



TAAHIRAH BOLTMAN

 Cape Town, South Africa
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PERSONAL PROFILE

A highly motivated, enthusiastic, and adaptive person with an acute interest in novel nanoscience based biomedical and pharmaceutical research. Experienced in scientific writing, teaching, supervising postgraduate students, and managing a research laboratory. Demonstrates excellent interpersonal skills, strong written and oral communication skills, and good data analysis and problem-solving skills. I have a positive outlook when confronting new challenges, detailed orientated, punctual with deadlines and I am always eager to learn and develop new skills. I work well independently or in a team.

EDUCATION

PhD Medical Biosciences | 2016-2022 | University of the Western Cape

- Thesis Title: The development of targeting nanosystems for the treatment of glioblastoma and neuroblastoma tumours
- Supervisor: Prof. Okobi Ekpo
- Co-supervisor: Prof. Mervin Meyer

M.Sc Nanoscience Cum Laude | 2013-2015 | University of the Western Cape

- Thesis Title: Liposomal Drug Delivery to Brain Cancer Cells
- Supervisor: Prof. Okobi Ekpo
- Co-supervisor: Prof. Mervin Meyer

B.Sc Honours (Medical Bioscience) | 2012 | University of the Western Cape

- Thesis Title: The effects of Bisphenol A and Rooibos (*Aspalathus linearis*) on bEnd 5 cells
- Supervisor: Prof. Okobi Ekpo
- Co-supervisor: Prof. Ficher and Dr Kareemah Najaar

JG Meiring High School | 2004-2008

SKILLS AND ABILITIES

Teaching and mentoring experience

- **Current:** Post-doctoral fellow at Stellenbosch University in the Division of Medical Physiology, co-supervising Honour's student and handling the media platforms of the Division which includes the official website, Facebook and Instagram
- **2021-2022:** Physiology lecturer for Emergency Medical Care undergraduate program at Cape Peninsula University, Cape Town, Bellville

- **2019-2021:** Responsible for training students with photon correlation spectroscopy and cell culture techniques, University of the Western Cape (UWC)
 - **2017-2019:** Supervision and mentorship of 2 M.Sc. Nanoscience students projects and led a training program on cell culture techniques for visiting researchers, UWC
 - **2016:** Lectured and designed laboratory practical for M.Sc. Nanoscience students as part of their coursework component, UWC
 - **2014-2015:** Laboratory demonstrator in the Anatomy Laboratory for the Medical Bioscience Department, UWC
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MANAGEMENT SKILLS

- Experienced in working within a multidisciplinary and diverse team
 - **2017-2021:** Managed cell culture laboratory, inventory and requesting quotations, ordering of laboratory consumables, and autoclaving for laboratory, UWC
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LABORATORY SKILLS

- Nanoparticle synthesis: synthesis of liposomes for drug entrapment and various metallic nanoparticles with surface functionalization of nanoparticles with targeting molecules
 - Extensive experience with Human and animal cell culture techniques: cell culture and maintenance of various human cancer cell lines, fibroblasts, mice cell lines and co-culture techniques
 - Proficient in protocols using biological assays: trypan blue, XTT, MTT, WST-1 Assays, TMRE, Apopercantage assay, Annexin V assay, ROS assays, clonogenic and wound healing assays
 - Molecular skills: Cloning, Plasmid Digestion, DNA purification and quantification, RNA extraction, cDNA synthesis, gel electrophoresis and both PCR and qPCR skills
 - Basic microbiological skills: preparation of plates, streaking etc.
 - Retinal imaging and Inter-media thickness analysis
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EQUIPMENT HANDLING SKILLS

Capable of operating laboratory equipment:

- UV-vis analysis
 - Photon correlation spectroscopy
 - Transmission electron microscopy and scanning electron microscopy flow cytometry
 - Fourier transform infrared spectroscopy and Raman spectroscopy
 - High-performance liquid chromatography
 - Canon CR-2 non-mydratic digital retinal camera
 - Esaote MyLab Five Ultrasound System
 - Oroboros O2k instrument
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ANALYTICAL SKILLS

Competent in:

- Basic programming: Linux (Ubuntu) command line and bash scripting and Python programming language
 - Microsoft Word, Excel, PowerPoint and Outlook
 - Statistical programs: MedCalc, GraphPad Prism, SPSS and Origen 8
 - Microscopy and imaging analysis programs: Image J and BioRender.com
 - Bioinformatics software programs: STRING and DAVID
 - Blackboard teaching platform
 - Primal Pictures 3D human Anatomy Software
 - Canon Retinal Imaging Control Software (RICS)
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HONOURS AND AWARDS

- **2023:** CHPC - NITheCS Coding Summer School Certificate
 - **2023:** Global Health Network Certificate: GCLP: Sample Management, Conduct of The Work, Data Recording, And Data Reporting
 - **2023:** Global Health Network Certificate: GCLP: Quality Management
 - **2023:** Global Health Network Certificate: GCLP: Facilities, Equipment, Materials and Reagents
 - **2023:** Global Health Network Certificate: GCLP: Method & Systems Validation
 - **2023:** Global Health Network Certificate: GCLP: Standard Operating Procedures & Analytical Plan
 - **2022:** Global Health Network Certificate: Introduction to Good Clinical Laboratory Practice
 - **2022:** Global Health Network Certificate: GCLP: Organisation and Personnel
 - **2022:** Received NRF Post-doctoral Scholarship
 - **2019:** Received NRF Extension Support Doctoral Scholarship
 - **2018:** Received Travel Grants from NRF Scholarship for international travel
 - **2016:** Recipient of NRF Freestanding, Innovation and Scarce Skills Masters and Doctoral Scholarship
 - **2013:** Received a full scholarship funded through the Department of Science and Technology after being selected for the MSc Nanoscience postgraduate program
 - **2010:** Received Golden key Award and joined as a member
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CONFERENCE PRESENTATIONS AND WORKSHOPS ATTENDED

- **23 May 2023:** 10th annual Faculty of Medicine and Health Sciences, Stellenbosch University
- **23 March 2023:** The Impact of Scholarly Writing and Publishing (Webinar)
- **3 February 2023:** Faculty of Medicine and Health Sciences website: subsite owner training (Online training session)
- **25-29 November 2019:** Attended the 5th South African Nanoscience and Nanotechnology Summer School, Devonvale Gold and Wine Estate, Stellenbosch, Western Cape
- **26-28 September 2018:** Presented at The International Conference On Nanomedicine And Nanobiotechnology 2018 (ICONAN-2018), Rome, Italy
- **2017:** Abstract accepted to present at the 8th International Congress Nanotechnology in Biology & Medicine, Krems, Austria
- **25-26 January 2017:** Attended the 7th Annual DST/MINTEK Nanotechnology Innovation Centre Workshop, University of the Western Cape, SA Medical Research Council
- **3 October 2016:** Oral presentation at the 1st Nanoscience Symposium of the National Nanoscience postgraduate teaching and training platform, Hotel Verde, Cape Town
- **22 October 2015:** Poster presentation at University of the Western Cape Science Faculty

Research Open Day 2015, Life Sciences Auditorium, University of the Western Cape

- **23-27 November 2014:** Presented a Poster at the 7th International Symposium on Macro- and Supramolecular Architectures and Materials, Emperor's Palace Hotel Casino, Boksburg, South Africa
 - **4 December 2014:** Attended the 1st Nanotechnology-Cancer Symposium, SANBI, New Life Sciences Building, University of the Western Cape
 - **24-29 November 2013:** Attended the South African Nanoscience and Nanotechnology Summer School 2013, University of the Western Cape, South Africa
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MANUSCRIPTS AND PUBLICATIONS

- Acquired good scientific writing skills during Master's and PhD degrees
 - Reviewed manuscript for The Botanical Review Journal
 - In the process of submitting manuscripts from PhD thesis for publication, with one published: Boltman, T.; Meyer, M.; Ekpo, O. Diagnostic and Therapeutic Approaches for Glioblastoma and Neuroblastoma Cancers Using Chlorotoxin Nanoparticles. *Cancers* 2023, 15, 3388. <https://doi.org/10.3390/cancers15133388>
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COMMUNITY WORK

- Charity work with local charity organization. This involves creating and delivering food parcels to the less advantaged areas around the Western Cape Involved in CPUT annual community outreach projects
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PERSONAL

- Driving license: Yes
 - Nationality: South African
 - Languages: English and Afrikaans (2nd)
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REFERENCES

- Hans Strijdom: Position: Professor, Head of the Division of Medical Physiology, Stellenbosch University, Tel: +27(021) 938 9387; Fax: +27 (021) 938 9476; Email: jgstr@sun.ac.za
- Mervin Meyer: Position: Professor, University of the Western Cape; Tel: +27 (021) 959 2032; Fax: +27 (021) 959 3505; Email: memeyer@uwc.ac.za
- David Fischer: Position: Associate Professor, University of the Western Cape; Tel: +27 (021) 959 2185; Fax: +27 (021) 959 1339; Email: dfisher@uwc.ac.za
- Kareemah Najaar: Position: Senior Lecturer and Basics Sciences Coordinator, Cape Peninsula University of Technology; Tel: +27 (021) 959 6542; E-mail: GamieldienK@cput.ac.za
- Okobi Ekpo: Position: Assistant Professor, Khalifa University; okobi.ekpo@ku.ac.ae/okobi.ekpo@gmail.com