Shailza Singh Editor

Systems Biology Application in Synthetic Biology



Contents

1	Microbial Chassis Assisting Retrosynthesis	1
2	Computational Proteomics Debasree Sarkar and Sudipto Saha	1 1
3	Design, Principles, Network Architecture and Their Analysis Strategies as Applied to Biological SystemsAhmad Abu Turab Naqvi and Md. Imtaiyaz Hassan	21
4	Structureomics in Systems-Based Drug Discovery Lumbini R. Yadav, Pankaj Thapa, Lipi Das, and Ashok K. Varma	33
5	Biosensors for Metabolic Engineering	53
6	Sustainable Assessment on Using Bacterial Platform to Produce High-Added-Value Products from Berries through Metabolic Engineering Lei Pei and Markus Schmidt	71
7	Hindrances to the Efficient and Stable Expression of Transgenes in Plant Synthetic Biology Approaches	79
8	The New Massive Data: miRnomics and Its Application to Therapeutics	91
9	Microscopy-Based High-Throughput Analysis of Cells Interacting with Nanostructures Raimo Hartmann and Wolfgang J. Parak	99

10	Mathematical Chemodescriptors and Biodescriptors: Background and Their Applications in the Prediction		
	of Bioactivity/Toxicity of Chemicals Subhash C. Basak	117	
11	Epigenetics Moving Towards Systems Biology	149	