

Screening and Characterization of Small Molecules that Induce Beige/Brite Fat for the Treatment of Metabolic Disorders

By Dr. Donghai Wu

Date: 20th October 2016 (Thursday)

Time: 12-1pm

Host: A/P Huang Dejian

Venue: Seminar Room S14-06-19

Abstract

Recently, it is found that humans as well as rodent model organisms such as mouse and rat have two types of adipose tissues: white adipose tissue (WAT) and brown adipose tissue (BAT) that are distinct and exhibit opposite functions in whole-body energy homeostasis. While white adipocytes function as energy storage depots, brown adipocytes are specialized in dissipating energy in the form of heat through uncoupled respiration. Brown adipose tissue (BAT) and the so called brown in white (brite) or beige fat are attracting attentions due to their promising potential to combat obesity and associated metabolic diseases. Using an Ucp1 driven luciferase reporter screening system, several interesting small molecular leads have been identified. Characterization of some of these molecules as well as recent progress of the field will be presented.

About the speaker



Dr. Donghai Wu graduated from Beijing Normal University with a BS degree in 1984 and obtained his Ph.D. degree from UT Southwestern Center at Dallas in 1990. He was a faculty member in the College of Pharmacy, University of Florida before joined Guangzhou Institute of Biomedicine and Health, Chinese Academy of Sciences in 2004 as a Principal Investigator and his major research interests include the molecular mechanism controlling adipocyte development and differentiation; Screening and development of novel medicinal compounds for the treatment of metabolic diseases; development of knockin and knockout animal models to identify and validate potential drug targets important for metabolic diseases etc.