

**INSTITUTE OF MEDICINE / NATIONAL RESEARCH COUNCIL  
BOARD ON CHILDREN, YOUTH, AND FAMILIES**

**Biological Markers for Healthy Development:**

**A Seminar on  
Recent Findings from Mental Health and Obesity Studies  
May 13, 2010**

**The Keck Center – Room 100  
500 Fifth Street, NW  
Washington, DC**

**“A biomarker is any biological index capable of being measured that is associated with or indicative of a defined biological end point such as a developmental or disease stage.”  
(Rockett et al., 2004, Biomarkers for Assessing Reproductive Development and Health:  
Part 1-Pubertal Development, *Environmental Health Perspectives*, Jan., 2004).**

**8:30 am Coffee and registration**

**9:00 am Welcome and Opening Remarks**

**Bernard Guyer, Johns Hopkins University and Chair,  
IOM-NRC Board on Children, Youth, and Families**

**9:15 am Interactions among Biology and Social Environments – Biological Markers  
for Mental Health Consequences**

**Gary Evans, Cornell University (moderator)**

**Charles Nelson, Harvard University**  
The search for an endophenotype for autism

**Emma Adam, Northwestern University**  
Diurnal cortisol rhythms: Social determinants and role as a risk, state or  
scar marker for major depressive disorder in youth

**10:30 am Break**

**10:45 am Staci Bilbo, Duke University**  
The role of the immune system in translating early-life experience to later-  
life brain and behavior

**Discussants:**

**BJ Casey, Cornell University  
Bruce McEwen, Rockefeller University**

**12:30 pm**      **Lunch**

**1:15 pm**      **The Role of Early Life Experience in the Regulation of Immune and Metabolic Functions**

**Fred Rivara, University of Washington (moderator)**

**Elissa Epel, University of California at San Francisco**

Biological embedding of life stress? Telomeres and Telomerase

**Sebastien G. Bouret, The Saban Institute and Children's Hospital, Los Angeles**

Early life origins of obesity: role of hypothalamic programming

**Kevin Grove, Oregon National Primate Research Center, Oregon Health and Science University**

The role of early metabolic imprinting in escalating obesity rates in children and the link to childhood anxiety and depression

**3:15 pm**      **Break**

**3:30 pm**      **Paul Taylor, Maternal and Fetal Research Unit, Department of Women's Health, St. Thomas Hospital, London, UK**

Developmental origins of obesity and the metabolic syndrome

**Mandy Brown Belfort, Children's Hospital and Harvard University**

Maternal iron status in pregnancy and offspring blood pressure in childhood

**Discussant:**

**Dennis Bier, Baylor College of Medicine**

**5:00 pm**      **Closing Remarks and Adjourn**

**Bernard Guyer, Johns Hopkins University**