埼玉大学グローバル化推進経費支援事業

Faculty of Science, SAITAMA Univ.

第8回 HiSEP Special Seminar

『Acclimation to high temperature in green microalgae』
（緑藻の高温順応）

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（カセサート大学理学部遺伝学科・助教）

Heat stress is a major environmental factor that has negative effects on plant growth and development, leading to great yield loss. Due to global warming, both daily temperatures and the occurrences of heat waves are on the rise. To be able to survive, plants must be able to adjust to a new environment through changes in various pathways. Evidence have shown that plants do exhibit acclimation or acquired tolerance to heat stress, the ability to survive under otherwise lethal temperature if they have experienced a higher non-lethal temperature beforehand. Moreover, during the process of acclimation, reactive oxygen species (ROS) are expected to be involved as general stress signals, but specific and unknown signals/mechanisms for heat acclimation are still yet to be discovered. Attempts have been made to identify these unknown signals/mechanisms using the plant model Arabidopsis thaliana, but due to complication with changes of heat acclimation phenotype at different growth stages, no new components were identified. The unicellular haploid green alga *Chlamydomonas reinhardtii* is a great model organism to study heat acclimation response including ROS signaling, and to identify unknown signals/mechanisms. Results showed that this alga does exhibit heat acclimation response similar to plants. This lecture will give an overview on the model organism *Chlamydomonas* and how it could be used for studying various pathways including acclimation response.

Date & Time: 13:30-14:50 on Jan. 20, 2022

This is an ONLINE-SEMINAR with ZOOM service, for all students in the Faculty of Science and for those who are interested in natural sciences. Contact “hisep.saitama@gmail.com” to get the ZOOM connection URL.

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