

Abstract Submitted
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Contrasting effects of magnetic fields on bacterial growth

MARTHA ARIZA, SAMINA MASOOD, University of Houston Clear Lake — In this study we investigate the growth rates and characteristics of several bacterial strains belonging to the gram positive and gram negative groups under a variety of electromagnetic fields. Preliminary results indicate that bacterial strains respond differently to electromagnetic fields depending on their cell structure and metabolic characteristics. Gram negative bacterial strains exhibit higher growth rates under increased magnetic field while gram positive bacteria respond negatively to moderate and high electromagnetic fluxes. These findings suggest that the direction and strength of electromagnetic current influence bacterial growth and the type of response is directly related with cell type. These findings granted further investigation as magnetic field may induce a variety of responses in biological systems.

Samina Masood
University of Houston Clear Lake

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