

SDS-PAGE analysis of proteins in the PV membrane of *Paramecium bursaria*.

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SUMMARY

The perialgal vacuole (PV) membrane must have a significant role in establishing and maintaining the symbiosis between host the *Paramecium bursaria* and symbiotic *Chlorella*. We attempted to isolate intact symbiotic *Chlorella* cells with their surrounding PV membranes to characterize the protein composition of the PV membrane. The host paramecia were gently homogenized by passing them through a 30-gauge needle, and the intact *Chlorella* cells were then isolated using Percoll density gradient centrifugation. The PV membranes were osmotically ruptured in distilled water and collected by centrifugation. SDS-PAGE and Western blot analyses showed that the PV membrane has a complex but characteristic pattern of proteins, with a specific concanavalin-A binding protein of about 70 kDa.