A SUGGESTION AS TO THE NATURE OF THE LYSOSOME GRANULES

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A Comment on the Paper by Alex B. Novikoff, H. Beaufay, and C. de Duve, Entitled "Electron Microscopy of Lysosome-Rich Fractions from Rat Liver"

The lysosome particles just shown us by Dr. Novikoff and his associates remind me of bodies associated with phagocytosis or pinocytosis, seen in liver parenchymal and endothelial cells, in mesothelial cells and in macrophages. Weatherford in 1932 (1) showed that carbon and colloidal dye particles injected intravenously in frogs are transported across liver endothelial and parenchymal cells and are released into the bile canaliculi. Mr. Hampton, a graduate student in our Department, has been studying the transfer of colloidal particles of thorotrast and of mercuric sulfide across liver cells, and has observed these particles in the cells in granules or bodies resembling the lysosome bodies Dr. Novikoff has just shown us. Dr. Odor (2) has reported at this meeting the passage of similar heavy particles across mesothelial cells, and has shown that the particles can be found in the mesothelial cells in bodies or vacuoles resembling the lysosome granules. These similarities prompt me to suggest that the lysosome granules may represent segregated phagocytosed or pinocytosed material in the liver cells. The enzymes associated with the granules may have a role in breaking down some of the contents of the bodies.

BIBLIOGRAPHY

1. Weatherford, H. L., *Zeitschr. Zellforsch. u. mikr. Anat.*, 1932, **15,** 343.
2. Odor, D. L., *J. Biophysic. and Biochem. Cytol.*, 1956, **2,** No. 4, suppl., 105.