

発生ダイナミクス分野主催セミナー
Developmental Dynamics Seminar

“ Evolution of cell fusion ”

Prof. Benjamin Podbilewicz

Technion-Israel Institute of Technology, Israel

Tuesday, July 2, 2019; 16:00-17:00

Katahira Campus:

Life Sciences Project Research Laboratory,
Conference Room (Rm. 103)

Cell fusion is essential for fertilization and organogenesis. GCS1(HAP2) are membrane glycoproteins essential for gamete fusion in plants and protists. To determine whether GCS1 is also sufficient for cell fusion, we expressed the Arabidopsis GCS1 in mammalian cells. We found that GCS1 expression results in the formation of giant cells via cell fusion [1]. The crystal structures of Arabidopsis and Chlamydomonas HAP2s structural homology with the nematode *C. elegans*' EFF-1 and class II viral fusion proteins [2]. We named this superfamily FUSEXINS: FUSion proteins essential for sexual reproduction and EXoplasmic merger of plasma membranes [1]. I will show data regarding the origin of fusexins.

[1] Valansi et al. J Cell Biol (2017). [2] Fedry et al. PLoS Biol (2018).

- This is a credit granted seminar (1 point) for:
 - Graduate School of Life Sciences
- Neuro Global Program “(Advanced) Brain Science Seminar Series Ex”

Contact:

Masao Watanabe (渡辺 正夫 生命科学研究科 植物分子育種分野)

E-mail : nabe@ige.tohoku.ac.jp / TEL : 022-217-5681

新学術領域研究「植物新種誕生原理」

Asako Sugimoto (杉本 亜砂子 生命科学研究科 発生ダイナミクス分野)

E-mail : asugimoto@tohoku.ac.jp / TEL : 022-217-6194