



# 第 459 回 つくば分子生命科学セミナー

TSUKUBA MOLECULAR LIFE SCIENCE SEMINAR

**演題 : Studying the biology of the human brain using organoids and assembloids technologies**

**演者 : Dr. Yuki Miura**

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日時 : 2020 年 3 月 9 日 (月) 15:00-16:30

会場 : 医学学群棟 483 会議室

要旨 :

The biology of the human brain and interactions between regions of the central nervous system has been challenging to study due to limited access to functional human brain tissue. Technologies to derive brain organoids and assembloids from human pluripotent stem cells including embryonic stem cells and induced pluripotent stem (iPS) cells are increasingly utilized to model development and disease of the human brain. Here, I will talk about the use of iPS cells-derived human cellular models to study connectivity between brain regions following controlled assembly of brain organoids. Using a combination of viral tracing, calcium imaging and electrophysiological recording, we present evidence of the formation of the *in vitro* model of three-dimensional human neural circuits that could be used to study development and disease of the human brain.

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