

FINAL PROGRAM

Independence and interaction of multiple memory systems SfN Satellite Symposium

Date: Friday October 12, 2012

Registration & Name Tags: 8:30 AM to 8:50 AM

Time: 8:55 AM to 5:45 PM.

Place: Ernest N. Morial Convention Center, Room: 383-385.

Organizers: Paul Colombo and Veronique Bohbot

Description: The purpose of this symposium is to integrate recent findings regarding the extent to which the medial temporal lobe system is independent of, or interactive with, other brain regions specialized for memory processing and storage. Brain regions that have been investigated extensively for their roles in memory include the medial temporal lobe, neostriatum, amygdala, and neocortex. The multiple memory systems hypothesis was supported initially by reports of dissociations among brain regions specialized for acquisition and storage of various types of information. While dissociations suggest independence among systems, there is also evidence that memory systems may be interactive during either memory formation or retrieval. Reports of interactions suggest that memory systems may be cooperative, competitive, or operate in temporal sequence. This symposium will bring together researchers who study multiple memory systems in human and non-human animal models at behavioral and physiological levels using genetic, electrophysiological, pharmacological, or fMRI methodologies. The goal will be to elucidate conditions under which brain regions operate independently or interactively during memory formation and retrieval. Moreover, for conditions in which memory systems are interactive, we will work toward an explanation of cooperation and competition.

List of Speakers:

Veronique Bohbot, Paul Colombo, Sheri Mizumori, Robert McDonald, Paul Gold, Donna Korol, Mark Packard, Norman White, Stephane Gaskin, Matthew Shapiro, Barbara Knowlton, Genevieve Albouy, and Lars Schwabe.

Data Blitz:

Duration of the data blitz will be 5 minutes – Strictly enforced, including questions.

FREE LUNCH & FREE COFFEE BREAKS will be served onsite.

Registration: 8:30 AM to 8:50 AM

Program starts at 8:55 AM

Opening Statements by Veronique Bohbot

Session 1:

9:00 AM: Sheri Mizumori. Neural Representations of Decision-Related Information Across Memory Systems

9:20 AM: Robert McDonald. Interactions amongst learning and memory systems: some thoughts on conditioned inhibitory processes

9:40 AM: Paul Gold. Making Memories Metabolic in Multiple Memory Modules

10:00 AM: Questions & Discussion

15 min Coffee Break

10:30 AM: Coffee, Tea & Light Snack served onsite

Session 2:

10:45 AM: Paul Colombo. Viewing interactions between memory systems through the lens of CREB

11:05 AM: Donna Korol. Jog Your (multiple) Memory (systems)

11:25 AM: Norman White, Stephane Gaskin. Hippocampus-Amygdala Interactions on the Radial Maze

11:45 AM: Questions & Discussion

Lunch Break

12:15 PM: Lunch served onsite

Data Blitz

1:10 to 2:10 PM Data blitz

Data Blitz Speakers:

Elizabeth Kensinger: Amygdala-Hippocampal Interactions During Encoding and Retrieval.

Katie Herdman: A Virtual Reality Investigation of Spontaneous Navigation Strategies and Spatial Memory Abilities in Schizophrenia.

Hadley Bergstrom: Manganese-enhanced MRI for phenotyping brain-wide activity in a mouse model of fear learning and memory.

Lily Qiu: Naturally fluctuating estrogen levels during the estrous cycle induces neuroanatomical change and biases learning strategy in female mice.

Dema Hussain: Reproductive experience modifies estrogen's effects on multiple memory system bias in female rats.

Elin Grissom: Learning Strategy in Early Life: Modulation by Anxiety & Maternal Care.

Richard Brown: Searching for dissociations among multiple memory systems in mouse models of Alzheimer's disease.

Henry Hallock: Dissociable Roles of the Dorsal Hippocampus and Dorsal Striatum in Post-Learning Conditional Discrimination and Spatial Alternation Performance in a T-Maze.

Dave Bucci: Contributions of retrosplenial, posterior parietal, and postrhinal cortices to hippocampal-dependent learning.

Ehren Newman: Cholinergic modulation of theta-gamma phase-amplitude coupling.

Session 3

2:15 PM: Mark Packard. Multiple Memory System Interaction Factors

2:35 PM: Barbara Knowlton. The effect of early life adversity on memory systems supporting instrumental behavior

2:55 PM: Matthew Shapiro. Integrating memory systems and prefrontal cortex

3:15 PM: Questions & Discussion

15 min Coffee break

3:45 PM: Coffee, Tea & Light Snack served onsite

Session 4

4:00 PM: Veronique Bohbot. Genetic and experience based modulators of learning strategies in mice and humans.

4:20 PM: Lars Schwabe. Stress and the engagement of multiple memory systems in mice and man

4:40 PM: Genevieve Albouy. Hippocampus and Striatum: Dynamics and Interactions during Acquisition and Sleep-Dependent Consolidation of Procedural Memories in Humans assessed by fMRI

5:00 PM: Questions & Discussion

5:30 PM

Closing Statements by Paul Colombo