

Clarisse Ratu Diandra

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EDUCATION & AWARDS

Biochemistry MBiol, BSc

September 2020 - July 2024

University of Leeds, UK

Molecular Cloning | Advanced Biomolecular Techniques | Biophysical Characterisations

- Classification: High Upper Second-Class Honours (67.9%)
- Dean's List Award (top 5% of students): 2021, 2022
- Dean's Excellence Scholarship (exemplary academic performance): 2020, 2021, 2022

A-levels

July 2018 - June 2020

Surabaya Cambridge School, Indonesia

Mathematics | Physics | Biology | Chemistry

- A*A*AA

RESEARCH EXPERIENCE

Characterising Highly Disordered but Conserved Regions of Ire1 Luminal Domain C-terminal for Oligomerisation

University of Leeds, UK

October 2023 - May 2024

- Refined DNA expression of 9 Ire1 luminal domain variants in bacterial cultures, performed purification using the QIAprep Spin Miniprep Kit, and conducted sequencing analysis in Benchling software.
- Optimised protein expression in bacterial cells and IMAC purification of 9 Ire1 luminal domain protein variants.
- Utilised Mass Photometry, Flow-Induced Dispersion Analysis, and Nuclear Magnetic Resonance for biophysical characterisation of Ire1 luminal domain to observe conformational and structural changes in response to its ligands.
- Developed refined experimental protocols that enhanced reproducibility and efficiency for parallel experiments.

Investigating HIV-1 Nef Hijacking of Cell Machinery for Pathogenesis

University of Leeds, UK

October 2022 - March 2023

- Characterised HIV-1 Nef's function in CD4 downregulation and interactions with Hck-SH3 protein
- Employed Surface Plasmon Resonance, Nuclear Magnetic Resonance, Confocal Microscopy and Flow Cytometry to explore the importance of Nef in HIV-1 pathogenesis in human cell machinery.
- Formulated critical importance of Nef protein for future therapeutic implications.

GFP Gene Expression and EGFP Protein Purification

University of Leeds, UK

October 2021 - November 2021

- Genetically modified *E. coli* (DH5 α) cells by ligating pET28c expression vector with GFP DNA to express GFP gene.
- Performed western blot analysis on purified EGFP protein expression to assess protein quality.

REVIEWS

The Development and Prospects of Immunotherapy in Cancer Treatment

November 2024 - December 2024

- Examined the development of cancer immunotherapy history to influence current standard medical practice.
- Evaluated potential Cancer Immunotherapies: ICI, tumour vaccines, CAR-T cells and BiTE® antibodies

Unfolding Protein Response (UPR): A Promising Therapy to Breast Cancer

October 2022 - May 2023

- Studied UPR influences in breast cancers: tumorigenesis, angiogenesis, migration, chemoresistance, and dormancy.
- Discussed UPR-targeting drugs as combination and single therapy of breast cancers.

WORK EXPERIENCE

FBS Student Engagement Intern: International Position

University of Leeds, UK

August 2023 - July 2024

- Organised student-led events and hosted activities for 200+ participants.
- Worked with the student support team to promote inclusivity within the community.
- Elevated year-to-year event engagement by 30% through proactive insights and feedback acquisition.

SKILLS

Protein Expression & Purification (Liquid Chromatography & FPLC) | Protein Characterisation Techniques (Flow-Induced Dispersion Analysis, Mass Photometry, Nuclear Magnetic Resonance, Surface Plasmon Resonance) | Plasmid Expression & Purification | Molecular Biology Techniques (PCR, SDS-PAGE, Western Blot, Molecular Cloning, DNA Sequencing) | Cellular Imaging Techniques (Confocal Microscopy, Flow Cytometry) | Bioinformatics | Data & Statistical Analysis | Origin Lab | Fiji | Benchling | Detailed Record Keeping | PyMOL | Good Laboratory Practice (GLP) | Troubleshooting & Optimisation |

CERTIFICATES

Imperial College London: Immunology - Immune Failures and Cancer Immunology Course

February 2025

- Studied genetic regulation, immune system failures, and therapeutic approaches.
- Evaluated current immune therapies and identified immune mechanisms in disease pathogenesis.

LifeArc Life Sciences: Biology Research Job Simulation

October 2024

- Optimised experimental conditions of fibroblast-to-sensory differentiation protocol.
- Analysed experimental results using RStudio software and logistic regression.

Pfizer UK: Molecule to Market Job Simulation

May 2024

- Researched clinical care pathways and prepared evidence for NICE submission for hypothetical new medicine.
- Created brand positioning statement and effective go-to-market strategy.

LANGUAGES

English full professional proficiency, Bahasa Indonesia native, Javanese native

INTERESTS

Scientific Research | Health & Wellness | Forensic Science & Investigation