

CURRICULUM VITAE

CATHERINE HEATHER WICKHAM

PERSONAL INFORMATION

Nationality: South African
ID number: 9403070047086
Telephone number: +27 71 683 8349
Email address: cathhwickham@gmail.com
Physical address: 660 Willowgrove Road, Dainfern, 2191
Johannesburg,
South Africa

EDUCATION

Year	Qualification	Institution	Details
2019	MSc in Medical Immunology, with distinction	University of Pretoria	Project title: <i>Transcriptional analysis of the host cell response to HIV-1 infection in CD4+ T lymphocytes and macrophages</i> Supervisor: Prof. Michael Pepper
2015	BSc Honours in Genetics, with distinction	University of Pretoria	Project title: <i>Analysis of chromosome number and size variation in Ceratocystis species by electrophoretic karyotyping.</i> Supervisor: Prof. Brenda Wingfield
2014	BSc in Genetics, with distinction	University of Pretoria	Course included a diverse array of subjects relating to genetics, biochemistry, microbiology, zoology and plant science. Achieved distinctions in all undergraduate subjects

EMPLOYMENT RECORD

Year	Position	Employer	Duties
2019 – present	Design Assistant	Isabelina Design Concepts	Assisting the lead designer of an interior design business with administration and client/supplier relations
2015	Tutor	University of Pretoria	Mentoring of first-year undergraduate Genetics students
2011 – 2013	Sales Assistant	Vet to Pet Dainfern	Sales and basic administration

ACHIEVEMENTS

2016/2017: Awarded the National Research Foundation Scarce Skills Masters Scholarship

2016/2017: Awarded the Poliomyelitis Research Foundation Masters Scholarship

2015: Received the SA Genetics Society Hofmeyer-van Schaik Prize

2014: Awarded honorary academic colours by the Student Representative Council of the University of Pretoria

2014: Awarded a place on the Dean's list as one of the top students in the Faculty of Natural and Agricultural Sciences, University of Pretoria

2014: Admitted to an undergraduate mentorship program with the Forest Molecular Genetics program in the Department of Genetics, University of Pretoria.

2012: Awarded membership to Golden Key International Honour Society

2012: Dux Learner Award from the University of Pretoria as the top matric student of my school

SKILLS AND COMPETENCIES

In my postgraduate studies I have supplemented the broad-spectrum theoretical background obtained during my undergraduate degree with practical laboratory skills. I have a thorough grounding in molecular biology techniques such as nucleic acid isolation, PCR, Sanger sequencing, contour-clamped homogeneous electric field (CHEF) electrophoresis, and microarray-based gene expression analysis. I have a few years' worth of experience with cell culture using both cell lines (HEK293T, GHOST) and primary human cells derived from peripheral blood. I was involved in the establishment of a Biosafety Level 2+ facility for HIV research, including the development of Standard Operating Procedures and doing the groundwork for the experimental protocols used in the facility. As such, I am very familiar with viral culture and quantification techniques. In addition, I have an excellent working knowledge of flow cytometry and fluorescence-activated cell sorting. I am, however, never satisfied with knowing just a few techniques and am always looking for opportunities to expand my skill set.

Beyond the laboratory, I have also had the chance to develop a set of soft skills that are essential in the scientific community. I have refined my ability to both write scientifically and to critically assess existing literature. I am able to clearly present project proposals and research findings to both scientific and industry-related audiences with genuine passion and enthusiasm. I have gained experience in conceptualizing novel research directions and developing detailed strategies to tackle scientific questions. I have developed the ability to work seamlessly with members of my research team to solve shared problems, while retaining my innate ability to work with autonomy towards completing my own research goals.

In terms of computer literacy and bioinformatics knowledge, I have full command of the MS Office Suite and user-level competency with the various bioinformatics and data-analysis tools I have encountered during my studies. These include BioEdit, CLC Genomics Workbench, Affymetrix Transcriptome Analysis Console, PANTHER GO, Kaluza Flow Cytometry Analysis Software, ZEN Imaging Software and GraphPad Prism. Programming is a skill I would like to develop in the future, and as such I have begun basic training in Python and R.

RESEARCH INTERESTS

While my background is strongly based in genetics and molecular biology, my current research interests are geared towards the application of these disciplines in the medical sciences. I have had some experience in virology and immunology while studying HIV. However, there are several other fields I would be particularly excited to explore in the future, such as stem cell biology, regenerative medicine and cancer biology. My goal is to be at the forefront of developing the next generation of medical treatments, such as gene- and cell-based therapies and personalized medicine.

SEMINARS AND COURSES ATTENDED

- **Good Clinical Laboratory Practice course**, presented by the Clinical Laboratory Services division at the University of the Witwatersrand, 5-7 December 2018, Johannesburg, South Africa
- **MRC Flagship Conference on Stem Cell Research & Therapy**, presented by Prof. Michael Pepper, 26-27 October 2017, Pretoria, South Africa
- **Health Sciences Faculty Day (annual)**, presented by the University of Pretoria, August 2016, 2017 and 2018, Pretoria, South Africa
- **Infectious Diseases Day**, presented by the Institute for Cellular and Molecular Medicine (ICMM), 12 February 2016, Pretoria, South Africa
- **26th Annual Meeting of the TPCP and CTHB**, presented by the Tree Protection Co-Operative Programme (TPCP) and the DST/NRF Centre of Excellence in Tree Health Biotechnology (CTHB), 19 May 2016, Pretoria, South Africa
- **Scientific Writing Workshop**, presented by Prof. Paulette Bloomer, 20 March 2015, Pretoria, South Africa
- **Chemical and Lab Safety Seminar**, presented by Merck, 26 February 2015, Pretoria, South Africa

REFERENCES

Prof. Michael Pepper

Professor &
Director of the ICMM,
Department of Immunology,
Faculty of Health Sciences,
University of Pretoria
Bophelo Rd, Pretoria, 0002,
South Africa
michael.pepper@up.ac.za

Prof. Brenda Wingfield

Deputy Dean,
Department of Genetics,
Biochemistry and Microbiology,
Faculty of Natural and Agricultural
Sciences,
University of Pretoria
Lynwood Rd, Pretoria, 0002, South
Africa
brenda.wingfield@up.ac.za

Prof. Paulette Bloomer

Head of Department,
Department of Genetics,
Biochemistry and Microbiology,
Faculty of Natural and Agricultural
Sciences,
University of Pretoria
Lynwood Rd, Pretoria, 0002, South
Africa
paulette.bloomer@up.ac.za