## **Bacterial Membrane Vesicles**

Biogenesis, Functions and Applications

This book focuses on the multitude of functions bacterial membrane vesicles perform in bacterial ecology and pathogenesis as well as in emerging medical and biotechnological applications. Both Gram-negative and Gram-positive bacteria produce membrane-bound nanostructures, known as membrane vesicles, which have a range of functions that include serving as delivery vehicles, providing a means of communication over both spatial and temporal scales, and contributing to bacterial survival and evolution. Topics covered in this book range from the biogenesis and composition of bacterial membrane vesicles to their abundance and biological roles in microbial ecosystems, such as marine environments. In the individual chapters, the involvement of bacterial membrane vesicles in host-pathogen interactions, promoting virulence and in facilitating the establishment of infection is explained. In addition, current knowledge regarding membrane vesicles produced by commensal bacteria and their role in the maturation of the host immune system, as well as the therapeutic potential of bacterial membrane vesicles as delivery systems and innovative nanotechnology-based therapeutics are discussed. This work appeals to a wide readership of students and researchers interested in microbial ecology, mechanism underlying pathogenesis and new avenues in applied microbiology and nanotechnology.



**171,19 €** 159,99 € (zzgl. MwSt.)

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