“Enveloped” Rotavirus Particles Detected in Culture Fluid

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J. exp. Med., 1984, **144** (3), 329-330 — In a negative contrast preparation of
human rotavirus culture fluid were found membrane-bound “enveloped” virus
particles which had been observed only in thin sections of the infected cells. The
“enveloped” particles comprised a single-shelled particle and degenerating mem-
brane structure. ——— rotavirus; “enveloped” particle

In thin-sections of human rotavirus-infected MA104 cells, membrane-bound “enveloped” virus particles are found together with “unenveloped” single- or double-shelled particles within the cisternae of the endoplasmic reticulum (Suzuki et al. 1984). However, the presence of the “enveloped” particles in cell-free preparations has never been reported (Holmes 1983). In this study, we detected the “enveloped” particles in both a negative contrast preparation of the culture fluid and thin sections of MA104 cells infected with human rotavirus KUN strain (Fig. 1). The culture fluid was harvested at 24 hr postinfection and examined by electron microscopy after being stained with uranyl acetate as previously described (Suzuki et al. 1984). The “enveloped” particles in culture fluid measured 150-160 nm in diameter. They were irregular in contour and had breaks in the membrane, suggesting that they were in the process of degradation.

References

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Fig. 1. A: "Enveloped" rotavirus particles (arrows) seen in the endoplasmic reticulum of human rotavirus infected MA104 cell. B: Human rotavirus KUN strain detected in culture fluid harvested at 24 hr after infection. Stained negatively with 1% uranyl acetate. A membrane-bound "enveloped" particle (arrow) contained a single-shelled particles and three double-shelled particles. Bar represents 100 nm.