

**MD DEGREE WITH DISTINCTION IN RESEARCH PROGRAM APPLICATION**  
**UMDNJ-Robert Wood Johnson Medical School**

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Mailing Address:** \_\_\_\_\_

**Phone:** \_\_\_\_\_ **Email:** \_\_\_\_\_ **Projected Year of Graduation:** \_\_\_\_\_

**Sponsor:** \_\_\_\_\_ **Title:** \_\_\_\_\_

**Department:** \_\_\_\_\_ **Institution:** \_\_\_\_\_

**Campus Mailing Address:** \_\_\_\_\_

**Site where research will be conducted:** \_\_\_\_\_

**Time period during which research will be conducted:** \_\_\_\_\_

**Title of Research Project:** \_\_\_\_\_

**Names & departments of potential *additional* faculty members for the student's committee**

1. \_\_\_\_\_ 2. \_\_\_\_\_

**BIOGRAPHICAL SKETCH:** On a separate page, provide a summary of your education, previous research experience and any publications in resume format.

**ACADEMIC STANDING:** Students must be in good academic standing and have completed the appropriate requirements for their current status in medical school to be considered.

**RESEARCH PROPOSAL:** The research proposal should be 5 pages of text (single spaced, minimum font size = 11), with up to 2 additional pages for references. It should include:

- A. Abstract (150 words of less)**
- B. Hypothesis to be tested**
- C. Statement of Importance**
- D. Introduction/background**
- E. Specific Aims**
- F. Preliminary data (not required, provide only if obtained by the student)**
- G. Research plan**
- H. Methods (experimental and data analysis)**
- I. Timeline for the proposed work**
- J. References**

**MENTOR LETTER:** A signed letter from the mentor indicating the student has written the proposal and supporting the scientific merit, proposed time frame and planned publication of the work is required.

**CERTIFICATION FOR THE CARE AND TREATMENT OF ANIMALS – (IACUC)**

Any application involving laboratory animals must be reviewed and approved by an appropriate institutional committee.

Please check the appropriate statement.

- ( ) No laboratory animals will be used in any of the proposed activities planned in this application.
- ( ) Laboratory animals will be used in the proposed activities planned in this application. If marked, you must complete all information below.
  - ( ) Protocol No.: \_\_\_\_\_ Approval Date: \_\_\_\_\_
  - ( ) Please add \_\_\_\_\_ to my animal protocol.  
Student's Name

**CERTIFICATION FOR THE PROTECTION OF HUMAN SUBJECTS (IRB)**

Any application involving human subjects must be reviewed and approved by an appropriate institutional committee.

Please check the appropriate statement.

- ( ) No human subjects will be used in any of the proposed activities planned in this application.
- ( ) Human subjects will be used in the proposed activities planned in this application. If marked, you must complete all information below.
  - ( ) Protocol No.: \_\_\_\_\_ Approval Date: \_\_\_\_\_
  - ( ) Please add \_\_\_\_\_ to my IRB application.  
Student's Name

Sponsor \_\_\_\_\_  
Print name Signature Date

The signature indicates that sponsor has approved the attached student proposal and agrees to supervise the thesis work.

Student \_\_\_\_\_  
Print name Signature Date

**PLEASE NOTE: IRB AND IACUC FORMS MUST BE SUBMITTED TO THE RESPECTIVE COMMITTEE ON OR BEFORE THE DUE DATE OF THE APPLICATION. ALREADY APPROVED IRB/IACUC PROTOCOLS MUST BE ACTIVE (NOT EXPIRED).**

## **THE DISTINCTION IN RESEARCH PROGRAM\*** **Graduation with "Distinction in Research"**

This prestigious and rigorous program is intended to recognize Robert Wood Johnson Medical School students who plan, carry out and write up independent, original basic or clinical research. It is not meant for those who limit their participation to a technical capacity on an ongoing project. Students who are accepted into this program and who fulfill the requirements listed below will receive diplomas at Commencement stating that they have graduated with "Distinction in Research". Moreover, students who complete the program before Sept 1 of their graduation year will have their achievement recognized in their Medical Student Performance Evaluation (MSPE) letter.

The research conducted must be intensive. Students are encouraged to begin in the spring semester of their first year or during the summer between their first and second years. Completed projects are not appropriate for this program; the student should be applying early in the conduct of the research. The publication of case reports, chart reviews or literature reviews does not qualify students for graduation with Distinction in Research. While some research is done in teams, students are encouraged to develop independent projects. Projects jointly performed by 2 or more students will require special permission from the committee. In addition, research submitted in fulfillment of any other degree cannot be used in whole or part as fulfillment of the requirements of the Distinction in Research program.

### **Procedure for admission to the program\***

1. The student (who must be in good academic standing at the Robert Wood Johnson Medical School) selects a mentor and formulates a research project. (Instructions for mentors are available below)
  
2. Application forms are available in the Student Affairs Office, the Office of Research and Sponsored Programs, and on-line on the Student Affairs web site. Applications may be submitted at any time during the academic year. Students are strongly encouraged to submit applications in August or February as the committee typically reviews applications twice per year. Projects cannot be initiated during the student's fourth year, and all students must submit their application to the program no later than MARCH 1 of the year before the student's anticipated graduation (typically the spring of the 3<sup>rd</sup> year). Completed projects are not appropriate for this program; the student should be applying early in the conduct of the research. The signed form including all IRB/IACUC information must be submitted, and IRB/IACUC protocols cannot be expired.
  
3. The application is in the form of a research proposal divided into the following sections
  - A. Abstract (150 words of less)**
  - B. Hypothesis to be tested**
  - C. Statement of Importance**
  - D. Introduction/background**
  - E. Specific Aims**
  - F. Preliminary data (not required, provide only if obtained by the student)**
  - G. Research plan**
  - H. Methods (experimental and data analysis)**
  - I. Timeline for the proposed work**
  - J. References**

Applications must be written by the student and should be no longer than 5 single-spaced pages for sections A-I and 2 pages for section J. Documents should have minimum one inch margins and a type font size >11. The sections should include an overview (abstract) of the project and a specific description of the methods you will employ, including (as appropriate) the number and type of subjects and the statistical methods. Your proposal should take into account the power of the statistical test(s) being used to detect significant effects (see below). Discuss the potential difficulties and limitations of the proposed procedures and alternative approaches to achieve the aims. As part of this section, provide a tentative sequence or timetable for the project. **For research involving human subjects please include a section with the following:** Human Subject Involvement and Characteristics, Sources of Materials, Potential Risks, Recruitment and Informed Consent, and Protection Against Risk.

4. A cover letter, signed by the mentor must accompany the application. It must state that:
  - a. the proposal has scientific merit
  - b. has been written primarily by the student
  - c. can be accomplished within the proposed time frame
  - d. you will be first author on any paper reporting this research

The latter implies that the student will carry out the majority of the experiments him/herself and will take primary responsibility for writing the manuscript. In the case where the student contributes to a multi-investigator project precluding first authorship, then the student may still submit a written research report for evaluation, as described under “Requirements.” All applications should be submitted to the Office of Research and Sponsored Programs.

5. The student’s biographical sketch (in CV/resume format) must be submitted.
6. All documents must be submitted in electronic format and hard copies of the signed mentor letter and application must be sent to the Office of Research and Sponsored Programs.
7. The Robert Wood Johnson Medical School DIR Parent Committee will make the final decision as to whether a student’s proposal is acceptable. Applicants can expect to be notified of the decision following receipt of the student’s research proposal after the September or March meetings of the DIR committee. Following acceptance, the student will meet with his/her DIR Student Advisory Committee (DIR SAC) comprised of his/her mentor and 2 other faculty members designated by the DIR Committee to provide guidance and feedback.
8. Students whose applications are not accepted by the committee will have the opportunity to revise their applications in response to specific criticisms.

### **Procedures during the course of the DIR program**

1. Once a student is accepted into the program, the student will be assigned a DIR Student Advisory Committee (DIR SAC) consisting of the mentor, a member of the DIR Parent Committee and a third faculty member appropriate to the scientific area. The student should meet with this committee within 1 month of acceptance into the program, document the meeting on the DIR SAC Initial Meeting Form, and submit the completed form to the Office of Research and Sponsored Programs. This meeting will assure the student is aware of the requirements of

the program and provide scientific feedback to assist the student in completing the DIR program.

2. Students must meet (either in person, by phone, or by email) with their DIR Liaisons in advance of the March 01 and Sept 01 deadlines each year that they are in the program so the Liaisons are aware of student progress. If a student's DIR Liaison cannot confirm this contact and ongoing progress by the student, then the student will be dropped from the program. It should be noted that while there is no appeals process, a student should discuss any difficulties in meeting these deadlines with his/her DIR liaison prior to the aforementioned dates.

3. If the project period will exceed one year, students should meet at least annually with their DIR SAC committees. Students may document this meeting using the DIR SAC Interim Meeting Form, which should be submitted to the Office of Research and Sponsored programs once complete. Completion of the Interim Meeting Form is not mandatory; however, we urge students to meet with their SACs at regular intervals. This will allow students to receive valuable scientific feedback on their DIR projects from faculty experts and ensure students make adequate progress to complete the program requirements in a timely fashion. Students must still keep their DIR Liaisons apprised of their progress as per #2 above.

### **Requirements for Successful Completion of the Program**

1. Acceptance of a paper to a peer-reviewed journal or submission of a paper to a peer-reviewed journal (with a copy of the letter of submission) with the student as first author by March 1 of the graduation year and endorsement of the student's work by the DIR SAC for awarding Distinction in Research. The student will meet with the DIR SAC committee to review the work and complete the Final Evaluation Form. Completion of this form is mandatory. An electronic copy of the paper and a hard copy of the signed completed Final Evaluation form must go to the Office of Research and Sponsored Programs for final approval by the DIR Parent Committee.

2. In cases where a manuscript has not been submitted or accepted for publication by March 1 of the fourth year, the student may submit a written report (15-20 pages, single spaced) including an expanded literature review and the research methods, results and discussion to the DIR SAC for evaluation. The DIR SAC will meet with the students and make a decision as to whether the report qualifies the student for graduation with Distinction in Research and complete the Final Evaluation Form. An electronic copy of the report and a hard copy of the signed completed Final Evaluation form must go to the Office of Research and Sponsored Programs for final approval by the DIR Parent Committee.

3. A signed letter from the mentor endorsing the manuscript/report must accompany the submission in all categories.

### **Recognition of Achievement**

1. Students in the DIR program will have this distinction noted in their Medical Student Performance Evaluation (MSPE) if they have fulfilled the program requirements prior to September 1<sup>st</sup> (pending approval by the DIR Parent Committee) of their graduation year. The student will earn the designation, "Distinction in Research." This will be indicated on the Commencement Program and noted on their diploma. Students will also be recognized at the Graduation and Awards banquet

2. Students who fulfill all of the requirements by March 1<sup>st</sup> (pending approval by the DIR Parent Committee) of their graduation year will earn the designation, "Distinction in Research." This will be indicated on the Commencement Program and noted on their diploma. Students will also be recognized at the Graduation and Awards banquet

This is an exciting opportunity for students to receive recognition for creativity and originality. This research experience is a valuable educational component for either an academic or clinical medicine career.

## **Distinction in Research: Program Guidelines for Mentors\***

The Distinction in Research Program at Robert Wood Johnson Medical School is a prestigious program which gives medical students an opportunity to obtain instruction from faculty members on how to carry out original research. For many students, this is the first step taken on the way to becoming independent investigators. The goal of the program is to provide instruction on how to:

- a. identify a scientific question
- b. formulate a specific aim(s)
- c. design a research plan
- d. analyze data
- e. compose scholarly manuscripts.

The program is not for every student, but for those who want to carry out a research study in which they will assume a significant level of responsibility. This work will be performed under the direction of their mentor.

The following criteria must be met:

1. The application form with all pertinent, up to date IRB/IACUC information must be completed and signed by the student and mentor. IRB/IACUC protocols cannot be expired. Please suggest two possible committee members who would be appropriate and willing to participate in this process and submit these names on the application. Do not list the mentor and at have at least one person outside the department if possible.
2. The application is in the form of a research proposal divided into the following sections
  - A. Abstract (150 words of less)**
  - B. Hypothesis to be tested**
  - C. Statement of Importance**
  - D. Introduction/background**
  - E. Specific Aims**
  - F. Preliminary data (not required, provide only if obtained by the student)**
  - G. Research plan**
  - H. Methods (experimental and data analysis)**
  - I. Timeline for the proposed work**
  - J. References**

Applications must be written by the student and should be no longer than 5 single-spaced pages for sections A-I and 2 pages for section J. Documents should have minimum one inch margins and a type font size >11.

Whether the project is in the area of basic science, clinical medicine, translational research, epidemiology, outcomes research, or health policy, it should be hypothesis driven, rather than purely descriptive reporting of observations. The following are examples of what is not acceptable for admission to the DIR program, although they may provide some students with a worthwhile research experience:

- a. those that are purely technical in nature, requiring the student to perform a single assay

- b. those that do not involve testing a scientific question
  - c. chart reviews
  - d. literature reviews
3. A letter, signed by you, must accompany the student's application. It must state that:
- a. the proposal has scientific merit
  - b. has been written primarily by the student
  - c. can be accomplished within the proposed time frame
  - d. the student will be first author on any paper reporting this research

For Mentors not affiliated with RWJMS, the letter must also describe the facilities and support services available to the student that are pertinent to the proposed research.

In the case where the student contributes to a multi-investigator project precluding first authorship, then the student may still submit a written research report for evaluation, as described under "Requirements."

4. The student must submit a biographical sketch in CV/resume format.  
Note: Mentor not affiliated with RWJMS must also provide a CV/resume.
5. The Robert Wood Johnson Medical School DIR Parent Committee will make the final decision on proposal acceptance. After acceptance, each student will be afforded the guidance of a three-person DIR Student Advisory Committee (DIR SAC) that will meet at the initiation of the project to review the research plan and provide guidance and feedback. The committee will consist of the student's research mentor, another faculty member typically suggested by the mentor, and a member of the DIR committee who will act as liaison.
6. Students should be encouraged to apply for extramural funding from foundations or professional societies to support their work, since this will provide them an introduction to much needed grant-writing skills. This is, however, not obligatory.
7. Once a student is accepted into the program they will be assigned a DIR Student Advisory Committee (DIR SAC) consisting of the mentor, a member of the DIR Parent Committee and a third faculty member appropriate to the scientific area. The student should meet with this committee within 1 month of acceptance into the program, document the meeting on the DIR SAC Initial Meeting Form, and submit the signed completed form to the Office of Research and Sponsored programs. This meeting will assure the student is aware of the requirements of the program and provide scientific feedback to assist the student in completing the DIR program.
8. If the project period will exceed one year, the student should meet at least annually with the DIR SAC committee, document the meeting on the DIR SAC Interim Meeting Form, and submit the signed completed form to the Office of Research and Sponsored programs. This meeting will assure the student is making progress to complete the requirements of the program and provide scientific feedback to assist the student in completing the DIR program. Completion of the DIR SAC Interim Meeting Form is not mandatory. However, it is mandatory that students keep their DIR Liaison informed of their progress while in the program. Students must meet (either in person, by phone, or by email) with their DIR Liaisons in advance of the March 01 and Sept 01 deadlines each year that they are in the program. If a student's DIR Liaison cannot confirm this

contact and ongoing progress by the student, then the student will be dropped from the program.

9. Successful completion of the Program will follow publication or submission of a first author paper in a peer-reviewed journal by March 1 of the graduation year, endorsement of the student by the SAC DIR for awarding Distinction in Research and approval by the DIR Parent Committee. Submitted papers must also include a copy of the submission letter to the journal. The DIR SAC will be strongly encouraged to meet with the student to discuss his/her successful publication. A signed completed Final Evaluation form and an electronic copy of the paper must go to the Office of Research and Sponsored Programs.

10. The student must be listed as first author on the manuscript. In the case where the student contributes to a multi-investigator project precluding first authorship, then the student may still submit a written research report for evaluation, as described below for work not meeting requirements for publication. Students may still be eligible to graduate with Distinction in Research if they:

- a. submit a written report (15-20 pages, single spaced) including an expanded literature review and the research methods, results and discussion to the DIR SAC for evaluation
- b. expand on their original research to explain what the next steps in their project would be to further progress toward their research goals
- c. at the conclusion of the research, meet with the SAC DIR to review the student's project. The student will be given the opportunity to present his/her work to the SAC DIR to receive feedback on his/her achievements.
- d. A signed completed Final Evaluation form and an electronic copy of the paper must go to the Office of Research and Sponsored Programs.

11. Students who would like their Dean's letter to include a statement indicating that they will graduate with Distinction in Research must complete item 9 or 10 and submit the required information by September 1st of the graduation year to the Office of Research and Sponsored Programs for review and approval by the DIR Parent Committee. The final deadline for completion of the program and submission to the Office of Research and Sponsored Programs is March 1 of the graduation year.

12. Mentors will be asked to comment on the student's performance for the purpose of the "Unique Characteristics" section of the Medical Student Performance Evaluation (MSPE).

13. Graduation with Distinction in Research will be noted on the student's diploma and also on the graduation program.

\*Adapted from the Mount Sinai Medical School Web Site with the kind permission of Dr. Karen Zier, Associate Dean for Student Research at the Mount Sinai School of Medicine.