

Title of talk: Diseases of Connectivity

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Highlights

- Connectopathies of disorders of connectivity have a long history beginning in 19th century
- Rather than attempt comprehensive summary, will provide illustrative examples of the most frequently examined neuropsychiatric disorders, specifically:
 - Alzheimer's dementia ¹
 - Schizophrenia ²
 - Depression
 - Attention-Deficit/Hyperactivity Disorder ³
 - Autism

Investigators are increasingly focusing on structural and functional connectivity to address clinical questions. This presentation is designed for investigators pursuing clinical questions amenable to analysis by examining functional connectivity. Fundamental principles that can be applied to the design of future studies of connectivity in clinical syndromes will be presented and discussed in the context of brief summaries of these rapidly growing literatures. Future research directions will be suggested.

Reference List

- (1) Sheline YI, Raichle ME. Resting state functional connectivity in preclinical Alzheimer's disease. *Biol Psychiatry* 2013.
- (2) Menon V. Large-scale brain networks and psychopathology: a unifying triple network model. *Trends Cogn Sci* 2011;15:483-506.
- (3) Castellanos FX, Proal E. Large-scale brain systems in ADHD: beyond the prefrontal-striatal model. *Trends Cogn Sci* 2012;16:17-26.