Morne van Wyk

Email: morn.vanwyk@gmail.com
Mobile: +27-078-389-1493

Education

- **PhD Biochemistry (ongoing)** — Cape Town, South Africa
  University of Stellenbosch — *March 2019 - Present*
  Research project: *The effect of ATP on the calcium oscillations and synchronisation of β-pancreatic cells in a microfluidic environment.*
- **MSc Biochemistry - *cum laude*** — Cape Town, South Africa
  University of Stellenbosch — *January 2017 - March 2019*
  Research project: *The effect of adenylate kinase on the glycolytic oscillations of Saccharomyces cerevisiae*
- **BSc Hons (Biochemistry)** — Cape Town, South Africa
  University of Stellenbosch — *January 2016 - December 2016*
  Courses: *Antimicrobial proteins, Practical biochemistry, Systems biology, Cytochrome P450, Steroid hormones, Research project*
- **BSc (Molecular Biology and Biotechnology)** — Cape Town, South Africa
  University of Stellenbosch — *January 2013 - December 2015*
  Majors: *Biochemistry, Microbiology*

Personal Summary

- Morné is a meticulous and analytical Researcher with 6 years of educational and lab experience in biochemistry and systems biology. He is an adaptive team player with in-depth knowledge of data collection, data analysis and problem-solving. He is currently finishing his PhD in biochemistry.

Skills Summary

- Molecular biology techniques: qualitative and quantitative enzymatic assays, fluorescence microscopy, spectrophotometry, gel electrophoresis, western blotting, cell culture (bacterial, fungal, mammalian), size-exclusion chromatography, DNA extraction and amplification, cloning.
- Systems biology methods: enzyme characterization using model fitting to kinetic data, metabolic control analysis and mechanistic model construction of metabolic pathways.
- Computer literate: Mathematica, C, Python, LaTeX, MS Office
- Scientific research planning, experimental design, execution, reporting and presenting.
- Data collection, organization, qualitative and quantitative data analysis using Mathematica and Python.
- Fast learner with a keenness for continued learning, teamwork and strong communication skills both verbal and written

Experience

- **PhD Student of Biochemistry** - 03/2019 - current
  Stellenbosch - Cape Town, South Africa
  - Worked with principal investigators to coordinate qualitative research into the calcium oscillations of pancreatic beta cells.
  - Performed quantitative microscopy, micro-fluidic device modelling and manufacturing, mathematical modelling of metabolism and calcium oscillations and documented findings.
  - Cultured and maintained mammalian cell cultures for experimentation and research.
  - Performed statistical, qualitative and quantitative analysis on collected data using Mathematica.
  - Compiled data in reports and other documents using LaTeX.
  - Reviewed technical and professional publications such as research articles and scientific journals to stay current on recent literature and make more strategic research decisions.
  - Learned new laboratory techniques and applied expertise in carrying out enhanced experiments under supervision of senior lab members.
  - Planned, modified and executed research techniques, procedures and tests.
- **MSc Student of Biochemistry** - 01/2017 - 03/2019
  Stellenbosch - Cape Town, South Africa
  - Worked with principal investigators to plan and coordinate qualitative and quantitative research into the research project.
  - Performed enzyme assay, spectrophotometric, fluorometric and mathematical modeling experiments and research and documented findings.
  - Cultured yeast for experiments and research.
  - Gathered and arranged research data, highlighting results for presentations.
  - Demonstrated strong writing skills to generate original correspondence reports and presentations.
  - Attended seminars and symposiums to improve overall knowledge and understanding.

- Performed statistical, qualitative and quantitative analysis of data using Mathematica.

- **Biochemistry Tutor** - 01/2017 - current
  Stellenbosch - Cape Town, South Africa
  - Collaborated with students to complete homework assignments, identify lagging skills and correct weaknesses.
  - Planned lessons for allotted time to strengthen weak subjects and build skills.
  - Provided one-on-one and small group instruction to students falling behind in biochemistry skills.