

## Characteristics of macronucleus-specific antigens of *Paramecium caudatum*

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### SUMMARY

Eight monoclonal antibodies specific for macronuclear proteins of the ciliate *Paramecium caudatum* were developed, and molecular weight of the antigens, cross-reactivity of the antibodies and timing of appearance of the antigens during nuclear differentiation were elucidated. The properties of these antigens were compared with characteristics of a presumed receptor substance on the macronuclear envelope for lipopolysaccharides of the outer membrane of the infectious form of *Holospora obtusa*. One of the eight antigens shows characteristics similar to those of the receptor substance. Indirect immunofluorescence microscopy shows that the antigen locates near the macronuclear envelope and appears in the macronuclear anlagen after the appearance of heterochromatic aggregates during the nuclear differentiation process. The molecular weight of the antigen is 30 kDa. Cross-reactivity of the antibody shows that the epitopes are present not only in strains of *P. caudatum*, but also in *P. jenningsi*, *P. multimicronucleatum*, *P. tetraurelia*, *P. putrinum*, *P. calkinsi*, *P. polycaryum* and *P. nephridiatum*.