

Abstract Submitted  
for the MAR13 Meeting of  
The American Physical Society

**Ferromagnetic Nanoparticles for Biomedical Applications** FRANK HOLDER, Rowan University, Dept. of Physics & Astronomy, CRISTINA IFTODE, Rowan University, Dept. of Biological Sciences, TABBETHA DOBBINS, Rowan University, Dept. of Physics & Astronomy — This work examines the cytotoxicity of barium hexaferrite to fibroblast (HEK-293) cells and also the response of barium hexaferrite to magnetic fields. Cytotoxicity is a great way for pharmacies to measure for toxic compounds. Cytotoxicity assays are widely used by the pharmaceutical industry to screen new compounds which may be introduced to the cells. Results show the cytotoxicity of nanoparticles of barium hexaferrite. We chose barium hexaferrite because it is a magnetic material—so it can be driven using an applied magnetic field. This would be useful in biomedical applications where these particles may be added to direct treatment to various parts of the body and across the cell wall membrane by an applied magnetic field.

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Date submitted: 17 Nov 2012

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