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Observing strains of bacteria able to withstand continuous exposure to radio frequency electromagnetic radiation

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ABSTRACT

Electromagnetic Radiation (EMR) is a particularly well-known issue, especially in the context of epidemiology. Yet there has been minimal research on the effects of EMR on the Radio Frequency (RF) sector of the spectrum. Previous studies state that long term exposure to RF EMR may lead to neurodegenerative diseases when tested on male rats. Ongoing research continues to examine the effects of RF EMR on human health. Radiofrequency radiation has not yet been tested on bacteria samples to observe the cultures that thrive.

Keywords— *Radiofrequency, Electromagnetic Radiation, Bacteria*

1. OVERVIEW AND BACKGROUND

The use of technology has rapidly increased cohesive with the number of devices that emit radio frequency (RF) radiation and many epidemiology studies reveal an increased risk for brain tumors due to RF radiation (Baan et al. 2011). Radio frequency radiation emitted from devices has been classified as a possible carcinogen (Hardell 2017). A study released by The National Toxicology Program showed that a study construed on rats found an increased occurrence of glioma in the brain (Hedendahl and Hardell 2015). The risk of RF radiation is increased for children because of the modern concern of lifetime exposure and developing cells are sensitive to said exposure (Obajuluwa et al. 2017).

2. OBJECTIVES

Study the survival of strains of bacteria when introduced to consistent levels of Radiofrequency Electromagnetic radiation

Microbiological cultures of selected bacteria that are commonly found within the vicinity of producers of RF EMR will be introduced to a higher, more consistent level of said radiation and observed to find which strain will have the leading survival rate.

Firstly we must discover the most efficient strains of bacteria that can withstand high amounts of RF EMR. Then gene amplification sequencing can be performed on them to identify the bacteria.

3. IMPACT

After this discovery, future research on how bacteria have evolved to live with high amounts of EMR can take place. This can then reveal the information needed to protect living organisms from the newly discovered dangers of continuous exposure to Radiofrequency Electromagnetic radiation.

4. REFERENCES

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