### **GUANGCHUANG YU**

Professor of Bioinformatics at Southern Medical University. I have developed more than 20 R packages, including clusterProfiler, ChIPseeker, treeio and ggtree.

I am broadly interested in bioinformatics, metagenomics, molecular evolution, data integration and visualization.



#### **EDUCATION**

2017 2013

#### PhD., Bioinformaitcs

The University of Hong Kong

OHONG Kong, CN

· Thesis: Big-data computational methods for studying molecular evolution: from accurate genome assembly to phylogenetic analysis and data integration

2009 2006

#### M.S., Biochemistry and Molecular Biology

Anhui Medical University

• Hefei, CN

·Thesis: miRNA靶基因计算分析新方法及其应用研究

2005

B.S., Biotechnology Southern Medical University

Q Guangzhou, CN

2001 2018

南方医科大学高层次人才"不忘初心 牢记使命"学习教育

延安干部培训学院

• Yan'an, CN

2015

**Train the Trainers** 

Institut Pasteur

Paris, FR



#### CERTIFICATE

2015

#### Certificate of Teaching and Learning in Higher Education

Centre for Enhancement of Teaching and Learning

♦ The University of Hong Kong



#### RESEARCH EXPERIENCE

2026 2018 **Professor** 

School of Basic Medical Sciences

Southern Medical University

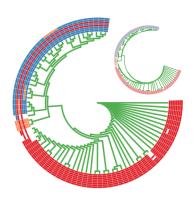
· Associate director of Institute of Bioinformatics

2018 2017

#### Post-doctoral Fellow

State Key Laboratory of Infectious Diseases

♦ The University of Hong Kong



#### CONTACT

- guangchuangyu@gmail.com
- y guangchuangyu
- github.com/GuangchuangYu
- guangchuangyu.github.io
- **%** biobabble
- **J** (86) 13826432521

#### SKILLS

Highly experienced in

- · ggplot2

Experience with

- · Linux
- · Bash
- · C++

·JAVA

Bioinformatician 2013 Key Laboratory of Functional Protein Research of Guangdong Higher 2009 **Education Institutes ♥** Jinan University ♣☐ TEACHING EXPERIENCE BMB209: Workshops in Applied Bioinformatics 2019 Department of Biochemistry and Molecular Biology • University of Southern Denmark · PhD level class, invited lecture 生物信息学科研训练 Southern Medical University School of Basic Medical Sciences · Undergraduate level class 基因组学 Southern Medical University School of Basic Medical Sciences · Undergraduate level class 基础医学新进展讲座 Southern Medical University School of Basic Medical Sciences · Undergraduate level class 2012 功能蛋白质研究 **♥** Jinan University College of Life Science and Technology 2011 · Graduate level class GRANTS 南方医科大学第三层次人才引进科研项目(G618289088) 2020 PI, CNY ¥1,500,000 2018 hnRNPK蛋白在调控人肺癌细胞周期胞质分裂中的作用研究 (21613414) 2013 PI, CNY ¥100,000, 中央高校基本科研业务费专项资金 Hela细胞周期动态蛋白质组学分析 (21611303) 2011 PI, CNY ¥20,000, 中央高校基本科研业务费专项资金

#### **BOOKS**

2012

#### 生物信息学II

《**功能蛋白质研究**》. 385-425. 何庆瑜(主编), 科学出版社("十二五"国家重 点图书出版规划项目)

·余光创



#### **PUBLICATIONS**

2018

Two methods for mapping and visualizing associated data on phylogeny using ggtree

Molecular Biology and Evolution. 2018, 35(12):3041-3043.

- · G Yu\*, TTY Lam, H Zhu, Y Guan\*
- · Impact Factor = 14.797

### Using meshes for MeSH term enrichment and semantic analyses

Bioinformatics. 2018, 34(21):3766-3767.

· G Yu

2017

ggtree: an R package for visualization and annotation of phylogenetic trees with their covariates and other associated data

Methods in Ecology and Evolution. 2017, 8(1):28-36

- · G Yu, DK Smith, H Zhu, Y Guan, TTY Lam\*
- · ♥ ESI Highly Cited Paper

2016

ReactomePA: an R/Bioconductor package for reactome pathway analysis and visualization

Molecular BioSystems. 2016, 12(2):477-479

- · G Yu, QY He\*
- · ₹ ESI Highly Cited Paper

Integrated Translatomics with Proteomics to Identify Novel Iron-Transporting Proteins in Streptococcus pneumoniae

Frontiers in Microbiology. 2016, 7:78

· XY Yang, K He, G Du, X Wu, G Yu, Y Pan, G Zhang\*, X Sun\*, QY He\*

Genetic characterization of highly pathogenic H<sub>5</sub> influenza viruses from poultry in Taiwan, 2015

Infection, Genetics and Evolution. 2016, 38:96-100

· PY Huang, CCD Lee, CH Yip, CL Cheung, G Yu, TTY Lam, DK Smith, H Zhu\*, Y Guan\*

ChIPseeker: an R/Bioconductor package for ChIP peak annotation, comparision and visualization

Bioinformatics. 2015, 31(14):2382-2383

- · G Yu\*, LG Wang, QY He\*
- · ₹ ESI Highly Cited Paper

DOSE: an R/Bioconductor package for Disease Ontology Semantic and **Enrichment analysis** 

Bioinformatics. 2015, 31(4):608-609

· G Yu\*, LG Wang, GR Yan, QY He\*

- · Citation = 3598
- · H-index = 16
- $\cdot$  I10-index = 22



2015

# ACK1 Promotes Gastric Cancer Epithelial-Mesenchymal Transition and Metastasis through AKT-POU<sub>2</sub>F1-ECD Signaling

Journal of Pathology. 2015, 236(2):175-185

· SH Xu, JZ Huang, ML Xu, G Yu, XF Yin, D Chen\*, GR Yan\*

### Proteomic analysis on the copper resistance of *Streptococcus* pneumonia

Metallomics. 2015, 7(3):448-454

· Z Guo, J Han, XY Yang, K Cao, K He, G Du, G Zeng, L Zhang, **G Yu**, Z Sun, QY He\*, X Sun\*

### Proteomic analysis on the antibacterial activity of a Ru(II) complex against *Strepococcus pneumonia*

Journal of Proteomics. 2015. 115:107-116

· XY Yang, L Zhang, J Liu, N Li, **G Yu**, K Cao, J Han, G Zeng, Y Pan, X Sun\*, QY He\*

# Proteomic analysis of putative heme-binding proteins in *Streptococcus pyogenes*

Metallomics. 2014, 6(8):1451-1459

· N Wang<sup>#</sup>, J Zhang<sup>#</sup>, L Zhang, XY Yang, N Li, **G Yu**, J Han, K Cao, Z Guo, X Sun<sup>\*</sup>, QY He<sup>\*</sup>

# Putative cobalt– and nickel–binding proteins and motifs in *Streptococcus pneumonia*

*Metallomics*. 2013, 5(7):928-935

· X Sun#, G Yu#, Q Xu, N Li, C Xiao, X Yin, K Cao, J Han, QY He\*

# A novel andrographolide derivative AL-1 exerts its cytotoxicity on K562 cells through a ROS-dependent mechanism

Proteomics, 2013, 13(1):169-178

· YY Zhu<sup>#</sup>, **G Yu**<sup>#</sup>, Y Zhang, Z Xu, YQ Huang, GR Yan<sup>\*</sup>, QY He<sup>\*</sup>

#### A DNA-Based Semantic Fusion Model for Remote Sensing Data

PLoS One. 2013, 8(10):e77090

 $\cdot$  H Sun $^*$ , J Weng, **G Yu**, RH Massawe

# Quantitative Proteomics Characterization on the Anti-tumor Effects of Isodexyelephantopin against Nasopharyngeal Carcinoma

Proteomics. 2013, 13(21):3222-3232

· GR Yan\*, Z Tan\*, Y Wang, ML Xu, G Yu, Y Li\*, QY He\*

# Design, SAR, angiogenic activities evaluation and pro-angiogenic mechanism of new marine cyclopeptide analogs

Current Medicinal Chemistry. 2013, 20(9):1183-1194

· J Li, X Lu, Q Wu, **G Yu**, Z Xu, L Qiu, Z Pei, Y Lin, J Pang\*

2014

2013

# Proteomic investigation of the interactome of FMNL1 in hematopoietic cells unveils a role in calcium-dependent membrane plasticity

**Journal of Proteomics**. 2013, 78:72-82

· Y Han, **G Yu**, H Sarioglu, A Caballero-Martinez, F Schlott, M Ueffing, H Haase, C Peschel, AM Krackhardt\*

## LXtoo: an integrated live Linux distribution for the bioinformatics community

BMC Research Notes. 2012, 5(1):360

· G Yu#, LG Wang#, XH Meng, QY He\*

### clusterProfiler: an R package for comparing biological themes among gene clusters

OMICS: A Journal of Integrative Biology. 2012, 16(5):284-287

- · G Yu, LG Wang, Y Han, QY He\*
- TESI Highly Cited Paper

# Cellular MicroRNA let-7c Inhibits M1 Protein Expression of the H1N1 Influenza A Virus in Infected Human Lung Epithelial Cells

Journal of Cellular and Molecular Medicine. 2012, 16(10):2539-2546

· Y Ma<sup>#</sup>, J Yang<sup>#</sup>, X Fan<sup>#</sup>, H Zhao, W Hu, Z Li, **G Yu**, X Ding, J Wang, X Bo, X Zheng, Z Zhou<sup>\*</sup>, S Wang<sup>\*</sup>

# Genistein-induced mitotic arrest of gastric cancer cells by downregulating KIF20A, a proteomics study

Proteomics. 2012, 12(14):2391-2399

 $\cdot$  GR Yan\*, FY Zhou\*, BL Dang, Y Zhang, **G Yu**, X Liu, QY  $\mathrm{He}^*$ 

#### Functional similarity analysis of human virus-encoded miRNAs

Journal of Clinical Bioinformatics. 2011, 1(1):15

· G Yu, QY He\*

# A new method for measuring functional similarity of microRNAs *Journal of Integrated OMICS*. 2011, 1(1):49-54

• **G Yu**<sup>#</sup>, CL Xiao<sup>#</sup>, X Bo, CH Lu, Y Qin, S Zhan, QY He<sup>\*</sup>

#### Phosphoproteome profile of human lung cancer cell line A549

Molecular BioSystems. 2011, 7(2):472-479

 $\cdot$  G Yu\*, CL Xiao\*, CH Lu\*, HT Jia, F Ge, W Wang, XF Yin, HL Jia, JX He\*, QY He\*

# Proteomic Analysis of Membrane Proteins from *Streptococcus* pneumoniae with Multiple Separation Methods plus High Accuracy Mass Spectrometry

OMICS: A Journal of Integrative Biology. 2011, 15(10):683-694

· X Sun#, XY Yang#, XF Yin, G Yu, CL Xiao, X He, QY He\*

2012

2011

GOSemSim: an R package for measuring semantic similarity among GO 2010 terms and gene products Bioinformatics. 2010, 26(7):976-978 · G Yu<sup>#</sup>, F Li<sup>#</sup>, Y Qin, X Bo<sup>\*</sup>, Y Wu, S Wang<sup>\*</sup> · **T** ESI Highly Cited Paper 结合基因组分析预测炎症相关miRNA及其靶标 2009 军事医学科学院院刊. 2009, 33(3):245-247 ·余光创,王超,许尹,伯晓晨,王升启\*,秦宜德\* 依赖于5'端非编码区高级结构的真核生物mRNA翻译调控 2007 **中国生物化学与分子生物学报**. 2007, 23(11):881-887 · 余光创,秦宜德,伯晓晨,王升启\* **CONFERENCE PROCEEDINGS** Two methods for mapping and visualizing associated data on phylogeny 2019 using ggtree **♀** Guangzhou, CN 第一届南方医科大学基础医学学术年会 Data integration and visualization of phylogenetic trees 2018 The 3<sup>rd</sup> South Lake Innovation Forum for International Young Talents **♀** Wuhan, CN ggtree for tree visualization & annotation 2017 Ohicago, US Phylogenetic tree visualization workshop/hackathon Computational Methods in Ecology and Evolution The Second International Workshop on Environmental Microbiomes **♀** Guangzhou, CN ggtree for visualization and annotation of phylogenetic trees 2016 Paeijing, CN The 9th China-R Conference