Joint/Usage Research Seminar

Co-organized by Life-style diseases Program Project

“Global picture of liver FoxO1 in the hormone-regulated metabolic networks”

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Location ：Conference Room (1F), IMCR

The several findings for FoxO1 as an effector of insulin action on gene expression has filled our knowledge gap of insulin signaling. The metabolic impact of FoxO1 in the liver has been examined in genetic experiments with liver-specific IR, IRS, or Akt knockout mice. These studies revealed that FoxO1 inhibition could reverse diabetes. One of the critical questions of FoxO1 relevant to diabetes pathophysiology is that known target candidates of FoxO1 regulation cannot account for the entirety of its effect on glucose metabolism. In the current project, we used a newly developed reporter mouse to determine the FoxO1 cistrom to address this question. We also used comparative cistrome analysis with the other fasting-related transcriptional factors, such as CREB, GR, and PPARα, to show the interaction with FoxO1 in hormone-regulated networks. Our comprehensive analysis will elucidate the global picture of FoxO1 in the liver, and find the novel target of insulin-sensitizer with a greater level of specificity.

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