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Criterion 3

Research, Innovations and Extension

3.3

Research Publications and Awards

3.3.2

Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years

3.3 Research Publication and Awards

3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/international conference proceedings per teacher during last five years

B. Copy of the Cover Page, Content page and first page of the publication indicating ISBN number and year of publication for books / chapters

INDEX

Number of Books and Chapters Published During Last Five Years

Sr. No.	Name of the teacher	Title of the book/ chapters published	Year of publication	ISBN/ISSN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher	Page No.
1	Dr. S. V. Patil	Polymeric materials for targeted delivery of bioactive agents and drugs	2018	978-0-08-102194-1	Shree Santkrupa College of Pharmacy, Ghogaon	Elsevier	4-8
2	Dr. S. V. Patil	Application of Lepidium sativum as an Excipient in Pharmaceuticals	2020	978-8-77-022136-8	Shree Santkrupa College of Pharmacy, Ghogaon	River Publishers	9-13
3	Dr. S. V. Patil	Nanostructures for antimicrobial therapy	2021	978-0-12-820569-3	Shree Santkrupa College of Pharmacy, Ghogaon	Elsevier	14-18
4	Mr. P.D. Lade	Practical Handbook of Instrumental Methods of Analysis	2021	978-93-921591-7-6	Shree Santkrupa College of Pharmacy, Ghogaon	Pritam Publications	19-23
5	Dr. J. S. Mulla	Ayurvedic remedies of covid-19	2022	978-81-956220-4-7	Shree Santkrupa College of Pharmacy, Ghogaon	Academic Decipher Press	24-27
6	Dr. J. S. Mulla	Clarithromycin Immediate Release Tablet: Formulation and Process Validation	2022	978-61-389696-2-4	Shree Santkrupa College of Pharmacy, Ghogaon	Scholars' Press	28-31
7	Dr. R. G. Patrakar	Practical Handbook of Herbal Drug Technology	2022	978-93-921596-6-4	Shree Santkrupa College of Pharmacy, Ghogaon	Pritam Publications	32-35
8	Mr. A. M. Kadam	Introduction and Need for Additive Manufacturing	2022	978-1-032-11077-6	Shree Santkrupa College of Pharmacy,	CRC Press, Taylor & Francis	36-39

		in the Medical Industry			Ghogaon	Group	
9	Dr. J. S. Mulla	MCQs on Pharmaceutics 1	2023	978-81-191176-0-4	Shree Santkrupa College of Pharmacy, Ghogaon	Nirali Prakashan	40-43

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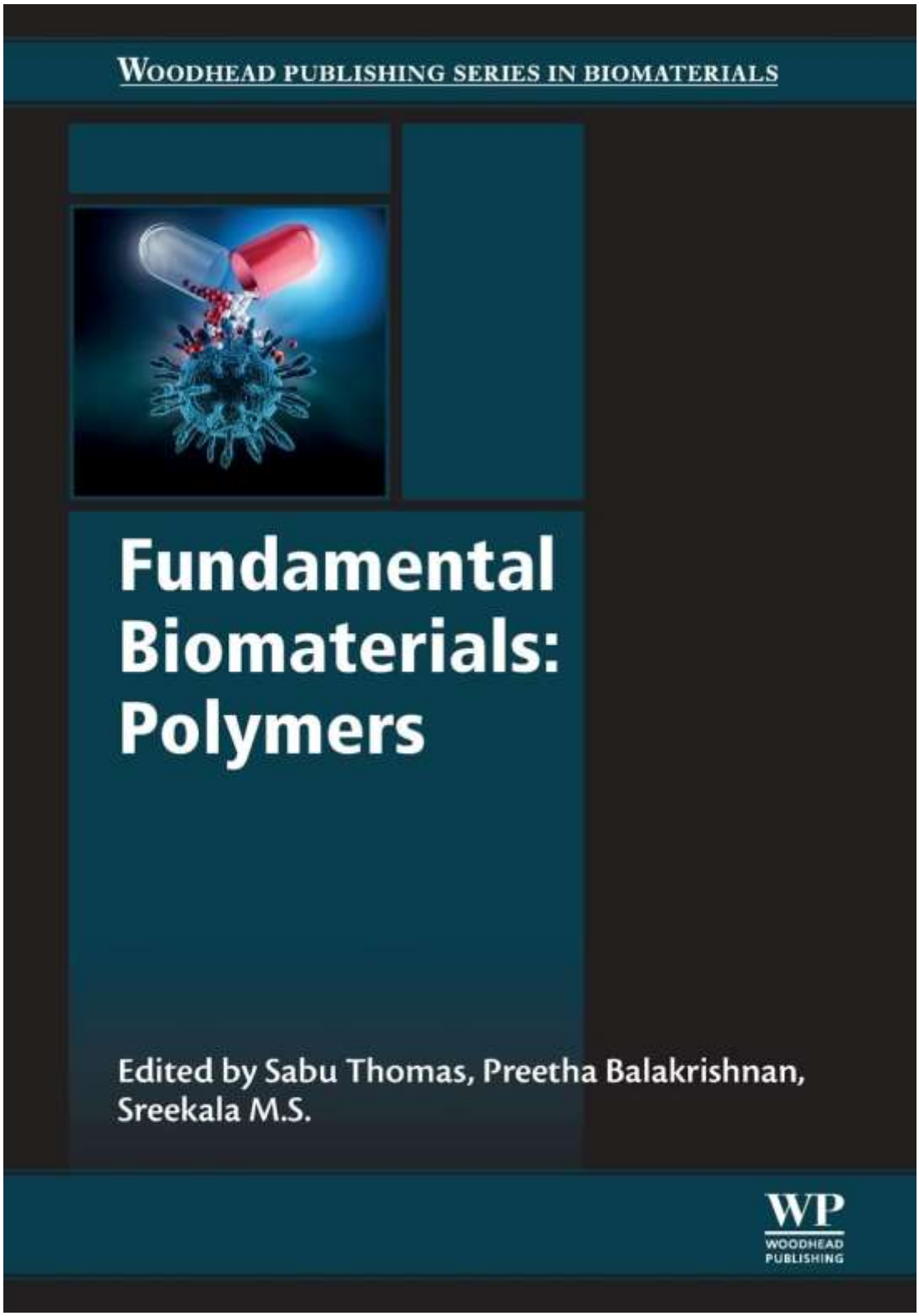
1. Dr. S. V. Patil

Title of the book/ chapters: Polymeric materials for targeted delivery of bioactive agents and drugs



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Polymeric materials for targeted delivery of bioactive agents and drugs

11

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*Shree Santkrupa College of Pharmacy, Karad, India, †Ashokrao Mane College of Pharmacy, Kolhapur, India

Abstract

In recent years, the application of polymeric materials for a targeted drug-delivery system has been greatly advanced. Since polymeric materials played a crucial role in the targeted drug-delivery technology, the selection of such materials is very important in formulation and development. Polymeric materials used as components of the drug-delivery system should not be toxic and must have the desired essential properties required for such developments. Nowadays, research is much focused on the targeted drug-delivery system as it will deliver a medication to the patient with increase in the concentration in some parts of the body relative to others. Thus, such a drug-delivery system is largely founded on polymer-mediated drug delivery in order to combat the downfalls of conventional drug delivery. The selected polymeric material will bind with drugs and target specific parts of the body where there is solely diseased tissue, thereby avoiding interaction with healthy tissue. The aim of a targeted drug-delivery system is to prolong, localize, target, and have a protected drug interaction with the diseased tissue. However, for optimization in the formulation and development of a targeted drug-delivery system, selection of polymeric materials plays a significant role. Various types of polymeric materials were used for the same. Such polymeric materials will be classified as per site of targeting and properties of the polymeric materials. The present chapter intends to focus on various polymeric materials used for targeted delivery of bioactive agents and drugs.

Keywords: Polymeric materials, Targeted drug-delivery system, Bioactive agents and drugs, Drug-delivery system.

11.1 Introduction

A polymer is a large molecule, macromolecule, composed of many repeated subunits. Owing to their broad range of properties, both synthetic and natural polymers play an essential and ubiquitous role in every day of life. The term "polymer" derives from the ancient Greek word (*polus*, meaning "many, much") and (*meros*, meaning "parts"), and refers to a molecule whose structure is composed of multiple repeating units, from which originate a characteristic of high relative molecular mass and attendant properties. The units composing polymers derive, actually or conceptually, from molecules

Fundamental Biomaterials: Polymers. https://doi.org/10.1016/B978-0-08-102194-1.00011-6

Woodhead Publishing is an imprint of Elsevier
The Officers' Mess Business Centre, Royston Road, Duxford, CB22 4QH, United Kingdom
50 Hampshire Street, 5th Floor, Cambridge, MA 02139, United States
The Boulevard, Langford Lane, Kidlington, OX5 1GB, United Kingdom

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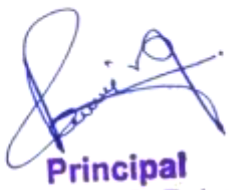
Library of Congress Cataloging-in-Publication Data
A catalog record for this book is available from the Library of Congress

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

ISBN: 978-0-08-102194-1 (print)
ISBN: 978-0-08-102195-8 (online)

Publisher: Matthew Deans
Acquisition Editor: Gwen Jones
Editorial Project Manager: Thomas Van Der Ploeg
Production Project Manager: Sreejith Viswanathan
Cover Designer: Greg Harris

Typeset by SPi Global, India



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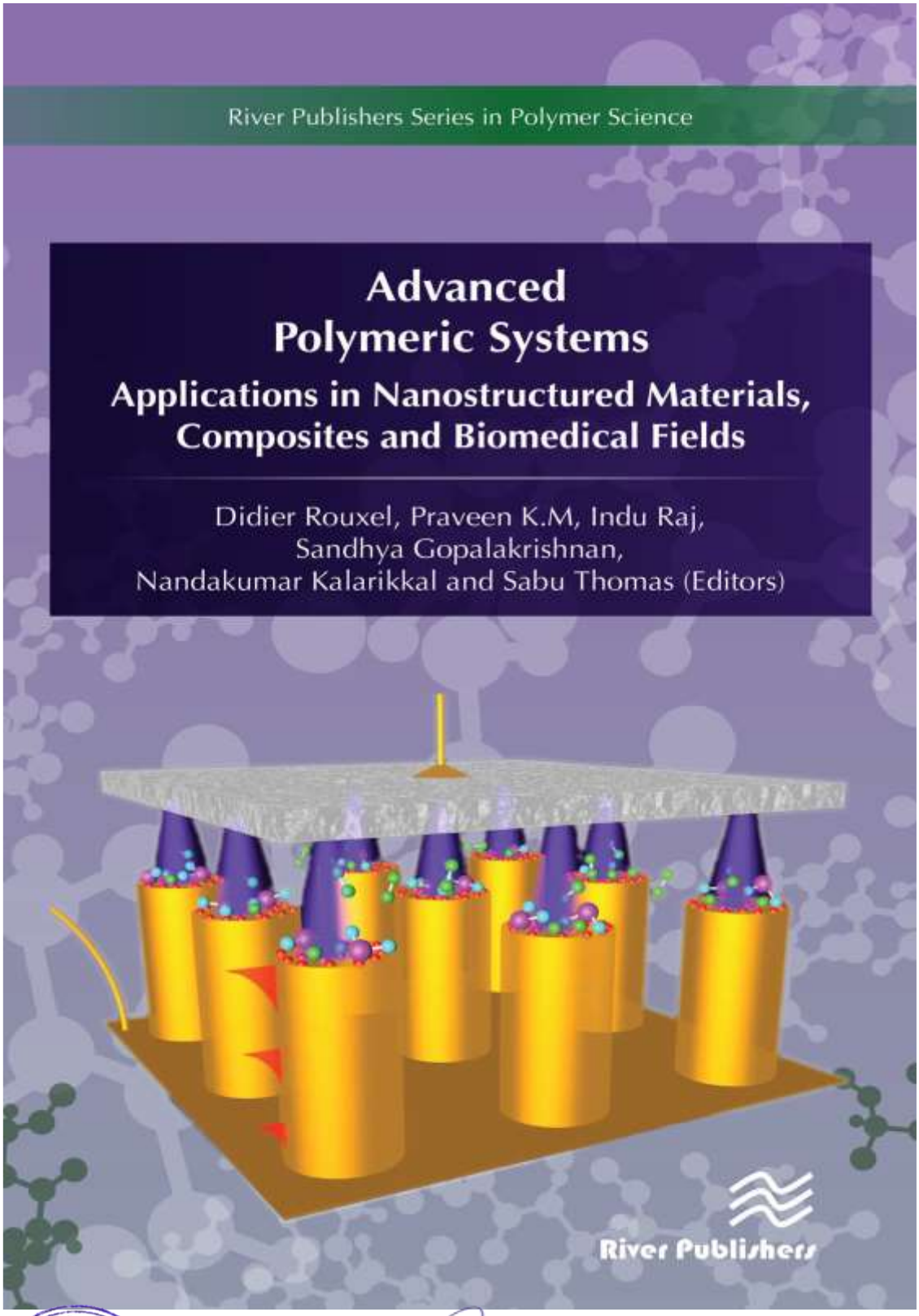

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Application of *Lepidium sativum* as an Excipient in Pharmaceuticals

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Various types of plant mucilage available like alginic acid, gelatin maize starch and potato starch have been used as a binder in pharmaceutical formulation. But still finding a novel binder is useful in the pharmaceutical industry for manufacturing tablets. *Lepidium sativum* was chosen for its binding property. Aspirin and ibuprofen tablets were prepared by wet granulation technique using *Lepidium sativum* as a tablet binder. The prepared tablets were evaluated for physiochemical characteristics, and the binding efficacy of the *Lepidium sativum* was compared with the standard binder mucilage polyvinyl pyrrolidine (PVP) at similar concentration (3% w/w), 27.16° to 28.45°angle of repose and 0.46–0.46% w/w friability 1.2 to 12.03 min disintegration time. Tablets at 3% w/w binder concentration showed more optimum results as tablet binder. *Lepidium sativum* was found to be useful for the preparation of uncoated tablet dosage form. *Lepidium sativum* can be an alternative binder for the pharmaceutical formulations. Abundant availability, food grade status, economic feasibility, commercial suitability and reliability make the mucilage an alternative for the existing synthetic excipients.

Published 2020 by River Publishers
River Publishers
Alsbjergvej 10, 9260 Gistrup, Denmark
www.riverpublishers.com

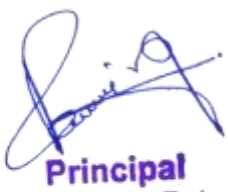
Distributed exclusively by Routledge
4 Park Square, Milton Park, Abingdon, Oxon OX14 4RN
605 Third Avenue, New York, NY 10017, USA

Advanced Polymeric Systems: Applications in Nanostructured Materials, Composites and Biomedical Fields / by Didier Rouxel, K. M. Praveen, Indu Raj, Sandhya Gopalakrishnan, Nandakumar Kalarikkal, Sabu Thomas.

Routledge is an imprint of the Taylor & Francis Group, an informa business

DOI: 10.1201/9781003337058

ISBN 978-87-7022-136-8 (print)



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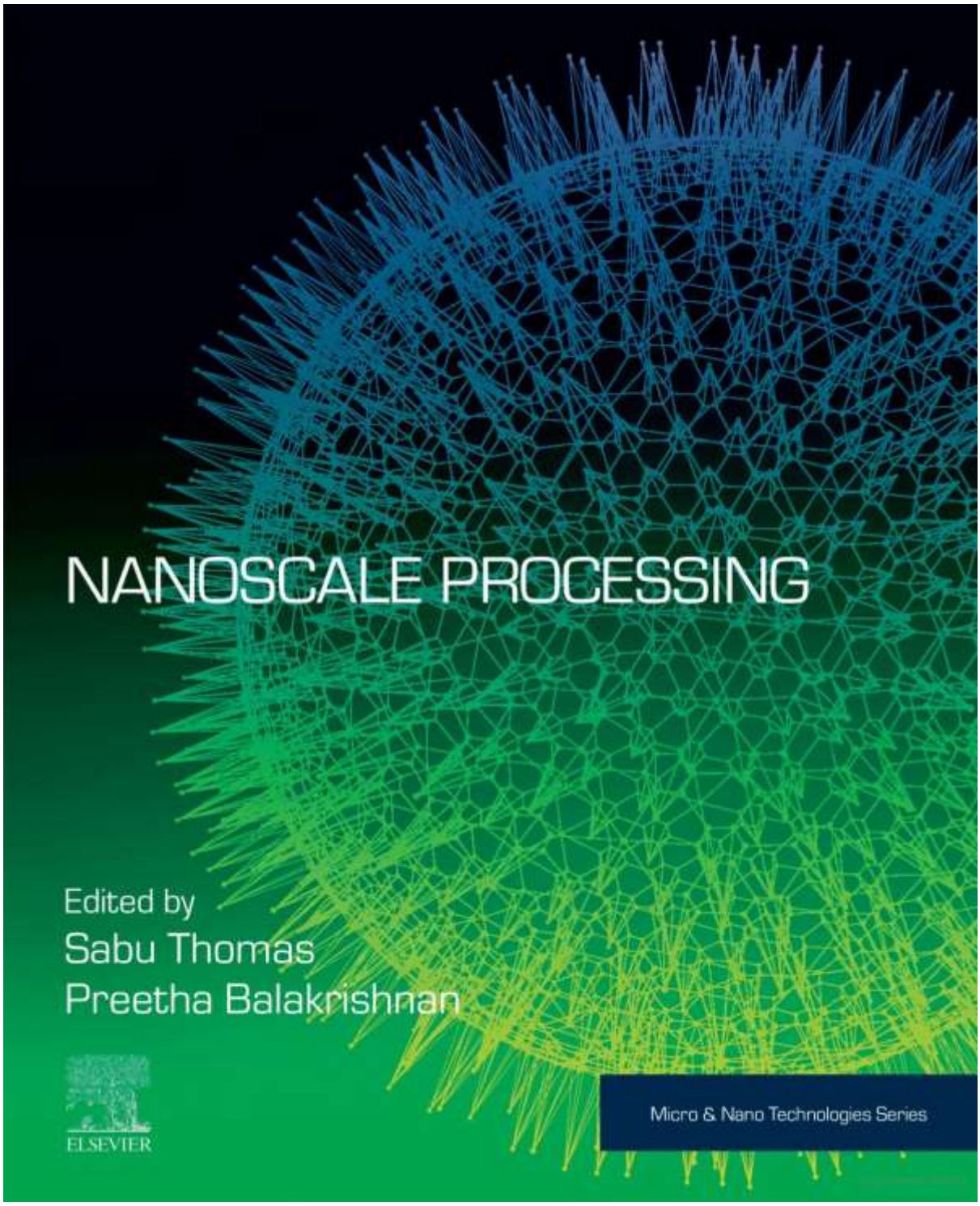

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Nanostructures for antimicrobial therapy 13

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Chapter outline

Nanoscale Processing. https://doi.org/10.1016/B978-0-12-820569-3.00013-X

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Radarweg 29, PO Box 211, 1000 AE Amsterdam, Netherlands
The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, United Kingdom
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Library of Congress Cataloging-in-Publication Data
A catalog record for this book is available from the Library of Congress

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

ISBN: 978-0-12-820569-3

Publisher: Matthew Deans
Acquisitions Editor: Simon Holt
Editorial Project Manager: John Leonard
Production Project Manager: Prasanna Kalyanaraman
Cover Designer: Greg Harris

Typeset by SPi Global, India

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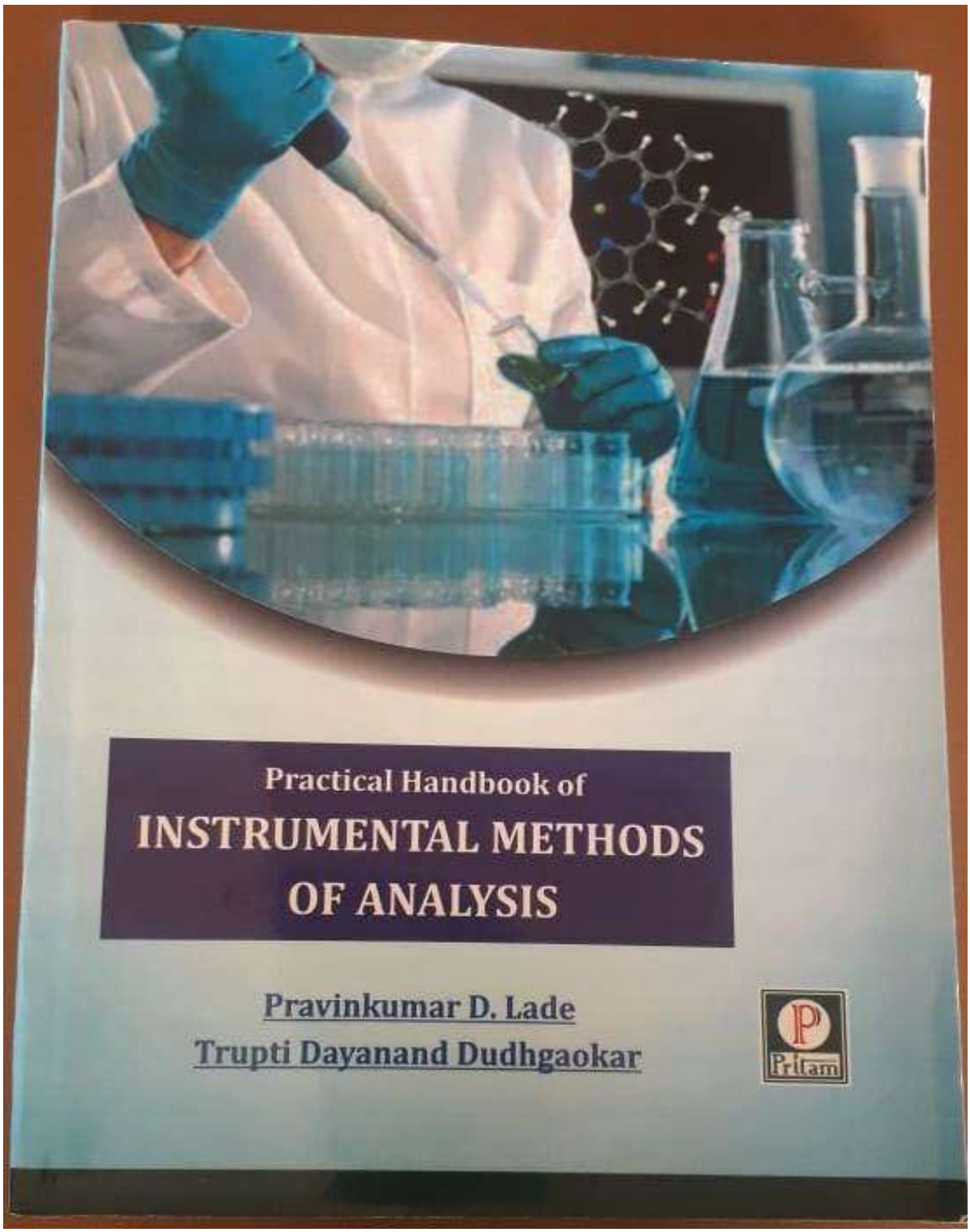
Title of the book/ chapters: Practical Handbook of Instrumental Methods of Analysis



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ISBN 9789392159176
9 789392 159176

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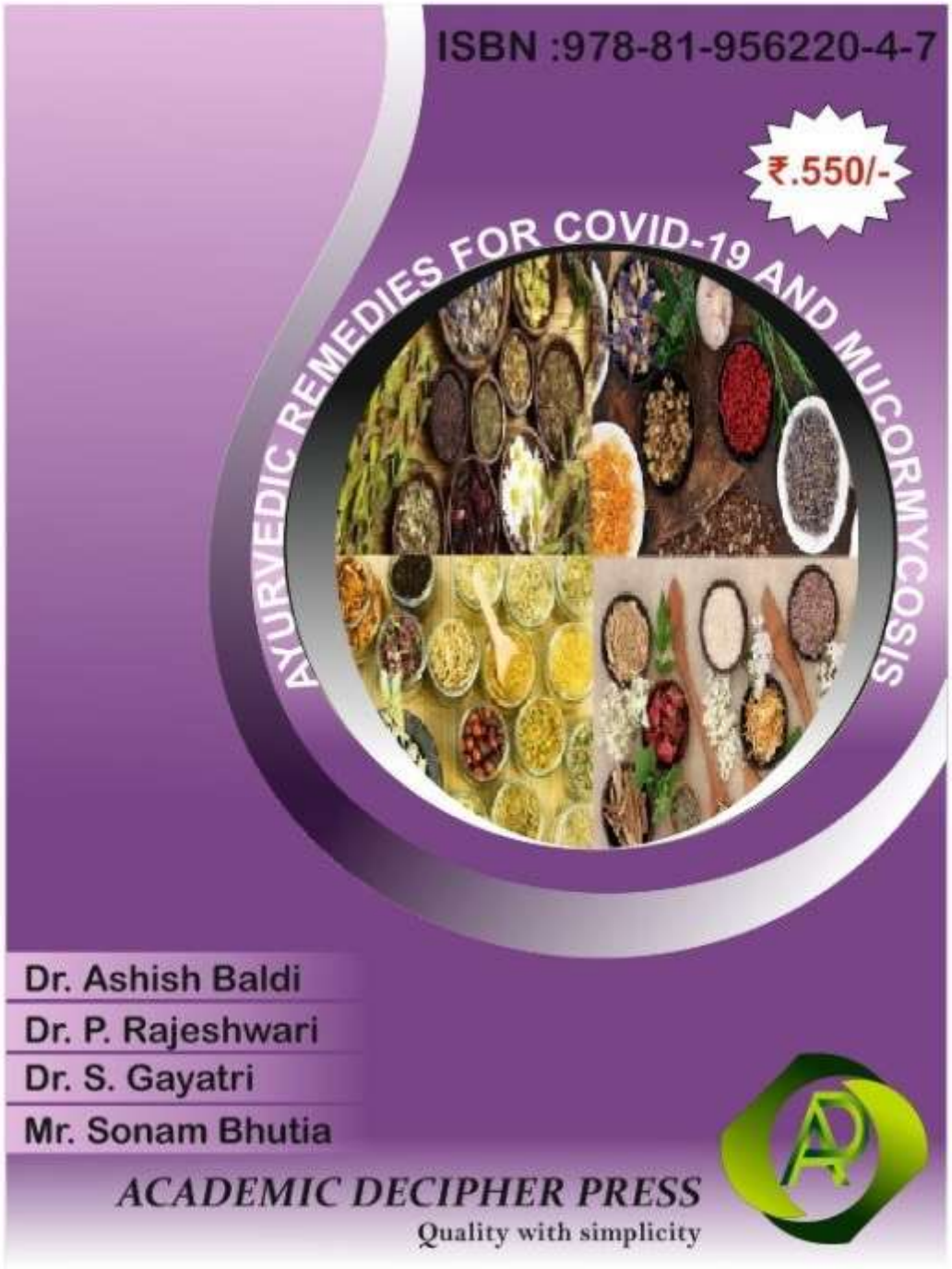
Title of the book/ chapters: Ayurvedic remedies of covid-19



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AYURVEDIC REMEDIES OF COVID-19

Dr. Jameel Ahmed S. Mulla*, Dr. Vijayanand R. Aralelimath ,
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ABSTRACT

COVID-19 has quickly spread across the globe, becoming a pandemic. The main objective of the present study was to prepare Ayurvedic remedies of Covid -19. The novel coronavirus disease 2019 (COVID-19) is a pandemic health emergency, caused by the severe acute respiratory syndrome corona virus-2. COVID 19 the novel coronavirus enters the host cell (Human) through its surface spike proteins and then it attaches to the angiotensin-converting enzyme -2(ACE-2) receptor which is most abundant on the surface of type II alveolar cells of the lungs. The Indian system of holistic medicine is known as "*Ayurveda*". Ayurveda has its origin in two Sanskrit words; Ayuh meaning life and veda meaning knowledge. Ayurveda provides a basic way of living to the people. In day-to-day life, Ayurveda plays an important role in controlling the viral disease SARS-CoV-2 and other health disorders. Ayurveda therapies improve the immunity of humans. Dietary supplements, herbal therapies and herbal medicines could be a complementary preventive therapy for COVID-19(SARS-CoV-2). Some herbs show antiviral activity against coronavirus. Ayurveda has specialties such as treatments, herbs and medicines to recover covid 19: Yoga and Rajayakshma chikitsa, etc (treatments) are discussed. Ashwagandha, Haridra, Guduchi, Tulsi, etc (herbs) used to cure. The study aims to review ancient classical literature and past human treatment protocols of Ayurveda for the prevention and treatment of infectious diseases like COVID-19.

INTRODUCTION

China has reported cases of pneumonia in Wuhan city in late December 2019 [1]. On 11 Feb 2020 World Health Organization (WHO) named pneumonia originated in Wuhan as Coronavirus Disease-2019 (COVID-19) [1,2]. The coronavirus disease (Covid -19) has challenged health care organizations across the globe. The World Health Organization (WHO) is constantly monitoring and updating the information available regarding its spread, mortality, and morbidity. The pathogen coronavirus belongs to a virus family which causes severe acute respiratory syndrome (SARS-Cov-2) [2]. COVID 19 the novel coronavirus enters the host cell (Human) through its surface spike proteins and then it attaches to the angiotensin-converting enzyme -2(ACE-2) receptor which is most abundant on the surface of type II alveolar cells of the lungs [2,3].

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Published by
Academic Decipher Press, Mumbai
Website:https://academicdecipher.in/
WhatsApp No.:7400253569
Email: admin@academicdecipher.in,
academicdecipher.in@gmail.com

Edition: Mar 2022

Price: Rs.550/-

ISBN: 978-81-956220-4-7

Exclusively marketed & distributed by
Academic Decipher Press, Mumbai.
For sale in India and abroad.

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Title of the book/ chapters: Clarithromycin Immediate Release Tablet: Formulation and Process Validation

Ketaki Shinde
R Doijad
J Mulla

Clarithromycin Immediate Release Tablet

Formulation and Process Validation

Scholars' Press

Clarithromycin Immediate Release Tablet

Quality cannot be assured only by doing finished product testing and in-process monitoring; it should be built into the manufacturing process. As a result, quality construction necessitates special attention to a few factors such as material selection, process design, control variables, in-process control, and finished product testing.In this study, three initial batches of Clarithromycin tablets with the same size, method, equipment, and validation criteria were taken. Various critical parameters during dry mixing, wet granulation, drying, lubrication, and compression were identified and evaluated as per the validation protocol. The results of the whole process show that process validation data gives a high level of confidence that the manufacturing process will produce a product that meets its predetermined specification and quality attributes.

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Cover image: www.ingimage.com

Publisher:
Scholars' Press
is a trademark of
Dodo Books Indian Ocean Ltd., member of the OmniScriptum S.R.L Publishing group
str. A.Russo 15, of. 61, Chisinau-2068, Republic of Moldova Europe
Printed at: see last page
ISBN: 978-613-8-96962-4

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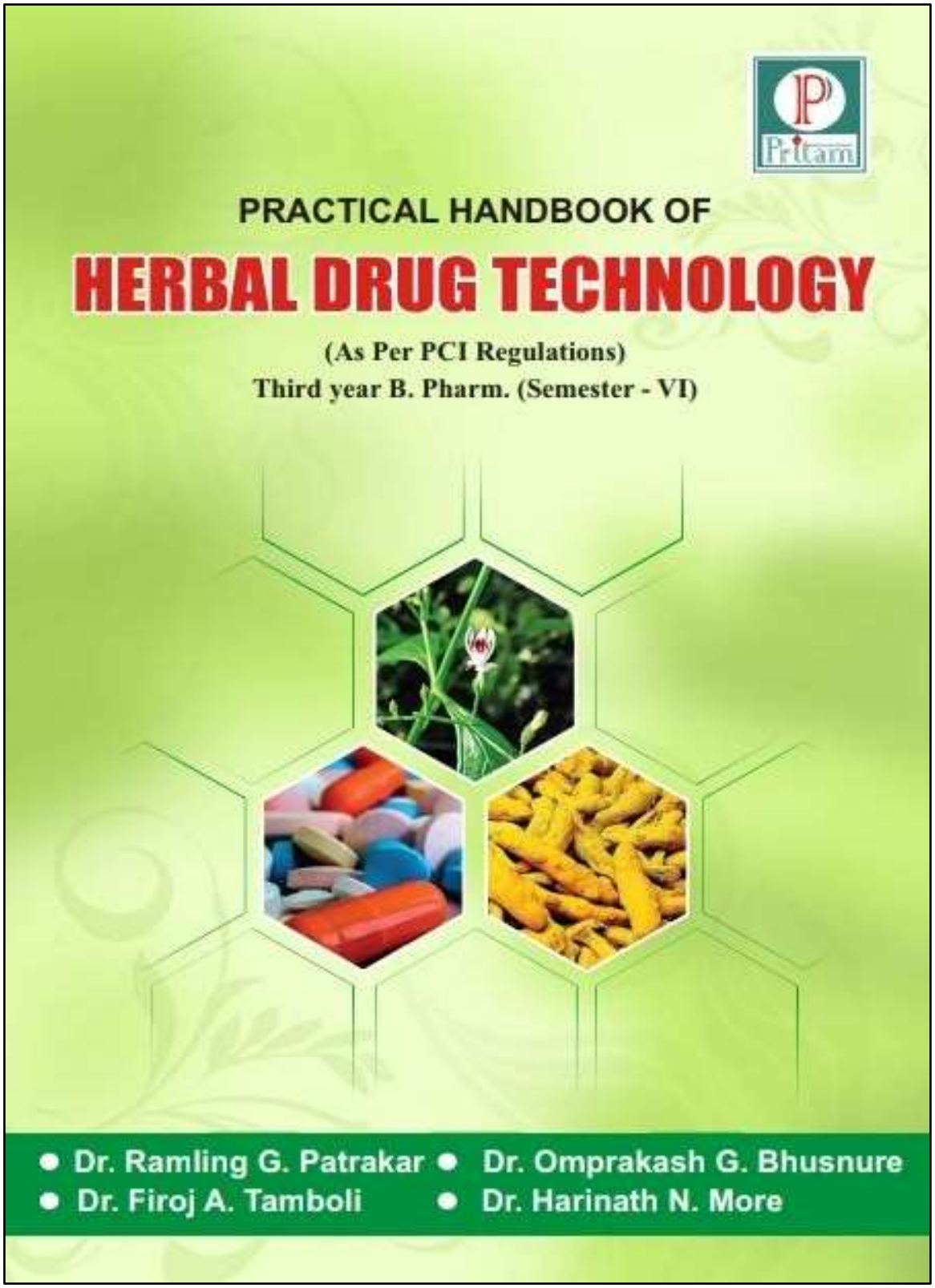

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PRACTICAL HANDBOOK
OF
HERBAL DRUG TECHNOLOGY

(As Per PCI Regulations)

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Pritam Publications
Publisher of Reference and Competitive Exam Books

ISBN 978-93-92159-66-4
9 789392 159664

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Title of the book/ chapters: Introduction and Need for Additive Manufacturing in the Medical Industry

ADDITIVE MANUFACTURING WITH MEDICAL APPLICATIONS

Edited by
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DOI: 10.1201/9781003301066-1

First edition published 2022
by CRC Press
6000 Broken Sound Parkway NW, Suite 300, Boca Raton, FL 33487-2742

and by CRC Press
4 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

CRC Press is an imprint of Taylor & Francis Group, LLC

Library of Congress Cataloging-in-Publication Data
Names: Kumar Banga, Harish, editor.
Title: Additive manufacturing with medical applications / edited by Harish Kumar Banga, Rajesh Kumar, Parveen Kalra, Rajendra M. Belokar.
Description: First edition. | Boca Raton : CRC Press, [2023] | Includes bibliographical references and index.
Identifiers: LCCN 2022003826 (print) | LCCN 2022003827 (ebook) | ISBN 9781032110776 (hbk) | ISBN 9781032293257 (pbk) | ISBN 9781003301066 (ebk)
Subjects: LCSH: Medical instruments and apparatus. | Additive manufacturing.
Classification: LCC R856 .A625 2023 (print) | LCC R856 (ebook) | DDC 610.28/4--dc23/eng/20220401
LC record available at https://lccn.loc.gov/2022003826
LC ebook record available at https://lccn.loc.gov/2022003827

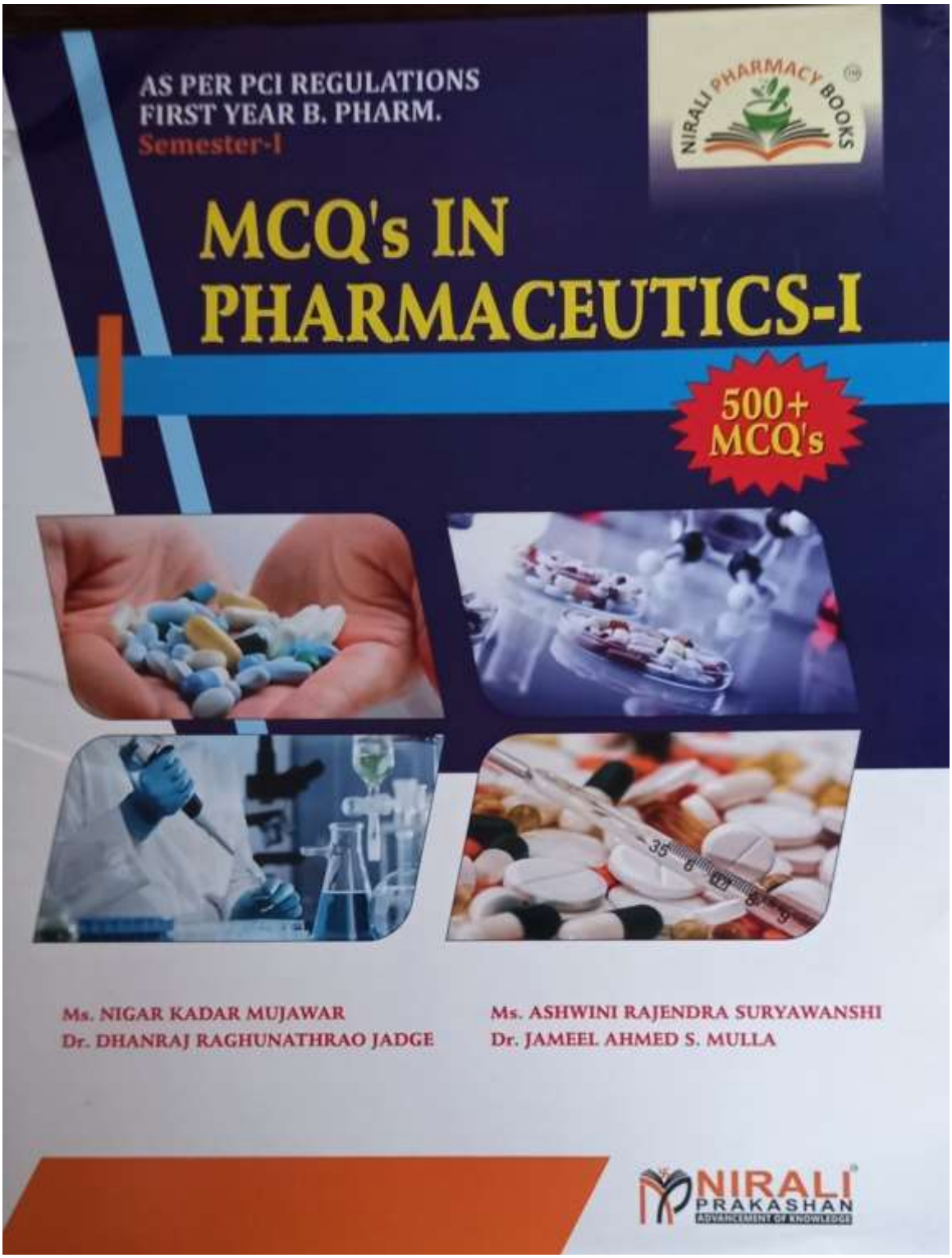
ISBN: 978-1-032-11077-6 (hbk)
ISBN: 978-1-032-29325-7 (pbk)
ISBN: 978-1-003-30106-6 (ebk)

DOI: 10.1201/9781003301066

Typeset in Times
by SPi Technologies India Pvt Ltd (Straive)

9. Dr. J. S. Mulla

Title of the book/ chapters: MCQs on Pharmaceutics-1



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ISBN 978-81-19117-60-4

MCQ's IN PHARMACEUTICS I
First Edition : September 2023

Published By :
NIRALI PRAKASHAN
Abhyudaya Pragati, 1312, Shivaji Nagar,
Off J.M. Road, Pune – 411005
Tel - (020) 25512336/37/39
Email : niralipune@pragationline.com

Polyplate

Printed By :
YOGIRAJ PRINTERS AND BINDERS
Survey No. 10/1A, Ghule Industrial Estate
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Nanded, Pune - 411041

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