

# FAITH OGUNDIMU

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## EDUCATION

### Dublin City University

2021 - 2025

BSc. in Genetics and Cell Biology (GCB) | First Class Honours (1.1) | Ranked 2nd & Dean's Honour List

Relevant Coursework: Computational Biology | Biostatistics | Cell Biology, Recombinant DNA Cloning & Bioinformatics

- Final Lit. Review: *Bioinformatics and Machine Learning in Advancing Transcriptomic Analysis for Predicting Drug Responses in Precision Oncology*
- Final Dissertation: *Using neural networks and foundation models to understand gene regulation in the MCF-7 breast cancer cell line*

### Royal College of Surgeons Ireland (RCSI)

2025 - 2029 (expected)

Doctor of Philosophy (PhD) in Cancer Genomics and Epigenomics, Machine Learning and Bioinformatics

- Investigating non-coding driver mutations in breast cancer using large-scale public datasets (TCGA, ICGC, ENCODE), with a focus on identifying functional variants in regulatory elements that affect transcription factor binding and gene expression.
- Applying integrative computational approaches and machine learning to map chromatin accessibility, mutation data, and expression profiles, aiming to uncover novel regulatory mechanisms and therapeutic vulnerabilities in breast cancer subtypes.

## PROFESSIONAL EXPERIENCE

### Google

October 2025

2025 Google Ireland Hackathon by BGN - [TestBuddy](#)

- Competitively selected from 200+ applicants to participate in a 3-day Google Ireland Hackathon focused on developing scalable cloud-based solutions using Google Cloud Platform.
- Co-developed TestBuddy, an AI-powered driving education platform integrating adaptive testing, real-time test booking, and Google Cloud APIs (Maps, Vision AI, Cloud Run).
- Achieved 2nd place overall, recognised for innovation, technical depth, and cross-disciplinary teamwork across AI, cloud engineering and UX design.

### University College Dublin

June 2025 - August 2025

Breakthrough Summer Research Scholar (BioSLATE - Biomarker Selection and Synthetic Lethality Analysis for Therapeutic Exploration in HGSOE) - [BioSLATE Website](#)

- Identified synthetic lethal targets in HGSOE by integrating DepMap CRISPR screens, TCGA CNA data, and gene essentiality models; developed a high-throughput pipeline for biomarker discovery and statistical prioritisation.
- Built a scalable CrewAI-based multi-agent system with automated literature mining, druggability scoring, and clinical trial linkage; deployed findings via an interactive Streamlit app for target nomination and visual exploration.

### Royal College of Surgeons Ireland (Final Year Dissertation)

January 2024 - March 2024

Visiting Student Researcher

- Developed and benchmarked a neural network to predict chromatin accessibility in MCF-7 cells using ChIP-seq data, achieving high accuracy and identifying key epigenetic predictors (e.g. H3K4me1) via LOCO and SHAP analysis.
- Processed and integrated multi-omic data from ENCODE (ChIP-seq, ATAC-seq) across >2.8M genomic bins to create biologically meaningful features; proposed future RNA-seq integration for functional inference.

### Virtual Metabolic Human (Virtuome)

May 2024 - July 2024

Research Intern

- Conducted biocomputational analysis of drug metabolism, collaborating on biochemical network visualisations and contributing to digital health community projects.
- Collaborated with the Coeliac Society of Ireland producing a detailed research report and a visually compelling infographic to advance understanding and support for members suffering with coeliac disease.

## Applied Process Company (APC) Ltd.

January 2024 - August 2024

### Analytical Intern

- Performed pDNA/gDNA extraction, HPLC, and SDS-PAGE to support analytical testing and method transfer for high-priority biopharma projects in an industry-leading R&D lab.
- Collaborated with senior analysts and cross-functional teams to deliver results under GLP standards; prepared and presented technical reports to internal stakeholders and external clients.

## Royal Victoria Eye And Ear Hospital

July 2023 - September 2023

### Histopathology Summer Intern

- Gained proficiency in patient information systems (i.e. Clinisys WinPath) and histopathology workflows, including microtomy (25 blocks/hr), H&E staining, and result tracking, reducing turnaround times by 60%.
- Collaborated with senior pathologists on research into uveal melanoma in young patients, contributing to efforts to improve diagnostic prognostics in Ireland.

## PRODIGY Creative

May 2020 - June 2023

### Founder & Multimedia Designer

- Monetised a longstanding hobby in graphic design by founding a multimedia business, completing over 500 projects for 300+ clients worldwide in both English and French; now transitioning focus entirely to bioinformatics and cancer research.
- Collaborated with clients to develop creative solutions, including logos, packaging, business stationery, and promotional materials, tailored to meet their needs.

## SKILLS

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**Bioinformatics & Data Science:** NGS Data Analysis, Genomic Databases (e.g. TCGA, DepMap, ENCODE), Statistical Modelling, GWAS, Workflow Automation, Biostatistics, Data Visualisation (matplotlib, seaborn, ggplot2), Docker, CellDesigner™

**Programming & Scripting:** Python, R, Bash Perl, Markdown, Mermaid (Notebooks & *Apps*: Streamlit, CrewAI, Jupyter, Colab, FastAPI, React.js, Material UI, Firebase)

**Machine Learning & AI Frameworks:** scikit-learn, XGBoost, PyTorch, Gemini API (Google Cloud), Vertex AI

**Highlighted Projects:** [Google Ireland Hackathon by BGN - TestBuddy](#) | [BioSLATE - Biomarker Selection and Synthetic Lethality Analysis for Therapeutic Exploration in HGSOE](#) | [Targeted Gene Panel of a Breast Cancer & Ovarian Cancer Susceptible Patient](#) | [Using Neural Networks and Foundation Models to Understand Gene Regulation in the MCF-7 Breast Cancer Cell Line](#)

**Experimental and Lab Techniques:** MiniPrep, NanoDrop 8, Biological Safety Cabinet, SDS-PAGE, HPLC (AEX), SoloVPE, ELISA, pDNA and gDNA Extraction, qPCR

**Languages:** English (Native), French (Professional-Working proficiency), Irish (Conversational), Yoruba (Receptive Bilingualism)

## GRANTS & SCHOLARSHIPS

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### Breakthrough Cancer Research Summer Student Scholarship

Funded by Ireland's leading patient-focused cancer research charity. Awards up to €3,000 for 6–10 weeks of hands-on summer research in cancer labs across Ireland. Recipients contribute to poor-prognosis cancer studies and are part of an elite group of emerging research leaders

### Government of Ireland Postgraduate Scholarship

Awarded through the €146,000 Government of Ireland Postgraduate Scholarship Programme, a nationally established and highly selective grant recognizing world-class research potential. Success rate has averaged **18% over the past five years**.

### RCSI Top-Up Research Grant — Royal College of Surgeons in Ireland (RCSI)

Competitive institutional €10,000 supplement awarded to Government of Ireland Postgraduate Scholars for research enhancement. Funding supports wet-lab validation of computationally predicted non-coding driver mutations in breast cancer using CRISPR-based perturbation, RNA-seq, ATAC-seq, and ChIP-seq.

## CONFERENCES & PRESENTATIONS

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### Dublin City University

April 2025

Poster presentation at the 16th BRS Research Day 2025: Using Neural Networks and Foundation Models to Understand Gene Regulation in the MCF-7 Breast Cancer Cell Line

### **Breakthrough Cancer Research**

August 2025

Awarded Best Lay Presentation for funded internship project: BioSLATE - Biomarker Selection and Synthetic Lethality Analysis for Therapeutic Exploration in HGSOE; recognised for excellence in communicating complex research to a lay panel of cancer survivors and research peers

### **Conway Institute Research Festival (UCD)**

October 2025

Presented BioSLATE to a scientific audience, receiving structured feedback and commendation from the judging panel, with a perfect 30/30 score from both judges among over 100 poster submissions.

## **VOLUNTEERING & SCIENCE COMMUNICATION**

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### **Dublin City University & Unibuddy**

February 2025 - April 2025

Student Blog Contributor

Authored a blog post for incoming students, detailing the academic journey, course insights and tips for thriving in the Genetics and Cell Biology programme.

### **Dublin City University**

October 2025

Black History Month Exhibition Contributor

Selected by DCU to be featured in the campus exhibition recognising student, staff, and alumni achievements; participated in on-site photoshoot and engagement activities coordinated by the EDI office.

## **ACADEMIC DISTINCTIONS & AWARDS**

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### **Google Ireland Hackathon – 2nd Place (2025)**

Awarded 2nd place among national finalists for developing *TestBuddy*, an AI-driven driving test preparation platform using Google Cloud technologies.

### **Conway Institute Research Festival - Poster Commendation**

Commended and awarded perfect scores (30/30) by both judges from a pool of over 100 posters at the Conway Research Festival.

### **Breakthrough Cancer Research – Best Lay Presentation Award (2025)**

Recognised for excellence in science communication during summer cancer research programme

### **BSc. First-Ranked Overall – Year 1**

**BSc. First-Ranked Overall – Year 2** → *Undergraduate Academic Achievement Award (Faculty of Science and Health)*

### **BSc. Second-Ranked Overall – Year 3**

**BSc. Second-Ranked Overall – Year 4** → *Salutatorian | Dean's Honours List*

### **FSH Academic Scholarship Recipient**

Awarded for achieving over 550 CAO points in the Leaving Certificate.