

《Gravity and the beha》

图书基本信息

书名：《Gravity and the behavior of unicellular organisms重力与单细胞生物体行为》

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内容概要

How do single cells recognize gravity and apply their perception to their ecological advantage? This book summarizes historical and current approaches to this basic question. Single cells play a significant role in food webs and also present valuable model systems for studying the mechanisms of gravity perception, a topic of increasing interest in these days of experimentation in space. The book is directed to biologists and other life scientists interested in space sciences, cellular evolution, cell motility, signal transduction and ecophysiology. How do single cells recognize gravity and apply their perception to their ecological advantage? This book summarizes historical and current approaches to these basic questions. Single cells play a significant role in food webs and also present valuable model systems for studying the mechanisms of gravity perception, a topic of increasing interest in these days of experimentation in space. The book is directed to biologists and life scientists interested in space sciences, cellular evolution, cell motility, signal transduction and ecophysiology. Unicellular organisms use gravity as an environmental guide to reach and stay in regions optimal for their growth and reproduction. These single cells play a significant role in food webs and these factors together make the effects of gravity on unicellular organisms a fascinating and important subject for scientific study. In addition, they present valuable model systems for studying the mechanisms of gravity perception, a topic of increasing interest in these days of experimentation in space. This book reveals how single cells achieve the same sensoric capacity as multicellular organisms like plants or animals. It reviews the field, discussing the historical background, ecological significance and related physiology of unicellular organisms, as well as various experimental techniques and models with which to study them. Those working on the biology of unicellular organisms, as well as in related areas of gravitational and space science will find this book of value.

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作者简介

Prof. Dr. Donat-Peter Häder holds the chair in botany at the Friedrich-Alexander Universität. He has been interested in gravitational biology and space research for more than 20 years and was involved in numerous space shuttle, sounding rocket, satellite and parabolic flight experiments. He is the author and editor of more than a dozen books and has published more than 450 papers in scientific journals.

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