

# ARZU KIRICI, MSc

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in arzukirici

📍 Toronto, Canada

## Profile

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Detail-oriented Biologist specializing in genomics, bioinformatics, and spatial biology. At Astraea Bio I analyze spatial omics datasets (Stomics—gene expression; MSI—metabolites/peptides/glycans; COMET—immunofluorescent images) and support operations (project documentation, cross-functional coordination, timelines, stakeholder reporting). Developer-minded: I design and build lightweight analysis tools and automations (Python, R, Seurat, Scanpy; basic HTML/CSS/JS/WordPress) to create dashboards, streamline workflows, and turn data into actionable insights.

## Professional Experience

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### PROJECT ANALYST

Apr 2025 – Present

**Astraea Bio** (Remote, Part-time Contract)

Toronto, Canada

Support spatial omics research (Stomics—gene expression; MSI—metabolites/peptides/glycans; COMET—immunofluorescent images) while coordinating project documentation, cross-functional workflows, and stakeholder communications. Combine computational biology expertise with operational support to advance data-driven projects and improve team efficiency.

- Developed pipelines and performed bioinformatics analyses of spatial omics datasets using Python, R, Seurat, and Scanpy.
- Designed and maintained advanced tracking sheets (lookups, PivotTables) to monitor milestones, KPIs, and follow-ups.
- Coordinated vendor communications for quotes/proposals; compiled comparison matrices to support procurement decisions.
- Prepared meeting minutes, action logs, and briefing notes; drafted update communications tailored to diverse audiences.
- Conducted literature and environmental scans to inform process improvements; synthesized results into concise memos and slide decks.
- Documented SOPs and process maps to standardize data capture, metadata handling, and reporting practices across teams.

### LABORATORY TECHNICIAN

Feb 2022 – Apr 2023

**Tikkle Scientific** (On-site, Part-time Contract)

Toronto, Canada

Supported high-throughput RT-PCR COVID-19 testing for clinical and film industry clients. Responsible for sample processing, nucleic acid extraction, RT-PCR setup, and data interpretation in compliance with public health standards and strict QC protocols.

- Performed sample processing, RNA extraction, and RT-PCR testing using rapid test kits.
- Ensured accurate result interpretation and maintained sample documentation via LIMS.
- Upheld lab safety standards and participated in daily QC procedures.

### SENIOR BIOLOGIST

Aug 2020 – Sep 2021

**Mikrogen Genetic Disease Diagnostic Center** (On-site, Full-time)

Ankara, Turkey

Led molecular diagnostics and genomics workflows including WES, WGS, and targeted genetic screening. Oversaw biospecimen processing, assay execution, and clinical reporting under regulated lab conditions.

- Supervised daily lab operations and supported diagnostic testing for oncology, prenatal, and rare disease panels.
- Performed DNA/RNA extraction, PCR/qPCR, and data validation for clinical reporting.
- Maintained LIMS records and ensured compliance with SOPs and QC/QA protocols.

### RESEARCH ASSISTANT

Sep 2015 – Jan 2016

**Wageningen University, Laboratory of Plant Physiology** (On-site, contract)

Wageningen, The Netherlands

Researched seed physiology and genetic, and investigated the EPPO method for seed dormancy release and aging.

- Assisted in research involving plant genetic analysis using PCR and gel electrophoresis and contributed to lab operations and documentation.
- Contributed to a published research article on seed dormancy mechanisms.

## Other Trainings

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micro-ELISA technique, EUROIMMUN Academy

Forensic Biology and Biotechnology Training (Applied Course) by Association of Forensic Scientists

- 60-hour intensive training on forensic biology and biotechnology
- Covered applied techniques in forensic biotechnology

## Education

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**Graduate Diploma in Computer Programming**

2021 – 2023

Seneca College, Toronto, ON

**Master of Science, MSc in Biology**

2015 – 2019

Ankara University, Ankara, Turkey

Laboratory: Prof. S. Aras Lab, Division of Biotechnology, Department of Biology, Faculty of Science.

Key Contributions: Managed & supervised BSc students for their dissertation. Ensured continuous learning & scientific expertise while attending scientific events. Received best poster presentation awards in Paris, France.

Main MSc Topic: Investigation of the YABBY and DOF transcription factors at gene expression level during drought stress conditions in *Phaseolus vulgaris* L. and the effect of salicylic acid.

Skills: qRT-PCR, RNA-seq, Gel Electrophoresis, Data Analysis, CRISPR-Cas9, Microscopy, Plate-Based Assays, Python for Data Analysis.

**B.Sc. in Biological Sciences**

2010 – 2014

Ankara University, Ankara, Turkey

## Peer Reviewed Publications

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- Contributed to findings published in: Gonda Buijs, Jan Kodde, Steven P C Groot, Leónie Bentsink, \*Seed dormancy release accelerated by elevated partial pressure of oxygen is associated with DOG loci\*, \*\*Journal of Experimental Botany\*\*, Volume 69, Issue 15, 10 July 2018, Pages 3601–3608, (DOI: 10.1093/jxb/ery156).
- Kirici AG, et al. Abstract–'Investigation of the YABBY and DOF transcription factors at gene expression level during drought stress conditions in *Phaseolus vulgaris* L. and the effect of salicylic acid.' Proceedings: SciTechnol.

## Volunteering & Customer Facing Part-Time Work

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**PANORAMICS - A Vision**

Feb 2025 – Present

**Computational Creative, Volunteer**

Toronto, Canada

- Aggregated and cleaned multi-source datasets; created analysis-ready tables and quality checks to support reproducible reporting.
- Built compact dashboards/summary tables (spreadsheets + basic Python/R scripts) to communicate trends, counts, and simple performance indicators.
- Prepared figures and one-page summaries for stakeholders; translated technical findings into plain-language insights.

**CReSCENT: CanceR Single Cell Expression**

Oct 2023 – April 2025

**Public Curator, Volunteer**

Toronto, Canada

- Integrated and curated 145 brain-related single-cell RNA-seq datasets (approx. 938,000 cells) from 15 publications for the CReSCENT platform.
- Focused on datasets covering brain-related diseases like multiple sclerosis and Alzheimer's, along with brain cancer data including hallmark glioblastoma publications and medulloblastoma to meet Brain Canada grant targets for the PMGC Single Cell Initiative.

**FOODBASICS**

Oct 2021 – Present

**Supervisor**

Toronto, Canada

- Oversaw daily operations across produce, cashier, and bookkeeping areas, ensuring smooth workflow, team coordination, and high standards of customer service and inventory management.