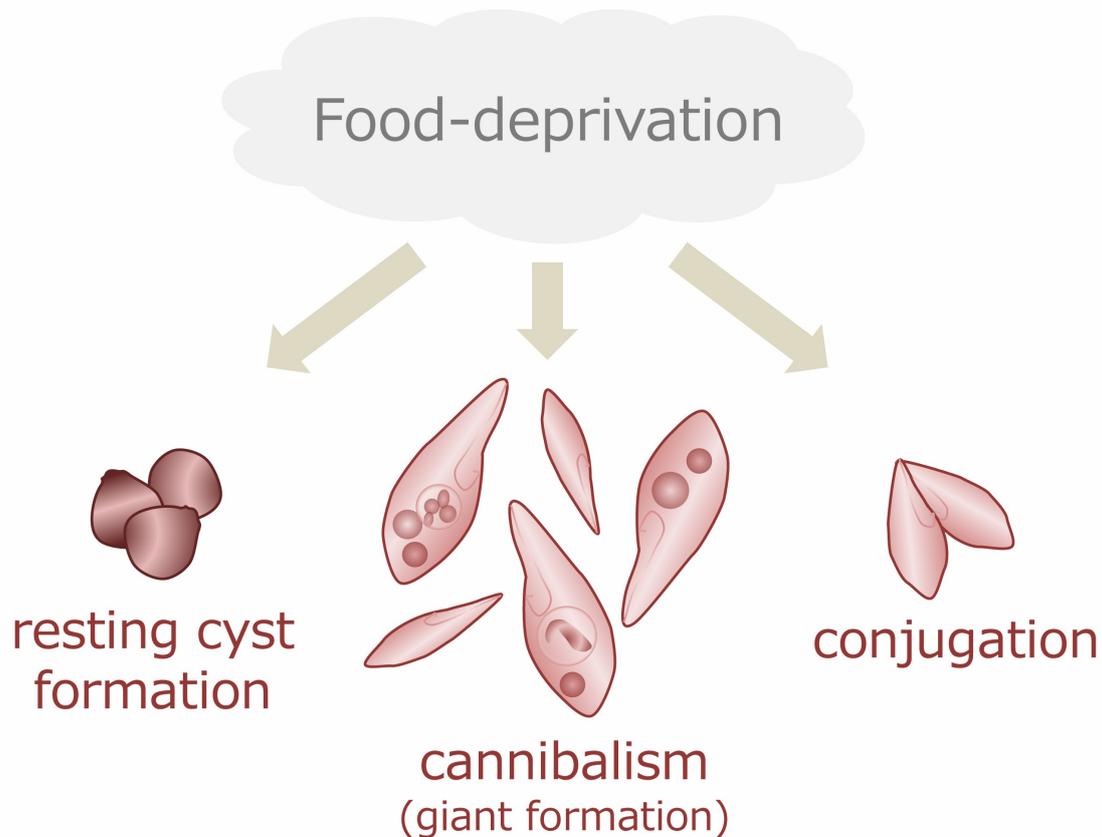


Studies on cell-cell interaction and the molecular mechanism of sexual reproduction in ciliates

Mayumi SUGIURA [Biological Sciences Course]



Strategies for survival under food-deprived conditions in *Blepharisma*

The ciliates are unicellular organisms and usually undergo asexual reproduction (binary fission) if provided with sufficient food. By repeating binary fissions, cells develop from sexually immature stage to mature stage.

Blepharisma is one of the ciliates. When *Blepharisma* cells are moderately starved, they start to undergo “cannibalism”, “sexual reproduction (conjugation)” and “resting cyst formation” for survival. Conjugation is induced by cell-cell interaction between complementary mating-type cells, through the mating pheromones. If cells complete all of the conjugation processes successfully, they would become the next generation progeny.

Our laboratory has been focusing on the surviving strategies of *Blepharisma*, “cannibalism” and “conjugation”, and aims to elucidate the molecular mechanisms of them.

Keywords : ciliate; conjugation; sexual maturation; mating type; cannibalism