

Sara Jalali

sjalali@my.yorku.ca

Education

Honours BSc in Biology | York University – Toronto, ON | Expected graduation: 2028

Research Experience

Research Assistant

Research volunteer | PI: Dr Nik Kovinich | York University | 2026 – Present

- Studying the role of transcription factors involved in Camalexin biosynthesis in *Arabidopsis thaliana*
- Testing a combination of knockout and overexpressed transcription factors to increase Camalexin biosynthesis

Research Assistant

Research volunteer | PI: Dr Pierre Potvin | York University | 2026

- Testing organic chemistry laboratory experiments designed for second- and third-year chemistry courses

USERN Research Internship

Research Intern | PI: Dr Nima Rezaei – Dr Mina Hosseini | Tehran, Iran | 2024-2025

- Completed an intensive research training in scientific writing and data analysis
- Screened and analyzed findings from 200+ studies to prepare a literature review on cancer nanovaccines

Research Assistant

PI: Dr Mohammad Sharifzadeh | Tehran, Iran | 2023-2024

- Collaborated with a research team on a literature review examining the combined effects of Carbohydrates and Neurotrophic factors for spinal cord injury treatment

Awards and Honors

- York University continuing student award | 2026
- Member of Dean's Honour Roll
- York University Entrance Scholarship | 2025
- USERN Research Fellowship Certificate | 2024

Projects and Skills

Laboratory and Technical Skills

- Molecular Biology Techniques: RNA extraction, cDNA synthesis, PCR, quantitative PCR (qPCR), gel electrophoresis, and nucleic acid analysis
- Cell culture and sterile laboratory techniques
- Protein interaction assays (Yeast two-hybrid system)
- Experimental design and analytical testing (Research Methods in Cell and Molecular Biology, Biol 2070)

Research and Scientific Skills

- Scientific writing and manuscript preparation for peer-reviewed research publications
- Statistical analysis in R, including parametric and non-parametric tests, ANOVA, and chi-square analysis
- Data interpretation and visualization (R, Excel, and BioRender)
- Reference management (Mendeley)

Experiences and Activities

- PASS Leader | Bethune College | York University | 2026 - present
- Peer Mentor | Bethune College | York University | 2026 - present
- Hospital Volunteer | Mackenzie Health Hospital Recovery Room | 2025-present
- Outreach Coordinator at Healthcare Society at York University | 2025-2026
- Science Student Ambassador | 2025-present
- Class Representative for Biol 1000 and Physics 1421 | Bethune College | York University | 2024