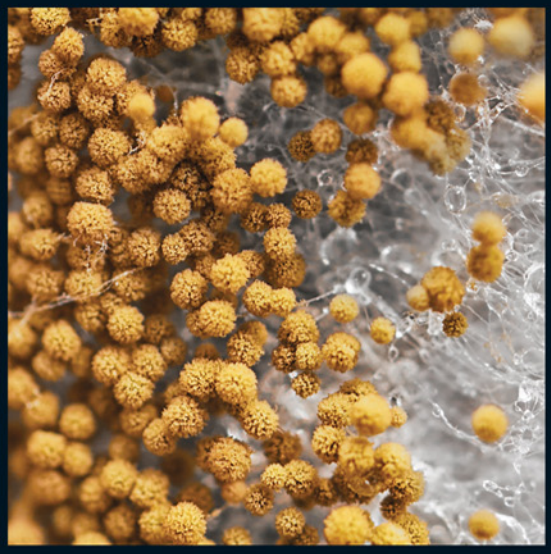
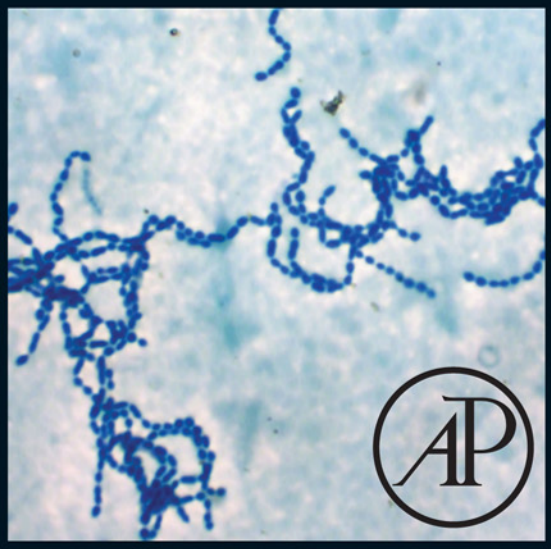


NANOTECHNOLOGY IN DIAGNOSIS, TREATMENT AND PROPHYLAXIS OF INFECTIOUS DISEASES

Edited by Mahendra Rai and Kateryna Kon



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Academic Press is an imprint of Elsevier

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32 Jamestown Road, London NW1 7BY, UK
525 B Street, Suite 1800, San Diego, CA 92101-4495, USA
225 Wyman Street, Waltham, MA 02451, USA
The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK

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ISBN: 978-0-12-801317-5

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library.

Library of Congress Cataloging-in-Publication Data
A catalog record for this book is available from the Library of Congress.

Typeset by MPS Limited, Chennai, India
www.adi-mps.com

Printed and bound in the United States

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Preface

Resistance to antimicrobial agents has been reaching high levels among all types of microorganisms. Bacteria constantly demonstrate growing rates of resistance to classical and newly introduced antibiotics, fungi increase rates of resistance to antimycotics, viruses increase rates of resistance to antiviral agents, and even insect vectors carrying microorganisms have been acquiring the ability to develop resistance to the most common insecticidal agents. Because of this, the efforts of scientists all over the world are being directed to the search for new and effective methods to cope with drug resistance. One promising approach is the application of nanotechnology in the battle against microorganisms.

Nanotechnology is being applied not only to the treatment of infectious diseases but also to diagnostics of infections and to prophylaxis by reducing the number of insecticidal vectors spreading microorganisms. This book discusses the potential of nanotechnology for fighting all common types of infective agents (bacteria, viruses, fungi, protozoa) and their vectors (ticks, mosquitoes, flies, etc.), as well as recent advances in diagnostics of infectious diseases and nanotechnology techniques.

Potential readers include researchers in applied microbiology, biotechnology, pharmacology, nanotechnology, and infection control, students of medical and biological faculties, and clinicians dealing with infectious diseases.

The editors thank Elizabeth Gibson, Editorial Project Manager, Academic Press/ Elsevier S&T Books, Waltham, MA, USA, for her constant help and valuable suggestions, and the contributors for devoting their time to this book.

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