

MARK PAMPUCH

markpampuch@gmail.com

EDUCATION

Doctor of Philosophy

Expected 2026

University of Western Ontario (London, ON)

- Ph.D candidate in Biochemistry
- Supervisor: Bogumil Karas
- Ontario Graduate Scholarship recipient (\$15,000)

Master of Science

09/2020-12/2020 (withdrawn from program)

University of British Columbia (Vancouver, BC)

- Master of Science in Botany
- Supervisors: Patrick Keeling and Naomi Fast
- British Columbia Graduate Scholarship recipient (\$15,000)

Bachelor's Degree (Hons): Science

04/2020

Western University (London, ON)

- Honors Specialization in Genetics
- Dean's Honor List 2017/2018; 2018/2019; 2019/2020
- Western Scholarship of Distinction 2016 (\$1000)

Ontario Secondary School Diploma

06/2016

Marshall McLuhan Catholic Secondary School (Toronto, ON)

- Ontario Scholar Distinction
- Extended French Certificate
- Gifted Program (Grade 9 – 12)

PROFESSIONAL EXPERIENCE

Summer Researcher

04/2021 – 08/2021

London Research and Development Centre – Agriculture and Agrifood Canada (London, ON)

- Supervisor: Dr. Bogumil Karas
- Project title: Towards a synthetic algal chloroplast: a streamlined platform for creating designer chloroplast genomes in *Phaeodactylum tricornutum*.

Snowboarding Instructor

12/2020 - 04/2021

Cypress Mountain Snow School – Cypress Mountain (Vancouver, BC)

Research Participant / Thesis Student

06/2019 – 04/2020

London Research and Development Centre – Agriculture and Agrifood Canada (London, ON)

Summer 2020 contract voided due to COVID-19

- Supervisor: Dr. Krzysztof Szczygłowski
- Project title: Shaping the root: assessing a dose dependent role of the *Lotus japonicus* *HAR1* receptor kinase gene

Summer Student

06/2019 – 08/2019

Biochemistry Summer Research Program – Western University (London, ON)

- Supervisor: Dr. Bogumil Karas

Snowboarding Instructor

01/2019 – 03/2019,

Boler Mountain Snow School – Boler Mountain (London, ON)

12/2019 – 03/2020

- Beginner – Intermediate skill range
- 70+ students across group and private lessons

Internship

05/2018 – 08/2018

MolecuLight Inc. – MaRS Discovery District (Toronto, ON) ✎

- Case report forms: Data collection and processing
- Microbiological data analysis
- Literature reviews: Microbiology and Healthcare Economics
- Market research
- Competitor analyses
- Social media content strategy
- Website design aid and QA

Private Snowboarding Instructor

12/2016 – 03/2017

- Single client at novice skill level

Private Tutor

06/2014 – 08/2016

- Primary focuses: Biology and Chemistry
- Secondary focuses: Mathematics, Physics, and English

EXTRACURRICULAR INVOLVMENT**London Track3 Adaptive Snow School Instructor**

12/2019 – 03/2020

London Track3 Ski School – Boler Mountain (London, ON) ✎

- Snowboarding instructor for children and adults with physical, developmental, visual, and hearing challenges

Community Representative

10/2020 – Present

SynBio Canada ✎

- Update Syn Bio Canada executives on synthetic biology research at UBC and BC province
- Syn Bio Canada blog contributor (articles pending)

cGEM Competition Judge

10/2021

cGEM ✎

- Judge for national biotechnology competition in Canada

iGEM Graduate Advisor

10/2020 – 12/2020

UBC iGEM – University of British Columbia (Vancouver, BC) ✎

- Aid in different aspects of UBC undergraduate iGEM research project

Council Member (Botany Department Representative)

09/2020 – Present

Graduate Student Society – University of British Columbia (Vancouver, BC) ✎

- Speaker on behalf of department needs to student government body
- Elected as representative by Botany Graduate Student Association
- Member of the elections committee

London Track3 Adaptive Snow School Instructor

12/2019 – 03/2020

London Track3 Ski School – Boler Mountain (London, ON) ✎

- Snowboarding instructor for children and adults with physical, developmental, visual, and hearing challenges

Writer / Researcher

09/2018 – 04/2019

Western University Technology Review – Western University (London, ON) ✎

- Writing articles on novel technologies for a local audience
- Sustainability department

Chito Ryu Karate Training

2004 – 2016

Higashi Dojo (Toronto, ON) ✎

- 1st Dan Black Belt in Chito Ryu Karate
- Weekly senior and youth group training
- Tournament competitions
 - ♦ Kata: 4 gold, 3 bronze; Kumite: 3 gold, 1 silver, 3 bronze
- Various demonstrations at other dojos and events

Snowboarding Team

2014 – 2016

Marshall McLuhan Catholic Secondary School (Toronto, ON)

- Participated in racing events at Mount St. Louis Moonstone (Coldwater, ON)

CASI Level 1 Program

12/2015

Canadian Association of Snowboard Instructors – Lakeridge Ski Resort (Uxbridge, ON) ✎

- Obtained CASI Level 1 Snowboard Instructor Certification

Staff in Training

07/2015 – 08/2015

Seneca Summer Camps – Seneca College (Toronto, ON)

- Mini-Multi's Sports Camp (ages 4 – 6)
- Engaging enthusiastically w/ children
- Planning and organizing weekly activities

Model United Nations (CHAMUN)

04/2015

Chaminade College School (Toronto, ON)

- Researching, debating, and cooperative problem-solving w/ regards to contemporary political issues

Leader in Training Program

07/2014

Seneca Summer Camps – Seneca College (Toronto, ON)

- Focuses: Management, decision making, and problem-solving skills

PUBLICATIONS

- Pampuch, M., Walker, E.J.L., and Karas, B.J. (2021) Towards synthetic diatoms: The *Phaeodactylum tricornutum* Pt-syn 1.0 project. Current Opinion in Green and Sustainable Chemistry. Submitted, manuscript number: COGSC-D-21-00104 (*in review*)

CONFERENCES / PRESENTATIONS

Ontario Biology Day

03/2020

McMaster University (Hamilton, ON)

Cancelled due to COVID-19

- Scheduled for 15 min presentation
- Title: Shaping the root: assessing a dose dependent role of the *Lotus japonicus* *HAR1* receptor kinase gene

TECHNICAL SKILLS

Computer Software Experience

- | | |
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| ▪ Microsoft Office (including Excel) – Proficient | ▪ PyMOL – Novice |
| ▪ Krona – Proficient | ▪ DNASTAR – Novice |
| ▪ NCBI BLAST – Intermediate | ▪ Adobe Photoshop – Intermediate |
| ▪ SnapGene – Intermediate | ▪ Adobe Illustrator – Intermediate |
| ▪ ML-DSP – Novice | ▪ Sony Vegas Pro – Intermediate |
| ▪ FigTree – Novice | ▪ Audacity – Intermediate |
| ▪ Benchling – Proficient | |

Laboratory Experience

- DNA / RNA isolation
- RE Digest
- E. coli* / yeast Transformation
- Bisulfide Conversion
- Sanger Sequencing
- qRT-PCR
- CAPS assay
- CRISPR–Cas editing
- Metagenomics

Technique Familiarity

- Next Gen Sequencing
- Agroinfiltration
- Hairy root transformation
- GUS staining
- Minisatellite/Microsatellite analysis
- Fluorescence *in situ* hybridization
- Chaos Game Representation

PROGRAMMING EXPERTISE

- | | |
|--|------------------------------|
| ▪ Python – Proficient | ▪ JavaScript – Novice |
| ▪ R and R studio – Intermediate | ▪ HTML – Novice |
| ▪ bash/Unix – Intermediate | ▪ CSS – Novice |

CERTIFICATIONS

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| ▪ CASI Level 1 and 2 | ▪ Smart Serve |
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ADDITIONAL SKILLS/HOBBIES/PASSIONS

- Scientific writing and communication
- Photo and video editing
- Avid Skier/Snowboarder
- Trilingual (English, French, Polish) + Basic Spanish
- Effective collaborator
- Nature lover (hiking, fishing, camping)