

領域特異的な血管化が担う神経分化制御機構

Spatiotemporally dependent vascularization is utilized to regulate neural differentiation.

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日時: **2020年1月31日(金)**

17:00~18:30

場所: 共同会議室 (研究棟B・2階)



講演要旨:

The developing neocortex acquires its vasculature by angiogenesis, a process consisting of proliferation of endothelial cells in existing blood vessels or vascular plexuses. Our recent study has suggested that neocortical angiogenesis progresses in a spatially and temporally restricted manner to generate a specialized vascular niche. In this seminar, I will discuss that periventricular blood vessels selectively influence neocortical progenitor behavior and neurogenesis, highlighting how CNS angiogenesis is utilized to construct neocortical cytoarchitecture.

参考文献:

1. Suzuki-Komabayashi M., Yamanishi E., Watanabe C., Okamura M., Tabata H., Iwai R., Ajioka I., Matsushita J., Kidoya H., Takakura N., Okamoto T., Kinoshita K., Ichihashi M., Nagata K., Ema M. & Mizutani K.

Spatiotemporally dependent vascularization is differently utilized among neural progenitor subtypes during neocortical development. *Cell Reports* 2019;29:1113-1129.

2. Inoue M., Iwai R., Tabata H., Konno D., Suzuki-Komabayashi M., Watanabe C., Iwanari H., Mochizuki Y., Hamakubo T., Matsuzaki F., Nagata K. & Mizutani K.

Prdm16 is crucial for progression of the multipolar phase during neural differentiation of the developing neocortex. *Development* 2017;144:385-399.

3. Mizutani K., Yoon K., Dang L., Tokunaga A. & Gaiano N.

Differential Notch signaling distinguishes neural stem cells from intermediate progenitors.

Nature 2007;449:351-355.

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