

Toward Understandings of Recognition Mechanisms of Environments by Living Organisms and Their Applications

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Living organisms recognize and respond to environmental stimuli by exploiting various cellular functions. Recognition of environmental changes at every moment or interactions with other living organisms, followed by expression of appropriate physiological functions, are critical for survival in the actual environment, which is not like controlled environments as laboratories.

In this symposium, researchers studying recognition of, responses to, and expression of physiological functions to the environment, by bacteria, plants, and animals, presented the front lines of the research topics in the field of molecular, cellular, and structural biology. The discussion will cover basic biology regarding the current proceedings for understandings of diverse mechanisms of recognition and responses to the environment in each species, as well as possibilities to develop these understandings into applications in various fields.