Hideyuki Tianyi Shi

github.com/TianyiShi2001 | linkedin.com/in/tshi01/ | hideyuki.ts@outlook.com | +44 07515152844

Education

University of Tokyo (Graduate School of Pharmaceutical Sciences) April 2022 -
PhD candidate in Yukiko Gotoh's lab (Laboratory of Molecular Biology)

University of Oxford Oct 2018 - Jun 2022
MBiochem in Molecular and Cellular Biochemistry Upper Second-Class Honours (equivalent to GPA 3.5/4.0)

Skills

Microscopy and Image/Media Processing: Olympus cellVivo microscope, ImageJ, LineageTracker, ImageMagick, ffmpeg
Programming languages: Rust, Python, R, MATLAB **Molecular Dynamics:** GROMACS, AMBER, MDAnalysis
Bioinformatics RNA-seq **Bioinformatics** RNA-seq
Languages: English, Mandarin Chinese, Japanese **Miscellaneous:** Linux, Shell, git, ggplot, cell culture

Experience

Internship at Nuffield Department of Clinical Neurosciences Jun 2022 - Nov 2022
University of Oxford

- I worked in Aarti Jagannath's lab to help with a project that explores the role of the microRNA mir-17 in coupling the cellular clock and the cell division cycle.
- I analyzed fluorescence microscopy data using ImageJ with the LineageTracker plugin and I maintained the cell lines to be used in fluorescence imaging experiments.
- I was also involved in RNA-seq, from its library preparation to data analysis.

Final Year Project of the Undergraduate Master of Biochemistry Course Sep 2021 - May 2022
University of Oxford

- I worked in Phil Biggin's lab and conducted computational studies on the properties of the interaction between NAADP and its newly discovered binding protein, LSM12.
- Protein-ligand/protein-protein docking and molecular dynamics simulation were the main techniques being employed and I routinely use bash and Python scripts to manage computational jobs and process input/ouput.
- I used R and the tidyverse suite, which I have been familiar with since 2019, for data analysis and visualisation.
- I used PyMOL for producing molecular graphics.

Contribution to the Open-source Community Sep 2020 - Mar 2021
Online (GitHub)

- During the COVID-19 pandamic I taught myself basic algorithms, both generic and bioinformatics-related (i.e. sequence alignment) ones, and programming in several languages, especially Rust. With these knowledge I was able to contribute to a number of open-source projects as well as develop my own. Two notable ones are:
- Algorithms (github.com/TianyiShi2001/Algorithms) – Rust translation of William Fiset's 'Algorithms' project which is for educational purposes.
- rust-bio (github.com/rust-bio) – I contributed to optimising the pairwise sequence-alignment algorithm, among other things.

Medical Neuroscience Online Course by Duke University Dec 2017 - Feb 2018
Online (Coursera)

- During the final year in high school, I developed interest in neuroscience and, in particular, the nature of mind and consciousness. To gain a better understanding of this field, I completed the "Medical Neuroscience" online course offered by Duke University and won a Gold Award in the Brain Bee neuroscience competition in 2018.
- Verify at coursera.org/verify/DXVQ4ZS9TYJ5

Internship at Sun Yat-sen University Cancer Center Jul 2017 - Aug 2017
Guangzhou, China

- I worked in Li-Bing Song's lab and contributed to a study which established an important role of CDCA7 in the progression of triple-negative cancer by activating the EZH2-mediated pathway, where I honed a number of lab techniques such as cell culturing, western blotting and immunohisochemistry staining.
- The results were published on the International Journal of Cancer: doi.org/10.1002/ijc.31766

Achievements

Second Year Scholarship	Achieved first-class in the first year Preliminary Examinations	2019
Brain Bee Neuroscience Competition (China)	Gold Award; Ranked #3 in China	2018
Canadian National Biology Competition	International Biology Scholar with Distinction (Ranked #10)	2017
British Biology Olympiad (Round 1)	Gold Award; Ranked #3 in China	2017
USA Biology Olympiad (Round 1)	Gold Award	2017
British Chemistry Olympiad (Round 1)	Gold Award	2017
American Mathematics Contest (AMC) 10	Ranked Top 2.5%; Qualified for AIME	2015