APPLICATION FORM

RESEARCH EXPERIENCES FOR UNDERGRADUATES IN MOLECULAR BIOLOGY AND GENETICS

DEPARTMENT OF BIOLOGY INDIANA UNIVERSITY

May 28 – August 6, 2008

Please complete this application form and return to: MBG REU Program, c/o REU Coordinator Eileen Workman, Department of Biology, Jordan Hall 142, 1001 E. Third St., Indiana University, Bloomington, IN 47405-3700. Applications should be received by February 15, 2008. Information from this form will be used to select interns and place them in laboratories suited to their interests. A transcript and two letters of recommendation MUST be sent with the application. Interns are expected to arrive on campus no later than May 27th. 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.

2. **Biographical Information**

Name (Last, First, and Middle Initial): _____

Social Security #: _____

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

___ Native American

___ Puerto Rican ___ Other Hispanic

___ Native Pacific Islander

___ 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 2007 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 Eileen Workman at 812-856-5522 or email iusummer@bio.indiana.edu or eiworkman@indiana.edu.

Justen Andrews. Control of development by genetic regulatory hierarchies, using sex- determination in the germline of *Drosophila melanogaster* as a model system.

Carl Bauer. Regulation of gene expression, microbial phototaxis, and microbial development.

Yves Brun. Bacterial cell division and differentiation.

Lingling Chen. Structural studies of protein-protein interactions in protein folding and host-pathogen communication.

Peter Cherbas. Hormone action in *Drosophila* using molecular biology, genetics and cell culture.

Dave Daleke. Structure and function of biological membranes, with focus on transmembrane lipid transporters and lipid bilayers.

Thomas Donahue. Mechanisms of eukaryotic translation initiation in yeast.

Jim Drummond. Basic mechanisms of the human DNA mismatch repair pathway.

Viola Ellison. Human chromosome duplication and maintenance of genome integrity.

Mark Estelle. Molecular genetics of hormone action in *Arabidopsis*.

Wayne Forrester. Molecular and genetic approaches to understand mechanisms of cell migration during *C. elegans* development.

Pat Foster. Genetic and molecular investigation of mutation and DNA repair in prokaryotes.

Clay Fuqua. Cell-to-cell communication in bacteria, plant-microbe interactions, developmental biology of surface-adherent microbial biofilms, plant associated biofilms.

Matthew Hahn. Genomic analyses of molecular function and evolution addressing the relative roles of natural selection and genetic drift in shaping nucleotide, gene family, and gene expression variation both within and between species.

Roger Hangarter. Mechanisms of plant photomorphogenesis, tropisms, leaf development, and chloroplast development.

Richard Hardy. Regulation of genome replication, transcription, and translation in RNA viruses.

Ke Hu. Cytoskeletal biogenesis of apicomplexan 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.

David Kehoe. Regulation of gene expression by light in cyanobacteria.

Justin Kumar. Eye specification in the fruit fly, *Drosophila melanogaster*.

Michael Lynch. Evolution of molecules, genome structure, and phenotypes.

Melanie Marketon. Molecular mechanisms of pathogenic microbe-host interactions.

Scott Michaels. Molecular genetics of flowering time regulation.

Armin Moczek. Developmental and ecological mechanisms that drive and direct evolutionary change using insect systems.

Leonie Moyle. Genetics of adaptation and speciation, especially the genetic basis of sterility between closely-related plant species.

Suchetana (Tuli) Mukhopadhyay. Assembly and budding of enveloped RNA viruses.

David Nelson. Chlamydial virulence factors and host response.

Martha Oakley. Protein biomolecular recognition, protein-protein interactions by coiled coil proteins and the protein-lipid interactions.

Jeff Palmer. Molecular evolution: Lateral transfer of mitochondrial genes to the nucleus and between organisms. Evolution of mutation rates. Molecular phylogeny.

Joe Pomerening. Signal transduction pathways governing early embryonic and somatic cell cycles, and understanding the integration of feedback looks and other signaling elements in their M-phase control systems.

Elizabeth Raff. The function of the microtubule cytoskeleton in development and cell differentiation, using genetic and molecular analysis in *Drosophila melanogaster*.

Rudolf Raff. Molecular studies of the relationship between development and evolution, and how phylum-level body plans are transformed in evolution.

Susan Strome. Maternal factors that guide development of the germline in *C. elegans*.

Gregory Velicer. Ecology and evolution of bacterial social behavior.

Claire Walczak. Mechanisms of mitotic spindle assembly and chromosome segregation.

Malcolm Winkler. Physiology, molecular genetics, stress responses, and pathogenesis of *Streptococcus pneumoniae*.

Joel Ybe. Self-assembly of protein coats involved in protein and membrane trafficking.

Miriam Zolan. Genetic, biochemical, and evolutionary links between meiosis and DNA repair.