

Tentative Outline

Special Thematic Issue for the journal *Combinatorial Chemistry & High Throughput Screening*

Artificial Intelligence on High Throughput Data for Biomedical Research

Guest Editors: Dr. Zhaohui Liang, Dr. Jimmy Huang, Dr. Huiru Zheng

Scope of the Thematic Issue:

This thematic issue aims to publish the leading-edge innovative research on artificial intelligence methods and algorithms to process and analyze high throughput data of biomedicine. It provides an excellent collection of the latest research on bioinformatics and health informatics, particularly on the omics science, bioinformatics, and health informatics. It also serves as a cutting-edge forum to bring together Interdisciplinary scientists from computer science, biology, chemistry, medicine, mathematics and statistics.

Keywords: Big Data, Artificial Intelligence, Machine Learning, Bioinformatics, Health Informatics, High Throughput Data Processing, System Biology

Sub-topics:

The sub-topics to be covered within the issue should be provided:

- Bioinformatics and computational biology of molecular structure, function and evolution
- Innovative method for sequencing and high throughput biomedical data
- Cheminformatics and pharmacogenomics
- AI and machine learning for medical informatics and bioinformatics of disease
- Computational system biology and healthcare informatics

Tentative titles of the articles and list of contributors:

Tentative titles of the articles and list of contributors with their names, designations, addresses and email addresses should be provided.

1. Disease-acupoint correlation based on hierarchical clustering for acupuncture treatment of cervical spondylosis. Ruizhe Chen, Xiaoying Zhong, Linzi Zhang, Xia Qiu, Wu Zhou, Honglai Zhang (School of Medical Information Engineering, Guangzhou University of Chinese Medicine, China), Lin Gu (National Institute of Informatics, Japan), Hongcai Shang (Beijing University of TCM)
2. An approach to calculation and visualization of efficacy of TCM herbal formulae based on a semantic network. Yan Zhua, Yidi Cuia, Bo Gao, Lihong Liu (Institute of Information on TCM, China Academy of Chinese Medical Sciences, China), Junhui Wang (Guang'an Men Hospital, , China Academy of Chinese Medical Sciences, China)
3. Models of Different Sub-health Syndromes Based on Ombination of Tongue, Face, and Interrogation Diagnosis Information: Construction and Validation. Shuai Yang, Ying Xu, Peng Qian, Yuancheng Guo, Xi Guan, Fufeng Li (Laboratory of TCM four Processing, Shanghai University of TCM, China)
4. Research on the Biological Basis of "Different Diseases with Same Syndrome" of TCM Based on Text Big Data and Complex Network. Zhai Xing, Wang Li, Xiu Linlin, Wang Xi, Wang Wei-lu, Pang Xiao-han, Guo Feng-ying. (Supported by National Science Foundation of China (NSFC), #81603499)
5. Big data analysis of TCM after radiotherapy and chemotherapy for breast cancer. Liang Zhou, Lixin Liang, Zhijun Zeng, Huowu Gong.
6. Research on the Acupoint Compatibility Rules of Acupuncture Treatment on Primary Dysmenorrhea Based on Apriori Algorithm. Yu Liu, Houwu Gong, Shaohua Chen, Heng Chen.
7. Complex time network excavates the hidden combination of prescriptions in TCM. Chen Yan, Yu Xingwen, Wang Huimin, Shao Rongqiang, Hu Kongfa, Gong Qingyue.

8. An E-nose and Convolution Neural Network based Recognition Products of *Crataegi Frictus*. Tianshu Wang, Yanping Chao, Fangzhou Yin, Xichen Yang, Chenjun Hu. Kongfa Hu.
9. Identifying and Segmenting Cells of TCM using Deep Learning Methods. Jing Liu, Huifen Li, Xuelan Zhang, Hui Cao, Yibo Feng, Dawei Qiu. (Shangdong University of Traditional Chinese Medicine)
10. Research on the Mechanism of *Radix Adenophorae* Based on Data Mining Method. Chenjun Hu, Liu Li, Jiadong Xie, Tianshu Wang, Youwei Ding, GangLei Shen, Ju He, Yue Li, Kongfa Hu, Fang Ye.

More submission will be invited from the University of Sydney, University of Toronto, Hong Kong Baptist University, and the universities and colleges in North America

Schedule:

- ✧ Thematic issue submission deadline: 30 April 2020
- ✧ Acceptance Notification: 31 July 2020

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