**Research Theme**
Metabolic Disorders

**Research Project Title**
Role of Peroxisome Proliferator Activated Receptor-beta/delta (PPARβ/δ) in the Circadian Rhythm Entrainment in the Intestine Epithelial Cells and in the Crosstalk between Hepatic and Intestinal Metabolic Functions

**Principal Investigator**
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**Collaborator(s)**
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**Project Description**
A circadian rhythm is any biological process that displays an endogenous, entrainable oscillation of about 24 hours. Peripheral circadian rhythm is known to exist in both intestine and liver. These rhythms are driven by the circadian clock machinery, which in turn governs the gene expression levels at different time throughout the day.

PPARs are nuclear receptors, which play a pivotal role in the regulation of lipid and glucose metabolism. Recently, a study showed that antibiotic-induced depletion of gut microbiota abrogated the oscillating expression of PPARβ/δ, thereby highlighting its role in the entrainment of internal circadian clock in the intestine as well as in the dynamic communication between microbes and intestinal epithelium. We aim to decipher the underlying mechanism that gives rise to this internal circadian clock in the intestine and to study how it affects the hepatic circadian rhythm and metabolic functions.

**Contact Us**
If you have questions regarding this project, please email the Principal Investigator.

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