

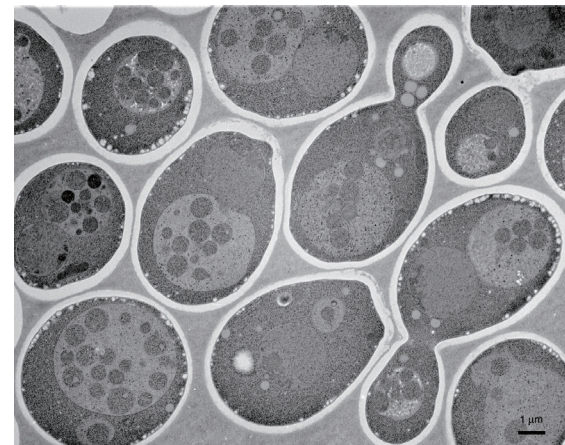
Molecular mechanism and physiological roles of autophagy

Cell Biology Center

<http://www.ohsumilab.aro.iri.titech.ac.jp/>

1. Establishment of an analytical regime for autophagic proteolysis
2. Mechanism and physiological roles of the degradation of RNA and lipid by autophagy
3. Understanding the conditions of autophagy induction

Autophagy is a fundamental degradative pathway that occurs within the cell's own lytic compartment (the vacuole or the lysosome) and is conserved throughout virtually all eukaryotic cells. A detailed description of autophagy is therefore indispensable for a complete understanding of the basic unit of life, the cell. Lending on the 30 years of experience, this project will use yeast as a model organism to undertake a systematic and rigorous biochemical interrogation of the yet-uncharacterized physiological functions of autophagy to provide a comprehensive picture of the role of autophagy in the cell.



Autophagy in Yeast

Electron microscope image of the yeast autophagy : single membrane-bound structures are delivered to the vacuole under starvation conditions.

