



Protozoan Response to Intense Magnetic Fields and Forces

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Condition: New. Publisher/Verlag: AV Akademikerverlag | Revision with unchanged content. Paramecium caudatum, a single cell ciliate found in ponds, uses various stimuli, such as light, electric fields, chemical gradients, etc., to direct its motion. However, its response to intense magnetic fields and forces had not been widely investigated due to the ultra-weak magnetic properties of its cell constituents. Large uniform fields, 100,000 times that of Earth's field are needed to alter the swimming of Paramecium. How do the swimming direction and/or rate change in such high fields? In the second part of the book, a novel application of magnetic forces as a gravity simulation technique to study the gravi-sensitivities of cells is introduced. How does Paramecium react to simulated altered gravity? What is the limit of its swimming power in increased gravity? This study introduces the potential of magnetism as a means for biophysical studies. The techniques used in these investigations are applicable to other types of microorganisms and cells beyond the Paramecium. Biologists and physicists researching in the area of gravitational biology, force transduction in cells, and microorganism motility will find this book helpful. | Format: Paperback | Language/Sprache: english | 164 pp.



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