Intracellular localization of immaturin in the early phase of immaturity detected by anti-immaturin antibody in both wild-type and early mature mutants of *Paramecium*

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SUMMARY

The sexual activity of *Paramecium* is expressed at about 50 fissions after conjugation in wild-type cells, when the cells are once more able to conjugate. However, in the case of early mature mutants, sexual activity is expressed at about 30 fissions after conjugation. This study was undertaken to analyze the molecular mechanisms regulating the length of the immaturity period by comparing the different characters in these two strains. We have produced an antibody against immaturin. Using this antibody, we observed the cells in the early stage of their immaturity period using the indirect immunofluorescence method. Results show that string-like objects showing strong fluorescent signals were observed in the macronucleus of the early mature mutant, although this was not observed in wild type cells. On the other hand, no difference was found in the intensity of fluorescent signal in the cytoplasm of the early mature mutant and that of the wild type cells.