

Zhe Deng

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EDUCATION

Case Western Reserve University | Ohio, the US

08/2023-present

Major in Biology, Doctor of Philosophy

- ❖ **Core Courses:** Statistical Analysis, and Developmental Biology.
- ❖ **Teaching Assistant:** BIOL214L (Gene, Ecology, and Cell).
- ❖ **Research lab:** Genetic studies on neurology using *Drosophila*.

University of British Columbia Vancouver (UBC Vancouver) | BC, Canada

08/2016-06/2021

Major in Biology, Bachelor of Science

- ❖ **Core Courses:** Integral Calculus with Applications to Life Sciences, Elementary Statistics for Applications, Fundamentals of Ecology, Fundamentals of Genetics, Introductory Medical Biochemistry, Evolution and Ecology, Physical Chemistry, Biology of the Cell, Molecular Genetics, Cellular Physiology, Comparative Neurobiology, Genetics, etc.

University of British Columbia Okanagan (UBC Okanagan) | BC, Canada

08/2015-06/2016

Major in Biology, Bachelor of Science

- ❖ **Honors:** Dean's List, Chancellor's Scholar Award, 2016.
- ❖ **Core Courses:** Differential Calculus with Applications to Physical Sciences and Engineering, Atomic and Molecular Chemistry, Physical and Organic Chemistry, etc.

RESEARCH EXPERIENCES

Appl Expression on the Distribution of ShaI on Cholinergic Neurons in Fly Brain

08/2023-present

Supervised by Dr. Claudia Mizutani, CWRU

- ❖ Hypothesized the Appl protein should be required for anchoring ShaI on the membrane of cholinergic neuron cell body in fly brain.
- ❖ Fly crosses were performed to generate Appl[d] homozygous and heterozygous genotypes for ShaIGFP expression pattern comparison to WT.
- ❖ Brains dissected to examine under a LSM900 confocal microscope.

Research on Epigenetic Activation and Inhibition of Flo10p in Yeast Cells

02/2020-04/2020

Supervised by Prof. Maryam Moussavi, UBC Vancouver

- ❖ Aimed to analyze the effect of *flo10* yeast mutation with the epigenetic test on their flocculation ability. Conducted literature review, experiment design, and result analysis.
- ❖ Tested inhibition to flo10p on yeast cell wall with treatments of various mannose concentrations, so that flocculation level can be manipulated to control fermentation.
- ❖ Used spectrophotometry to determine free cell level, utilized hemocytometry to observe flocculation level, and conducted yeast cell culturing.
- ❖ Discussed the results with the professor and gave a presentation to explain the research ideas.

The Application of Transgenic Technology on Farm Animals

09/2019-11/2019

Supervised by Prof. Ronaldo Cerri, UBC Vancouver

- ❖ Explored types of transgenic techniques used on farm animals, and agricultural applications for transgenic livestock, discussed advantages and disadvantages of applications of transgenic techniques.
- ❖ Learned the knowledge of DNA-microinjection, retrovirus-mediated gene transfer, embryonic stem cell-mediated gene transfer, sperm-mediated gene transfer, interspecies nuclear transfer, and germ line stem cell transplantation.

PROFESSIONAL EXPERIENCES

WuXiBiologics | Shanghai, China

09/2021- 09/2022

Full-time, Analytical scientist

- ❖ Provided technical support for biologic drug analysis experiments, such as iCIEF, SDS-CE, SEC, and IEX.

- And wrote analysis reports for in-process and lot-release products from other departments.
- ❖ Developed two iCIEF methods, three SDS-CE methods and one UPLC method, as well as issued two comparability study protocols and reports for IND filing.
 - ❖ Lead analytical team to conduct biologic drug development projects during CMC stage, including:
 - One fusion protein project: conducted method development, evaluated the temperature of sample plate and the time of focusing period, and changed the composition of master mix added with the sample to stabilize the protein, increase the resolution, and keep good repeatability.
 - Two monoclonal protein projects: completed the evaluation analysis about three methods (CE-NR/R & SEC-UPLC).
 - One nanobody project: optimized instruments running time and focusing time-period to adjust for its small size. The optimized methods were reviewed and issued as the product-specific assays.

Excell Analytical Inc | BC, Canada

05/2020-08/2020

Intern, Lab Technician

- ❖ Assisted supervisor in a project: Curcumin Supplements Could be Ineffective, Event at Higher Dosage.
- ❖ Collected the related articles and make basic summarizations, conducted experiment design, and performed the molecular analysis with cell lab techniques, including qPCR, SDS-PAGE, and ELISA.
- ❖ Used HPLC method to determine the purity of curcumin in some commercial products, edited and revised the research report, and gave presentations explaining analysis results to my colleagues.

EXTRACURRICULAR ACTIVITIES

UBC Mental Health Awareness Club, Mental Health Correspondent | BC, Canada

12/2020-07/2021

- ❖ Weekly posted related to mental health in the form of articles and event summaries, etc.
- ❖ Collaborated with clubs' communication coordinator to promote mental health awareness through various social media.

UBC Chinese Language Program, Volunteer | BC, Canada

09/2019-12/2019

- ❖ Assisted students with mandarin pinyin recognition, character spelling, speaking and listening.

UBC Face Drama Club, Key Member | BC, Canada

09/2016-05/2018

- ❖ Involved in the major social events of the face drama club, responsible for event promotion, stage building, theatre performance, etc.

ADDITIONS

- ❖ **Computer Skills:** Python, R, Empower, LIMS, ELN, Excel, Word, Powerpoint.
- ❖ **Instruments:** Skilled in use of Agilent HPLC, Waters UPLC, ProteinSimple Maurice iCIEF, Sciex PA800 CE, SoloVPE, OsmoPRO Micro-Osmometer, NanoDrop spectrophotometer.
- ❖ **Language:** Mandarin (Native), English (Fluent).
- ❖ **Interests:** Playing guitar, Writing novel online (4 yrs), Reading, and Traveling.