# Guangchuang Yu

Post-doctoral Fellow

# **≈** EDUCATION

| The University of Hong Kong         | Ph.D. Evolution Study of Influenza A virus | 2017 |
|-------------------------------------|--|------|
| Anhui Medical University            | M.S. Biochemistry and Molecular Biology    | 2009 |
| South China Agricultural University | B.S. Biotechnology                         | 2005 |
| Institut Pasteur, Paris             | Train the Trainers                         | 2015 |

# **■** CERTIFICATE

Certificate of Teaching and Learning in Higher Education, Centre for Enhancement of Teaching and Learning, The University of Hong Kong 2015

# **★** EMPLOYMENT

State Key Laboratory of Infectious Diseases, School of Public Health, The University of Hong Kong:

Post-doctoral Fellow 2017

College of Life Science and Technology, Jinan University:

Bioinformatician 2009–2013

# **₩** TEACHING

Student Helper, The University of Hong Kong

2013-2014

BIOL6001 Presentation Skills and Research Seminars in Biological Sciences

Lecturer, Jinan University 2011–2012

Functional Proteomics

# **♥** AWARDS

 ${\bf 2013}{-}{\bf 2017}$  Postgraduate Studentships. The University of Hong Kong.

2012 Best paper of the year 2010. Journal of Integrated OMICS.

#### **■** GRANTS

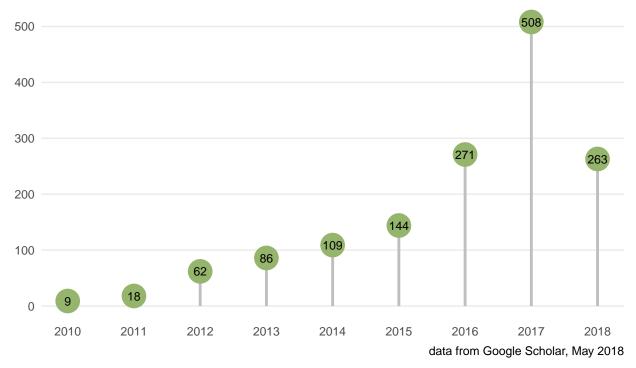
**2013** (完成) PI, hnRNPK 蛋白在调控人肺癌细胞周期胞质分裂中的作用研究, 中央高校基本科研业务费专项资金 (21613414), CNY 100,000

**2011** (完成) PI, Hela 细胞周期动态蛋白质组学分析, 中央高校基本科研业务费专项资金 (21611303), CNY 20,000

# **₽** PUBLICATIONS

#### Journal Articles

Citation = 1501, H-index = 14, I10-index = 18



- **№** ESI Hot Paper (X1)
- ▼ ESI Highly Cited Paper (X4)

第一作者/通讯作者 SCI 文章 9 篇: 1 区 (X4), 2 区 (X1)

期刊排名与分位数来源: InCites Journal Citation Reports

分区来源:中国科学院文献情报中心 JCR 期刊分区表中小类分区

- † indicates equal contribution, \* indicates corresponding
- 1. **G** Yu. clusterProfiler: universal enrichment tool for functional and comparative study. *bioRxiv*. 2018, https://doi.org/10.1101/256784
- 2. G Yu. Using meshes for MeSH term enrichment and semantic analyses. Bioinformatics. revised.
- 4. **G Yu**, QY He\*. ReactomePA: an R/Bioconductor package for reactome pathway analysis and visualization. *Molecular BioSystems*. 2016, 12(2):477-479. cited by 66, Impact Factor: 2.781, JCR Biochemistry & Molecular Biology 145/290 (Q2, 3 ⋈)
- 5. **G** Yu\*, LG Wang, QY He\*. ChIPseeker: an R/Bioconductor package for ChIP peak annotation, comparision and visualization. *Bioinformatics*. 2015, 31(14):2382-2383. cited by 124, Impact Factor: 7.307, JCR Mathematical & Computational Biology 2/57 (Q1, 1 ⋈)
- 6. **G** Yu\*, LG Wang, GR Yan, QY He\*. DOSE: an R/Bioconductor package for Disease Ontology Semantic and Enrichment analysis. *Bioinformatics*. 2015, 31(4):608-609. cited by 71, Impact Factor: 7.307, JCR Mathematical & Computational Biology 2/57 (Q1, 1 区)
- 7. **G** Yu<sup>†</sup>, LG Wang<sup>†</sup>, XH Meng, QY He<sup>\*</sup>. LXtoo: an integrated live Linux distribution for the bioinformatics community. *BMC Research Notes*. 2012, 5(1):360. cited by 6

- 9. **G Yu**, QY He\*. Functional similarity analysis of human virus-encoded miRNAs. *Journal of Clinical Bioinformatics*. 2011, 1(1):15. cited by 14
- 10. **G** Yu<sup>†</sup>, CL Xiao<sup>†</sup>, X Bo, CH Lu, Y Qin, S Zhan, QY He<sup>\*</sup>. A new method for measuring functional similarity of microRNAs. *Journal of Integrated OMICS*. 2011, 1(1):49-54. cited by 19
- 11. **G** Yu<sup>†</sup>, CL Xiao<sup>†</sup>, CH Lu<sup>†</sup>, HT Jia, F Ge, W Wang, XF Yin, HL Jia, JX He<sup>\*</sup>, QY He<sup>\*</sup>. Phosphoproteome profile of human lung cancer cell line A549. *Molecular BioSystems*. 2011, 7(2):472-479. cited by 12, Impact Factor: 2.781, JCR Biochemistry & Molecular Biology 145/290 (Q2, 3 区)
- 12. **G** Yu<sup>†</sup>, F Li<sup>†</sup>, Y Qin, X Bo<sup>\*</sup>, Y Wu, S Wang<sup>\*</sup>. GOSemSim: an R package for measuring semantic similarity among GO terms and gene products. *Bioinformatics*. 2010, 26(7):976-978. cited by 333, Impact Factor: 7.307, JCR Mathematical & Computational Biology 2/57 (Q1, 1 区)
- 13. X Sun<sup>†</sup>, **G** Yu<sup>†</sup>, Q Xu, N Li, C Xiao, X Yin, K Cao, J Han, QY He<sup>\*</sup>. Putative cobalt- and nickel-binding proteins and motifs in *Streptococcus pneumonia*. *Metallomics*. 2013, 5(7):928-935. cited by 18, Impact Factor: 3.975, JCR Biochemistry & Molecular Biology 80/290 (Q2, 3 ⋈)
- 14. YY Zhu<sup>†</sup>, **G** Yu<sup>†</sup>, Y Zhang, Z Xu, YQ Huang, GR Yan<sup>\*</sup>, QY He<sup>\*</sup>. A novel andrographolide derivative AL-1 exerts its cytotoxicity on K562 cells through a ROS-dependent mechanism. *Proteomics*, 2013, 13(1):169-178. cited by 22, Impact Factor: 4.041, JCR Biochemistry & Research Methods 15/78 (Q1, 2 ⋈)
- 15. XY Yang, K He, G Du, X Wu, G Yu, Y Pan, G Zhang\*, X Sun\*, QY He\*. Integrated Translatomics with Proteomics to Identify Novel Iron–Transporting Proteins in *Streptococcus pneumoniae*. *Frontiers in Microbiology*. 2016, 7:78. cited by 8, Impact Factor: 4.076, JCR Microbiology 26/125 (Q1, 2 ⋈)
- 16. PY Huang, CCD Lee, CH Yip, CL Cheung, **G Yu**, TTY Lam, DK Smith, H Zhu\*, Y Guan\*. Genetic characterization of highly pathogenic H5 influenza viruses from poultry in Taiwan, 2015. *Infection, Genetics and Evolution*. 2016, 38:96-100. cited by 7, Impact Factor: 2.885, JCR Infectious Diseases 36/84 (Q2, 3 ⋈)
- 17. SH Xu, JZ Huang, ML Xu, **G Yu**, XF Yin, D Chen\*, GR Yan\*. ACK1 Promotes Gastric Cancer Epithelial-Mesenchymal Transition and Metastasis through AKT-POU2F1-ECD Signaling. *The Journal of Pathology*. 2015, 236(2):175-185. cited by 24, Impact Factor: 6.894, JCR Pathology 3/79 (Q1, 1 ⋈)
- 18. Z Guo, J Han, XY Yang, K Cao, K He, G Du, G Zeng, L Zhang, **G Yu**, Z Sun, QY He<sup>\*</sup>, X Sun<sup>\*</sup>. Proteomic analysis on the copper resistance of *Streptococcus pneumonia*. *Metallomics*. 2015, 7(3):448-454. Impact Factor: 3.975, JCR Biochemistry & Molecular Biology 80/290 (Q2, 3 ⋈) cited by 10
- 19. XY Yang, L Zhang, J Liu, N Li, **G Yu**, K Cao, J Han, G Zeng, Y Pan, X Sun\*, QY He\*. Proteomic analysis on the antibacterial activity of a Ru(II) complex against *Strepococcus pneumonia*. *Journal of Proteomics*. 2015, 115:107-116. cited by 7, Impact Factor: 3.914, JCR Biochemistry & Research Methods 17/78 (Q1, 2 区)
- 20. 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>. Proteomic analysis of putative heme-binding proteins in *Streptococcus pyogenes*. *Metallomics*. 2014, 6(8):1451-1459. cited by 0, Impact Factor: 3.975, JCR Biochemistry & Molecular Biology 80/290 (Q2, 3 ⋈)
- 21. H Sun\*, J Weng, **G Yu**, RH Massawe. A DNA-Based Semantic Fusion Model for Remote Sensing Data. *PLoS One*. 2013, 8(10):e77090. cited by 6, Impact Factor: 2.806, JCR Multidisciplinary Sciences 15/64 (Q1, 3 🗵)
- 22. GR Yan<sup>†</sup>, Z Tan<sup>†</sup>, Y Wang, ML Xu, **G Yu**, Y Li<sup>\*</sup>, QY He<sup>\*</sup>. Quantitative Proteomics Characterization on the Anti-tumor Effects of Isodexyelephantopin against Nasopharyngeal Carcinoma. *Proteomics*. 2013, 13(21):3222-3232. cited by 14, Impact Factor: 4.041, JCR Biochemistry & Research Methods 15/78 (Q1, 2 ⋈)
- 23. J Li, X Lu, Q Wu, **G Yu**, Z Xu, L Qiu, Z Pei, Y Lin, J Pang\*. Design, SAR, angiogenic activities evaluation and pro-angiogenic mechanism of new marine cyclopeptide analogs. *Current Medicinal Chemistry*. 2013, 20(9):1183-1194. cited by 1, Impact Factor: 3.249, JCR Pharmacology & Pharmacy 71/257 (Q2, 2 ⋈)
- 24. Y Han, G Yu, H Sarioglu, A Caballero-Martinez, F Schlott, M Ueffing, H Haase, C Peschel, AM

- Krackhardt\*. 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. cited by 7, Impact Factor: 3.914, JCR Biochemistry & Research Methods 17/78 (Q1, 2 区)
- 25. 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>. 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. cited by 49, Impact Factor: 4.499, JCR Medicine, Research & Experimental 20/128 (Q1, 2 ⋈)
- 26. GR Yan<sup>†</sup>, FY Zhou<sup>†</sup>, BL Dang, Y Zhang, **G Yu**, X Liu, QY He<sup>\*</sup>. Genistein-induced mitotic arrest of gastric cancer cells by downregulating KIF20A, a proteomics study. *Proteomics*. 2012, 12(14):2391-2399. cited by 42, Impact Factor: 4.041, JCR Biochemistry & Research Methods 15/78 (Q1, 2 ⋈)
- 27. X Sun<sup>†</sup>, XY Yang<sup>†</sup>, XF Yin, **G Yu**, CL Xiao, X He, QY He<sup>\*</sup>. 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. cited by 14, Impact Factor: 2.723, JCR Biotechnology & Applied Microbiology 29/160 (Q2, 3 区)

#### $E ext{-}Letters$

- 1. Y Wan<sup>†</sup>, **G** Yu<sup>†</sup>, J Zou<sup>†</sup>, W Liu<sup>†</sup>, Q Liu<sup>\*</sup>, Why animals have escaped the Indian Ocean tsunami? *Science*. 2017, http://science.sciencemag.org/content/356/6340/841/tab-e-letters
- M Tang, S Weng, G Yu, K Yang, M Pan, S He, Q Liu\*, RE: Sequence features of the virulence protein VP24 of Ebola virus. Science. 2017, http://science.sciencemag.org/content/351/6279/1339/ tab-e-letters

#### Books

余光创, "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, 2012. ("十二五" 国家重点图书出版规划项目)

# **☎** CONFERENCE PROCEEDINGS

#### Presentations

- 1. Data integration and visualization of phylogenetic trees, The South Lake Innovation Forum for International Young Talents, Huazhong Agricultural University, Wuhan, May, 2018
- 2. ggtree for tree visualization & annotation (invited), Phylogenetic tree visualization workshop/hackathon, The Field Museum of Natural History, Chicago, May. 2017
- 3. Computational Methods in Ecology and Evolution, The Second International Workshop on Environmental Microbiomes, Sun Yat-sen University, Guangzhou, April. 2017
- 4. **ggtree for visualization and annotation of phylogenetic trees** (invited), The 9<sup>th</sup> China-R Conference, Renmin University of China, Beijing, May. 2016

#### Posters

- 1. ggtree: a programming package for complex data integration and analysis in phylogeny to identify potential genetic markers of influenza a virus that determine interspecies transmission, Scientific Advisory Board (SAB) Meeting for the Theme-based Research Scheme on Viral, Host and Environmental Determinants of Influenza Virus Transmission and Pathogenesis, The University of Hong Kong, Hong Kong, Jun. 2017
- 2. Phylogeny-guided genome assembly method for short read nucleotide sequences from coinfecting influenza A viruses, Options IX for the control of influenza, International Society for Influenza and other Respiratory Virus Disease, Chicago, Aug. 2016

3. ggtree: an R package for visualization and annotation of phylogenetic tree with different types of meta-data, The  $20^{\text{th}}$  Research Postgraduate Symposium, The University of Hong Kong, Hong Kong, Dec. 2015

#### **■ PUBLIC MEDIA**

• "Plotting trees + data" lecture by Guangchuang Yu. https://youtu.be/tqspAXM0UQE

# **♠** PROFESSIONAL AFFILIATIONS

Member, International Society for influenza and other Respiratory Virus Disease
Steering Committee, International Network for Data Analysis, Institut Pasteur
Visiting student, Beijing Institute of Radiation Medicine
2005-2009

# **▲** PROFESSIONAL SERVICES

#### Associate Editor

• Journal of Integrated OMICS, 2011-present

#### Reviewer

Bioinformatics, BMC Bioinformatics, Computational Biology and Chemistry, Current Bioinformatics, Gastroenterology Research and Practice, Molecular BioSystems, Nucleic Acids Research, R Journal

# SOFTWARE DEVELOPMENT

R ranking: ranked 49/72210 worldwide by Git Awards

- badger: Badge for R Package
- dlstats: Download Stats of R Packages
- emojifont: Emoji and Font Awesome in Graphics
- ggplotify: Convert Plot to 'grob' or 'ggplot' Object
- ggimage: Use Image in 'ggplot2'
- meme: Create Meme
- rvcheck: R/Package Version Check
- scatterpie: Scatter Pie Plot
- shadowtext: Shadow Text Grob and Layer
- ChIPseeker: ChIPseeker for ChIP peak Annotation, Comparison, and Visualization
- clusterProfiler: statistical analysis and visualization of functional profiles for genes and gene clusters
- DOSE: Disease Ontology Semantic and Enrichment analysis
- ggtree: an R package for visualization and annotation of phylogenetic trees with their covariates and other associated data
- GOSemSim: GO-terms Semantic Similarity Measures
- meshes: MeSH Enrichment and Semantic analyses
- Reactome PA: Reactome Pathway Analysis
- segcombo: Visualization Tool for Sequence Recombination and Reassortment
- tidytree: A Tidy Tool for Phylogenetic Tree Data Manipulation
- TIPars: Taxa Insertion by Parsimony
- treeio: Base Classes and Functions for Phylogenetic Tree Input and Output

# Contributions to open source libraries

- basicTrendline: Add Trendline of Basic Regression Models to Plot
- cowsay: Messages, Warnings, Strings with Ascii Animals
- kableExtra: Construct Complex Table with 'kable' and Pipe Syntax
- microbiomeViz: Visualizing Microbiome Data
- MSnbase: Base Functions and Classes for Mass Spectrometry and Proteomics
- scholar: Analyse Citation Data from Google Scholar