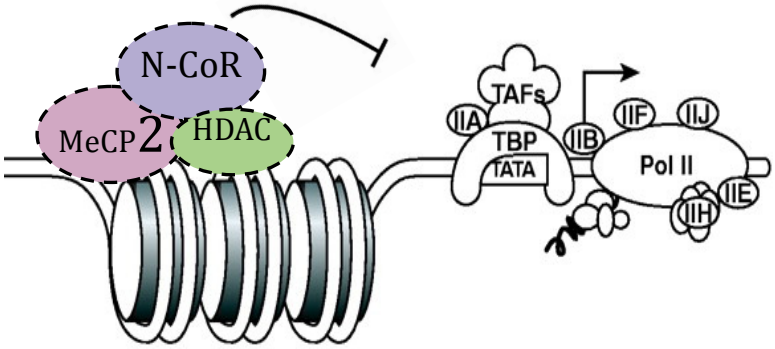
GUEST SPEAKER SEMINAR

Molecular Genetics
UNIVERSITY OF TORONTO

A genetic suppressor screen in the mouse identifies new therapeutic targets for Rett Syndrome



Histone and factor deacetylation

Mutations in methyl CpG binding protein 2 (*MeCP2*) cause Rett Syndrome, a neurological disease with autistic features. Mutation of *MeCP2* causes widespread gene dysregulation, making the syndrome difficult to treat. A genetic suppressor screen was carried out using *MeCP2* null mice, which recapitulate symptoms of Rett Syndrome. A nonsense suppressor mutation was identified in *Sqle*, which encodes a rate-limiting enzyme in cholesterol synthesis. Treatment of *MeCP2* mutant mice with statin drugs improved symptoms and increased longevity. Our ongoing work reveals an unexpected metabolic syndrome that develops in Mecp2 mutant mice, and suggests other therapeutic targets.

Dr. Monica Justice
Hospital for Sick Children
(Candidate for Faculty Appointment)

Host: Dr. Howard Lipshitz

Date: Wednesday February 19, 2014
Time: 4:00 p.m.
Place: #4279, Medical Sciences Building,
1 King's College Circle