



# 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**

Postdoctoral Fellow

Pasca lab, Department of Psychiatry and Behavioral Sciences

Human Brain Organogenesis Program

Stanford University School of Medicine

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.

本セミナーは、生命システム医学専攻&疾患制御医学専攻（博士）「医学セミナー」（担当：専攻各教員）、及び、フロンティア医科学専攻（修士）「医科学セミナーII」（担当：入江賢児）の関連セミナーに相当します。HBP共催

連絡先： 筑波大学医学医療系 高橋 智 （内線 7516、satoruta@md.tsukuba.ac.jp）

【筑波分子医学協会（TSMM）主催】 HP <http://www.md.tsukuba.ac.jp/public/tsmm/>

協会代表：筑波大学医学医療系 熊谷嘉人 TSMM セミナー担当：TARA センター 柳沢裕美