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GUSTAVO TURECKI

 Canadá

Director of the McGill Group for Suicide Studies and head of the Depressive Disorders Program. Research Areas: studies to better understand the neurobiological factors on suicide, with particular attention to how the environment interacts with the genome to increase risk (MGSS).

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CARL ERNST, PhD, was a fellow at Harvard Medical School, Massachusetts General Hospital in the Center for Human Genetic Research, where he studied stem cells and genetics. In September 2011, he joined the McGill Group for Suicide Studies at the Douglas Institute.

The goal of his work is to study human behaviour and mood by identifying genes that may be involved in mental disorders. For this work, he produces cellular models based on the functions of specific genes, then screens at-risk populations for genetic mutations, deriving stem cells from their tissue. He then assesses functions in neurons derived from these subjects' stem cells.

The way he assesses mutated genes includes both molecular and morphological techniques. Molecular techniques encompass alterations in biochemical processes and gene expression patterns, while morphological techniques refer to cell structure analyses and cell connectivity assays.



LINDA BOOIJ. Adverse events can occur and affect the brain at various stages, from gestation until adulthood. Such adverse events can affect the brain in many ways, including alterations in neurotransmission, brain structure, endocrinology, among others, all of which may interact. Given the important role of serotonin in brain development, alterations in the serotonin system as a result of early adverse events may be particularly relevant. My

research program examines how early adversity, in combination with genetic factors, could affect the serotonin system in humans. The overarching hypothesis of my research program is that an early disruption in serotonin homeostasis could lower the vulnerability threshold in brain circuits involved in emotion regulation, thereby predisposing the individual to psychopathology when exposed to stressful events.

In my studies I use a combination of brain imaging, genetic, epigenetic (i.e. DNA methylation) and emotional-cognitive assessments. For instance, in ongoing projects, I investigate in prospectively followed community samples how early stressors could alter the expression of serotonin genes through epigenetic processes and impact the neural regulation of emotions. I am extending this line of research to clinical populations, in particular to individuals with mood disorders and to individuals with aggression problems.

» Monday, April 07, 2014

• Room 1	
Time	Activity
08:00-09:30	<p style="text-align: center;"><u>Session 1</u></p> <p style="text-align: center;"><b>Biological impact of social disruption</b> Chair: RICHARD E. TREMBLAY (Canada)</p> <p style="text-align: center;"><b>Dialogue between the social environment and the genome</b> Speaker: MOSHE SZYF (Canada)</p> <p style="text-align: center;"><b>Epigenetic consequences of different early social experiences in monkeys</b> Speaker: STEPHEN J. SUOMI (United States)</p> <p style="text-align: center;"><b>Social disruption, DNA methylation and the developmental origins of violent behavior</b> Speaker: RICHARD E. TREMBLAY (Canada)</p>
14:00-15:30	<p style="text-align: center;"><u>Session 2</u></p> <p style="text-align: center;"><b>Life experiences and the organization of the brain: Facts and mechanisms</b> Chair: MARTHA FARAH (United States)</p> <p style="text-align: center;"><b>Maternal Adversity Associates with Brain Development and Mental Health in the Offspring</b> Speaker: MICHAEL MEANEY (Canada)</p> <p style="text-align: center;"><b>Hippocampal and amygdala volumes in children of depressed mothers</b> Speaker: SONIA LUPIEN (Canada)</p> <p style="text-align: center;"><b>Socioeconomic Status and Its Impact on Brain Function</b> Speaker: MARTHA FARAH (United States)</p>

• Room 2	
Time	Activity
14:00-15:30	<p style="text-align: center;"><u>Panel</u></p> <p style="text-align: center;"><b>Developmental pathways to mental disorders</b> Chair: GUSTAVO TURECKI (Canada)</p> <p style="text-align: center;"><b>Translocation breakpoint sequencing identifies the Netrin G1 Ligand as a risk factor for emotional, behavioral and cognitive deficits</b> Speaker: CARL ERNST (Canada)</p> <p style="text-align: center;"><b>Developmental dys-regulation of the serotonin system in determining anxiety and depression phenotypes</b> Speaker: PAUL ALBERT (Canada)</p>

	<p><b>Psychopathological and cognitive antecedents in offspring of parents with major mood or psychotic disorder: the FORBOW study</b></p> <p>Speaker: RUDOLF UHER (Canada)</p> <p><b>Discussion</b></p>
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• Room 3	
Time	Activity
11:00-13:00	<p><u>Panel</u></p> <p><b>Hot topics - Psychoneuroendocrinology</b> Chair: MARIO FRANCISCO JURUENA (Brazil/SP)</p> <p><b>Early environmental influences on the developing brain: role of epigenetic processes and risk for psychopathology</b> Speaker: LINDA BOOIJ (Canada)</p> <p><b>Pregnancy and birth complications as risk factors for schizophrenia: from epidemiology to animal models</b> Speaker: PATRICIA BOKSA (Canada)</p> <p><b>Neurobiology of Chronic Fatigue Syndrome and the relation with depression</b> Speaker: ANTHONY CLEARE (United Kingdom)</p> <p><b>Early life stress in affective disorders: From HPA axis to Receptor function</b> Speaker: MARIO FRANCISCO JURUENA (Brazil/SP)</p> <p><b>Discussion</b></p>

» Tuesday, April 08, 2014

• Room 1	
Time	Activity
09:30-10:30	<p><u>Plenary Keynote lecture</u></p> <p><b>Childhood Trauma: the Catapult of Mental Disorders</b> Speaker: MICHAEL MEANEY (Canada)</p>

» Wednesday, April 09, 2014

• Room 2	
Time	Activity
13:30-14:30	<p><u>Interactive Keynote Lecture</u></p> <p><b>Advances in our understanding of the suicidal brain</b></p>

Speaker: GUSTAVO TURECKI (Canada)

### • Room 3

Time	Activity
08:00-09:30	<p><u>The Backstage of the Future - Session 1</u></p> <p>Chair: MIMI ISRAEL (Canada)</p> <p><a href="#">[access abstracts]</a></p>