

Mandhri Dushyanthi Abeysooriya

JOB APPLICANT

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KEY SKILLS

Analysis & Problem-Solving

Oral and written communication

Project management

Self-direction and Entrepreneurial skills

Supervision and leadership

Teamwork

COMPUTER LITERATE

R and Python languages

Microsoft office package

GitHub

LANGUAGES

English

Sinhala

1.0 EDUCATION

2019-2021 **Master of Biotechnology and bioinformatics**
July **Deakin university, Australia**

2014-2017 **Bachelor's in biotechnology, Biochemistry, and genetics**
University of Bangalore, India (Distinction level was achieved throughout the course)

2.0 RESEARCH EXPERIENCES

2020 October-present

School of Life & Env. Sciences.
Deakin University,
Australia

Master Research Projects:

1. Meta-analysis of the effect of Homocysteine on DNA methylation and gene expression
 - Designing systematic approach in reviewing research literatures.
 - Using R language to analyse and derive conclusions on statistical validity of data in a research
 - Performing one/multi-dimensional enrichment analysis using R
 - Working with “miss. methyl, limma, minfi, plyr, R. utils, illuminaHumanMethylation450kmanifest” packages.
 - Implementing statistical principles for genomic data
 - Using GitHub and troubleshooting GitHub
2. Microsoft Excel impact on alteration of Gene names
 - Designing R codes to analyse the data imported
 - Systematic review on analysis of data and deriving to conclusions on the impact of the study.
 - implementing statistical principles for genomic data
 - Using GitHub and troubleshooting GitHub

2016 November-

2017 April

Department of Biotechnology.
University of Bangalore,
India

Bachelor Research project:

1. Sequence analysis of MC1R protein of reptiles and birds using bioinformatic tools
 - Using BLAST, MEGA, FASTA, Clustal Omega tools
 - Performing multiple sequence alignments

2.1 Research Supervision

Supervised a final year Biomedical undergraduate student, Saleh Alobaidi from Deakin University, Australia.

Supervised on his training related to

- Using GitHub
- Introduction to R & RStudio
- Introduction to meta-analysis and gene expression

3.0 RESEARCH PUBLICATIONS

1. A Study on VRSA Prevalence in Hospital Settings-Bangalore India (August 2019)

This publication is related to *Staphylococcus aureus* (SA). In this study, SA isolated from three different hospitals in Bangalore, India and were tested against various antibiotics including vancomycin, ceftazidime, co-trimoxazole and ciprofloxacin for their sensitivity.

doi: [10.31080/ASMI.2019.02.0330](https://doi.org/10.31080/ASMI.2019.02.0330)

2. Gene name errors: lessons not learned (March 2021)

Erroneous conversion of gene names into other dates and other data types has been a frustration for computational biologists for years. In this research supplementary files published in PubMed Central from 2014 to 2020 were scanned. An improved scanning software we developed identified gene name errors in 30.9% of articles with supplementary Excel gene lists.

doi: <https://doi.org/10.1101/2021.03.30.437702>

4.0 LABORATORY EXPERIENCE

4.1 Wet lab

Laboratory Skills

- Use of micro and ultra-filters. Ability to perform filtration techniques in filtration of desired molecules in industrial level along with the conducting conductometer tests to check the purity.
- Use of chromatography techniques in isolation of the products (ionic exchange chromatography, affinity chromatography) in biopharma industry.
- Use of spectrophotometer, Ph meter calibration, preparation medias, use of Thermocycler, Hemocytometer

- Ability to subculture mammalian cells (BHK cells) under sterilized condition and checking the percentage of the viable and nonviable cells manually.
- Harvesting of the sub cultured cells.
- Sub-culturing of monolayer cells and In vitro maintenance of the cell lines/cultures by nourishing with suitable medium & sampling providing favourable parameters.

Sterilization techniques

- Shake flask inoculum development and transfer to lab scale fermenter.
- Operation of Lab scale fermentation using an Autoclavable (Glass Fermenter).
- Media preparation for Lab Scale Fermenter.
- Preparation and calibration of different process probes (Ex: DO, pH) along with vessel
- Preparation & sample; autoclave sterilization. Process accessories (acid/alkali/antifoam/inoculum/feed) preparation. Parameter and loop control (temperature, aeration, agitation, ph, do, feed) along with perform sampling and growth estimation
- Operation of Industrial Autoclave and Qualification
- Incorporating biological indicators in the sterilization cycles.
- Operation of Dry Heat Sterilizer and Quantification
- Incorporating biological indicators in the sterilization cycles

4.2 Dry Lab

- Previous practical experience implementing statistical principles for genomic data
- Knowledge of basic biostatistics and bioinformatics tool usage
- Knowledge in next generation sequencing and related data analysis
- Moderately skilful in modern programming languages (R, Python)

5.0 WORK EXPERIENCE

1.0 Morison PLC, Sri Lanka – Quality Assurance Intern (2017 – 2018)

- Batch Manufacturing Records (BMR) preparing and optimization of BMR.
- process validation of liquids and tablets products.
- Preparation of master formulas for tablet production.
- Performed Tablet production process from dispensing, granulation, lubrication, compression, coating, and packing
- Chemical/process testing which ensure the quality of the drug (Friability test, Dissolution test, Hardness, Thickness)
- Performed production method validation protocols

2.0 Crew member at Macdonald's Fast-food company, Australia (2019 to present)

- Teamwork and effective communication
- Customer care and task prioritisation
- Ability to cope up with busy environments and different customers
- Attention to detail and punctuality

6.0 AWARDS/ SCHOLARSHIPS

- STEM Scholarship of 20% of total course tuition fee was awarded by Deakin University for performance in undergraduate degree. (2019 to present)

7.0 EXTRA-CURRICULAR ACTIVITIES/VOLUNTEERING

- Member of the St. John Ambulance society, Sri Lanka
- An excellent Chess player
- Volunteered at Conservation Volunteers, Australia (December 2019-Jan 2020)
- Member of the Australian Epigenetics Alliance(2020-Present)
- Member of Fair-Trade Vision organisation, Deakin (2019-2020)

8.0 REFEREES

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