

応用生命工学・微生物学研究室 特別セミナー

Lab of Microbiology, Dept of Biotechnology Special Seminar

Wednesday May 8, 2019, 3:30 PM – 4:30 PM

Room Chem 3, Bldg 2 / 2号館 化学第3講義室

**“Recycle of nutrients from secondary to primary metabolites:
Glucosinolate breakdown regulated by “atypical”
thioglucosidases initiates unique sulfur catabolism.”**



Lab website



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“Glucosinolate is a class of sulfur-rich plant metabolites mainly produced by Brassicaceae. The well-known function of glucosinolates is chemical defense to predators; glucosinolates and their hydrolases accumulated in separate cells are mixed upon tissue damage to release toxic volatiles. On the other hand, recent studies have reported breakdown of glucosinolates even in non-disrupted tissues by pathogen attack or abiotic stress, suggesting the presence of other glucosinolate catabolism involved in plant homeostasis.

Our integrated omics analysis of Arabidopsis thaliana fed by isotope-labeled glucosinolates revealed a unique degradation pathway initiated by non-classical thioglucosidases. In this talk I demonstrate that glucosinolates can also be used as a nutrient storage under sulfur deficiency.”

Please contact Shinichi Nishimura / 西村 慎一 (anshin@mail.ecc.u-tokyo-ac.jp; ex. 25162) with any questions.