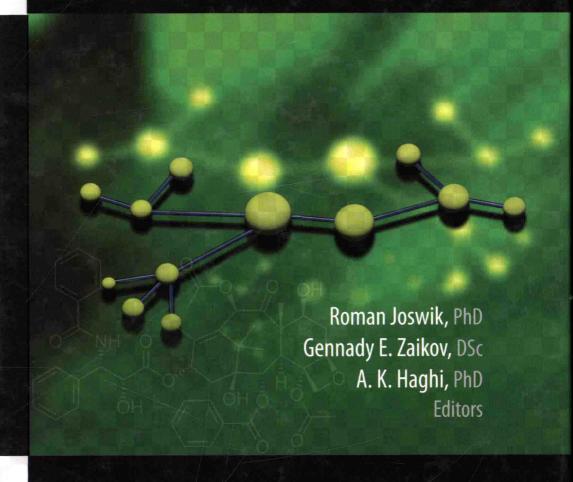
Research Biological Systems





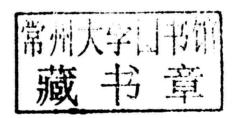


LIFE CHEMISTRY RESEARCH

Biological Systems

Edited by

Roman Joswik, PhD, Gennady E. Zaikov, DSc, and A. K. Haghi, PhD





Apple Academic Press Inc. 3333 Mistwell Crescent Oakville, ON L6L 0A2 Canada

Apple Academic Press Inc. 9 Spinnaker Way Waretown, NJ 08758 USA

©2016 by Apple Academic Press, Inc.

Exclusive worldwide distribution by CRC Press, a member of Taylor & Francis Group

No claim to original U.S. Government works

Printed and bound in Great Britain by TJ International Ltd, Padstow

International Standard Book Number-13: 978-1-77188-068-8 (Hardcover)

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Library and Archives Canada Cataloguing in Publication

Life chemistry research: biological systems / edited by Roman Joswik, PhD, Gennady E. Zaikov, DSc, and A.K. Haghi, PhD.

Includes bibliographical references and index.

ISBN 978-1-77188-068-8 (bound)

1. Chemistry. 2. Biochemistry. 3. Biological systems. I. Haghi, A. K., editor II. Zaikov, G. E. (Gennadiï Efremovich), 1935-, author, editor III. Joswik, Roman, editor

QD31.3.L53 2015

540

C2015-902234-7

Library of Congress Cataloging-in-Publication Data

Life chemistry research: biological systems / Roman Joswik, PhD, Gennady E. Zaikov, DSc, and A.K. Haghi, PhD, editors.

pages cm

Includes bibliographical references and index.

ISBN 978-1-77188-068-8 (alk. paper)

1. Bioremediation. 2. Biology. 3. Chemistry, Organic. I. Joswik, Roman, editor. II. Zaikov,

G. E. (Gennadii Efremovich), 1935- editor. III. Haghi, A. K., editor.

TD192.5.L54 2015

572--dc23

2015011054

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LIST OF ABBREVIATIONS

AD Alzheimer's disease
AFO ankle foot orthotics
AHB alkylhydroxybenzenes
AMS amikacin sulfate
AMS antibiotics - amikacin
BSA bovine serum albumin

CBC cyano-bacterial communities CBT cognitive behavioral therapy

ChTA chitosan acetate

CMC critical micelle concentration
CTD common technical document
EMEA evaluation of medicinal products
EPR electron paramagnetic resonance
ETP electron transport particles

FFA free fatty acids

FSR fragmented sarcoplasmic reticulum

HAS human serum albumin

INNs international non-proprietary names LMWC low molecular weight chitosans

LT longitudinal tubules

MFC minimal fungicidal concentration
MFD minimum fungicidal dilution
MIC minimal inhibitory concentration
MID minimum inhibitory dilution
NMR nuclear magnetic resonance

PD Parkinson's disease PRCA pure red cell aplasia

PRET progressive resisted exercise training

RyR ryanodine receptor

SIRS system inflammatory response syndrome

SR sarcoplasmic reticulum TC terminal cysternaes

TCM traditional chinese medicine TGA therapeutic goods administration

UPSIT University of Pennsylvania Smell Identification Test

LIST OF SYMBOLS

m_{∞}	relative amount of water in equilibrium swelling film sample
k	constant connected with parameters of interaction polymer
n	indicator characterizing the mechanism
$\mathbf{c}_{_0}$	surface concentration
τ	constant of proportionality
τ_{c}	rotational diffusion correlation time
V	volume of the radical
η	dynamic viscosity of the medium
K	Boltzmann constant
T	absolute temperature
n	number of cracks
l	length of a crack
h	depth
D	optical density
α	solubility coefficient

PREFACE

This book, with contributions from many world leaders in the field, is equally appropriate for graduate or research courses in biochemistry. The book has been extensively class-tested and includes tutorials in biology and biochemistry to aid students of varying backgrounds. This exciting new book will be a must-read for years to come for all students and researchers interested in the field of biological chemistry.

This volume also contains experiments related to the content of biological chemistry courses as well as basic/preparatory chemistry courses. These research studies give students an opportunity to go beyond the lectures and words in the textbook to experience the scientific process from which conclusions and theories are drawn.

This book:

- Focuses on fundamental and relevant connections between chemistry and life.
- Elegantly portrays the complementary nature of chemistry and biology.
 By describing biological processes in detailed chemical terms, the authors have provided a resource that provides an unparalleled look into the fascinating and emerging field of chemical biology.
- Satisfies a major need in chemistry curricula, bridging the gap between introductory organic chemistry and biochemistry/biology.
- Delivers need-to-know information in a succinct style for today's students.

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