

Current Issues in PHARMACY

Qamar Uddin Ahmad



IIUM PRESS
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA



Current Issues in Pharmacy

Editor

Qamar Uddin Ahmed, PhD

Kulliyah of Pharmacy, International Islamic University Malaysia



IIUM Press

Published by:
IIUM Press
International Islamic University Malaysia

First Edition, 2011
©IIUM Press, IIUM

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without any prior written permission of the publisher.

Perpustakaan Negara Malaysia

Cataloguing-in-Publication Data

Qamar Uddin Ahmed: Current Issues in Pharmacy

ISBN: 978-967-418-019-5

Member of Majlis Penerbitan Ilmiah Malaysia – MAPIM
(Malaysian Scholarly Publishing Council)

Printed by :
IIUM PRINTING SDN. BHD.
No. 1, Jalan Industri Batu Caves 1/3
Taman Perindustrian Batu Caves
Batu Caves Centre Point
68100 Batu Caves
Selangor Darul Ehsan

TABLE OF CONTENTS	Page
PREFACE	3
Chapter 1: Issues in Pharmacy Education	
<i>Tariq Abdul Razak</i>	5
Chapter 2: Direct-to-Consumer Advertising in Malaysia: Skirting the Regulations?	
<i>Syahiera Farhana Zakaria; Noordin Othman</i>	15
Chapter 3: Tobacco Control Education in Pharmacy: From Theory to Practice	
<i>Mohamad Haniki Nik Mohamed; Saraswathi Simansalam</i>	25
Chapter 4: Pharmaceutical Promotion: The Theoretical Framework of Regulation	
<i>Noordin Othman; Agnes Vitry; Elizabeth E. Roughead</i>	57
Chapter 5: The Challenge of Pharmaceutical Promotion Regulation in Malaysia	
<i>Noordin Othman; Agnes Vitry; Elizabeth E. Roughead</i>	70
Chapter 6: Innovations in the Delivery of Pharmaceutical Care	
<i>Nurdiana Jamil; Syahiera Farhana Zakaria</i>	88
Chapter 7: Microencapsulation of Gentamicin into PLGA-Chitosan Matrices	
<i>Anas Abdullah Hazim; Ahmad Fahmi Harun Ismail; Mohamed Awang; Farahidah Mohamed</i>	112
Chapter 8: Process Analytical Technology Based Monitoring and Control of Crystal Properties in Pharmaceutical Crystallisation Processes	
<i>Mohd Rushdi Abu Bakar; Zoltan Karman Nagy</i>	129
Chapter 9: Pharmaceutical Application of Solid Dispersion Technology in Improving Solubility of Poorly Soluble Drugs: A Review	
<i>Uttam Kumar Mandal</i>	156

Current Issues in Pharmacy

Chapter 10: Natural Surfactants for Pharmaceutical Emulsions	
<i>Hadi, J. N; Norazian M. Hassan; Kausar Ahmad</i>	178
Chapter 11: The Vascular Protective Effects of Polyphenols	
<i>Juliana Md Jaffri</i>	196
Chapter 12: The Stress and Free Radical towards Disease and Aging	
<i>May Khin Soe</i>	215
Chapter 13: Research and Development on Antidiabetic Herbs: Malaysia Perspective	
<i>Abdul Razak Kasmuri</i>	227
Chapter 14: <i>In Vitro</i> Activities of Malaysian Antidiabetic Plant Extracts on Adipocyte Cells	
<i>Muhammad Taher; Mohamed Zaffar Ali Mohamed Amiroudine; Deny Susanti</i>	238
Chapter 15: Herbs as Antimicrobial Remedies and the Scientific Evidences	
<i>Norazian M. Hassan; Qamar Uddin Ahmed</i>	249
Chapter 16: Phytochemical Screening Expedition 2009: Drug Discovery From Nature	
<i>Siti Zaiton, M. S; Norazian M. Hassan; Shamsul Khamis</i>	274
Chapter 17: Pharmacology, Phytochemistry, and Toxicity of <i>Rhazya Stricta</i> DECNE	
<i>Saifullah Khan; Farmanullah</i>	285
Chapter 18: Effect of Different Growth Regulators on Shoot Proliferation of Garlic (<i>Allium sativum</i> L.)	
<i>Santi Rosana; Retno A. Budi Muljono; Ishak</i>	305
Chapter 19: Metals in Herbal Formulations	
<i>A. B. M. Helal Uddin</i>	320
Chapter 20: Flavonoids: Future Pharmaceutical Agents	
<i>Qamar Uddin Ahmed</i>	333

CHAPTER 13

RESEARCH AND DEVELOPMENT ON ANTIDIABETIC HERBS: MALAYSIA PERSPECTIVE

Abdul Razak Kasmuri

*Department of Basic Medical Sciences, Kulliyah of Pharmacy, International Islamic University
Malaysia, Kuantan, Pahang DM, Malaysia*

Introduction

Malaysian market value for herbal industry was estimated to grow at 10% annually and the total market value of Malaysian herbal industry in 1999 was RM 4.55 billion (Huda et al., 2007; Zainal, 2007). On the other hands, diabetes mellitus (DM) is a major and growing health problem since it is the fourth or fifth leading cause of death in most developed countries (Shafie et al., 2004). In Malaysia, National Health and Morbidity study showed that there was an increase in the prevalence of DM among adults above 30 years old of Peninsular Malaysia from 6.3% in 1986 to 8.8% in 1996 (Chua, 2001). It causes substantial amount of disability, premature mortality, lost of productivity and increased burden on health care budget and facilities.

In clinical reality, despite the introduction of new agents due to vigorous researches, efforts for better management of this disease have been disappointing and the control of blood glucose levels remains unsatisfactory (Nanthan et al., 1996). This leads to increase demand on traditional preparation since people looking for alternatives. Actually, the antidiabetic-claim-preparations were already penetrated the local market and well accepted by the community ly based on anecdotal and folklores claims.