

# CENTER FOR COGNITIVE SCIENCE

University at Buffalo, State University of New York

**Wednesday, February 27, 2002**

280 Park Hall

North Campus

2:00 pm –4:00 pm

**“In Search of Depression Circuits:  
The Functional Neuroimaging Evidence”**

Helen Mayberg, M.D.  
Rotman Research Institute  
University of Toronto, Canada

Resting-state abnormalities in regional glucose metabolism and blood flow using PET have been identified in patients with depression, including changes associated with treatment and clinical recovery. Although the relative contribution of individual regions varies as a function of clinical state, involvement of cortical, paralimbic and subcortical regions is seen across studies. Cortical deficits normalize with treatment (state effects); paralimbic and subcortical regions show a more complex state-trait pattern. Changes in these same regions are also seen with transient provoked sadness, with differences discriminating controls from depressed patients. Common patterns seen in both unipolar and bipolar patients suggest convergent pathways mediating disturbances in mood across diagnoses including a more generalized vulnerability to emotional stressors across patient groups. Formal testing of disease-specific and state-specific functional interactions among regions in this depression “network” provides a complementary perspective for future studies examining mechanisms underlying treatment response, relapse and disease vulnerability.

**Refreshments will be available  
Everyone is welcome to attend!**

For information please call the Cognitive Science Office at (716) 645-3794 or check  
<http://wings.buffalo.edu/cogsci/html/2002spring.htm>