

CURRICULUM VITAE of ENNET MOHOLISA

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1. PERSONAL DETAILS

Date of Birth	10 September 1977			
Identity number	7709101372083			
Gender	Female			
Marital status	Single			
Nationality	South Africa			
Language Proficiency		Speak	Write	Read
	Sesotho	Excellent	Excellent	Excellent
	English	Excellent	Excellent	Excellent
	Afrikaans	Basic	Basic	Basic
Drivers License	Code B			

2. EDUCATION AND PROFESSIONAL TRAINING

A. UNIVERSITY OF FREE-STATE

2012-2015: PhD Agric Food Science: Dissertation: Meat science

- **Project Title:** The effects of animal age, feeding regime and beta-agonists on tenderness and other meat quality traits of South African beef
- **Practical technique's involved:** Moisture Determination-Oven Drying, Thawing, Cooking and Evaporation Losses, Protein-Kjedahl, NaCl-Voldhard, Ash-Muffle Furnace, methylations, fatty acids analysis-GC, meat tenderness-Instron, collagen properties, sarcomere lengths- Video Image analysis, myofibrillar fragmentation Lengths-Video Image analysis and sensory analysis-Trained panel

2009-2011: M.Sc. Agric Food Science: Dissertation: Meat science (*Cum laudae*)

- **Project Title:** Effect of brine injection on broiler meat quality and its implications for the consumer.
- **Practical technique's involved:** Moisture Determination-Oven Drying, Thawing, Cooking and Evaporation Losses, Protein-Kjedahl, NaCl-Voldhard, Ash-Muffle Furnace, Phosphates, Ascorbic Acid-Titrations, Sodium-Atomic Absorption Spectrometer, Energy - Bomb Calorimeter, Total Lipids-Soxhelt, and sensory analysis.

2008: B.Sc. Agric Hons: Food Science (*Cum laudae*)

- **Major subjects:** Agricultural Datametry, Advanced Techniques in Microbiology, Food Microbiology, Food Chemistry, Dairy Science, Meat Science.
- **Food Science research project (Meat Science)**
Project title: Enhancement of broiler meat by brine injection: Implications to the consumer.

- **Practical technique's involved:** Moisture Determination-Oven Drying, Thawing, Cooking and Evaporation Losses, Protein-Kjedahl, NaCl-Voldhard, Ash-Muffle Furnace, Phosphates, Ascorbic Acid-Titrations, Sodium-Atomic Absorption Spectrometer, Energy - Bomb Calorimeter, Total Lipids-Soxhelt, and consumer sensory analysis

2007: Occasional Studies: Natural and Agricultural Sciences-Undergraduate

- **Subjects:** Introduction to Microbiology, Chemical Analysis of Foods, Food Chemistry, Food Products from Plants, Food Products from animals, Food Engineering, Food Microbiology, Dairy Science, Meat Science, Industrial Quality Management, Product Development and Sensory analysis.
- **Product development and Sensory analysis project :** Developed a poultry sausage
Practical technique's involved: Generate a product concept, drew a concept board, developed a standardized small scale recipe for the product, produced a product, supplied an approximate nutrient values calculated according to NRID tables, designed a label for the product, developed packaging material, position the product blue print, draw the product blue print, developed marketing strategies, ran a consumer panel (The application of a sensory product development panel, eg, panel training, usage, coding, evaluation of forms, interpreting and analysis of results. A comprehensive written scientific report.

B. UNIVERSITY OF PRETORIA

2002- 2004 - Bachelor of Consumer Science Education

- **Major subjects-** Food, Nutrition, Education
- **Community projects**
 2003- Supervising Ribana-Laka learners in Mamelodi with the Science Expo
 2003- Helping various primary school learners around Pretoria with science projects

C. PROFESSIONAL TRAINING AND CERTIFICATES

2018: Seminar on Agriculture and livestock Products processing: University of Harbin, China

2017: Assessor certificate of registration-Apply basic food safety practices-116166 (AGric/Ass/1967/17)

2016: Facilitate learning using variety of given methodologies (117871): ETDP-SETA

2016: Conduct outcome-based assessment (115753): ETDP-SETA

2016: Conduct moderation of outcome-based assessment (115759): ETDP-SETA

2016: Personal and General Hygiene Principles in Food Processing areas-Immuno -Vet Services

2014: Statistical Program for Social Sciences (SPSS) basic training: University of Free-State

2010: Basic Project Management Course (Develop, Implement, evaluate and manage project plan): Experiential Technologies

2010: Advanced Project Management Course (The complete project Manager): Experiential Technologies

2010: ISO 17025:2005: Progress Excellence Management system coaching

2009: HACCP (SANS 10330:2007): Progress Excellence Management system coaching

2008: Industrial Quality Management (SPC): University of Free-State

2008: Academic writing for post-graduates students: UDRAW- University of Free-State

3. PROFESSIONAL CAREER

1. Agricultural Research Council – Animal Production Institute ARC-AP (IRENE), Department of Food Science

2017 to date: Researcher: Meat Science - Meat Production and Slaughter Technology Unit.

- Initiates, manages and contributes towards national projects and writes proposals.
- Plans and co-ordinates research with single or multi-disciplinary team.
- Identifies the need for resources (equipment and material) in project(s) and manages them accordingly.
- Accountable for compiling and managing the project budget.
- Conducts research.
- Manages data capture, analysis, interpretations and recommendations.
- Compiles detailed reports and seeks approval for final reports.
- Disseminates research results by presenting oral and poster contributions.
- Publishes semi-scientific and peer reviewed reports / articles.
- Actively seeks networking opportunities (e.g. attends scientific gatherings, works with farmer communities etc).

2013Aug to 2017 July: Junir researcher: Meat Science

- Contribute towards project(s) and perform duties under supervision (all of the above duties)

2012 – July 2013: Professional Development Program

- Conduct research, biochemical and sensory analysis, capture, interpret data and compile reports
- Participate in presenting oral and poster under mentorship
- Write publications under supervision

2. University of Free State: department of Microbial, Biochemical and Food Biotechnology - Food Science division

2011 Sept - Dec: Research assistant

- Literature survey in red meat and pork industry- Analysed legal issues regarding brine injection, national and international standards, making use of; The Foodstuffs, Cosmetics and Disinfectants Act (Act 54 of 1972)
Regulations governing emulsifiers, stabilisers and thickeners; Meat Safety Act (Act 40 of 2000), Agricultural Products Standard Act, 1990 (Act 119 of 1990), Consumer Protection Act 2008 (Act No. 68 of 2008) and Codex Alimentarius

2010-2011 (every second semester: July-October): Meat processing laboratory assistant

- Facilitated fourth year students in the meat-processing laboratory.
Practical techniques included: Critical assessment of emulsified meat products and additives, Emulsified meat technology, Whole muscle meat technology, Meat product formulation, Combination of minced and emulsified meat products, fermented minced meat products, Brine and meat product formulations, Packaging systems.
Products produced: Meat products produced included mince from beef, patties/burgers, boerewors, Russians, Smoked viannas, French polony, Liver and Polony spread, Bacon, Shoulder ham, Sandwich ham, meat loaves, Salami.

2008- 2010 (Every second semester: July- October) Laboratory assistant in the chemical analysis of foods

- Emphasising importance of laboratory safety, i.e. danger of chemicals, negligence in laboratory, and mastering of laboratory skills and techniques, i.e. correct usage of apparatus.
- Preparing reagents, glassware and equipment for practicals.
- Preparing samples for analysis
- Acted as a link between students and relevant lecturer.
 - Supervising and assisting students whilst they are busy with experiments.
 - Collecting the students practical reports, tests and invigilating during practical tests.
 - Perform biochemical analysis with the second and fourth years students

3. University Pretoria (Faculty of Education) Department of Centre for Evaluation and Assessment

2004 Oct - 2004 Nov: Research Assistant

- Data collection

4. High School Teacher

2005 Jan- 2006 Dec: Home Economics teacher at Dahon High School

2004 April -2004 Sept- Teaching practice

- Teaching Grade 10 and Grade 11 consumer studies (Pretoria High School for Girls) (April-June), Lyttelton Manor High School (Pretoria, Centurion) (July-Sept).

4. FUNDED PROJECTS INCLUDING TECHNICAL REPORTS

2017- to date (Project leader): Utilisation of slaughterhouse blood as an edible by-product of meat: Manufacturing of blood sausages, ARC Project number P02000111. Funders; Red Meat Research and Development South Africa (RMRD) and National Research Foundation (NRF).

2019 - Literature study: South African consumers perceptions of ready-to-eat meat products after 2017-2018 listeriosis out-break. Funder; Red Meat Research and Development Trust (RMRDT)

2011 - 2014 (Ph.D. study): The effect of beta-agonists and animal age on South African beef. ARC project number NFSC 055. Funders; RMRD-SA and Technology and Human Resource for Industry Programme (THRIP).

2009-2011 (M.Sc. study): Effect of brine injection on broiler meat quality and its implications for the South African consumer. Permitted levels of brine injection into poultry portions. DAFF Project Number: 21.1.1/10/FSQA – 01/AP.

5. PEER REVIEWED SCIENTIFIC PAPERS

Moholisa E., Strydom PE, Van Heerden I., & Hugo, A. 2019. Influence of production systems on selected beef quality and sensory attributes. South African Journal of Animal Science, 49, 1158 – 1173.

Moholisa E., Strydom, PE & Hugo, A. 2018. The effect of beef production systems on proximate composition and fatty acid profile of three beef muscles. South African Journal of Animal Science, 48, 298-306.

Moholisa, E. Hugo, A., Strydom, PE & Van Heerden I. 2017. The effects of animal age, feeding regime and a dietary beta-agonist on tenderness of three beef muscles. *Journal of Science of Food and Agriculture*, 97: 2375–2381.

Strydom, P. E., Frylinck, L., van Heerden, S. M., Hope-Jones, M., Hugo, A., Webb, E.C., **Moholisa, E.**, Liebenberg, B.E. & Sehoole, O. C. 2015. Sources of variation in quality of South African beef: Case studies in relation to the red meat classification system. *South African Journal of Animal Science* 2015, 45 (No. 3). Peer-reviewed Proceedings of the 12th Meat Symposium: Relevance of the South African Carcass Classification system.

Links

<https://orcid.org/0000-0002-5556-5477>

<https://www.scopus.com/authid/detail.uri?authorId=56771411300>

6. CONFERENCE CONTRIBUTIONS

▪ Short papers and posters

Moholisa E., Mosimanyana K., De Lange L., Strydom P. 2021. Optimisation of slaughterhouse blood as an indigenous food product and its acceptability by South African ethnic groups. Poster oral presentation at Congress proceedings of the SAAFoST 24th Biennial virtual Congress 2021. 20-22 September, KwaZulu Natal, South Africa.

Moholisa E., Strydom P., Mosimanyana, K., Magoro M., & Hugo A. 2019. The microbial stability of overwrapped and vacuum packaged bovine blood sausages. Congress proceedings of the SAAFoST 23rd Biennial International Congress and Exhibition. 1-4 September 2019. Johannesburg, South Africa.

Moholisa E., Strydom P., Mosimanyana, K., Magoro M. & Hugo A. 2019 Physico-chemical stability of bovine blood sausages. Congress proceedings of the 65th International Congress of Meat Science and Technology. 04-09 August 2019 Potsdam, Germany.

Moholisa E., Mogoro M., Boikhutso, J & Strydom P. 2018. Consumer food safety knowledge, handling and practices of meat and meat products: Agricultural Research Council case study. Proceedings of the 2nd International Conference for Food Safety & Security. 15-17 October 2018, Irene, Pretoria.

Strydom P., Høst V., Veiseth-Kent V & **Moholisa E.** 2018. Protein expression profiles in muscle are affected by beta agonist treatment in cattle. Proceedings of the 64th International Congress of Meat Science and Technology, 12th - 17 August, 2018.

Strydom, P E., Strydom, N., Frylinck, L., Hugo, A., **Moholisa, E** & Van Heerden I. 2015. The interrelationship between sensory tenderness and Warner-Bratzler Shear force of three beef muscles as influenced by productions and post-harvest conditions. Proceedings of the 61st International conference of meat Science and Technology, 23-28 August 2015, Claremont, Ferrand France.

Moholisa E., Strydom, P. E., & Hugo A. 2014. The effect of feeding regime, beta-agonists and animal age on intramuscular fat content and fatty acid composition of beef. Proceedings of the 60th International Congress of Meat Science and Technology, 17th– 22 August 2014. Punta del Este, Uruguay.

Moholisa, E., Roodt, E., Bothma, C., de Witt, F., & Hugo, A. 2014. The effect of brine injection level on moisture retention and sensory properties of chicken breast meat. Proceedings of the 60th International Congress of Meat Science and Technology, 17th – 22 August 2014. Punta del Este, Uruguay.

Moholisa E., Strydom, P. E., Hugo A., & Hope-Jones, M. 2013. Effect of beta-agonists and age on tenderness of Longissimus dorsi and Biceps femoris muscles of grass-fed and feedlot steers.

Proceedings of the 59th International Congress of Meat Science and Technology, 11-23 August 2013, Izmir Turkey.

Hope-Jones, M., Strydom, P., & **Moholisa, E.** 2012. Effect of electrical stimulation, age of the animal and extreme ageing on tenderness and water holding capacity of loin muscles. Proceedings of the 58th International Congress of Meat Science and Technology, 12-17 August 2012. Montreal Canada.

Moholisa, E., Hugo, A., Roodt, E., Bothma C., & de Witt, F. 2010. Enhancement of broiler meat by brine injection: Implications to the consumer. Proceedings of the 15th World Congress for Food Science and Technology, 22-26 August 2010. Cape-Town International Convention Centre, South Africa.

- **Oral presentations**

Hugo, A., **Moholisa, E.**, Kutu, M., Zondagh, B., Jooste, P., Kuhn, Z, Kolobi, M., Ferreira, & C Roodt E 2016. World experience and trends in the use of brine in poultry abattoirs. 2016. A South African case study. First National Poultry Workshop, Rovuma Hotel. Maputo, Mozambique, 22-23 September 2016.

Hugo, A., van Wyngaard, L., **Moholisa, E.**, & Strydom, P. 2016. Research results on fatty acids in meat. 11/18 Stockman School, 2016, Meeting Consumer expectations: Vision for Red Meat Industry 2020 and Beyond, Conference Centrum, Aldam, 12-14 October 2016.

Moholisa E., Strydom, P. E., & Hugo A. 2013. Influence of beta-agonist (zilpaterol) and age on tenderness of beef loin and silverside muscles. Proceedings of the 20th SAAFoST Biennial International congress and Exhibition, 7-9 October, 2013, Pretoria, South Africa.

7. NON-PEER REVIEWED PUBLICATIONS

Moholisa E. 2019. Food loss and waste in beef industry. In ARC Annual Beef Bulletin. Animal Production. Pp 48-49.

Moholisa, E., Strydom, P E., Mogoro M., Rasebotsa D., & Van Heerden I. 2017. Underutilised foods sources can be used to ensure food security in South Africa. In Agrikultuur Magazine: June edn, 2017, pp 70-72.

Moholisa, E. 2015. The effects of animal age, feeding regime and zilpaterol on the quality of South African beef. In Food Science and Technology Magazine: Post graduate show case. November Issue 2015.

Hugo, A., & **Moholisa, E.** 2013. Moisture enhancement of pork. Quality improvement or adulteration? In Porcus Magazine: June – July 2013, pp10-13.

Invitations:

Session Chairperson: Session 8: Food Security, Nutrition and Well Being. 3 September 2019. Congress proceedings of the SAAFoST 23rd Biennial International Congress and Exhibition. 1-4 September 2019. Johannesburg, South Africa.

8. WORKSHOPS ATTENDED

2015- Research management workshop

2013- SPSS basic training

2012- MERK seminar on Good Laboratory Practice

2011- Consumer protection Act

2011, 2010- Merck Laboratory safety and chemical grades

2010- Leadership workshop

9. RECOGNITION AND AWARDS

2012-2014 Red Meat Industry Trust Bursary

2011, 2008, 2007- Academic merit Awards; - University of Free-State (Subjects average above 75%)

2010- TATA Africa Scholarship Award

2010- Mars sponsored student to attend IUFoST 2010

2009-2011 NRF Masters Innovation bursary

2009- Golden key Scholastic Achievement and Excellence award 2009 (15% Top Achievers of the UFS)

2008- NRF Honours innovation bursary

10. SKILLS

Computer skills	Ms Word, Ms Excel, PowerPoint Presentations, Ms outlook, AX
Laboratory skills	Preparations and analysis
Other skills	Oral presentations, Statistical data interpretation, Data capture and management, Research, Report writing, Meat processing, Teaching & Training

12. PROFESSIONAL MEMBERSHIPS

1. South African Association for Food Science and Technology
2. South African Council for Educators
3. Golden Key International Honour Society

13. MEMBERSHIP OF PROFESSIONAL BODIES

References

1. Prof A. Hugo
Department of Food Science
University of Free - State
P.O. Box 339, Bloemfontein 9300
Tel: +27 (0) 51 401 2729
E-mail: HugoA@ufs.ac.za
Relationship: Former supervisor and current research collaborator
2. Prof Phillip Strydom
Department of Animal Sciences ;Faculty of Agrisciences,
University of Stellenbosch
Mike de Vries Building, Room 1065, Merriman Avenue,
Tel: + 27 (0) 21 808 4749
E-mail: pestrydom@sun.ac.za
Relationship: Former Manager and current research collaborator.