Realization of common platform technology, facilities, and equipment that creates innovative knowledge and products

Development of covariation network analysis using super-resolution immunofluorescence microscopy

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Summary :

Launching the novel pharmaceutical products into market requires not only the precise identification of the drug target molecules in the cells under the pathological condition, but also the elucidation of the desired and adverse effects of the drug on the whole intracellular protein network. In this project, our team will sophisticate our three key technologies to resolve these issues: super-resolution immunofluorescence method: super-resolution PLOM-CON analysis (the novel covariation network analysis using the quantified data obtained from the super-resolution immunofluorescence method), disease-model cells where the cytoplasm has been changed to the pathological condition. By coupling these technologies that we originally developed in Japan, we will provide the optimal platform that is unparalleled in the world for refining and improving the speed of drug development.