

The book cover features a vibrant, multi-layered illustration. At the top, a dark, textured surface is covered with numerous small, colorful, glowing spheres in shades of blue, red, and white. Below this, a bright, fiery orange and yellow glow emanates from a central point, surrounded by more colorful particles. The lower half of the cover is dominated by a complex, white, web-like structure that resembles a biological network or a microscopic organism. This structure is set against a dark green background. In the center of this web, there is a large, glowing green sphere containing smaller white and yellow particles, similar to the ones at the top of the cover. The overall composition is dynamic and visually rich, representing the microscopic world of microbiology.

Microbiology

Deependra Solanki

Microbiology

Contents

- Fundamentals of Microbiology
- Microbial Metabolism
- Microbial Growth
- Functional Anatomy of Prokaryotic and Eukaryotic Cells
- Microbial Genetics
- Classification of Micro-organism
- Virus, Viroids and prions
- Non-specific Defence of the Host
- Anti-microbial Drugs
- Microbial Diseases of the Nervous system
- Biotechnology and Recombinant DNA
- Environmental and applied Microbiology
- Applied and Industrial Microbiology



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Dania Publications

S-3, Vishwakarma Nagar-II

Maharani Farm, Durgapura-Jaipur

M.: 80035 02015 | 89528 34490

₹ 1850/-

ISBN 978-81-926550-1-7



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Dania Publications—Jaipur

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ISBN

978-81-926550-1-7

Publisher

Dania Publications

S-3, Vishwakarma Nagar-II,
Maharani Farm, Durgapura Jaipur - 302018

Mob. : 8003502015, 8952834490

E-mail : daniapublications@gmail.com

Edition

2018

Copyrights

writer

Price

₹ 1850/-

Type Setting

Rajeev Kumawat

Printer

Trident Enterprises, Noida

पुस्तक प्रकाशन में पूर्ण सावधानी बरती गई है फिर भी किसी त्रुटि, कमी अथवा लोप रह जाना संभव है। अतः किसी भी त्रुटि, कमी एवं लोप के कारण क्षति अथवा क्लेश के लिए लेखक, प्रकाशक, वितरक अथवा मुद्रक का कोई उत्तरदायित्व नहीं होगा। प्रकाशित शोध आलेखों की समस्त जिम्मेदारी लेखकों की स्वयं की होगी तथा किसी भी विवादास्पद स्थिति में सम्पादक अथवा प्रकाशक उत्तरदायी नहीं होगा।

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Fundamentals of Microbiology

Microbiology 'small', $\alpha\beta\iota\omicron$ (bíos) 'life', and (-logía) 'study of') is the scientific study of microorganisms, those being unicellular (single cell), multicellular (cell colony), or acellular (lacking cells). Microbiology encompasses numerous sub-disciplines including virology, bacteriology, protistology, mycology, immunology, and parasitology.

Eukaryotic microorganisms possess membrane-bound organelles and include fungi and protists, whereas prokaryotic organisms—all of which are microorganisms—are conventionally classified as lacking membrane-bound organelles and include Bacteria and Archaea. Microbiologists traditionally relied on culture, staining, and microscopy. However, less than 1% of the microorganisms present in common environments can be cultured in isolation using current means. Microbiologists often rely on molecular biology tools such as DNA sequence based identification, for example the 16S rRNA gene sequence used for bacteria identification.

Viruses have been variably classified as organisms, as they have been considered either as very simple microorganisms or very complex molecules. Prions, never considered as microorganisms, have been investigated by virologists, however, as the clinical effects traced to them were originally presumed due to chronic viral infections, and virologists took search—discovering “infectious proteins”.