

33th Special seminar on The IDEC Institute, 19th PHIS Seminar

2nd G-TREP seminar

Date: Oct, 6th, 2023, 17:00~

Place: Hiroshima University, Graduate School of
Advanced Sciences of Matter Build, 6F Seminar room

Online: <https://o0m.in/HQRsl>

Title : **Genomics of a mushroom *Schizophyllum*
commune to understand biodiversity and our
health**

Name : Hiromi Matsumae

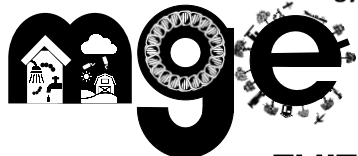
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Abstract

Biodiversity explores three levels of diversity: species, intra-species, and ecosystems. The fungal kingdom is estimated to have six times as many species as land plants, but our knowledge of intra-species genetic diversity in fungi lags behind that of animals and plants. Interestingly, the highest genetic diversity of any known eukaryote is reported from a mushroom, *Schizophyllum commune*. The species causes a rare human respiratory disease, but whether the high genetic diversity is associated with phenotypes such as pathogenicity in humans is unclear. Here I present our reference genome project of *S. commune* to investigate genomic and phenotypic diversity. We found that genomes of Japanese *S. commune* differ by 7%, greater than those between humans and chimps. Our study would contribute to understanding diversity in fungi and the relationships between human health and biodiversity.

Microbial Genomics and Ecology



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