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**Endometallofullerene influence on the bacterial populations
Escherichia coli.**

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Gd@C₈₂ is one of the most important molecules in the metallofullerene family, known as Magnetic Resonance Imaging (MRI) contrast agent candidate for diagnostic imaging. Gadolinium endohedralmetallofullerenol (e.g., Gd@C₈₂(OH)₂₂) is a functionalized fullerene with gadolinium trapped inside carbon cage.

In the present work the influence of Gd@C₈₂(OH)₂₂ on the vital activity of microorganisms *Escherichia coli* was studied. During the experiment *E. coli* cells were cultivated in liquid media containing different concentrations of Gd@C₈₂(OH)₂₂ (10⁻⁴ mol/L, 10⁻⁵ mol/L, 10⁻⁶ mol/L, 10⁻⁷ mol/L, 10⁻⁸ mol/L). Bacterial cells were incubated for 6 hours, and growth curves for *E. coli* cells were obtained experimentally. Experimental growth curves were qualitatively similar being detected at different wavelengths. However, the data had showed no effect of Gd@C₈₂(OH)₂₂ on the growth curves of bacterial cells, regardless of the concentration of the solution. However, Gd@C₈₂(OH)₂₂ was found can increase colony forming ability of bacterial cells.