Ling He, M.D., Ph.D.

Titles & Department

Associate Professor, Pediatrics

Specialization Areas

Liver metabolism of glucose and lipids, Mitochondrial dynamics and respiration through AMPK activation, Insulin resistance and hepatic steatosis in obesity and type II diabetes

Summary of Research & Work

Dr. He's research focuses on liver metabolism, in particular, glucose and lipid metabolism and the involvement of mitochondrial dynamics. Currently, his laboratory is working on an NIH-funded project to define the molecular mechanisms of metformin's effects on mitochondrial dynamics and respiration through AMPK activation. He has another NIH-funded project to investigate mechanisms leading to the paradoxical concurrence of insulin resistance and hepatic steatosis in obesity and type 2 diabetes. In addition, his laboratory is studying the mechanisms responsible for the mitochondrial expansion in neonates.

Publications

- Blocking AMPKαS496 phosphorylation improves mitochondrial dynamics and hyperglycemia in aging and obesity
- Mitochondrial Dynamics during Development
- Far-western Blotting Detection of the Binding of Insulin Receptor Substrate to the Insulin Receptor
- Activation of the canonical ER stress IRE1-XBP1 pathway by insulin regulates glucose and lipid metabolism
- The P300 acetyltransferase inhibitor C646 promotes membrane translocation of insulin receptor protein substrate and interaction with the insulin receptor
- Alterations of Gut Microbiota by Overnutrition Impact Gluconeogenic Gene Expression and Insulin Signaling