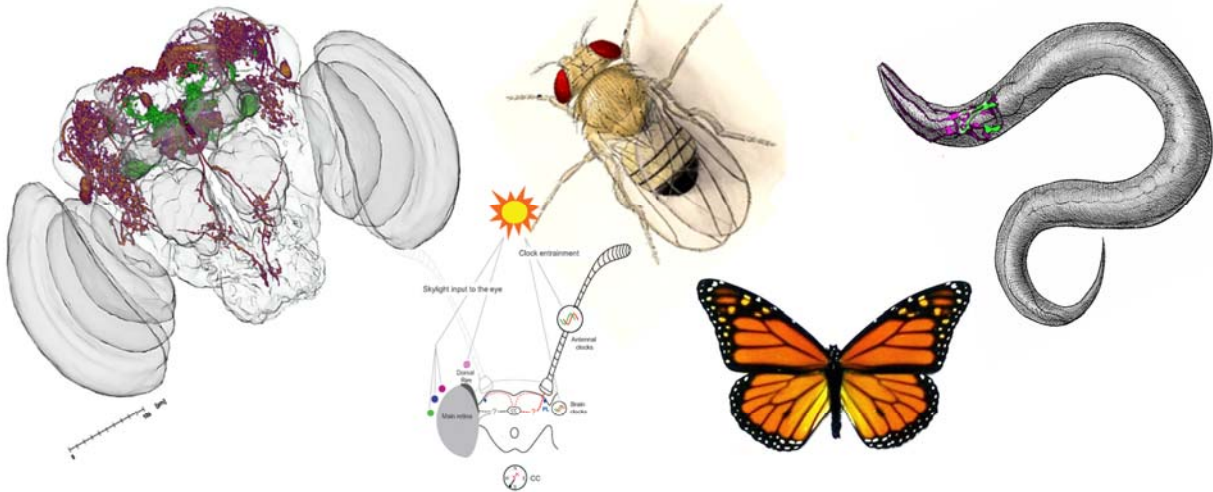


# Small Brains, Big Ideas

## 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](mailto:jimena@neuro.med.uchile.cl)

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



photos courtesy from Wolf Huetteroth, Jen Pirri and Steven Reppert

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## Biomedical Insights from Invertebrate Neuroscience Research

October 25-30, 2010, Santiago-Valparaiso, Chile

Facultad de Medicina Universidad de Chile, Santiago, Chile  
Centro Interdisciplinario De Neurociencia, Valparaiso, Chile

### 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. Raúl Godoy-Herrera: *Drosophila* Behavior in Natural Populations (*Universidad de Chile, Santiago, CHILE*)  
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](mailto: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](mailto:jimena@neuro.med.uchile.cl)** Incomplete and  
late applications will be returned without review.