



**Biological Embedding of Early Social Adversity:  
From Fruit flies to Kindergartners**

Organized by W. Thomas Boyce, Gene E. Robinson, and Marla B. Sokolowski

December 8 – 10, 2011  
Arnold and Mabel Beckman Center  
Irvine, California

**Thursday, December 8**

- 5:15 PM Bus departs from Marriott to Beckman Center
- 5:30 PM Welcome Reception Buffet for Sackler attendees
- 7:00 PM Distinctive Voices Public Lecture (Auditorium)  
Jared Diamond, University of California Los Angeles, *How does childhood differ between traditional societies and modern societies?*
- 8:00 PM Coffee and dessert reception
- 8:45 PM Bus returns from Beckman Center to Marriott

**Friday, December 9**

- 7:15/7:45 Buses departs Marriott for Beckman Center
- 7:30 AM Registration and Breakfast (Dining Room)
- 8:30 AM Welcome and Introductions (Auditorium)  
Gene Robinson, University of Illinois

**I. The Origins and Consequences of Social Stratification**

- 8:40 AM Marla Sokolowski, University of Toronto: Session Chair
- 8:50 AM Clyde Hertzman, University of British Columbia, *Biological Embedding in Historical Perspective*
- 9:20 AM Nancy Adler, University of California, San Francisco, *Rigor, vigor and causality in the study of health disparities across the lifespan*

- 9:50 AM W. Thomas Boyce, University of British Columbia, *Social stratification, classroom 'culture' and the adaptive behavior of kindergarten children*
- 10:20 AM Joel Levine, University of Toronto, *Group Dynamics: Insights from a fly on the wall*
- 10:50 AM Break

## **II. The Neuroscience of Social Signaling and Stress**

- 11:10 AM Session chair: Bryan Kolb, Lethbridge University
- 11:30 AM Russell Fernald, Stanford, *How do Social Signals Change the Brain?*
- 12:00 AM Michael Meaney, McGill University, *Maternal care differentially regulates hippocampal development in the dorsal and ventral hippocampus*
- 12:30 PM Megan Gunnar, University of Minnesota, *The Developmental Effects of Early Life Stress: Adaptations or Impairments?*
- 1:00 PM Lunch (Beckman Center Dining Room)

## **III. The Impact of Early Experience on Perceptual and Cognitive Systems**

- 2:00 PM Session Chair: Bryan Kolb, Lethbridge University
- 2:10 PM Takao Hensch, Harvard University, *Shaping neural circuits by early experience*
- 2:40 PM Janet Werker, University of British Columbia, *Opportunity and adversity in becoming a native listener*
- 3:10 PM Annette Karmiloff-Smith, Birbeck University of London, *Why developmental time counts in understanding genes, brain and cognition*
- 3:40 PM Break

## **IV. Challenged to the Translation of Neurogenomic Science to Interventions and Policies**

- 4:00 PM **Panel Discussion:**  
Ron Barr, University of British Columbia, Session Chair, *Crossing the "translation" bridge: how long a crossing will it be?*
- Jack Shonkoff, Harvard University, *Leveraging science to catalyze innovative early childhood policy and practice*

Lia Fernald , University of California, Berkeley, *Thinking beyond our borders: developing programs for children living in poverty throughout the world*

Greg Duncan, University of California, Irvine, *The Long Reach of Early Childhood Poverty*

5:30 PM **Reception and Poster Session** (Huntington Room)  
Organizers: Jelena Obradović, Stanford University and James Burns, University of Toronto and Anne Takesian, Harvard University

6:30 PM Dinner (Atrium)

**Keynote Address** (Auditorium)

7:45 PM Introduction

7:55 PM Bruce McEwen, Rockefeller University, *The Brain on stress: how the social environment gets under the skin*

8:45 PM Buses depart for Marriott

## **Saturday, December 10**

7:15/7:45 Buses depart Marriott for Beckman Center

7:30 AM Registration and Breakfast (Dining Room)

## **V. Gene-Environment Interplay in Socially Partitioned Health, Development and Behavior**

8:30 AM Session Chair: Francis Champagne, Columbia University: *Epigenetics and the Impact of the Prenatal Environment*

8:50 AM Gene Robinson, University of Illinois, *Social Regulation of gene expression and behavior in honey bees*

9:20 AM Marla Sokolowski, University of Toronto, *Gene-environment interplay: insights from animal models*

9:50 AM David Clayton, University of Illinois, *Epigenetics of social communication*

10:20 AM Break

- 10:40 AM Tom McDade, Northwestern University, *Early environments and the ecologies of inflammation*
- 11:10 AM Michael Kobor, University of British Columbia, *Epigenetic variation in human health and disease*
- 11:40 AM Lunch

## **VI. Development of the Social Brain: Neural Circuits and Neurogenomics**

- 12:50 PM Session Chair: Dan Goldowitz, University of British Columbia
- 1:00 PM Charles Nelson, Harvard University, *Tuning the developing brain to social signals of emotion*
- 1:30 PM Edward A. Kravitz, Harvard Medical School, *Genetic manipulations in the fruit fly fight club: role of amine neurons studied at a single neuron level*
- 2:00 PM Steve Suomi, NICHD, *Epigenetic Consequences of adverse early social experiences in primates*
- 2:30 PM Don Pfaff, Rockefeller University, *Sexually differentiated normal and abnormal social behaviors and the chromatin chemistry supporting them*
- 3:00 PM Break

## **VII. Summation, Conclusions and Future Directions**

- 3:20 PM Sir Michael Rutter, Kings College London, *Social adversity: heterogeneity, causal inference, and biological mediation of consequences*
- 4:00 PM General Discussion, Marla Sokolowski and Tom Boyce
- 4:45 PM Buses depart