Many healthcare practitioners understand the role microbiology has within the management of their patients, particularly when this involves wound care and the healing process. However, basic medical and nursing training does not always cover the microbiology of wound care in any great depth.

Essential Microbiology for Wound Care is an indispensable reference aid that covers the key areas and science of microbiology from a point of view relevant to wound care practitioners wishing to enhance their skills.

The Series will provide microbiologists, hygienists, epidemiologists and infectious diseases specialists with well-chosen contributed volumes containing updated information in the areas of basic and applied microbiology involving relevant issues for public health, including bacterial, fungal and parasitic infections, zoonosis and anthropozoonosis, environmental and food microbiology. The increasing threat of the multidrug-resistant microorganisms and the related host immune response, the new strategies for the treatment of biofilm-based, acute and chronic microbial infections, as well as the development of new vaccines and more efficacious antimicrobial drugs to prevent and treat human and animal infections will be also reviewed in this series in the light of the most recent achievements in these fields. Special attention will be devoted to the fast diffusion worldwide of the new findings of the most advanced translational researches carried out in the different fields of microbiological sciences, with the aim to promote a prompt validation and transfer at clinical level of the most promising experimental results.
Infectious diseases constitute a major portion of illnesses worldwide, and microbiology is a main pillar of clinical infectious disease practice. Knowledge of viruses, bacteria, fungi, and parasites is integral to practice in clinical infectious disease. "Practical Medical Microbiology" is an invaluable reference for medical microbiology instructors. Drs. Berkowitz and Jerris are experienced teachers in the fields of infectious diseases and microbiology respectively, and provide expert insight into microorganisms that affect patients, how organisms are related to each other, and how they are isolated and identified in the microbiology laboratory. The text also is designed to provide clinicians the knowledge they need to facilitate communication with the microbiologist in their laboratory. The text takes a systematic approach to medical microbiology, describing taxonomy of human pathogens and consideration of organisms within specific taxonomic groups. The text tackles main clinical infections caused by different organisms, and supplements these descriptions with clinical case studies, in order to demonstrate the effects of various organisms. "Practical Medical Microbiology" is an invaluable resource for students, teachers, and researchers studying clinical microbiology, medical microbiology, infectious diseases, and virology.


Originally published in 1954, this book contains a series of thirteen articles, forming the basis of lectures delivered at the Fourth Symposium of the Society for General Microbiology during that year. The articles investigate the nature of autotrophic micro-organisms and their importance for processes such as maintaining soil fertility. Discussion of micro-organisms which possess a mixture of autotrophic and heterotrophic characteristics is also provided. This book will be of value to anyone with an interest in microbiology, biochemistry and the history of science.
Practical Methods in Predictive Food Microbiology Hardcover – 16 Feb 2016
by Lihan Huang (Author), Andy Hwang (Author)

Product details
Hardcover: 400 pages
Publisher: CRC Press (16 Feb. 2016)
Language: English
ISBN-10: 1482260646

This book introduces comprehensive, up-to-date theories, methods, and practical approaches commonly encountered in predictive food microbiology. It covers the basic science of predictive microbiology and provides hands-on illustrations and techniques of experimental design, data analysis, model development, and practical applications of predictive food microbiology. Basic methods for data analysis, including principles of regression analysis, linear and nonlinear, are showcased as well as the new USDA Integrated Pathogen Modeling Program (IPMP), an all-in-one data analysis and model development suite.

Biosurfactants of Lactic Acid Bacteria 2016 (Springerbriefs in Microbiology)
Paperback – 22 Jan 2016
by Sharma Deepansh (Author), Baljeet Singh Saharan (Author), Shailly Kapil (Author)

Product details
Paperback
Publisher: Springer International Publishing AG (22 Jan. 2016)
Language: English
ISBN-10: 3319262130

This book provides an introduction to biosurfactants produced by lactic acid bacteria, presenting a detailed compilation of their functional properties and structural composition. Microbial surfactants, extensively known as surface-active agents, have created a niche for themselves in the green-chemicals market, thanks to their distinct environment-friendly properties. The demand for biosurfactants in the cosmetics, food, pharmaceuticals, agricultural and environmental industries is steadily growing, and biosurfactants from lactic acid bacteria possess significant biological properties, making them potentially suitable for antimicrobial, anti-adhesive and various other industrially important applications. Exploring these aspects in depth, the book offers a valuable resource for both postgraduate students and researchers in the fields of food and industrial microbiology.
In the last quarter century, advances in mass spectrometry (MS) have been at the forefront of efforts to map complex biological systems including the human metabolome, proteome, and microbiome. All of these developments have allowed MS to become a well-established molecular level technology for microorganism characterization. MS has demonstrated its considerable advantage as a rapid, accurate, and cost-effective method for microorganism identification, compared to conventional phenotypic techniques. In the last several years, applications of MS for microorganism characterization in research, clinical microbiology, counter-bioterrorism, food safety, and environmental monitoring have been documented in thousands of publications. Regulatory bodies in Europe, the US, and elsewhere have approved MS-based assays for infectious disease diagnostics. As of mid-2015, more than 3300 commercial MS systems for microorganism identification have been deployed worldwide in hospitals and clinical labs. While previous work has covered broader approaches in using MS to characterize microorganisms at the species level or above, this book focuses on strain-level and subtyping applications. In twelve individual chapters, innovators, leaders and practitioners in the field from around the world have contributed to a comprehensive overview of current and next-generation approaches for MS-based microbial characterization at the subspecies and strain levels. Chapters include up-to-date reference lists as well as web-links to databases, recommended software, and other useful tools. The emergence of new, antibiotic-resistant strains of human or animal pathogens is of extraordinary concern not only to the scientific and medical communities, but to the general public as well. Developments of novel MS-based assays for rapid identification of strains of antibiotic-resistant microorganisms are reviewed in the book as well. Microbiologists, bioanalytical scientists, infectious disease specialists, clinical laboratory and public health practitioners as well as researchers in universities, hospitals, government labs, and the pharmaceutical and biotechnology industries will find this book to be a timely and valuable resource.
Written by a microbiologist with over two decades of collective experience both teaching and coordinating lab courses, Microbiology: The Laboratory Experience teaches the science behind the labs. It explains, with a uniquely-engaging authorial voice, the reasons behind the methods. Each lab has a thorough introduction that emphasizes the relevant concepts and applications, and is accompanied by an unparalleled visual program. Microbiology: The Laboratory Experience can be used independently or in tandem with either of Norton’s microbiology textbooks—Microbiology: The Human Experience and Microbiology: An Evolving Science—at an unmatched value.

Current and Emerging Technologies in Microbial Diagnostics (Methods in Microbiology) Hardcover – 1 Dec 2015
by Yi-Wei Tang (Editor), Andrew Sails (Editor)

Current and Emerging Technologies in Microbial Diagnostics, the latest volume in the Methods in Microbiology series, provides comprehensive, cutting-edge reviews of current and emerging technologies in the field of clinical microbiology. The book features a wide variety of state-of-the-art methods and techniques for the diagnosis and management of microbial infections, with chapters authored by internationally renowned experts. This volume focuses on current techniques, such as MALDI-TOF mass spectroscopy and molecular diagnostics, along with newly emerging technologies such as host-based diagnostics and next generation sequencing. * Written by recognized leaders and experts in the field* Provides a comprehensive and cutting-edge review of current and emerging technologies in the field of clinical microbiology, including discussions of current techniques such as MALDI-TOF mass spectroscopy and molecular diagnostics* Includes a broad range and breadth of techniques covered* Presents discussions on newly emerging technologies such as host-based diagnostics and next generation sequencing
A broad overview of foodborne infectious diseases, this book covers recent outbreaks, highlighting the food sources and pathogens involved. It also examines foodborne infectious diseases in travelers that are not commonly seen in the United States, outbreak investigation, sources and vehicles of foodborne pathogens as well as diagnosis, treatment, and prevention of foodborne infectious diseases. The authors explore the relationship between antibiotic use in animal food and its effects on human health, and the use of "good bacteria" in food to promote health and treat disease.

This excellent book covers wide-ranging topics in interdisciplinary microbiology, addressing various research aspects and highlighting advanced discoveries and innovations. It presents the fascinating topic of modern biotechnology, including agricultural microbiology, microalgal biotechnology, bio-energy, bioinformatics and metagenomics, environmental microbiology, enzyme technology and marine biology. It presents the most up-to-date areas of microbiology with an emphasis on shedding light on biotechnological advancements and integrating these interdisciplinary microbiology research topics into other biotechnology sub-disciplines. The book raises awareness of the industrial relevance of microbiology, which is key component of this unique collection. The topics include production of antioxidant-glutathione, enzyme-engineering methods, probiotic microbiology and features of microbial xylanases. It also covers some other remarkable aspects of microbiology, like potential health hazards in recreational water and fullerene nanocomposites, which are vital for biotechnological interventions.
Epstein Barr virus (EBV) was discovered as the first human tumor virus around 50 years ago. Since its discovery in Burkitt’s lymphoma it has been associated with various other malignancies, infectious mononucleosis and even autoimmune diseases. The two book volumes on EBV summarize the first 50 years of research on this tumor virus, starting with historical perspectives on discovery, oncogenicity and immune control, reviewing the role that the virus plays in the various associated diseases and concluding with a discussion on how the immune system keeps persistent EBV infection under control in healthy EBV carriers and can be used to treat EBV associated diseases. The respective 32 chapters are written by international experts from three continents for health care providers, biomedical researchers and patients that are affected by EBV. The assembled knowledge should help to understand EBV associated diseases better and to develop EBV specific vaccination in the near future.
Understand the clinically important aspects of microbiology with this full-color review. "Includes more than 20 case studies" The twenty-seventh edition of "Jawetz, Melnick & Adelberg's Medical Microbiology" delivers a concise, up-to-date overview of the roles microorganisms play in human health and illness. Linking fundamental principles with the diagnosis and treatment of microbial infections, this classic text has been updated throughout to reflect the tremendous expansion of medical knowledge afforded by molecular mechanisms, advances in our understanding of microbial pathogenesis, and the discovery of novel pathogens. Along with brief descriptions of each organism, you will find vital perspectives on pathogenesis, diagnostic laboratory tests, clinical findings, treatment, and epidemiology. The book also includes an entire chapter of case studies that focuses on differential diagnosis and management of microbial infections.

Updated to reflect the latest developments in the field, Concise Review of Veterinary Microbiology, 2nd Edition, presents essential information on veterinary microbiology for students and those requiring a refresher on key topics relating to microbial diseases in animals. Morphological, cultural and other descriptive features of pathogenic microorganisms are described, together with their habitats and aetiological roles in disease production in animals and, where appropriate, in the human population.