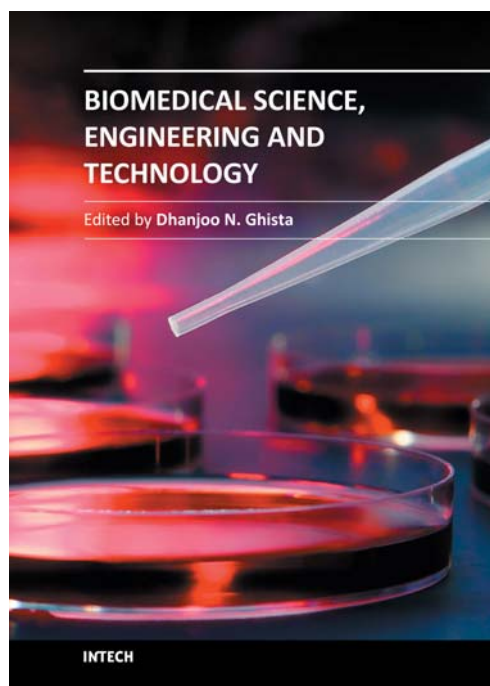


DHANJOO GHISTA (EDITOR) BIOMEDICAL SCIENCE, ENGINEERING AND TECHNOLOGY



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This innovative book integrates the disciplines of biomedical science, biomedical engineering, biotechnology, physiological engineering, and hospital management technology. Herein, Biomedical science covers topics on disease pathways, models and treatment mechanisms, and the roles of red palm oil and phytomedicinal plants in reducing HIV and diabetes complications by enhancing antioxidant activity. Biomedical engineering covers topics of biomaterials (biodegradable polymers and magnetic nanomaterials), coronary stents, contact lenses, modelling of flows through tubes of varying cross-section, heart rate variability analysis of diabetic neuropathy, and EEG analysis in brain function assessment. Biotechnology covers the topics of hydrophobic interaction chromatography, protein scaffolds engineering, liposomes for construction of vaccines, induced pluripotent stem cells to fix genetic diseases by regenerative approaches, polymeric drug conjugates for improving the efficacy of anticancer drugs, and genetic modification of animals for agricultural use. Physiological engineering deals with mathematical modelling of physiological (cardiac, lung ventilation, glucose regulation) systems and formulation of indices for medical assessment (such as cardiac contractility, lung disease status, and diabetes risk). Finally, Hospital management science and technology involves the application of both biomedical engineering and industrial engineering for cost-effective operation of a hospital.

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Table of Contents

Preface.....	ix
Chapter 1 Biomedical Engineering Professional Trail from Anatomy and Physiology to Medicine and Into Hospital Administration: Towards Higher-Order of Translational Medicine and Patient Care <i>Dhanjoo N. Ghista</i>	1
Part 1 Biomedical Science: Disease Pathways, Models and Treatment Mechanisms	49
Chapter 2 Cell Signalling and Pathways Explained in Relation to Music and Musicians <i>John T. Hancock</i>	51

Chapter 3 Chemical Carcinogenesis: Risk Factors, Early Detection and Biomedical Engineering	
<i>John I. Anetor, Gloria O. Anetor, Segun Adeola and Ijeoma Esiaba</i>	69
Chapter 4 AGE/RAGE as a Mediator of Insulin Resistance or Metabolic Syndrome: Another Aspect of Metabolic Memory?	
<i>Hidenori Koyama and Tetsuya Yamamoto</i>	91
Chapter 5 Mitochondria Function in Diabetes – From Health to Pathology – New Perspectives for Treatment of Diabetes-Driven Disorders	
<i>M. Labieniec-Watala, K. Siewiera, S. Gierszewski and C. Watala</i>	123
Chapter 6 Red Palm Oil and Its Antioxidant Potential in Reducing Oxidative Stress in HIV/AIDS and TB Patients	
<i>O. O. Oguntibeju, A. J. Esterhuyse and E. J. Truter</i>	151
Chapter 7 Medical Plant and Human Health	
<i>Ahmed Morsy Ahmed</i>	165
Chapter 8 In Vitro Leukocyte Adhesion in Endothelial Tissue Culture Models Under Flow	
<i>S. Cooper, M. Dick, A. Emmott, P. Jonak, L. Rouleau and R. L. Leask</i>	191
Chapter 9 Pain in Osteoarthritis: Emerging Techniques and Technologies for Its Treatment	
<i>Kingsley Enohumah</i>	209
Part 2 Biomaterials and Implants	223
Chapter 10 Non-Thermal Plasma Surface Modification of Biodegradable Polymers	
<i>N. De Geyter and R. Morent</i>	225
Chapter 11 Poly(Lactic Acid)-Based Biomaterials: Synthesis, Modification and Applications	
<i>Lin Xiao, Bo Wang, Guang Yang and Mario Gauthier</i>	247
Chapter 12 Multifunctional Magnetic Hybrid Nanoparticles as a Nanomedical Platform for Cancer-Targeted Imaging and Therapy	
<i>Husheng Yan, Miao Guo and Keliang Liu</i>	283
Chapter 13 Arterial Mass Transport Behaviour of Drugs from Drug Eluting Stents	
<i>Barry M. O’Connell and Michael T. Walsh</i>	301
Chapter 14 Biosurfactants and Bioemulsifiers Biomedical and Related Applications – Present Status and Future Potentials	
<i>Letizia Fracchia, Massimo Cavallo, Maria Giovanna Martinotti and Ibrahim M. Banat</i>	325
Chapter 15 Contact Lenses Characterization by AFM MFM, and OMF	
<i>Dušan Kojić, Božica Bojović, Dragomir Stamenković, Nikola Jagodić and Đuro Koruga</i>	371
Chapter 16 Synthesis and Characterization of Amorphous and Hybrid Materials Obtained by Sol-Gel Processing for Biomedical Applications	
<i>Catauro Michelina and Bollino Flavia</i>	389
Part 3 Biomedical Engineering	417
Chapter 17 Diabetes Mechanisms, Detection and Complications Monitoring	
<i>D. N. Ghista, U. R. Acharya, K. D. Desai, S. Dittakavi, A. A. Adeneye and L. Kah Meng</i>	419

Chapter 18 Domain-Specific Software Engineering Design for Diabetes Mellitus Study through Gene and Retinopathy Analysis <i>Hua Cao, Deyin Lu and Bahram Khoobehi</i>	447
Chapter 19 A Shape-Factor Method for Modeling Parallel and Axially-Varying Flow in Tubes and Channels of Complex Cross-Section Shapes <i>Mario F. Letelier and Juan S. Stockle</i>	469
Chapter 20 CSA – Clinical Stress Assessment <i>S. Porta, G. W. Desch, H. Gell, K. Pichlkastner, R. Slanic, J. Porta, G. Korisek, M. Ecker and K. Kisters</i>	487
Chapter 21 Neurotechnology and Psychiatric Biomarkers <i>William J. Bosl</i>	511
Chapter 22 Life Support System Virtual Simulators for Mars-500 Ground-Based Experiment <i>E. Kurmazenko, N. Khabarovskiy, G. Kamaletdinova, E. Demin and B. Morukov</i>	535
Chapter 23 Educational Opportunities in BME Specialization – Tradition, Culture and Perspectives <i>M. Wasilewska-Radwanska, E. Augustyniak, R. Tadeusiewicz and P. Augustyniak</i>	559
Part 4 Biotechnology	585
Chapter 24 Poly (L-glutamic acid)-Paclitaxel Conjugates for Cancer Treatment <i>Shuang-Qing Zhang</i>	587
Chapter 25 Hydrophobic Interaction Chromatography: Fundamentals and Applications in Biomedical Engineering <i>Andrea Mahn</i>	603
Chapter 26 Development and Engineering of CS$\alpha$$\beta$ Motif for Biomedical Application <i>Ying-Fang Yang</i>	629
Chapter 27 Application of Liposomes for Construction of Vaccines <i>Jaroslav Turánek, Josef Mašek, Milan Raška and Miroslav Ledvina</i>	653
Chapter 28 iPS Cells: Born-Again Stem Cells for Biomedical Applications <i>Ambrose Jon Williams and Vimal Selvaraj</i>	679
Chapter 29 Genetic Modification of Domestic Animals for Agriculture and Biomedical Applications <i>Cai-Xia Yang and Jason W. Ross</i>	697
Chapter 30 Animal Models of Angiogenesis and Lymphangiogenesis <i>L. D. Jensen, J. Honek, K. Hosaka, P. Rouhi, S. Lim, H. Ji, Z. Cao, E. M. Hedlund, J. Zhang and Y. Cao</i>	727
Chapter 31 Ethical and Legal Considerations in Human Biobanking: Experience of the Infectious Diseases BioBank at King’s College London, UK <i>Zisis Kozlakidis, Robert J. S. Cason, Christine Mant and John Cason</i>	761
Part 5 Physiological Systems Engineering in Medical Assessment	779

Chapter 32 Cardiac Myocardial Disease States Cause Left Ventricular Remodeling with Decreased Contractility and Lead to Heart Failure; Interventions by Coronary Arterial Bypass Grafting and Surgical Ventricular Restoration Can Reverse LV Remodeling with Improved Cont	
<i>D. N. Ghista, L. Zhong, L. P. Chua, G. S. Kassab, Yi Su and Ru San Tan</i>	781
Chapter 33 Renal Physiological Engineering – Optimization Aspects	
<i>David Chee-Eng Ng and Dhanjoo N. Ghista</i>	815
Chapter 34 Lung Ventilation Modeling for Assessment of Lung Status: Detection of Lung Disease and Indication for Extubation of Mechanically-Ventilated COPD Patients	
<i>Dhanjoo N. Ghista, Kah Meng Koh, Rohit Pasam and Yi Su</i>	831
Chapter 35 Physiological Nondimensional Indices in Medical Assessment: For Quantifying Physiological Systems and Analysing Medical Tests’ Data	
<i>Dhanjoo N. Ghista</i>	851