

MICROBIOLOGY MONOGRAPHS

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Uncultivated Microorganisms

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Editor

The number of existing microbial species may be in the millions, but only a few thousand have been isolated in pure culture and described. The principal reason for this tremendous disparity is that, mysteriously, over 99% of all environmental microorganisms refuse to grow in the laboratory. The phenomenon of microbial uncultivability has been recognized as one of the main challenges for basic and applied microbiology, and finding a way to access this uncultivated microbial majority may change many aspects of biology and biotechnology as we know them today.

This volume describes the discovery of the phenomenon, the current hypotheses on its physiological and molecular nature, state-of-the-art approaches to "outsmarting" the uncultivated microorganisms, and the importance of the uncultivated microbial majority in medicine and biotechnology. It reveals the hidden universe of uncultivated microorganisms, their unparalleled diversity and enormous potential for application.

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