Small Brains, Big Ideas
Biomedical Insights from Invertebrate Neuroscience Research
October 25–30, 2010, Santiago-Valparaiso, Chile

Overview
Part I. Basics of Invertebrate Neurobiology
Part II. Laboratory Work
Part III. Neuroscience Symposium

Organizers:
Jimena Sierralta Ph. D.
John Ewer Ph. D.
Yuly Fuentes-Medel M. S.

Participants
Rebeca Aldunate Ph. D. (Chile)
Mark Alkema Ph. D. (USA)
Juan Bacigalupo Ph. D. (Chile)
Claire Benard Ph. D. (USA)
Vivian Budnik Ph. D. (USA)
Andrea Calixto Ph. D. (Chile)
Jorge Campusano Ph. D. (Chile)
Fernanda Ceriani Ph. D. (Argentina)
Ricardo Delgado M. S. (Chile)
Marc Freeman Ph. D. (USA)
Raul Godoy-Herrera Ph. D. (Chile)
Steven Reppert M. D. (USA)
Scott Waddell Ph. D. (USA)

Application deadline, July 30, 2010
Supporting documents: Cover letter (max. 450 words), Recommendation letter from Principal Investigator and Curriculum Vitae.
Submit as one PDF to: jimena@neuro.med.uchile.cl

Fellowships will be available to Graduate Students from Latin American academic institutions.

photos courtesy from Wulf Huetteroth, Jen Plenl and Steven Reppert
Overview

This lecture and laboratory course will expose Latin-American students/Faculty to recent advances and modern techniques in neurosciences, using invertebrates as model systems. The course will primarily focus on *Drosophila melanogaster* and *Caenorhabditis elegans*, and the use of these animal models both in basic neuroscience and biomedical research. Invertebrate model systems amenable to genetic manipulation have been fundamental in elucidating major neuroscience processes, such as circadian rhythms, ion channel function, and pattern formation during development. The course will include areas ranging from genetic approaches to the study of the nervous system, brain development, cellular and molecular neuroscience, analysis of brain circuits, navigational mechanisms of migrating monarch butterflies and behavior. Instructors will be both faculty members from the host institutions as well as renowned scientists in each field. This will allow students not only to gain first hand experience with approaches in these model systems, but also to interact and network with leaders in the specific areas of research.

Participants:

Dr. Rebeca Aldunate: Molecular aspects of Aging in C. elegans (*Universidad Santo Tomás, Santiago CHILE*)
Dr. Mark Alkema: C. elegans Genetics of Escape Behavior (*University of Massachusetts, USA*)
Dr. Juan Bacigalupo: Role of TRP Channels in Sensory Receptors and Synapse (*Universidad de Chile, Santiago, CHILE*)
Dr. Claire Benard: Maintenance of Nervous System Architecture (*University of Massachusetts, USA*)
Dr. Vivian Budnik: Molecular Mechanisms of Synapse Assembly and Plasticity (*University of Massachusetts, USA*)
Dr. Andrea Calixto: RNAi role in the physiology of C.elegans (*Pontificia Universidad Católica de Chile, Santiago, CHILE*)
Dr. Jorge Campusano: Dopaminergic system in Drosophila (*Pontificia Universidad Católica de Chile, Santiago, CHILE*)
Dr. Fernanda Ceriani: Neurodegeneration in Drosophila (*Fundación Instituto Leloir, ARGENTINA*)
Dr. Ricardo Delgado *Drosophila*, synaptic physiology and sensory receptors (*Universidad de Chile, Santiago, CHILE*)
Dr. John Ewer: Behavior and Endocrine System in Drosophila (*Universidad de Valparaiso, Valparaiso, CHILE*)
Dr. Marc Freeman: *Drosophila*, glial cells and axon degeneration (*University of Massachusetts, USA*)
Dr. Steven Reppert Butterfly's navigational abilities and its ancestral circadian clock (*University of Massachusetts, USA*)
Dr. Jimena Sierralta: Synapse Structure and Behavior (*Universidad de Chile, CHILE*)
Dr. Scott Waddell: Drosophila Learning and Memory (*University of Massachusetts, USA*)

Application Instructions

1. **Eligibility**
   Advanced graduate students, postdoctoral fellows and junior faculty from academic and research institutions from Latin America may apply for this course.

2. **Application process**
   Submission of a cover letter (maximum 450 words) stating current research interests and reasons why this course would be beneficial for the candidate's career and Curriculum Vitae. **Students and postdoctoral fellows** must include a letter of recommendation from the scientific advisor or professor. **Faculty** must include a support letter from the department chair.
   Deadline for receipt of completed applications: **July 30, 2010**.
   Completed form and supporting documents must be submitted as one PDF attachment by email to jimena@neuro.med.uchile.cl, with Small Brain big Ideas Application as the email Subject title.

3. **Selection process**
   Preference will be given to candidates who show promise in pursuing a career in research in neurobiology using innovative approaches and who have not taken similar extracurricular courses previously. Junior faculty with different training who wishes to enter the field of invertebrate neurobiology will also be considered.

4. **Costs**
   The basic expenses (course materials, lodging and most meals) for the students will be covered by the Course, which is funded by IBRO and AMSUD-Pasteur. Travel costs will also be covered for a limited number of students. The necessity for travel support must be indicated in the intention letter together with the cost to be covered.
Small Brains, Big Ideas
Biomedical Insights from Invertebrate

COURSE APPLICATION

NAME______________________________________________________________

INSTITUTION__________________________________________________________

DEPARTMENT__________________________________________________________

ADDRESS_____________________________________________________________

CITY____________________ COUNTRY__________________

E- MAIL_________________________ TEL_____________________

FAX__________________________

Current Status:

Master’s degree student ___ Current year of study_____ Subject ______________________________

Doctoral degree student ___ Current year of study___ Subject ______________________________

Postdoctoral fellow ___ Current year of training ___ Subject ______________________________

Faculty rank ____________ Years in this position ___ Subject ______________________________

If you are holder of degrees, please enter the year(s) you received the degree(s), institution and city/country:

_________________________________________________________________________

FOR STUDENTS AND POSTDOCTORAL FELLOWS - Please have the department chair or your advisor complete the following statement:

I confirm the above candidate’s
student ___ status,
postdoctoral fellow ___ status.

Dept. Chair / Advisor Name (Please print) Email Address ________________________________

Telephone ______________________________

Deadline for receipt of complete application as one PDF attachment: July 30, 2010, by email to jimena@neuro.med.uchile.cl Incomplete and late applications will be returned without review.