



University of Tsukuba

Plant Transgenic Design Initiative

73rd PTraD Research Seminar

T-PIRC Research Seminar

Date and Time: 2023/05/9 (火) 16:00 –17:00

Place: Gene Research Center, Seminar Room (211)

The plant hormone jasmonate: how can a simple molecule do so many things?

Gregg Howe (howeg@msu.edu)

**University Distinguished Professor and MSU Foundation Professor,
Plant Research Laboratory / Plant Resilience Institute / Department of Biochemistry and
Molecular Biology at Michigan State University**

Professor Gregg Howe is a leading researcher in the signaling of jasmonic acid, a plant defense hormone. Using genetic approaches in both model (*Arabidopsis*) and crop (tomato) species, his group identified several components responsible for jasmonic acid synthesis and signal transduction, and clarified their biochemical and physiological functions. In recent years, his lab also elucidated molecular mechanisms of growth-defense trade-offs and defense modulation under conditions associated with climate change. In recognition of his contributions to the plant sciences, he was elected as a member of the National Academy of Sciences in the U.S.A. in 2020. Today, Professor Howe will present a seminar describing research progress in his lab. He will also share some reflections of his journey as a plant scientist, including a message to young researchers. We look forward to your participation.

グレッグハウ教授は植物の防衛ホルモンであるジャスモン酸の細胞内情報伝達に関する世界のトップランナーです。主にシロイヌナズナとトマトを用いた遺伝学的解析により、ジャスモン酸合成から情報伝達を担う分子の同定しその生理・生化学的機能を明らかにしてきました。近年は防衛-生育のトレードオフ現象の分子メカニズムの解明や植物防衛が生育環境によって調節されるメカニズムなど、広い領域においても成果を上げられています。これら植物科学の進展に貢献してきたことが評価され、2020年には米国科学アカデミーメンバーに選出されました。本日は筑波大学への来学を記念してハウ教授のこれまでの研究や最近の進展、若い研究者に向けたメッセージ等をプレゼンしていただければと思います。皆さんふるってご参加ください。

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