NEURO GLOBAL Seminar

Speaker:

Ryuta KOYAMA, Ph.D.

Associate Professor
Graduate School of Pharmaceutical Sciences,
The University of Tokyo

Title:

Functional morphology of microglia and beyond.

Date:

January 13, 2022 (Thur) 16:00-17:30 JST

Venue:

Middle Auditorium
Clinical Lecture Building [A21] 2F, Seiryo campus
https://www.tohoku.ac.jp/map/en/?f=SR_A21

Format: **Hybrid (Onsite & Online)**

Registration:

Refer to the message from the NGP office

Related Website:

https://ryutakoyama.jimdofree.com/
https://www.yakusaku.jp/english.html

●Neuro Globalプログラム生(Neuro Global Program Students)
【脳科学セミナーシリーズEx】/【先進脳科学セミナーシリーズEx】セミナー1ポイント
【Brain Science Seminar Series Ex】/【Advanced brain science seminar series Ex】1 point
●医学系研究科(Graduate School of Medicine)
【医学履修課程】国際交流セミナー (アドバンスド講義科目)」(出席1回分)
【Medical Science Doctoral Course】International Interchange Seminar (Advanced Lecture course) (It will be counted as 1 attendance.)
●生命科学研究科(Graduate School of Life Sciences)
【単位認定セミナー】単位認定セミナーとして2ポイントを付与します。
【Credit-granted seminar】2 point will be granted to the students who will attend this seminar.

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NEURO GLOBAL
Tohoku University

NEURO GLOBAL
Seminar

Abstract

Among glial cells in the brain parenchyma, microglia, which are major immune cells in the brain, exhibit more dynamic morphologies than other brain cell types. Microglia extend ramified processes from the cell body and constantly monitor changes in the extracellular environment. We are particularly interested in understanding the mechanisms of interaction between microglia and other brain cell types and their involvement in brain functions. In this talk, I will present our latest findings on how the dynamic morphological changes of microglia are related to their functions, including morphological changes during phagocytosis.

References (#: Corresponding author):

Original articles:

1. Hoshi Y, Shibasaki K, Gailly P, Ikegaya Y, **#Koyama R**.
   Thermosensitive receptors in neural stem cells link stress-induced hyperthermia to impaired neurogenesis via microglial engulfment.
   Science Advances., 7(48):eabj8080, **2021**.
2. Zhou Z, Okamoto K, Onodera J, Hiragi T, Andoh M, Ikawa M, Tanaka KF, Ikegaya Y, **#Koyama R.**
   Astrocytic cAMP modulates memory via synaptic plasticity.
   PNAS, 118: e2016584118, **2021**.
3. Andoh M, Shibata K, Okamoto K, Onodera J, Morishita K, Miura Y, Ikegaya Y, **#Koyama R**.
   Exercise reverses behavioral and synaptic abnormalities after maternal inflammation.
   Cell Reports, 27:2817-2825, **2019**.

Review articles:

1. Andoh M, **#Koyama R**.
   Assessing microglial dynamics by live imaging
   Front Immunol., 12:617564, **2021**.
2. Andoh M, **#Koyama R**.
   Microglia regulate synaptic development and plasticity
   Dev Neurobiol., 81(5):568-590, **2021**.

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