## **Table of Contents**

Assessment of Physiological States of Plants in situ - An Innovative Approach to the use of Electrical Impedance Spectroscopy  Elisabeth Ferreira, Mariana Sequeira, Andre Cortez, Helena Pereira, Tania Pereira, Vania Almeida, Joao Cardoso, Carlos Correia, Teresa Vasconcelos, Isabel Duarte, and Neusa Nazare	1
A Semantic-Based Similarity Measure for Human Druggable Target Proteins  Eduardo Campos dos Santos, Braulio Roberto Goncalves Marinho Couto, Marcelo Matos Santoro, Marcos  Augusto dos Santos, and Julio Cesar Dias Lopes	9
Compression- based Algorithms for Comparing Fragmented Genomic Sequences  Ramez Mina, Dhundy Bastola, and Hesham Ali	15
Controllability of a Model of Treatment Response to Combined Anticancer Therapy  Andrzej Swierniak and Jerzy Klamka	23
Design and Development of an Information System to Manage Clinical Data about Usher Syndrome Based on Conceptual Modeling Veronica Burriel, M. Angeles Pastor, Matilde Celma, J. Carlos Casamayor, and Laura Mota	30
Antinociceptive Activity of ST36 Acupoint Stimulation by Low-Level Light Therapy (LLLT) in mice Vanessa Erthal, Cristine Hatsuko Baggio, Maria Fernanda de Paula Werner, and Percy Nohama	36
Simultaneous Ultrasonic Measurement of Vascular Flow-mediated Dilation and Quantitative Wall Shear Stress for Endothelium Function Assessments  Naotaka Nitta	40
Analyzing Meiotic DSB Interference by Combining Southern Blotting and Microarray Analysis Hiroshi Toyoizumi and Hideo Tsubouchi	44
Modeling Patterns of microRNA:mRNA Regulation Through Utilization of Cryptographic Algorithms  Harry Shaw	48
Chronological Prediction of Certainty in Recall Tests using Markov Models of Eye Movements  Noaya Takahashi and Minoru Nakayama	55
Clustering MicroRNAs from Sequence and Time-Series Expression  Didem Olcer and Hasan Ogul	61
Real-time Visualization of Protein Empty Space with Varying Parameters  Ondrej Strnad, Vilem Sustr, Barbora Kozlikova, and Jiri Sochor	65

Applied Multi-Expert Decision Making Issue Based on Linguistic Models for Prostate Cancer Patients  Hang Zettervall, Elisabeth Rakus-Andersson, and Janusz Frey	71