

公開講演会のお知らせ



平成26年度 ストラスブール大学派遣研究者
Professor Marie-Claire Lett

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専門は微生物学・生態学)

“Microbial communities in nutrients poor environments: bacterial diversity and survival strategies”

日時： 2月17日(火) 17:00-18:30

場所： 理学部1号館4階 415号室(化学第一講義室)

<講演要旨>

Various microorganisms, including bacteria, yeasts, fungi and algae are able to survive in polluted and/or nutrients poor (oligotrophic) environments, despite the inhospitable conditions. They develop different strategies to overcome the harshness of the environment. We explored the prokaryotic diversity in acid mine drainages, characterized by low pH, high levels of toxic metals and metalloids, such as arsenic, and low concentration of organic matter. The application of novel cultures strategies revealed a much higher diversity than previously described in investigations based on classic culture methods as well as on culture independent approaches. Our work led also to the isolation of bacteria involved in organic matter recycling in these nutrient poor ecosystems and showed that some of them could be a reservoir for genes with potential biotechnologies properties. On the other hand we studied the bacterial strategies used for the colonization of nutrients poor environments. Six bacterial strains, isolated from industrial ultra pure water systems, were grown in single- and multi-species consortia. Our results showed that the survival of bacteria, in these very oligotrophic ecosystems, requires a rather sophisticated social cooperative behavior between the partners, including hitchhiking strategies and exchanging of metabolites.

(教職員・院生・学部生の来聴歓迎・入場無料・申込み不要)

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