

GTR Seminar

Topics in Advanced Biological Science

大学院理学研究科アドバンス生命理学特論

The fine line between conservation and diversity: unexpected variations in polar flagellar systems

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日時： 10月24日（木） 16:00—17:00

場所： 理学G館101講義室

It is well established that flagellar components mostly originate through the successive duplication and are thus fairly conserved, especially in polar flagellates. For a system consisting of several dozens of structural and regulatory proteins, such conservation, on one hand, provides invaluable information for identification of flagellar components, thus greatly facilitating investigations into flagellar systems of new bacterial species. However, on the other hand, it may play a negative role by inhibiting in-depth studies of many components because they are presumed to function as their conserved counterparts of model bacteria. The work of my team reveals different story about some well-characterized flagellar components, including flagellins, flagellar number and position determinants, and regulators. These intriguing observations open up a new avenue to further explore flagellar assembly and its regulation.