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## New and Evolving Psychiatric Therapies

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### ***A Functional Neuroanatomic Model of Bipolar Disorder***

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The symptoms and signs of bipolar disorder suggest abnormalities within the anterior limbic network (ALN). The ALN is conceptualized as an extended prefrontal-striatal-thalamic iterative network that also incorporates amygdala, 'cognitive' regions of the prefrontal cortex, hypothalamus, and mid-line cerebellum. The ALN has been implicated in emotional processing and injuries within this network may result in secondary manic and mood-cycling syndromes. Neuroimaging studies have permitted the in vivo exploration of the ALN in bipolar disorder. Structural imaging suggests morphometric abnormalities throughout the ALN. Magnetic resonance spectroscopy has identified metabolic abnormalities in this network as well, particularly in the striatum. Functional imaging suggests that dysfunction of the ALN leads patients to compensatory brain activation patterns to manage cognitive tasks. As imaging techniques and studies advance, the neurophysiology of bipolar disorder will become better understood.

#### **Learning Objectives**

At the conclusion of this presentation, participants will be able to:

- Know current models of the brain basis of bipolar disorder;
- Know how neuroimaging can be applied to develop these models; and
- Know how these models might inform treatment development in the future.

#### **Disclosures**

Regarding financial interest in or affiliation with any manufacturer of any commercial product(s) discussed in any of the 2014 presentations, Dr. Strakowski has indicated the following affiliations/financial interests:

- DSMB Chair: Sunovion Pharmaceuticals, Novartis
- EAP Consultant: Proctor and Gamble
- Discussion Leader: Web MD

Additionally, Dr. Strakowski has indicated that he WILL NOT be discussing unapproved uses of a commercial product, or investigational use of a product not yet approved for this purpose during his presentation.