

Shana E. McCormack, MD, MTR

Shana E. McCormack, MD, MTR, is an attending physician and Scientific Director of the Neuroendocrine Center in the Division of Endocrinology and Diabetes at Children's Hospital of Philadelphia (CHOP). She also serves as a member of the clinical research team for Mitochondrial Medicine at CHOP.

Areas of Expertise: Neuroendocrinology, Endocrine disorders in individuals with hypothalamic/pituitary brain tumors, Pituitary disorders, Hypothalamic obesity, Endocrine disorders in individuals with mitochondrial diseases, Endocrine disorders in Friedreich's Ataxia, Diabetes mellitus, Hypoglycemia, Lipodystrophy, Pseudotumor cerebri syndrome/idiopathic intracranial hypertension

Shana McCormack, MD, is an attending physician in the Division of Endocrinology and Diabetes and an assistant professor of Pediatrics at the Perelman School of Medicine at the University of Pennsylvania. She cares for children with pediatric endocrine disease. She has a clinical interest in patients with endocrine dysfunction related to individually rare metabolic disorders such as primary mitochondrial disease, Friedreich ataxia, and lipodystrophy. She also has an interest in inherited and acquired forms of hypothalamic and pituitary dysfunction, in particular those associated with abnormal energy balance and obesity, like craniopharyngiomas. Finally, she cares for children with all types of obesity and its complications, such as type 2 diabetes mellitus and pseudotumor cerebri syndrome/idiopathic intracranial hypertension.

As a physician-scientist, she investigates the neuroendocrine systems that regulate energy balance in humans. Her translational research program has two main areas of focus. First, she studies individuals with metabolic disorders with characterized by risk for diabetes mellitus, including primary mitochondrial diseases, Friedreich's ataxia, and lipodystrophy. Second, she focuses on brain disorders associated with excess weight gain, including brain-tumor related hypothalamic obesity syndrome and pseudotumor cerebri syndrome/idiopathic intracranial hypertension. She performs detailed assessments of mitochondrial bioenergetics and metabolism in humans with these conditions using, for example, non-invasive imaging techniques, stable isotopes, and integrated metabolomics and proteomics. She complements these *in vivo* studies with *in vitro* experiments to more fully explore the tissue-specific causes and consequences of abnormal energy balance in model systems such as patient-derived cell lines.