

The 140th iCeMS SEMINAR

CeMI Seminar Series 39

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13:00-14:00

Functional imaging and superresolution microscopy using fluorescent proteins

Lecturer: **Assoc. Prof. Hideaki Mizuno**

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Venue: 2nd Floor Seminar Room (#A207)
iCeMS Main Building (#70) Kyoto University

Fluorescent proteins become indispensable tools of molecular labeling. By applying color variants of fluorescent proteins to Förster resonance energy transfer (FRET), we could design genetically encoded functional probes. The genetically encoded probes are applicable for imaging in intact animal since it can be introduced by genetic engineering method. In addition to the color variation, we found unique fluorescent proteins that show photoswitching property (Kaede and Dronpa). Recently, based on the photoswitchable fluorescent protein, a new microscopic modality circumventing the diffraction limit of light was invented. Here I introduce our recent achievement of Ca²⁺ imaging in intact zebrafish embryo with cameleon YC2.60 and biological applications of superresolution imaging.

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