

## 第108回 病態生化学セミナー

日時：平成29年2月3日（金曜日）午後6時00分～

場所：医学部 図書館3階 視聴覚室

演題：糖鎖による Notch 受容体機能の制御

Regulation of Notch receptor function by glycosylation

演者：岡島 徹也 先生

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Notch signaling is an evolutionarily conserved pathway in multicellular organisms that regulates cell-fate determination during development and maintains adult tissue homeostasis. Aberrant Notch signaling is associated with many human diseases including cancers. Many regulators achieve the precise control of Notch signaling activity. In this seminar, I will talk about the basic knowledge of Notch signaling and regulation focusing on EGF domain-specific O-glycans modifying the extracellular domains of Notch receptors.

【岡島 徹也】

### 文献

1. **Okajima T**, Irvine KD. Regulation of notch signaling by O-linked fucose. *Cell* 111:893-904 (2002)
2. **Okajima T**, Xu A, Lei L, Irvine KD. Chaperone activity of protein O-fucosyltransferase 1 promotes notch receptor folding. *Science* 307:1599-1603 (2005)
3. **Okajima T**, Reddy B, Matsuda T, Irvine KD. Contributions of chaperone and glycosyltransferase activities of O-fucosyltransferase 1 to Notch signaling. *BMC Biol* 6:1 (2008)
4. Sakaidani Y, Nomura T, Matsuura A, Ito M, Suzuki E, Murakami K, Nadano D, Matsuda T, Furukawa K, **Okajima T**. O-linked-N-acetylglucosamine on extracellular protein domains mediates epithelial cell-matrix interactions. *Nat Commun* 2:583 (2011)
5. Sawaguchi S, Varshney S, Ogawa M, Sakaidani Y, Yagi H, Takeshita K, Murohara T, Kato K, Sundaram S, Stanley P and **Okajima T**. O-GlcNAc on NOTCH1 EGF Repeats Regulates Ligand-Induced Notch Signaling and Vascular Development in Mammals. *in revision*.

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