WANG Chao

+86-13049863653 +852-34112940 wangchao@hkbu.edu.hk
Postdoctoral Research Fellow ORCID: 0000-0002-1674-3111
School of Chinese Medicine, Hong Kong Baptist University
RM SCM601, School of Chinese Medicine BLDG, HKBU

Education

Jun 2015 Sep 2007	**South China University of Technology** •School of Bioscience and Bioengineering Fermentation Engineering •Doctor of Engineering
Jun 2006 Sep 2002	**Henan Agricultural University** •College of Biotechnology and Food Science Biotechnology •Bachelor of Science

Work & Research Experiences

Present Oct 2015	**School of Chinese Medicine, HKBU** •HONG KONG Position: Postdoctoral Research Fellow •Main Duties: Combinatorial gene regulation in controlling gene expression noise & Tumor cell-targeted delivery system by lipopolymer
Sep 2015 Jan 2014	**Department of Computer Science, HKBU** •HONG KONG Position: Senior Research Assistant •Main Duties: Development of gene regulatory model framework and genetic function analyses
Dec 2013 May 2012	**BGI Genomics** •SHEN ZHEN Position: R&D intern •Main Duties: Assembly and annotation of single genome base on meta-genomics sequencing data

Ongoing & Finished Projects

- **基于单分子荧光成像定位技术的基因转录组合调控下噪声发生的分子机制研究**
  - Natural Science Fund of Guangdong Province, China | Ongoing
  - Institution: HKBU Shenzhen Institute of Research and Continuing Education, Shenzhen
  - Role: Principal Investigator
- **A mechanistic study on role of combinatorial gene regulation in controlling gene expression noise through direct observation on the transcriptional activities in single cells**
  - General Research Fund - Hong Kong University Grants Committee | Ongoing
  - Institution: Hong Kong Baptist University, Hong Kong
  - Role: Principal Participant
- **通过超高分辨率荧光成像技术研究细胞基因转录噪声组合调控的分子机制**
  - National Natural Science Foundation of China (General Program) | Ongoing
  - Institution: HKBU Shenzhen Institute of Research and Continuing Education, Shenzhen
  - Role: Principal Participant
- **基于 *lasso* 的 14-3-3 蛋白家族配体亲和力预测及其应用研究**
  - Shenzhen Basic Research Program | Ongoing
  - Institution: Shenzhen Institute of Information Technology, Shenzhen
  - Role: Principal Participant
- **丝状真菌蛋白分泌途径中内质网压力反馈机制的研究**
  - National Natural Science Foundation of China (General Program) | Finished
  - Institution: South China University of Technology

  - Role: Participant
- **菌核发育与黄曲霉毒素生物合成关联机理的转录组分析**
  - National Natural Science Foundation of China (General Program) | Finished
  - Institution：South China University of Technology
  - Role: Participant

Research Achievements

Research Articles

- Debajyoti Chowdhury*, Chao Wang*, Aiping Lu, Hailong Zhu, **Identifying Transcription Factor Combinations to Modulate Circadian Rhythms by Leveraging Virtual Knockouts on Transcription Networks**, *iScience*, Volume 23, Issue 9, 25 Sep 2020, [Research article, co-first author, impact factor: 4.447]
  https://doi.org/10.1016/j.isci.2020.101490
- Ying Fan, Xiaojun Wang, Chao Wang*, **Inference of phosphopeptide binding affinity from 14-3-3s byQSAR-based prediction**, *Computational Biology and Chemistry*, [Under revision, corresponding author, impact factor: 1.850]
- Debajyoti Chowdhury*, Chao Wang*, Aiping Lu, Hailong Zhu, **Understanding Quantitative Circadian Regulations Are Crucial Towards Advancing Chronotherapy**, *MDPI Cells*, 2019, 8(8), 883 [Review, co-first author, impact factor: 5.656]
  https://doi.org/10.3390/cells8080883
- Chao Liang*, Fangfei Li*, Luyao Wang*, Zongkang Zhang*, Chao Wang*, Bing He, Jie Li, Zhihao Chen, Atik Badshah Shaikh, Jin Liu, Xiaohao Wu, Songlin Peng, Lei Dang, Baosheng Guo, Xiaojuan He, D.W.T. Au, Cheng Lu, Hailong Zhu, Bao-Ting Zhang, Aiping Lu, Ge Zhang, **Tumor cell-targeted delivery of CRISPR/Cas9 by aptamer-functionalized lipopolymer for therapeutic genome editing of VEGFA in osteosarcoma**, *Biomaterials*, Volume 147, 13 September 2017, Pages 68-85 [Research article, co-first author, impact factor: 10.273]
  https://doi.org/10.1016/j.biomaterials.2017.09.015
- Bin Yan*, Daogang Guan*, Chao Wang, Junwen Wang, Bing He, Jing Qin, Kenneth R. Boheler, Aiping Lu, Ge Zhang, Hailong Zhu, **An integrative method to decode regulatory logics in gene transcription**, *Nature Communications*, Volume 8, Article number: 1044 (2017) [Research article, impact factor: 11.880]
  https://doi.org/10.1038/s41467-017-01193-0
- Luyao Wang, Fangfei Li, Lei Dang, Chao Liang, Chao Wang, Bing He, Jin Liu, Defang Li, Xiaohao Wu, Xuegong Xu, Aiping Lu, Ge Zhang, **In Vivo Delivery Systems for Therapeutic Genome Editing**, *International Journal of Molecular Sciences* , 2016, 17(5), 626 [Review, impact factor: 4.183]
  https://doi.org/10.3390/ijms17050626
- Chao Wang, Yangyong Lv, Bin Wang, Chao Yin, Ying Lin, Li Pan, **Survey of protein-DNA interactions in Aspergillus oryzae on a genomic scale**, *Nucleic Acids Research*, Volume 43, Issue 9, 19 May 2015, Pages 4429–4446 [Research article, first author, impact factor: 11.147]
  https://doi.org/10.1093/nar/gkv334
- Bin Zhou*, Chao Wang*, Bin Wang, Xiupeng Li, Jing Xiao, Li Pan, **Identification of functional cis-elements required for repression of the Taka-amylase A gene under secretion stress in Aspergillus oryzae**, *Biotechnology Letters*, Volume 37, Issue 2, 04 October 2014, Pages 333-341 [Research article, co-first author, impact factor: 1.847]
  https://doi.org/10.1007/s10529-014-1691-2
- Bin Wang*, Guangwu Guo*, Chao Wang, Ying Lin, Xiaoning Wang, Mouming Zhao, Yong Guo, Minghui He, Yong Zhang, Li Pan, **Survey of the transcriptome of Aspergillus oryzae via massively parallel mRNA sequencing**, *Nucleic Acids Research*, Volume 38, Issue 15, 01 August 2010, Pages 5075-5087 [Research article, impact factor: 11.147]
  https://doi.org/10.1093/nar/gkq256

- 王超, 韩璐, 潘力, **无机离子和非离子表面活性剂对酸性纤维素酶活性的影响**, 现代食品科技, 2009 年第 2 期, 页 152-156
  文章编号：1673-9078(2009)02-0152-05
- 陈红梅, 李方方, 潘力, 杨慧林, 王超, **米曲霉沪酿 3042 制曲过程中碱性蛋白酶的表达分析**, 中国酿造, 2008 年第 10 期, 页 62-63,74
  文章编号：0254-5071(2008)19-0062-02

Conference Papers and Abstracts

- Ying Fan, Xiaojun Wang, Chao Wang*, **Building Random Forest QSAR Models for Affinity Identification of 14-3-3 ζ with Optimized Parameters**, *Association for Computing Machinery*, [Conference paper, corresponding author]
  2020 9th International Conference on Bioinformatics and Biomedical Science, Xiamen, China
  https://doi.org/10.1145/3431943.3431951
- Ying Fan, Xiaojun Wang, Chao Wang*, **Utilizing QSAR models for the affinity prediction of the phosphopeptide sequence against 14-3-3s**, *Basic & Clinical Pharmacology & Toxicology*, Volume 127, Issue S3, 02 Nov 2020, [Conference abstract, corresponding author, impact factor: 2.651]
  2020 International Conference on Biomedical Engineering, Bioinformatics and Health Science, Virtual
  https://doi.org/10.1111/bcpt.13494
- Debajyoti Chowdhury*, Chao Wang*, Aiping Lu, Hailong Zhu, **Quantitatively decoding the circadian transcriptional regulations: an advanced approach in sleep medicine**, *Sleep Medicine*, Volume 64, Supplement 1, 16 Dec 2019, Page S74 [Conference abstract, co-first author, impact factor: 3.038]
  2019 15th World Sleep Congress in Vancouver, Canada
  https://doi.org/10.1016/j.sleep.2019.11.205

Patent

- 潘力,王超, 周斌, **丝状真菌蛋白分泌压力反馈调控原件与抗反馈抑制的启动子、质粒及制备方法和转化细胞**, 2015 年, 国家发明专利
  授权号：CN103275981B

Technical Skillset

OS	Linux （>10 years） macOS（9 years） Windows (> 10 years)
Programming	Python, Perl, R, Matlab, sed, awk, *etc.*
Tools	LaTeX, SSH, Git, Vim, Xshell, Notepad++, PyCharm, Jupyter, *etc.*
Data Viz	ggplot2, Cytoscape, Tableau, D3.js, Google Chart, *etc.*
Web Dev	JavaScript, Django, Bootstrap, HTML, Nginx, MySQL, Shiny, *etc.*
Bioinfor	BEDTools, Samtools, Interproscan, *etc.*

Awards

2020	Best oral presentation@2020 9th International Conference on Bioinformatics and Biomedical Science
2018	The 2nd Place Winner, China-US Young Maker Competition (Shenzhen Division)
2018	The 3rd Place Winner, Community Entrepreneurs Cup, Guangdong Entrepreneurship and Innovation Competition