Section IX: The Thesis Dissertation

The graduate thesis, or dissertation, is the all-encompassing document describing original research carried out by the graduate student in the laboratory. In general, the research has been structured to answer a question or group of questions, or to explore particular hypotheses, and has resulted in a body of novel data. The historical background, the scientific context of the experiments, and the data are presented and discussed extensively in the dissertation. It is expected that the research carried out to generate the thesis dissertation will also result in published papers in recognized scientific journals, for which the student is the first author.

Manuscript requirement to graduate: If you came into the Ph.D. program in Fall 2003 or prior to Fall 2003 (Summer 2002 for MSTP), you are required to publish at least one first-author paper. If this has not yet been accomplished, you must append to your thesis a draft of a proposed manuscript in the style of the intended journal. The manuscript should be indicated as In press, Submitted, In revision, or In preparation for submission, (noting the journal) etc.

If you came into the program in Fall 2004 (Summer 2003 for MSTP) or after Fall 2004, you are required to publish at least one first-author paper, or if not, to document and append to your thesis the final draft of a submitted first-author manuscript. The manuscript should be indicated as In press, Submitted (and to which journal), or In revision (for which journal). Note that this slightly more rigorous revised requirement affects students who entered the program starting Fall 2004 (those beginning year 3).

A co-first authorship meets the requirement. The Graduate Division does not set a requirement for a specific number of published manuscripts, and it is expected that some of this work may be published following the thesis defense. However, it is not unusual for the thesis dissertation research to comprise 2-3 publications in which the student is the leading author. All collaborative work that contributes to the Thesis Dissertation must be clearly indicated in the text. Each Chapter should indicated which publications (if any) are represented by the described work.

38) The Thesis Defense Committee

Every candidate for the Ph.D. Degree must submit a dissertation and pass an oral examination of their thesis (Thesis Defense) by a Thesis Defense Committee (Committee) that consists of a minimum of five members chosen by the student and their mentor. The Thesis Defense Committee must include at least four faculty members from the departments that comprise the Graduate Division. One member, who serves as Chair, must be a present or past (within three years) representative of the Graduate Committee (upon request to the Asst. Dean for Graduate Studies this requirement may be waived for the Chair). At least two must be members of the student's department. The student's mentor does not serve on the Committee although the mentor is present at the Thesis Defense. Inclusion of an examiner from outside the institution with expertise in the area of the student's research is desirable although the fifth member of the committee may be an additional member of the basic
science faculty. Students are encouraged to designate a sixth faculty member as an alternate in the event that an examiner cannot attend the Thesis Defense. The name of any member who served as co-mentor or collaborator with the student must be indicated by an asterisk on the submitted Committee Form.

39) Approval of the Thesis Defense Committee

The Assistant Dean must approve all Thesis Defense Committees, according to the designated criteria established by the Graduate Committee. At least two months prior to the scheduled defense date, a completed Thesis Defense Committee form must be submitted to the Graduate Office. This form states the title of the dissertation, the members of the Thesis Defense Committee, the date at which the required public seminar will be held, the signatures of the appropriate Department Chair and the mentor, the abstract of the dissertation and a list of publications. A draft copy of the thesis defense seminar announcement must accompany this form. The Assistant Dean will not consider Defense Committees from students whose course work or qualifying examinations are incomplete. Once the Thesis Defense Committee has been approved by the Assistant Dean, the Thesis Defense Committee has full authority to recommend the award of the Ph.D. degree to the Assistant Dean.

All changes in Committees that have been reviewed and approved must be approved by the Assistant Dean. In the event that changes in the Committee must be made, and the Assistant Dean is not available for consultation, the approval of the appropriate Department Chair should accompany the final report of the Committee.

40) Including Published Work in the Thesis

Students are strongly encouraged to submit their dissertation studies for publication in peer-reviewed journals during the course of their studies. In order to fulfill copyright obligations, papers published by graduate students before the Thesis Defense, that are intended to be included in the dissertation, should carry the footnote:

"Data in this paper are from a thesis to be submitted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy in the Graduate Division of Medical Sciences, Albert Einstein College of Medicine, Yeshiva University".

All publications for which the student is first author should be appended (as reprints) to the submitted Thesis. Co-first authors are allowed.

Manuscript requirement to graduate: If you came into the Ph.D. program in Fall 2003 or prior to Fall 2003 (Summer 2002 for MSTP), you are required to publish at least one first-author paper. If this has not yet been accomplished, you must append to your thesis a draft of a proposed manuscript in the style of the intended journal. The manuscript should be indicated as In press, Submitted, In revision, or In preparation for submission, (noting the journal) etc.

If you came into the program in Fall 2004 (Summer 2003 for MSTP) or after Fall 2004, you are required to publish at least one first-author paper, or if not, to document and append to your thesis the final draft of a submitted first-author manuscript. The manuscript should be
indicated as In press, Submitted (and to which journal), or In revision (for which journal). Note that this slightly more rigorous revised requirement affects students who entered the program starting Fall 2004 (those beginning year 3).

41) Instructions for Preparing the Dissertation

Two dissertation formats are generally accepted by the Departments within the Graduate Division. Students must consult with the appropriate faculty in their Department to insure that their dissertation format is acceptable by their Department. ‘Format A’ is the traditional organization of a dissertation. ‘Format B’ is organized with each chapter corresponding to a published (or in preparation) journal article. However, it is emphasized that a collection of published papers cannot be submitted in place of a dissertation. An improperly prepared dissertation may be returned to the student by the Committee without review.

The following general instructions apply to both dissertation formats.

i) Manual of Style: On points of style (including capitalization and punctuation) not covered by the above, follow the recommendations of your department. The style selected should be adhered to strictly and consistently. If no style is preferred by the Department, the Manual for Writers of Dissertations by Kate L. Turabian, University of Chicago Press, should be used.

ii) Line spacing: The text of the dissertation is to be double-spaced except for indented quotations, footnotes, figures, legends and bibliography, which are to be single-spaced.

iii) Paper: The final copies of the dissertation are to be printed on 8 1/2" x 11" high quality paper that is not punched or perforated in any way. Copies of the draft of the dissertation that are submitted to the Committee prior to the Thesis Defense may be duplicated on standard photocopy paper and may be secured using either a three-hole binder or a spring binder.

iv) Pagination: Every paper in a thesis is assigned a number typed on it. There are two series of page numbers. The first, in small Roman numerals, begins with the title page and ends with the last page preceding Chapter I. The second series, in Arabic numerals, begins with the first page of Chapter I and continues throughout the dissertation, including graphs, illustrations, tables, bibliography and appendices.

v) Margins: The margins at the top, bottom and right are to be 1.0 inch; the left-hand margin is to be 1.5 inches. All tables, charts and illustrations are to have left-hand margins of no less than 1.5 inches because of binding requirements. Any over-size material may be folded in from the right, top and bottom in such a way as to leave a 1.5 inch margin on the left side.

vi) Spelling: The spelling given in any standard dictionary may be used. However, whatever forms are adopted should be adhered to consistently throughout the text of the dissertation.

vii) Quotations: Quotations of more than three lines should be single-spaced, set off from the text in a separate paragraph and indented four spaces, with double-spacing between
paragraphs. Opening and closing quotation marks are omitted. Quotations of three lines or less are enclosed in quotation marks and are run into the text.

viii) Tables, Figures, Reproduction: The recommendations of the style manual are to be followed in preparing tables, figures and other graphic materials. Reproduction processes that lack permanence are not acceptable. Tables and Figures should be imbedded into the document.

Tables are numbered consecutively throughout the thesis. The word TABLE, followed by the appropriate Arabic numeral, is placed above the caption; the table caption is also written in full capital letters. Figures are numbered consecutively in Arabic numerals, with the word "Figure" (only the first letter is capitalized) and the appropriate numeral appearing before the caption. If possible, figures should be oriented in the "portrait" configuration. Figure legends should appear on the page facing the Figure. Alternatively, if it fits without crowding on the same page, the legend may be printed beneath the Figure.

ix) References and Footnotes: References to published articles should be cited by author and year (i.e. Student and Mentor, 1995 or Student et al., 1995). Footnotes are to be placed at the foot of the page and numbered consecutively for each chapter. Every reference listed must appear in the bibliography (see below).

The following sections of the dissertation are common to both formats.

i) Title Page: The title page is to list at the top the title of the dissertation, student's full name and signature, the full name and title of the thesis advisor and, at the bottom, the statement: "Submitted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy in the Graduate Division of Medical Sciences, Albert Einstein College of Medicine, Yeshiva University, New York, (month and year)." The title of the dissertation must not exceed 72 letters and spaces.

A sample page is shown at the end of this section which illustrates the format. The date given is not when the dissertation is submitted, but when the degree is expected to be granted (January, June or September of the appropriate year).

ii) Abstract: The abstract of the dissertation is to include: a hypothesis, the procedures followed, the significant results and the general conclusions. The abstract is to be presented on a separate page headed with the word ABSTRACT in capital letters centered on the page. On the next line is the title of the dissertation. The following line is the full name of the student. The length of the abstract must not exceed 600 words. (Please note the separate instructions for the 350 word microfilm copy abstract described in the first section of this manual.)

iii) Acknowledgments: This feature is not required, but offers a convenient opportunity to express the writer's appreciation to persons who have been especially helpful, or to the publishers of materials from which data have been drawn and to whom acknowledgment should be given. The appropriate training or research grants should also be acknowledged in the dissertation.

iv) Table of Contents: The table of contents should list the chapters or other division headings of the dissertation, using the same words that appear in the body of the report.
The numbers of the pages on which these items appear should also be given. The table of contents is to be followed by separate page listings for tables and for figures and illustrations.

v) Introduction: The dissertation begins with a scholarly introduction (Chapter I). This section should include a historical review of the student’s area of research followed by a critical evaluation of the current status of the field. The student should then present working hypotheses and give an introduction to the system and the thesis research. The student should consult with his or her mentor in order to agree upon how extensive a historical review is appropriate to the dissertation.

vi) Conclusions: A dissertation should end with a general discussion of the studies that have been conducted including an assessment of the significance of the research, arguments of interpretation, evaluation of material included in appendices, and a plan for the experimental resolution of unanswered questions.

vii) Bibliography: The format for the references included in the bibliography should follow that in the suggested manual of style or a highly respected scientific journal. At a minimum, each reference must include the names of all authors, the title of the article, the name of the journal, volume number and pages of the article. Titles of articles must be included. The bibliographies of the dissertation may be compiled for each chapter separately, or together at the end of the dissertation, at the discretion of the mentor and the student.

viii) Supplementary Materials and Methods: It may be appropriate for a more extensive presentation of Materials and Methods to be given in an appendix where it may be helpful to other investigators who wish to utilize procedures developed by the candidate. The candidate may also wish to include as appendix material more detailed presentations of data than appropriate for a scholarly journal or thesis. This material would then be available through the College library or University Microfilms.

The generally accepted thesis formats (Formats A and B) are described below. The format chosen must be maintained throughout the dissertation. Students must discuss with their mentor the dissertation format acceptable to their department.

FORMAT A

i) Methods and Materials: The protocols and procedures used in the dissertation studies should be presented in sufficient detail to allow reproduction of the experiments (Chapter II). A dissertation provides an appropriate vehicle for experimental details that might be omitted from journal articles due to space limitations.

ii) Results and Discussions: Chapters III ... n of the dissertation should present the results of the conducted studies followed by a discussion of their significance. The format for these chapters should follow that in the suggested manual of style or of a highly respected scientific journal, mutually agreed upon by the student and the mentor.

FORMAT B

i) Manuscripts: The body of the thesis should be in the form of manuscripts that have been or are ready to be submitted for publication in a scholarly journal. Note that the format
and style requirements described above must be adhered to for each and every chapter of the dissertation. Each manuscript will constitute a chapter and will include a brief Introduction, Methods and Materials, Results, and Discussion. The candidate must be the first author of these manuscripts and must be responsible for their preparation. A footnote to the introduction should give bibliographic information for manuscript constituting the chapter. This information should include the full names of the authors, the journal and the status of the manuscript (i.e., submitted, published or in press).

If the student is not first author: One of several options may be appropriate in cases in which the student is not first author of a manuscript that is to be presented in the dissertation as a chapter: 1) The student may extract his or her own work from the manuscript for presentation in the dissertation; 2) The manuscript may be included as an appendix to the dissertation; 3) The manuscript may be included as a chapter if the student was responsible for the preparation of a significant portion of the manuscript. For all multi-authored manuscripts, the exact contribution of the student should be stated in an introductory statement or footnote preceding each chapter or in the appendix. If figures from a multi-author manuscript are used, it is imperative to indicate which figures are the student’s work and which represent the work of other authors. In all cases in which figures are used, appropriate acknowledgement must be given. In addition, any contributions of co-authors must also be specified in the acknowledgment section.
AN EVOLUTIONARY VIEW OF THE MYC NETWORK IN GROWTH CONTROL AND DIFFERENTIATION

by

Nicole Schreiber Agus

Candidate: ____________________________  Thesis Advisor: ____________________________

__________________________  ____________________________
Signature  Signature

Nicole Schreiber Agus  Ronald A. DePinho, M.D.
Name  Name

Associate Professor of
Microbiology and Immunology
Title

Submitted in partial fulfillment of the requirements for the
degree of Doctor of Philosophy
in the Graduate Division of Medical Sciences

Albert Einstein College of Medicine
Yeshiva University
New York
June, 1994
42) Submission of the Thesis

Presentation of the thesis to the Committee. The Thesis must be presented to all members of the Thesis Defense Committee at least three weeks before the scheduled defense. A member of the thesis committee may require a postponement of the Thesis Defense if this requirement is not met. However, this requirement may be waived upon the consent of all of the members of the Committee. It is the responsibility of the student to determine suitability of providing less time for review. A Committee member may request a pre-defense meeting of the Committee if, in the opinion of the Committee member, the dissertation is not defensible. All expenses related to the defense and the thesis are the responsibility of the student's Department, although funds may be requested from the Graduate Office to support travel (but not honorarium) for an outside reader, pending availability.

Presentation of a public seminar. The presentation of a public seminar at the College of Medicine is required for successful completion of the PhD degree. This seminar also fulfills a New York State requirement that a PhD candidate demonstrate his/her ability to present scientific material in public. This seminar should be presented within three months of the date of the examination, but is usually presented immediately preceding the defense. A copy of the announcement of the seminar must be forwarded to the Graduate Office for inclusion in the student's file. An announcement of the time, place and subject of the public seminar should be widely disseminated at the College of Medicine, and a draft copy of this announcement must be included with the Thesis Defense Committee form submitted to the Graduate Office.

43) Conduct of the Thesis Defense

The purpose of the thesis defense is to demonstrate in an oral form the knowledge and skills acquired to carry out research that provides new information on a significant problem. The following are recommended guidelines for conducting the thesis defense:

The thesis seminar, whenever possible, should immediately precede the thesis defense.

The Chair of the Defense Committee is a current or recent (within three years) member of the Graduate Committee. At this member's discretion, a different Chair may be chosen to run the defense, with the original Chair remaining as an examiner. The Chair should ensure that the Thesis Defense Form has been brought to the defense. The form is available on the Registrar's page on the Graduate Division website. The Chair will identify to the group any members of the Defense Committee who have acted as co-mentors or collaborators during the course of the student's research.

At the commencement of the defense, the student should be excused and the Chair (and/or mentor) will then provide a profile of the student’s background, course work, and publication record.

The Chair, in consultation with the examiners, will then determine how the thesis defense will be conducted.

If any of the examiners expresses a serious concern with the content of the thesis, a strategy should be developed whereby the questioning can address these concerns in a constructive manner.
The student will then be asked to return and the exam can commence. If a thesis seminar was not given immediately prior to the defense, the student should give a short (~10 minutes) synopsis of the major findings of his/her research.

If an external examiner has been invited to participate in the thesis defense, it is recommended that this examiner be invited to commence the questioning period. Examiners will be allowed a ~10 min question period in turn, with the opportunity to have a second round of questioning. Alternatively, questions will be permitted to follow logically from the initial set of questions, with examiners sharing the examination period.

The mentor may be present during the defense but cannot ask questions and is not expected to answer any questions for the student unless clarification is asked for from the examiners.

It is inappropriate for food or beverages to be provided by the student during the defense, although the Department may offer lunch if timing requires it.

The Chair should ensure that the defense is conducted in a professional manner, and that each examiner has the opportunity to ask questions. The Chair should also ensure that the length of the exam is appropriate and does not proceed to exhaustion. A typical exam period is 1 to 2 hours.

After the Chair has determined that the defense is at an end, the student is asked to leave the room. The Thesis Defense Committee vote is confidential and the mentor should leave the room together with the student during the voting procedure. The defense is discussed, and a decision is made. The decision is determined by majority vote. If the vote is for "minor revision" then the mentor is usually given the responsibility of checking the final document. If the vote is for "major revision", a member of the committee is usually assigned to review and accept the corrections on behalf of the parent committee. A decision for "major revision" results in the grade of Conditional Pass.


A Thesis Defense form is available on the Registrar’s homepage. When the examination is complete, the Chair of the Thesis Defense Committee should return the completed form immediately to the Graduate Office for the Director of the Graduate Division who will provide a copy to the appropriate Departmental Chairperson. Students may receive a grade of 'Pass', 'Conditional Pass' or 'Fail' for the examination by majority vote of the committee. A grade of 'Conditional Pass' will require the student to complete additional work set forth by the Committee. The report of the Committee will contain any recommendations for rectifying deficiencies if a grade of 'Conditional Pass' has been given. Unless specified otherwise by the Committee, all deficiencies must be corrected within a period of three months of the date of the examination. If the deficiencies are not corrected to the satisfaction of the Committee (or the designated sub-committee), the grade of 'Conditional Pass' will be changed to 'Fail'.

If the event of a grade of Fail, re-examination is at the discretion of the appropriate Department. The Department and the student’s Advisory Committee, working together with the student and mentor, must submit a written plan to the Assistant Dean for completion of
the Degree. In some cases, the grade of Fail for the defense may lead to review by the Academic Affairs Committee and possible dismissal from the PhD program.

More paperwork absolutely required for the degree. Following successful completion of the Thesis Defense, the student and mentor will be notified in writing of the award of the Ph.D. degree by the Assistant Dean.

Thesis copies:

No diploma will be granted until five copies of the thesis, printed on good quality paper, in final form, (including the signatures of the candidate and his/her major advisor on the title page), as well as authorization for funds to cover microfilming and binding of the thesis, are submitted by the student's home Department. Copies of the thesis must be distributed as follows: a bound copy to the student's advisor; a bound copy to the student's home department; a bound copy to the student; a bound copy for the Samuel Gottesman library; an unbound copy to the student's home department for microfilming (this copy will be returned to the student after microfilming).

The following documents must be submitted to the student's home Department:

- Two copies of a 350-word dissertation abstract are required for the microfilming copy. This reduction in length will allow University Microfilms International to provide an on-line, computerized version for Dissertation Abstracts International. (The following method for counting to remain within the 350 word limit may be helpful - maximum 2,450 typewritten characters for the abstract, averaging 70 characters per line with a maximum of 35 lines.).

- A signed and completed University Microfilms International Agreement form. This agreement provides for copyrighting of the thesis.

- Written permission from the copyright holders if copyright material by the student (e.g. publications) or other authors, (e.g., tables, charts, pictures, etc.) are included in the dissertation. All thesis requirements must be fulfilled before a candidate can be recommended for a PhD Degree.

The following documents are to be submitted to the Graduate Office:

- The PhD diploma form indicating the student's full name as it should appear on the final document.

- A copy of the signed title page of the student’s thesis. All signatures must be present.

- A signed and completed Survey of Earned Doctorates form.

- An internal data sheet providing a forwarding address and a description of the student’s next professional position.
Completion of all requirements. All corrected copies of the Thesis and all additional paperwork must be filed within 3 months after the successful Thesis Defense. Permission to remain in the program beyond 3 months requires justified written approval from the Assistant Dean. In the absence of such approval, the student may be placed on unpaid Academic Leave. All requirements must be fulfilled within one year of the thesis defense.

Granting of the PhD degree. Certification of receipt of the PhD degree may be made by the Assistant Dean at any time during the year and formal award of the degree will then be made at the subsequent regular commencement exercises of the College of Medicine. The degree granting dates are the last days of September and January and the date of the College of Medicine Commencement exercises conducted at the beginning of June. All financial obligations to the College of Medicine must be met prior to the release of the diploma.

Participation in the June Commencement Ceremony. In order to participate in the Commencement Ceremony, all academic requirements must be fulfilled and communicated to the Assistant Dean on or before April 30. This includes completion of all coursework and other departmental requirements, successful defense of the thesis (conditional pass is not sufficient), completion of all revisions, deposit of 5 copies of the thesis in the Department Office, and completion of all required paperwork. There will be no exceptions to this deadline.

Change in status after successful thesis defense. Occasionally students who have successfully defended the thesis may elect to delay final submission of documents for a short period of time as they complete arrangements to move on. Students may remain as “active students” for a maximum of 3 months after the defense. This requires formal notification of the Assistant Dean and Registrar. If all paperwork and corrected thesis copies have not been submitted at the end of this period, students may be placed on unpaid Academic Leave of Absence until such requirements have been fulfilled. All requirements must be fulfilled within one year of the thesis defense.

A student who has successfully defended the thesis and completed all requirements for the PhD, will no longer be an “active student.” If the student is to remain at the Institution, the student’s status must be changed to that of post-doctoral fellow.

Change in status for international students. International students who have been studying at the Institution on a student visa and intend to remain in the U.S. for further training must apply for “practical training” at least 3 months prior to the date of the PhD thesis defense. Visa restrictions and requirements change frequently. Students are strongly advised to consult the International Students and Scholars Office at the Institution well in advance of any anticipated change in status.