

YUNXUAN (CASSENDRA) CHEN

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<http://linkedin.com/in/yunxuan-chen-954244208>

Skills

Food Microbiology • Microfluidic • Isothermal nucleic acid amplification • Antibiotic resistance • Whole genome sequencing • Rapid detection • Machine learning • AutoCAD
Critical thinking • Communication • Problem solving

Research Experience

Dr. Xiaonan Lu Lab | Vancouver, Canada Sep 2020 – Aug 2022

Graduate Student Researcher & Teaching Assistant

- Developed a hybrid paper/polymer based microfluidic device for the rapid detection of *Campylobacter jejuni*. Manuscript is completed with its submission on hold pending IP application clearance.
- Developed a hybrid PES/polymer based microfluidic device for the rapid detection of *Salmonella enterica*. Manuscript is completed with its submission on hold pending IP application clearance.
- Managed lab inventory including replenishment orders.
- Prepared and led weekly lab activities and mini lectures on Food Microbiology courses, graded homework, and exams.

Dr. Xiaonan Lu Lab | Vancouver, Canada May – Aug 2019/2020

Undergraduate Student Research Assistant (full time)

- Conducted isolation, cultivation, and confirmation of *Campylobacter* in poultry meats.
- Characterized antibiotic-resistance profiles of isolated *Campylobacter* bacteria and analyzed genomic differences via multi-locus sequence typing
- Assisted on bacterial cell cultivation and sample preparation for Raman spectral collection. Participated in chemometrics and machine learning for spectral analysis.

Swisswater Ltd. | Vancouver, Canada Sep 2018 – Apr 2019

Research Study Assistant

- Developed adsorption isotherms of activated carbon on different molecules.
- Established mathematical models (Freundlich and Langmuir) for validation and statistical prediction.
- Characterized surface morphology of activated carbon via scanning electron microscopy (SEM) and analyzed mean pore diameters via Image J software.

NovoBind Livestock Therapeutics Inc. | Vancouver, Canada May 2018 – Apr 2019

Lab technician

- Performed vector-transformation and protein expression of the target gene via *E. coli* cells.
- Conducted plasmid extraction and purification by Miniprep, and quantification by Nanodrop microvolume spectrophotometer.

West China Hospital | Chengdu, China May 2017 – Jun 2017

Hemodialysis Assistant & Nutrition Counselling

- Prepared hemodialysis set-up under supervision and collected patients' routine medical test results. Assessed patients' health and nutritional condition by fat mass and bioelectrical impedance analysis.

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Publication

Chen, Y., Hu, Y., & Lu, X. (2022). Detection of *Campylobacter jejuni* using a hybrid paper/polymer-based microfluidic device based on the recombinase polymerase amplification and lateral flow assay. Unpublished manuscript, Department of Food Science, the University of British Columbia, Vancouver, Canada.

Chen, Y., Hu, Y., & Lu, X. (2022). Development of the PES-based microfluidic chip with recombinase polymerase amplification for rapid detection of *Salmonella enterica* in food samples. Unpublished manuscript, Department of Food Science, the University of British Columbia, Vancouver, Canada.

Wang, X., **Chen, Y.**, Hu, Y., Zhou, J., Chen, L., & Lu, X. (2022). Systematic review of the characteristic markers in honey of various botanical, geographic, and entomological origins. *ACS Food Science & Technology*, 2(2), 206-220.

Education

The University of British Columbia | Vancouver, Canada Sep 2020 – Aug 2022
Master of Science, Food Science

The University of British Columbia | Vancouver, Canada Sep 2015 – Apr 2020
Bachelor of Science (with honors) – Food Science and Nutrition Double Major

Academic Awards and Certifications:

CIFST Scholarship Trust Inc. Graduate Scholarship in Food Science	Sep 2021
Faculty of Land and Food Systems Graduate Award	Sep 2020
A J Wood Memorial Scholarship	Sep 2020
Dr Joseph F Morgan Scholarship	Sep 2020
International Tuition Award	2020-2022
Work Learn International Undergraduate Research Award	2019-2020
1st Place Undergraduate Research Award in Agricultural and Food Chemistry Division of American Chemical Society	2020
Faculty of Land and Food Systems International Student Scholarship	Sep 2018
Ping Hua Pu Scholarship	Sep 2018
Marvin Tung Food Product Development Competition	Apr 2018
Undergraduate graduation with honors	2020
American Chemical Society (ACS) membership	2019-2022
Membership of Institution of Food Technologists (IFT)	2018-2022
Food Safe Level 1&2	2017