

MUHAMMED MURSHED AMIR

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PROFESSIONAL SUMMARY

Microbiology and Biological Sciences graduate from the University of Manitoba with hands-on laboratory research experience in Biosafety Level 2 (BSL-2) environments, including aseptic technique, microbial culturing, PCR, DNA extraction, and gel electrophoresis. Experienced in experimental documentation, quality control, research data collection, and SOP adherence. Experience with R and Python through computational biology, bioinformatics, and genomic data science coursework. Reliable, detail-oriented, and adaptable, with experience collaborating across multidisciplinary research and technical operations teams.

CORE TECHNICAL SKILLS

Laboratory & Molecular Biology: Aseptic technique, sterile procedures, sample preparation, DNA extraction, PCR, gel electrophoresis, molecular assays, microbial culturing, cell culture, biological sample handling

Research Operations: Experimental protocol execution, SOP adherence, laboratory documentation, research data collection, quality control, research record-keeping, scientific workflow support

Computational & Data: R, Python, data analysis, computational biology, bioinformatics, genomic data science

Safety & Compliance: WHMIS, Biosafety Level 2 practices, general laboratory safety, laboratory compliance

Professional: Technical troubleshooting, attention to detail, scientific communication, team collaboration, time management, adaptability

EDUCATION

University of Manitoba — Winnipeg, MB

Completed Fall 2025

Bachelor of Science, Microbiology & Biological Sciences

Relevant coursework: Microbiology, Molecular Biology, Biochemistry, Chemistry, Computational Biology, Biological Sciences, Laboratory Techniques

Northwood University / American National College — USA

Associate Degree, Biomedical & Social Sciences

49 credits completed | GPA: 3.6/4.0

Asian Institute of Business & Sciences — Sri Lanka

Pre-Biomedical Sciences

Research project: Type 2 Diabetes | Certificate of Excellence in Chemistry

Genetech Molecular Biology Program

Practical training in PCR-based blood testing and genetic fingerprinting

RESEARCH & TECHNICAL EXPERIENCE

Student Research Assistant — Microbiology Laboratory (BSL-2)

2023

University of Manitoba — Winnipeg, MB

- Performed aseptic sample preparation, microbial culturing, and molecular biology procedures including PCR-related work, DNA extraction, and gel electrophoresis while following BSL-2 requirements and laboratory SOPs.
- Maintained organized laboratory records, experimental documentation, and research data to support traceability, accuracy, and consistent research workflows.
- Performed quality-control activities and monitored laboratory procedures for consistency, communicating workflow or equipment issues requiring attention.
- Collaborated with academic researchers and multidisciplinary team members to support research objectives, project timelines, and efficient day-to-day laboratory operations.

Simulation Operator Technician

2025 – Present

University of Manitoba — Winnipeg, MB

- Support reliable delivery of simulation-based education by preparing, operating, and maintaining technical equipment before and during scheduled activities.
- Maintain equipment readiness through routine checks, troubleshooting, and escalation of technical issues when additional support is required.
- Coordinate equipment readiness, inventories, workspace standards, and operational requirements across scheduled simulation activities.
- Collaborate with faculty, staff, and multidisciplinary teams on technical setup, troubleshooting, and activity coordination while maintaining safety and professional standards.

PROFESSIONAL DEVELOPMENT

- Marine Biology — American Museum of Natural History: marine biodiversity, ecology, evolution, ocean ecosystems, and the effects of environmental change and human activity on marine organisms.
- Researcher's Guide to Omics Fundamentals — Fred Hutchinson Cancer Center: genomics, transcriptomics, proteomics, and related omics technologies used in biomedical research and data interpretation.
- Researcher's Guide to DNA Sequencing Data — Fred Hutchinson Cancer Center: DNA-sequencing workflows, data quality control, genomic data analysis, variant identification, and interpretation of sequencing results.
- Drug Discovery — University of California San Diego (in progress): target identification, compound screening, preclinical research, clinical trials, regulatory evaluation, and commercialization.
- Experimental Methods in Systems Biology — Icahn School of Medicine at Mount Sinai (in progress): gene and protein expression, molecular interactions, microscopy, flow cytometry, mass spectrometry, and related systems-biology methods.
- Python for Genomic Data Science — Johns Hopkins University (in progress): Python programming for processing, analyzing, and interpreting biological sequences and large-scale genomic datasets.

CERTIFICATIONS & PROFESSIONAL MEMBERSHIPS

Certifications: WHMIS (University of Manitoba), General Laboratory Safety (University of Manitoba), Smart Serve, Smart Choice, Manitoba Food Handler Certification

Memberships: Bioscience Association of Manitoba (BAM), Youth Enrichment Network (YEN)

ADDITIONAL EXPERIENCE

Guest Event Expert

2021 – Present

Delta Hotels by Marriott — Winnipeg, MB

- Deliver high-precision service in a fast-paced, standards-driven environment, applying strong time management, communication, reliability, and attention to detail under pressure.

Server Assistant

Summer 2022

Earl's Kitchen + Bar

- Supported efficient front-of-house operations through teamwork, organization, and responsive service in a fast-paced environment.