



# Tanaka-Yoshida Lab

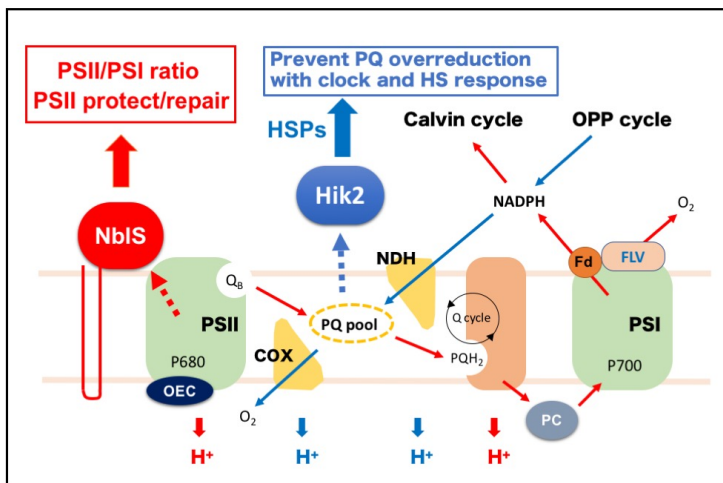
## Researches on Cell Operating System and its Application

Molecular Bioscience Division, Laboratory for Chemistry and Life Science

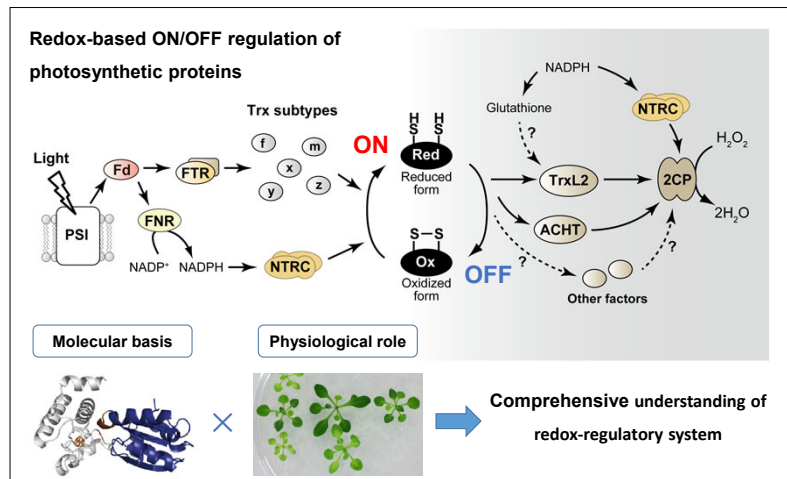
[http://www.res.titech.ac.jp/~biores/E/index\\_E.html](http://www.res.titech.ac.jp/~biores/E/index_E.html)

- Microbial Responses to Nutritional and Light Conditions
- Redox-Based Regulatory Network for Controlling Plant Organelle Functions
- Biosynthesis and regulation mechanisms of extracellular polysaccharide in cyanobacteria and their applied use
- Network linking metabolism and proliferation centered on ribosome

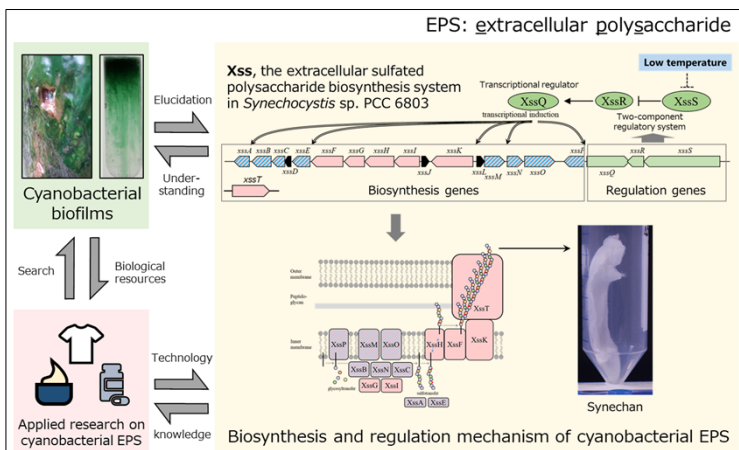
Cell is a basic unit of Life, where various molecular devices and systems are accumulated and organized to perform integrated outputs such as energy and biomolecules production. In this laboratory, we are focusing on various regulation in the cell, and trying to predict the cell metabolism and proliferation, as well as the application to cell control and biomass production. Especially, uses of photosynthetic microbes to understand light and nutrient signal transduction and biomass production is our recent favorite research subject.



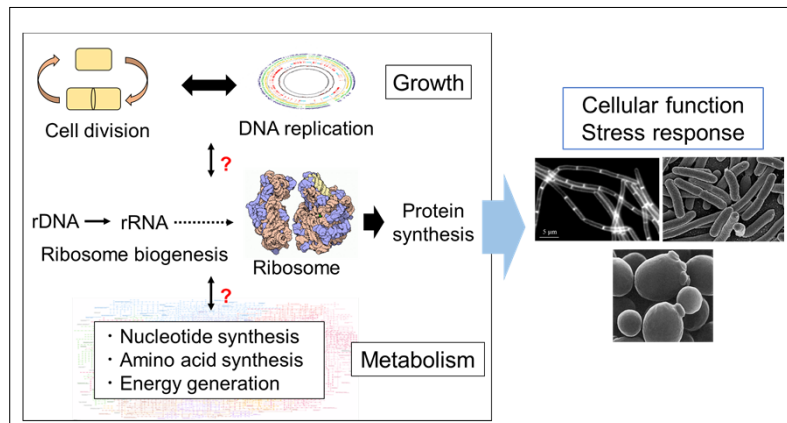
Monitoring of ongoing status of photosynthetic light reaction: Functional analysis of photosynthesis-linked conserved protein kinases in cyanobacteria



Redox-based regulatory network for controlling plant organelle functions



Biosynthesis and regulation mechanisms of extracellular polysaccharide in cyanobacteria and their applied use



Comprehensive analysis of ribosome biogenesis-coupled regulation of metabolism and cellular processes.

Establishment of the basis for ideal cell design with high productivity of useful substances.