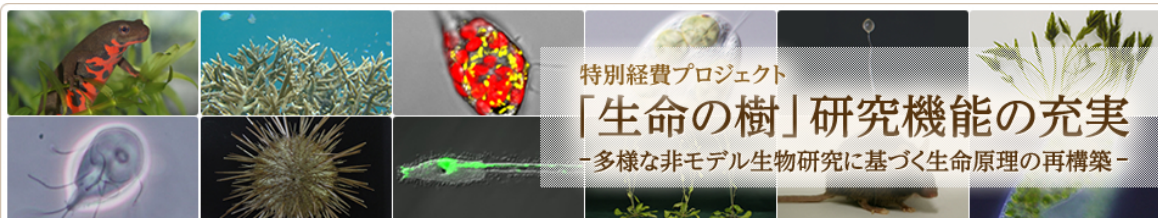




筑波大学
University of Tsukuba



特別経費プロジェクト

「生命の樹」研究機能の充実

—多様な非モデル生物研究に基づく生命原理の再構築—

生命の樹セミナー (This seminar will be held in English)

Bottom-up approaches toward the study of insect chemosensory receptors and ion channels

ボトムアップアプローチでせまる、
昆虫の化学感覚受容体とイオンチャネル

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National Institutes of Natural Sciences, Okazaki Institute
for Integrative Bioscience (岡崎統合バイオ)

Date: March 7, 2016 (Mon) 16:00-17:30

Room: Sougou Kenkyu Bldg. A, Rm. A110

(筑波大学 総合研究棟 A棟 A110講義室)

The main stream of biological research strategy is a top-down approach, by which organisms are broken down into the network of genomic information and molecular interaction. The progress of the approach accumulated the information of the function of individual biological elements and their interaction, and also accelerated the initiation of a bottom-up approach, which reconstructs the *ex vivo* biological function by using biomaterials and genomic information. We have focused on especially in insect chemoreceptors. In this seminar, I will introduce our bottom-up approaches toward the development of the on-chip olfactory sensor and the mutagenesis for generating *Drosophila* light-activated ion channels.

the molecular mechanisms of olfactory transduction machineries,

【References】 Ishii et al. (2015) *Nat Comm*. doi:10.1038/ncomms9021;
Sato & Takeuchi (2014) *Angew Chem Int Ed Engl* 53: 11798-11802;
Sato et al. (2011) *PNAS* 108:11680-11685; Sato et al. (2008) *Nature*
452:1002-1006.

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