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个人学术简介

吴强博士于 1990 年本科毕业于华中农业大学园艺系。 1992-1995 年就读于武汉大学生命科学院遗传系，获硕士学位。1998-2003 年在新加坡国立大学生物科学系攻读博士学位。2003-2006 年在新加坡基因组研究院从事博士后研究工作。导师是知名干细胞专家 Prof Huck Hui Ng。2006 年至 2008 年，在剑桥大学 Prof Magdalena Zernicka-Goetz 的实验室担任 Research associate。2009 年被聘为新加坡国立大学生物化学系助理教授。2017 年加入澳门科技大学担任副教授。2025 年七月晋升为教授。

目前的主要研究方向是干细胞生物学，表观遗传学以及药物生物学。自 2009 年成为独立 PI 以来，我的实验室专注于利用分子细胞学方法，高通量分析法和其他分子细胞方法寻找和分析新的干细胞多能性的调节因子 （包括新的遗传因子和表观遗传因子）。我们实验室成功发现了三个锌指蛋白 （Zfp322a， Patz1 和 Zfp553）和两个组蛋白精氨酸甲基转移酶 （Prmt4，Prmt6）。近年来我们还专注于染色质因子（NPAC，JMJD6 及 BRD9）在干细胞多能性维持和重编程的作用的研究并取得了一些进展。我们的长期研究目标是利用干细胞开展对干性维持，分化机理，疾病模型，药物筛选的研究。吴强博士已经发表了 63 篇研究和综述论文。这其中包括有重大学术贡献和突破性的一篇干细胞论文 （Nature Genetics 2006）和一篇癌细胞论文（Cell 2006）。总的论文被引用次数近 6000 次。还受邀担任 Stem Cell Reviews and Reports, PLoS ONE，Stem Cells International，Frontiers in Cell and Developmental Biology，Heliyon, Current Gene Therapy 等杂志的学术编辑。也被多次受邀担任国家自然科学基金重点项目，英国 Medical Research Council (MRC), 新加坡 Biomedical Research Council (BMRC) 等科研项目的评审。

教育背景

1998-2003　National University of Singapore/博士学位

1992-1995　武汉大学生命科学院/硕士学位

1986-1990　华中农业大学园艺系/学士学位

工作经历

2025 至今　澳门科技大学中药质量研究国家重点实验室/教授

2017-2025　澳门科技大学中药质量研究国家重点实验室/副教授

2009-2017　Department of Biochemistry, National University of Singapore/Assistant professor

2006-2008　The Gurdon Institute, University of Cambridge/Research associate
(Advisor: Prof Magdalena Zernicka-Goetz)

2003-2006　Genome Institute of Singapore/Postdoctoral fellow
(Advisor: Prof Ng Huck Hui)

2002-2003　National University of Singapore/Research assistant
(Supervisor: Dr. Philippa Melamed)

1996-1998　武汉市科学技术委员会/副主任科员

1995-1996　同济医科大学/助理讲师

1990-1992　武汉市青菱园艺场/科技副场长

研究方向

干细胞生物学及其应用，表观遗传学，基因调控， 中药药理，肿瘤生物学。

学术兼职

Academic editor of *PLoS ONE* (July 2010-present)

Guest editor of *Stem Cells International* (2015)

Lead guest editor of *Stem Cells International* (2016-2017, 2020)

Academic Editor of *Frontiers in Cell and Developmental Biology* (from 2021)

Academic editor of *Stem Cell Review and Reports* (from 2021)

Section editor of *Current Gene Therapy* (from 2021)

Section editor of *Heliyon* (Genetics section) (from 2021)

教学科目

研究生课程：药理实验方法学；现代生物技术学；中药研究进展，高等药学实验方法学。

本科生课程：药理与临床药学及毒理学与安全用药；生物化学及分子生物学；分子药理学（课程统筹）。

大学通识课程：生命科学（课程统筹）。

已发表论文（共 63 篇，引述次数近 6,000. H-index 23）

2025

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2. Qian Y and **Wu Q#.** The Multifaceted Roles of Zinc Finger Proteins in Pluripotency and Reprogramming. ***International Journal of Molecular Sciences***. 2025, 26(11), 5106.

3. Fu L, Zhou Y, Xu L, Hu YOO, Chen S, Wang M, Jiang X, Zheng M, **Wu Q#,** Fu J#. The influence and association of blood on transfer catheter and vaginal microbiota on pregnancy outcomes in frozen-embryo transfer cycles. ***Journal of Reproductive Immunology***. 2025 Jun;169:104530

4. Song X, Pang Y, Wei Y, Yu D, Wang Y, Gao J, Zhang S, **Wu Q**, Wang J, Zhao S, Deng W. Filamin A suppresses the expression of ribosomal protein genes by controlling the activity of an EGR1-Sp1-GCN5/PCAF pathway in human cells***. Biochimica et Biophysica Acta Molecular Cell Research.*** 2025 Mar;1872(3):119914.

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5. Li X, Khan I, Han R, Huang G, Xia W, Yin L, Leong WK, Su L, Law BY, Wong VKW, **Wu Q**, Guo X, Hsiao WLW. Gynostemma pentaphyllum saponins shield mice from peanut allergy by modulation of gut microbiota: A novel approach for peanut allergy management. ***Phytomedicine***. 2024 Dec;135:156101.

6. Qian Y, Ye Y, Zhang W, **Wu Q#.** Npac Regulates Pre-mRNA Splicing in Mouse Embryonic Stem Cells. ***International Journal of Molecular Sciences***. 2024 Sep 27;25(19):10396.

7. Le M, Lu W, Tan X, Luo B, Yu T, Sun Y, Guo Z, Huang P, Zhu D, **Wu Q**, Ganesan A, Wen S. Design, Synthesis, and Biological Evaluation of Potent EZH2/LSD1 Dual Inhibitors for Prostate Cancer. ***Journal of Medicinal Chemistry***. 2024 Sep 12;67(17):15586-15605.

8. Song C, Zhang Z, Leng D, He Z, Wang X, Liu W, Zhang W, **Wu Q**, Zhao Q, Chen G. ERK5 promotes autocrine expression to sustain mitogenic balance for cell fate specification in human pluripotent stem cells. ***Stem Cell Reports***. 2024 Sep 10;19(9):1320-1335.

9. Ma X, Dai L, Tan C, Li J, He X, Wang Y, Xue J, Huang M, Ren J, Xia Y, Wu Q, Zhao H, Chan WY, Feng B. β-catenin mediates endodermal commitment of human ES cells via distinct transactivation functions. ***Cell & Bioscience***. 2024 Jul 24;14(1):96.

10. Xiao X, Zhang M, Qian Y, Wang X and **Wu Q**#. KLF9 regulates osteogenic differentiation of mesenchymal stem cells. ***Journal of Molecular Histology***. 2024 Aug;55(4):503-512.

11. Fu L, **Wu Q**#, Fu J#. Exploring the biological roles of DHX36, a DNA/RNA G-quadruplex helicase, highlights functions in male infertility: A comprehensive review. ***International Journal of Biological Macromolecules.*** 2024 May;268(Pt 2):131811.

12. Sun B#, Cheng X, **Wu Q#.** The Endometrial Stem/Progenitor Cells and Their Niches. ***Stem Cell Reviews and Reports.*** 2024 Jul;20(5):1273-1284.

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14. Wang X, Song C, Ye Y, Gu Y, Li X, Chen P, Leng D, Xiao J, Wu H, Xie S, Liu W, Zhao Q, Chen D, Chen X, **Wu Q#,** Chen G#, Zhang W#. BRD9-mediated control of the TGF-β/Activin/Nodal pathway regulates self-renewal and differentiation of human embryonic stem cells and progression of cancer cells. ***Nucleic Acids Research*** 2023 Nov 27;51(21):11634-11651.

15. Ma L, He X and **Wu Q#**. The Molecular Regulatory Mechanism in Multipotency and Differentiation of Wharton's Jelly Stem Cells. ***International Journal of Molecular Sciences*** 2023 24(16):12909.

16. Ma L, **Wu Q#** and Tam PK#. The Current Proceedings of PSC-Based Liver Fibrosis Therapy. ***Stem Cell Reviews and Reports*** 2023 Oct;19(7):2155-2165.

17. Zhang M, Liao X, Ji G, Fan X# and **Wu Q**#. High Expression of COA6 Is Related to Unfavorable Prognosis and Enhanced Oxidative Phosphorylation in Lung Adenocarcinoma. ***International Journal of Molecular Sciences*** 2023 Mar 16;24(6):5705.

18. Wang X, Fan Y and **Wu#**. The regulation of transcription elongation in embryonic stem cells. ***Frontiers in Cell and Developmental Biology*** 2023 Feb 16;11:1145611.

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21. Huang M, **Wu Q**#, Jiang ZH#. Epigenetic Alterations under Oxidative Stress in Stem Cells. ***Oxidative Medicine and Cellular Longevity*** 2022 Aug 29;2022:6439097.

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23. Ma L, Huang M, Liao X, Cai X, **Wu Q#.** NR2F2 Regulates Cell Proliferation and Immunomodulation in Whartons' Jelly Stem Cells. ***Genes*** **(**Basel). 2022 Aug 16;13(8):1458.

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26. Fan XX#, **Wu Q#**. Decoding Lung Cancer at Single-Cell Level. ***Frontiers in Immunology*** 2022 May 23;13:883758.

27. Chen J, Lu Y, Du Y, Wang H#, **Wu Q#**. Recent development of small-molecular inhibitors against Clostridioides difficile infection. ***Bioorganic Chemistry*** 2022 Aug;125:105843.

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Before 2019

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