



## GRADUATE SCHOOL OF BIOMEDICAL SCIENCES

University of Medicine & Dentistry of New Jersey

### Undergraduate Summer Research Experience

## Summer Application Instructions

The Summer Research Program, sponsored by the Graduate School of Biomedical Sciences (GSBS), is designed to provide research experience for undergraduate students interested in **careers in Biomedical Research**. The program provides a 10-week period of full-time laboratory research, under the direction of a GSBS faculty member. In addition, graduate faculty members give weekly presentations describing their research and the opportunities for graduate study in their respective programs. Students make oral presentations of the results of their summer research at the end of the 10 week period. To be considered for the program you must be a **U.S. citizen or Permanent resident** to apply provide the following documents:

1. A completed application
2. Official Transcript from all universities/colleges attended/attending.
3. Two Letters of Recommendation (preferably one from your advisor and one science faculty member).

There is no tuition cost for the program; **accepted students will receive a fellowship of \$3500 for the ten-week period** (May 28, 2013 - August 2, 2013). Only complete applications will be reviewed. Maximum of 10 qualified candidates will be accepted. **Application deadline: February 28, 2013.**

#### Please return all correspondence to:

UMDNJ-Graduate school of Biomedical sciences  
Undergraduate Summer Research Experience  
c/o M. Marallano  
185 South Orange Avenue  
Medical Science Building, Room C-696  
Newark, New Jersey 07103

**If you have any questions concerning this program, please contact the Graduate School of Biomedical Sciences at (973) 972-4511; or e-mail your inquiries to [marallma@umdnj.edu](mailto:marallma@umdnj.edu).**

*Note: The University requires that all participants in this program have health insurance. Proof of insurance will be required prior to the program start date. Also, if you are using a PO Box address for your mailing address then you must submit a street address for the permanent address. Use of two PO Box addresses will not be accepted.*

UMDNJ does not discriminate in admissions or access to its programs and activities on the basis of race/color, ethnicity, national origin, religion/creed, disability, age, marital status, sex, sexual orientation or veteran's status.



9. In which of the following biomedical fields are you interested? (indicate your top three choices by numbering them from 1-3)

- |                    |                                     |                         |
|--------------------|-------------------------------------|-------------------------|
| ____ Bio Terrorism | ____ Biochemistry/Molecular Biology | ____ Cancer Biology     |
| ____ Cell Biology  | ____ Drug Discovery                 | ____ Immunology         |
| ____ Microbiology  | ____ Molecular Genetics             | ____ Molecular Medicine |
| ____ Neuroscience  | ____ Stem Cell                      |                         |

10. Which degree would best describe your career goal:  Ph.D.  M.D./Ph.D. Other \_\_\_\_\_  Undecided  
 M.D.  M.S.

11. Letters of Recommendation-please indicate the names of two faculty members (one should be your science advisor) who you have asked to submit letters of recommendation.

1) \_\_\_\_\_ 2) \_\_\_\_\_  
Name Name

12. **Statement of purpose:** Briefly describe your career objective and any previous research experience (must be completed):

I understand and agree that any misrepresentation in this application will be sufficient cause for rejection of this application, or dismissal if I have been admitted to the Graduate School of Biomedical Sciences-Summer Undergraduate Research Program. In compliance with the Student Right to Know and Campus Security Act, UMDNJ's Annual Security Report is available from the Department of Public Safety at 5 Bruce Street, Building 5, P.O. Box 170, Newark, NJ 07101-1709.

Signature \_\_\_\_\_ Date: \_\_\_\_\_



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### **ESSENTIAL FUNCTION / TECHNICAL STANDARDS FOR GSBS**

Technical Standards refer to non-academic requirements that are essential for meeting the academic requirements of the program. Within any area of specialization, students must demonstrate competence in those intellectual and physical tasks that together represent the fundamentals of biomedical research in their chosen discipline. Enrollment is contingent on the result of certain medical laboratory test (e.g., TB) and fulfillment of immunization requirements. For details see the UMDNJ website: [http://www.umdj.edu/oppmweb/Policies/HTML/StudentServices/00-01-25-40\\_00.html](http://www.umdj.edu/oppmweb/Policies/HTML/StudentServices/00-01-25-40_00.html)

The Ph.D. and M.S. degree programs at the UMDNJ-Graduate School of Biomedical Sciences require a laboratory-based research dissertation. Granting of these degrees implies that the recipient has demonstrated a base of knowledge in the field and the ability to independently apply that knowledge to solve a particular problem by forming hypotheses, designing and conducting experiments, interpreting the experimental results, and communicating the results and their interpretation to the scientific community. Thus, a candidate for the Ph.D., M.S., or MBS degree in the biomedical sciences must possess abilities and skills that allow for observation, intellectual and conceptual reasoning, motor coordination, and communication. The use of a trained intermediary is not acceptable in many situations in that a candidate's judgment will be based on someone else's power of selection and observation.

A student whose behavior or performance raises questions concerning his or her ability to fulfill the essential functions may be required to obtain evaluation and/or testing by a health care provider designated by the School, and to provide the results to the Campus Student Health Service for the purpose of determining whether the student is fit to pursue the educational program. If the student is deemed fit to pursue the program, the School reserves the right to require actions recommended by the health care provider, including further testing, counseling, monitoring, leave of absence, etc.

#### **Observation**

The candidate must be able to acquire knowledge by direct observation of demonstrations, experiments, and experiences within the laboratory and instructional setting. Examples are physiological or pharmacological responses in animals, studies of microbiological cultures and organisms, identification of normal and abnormal cells or tissues through a microscope, and interpretation of results obtained on various instrumentation.

#### **Intellectual/Conceptual Abilities**

The candidate must be able to measure, calculate, analyze, reason, integrate and synthesize information to solve problems.

#### **Motor Skills**

The candidate must possess motor skills necessary to perform procedures required for experimentation within the chosen discipline. These skills may include, but are not limited to, surgery in animals, handling of animals, transfer of microorganisms to various mediums, preparing chemical and often toxic materials and solutions, preparation of anatomical specimens for microscopic examination, manipulating electronic and other complex equipment. Such actions require coordination of muscular movements and functional use of the senses of touch and vision.

#### **Communication**

The candidate must be able to communicate and discuss his or her experimental hypotheses and results to the scientific community, both in scientific journals or directly at scientific meetings, seminars, or in the laboratory to the research team.

#### **Behavioral and Social Attributes**

The candidate must possess the emotional and mental health required for full utilization of his or her intellectual abilities, the exercise of good judgment, the prompt completion of responsibilities inherent in managing a scientific laboratory, the ability to function under the stress inherent in biomedical research, and the ability to understand and comply with ethical standards for the conduct of research.



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**Request for recommendation for the Summer Research Experience for Undergraduate Students**

This section to be completed by the applicant (PLEASE PRINT OR TYPE)

Last name \_\_\_\_\_ First \_\_\_\_\_ Middle \_\_\_\_\_

Degree program and field of study \_\_\_\_\_

AGREEMENT RESPECTING CONFIDENTIALITY; I waive , I do not waive , my right to access this recommendation under the Family Education rights and Privacy Act of 1974, 20 U.S.C.A. par 1232g (a)(1).

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

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**To the Recommender:**

The person above is applying for admission to the UMDNJ-Graduate School of Biomedical Sciences – Newark campus. Please provide your assessment of the applicant's aptitude for graduate study, with specific reference to academic performance, intellectual ability, communicative skills, and motivation. Your letter of recommendation should be on letterhead paper and sent to us at the above address. Please return this form, signed by the applicant, with your letter.

Recommender's Name:

Title:

Address: