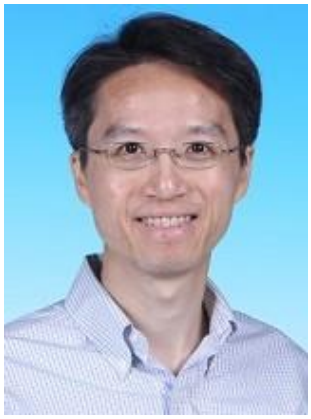
基盤医学特論

Special Lecture Tokuron

Title: Regulation of cellular fat storage at the ER-lipid droplet interface



Speaker: Dr. Ho Yi Mak （Associate Professor, Hong Kong University of Science and Technology）

Lipid droplets are evolutionarily conserved organelles for cellular fat storage. Although close apposition of lipid droplets with the endoplasmic reticulum (ER) has been shown, the molecular mechanisms that enable their interaction and facilitate neutral fat storage are poorly understood.　We have previously shown that physical and functional coupling of lipid droplets to the ER is facilitated by a macro-molecular complex and requires an intact tubular ER network. From a forward genetic screen, we uncovered a role of atlastin, which is required for homotypic fusion of ER membranes, in regulating lipid droplet size. More recently, we propose that nano-scale interaction between ER sub-domains and lipid droplets promotes functional diversification. Using a combination of genetic and imaging approaches, we discovered that a subset of lipid droplets is surrounded by a membranous cage that favors fat storage. Our results have implications on how cellular fat storage can be fine-tuned by lipid droplets heterogeneity.

Date: Wednesday, November 2, 2016　18:00～ (60 min)

Room: The Basic Building 1st meeting room (基礎棟第 1 会議室)

Language: English

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No Registration Required.

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