

## **FINE STRUCTURE OF ARTHROBACTER CRYSTALLOPOIETES DURING LONG-TERM STARVATION OF ROD AND SPHERICAL STAGE CELLS**

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**Abstract:** Actively growing spherical and rod-shaped cells of *Arthrobacter crystallopoietes* were subjected to total starvation in buffer for 8 weeks. At intervals, thin sections of cells were prepared and examined by electron microscopy. Starving cells underwent no morphological changes that would account for their unusual survival capabilities. Cell size and shape remained unaltered. There was no thickening of the cell wall and no development of structures similar to those observed in spores or cysts. As the length of starvation increased, the following changes were observed; glycogen deposits disappeared, the number of ribosome particles decreased, the number of vesicular membranes increased within the cell, and the nucleoplasm expanded in volume to fill the emptying cytoplasm.

**Full article can be found at:** <http://dx.doi.org/doi:10.1139/m73-001>