

The Intramural Program

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Acting Director

Division of Intramural Research



Outline

- Staffing
 - Openings
 - New Recruits
- Training – Awards to Students and Fellows
- Recent Research
- Scientific Presentations to Council
 - Dr. Paul Wade, Newly Tenured, Laboratory of Molecular Carcinogenesis – Today at 2:00 PM
 - The Epidemiology Branch – Next Meeting

Openings:

- Scientific Director – Open through December 1, 2009.
<http://www.niehs.nih.gov/careers/jobs/dir-director.cfm>
- Senior or Tenure-Track Investigator in Bioinformatics, Biostatistics Branch. Candidate identified.
- Tenure-Track Developmental Biologist, Laboratory of Reproductive and Developmental Toxicology.
- Tenure-Track Environmental Epidemiologist focusing on non-cancer endpoints, Epidemiology Branch.
- Chief, Toxicology Branch, National Toxicology Program – National search completed.

New Appointments

*Dr. Patricia Jensen, Tenure-Track Investigator
Laboratory of Neurobiology*

- Graduate Training
 - University of Tennessee Health Science Center – Dr. Dan Goldowitz
 - Genetic analysis of cerebellar development in mice
- Postdoctoral Training
 - St. Jude Children’s Hospital, Memphis – Dr. Tom Curran
 - *In situ* hybridization mapping of gene expression in the nervous system
 - Harvard Medical School – Dr. Susan Dymecki
 - Genetic fate mapping of serotonergic neurons in the mouse brain
- Arrived August 31, 2009
- Research Interests:
 - Understanding how genetic and environmental perturbations during development alter the fates and functions of noradrenergic neurons.

New Appointments

*Dr. Guang HU, Tenure-Track Investigator
Laboratory of Molecular Carcinogenesis*

- Graduate Training
 - Baylor College of Medicine – Dr. Theodore Wensel
 - Biochemical characterization of a membrane photoreceptor
- Postdoctoral Training
 - Harvard Medical School – Dr. Stephen Elledge
 - Genome wide siRNA screen of embryonic stem cell for self renewal factors
- Arriving October 2009
- Research Interests:
 - Characterization of protein complexes important for stem cell renewal

New Appointments

*Dr. Scott Williams, Tenure-Track Investigator
Laboratory of Structural Biology*

- Graduate Training
 - University of Alberta – Dr. Mark Glover
 - Molecular basis of tumor suppressor inactivation
- Postdoctoral Training
 - The Scripps Research Institute – Dr. John Trainer
 - Structural and functional characterization of the MRE11/Rad50/Nbs1 DNA double strand break sensing and processing complex
- Arriving October 2009
- Research Interests:
 - Structure-based biochemical and genetic analysis of protein complexes involved in double strand DNA break repair and DNA damage signaling

Training

- Summers of Discovery
 - 46 Students
 - 5 High school
 - 34 Undergraduate
 - 7 Graduate
 - Wrapped up with the opportunity to present their work in a formal poster session. Winners are listed in the DIR write-up.
- Fellows Awards for Research Excellence (FARE)
 - NIH-wide competition. \$1000 travel awards to present at a US meeting
 - 20 NIEHS winners

Snapshots of DIR Research

Sisters Study – Enrollment of 50,000 sisters of breast cancer patients has been completed.

Genome-Wide Association Study (GWAS) of childhood asthma published.

Association of obesity with allergy based on NHANES data.

Sun exposure may trigger autoimmune disease.

Agricultural Health study shows association of pesticides with asthma.

Molecular mechanism of gap filling in repair of single strand breaks established.

Snapshots of DIR Research

The “anti-aging” nuclear protein, SIRT1, regulates lipid metabolism, promoting fatty acid oxidation.

Double strand DNA breaks can induce lymphocyte differentiation.

Calcium handling critical for synaptic plasticity in the brain.

Mechanism of genomic hypermutation following environmental damage studied in yeast model.

AZT shown to cause mitochondrial mutations following *in utero* exposure.

Hypertension in mice lacking cytochrome P450 P2J5.