

Curriculum Vitae**Boitumelo Semete****1.0 Contact Information**

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Physical Address:	89 Windmill Augrabis Street Mooikloof Ridge Pretoria	CSIR building 14C Mering Naude Road, Brummeria Pretoria South Africa
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2.0 Personal Information

Date of birth: 04 November 1979
 Gender: Female
 Nationality: South African

3.0 Academic Qualifications

<u>Qualification</u>	<u>Year Awarded</u>	<u>Institution</u>	<u>Field of Study</u>
Management Advancement programme	2008	Wits Business School	Management
PhD	2005	North-West University, Potchefstroom campus	Biochemistry
M.Sc.	2002	Potchefstroom University for CHE	Biochemistry
B.Sc. (Honours)	2001	University of Pretoria	Genetics
B.Sc.	2000	University of Pretoria	Genetics

4.0 Lecturing and Teaching, Training Experience and Employment history

February 2003- September 2003	Part-time technical laboratory assistant at Inqaba Biotechnical Industries (Pty) Ltd
January 2003- December 2003	Assistant, in the Molecular research program for Malignant Hyperthermia, Prof A Olckers, Centre for Genome Research.
October 2003- January 2004	Part-time research assistant for Dr. G. Gericke, Genepath laboratories
April 2004	Part-time laboratory assistant in the Essential PCR short course presented by DNAbiotec (Pty) Ltd, South Africa
April 2005- October 2006	CSIR, BioSciences
February 2006-July 2006	Postdoctoral research training on Nanodrug delivery systems, EPFL, Switzerland
August 2006-October 2006	Postdoctoral research training on targeted Nanodrug delivery systems, University of Nottingham, UK
February 2007-June 2007	Part-time Lecturer on Immunology, University of Pretoria
June 2008	Guest lecture on Nanotechnology, University of Pretoria
July 2009	Guest lecture on Nanotechnology, University of Pretoria
November 2006 –current	CSIR (Polymers and Bioceramics)

5.0 National and International Conferences

May 2006 Medical/Biochemical Diagnostic, Pharmaceutical, and Drug Delivery Applications of Particle Technology, Florida.

- Aug 2006 Kalombo L., Semete B. and Swai H. Evaluation of nanoencapsulation performed by spray drying technique for the delivery of Tuberculosis drugs (ATD) (**Poster presentation**) Geneva Health Forum: Towards Global Access to Health, Geneva, Switzerland.
- Oct 2006 Semete B., Kalombo L., Shoba L., Hille T., Cingo N., J A Hubbell., O Alpar and H Swai Nanopolymeric delivery of anti-Tuberculosis drugs (**Poster Presentation**) European and Developing Countries Clinical Trial Partnership, Stockholm, Sweden.
- Nov 2006 Semete B., Shoba L, Kalombo L and Swai H. Potential for treating TB with nano drug delivery system. (**Pragster presentation**) NanoAfrica 2006, Cape Town, South Africa.
- Nov 2006 Semete B., Kalombo L, Shoba L, Hille T, Cingo N, Hubbell J A, and H Swai. Solid nanoparticles and self-assembling particulate structures for delivery anti-TB drugs (**Poster presentation**) NanoAfrica 2006, Cape Town, South Africa.
- Mar 2007 H Swai. Semete B, Kalombo L, Shoba L, Hille T, Cingo N. Potential for treating TB with polymeric nanodrug delivery systems. (**Invited Oral presentation**) BioVision. Nxt; World Life Sciences. Lyon France
- May 2007 NSTI Nanotech, Santa Clara, USA. Semete B. Kalombo L, Shoba L, Hille T, Cingo N, Hubbell J A, and H Swai. Solid nanoparticles and self-assembling particulate structures for delivery anti-TB drugs (**Poster presentation**).
- Nov 2007 NanoDDS, Boston, MA, USA. Semete B. Kalombo L, Shoba L, Hille T, Cingo N, Hubbell J A, and H Swai. Solid nanoparticles and self-assembling particulate structures for delivery anti-TB drugs (**Poster presentation**).
- Nov 2007 IBSA Conference. Potential of treating TB via nanoparticulate drug delivery. (**Oral Presentation**)
- Nov 2007 IBSA Conference. Targeted delivery of anti-TB drugs. (**Oral presentation**).
- April 2008 10th European Symposium on Controlled drug delivery. Potential of treating TB via nanoparticulate drug delivery. H Swai. Semete B. Kalombo L, P Chelule (**Best poster award**)
- Sept 2008 9th International Conference on Particles. **Oral presentation (Best Presentation by Young Researcher)**
- Nov 2008 CSIR Science Real and Relevant Conference. Potential of treating TB via nanoparticulate drug delivery. Novel Nanoparticles for tuberculosis chemotherapy. **Oral Presentation (Best Presentation in the Healthy South Africa Category)**
- June 2009 3rd International Congress of Nanobiotechnology and Nanomedicine, San Francisco, CA, USA. Novel Nanoparticles for tuberculosis chemotherapy. **Oral Presentation**

6.0 Publications and book chapters

Swai H, Semete B, Kalombo L, Chelule P, Kisich K and Seivers R. Nanomedicine for treatment of respiratory diseases. *Nanomedicine and Nanobiotechnology*, 1, 255-263, 2009.

B Semete, L Kalombo, P Chelule, Y Benadie, L Booyesen, L Katata, S Naidoo, H Swai. Novel nanoparticles for Tuberculosis Chemotherapy. *CSIR conference proceedings. November 2008*.

Swai, H., Semete, B., Kalombo, L., & Chelule, P. 2008, "Potential of treating tuberculosis with a polymeric nano-drug delivery system", *Journal of Controlled Release*, vol. 132, no. 3, p. e48.

Eddy c. Agbo, Simon Agwale, Camellus O. Ezeugwu, Boitumelo Semete, Hulda Swai, Anthony Ikeme, Richard I. Somiari. Biotechnology in Africa. *Science Letters, Science*, 321, 26 September 2008.

Swai H, Chelule P, Semete B and Kalombo L. Nanotechnology in Drug Delivery for Malaria and TB Treatment. *Invited book chapter in Bionanotechnology: Global Prospect 2008. Tylor and Francis Publishers*

Reinecke F., Levanets O., Olivier Y., Louw Y., Semete B., Grobler A., Hidalgo J., Smeitink J., Olckers A. and van der Westhuizen F.H. Metallothionein-2a protects against ros-mediated apoptosis in rotenone treated HeLa cells. *Biochemical Journal*, 395, 405-415, 2006.

7.0 Research Grants

2007-2009 CSIR, Young Researchers Establishment Fund. Self Assembly systems for Drug Delivery
2009/10 Bill and Melinda Gates Grand Challenges Explorations Grant

8.0 Awards awarded

2007 Material Science and Manufacturing (MSM) Excellence Awards: Promising Young Researcher.
2007 MSM, Polymers and Bioceramics. Most Valuable Contribution in 2007
2009 Finalist for the NSTF awards: Distinguished Young Black Researcher over the last 2-5 years
2009 Biotech Young Researcher Fundi Award
2009 SA Bioplan Best Business plan