

# APPLICATION FORM

## RESEARCH EXPERIENCES FOR UNDERGRADUATES IN MOLECULAR BIOLOGY AND GENETICS

### DEPARTMENT OF BIOLOGY INDIANA UNIVERSITY

May 26 – August 4, 2010

Please complete this application form and return to: MBG REU Program, Department of Biology, Myers Hall 150, 915 E. Third St., Indiana University, Bloomington, IN 47405-3700. Applications should be received by February 15, 2010. Information from this form will be used to select interns and place them in laboratories suited to their interests. ***Interns are expected to arrive on campus no later than May 25<sup>th</sup>***. Participants must be citizens or permanent residents of the United States.

#### 1. Documents

A copy of your **transcript(s)** and **two letters of recommendation** *MUST* be sent with your application. Ask the people writing the letters of reference to seal their letters into envelopes and sign the backs. Attach the letters to your application. *Please note* we will accept your application if transcripts and/or recommendation letters are sent separately – but everything must be received by the February 15<sup>th</sup> deadline.

#### 2. Biographical Information

Name (Last, First, and Middle Initial): \_\_\_\_\_

Date of Birth: \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Gender: \_\_\_ Female \_\_\_ Male

U. S. Citizen \_\_\_\_\_ Permanent Resident of the U.S. \_\_\_\_\_

Full Permanent (Parent's) Address:

Street Address:

\_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone (include area code): \_\_\_\_\_

Current Address (if different from permanent address):

Street Address:

\_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone (include area code): \_\_\_\_\_

E-mail address: \_\_\_\_\_

(Please Print Clearly)

Ethnic origin and other information:

African American

Asian (A person having origins in any of the original peoples of the Far East, Southeast Asia, of the Indian subcontinent including Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.)

Native American or Alaska Native

Puerto Rican  Other Hispanic/Latino (A person of Mexican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.)

Native Pacific Islander (A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.)

White, non-Hispanic

First generation college  Low income

Current Institution: \_\_\_\_\_

Highest Degree awarded at your current institution: Bachelors   Masters   PhD   Other:  
\_\_\_\_\_

Major: \_\_\_\_\_ GPA in Major: \_\_\_\_\_

Field of Interest: \_\_\_\_\_ Undergraduate GPA: \_\_\_\_\_

SAT or ACT Scores: \_\_\_\_\_

List the names, addresses, e-mail and telephone numbers of the people you asked to write letters of reference.

1. Name: \_\_\_\_\_ Phone #: \_\_\_\_\_

Address: \_\_\_\_\_

Email address: \_\_\_\_\_

2. Name: \_\_\_\_\_ Phone #: \_\_\_\_\_

Address: \_\_\_\_\_

Email address: \_\_\_\_\_

Year in School (CHECK ONE):  Freshman  Sophomore  Junior  Senior

When do you expect to receive your Bachelor's degree? \_\_\_\_\_ / \_\_\_\_\_ (Month/Year)

*(STUDENTS WHO WILL HAVE COMPLETED ALL REQUIREMENTS FOR THE BACHELOR'S DEGREE BEFORE JUNE 2010 ARE NOT ELIGIBLE TO APPLY TO THE REU PROGRAM.)*

### 3. Research Experience

Briefly summarize any research experience or other relevant training (science courses, laboratories, laboratory assistantship, independent research, etc.) that you have had. Use an attached page if necessary.

4. Please list significant extracurricular activities. Use an attached page if necessary.

### Research Topic

From the attached list, please indicate 3 laboratories that interest you. We will try to assign you to one of the laboratories of your choice and we will at least match your interests. In order of preference

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

In a one page essay, explain why you are interested in these laboratories. Please also indicate how participation in this program matches your career objectives.

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

If you have any questions, please call the Biology MBG-REU coordinator at 812-856-5522 or email [iusummer@bio.indiana.edu](mailto:iusummer@bio.indiana.edu) or

## Faculty Participants of the Summer, 2010 REU Program:

- Justen Andrews:** Gene regulatory networks controlling sex in arthropods.
- Carl Bauer:** Regulation of gene expression, microbial phototaxis, and microbial development.
- Yves Brun:** Bacterial cell division and differentiation.
- Brian Calvi:** Cell cycle control of DNA replication and genome stability.
- Lingling Chen:** Structural studies of protein-protein interactions.
- Peter Cherbas:** Hormone action in *Drosophila* using molecular biology, genetics and cell culture.
- Dave Daleke:** Structure and function of biological membranes.
- Pranav Danthi:** Viral and cellular determinants of virus-induced cell death and disease.
- Jim Drummond:** Basic mechanisms of the human DNA mismatch repair pathway.
- Viola Ellison:** Human chromosome duplication and maintenance of genome integrity.
- Wayne Forrester:** Mechanisms of cell migration during *C. elegans* development.
- Pat Foster:** Genetic and molecular investigation of mutation and DNA repair in prokaryotes.
- Clay Fuqua:** Multicellular interactions of bacteria.
- Matthew Hahn:** Computational and evolutionary genomics.
- Roger Hangarter:** Environmental sensory-response systems and plant development.
- Richard Hardy:** Regulation of genome replication, transcription, and translation in RNA viruses.
- Ke Hu:** Cytoskeletal biogenesis of apicomlexan parasites.
- Roger Innes:** Genetic and biochemical basis of disease resistance in plants.
- Frederika Kaestle:** Anthropological molecular genetic techniques; ancient DNA.
- Daniel Kearns:** Genetic basis of the mechanisms and regulation of bacterial multicellular behavior.
- Cheng Kao:** Biochemistry of RNA viruses and the roles of trans-acting factors.
- David Kehoe:** Regulation of gene expression by light in cyanobacteria.
- Justin Kumar:** Specification, patterning and proliferation of the developing retina.
- Soni Lacefield:** Chromosome segregation and spindle checkpoint function in meiosis.
- Michael Lynch:** Evolution of molecules, genome structure, and phenotypes.
- Scott Michaels:** Molecular genetics of flowering time regulation.
- Tai Min:** Down syndrome, synaptic functions and mitochondrial dynamics.
- Armin Moczek:** Developmental and ecological mechanisms that drive and direct evolutionary change.
- Kristi Montooth:** Evolutionary physiological genetics; population genetics; biochemical adaptation.
- Leonie Moyle:** Genetics of adaptation and speciation.
- Suchetana (Tuli) Mukhopadhyay:** Assembly and budding of enveloped RNA viruses.
- Martha Oakley:** Protein-protein interactions by coiled coil proteins and the protein-lipid interactions.
- Jeff Palmer:** Molecular evolution: Horizontal gene transfer in plants.
- Craig Pikaard:** Mechanisms of RNA-mediated gene silencing and large-scale epigenetic control.
- Joe Pomerening:** Signal transduction pathways governing early embryonic and somatic cell cycles.
- Elizabeth Raff:** Specification of three-dimensional biological form in cells and in evolution.
- Rudolf Raff:** Evolutionary developmental biology: evolution of early development.
- Sid Shaw:** Microtubule dynamics and cellular morphogenesis in Arabidopsis.
- Nicholas Sokol:** MicroRNA function in *Drosophila*.
- Claire Walczak:** Mechanisms of mitotic spindle assembly and chromosome segregation.
- Joel Ybe:** Self-assembly of protein coats involved in protein and membrane trafficking.
- Greg Velicer:** Ecology and evolution of bacterial social behavior.
- Andrew Zelfhof:** Metamorphosis of *Drosophila* photoreceptor cells.
- Adam Zlotnick:** Biophysics of virus assembly and development of antiviral strategies.
- Miriam Zolan:** Genetic, biochemical, and evolutionary links between meiosis and DNA repair.