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About the Cover

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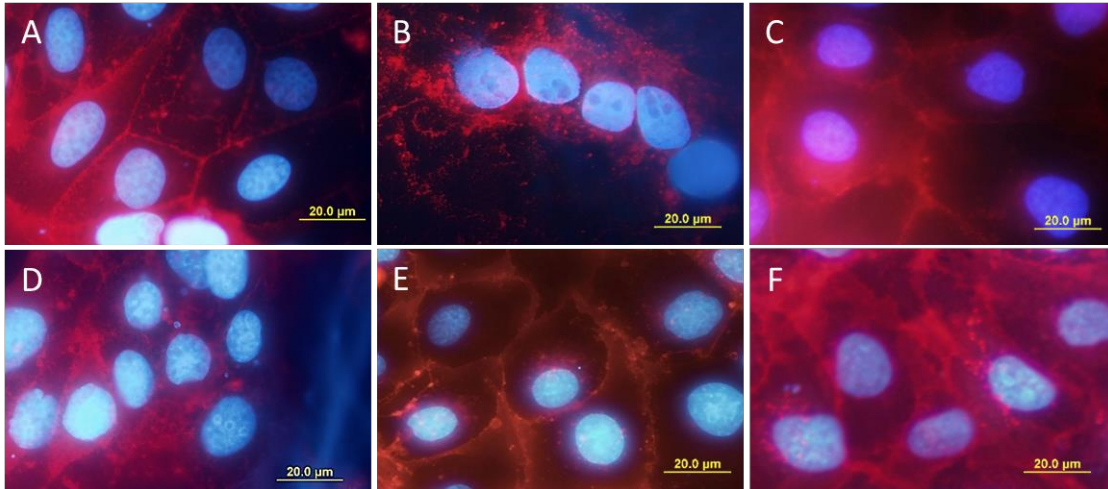
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About the Cover



Rotavirus causes severe life-threatening diarrhea in young children and immunocompromised individuals. There are several licensed attenuated vaccines for young children, but there are no vaccines or antiviral therapeutics for immunocompromised patients of any age. In this Issue Witcher and collaborators examine the effects of the arachidins on the human RV (Wa)-infected African green monkey kidney cell line, MA104. TEM morphometric analyses showed ultrastructural changes in RV-infected cells treated with A1 or A3.

In this image a red-fluorescent Alexa Fluor® 594 wheat germ agglutinin (WGA) which binds to the N-acetylglucosamine and N-acetylneuraminic (sialic) acid residues in membranes and a blue-fluorescent Hoechst 33342 dye which is selective for DNA were used.

A: NV-no virus or treatment demonstrated very distinct plasma membranes (PM); B: Cells with 20 μ M A1 alone showed a disruptive pattern of the PM; C: Cells with 20 μ M A3 alone appeared to have distinct PM and perinuclear membranes; D: RV alone demonstrated PM that appear to be not as distinctly outlined as the NV cells E: Cells with RV with 20 μ M A1 demonstrated a distinct PM with some perinuclear staining; and F: Cells treated with RV and 20 μ M A3 showed a similar PM staining pattern as NV (A) and RV with A1 (E) but displayed a more punctate perinuclear staining pattern. The cells treated with NV (A), 20 μ M A1 (B), 20 μ M A3 (C), RV with 20 μ M A1 (F) and RV with 20 μ M A3 demonstrated nucleus to cytoplasm (N/C) ratios of approximately 0.25. However, the cells infected with RV alone (D) had average N/C ratios of approximately 1.