

Research and Reviews in Clinical Microbiology: Applied Microbiology, Bio-markers and Infectious Disease Diagnosis-A book Review

Venkataramana Kandi*

Microbiology, Member Asian Council for Science Editors (ASCE), Prathima Institute of Medical Sciences,
Karimnagar-505417, Telangana, India

*Corresponding author: ramana_20021@rediffmail.com

Received November 22, 2018; Revised January 08, 2019; Accepted January 17, 2019

Abstract Clinical microbiology is a vast subject that covers a wide range of sub categories that include clinical bacteriology, clinical virology, clinical mycology, and clinical parasitology. The present book is a compilation of both research and review pieces related to the field of applied microbiology, bio-markers and infectious disease diagnosis.

Keywords: clinical microbiology, bio-markers, infectious disease diagnosis

Cite This Article: Venkataramana Kandi, "Research and Reviews in Clinical Microbiology: Applied Microbiology, Bio-markers and Infectious Disease Diagnosis-A book Review." *American Journal of Biomedical Research*, vol. 7, no. 1 (2019): 1-2. doi: 10.12691/ajbr-7-1-1.

1. Book Review

This book contains a systematic compilation of both research and review articles, related to applied microbiology. It reviews the clinical applications of various techniques, procedures, and bio-markers useful for better patient care and management. All the chapters in this book were extensively peer-reviewed.

The chapter one reviews the role of Mantoux test in the diagnosis of tuberculosis. It delineates the historical aspects of Mantoux test, technical expertise in performing the test, the test procedure, and its interpretation. The pictorial representations of the test procedure, reading the results, and the interpretation of the test is a highlight to this chapter.

In chapter two, the author reviews the significance of lower respiratory tract infections (LRTI's). It stresses on the role of clinical microbiology laboratories in the diagnosis and management of LRTI's. The chapter reviews the microbiota of LRTI's, and the importance of the use of antimicrobial agents to treat LRTI's in the era of emergence and re-emergence of newer and existing microbes. Also, it highlights the prevalence and spread of multi-drug resistant microorganisms.

Chapter three elaborates the aetiology, and antimicrobial therapeutic considerations during complicated skin and skin structure infections (cSSSI's). The pictorial representations of the cSSSI's would be very much useful to the readers.

Chapter four reviews the predictors of urinary tract infections, especially among nursing students in India. Chapter five presents the importance of and performance analysis of automated blood culture system in the diagnosis of sepsis. The methodology, and the tabular

representations of the results should be of great interest to the readers.

Chapter six reviews the role of presepsin as a potential diagnostic bio-marker for sepsis. It presents the structure of presepsin in an impressive pictorial representation. It also presents the recent research regarding the utility of presepsin and signifies its importance as a potential bio-marker for sepsis, when compared to the others.

In chapter seven, the authors review the clinical aspects of otogenic brain abscess, and its microbiology. It also presents the clinical manifestations, laboratory diagnosis and the management of otogenic brain abscess. The chapter also uses a real patient case including the pictorial representations in support of the review which can be of great use to the budding clinical microbiologists.

By using an experiment, and with pictorial representations, the chapter eight reviews the role of non-staining techniques in the identification of gram-positive and gram-negative bacteria. Such a representation is unavailable in most of the traditional books.

Chapter nine reviews the role of bacteria in the development and progression of rheumatoid arthritis (RA). The chapter presents the idea of screening for antibacterial antibodies, with special reference to anti-*Proteus* antibodies among the RA patients. The methodology includes an in-house enzyme linked immunosorbent assay (ELISA), presented in detail. The tabular representations of the results are a highlight to the chapter.

In the chapter ten, the author reviews the role of blood agar (BA) in the isolation of *Mycobacterium tuberculosis* (*M. tuberculosis*). The chapter presents the efficacy of BA in comparison to the traditional Lowenstein-Jensen's (LJ) medium in the isolation of *M. tuberculosis*.

Chapter eleven reviews the role of molecular diagnostic methods in patient care. It delineates the status of clinical

microbiology laboratories in the developing financially constrained, and third world nations. Also, the chapter reviews the significance of rapid, accurate laboratory testing, and advanced clinical laboratory testing in the better patient management and care. The flow charts reviewing the clinical microbiology laboratory techniques (both conventional and molecular/advanced methods) for bacterial, fungal, parasitic and viral identification are a highlight to this chapter.

In this era of increased prevalence and spread of antimicrobial drug resistance, there is an urgent need for alternatives. This chapter reviews the role of nanomolecules as antimicrobial agents. It reviews the mode of actions of nanomolecules, and their applications in medicine and research.

The chapter thirteen presents the effect of co-morbidities

on the human immunodeficiency virus (HIV) disease progression among the illicit drug users in the era of highly active antiretroviral therapy (HAART). And, the chapter fourteen reviews the predictors of HIV and tuberculosis co-infection.

Over all this book could be of a great interest to the budding clinical microbiologists with its wide collection of both research and review pieces.

References

- [1] Venkataramana Kandi. Research & Reviews in Clinical Microbiology: Applied Microbiology, Bio-markers and Infectious Disease Diagnosis. 2017, ISBN: 978-620-2-06966-3; Publisher: LAP LAMBERT Academic Publishing. Available online at www.morebooks.de; Amazon.



© The Author(s) 2019. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).