ZHIYUAN HU

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MRC Weatherall Institute of Molecular Medicine ⋄ Oxford OX3 9DS, UK

EDUCATION

University of Oxford, United Kingdom *Oct 2015 - Jan 2020*
D.Phil in Clinical Medicine
Thesis title: *Functional genomics studies of cancer and cells of origin: from pan-cancer to single-cell*
Supervisors: Prof Christopher Yau, Prof Ahmed Ahmed and Prof Chris Holmes
Viva examiners: Prof Cecilia Lindgren and Prof Johann de Bono

Peking University, China *Sep 2011 - July 2015*
B.S. in Biological Science
Undergraduate Honors Program in Biology
Cumulative GPA: 3.86/4.00 (ranking: 1st out of 108)

PUBLICATIONS

Z. Hu, M. Artibani, A. Alsaadi, N. Wietek, M. Morotti, T. Shi, ..., T. Sauka-Spengler, C. Yau*, A. A. Ahmed*. The repertoire of serous ovarian cancer non-genetic heterogeneity revealed by single-cell sequencing of normal fallopian tube epithelial cells. *Cancer Cell*, 37(2), 226–242.e7 (2020). https://doi.org/10.1016/j.ccell.2020.01.003

G. Prota*, U. Gileadi, M. Rei, A. Lechuga-Vieco, J.-L. Chen, S. Galiani, M. Bedard, V. Lau, L. Fanchi, M. Artibani, **Z. Hu**, S. Gordon, J. Rehwinkel, J. Enríquez, A. Ahmed, T. Schumacher, and V. Cerundolo. Enhanced immunogenicity of mitochondrial localised proteins in cancer cells. *Cancer Immunology Research* (Accepted).

R. Ma*, K. P. Capobianco, N. T. Buchanan, **Z. Hu**, J. M. Oakman*. Etiologic and Treatment Conceptualizations of Disordered Eating Symptoms among Mainland Chinese Therapists. *International Journal of Eating Disorders* (2019). https://doi.org/10.1002/eat.23204

M. P. Menden, D. Wang, M. J. Mason, B. Szalai, K. C. Bulusu, Y. Guan, T. Yu, J. Kang, M. Jeon, R. Wolfinger, T. Nguyen, M. Zaslavskiy, **AstraZeneca-Sanger Drug Combination DREAM Consortium**, I. Sock Jang, Z. Ghazoui, M. Eren Ahsen, R. Vogel, E. Chaibub Neto, T. Norman, E. K. Y. Tang, M. J. Garnett, G. Y. Di Veroli, S. Fawell, G. Stolovitzky, J. Guinney*, J. R. Dry* J. Saez-Rodriguez*. Community assessment to advance computational prediction of cancer drug combinations in a pharmacogenomic screen. *Nature Communications* **10**, 2674 (2019). https://www.nature.com/articles/s41467-019-09799-2

T. Motohara, K. Masuda, M. Morotti, Y. Zheng, S. El-Sahhar, K. Chong, N. Wietek, A. Alsaadi, M. Karaminejadranjbar, **Z. Hu**, M. Artibani, L. Santana Gonzalez, H. Katabuchi, H. Saya and A. Ahmed. An evolving story of the metastatic voyage of ovarian cancer cells: cellular and molecular orchestration of the adipose-rich metastatic microenvironment. *Oncogene*, 38, 2885−2898 (2019).

Z. Hu, C. Yau* and A. Ahmed*. A pan-cancer genome-wide analysis reveals tumour dependencies by induction of non-sense mediated decay. *Nature Communications* **8**, 15943 (2017). doi: 10.1038/ncomms15943. https://www.nature.com/articles/ncomms15943

CONFERENCE ABSTRACT

Z. Hu, A. Alsaadi, N. Wietek, L. Santana González, C. Yau* and A. Ahmed*. Deep single-cell RNA-seq of the putative cell of origin revealed a novel molecular subtype of high-grade serous ovarian cancer with poor prognosis [abstract]. In: *Proceedings of the American Association for Cancer Research Annual Meeting 2019*; 2019 Mar 29-Apr 3; Atlanta, GA. Philadelphia (PA): AACR; Cancer Res 2019;79(13 Suppl):Abstract nr 467.

PATENT

UK Patent Application No. 1902653.3 Ovarian Cancer Biomarkers. Date of filing: 27 February 2019

R PACKAGE

Z. Hu, C. Yau and A. Ahmed (2017). masonmd: making sense of nonsense mediated decay. MIT License. doi: 10.5281/zenodo.546698
The R package masonmd we developed can predict the genomic mutations that can elicit nonsense-mediated decay and may cause loss-of-function of the mutated genes.

SCHOLARSHIPS, AWARDS & GRANTS

WHG Public Engagement Seed Award, University of Oxford (£1,000)	2019
NIHR Oxford Biomedical Research Centre Small Grants in Health Sciences (£24,395)	2019
AACR-Margaret Foti Scholar-in-Training Award, AACR ($2,000)	2019
Travel and Research Fund, St Cross College, University of Oxford (£500)	2019
Poster Prize, CRUK Oxford Centre 2018 Symposium	2018
NDM Graduate Student Prize, University of Oxford	2017
Shen Tong Outstanding Undergraduate Award, Peking University (CNY 20000)	2015
China National Scholarship (CNY 8000)	2014
Li & Fung Scholarship, Victor and William Fung Foundation	2014
Arawana Scholarship, Yihai Kerry, Wilmar China (CNY 12000)	2013
Robin Li Scholarship, Robin Li Foundation (CNY 5000)	2012

UNDERGRAD RESEARCH EXPERIENCE

Summer intern, Nuffield Department of Medicine, University of Oxford *July 2014 - Aug 2014*
Analysis of the metformin effect on cancer single-cell transcriptome
Advisors: Dr. Chris Yau and Dr. Quin Wills

Research assistant, Center for Quantitative Biology, Peking University *Oct 2014 - June 2015*
Phylogenetic analysis of horizontal gene transfer in microbial microevolution.
Advisor: Prof Huaiqiu Zhu

Research assistant, Center for Quantitative Biology, Peking University *June 2013 - Oct 2014*
Analysis of non-coding regions in horizontal gene transfer.*Advisor: Prof Huaiqiu Zhu*

SKILLS

Web lab skills

- Tissue processing: human/mouse sample dissociation, primary cell preservation, primary cell culture and etc.
- Next-generation sequencing: RNA-seq library preparation, single-cell RNA-seq (Smart-seq2 and 10x), Illumina sequencing and etc.

- Cell biology techniques: fluorescent staining, flow cytometry/FACS, confocal microscope, cell culture and etc.
- Molecular techniques: DNA/RNA extraction, RT, PCR, qPCR, electrophoresis, Sanger sequence, NanoString assay and etc.

Computational skills

- Proficient in: R (daily usage), Shell (regular usage), Git (daily usage), analysis of next-generation sequencing data and single-cell RNA-seq data
- Familiar with: Python (improving), C (used extensively during undergrad) and MATLAB (used for a course project)
- Familiar with statistical learning and Bayesian inference.

RELEVANT SKILLS

Language English (fluent) and Mandarin Chinese (native)
Softwares LaTeX, Fiji, Illustrator *etc.*