ACTIVITY REPORT

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Analysis of MITOL-deficient mice

Roles of Membrane Contact Sites in Organelle Dynamics and Diseases

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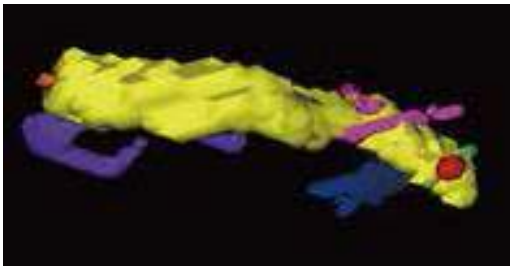
Research summary

Mitochondria are important organelle to produce energy, but mitochondrial dysfunction is closely involved in various diseases. There are several machineries regulating mitochondrial quality to maintain mitochondrial functions. Recently, it has been suggested that the efficient exchanges of lipids and calcium between mitochondria and ER by a direct tethering play an important role in maintaining the function of the mitochondria. We reported that mitochondrial ubiquitin ligase (MITOL) regulates mitochondria-ER contacts via Mfn2. In this project, we try to elucidate the mechanism of mitochondria-ER contact manner through analysis of MITOL-deficient mice.

Figure

Three-dimensional reconstruction of mitochondrion and ER.

Plural ER (red, blue, purple, pink, and green) contact with a mitochondrion (yellow).



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