinators – margaret.jordan@jcu.edu.au or sandip.kamath@jcu.edu.au
The above matrix is used for scoring. The outcome from the above matrix may be described as:

**Sum score 85-100:**
The thesis is excellent in that it shows flair and originality and displays a well-developed capacity and potential for independent research. The thesis represents a worthwhile contribution to scholarship. The problem for investigation has been well chosen. The aims and conclusions are clearly stated within the context of a range of relevant literature. The research design and investigation procedures are appropriate to the problem selected. The analysis of data and observation are appropriate, accurate and efficient. The discussion of findings show that the author is able to assess their significance and shows awareness of the limitations of the work. The report is clear, grammatical, concise and coherent. The logical sequence of thesis sections is easily seen. Tables, graphs and maps are well presented, identified as to sources and neatly executed and checked. References are correctly cited and, where necessary, detailed data and statistical analyses are included in the appendices.

**Sum score 75-84:**
The thesis is a very competent piece of work showing strong capacity for independent research. The originality and flair of a first class thesis may not be apparent but the work contains 'flashes of inspiration'. The other qualities listed above are present but to a lesser degree. Nevertheless the thesis demonstrates that the author has the capacity to embark on a PhD or a Research Masters degree.

**Sum score 65-74:**
The thesis is a competent report illustrating some capacity for independent inquiry but not showing high promise for higher degree work by research. There will be a number of deficiencies in terms of research design, presentation and analysis but there will be useful empirical observations and a high degree of reliability in their presentation.

**Sum score 50-64**
Significant deficiencies in most of the following - grasp of the literature, research design, analysis and presentation. The thesis does not show promise of ability to undertake reliable research.

**Sum score <49**
The thesis is unsatisfactory in all of the areas mentioned above.
**Molecular and Cell Biology Honours’ Completion Form**

Student Name: .............................................  Student Number: .............................................

You are expected to complete numbers (1) & (2) prior to your Oral Defense
To enable the Honours Coordinator to forward your results to Examinations, all sections should be completed

<table>
<thead>
<tr>
<th>Criteria to be completed</th>
<th>Signatures</th>
<th>Date</th>
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<tbody>
<tr>
<td></td>
<td>Honours Student</td>
<td>Supervisor</td>
</tr>
<tr>
<td>1) Hand in all Laboratory Books to your supervisor.</td>
<td></td>
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<td>2) Cleaned laboratory space in labs (list)-----------------------------------------------</td>
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<td>3) Received marked thesis with your overall grade</td>
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<td>4)</td>
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<td>a) Vacate allocated office booth and clean area</td>
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<td></td>
</tr>
<tr>
<td>b) Return borrowed Laboratory theses and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Return Laboratory room key to the Laboratory Head.</td>
<td></td>
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<tr>
<td>5) Submitted three copies of theses + one marked thesis for binding.</td>
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</table>
Lab Manager or Research Lab Supervisor

Lab Manager or Research Lab Supervisor

Honours Coordinator