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December 2023 Desember



Food Science | Voedselwetenskap
Newsletter | Nuusbrief

forward together
sonke siya phambili
saam vorentoe



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What a crazy year 2023 has been. This year more than ever, I have heard that sentiment being shared often. The new normal? After three years that were affected by the pandemic (in 2022 we still had the first semester affected by restrictions to numbers allowed in venues) it was good to start a year with more certainty around what mode we would be operating in. We didn't know how busy the year would be and how quickly it would pass. Here we are at the end of the year and able to look back on the year that was.

A few things that stood out for me this year, apart from how quickly it went:

Staff and postgraduate students were travelling again. Attending and presenting at conferences and spending time in research labs around the world – read more about these conferences and research visits elsewhere in the Newsletter.

We were sad to see Dr Maricel Krügel leave the Department and emigrate to Canada but wish her well in her new endeavours. We are grateful for the New Product Development course that Maricel built up in the Department – our capstone course.

We were thrilled to be able to fill the New Product Development lecturer position when Dr Debora van der Merwe joined us from Babylonstoren. Debora hit the ground running and immediately made a positive impact on this year's New Product Development (read more about Debora and NPD 2023 in this newsletter).

We also had to say goodbye to Prof Lizette Joubert, an Extraordinary Professor in the Department and Senior Researcher at the ARC Infruitec-Nietvoorbij as she officially retired at the end of November. Prof Joubert will be remembered for her ground-breaking tea research (mainly Rooibos and Honeybush) – there is a lot more about her incredible career in this newsletter.

Several students and staff received awards in recognition of their achievements in academics or research – we continue to be amazed by the calibre of students and staff in the Department.

It was time again for the Department to be externally evaluated in 2023. The process started with the Departmental Self-evaluation Report, which was expertly and professionally compiled by Drs Jeannine Marais and Diane Rip. This culminated in the external evaluation panel spending time (27 – 29 November) at the Department, conducting interviews, inspecting the facilities, and reviewing the curriculum and achievements of the Department. The initial feedback was very positive, and we await the panel's final report. A more detailed account of the evaluation is given later in this newsletter.

Lastly, I was once again amazed and extremely proud of all the staff in the Department. It is truly a blessing to have such an incredibly dedicated, passionate, and amazing group of colleagues. Their commitment to the food science degree and ensuring that graduates have the best possible learning experience is second to none. I salute them!

Prof Gunnar Sigge,

HOD, Food Science Department

AGRISCIENCES · EYENZULULWAZI NGEZOLIMO · AGRIWETENSKAPPE

March 2023 Graduation



Attending the 2023 March graduation ceremony from left to right: Prof Pieter Gouws, Dr Diane Rip, Dr Jeannine Marais, Prof Gunnar Sigge, Prof Marena Manley and Dr Paul Williams.

At this ceremony 1 BSc in Food Science (Cassandra Nortje), 4 Master of Science in Food Science, Jana Becker (*cum laude*), Liné Becker, Marzanne Engelbrecht and Kim Mannix (*cum laude*) and 2 PhD in Food Science (Lisa Ronquest-Ross and Kiah Edwards) degrees were awarded.

Congratulations to all our March 2023 graduates!



Dr Lisa Ronquest-Ross

Supervisor: Prof Gunnar Sigge

An analysis of the South-African food and beverage industry efforts since 1994 in responding to major shifts in food consumption patterns and mapping of the potential future applications of science and technology advances, to provide safe, affordable and nutritious foods

South Africa's food system is failing. This is evidenced by increased hunger, rising food costs, lack of dietary diversity, child stunting, foodborne illnesses, excessive food waste and an obesity epidemic coupled with malnutrition. This study establishes the broad consumption shifts in packaged foods since 1994 to explore the application of food science and technology advances and investments made by industry to meet these shifts, to assess the extent to which nutrition practices are integrated into core business practices, and to identify underutilized or emerging food sources that could provide safe, affordable and nutritious foods relevant for South Africans.

Lisa Ronquest is currently employed as the Chief Scientific Officer at v2food in Brisbane, Australia. V2food is a plant-based food manufacturing company and Lisa has been with them for nearly three years now.



Dr Kiah Edwards

Supervisor: Dr Paul Willaims

Co-supervisors: Profs Marena Manley, Louw Hoffman

Approaching authenticity issues in processed meat product by using hyperspectral imaging and chemometrics

Meat is a major source of protein in South Africa, with an approximate consumption of between 60 and 70 kg per capita per year. Since red meat is expensive, there is significant financial benefit in adulterating meat products. New South African regulations stipulate the composition of a 'beef patty' in order to promote transparency and accurate food labeling. This study demonstrates that near-infrared hyperspectral imaging shows potential to rapidly and accurately distinguish between processed beef burger patties consisting of various ingredients, species and adulterants. This could contribute to the authenticity and fair trade of processed meat products locally and internationally.



2023 March Graduation



International Association for Food Protection, Aberdeen Scotland

Nine students from the Department of Food Science (Centre for Food Safety) had the opportunity to present posters at the **International Association for Food Protection (IAFP) European Symposium in Aberdeen, Scotland 3-5 May 2023**. The Forum brought together many experts from academia, industry and government and provided an ideal space for networking, knowledge sharing and socialising. The latest developments in Food Science and Safety were communicated. The students were



accompanied by Dr. Diane Rip who described the conference as "an enriching and rewarding experience that offered opportunities to learn about the latest developments in the field, present research findings and network. It was particularly rewarding to witness nine students from our department present their research on a global platform and gain valuable insights from international perspectives, through active engagement with other researchers, and asking questions during the technical and plenary sessions." The travelling expenses for students were partly funded by the Centre for Food Safety.

Of 28 student poster award competitors, 10 finalists were named of whom two students, Michelle Gouws and Tarien Riekert, both made the top 10. Our two finalists had this to say:

Tarien Riekert: "The International Association for Food Protection's European Symposium was an amazing opportunity to meet and interact with the agents and players influencing the landscape of food safety globally. Presenting research and learning more about the current challenges facing our industry, and how we can tackle them using science, was an enriching and eye-opening experience."

Michelle Gouws: "The IAFP European Symposium did not only highlight current food safety concerns, it provided an excellent opportunity to connect with other leading institutions and experts in keeping our food safe. Talks at the symposium also discussed how consumer education can be utilised to promote safe food practices at home, which could be something we can implement as well. On a personal note – it has been a wonderful experience, and we are very fortunate to have had the opportunity to attend!"

Additional photos of the event can be viewed here:

<https://www.flickr.com/photos/iafp/sets/72177720308126654/>

The Scottish Adventure

M Gouws

The Centre for Food Safety (CFS) students embarked on a wild and wonderful journey, full of misadventure and magic, to attend the IAFP European Symposium in Aberdeen, Scotland. Seasoned travelers and first timers made up the group of nine, and the trip was thoroughly enjoyed by all.

Braving the chili weather and the confusing bus lines, the students found comfort at the conference. They were always the first at the breakfast spread, loading their plates with the array of pastries and quickly finishing their third cup of coffee, before they scurried to the first symposium session of the day. It was evident that the group was liked by all, and some valuable connections were made with peers from Ghent University, the European Federation of Food Science, and various industry leaders.

Each of the students presented a poster on their research, with the posters of Tarien Riekert and Michelle Gouws (picture below, right) being selected among the top ten at the conference. It was evident that the research from the CFS filled the gap between pure science and industry application, by providing solutions to current and relevant concerns.

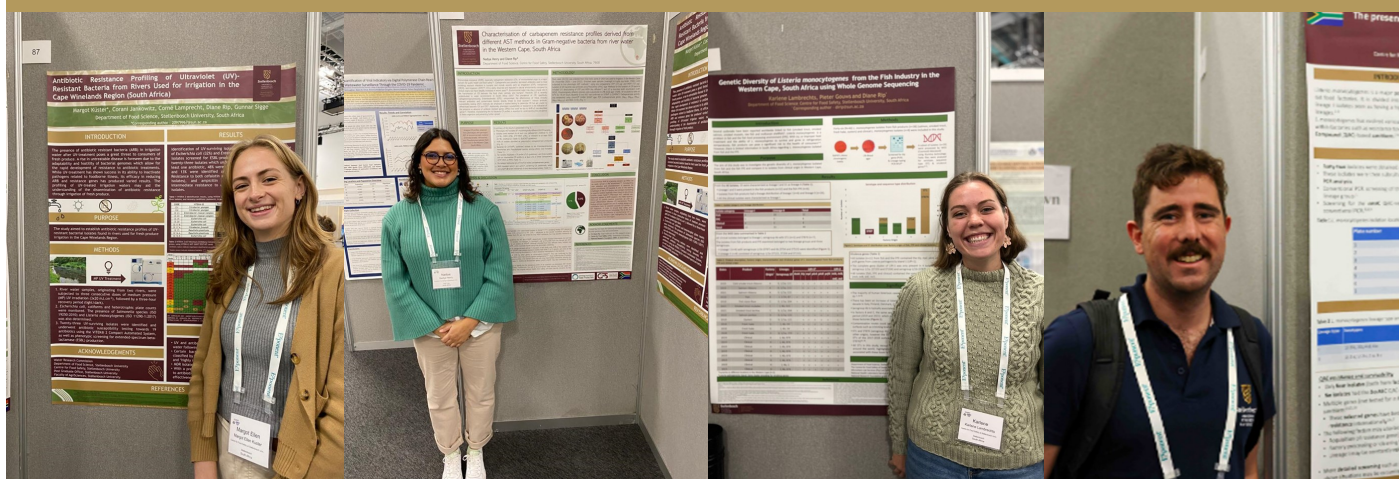
The students would like to thank the CFS and the Department of Food Science for the opportunity to attend the symposium.

Group photo, top row (left to right): Dr Diane Rip, Margot Küster, Nadiya Henry, Nicole Meyer, Denise Coetzee, Christina Enslin, Karlene Lambrechts, Tarien Riekert. Bottom row: Kyle Corbett, Michelle Gouws

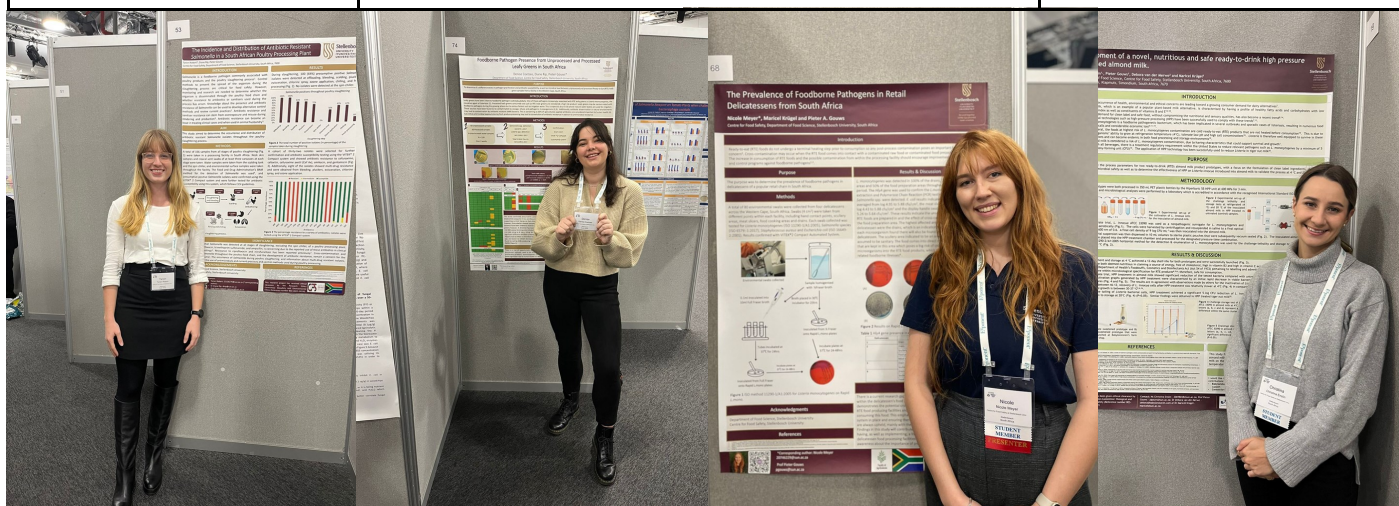
Photo right: Michelle Gouws and Tarien Riekert Top Ten Poster finalists.



Poster presentations at IAFP, Aberdeen Scotland



Presenter	Title of presentation	Supervisors
Margot Küster (MSc)	Antibiotic-Resistance Profiling of Ultraviolet (UV)-Resistant Bacteria from Rivers Used for Irrigation in the Cape Wine-lands Region (South Africa)	Prof G Sigge, Dr C Lamprecht, Dr D Rip
Nadiya Henry (MSc)	Characterisation of Carbapenem Resistance Profiles Derived from Different AST Methods in Gram Negative Bacteria from River Water in the Western Cape, South Africa	Dr D Rip
Karlene Lambrechts (MSc)	Genetic Diversity of <i>Listeria monocytogenes</i> from the Fish Industry in the Western Cape, South Africa Using Whole Genome Sequencing	Dr D Rip, Prof P Gouws
Kyle Corbett (PhD)	The Presence of <i>Listeria monocytogenes</i> Lineage Type I in South African Ready-to-Eat Factories	Prof P Gouws, Dr D Rip
Tarien Riekert (MSc)	The Incidence and Distribution of Antibiotic Resistant <i>Salmonella</i> in a South African Poultry Processing Plant	Prof P Gouws, Dr D Rip
Denise Coetzee (MSc)	Foodborne Pathogen Presence from Unprocessed Leafy Greens and Processed Leafy Greens in South Africa	Prof P Gouws, Dr D Rip
Nicole Meyer (MSc)	The Prevalence of Foodborne Pathogens in Retail Delicatessens from South Africa	Prof P Gouws, Dr M Krügel
Christina Enslin (MSc)	Development of a Clean, Nutritious, and Safe Ready-to-Drink, High Pressure-Processed Almond Milk Product	Prof P Gouws, Dr JD Van der Merwe, Dr M Krügel
Michelle Gouws (MSc Animal Science, PhD Food Science)	The Effect of Ionophore Use and Essential Oil Compounds in the Diet of South African Calves on the Prevalence of Antibiotic-Resistant <i>Escherichia coli</i> and <i>Salmonella</i> spp.	Dr L Steyn, Dr JHC van Zyl, Dr MS van den Honert



CFS Poster presentations

Prof. Marena Manley and her postgraduate students visited the United Kingdom, Türkiye, and Poland as part of SuChAQuality secondments

M Manley

The 'SuChAQuality' project is funded under the European Commission Horizon 2020 Marie Skłodowska-Curie Actions Research and Staff Exchange Program. This project aims to develop alternative quality control methods for the sugar, chocolate and confectionary industries with Professor Mecit Öztop from the Department of Food Engineering, Middle East Technical University (METU) in Ankara Türkiye as the principal investigator. Stellenbosch University is one of the 11 partners in the project.

This year, I completed a secondment at Nottingham Trent University (NTU). PhD student Jana van Rooyen completed a one-month secondment in Poland and three months in the Physics research laboratory of Prof Rob Morris at NTU, while MSc in Food Science students Carli Pretorius and Naomi Douglas performed three-month secondments at NTU - including a visit to METU. Jana is in her final year completing her PhD (Food Science) on Starch chemistry, structure and functionality in dry heat-treated wheat.



Jana van Rooyen and Prof Marena Manley in the Physics laboratory at NTU, together with Umur Tuna (MSc student from METU) and Prof Rob Morris.

As was the case last year, the SuChAQuality secondments again turned out to be a busy time with a number of activities in different countries. This year Prof Mecit Öztop and his ÖztopLAB research group hosted us during the SuChAQuality week. He ensured a week full of stimulating presentations by established (ERs) and early stage researchers (ESRs), and three workshops. He also took us on a tour of the campus. Naomi and Carli had the opportunity to introduce their MSc in Food Science research topics on the use of near-infrared spectroscopy and NMR relaxometry to investigate (1) the refining process of dark chocolate and (2) the effect of different temper regimes on polymorphic structure of cocoa butter in dark chocolate.





Prof Marena Manley, with Prof Mecit Öztop, Carli Pretorius, Naomi Douglas, Prof Danuta Kruk, Eren Cantürk (who looked after all with food and drinks the entire week) and METU students in the ÖztopLAB.

The first workshop was presented by Prof Rob Morris from NTU, in his characteristic energetic and engaging manner, introducing nuclear magnetic resonance (NMR). The workshop included an interactive day on building low-cost MR hardware and each participant got the opportunity to build small NMR probes – using amongst others LEGO blocks; all producing useful signals.



Carli Pretorius, Naomi Douglas, Prof Marena Manley building small (working) NMR probes during the workshop with Umur Tuna, Prof Rob Morris and Dr Nicasio Geraldi.

On the last afternoon of SuChAQuality week, chocolate, soft and hard candy manufacturing workshops with demonstrations was hosted by Tören and Durukan (two industry partners in the project), respectively. The ÖztopLAB was, as I got to know it, again filled with its customary lively atmosphere and excited voices of students wanting to learn - this time also with the voices of enthusiastic visiting ERs and ESRs of all 11 project partners.



Chocolate tempering by hand and demonstrations on how to make hard and soft candies by ERs and ESRs from Durukan, after an online lecture on chocolate quality was presented by Selcuk Arslan from Tören Foods, city of Gaziantep.

Subsequent to the SuChAQuality week, Jana van Rooyen, who had the opportunity to learn how to build NMR probes in the Physics laboratory at NTU, and I got the opportunity to attend the Ampere NMR School in Zakopane, Poland. Jana presented a poster on '*Exploring temperature related proton dynamics in hydrated starch by Time-Domain NMR*' and I was asked to chair a session and serve on the Poster Evaluation Committee. The School was organised by Prof Danuta Kruk, University of Warmia and Marzury, Olsztyn, Poland. We are looking forward to Prof Kruk's visit to the Department in September and further visits of postgraduate students from METU and other partners of the SuChAQuality project; as well as further collaboration with Prof Mecit Öztop.

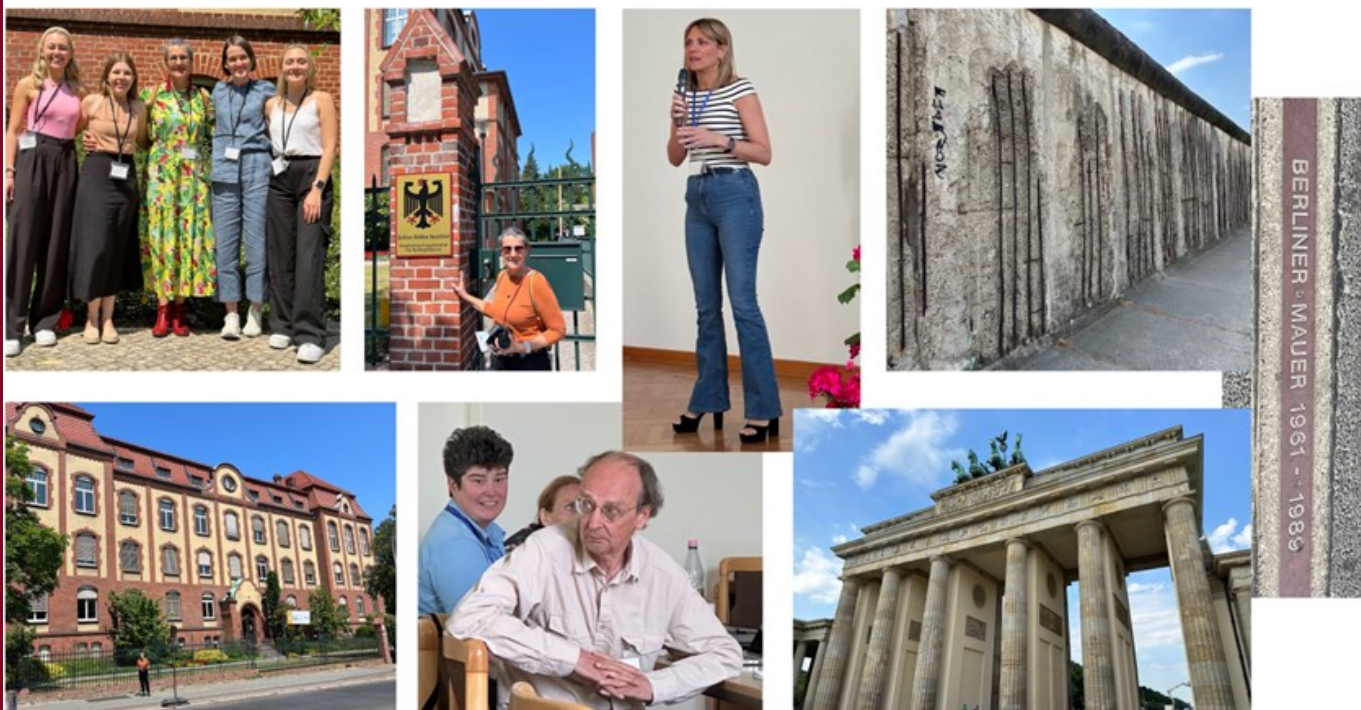


For the LOVE of chocolate

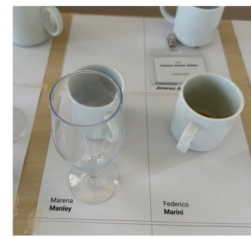
2nd sensorFINT (COST Action) International Conference: Prof Marena Manley and MSc in Food Science students

A COST Action is an interdisciplinary research network that brings researchers and innovators together to investigate a topic of their choice for 4 years. South Africa, as one of the non-COST countries, is currently the only COST Partner Member. By becoming a Partner Member in 2019, South Africa maintains a budget dedicated to the participation of its nationals in COST Actions. This provides us with more possibilities to participate in Actions and strengthen and establish mutually beneficial cooperation with European researchers and vice versa. I am the representative of Stellenbosch University of the COST Action 19145 (European Network for assuring food integrity using non-destructive spectral sensors) dedicated to '*Non-Destructive Spectral Sensors advances and future trends*', referred to as sensorFINT. Prof Dolores Perez-Marin is the Action Chair of sensorFINT, assisted by the vice-chair, Prof Tom Fearn. Cooperation between both the European Union (EU) and South Africa is of strategic importance, as both regions share an interest in common challenges like climate change, migration, and good governance, while there is also a rich potential for cooperation in innovation.

Through the sensorFINT COST Action we have had the opportunity again to attend a COST Action activity, this year in Berlin, Germany. MSc in Food Science students, Mia Schutte and Mari van Wyk and I were funded by the Department of Science and Innovation (DSI) to attend the 2nd sensorFINT International Conference (5-7 June). The Conference was hosted by the Julius Kühn-Institut (JKI), Königin-Luise-Straße 19, Berlin, Germany and was presented as a joint event with the Annual Workshop of the German Chemical Society (GDCh) work group.



MSc in Food Science students, Carli Pretorius and Naomi Douglas also had the opportunity to present a joint poster titled, 'Effect of refining of dark chocolate on near-infrared (NIR) spectral data'. They were partly funded by the SuChAQuality project and the PI of the project Mecit Öztop and two of his PhD students, Hilmi Eriklioglu, and Ege Gulenc from METU, Türkiye, also attended the Conference. An interesting 'water-saving' concept at the conference was the use of 'parking bays' for each delegate's coffee cup and glass for the day.



Department of Food Science students presenting and having lunch together with Hilmi Eriklioglu and Ege Gulenc from METU.

We acknowledge the Department of Science and Innovation giving especially postgraduate students the opportunity to attend this Conference where they could present their work and received constructive feedback in a safe and friendly environment. Also, during the Conference, experts in their fields took time to discuss with and advise the students towards improvements of their research – as experienced also this time by Mia, Mari, Carli, and Naomi.



Embracing a safer food future... On World Food Safety Day, 8 June 2023, we appreciated and celebrated the efforts taken to ensure our food is safe. Join the global movement for safe food practices and let's make a positive impact together. Please note that no humans or animals were harmed during these celebrations.

#worldfoodsafetyday2023 #safefood #worldhealthorganization #foodscience#CFS

Dr Femi Caleb & team to host the next ISHS International Symposium

Dr Caleb recently announced that Stellenbosch University and his research team won the bid to host the next International Symposium of the ISHS after the successfully concluded Model-IT 2023, where he presented two papers.

The “VIII International Symposium on Applications of Modelling as an Innovative Technology in the Horticultural Supply Chain - Model-IT 2027” will be hosted by Dr Caleb. The International Symposium will be focused on the application of mathematical models, methodologies, and the role of artificial intelligence within the whole horticultural postharvest value chain. For the first time, this International Symposium will be organized in South Africa. The event will be designed to provide a concerted platform that brings together academics, research scientists, policy makers and all the role players from the global fresh produce industry.



Prof. Giancarlo Colelli (Chair of ISHS Division Postharvest and Quality Assurance), Dr Oluwafemi J. Caleb (Convener of Model-IT 2027), Dr Pramod V. Mahajan (Convener of Model-IT 2023), and Dr Manuela Zude-Sasse (New Chair of ISHS Working Group Modelling of Postharvest Processes).

Brewing team awarded for best African WILD Ale

The team dressed in US colours, from left to right: Mr Dewald Botha (Team captain), Dr Stefan Hayward (Mentor), Ms Mia Schutte, Mr Hamish Gerbers, Mr Sebastian Orth.

The annual Intervarsitybrew, Brewing & Tasting Challenge was hosted at Central University of Technology in Bloemfontein from 19 – 22 October. At this event the Maties Team won the category for the Best African WILD ALE with their “Italian grape ale” made with local Pinotage grape juice which were wild fermented. Congratulations team Maties!



The 2023 NPD journey



*Unnovate

Revitalising time-honored methods to create authentic products and extend shelf-life

Requirements

- Create authentic and meaningful value
 - by using time proofed methods
- Solve new and emerging problems with existing and widely adopted scientific methods
- Develop an innovative product for the pantry: ambient storage
- Identify the preservation method, e.g. reduced water activity, canning, bottling, vacuum packing, fermentation, smoking, dehydration etc.



Target market



Food trend



Benchmark



Costing



South African legislation



Food safety aspects

- Microbial limits
- HACCP Plan
- Shelf-life: min 14-days



Nutritional information

- Based on 
- In-house + 



Consumer research



Suitable packaging



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New Product Development Presentations 2023

19 October 2023



- Dr Jaco Franken - Manager: Graduate School Economic & Management Sciences
- Tanya Rabie & Ashley Ferreira - In2Food
- Abby Stern & Leana Kotze & Ukutya - Launchlab
- Bitta van Staden & Wendy Beneke - Sensient Technologies
- Karin Carstensen - Woolworths
- Gary Pon - Ingredion
- Karen Horsburgh - FACTS SA
- Karin Botha - NSF
- Raymond Hartley & Nathan Naude - Microchem
- Vanessa von Holdt - IPSA

LAUNCHLAB
STELLENBOSCH UNIVERSITY



in2food

SENSIENT



Ingredion

FACTS



microchem

Guest speakers & lecturing team



Dr. Maricelle Krügel

Lecturer



Andrea Marent-Hegewisch

Guest Lecturer



Melvi Todd

Master of ceremonies





Pantry Party Products

FizzCraft bombs to flavour cocktails or mocktail, rounded with an instant egg white foam layer

Kapôki, a dairy-free, plant-based milk alternative made from potatoes

DACO, a dairy-free date caramel treat

So Mushroom, a pulled oyster mushroom product in an Asian inspired sauce

Nummus, dehydrated beetroot and butter bean dip

Bramble, oat bran and mixed berry cereal flakes with coconut and dates



Meet the judges for packaging, legislation, HACCP & NPD day



Ingrid Schoeman
Packaging Expert
Packaging Consultant



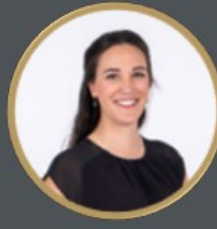
John Fox
Packaging Expert
Packaging Consultant



Vanessa von Holdt
IPSA Student Gold Pack
Packaging Consultant



Karen Horsburgh
FACTS SA
Regulatory Consultant



Gabriella Stevens
FACTS SA
Registered Dietician &
Regulatory Consultant



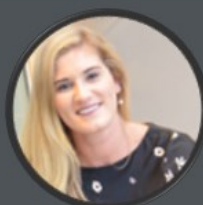
Karin Botha
NSF
Business Manager



Petrus van Eeden
Babylonstoren
Food Production
Specialist and
Innovator



Carlé van der Vyver
Crown Food Group
Technical Lead:
Culinary/Convenience
Foods



Ashley Ferreira
In2Food
New Product
Developer: Bakery



Anneri Carinus
Synercore
Business
Development &
Special Projects



Tracy Cherrington
Leo Foods
Food Scientist and
Managing Director





FizzCraft Bombs to flavour cocktails or mocktail, rounded with an instant egg white foam layer



Kapôkí, a dairy-free, plant-based milk alternative made from potatoes



DACO, a dairy-free date caramel treat



Bramble team



Dane van Rooyen
Group facilitator



Nadia van Niekerk
Innovation queen



Tristan Rabie
Chill pill



Anike Kemp
Fire ball



Jolida Roux
Eager Beaver



Arabella Clouston
Secret weapon



Nare Phosa
Sniper



Bramble, oat bran and mixed berry cereal flakes with coconut and dates

THE NUMMUS TEAM



Carli Verreyne
Co-coordinator & Finance Specialist



Kayla Scott
Co-ordinator & packaging Specialist



Chloe Duval
Marketing specialist and microbiologist



Jenna Peoples
Microbiology manager



Elma Engelbrecht
Microbiologist and Sensory Specialist

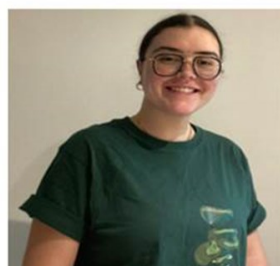


Nola de Jongh
Sensory & Packaging Specialist



Zaakirah Bhore
Production manager & Chemical analysis specialist

Nummus, dehydrated beetroot and butter bean dip



So Mushroom team

So Mushroom, a pulled oyster mushroom product in an Asian inspired sauce

2023 NPD Prize winners

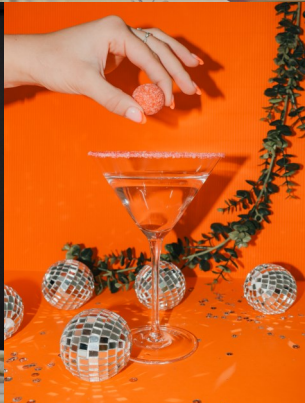
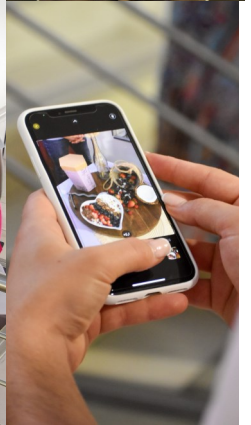
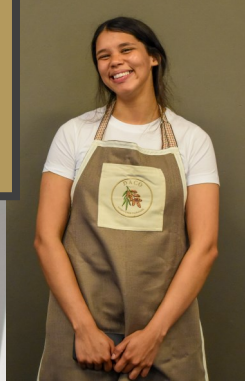
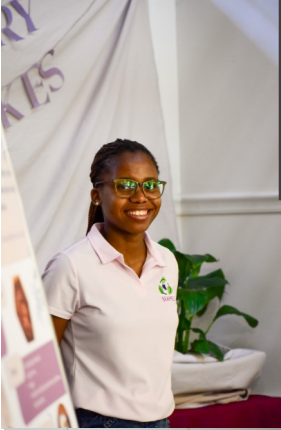
- Best Product & Presentation **GOLD**, Sponsored by Synercore and INNOVUS, went to *Bramble*.
- Best Product & Presentation **SILVER**, Sponsored by Synercore and INNOVUS, went to two groups, *Kapôki* and *So Mushroom*.
- Best Product & presentation **BRONZE**, Sponsored by Centre for Food Safety, went to *Nummus*.
- Prize for the group, best complying to SA Regulations, sponsored by FACTS went to *FizzCraft*.
- Prize for the group with the best HACCP plan, sponsored by NSF went to *Daco*.
- Institute of Packaging prize for best packaging design went to *Daco* (GOLD) and *FizzCraft* (SILVER)
- The MICROCHEM prize for product best liked by the audience went to the *Daco* team. MICROCHEM sponsored all chemical & Micro analysis
- Beverages for NPD day, sponsored by Babylonstoren

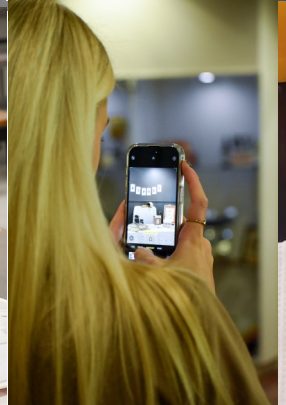




NPD day 2023

The products, students, last minute touches, the nerves, judges, tasting, excitement, presentations, moments of joy and a few jokes by the MC. Great fun was had by all! Well done TEAM 2023





Department of Food Science Prizes

SIMMONS (KITTY SIMMONS-PRIZE): R750 (92.5%)

Marli Kotze

Awarded annually to a third year BSc Food Science student with the highest average percentage in Food Science 214 and Food Science 244 (Commercial Food Processing and Preservation

BESSIE RETIEF-PRIZE: R1 000(91%)

Kelsey Dellar

Awarded annually to a final year BSc Food Science student with the highest average in the undergraduate module, Sensory Analysis (FS 354).

MIMSIE SMIT-PRIZE: R1 500 (92%)

Zaakirah Bhore & Kelsey Dellar

Awarded annually to a final year BSc Food Science student with the highest average percentage in Food Science 344 module (Food of plant origin).

NONNA RABIE-PRIZE: R6 000 (83%)

Paige Wardle & Charne Woolf

Awarded annually to a second year BSc Food Science student for the best achievement in his/her first year in all Food Science modules.

JEANNE MARIE VAN DER POEL-PRIZE: R5 500

Dané Van Rooyen

Awarded annually to a final year BSc Food Science student. Involvement and general interest in Food Science as a field of study.

DEPARTMENT OF FOOD SCIENCE-PRIZE: R800

Zoë Hendricks

Awarded annually to a third year BSc Food Science student. Involvement and general interest in Food Science as a field of study.

DEPARTMENT OF FOOD SCIENCE-PRIZE: R700

Cisca Van Wyk

Awarded annually to a second year BSc Food Science student. Involvement and general interest in Food Science as a field of study

DEPARTMENT OF FOOD SCIENCE-PRIZE: R600

Zeenat Ahmed-Mohamed

Awarded annually to a first year BSc Food Science student. Involvement and general interest in Food Science as a field of study.

MATTIE JOOSTE (UNDERGRADUATE): PRIZE: R12 000 (82%)

Yvette Boshoff

Awarded annually to an undergraduate final-year student in BSc Food Science for having obtained the highest average percentage for all modules over the first three years.

MATTIE JOOSTE (POSTGRADUATE): R16 000 (76%)

Jade Tobin

Awarded annually to a PhD student for the best achievement in an MSc in Food Science degree

SASKO-PRIZE: R12 000 (88%)

Marli Kotze

Awarded annually to a third-year BSc Food Science student for the best achievement in all the first year and second year modules.

Congratulations to all the prize winners!



Prizes and winners 2023



Professor Lizette Joubert retires



We bid farewell to one of our extraordinary Professors and celebrate her extraordinary career. Professor Lizette Joubert started her career in 1981 with a BSc in Food Science. Her MSc in Food Science, awarded in 1984, dealt with the development of instant rooibos tea, which sparked her interest in herbal teas. Her extensive research on rooibos (*Aspalathus linearis*) and honeybush (*Cyclopia* spp.) has led to more than 200 peer reviewed research publications in the past 40 years and she supervised and mentored more than 50 postgraduate students. She is also co-inventor of several patents and her excellent fundamental and applicable research has made a significant and sustainable contribution to the South African herbal tea (rooibos and honeybush) industry.

We did a final interview with her in November:

What was a big “aha” moment in your career?

Polyphenols had a “bad rap” prior to the 1990’s since, in most cases, their presence in foods were associated with negative sensory implications (taste and other) and therefore deemed as “undesirable”. By chance, I was asked to investigate antioxidant activity of rooibos

and that put me on the path of investigation polyphenols as natural antioxidants. Another big insight was that polyphenols is much more than antioxidants, which led to several interesting research collaborations, nationally and internationally. It also brought the realisation that working as a multidisciplinary research team has many advantages. Isolated and single focused research became an outdated practice. Furthermore, collaboration with industry was and remains important.

Did you see yourself as a researcher and mentor for postgraduate students when you envisioned your future?

I did not plan or imagine this path while I was completing my Food Science degree. That being said, I really enjoyed doing research and working with postgraduate students. It was very stimulating, and I enjoyed teaching and developing students. I was fortunate to work with many excellent and motivated students from day one.

What are your tips for postgraduates and researchers in Food Science?

Look far ahead and stay aspirational. It is our job as researchers to lead. If you decide to take on a postgraduate project, make sure you are interested in your topic. It will help to keep you motivated, even when everything does not go according to plan.

What do you see in the future for rooibos and honeybush?

I would like to see well researched and validated functional claims incorporated in legislation and on product labels. This will benefit the rooibos and honeybush tea industries and may create a sophisticated and sought-after market for these teas globally.

What will you miss the most?

My colleagues and collaborators and the stimulating environment and challenges research brought.

(M Manley & D van der Merwe)



Brigitte du Preez received these messages from SU Alumni, honouring Prof Lizette Joubert for the vast impact that she has made on the Department of Food Science and the lives of her postgraduate students, and her lasting legacy on especially research in the indigenous SA Herbal Teas, Rooibos and Honeybush, and their industries. What an amazing testimonial this is!

Jaco Du Toit | R&D Manager, Environ® Skin Care

MSc Food Science (1996) | Development of a standardised processing method for honeybush tea (*Cyclopia*).
Dit was 'n wonderlike voorreg om onder Prof Lizette Joubert se leiding navorsing te kon doen om prosesseringsriglyne te bepaal vir goeie kwaliteit Heuningbos tee. Haar ongelooflike kennis oor Rooibos tee, en die tee bedryf in die algemeen, het verseker dat ons projek positiewe resultate en navorsings artikels opgelewer het. Ek het mooi herinneringe oor ons besoeke aan Du Toitskloof, Langkloof en Weskus om na die pragtige geel Cyclopia blommetjies tee te soek. Baie dankie Lizette, jou passie vir tee en vrugte navorsing gaan vir seker gemis word in academia en in die voedselbedryf!

Astrid Beyers (nee Von Gadow) | Sensory Evaluation panellist; Owner, Juizi CC

MSc Food Science (1996) | The antioxidant activity of rooibos tea (*Aspalathus linearis*).
Dear Lizette, with your retirement coming up, my thoughts go back to 1995 when I was one of your first Masters students. It certainly was a milestone year for me, due mainly to your excellent guidance and mentorship. Thank you! Wishing you all the very best and looking forward to bumping into you in Kleinmond. Astrid.

Anton Erwee | Chief Operating Officer, At Source Handmade Foods (Pty) Ltd

MSc Food Science (2003) | Development of technology for the production of stable high moisture dried fruit.
Ek is redelik seker dat as dit nie vir Lizette Joubert was nie, ek nooit my M sou klaar gemaak het nie. Dit was my voorreg om vir Lizette as studieleier te hê sowat 25 jaar gelede. Aan die begin was ek maar skrikkerig, soos meeste studente, maar vinnig ontdek dat ek die beste studieleier gekry het. Haar praktiese ingesteldheid en positiewe manier om probleme op te los was vir my 'n waardevolle leerskool vir my loopbaan. Lizette – baie dankie vir dit wat jy vir my, en soveel ander studente, beteken het. Jou bydrae tot jou studente se loopbane en lewens sal nooit na waarde geskat kan word nie. Geniet jou aftrede en weet dat jy diep spore getrap het in die Voedselwetenskap wêreld.

Christel De Bruyn (nee Cronjé) | Research Scientist, Mpact

PhD Chemistry (2010) | Chemical characterisation of the aroma of honeybush (*Cyclopia*) species.
Ek het dit baie geniet om saam met Prof Joubert te werk gedurende my studies aan die Universiteit van Stellenbosch. Sy het ongelooflike kennis oor die hele Heuningbos industrie asook die tee self en dit was vir my lekker om haar as mens te leer ken. Sy is baie hardwerkend, altyd bereid om te help en te gesels waar nodig! Ek onthou steeds hoe ek en sy 'n hele paar keer saam Pearly Beach toe gery het om Heuningbos blomme te gaan analiseer en hoe lekker mens altyd met haar kon gesels en ook hoe bekend sy in daardie omgewing onder die boere was. Ek wens vir Prof Joubert al wat mooi is toe vir hierdie nuwe hoofstuk in haar lewe!

Ilona Steenkamp (nee Koch) | Researcher, Department of Food Science, SU

MSc Food Science (2011) | Development of a sensory lexicon and sensory wheel for rooibos (*Aspalathus linearis*) and the role of its phenolic composition on taste and mouthfeel.
I had the privilege of having Prof. Joubert as my study leader for my Masters degree and also working under her at the ARC for some time afterwards. Prof. Joubert is one of those people that has truly found her passion in life, has followed this passion, and invested herself completely in it, resulting in a phenomenal and successful career in Science that has lasted for so many years. I really enjoyed my time in research with her and was so grateful to be able to learn so much from her and her passion for rooibos and honeybush tea research. For this new chapter of retirement that she is starting now I wish her joy and contentment as she maybe discovers new interests and things that delight her heart. Alles wat mooi is vir hierdie wonderlike nuwe seisoen, Prof Joubert!

Theresa de Villiers (nee Beelders) | Head of Innovation, Lancewood

MSc Food Science (2011) | HPLC method development for the characterisation of the flavonoid and phenolic acid composition of rooibos (*Aspalathus linearis*) infusions.
PhD Food Science (2016) | Xanthones and benzophenones from *Cyclopia genistoides* (honeybush): chemical characterisation and assessment of thermal stability.

Alex Schulze | Software Project Manager, Connect Group South Africa

MSc Food Science (2013) | HPLC method development for characterisation of the phenolic composition of *Cyclopia subternata* and *C. maculata* extracts and chromatographic fingerprint analysis for quality control.
Prof Joubert is an extraordinary leader and researcher who gave me the opportunity to explore and challenge my different interests while conducting my MSc and while working together afterwards. She pushed me to give my best and accomplish more than I knew I was able to. I am greatly appreciative of the time I was able to learn from her, and there are many lessons I still carry with me today.

Erika Moelich | Project Researcher & Sensory Scientist, Sensory Research Facility, Department of Food Science, SU

PhD Food Science (2018) | Development and validation of prediction models and rapid sensory methodologies to understand intrinsic bitterness of *Cyclopia genistoides*
I had the privilege to have Prof Joubert as study leader when doing my PhD. She is an amazing study leader, always asking the next research question, guiding students to achieve excellent outputs, and always willing to listen and help on a journey of learning and growth. Lizette, ek het groot respek vir alles wat jy vermag het, baie dankie vir die voorreg om onder jou te werk en so baie te leer, en altyd met 'n 'smile' uit te stap na ons besprekings. All the best for this new chapter in your life.

Brigitte von Pressentin du Preez | Researcher, Sensory Research Facility, Department of Food Science, SU

MSc Food Science (2013) | *Cyclopia maculata* : Source of flavanone glycosides as precursors for taste modulating aglycones
PhD Food Science (2020) | Development of a quality grading system for the honeybush (*Cyclopia* spp.) tea industry
Throughout my postgraduate studies, Prof Joubert always reminded me to focus on the 'golden thread' that would bring my research, and finally my thesis chapters together. She has guided her students with her phenomenal skill to formulate a research idea within a bigger picture – as an extraordinary researcher and writer. Her expert advice and encouragement introduced me to numerous opportunities in sensory science and science communication. Under her guidance I have developed a shared enthusiasm for honeybush and rooibos research, its industry and especially its people. She has left a lasting impact on rooibos and honeybush research for future generations of researchers to build on. Prof Joubert, thank you for being the golden thread throughout my research journey, and I wish you a very blessed and happy new chapter ahead.

Debora van der Merwe | Lecturer, Department of Food Science, SU

PhD Food Science (2012) | Exposure to polyphenol-enriched rooibos (*Aspalathus linearis*) and honeybush (*Cyclopia* spp.) extracts : implications of metabolism for the oxidative status in rat liver.
I had the privilege to have Prof Joubert as a study leader for both my MSc and PhD projects. I will be forever grateful for the problem solving, planning and analytical skills you taught me! I use it in life and work on a daily basis. Thank you for the very valuable work you did for South African herbal teas and for being an example of what we should strive for as researchers.

Lara Alexander | Sensory Scientist, Cara Technology Ltd, UK

MSc Food Science (2015) | Effects of steam treatment and storage on green honeybush quality.

PhD Food Science (2018) | The contribution of phenolics to the bitter taste of honeybush (*Cyclopia genistoides*) herbal tea.

Prof Joubert has been for many years and continues to be an inspiration and role model to me (and many others) of a successful and passionate woman in science. More than that, she has led so many young scientists through the challenging journey of postgraduate research with remarkable skill, empathy and (just the right amount of) supervision and support. I fondly (and often) look back on my time working under Prof Joubert and I wish her all the best in retirement, filled with all the murder mystery novels, seaside walks, and some very well deserved relaxation!

Bianca Jolley | Senior Scientist (Consumer Science), Mondelēz International, UK

MSc Food Science (2014) | Development of quality control tools and a taste prediction model for rooibos.

Dear Prof Joubert Congratulations on your retirement, it is such a wonderful milestone to have achieved! I will always be grateful for the time we worked together. Thank you for all your patience, guidance and support in the completion of my thesis. Wishing you all the best for your next chapter! Love, Bianca Jolley

Brigitte du Preez | Researcher, Sensory Research Facility, Department of Food Science, SU

MSc Food Science (2013) | *Cyclopia maculata* : source of flavanone glycosides as precursors for taste modulating aglycones

PhD Food Science (2020) | Development of a quality grading system for the honeybush (*Cyclopia* spp.) tea industry

Manzi Sishi-Vilakazi | Sensory & Consumer Experience Associate Scientist, PepsiCo

MSc Food Science (2018): *Evaluation of rooibos waste plant material for the development of a high-value herbal tea product*

Dear Prof. Joubert, Congratulations on your retirement! Wishing you the best of health, happiness, and success on your new journey in life. I will remember you fondly for all your teachings, critical thinking and attention to detail.

Nico Walters | General Manager, Julonamix

MSc Food Science (2016) | Development of advanced chromatographic techniques for the in-depth phenolic profiling of rooibos.

PhD Food Science (2019) | Comprehensive characterisation of the phenolic composition of *Cyclopia pubescens* (honeybush).

Prof Joubert het die talent om die beste in mense te sien en ook die beste uit mense te bring. Onder haar leiding het ek nie net kennis opgedoen nie, maar ook as 'n persoon gegroei. Daar is min mense met so 'n briljante verstand en goeie siel soos Prof Joubert. Ek wens haar alles wat goed is vir haar aftrede.

Neil Miller | Research Technical Specialist, Heineken Beverages

MSc Food Science (2016) | Green rooibos nutraceutical: optimisation of hot water extraction and spray-drying by quality-by-design methodology.

PhD Food Science (2020) | Development of a gastroretentive anti-diabetic nutraceutical incorporating polyphenol-enriched fractions of *Cyclopia genistoides*.

The time I spent as a postgraduate under Lizette's supervision has set a personal gold standard to which I will aspire in all future endeavours. She has always gone the extra mile(s) in her roles as a researcher and academic supervisor, but hopefully she will now enjoy many leisurely strolls on the beach, free from the horrors of peer review and dirty scales!

Chantelle Human | Researcher, Agricultural Research Council Infruitec-Nietvoorbij

PhD Food Science (2019) | The physicochemical properties and stability of aspalathin in micro- and nanoencapsulated green rooibos extract formulations.

Lizette is an inspirational colleague, mentor, and PhD supervisor overflowing with exciting and out-of-the-box research ideas. Her colourful stories and witty banter will be deeply missed.

Melvi Todd | Founder & Innovation & Strategy Consultant; Elyxer Consulting; Lecturer, USB Executive Development (Pty) Ltd [MDP: Environment of Business & SMDP: Sustainable Competitiveness]

PhD Food Science (2022) | Multi-stakeholder perspectives on food labels and the future of healthy eating

Dear Prof J. I am forever grateful that you could 'concoct' a Masters project for me back in 2007 – especially considering that I was late to apply for bursaries in my final year (I totally missed the NRF deadline!). Thank you for always having a plan A, B, C, D, E, F and G! I fondly remember early morning coffee chats – my way to invite myself in and then bombard you with many questions. I remember sleeping in the ARC boardroom and training in the lab (you know when!). So, when it came to Round 2 (i.e., the PhD), I knew there was nowhere else I could go, but to you. (And Jako knew to advise/support me to speak to you too!) I recall a dinner at Topaz over a large Woolworths lasagne and a bottle of red wine... where yet another plan was hatched! Thank you for your research guidance and for becoming a friend (Ferdie included). Enjoy doing 'whatever the hell you want to do!!' Sending the very biggest hug, Melvi.

Jade Tobin | PhD Food Science candidate, Department of Food Science & ARC Infruitec-Nietvoorbij

MSc Food Science (2018) | Rooibos fermentation - Characterising phenolic changes using chemometric analysis and kinetic modelling.

I remember struggling with a concept of my research topic for weeks on end, and all it took was a 5 minute conversation with Prof. Joubert to have everything simplified. She is a great storyteller (possibly what makes her such a brilliant researcher) and always made time to share some of her stories with her students.

Brian Gray | Senior Specialist: R&D, KWV

MSc Food Science (2003) | Retention of the harpagoside content in dried *Harpagophytum procumbens* (Devil's Claw) root through controlled drying and the application of near infrared spectroscopy (NIRS) as rapid method of determination. As student by Stellenbosch het ek die geleentheid gehad om, onder leiding van Prof. Joubert, by Infruitec-Nietvoorbij se Na-oes en Agri-Prosesserings fasiliteit 'n gedeelte van my nagraadse studies te voltooi.

Iets wat my sal bybly is Prof. Joubert se vermoë om op forums en werksinkels met soveel gemak en gesag te gesels oor die nuutste ontwikkelinge op Rooibos en Heuningbos navorsing. Dit het vir my 'n duidelike voorbeeld gestel van iemand wat hulle onderwerp goed genoeg ken om die wetenskaplike informasie lewend te maak.

Aan die einde van 2022 het ek 'n besoek afgelê by Rooibos Limited in Clanwilliam en is net weereens herinner aan die blywende indruk wat Prof. Joubert op my gelaat het met haar passie vir hierdie inheemse skatte van Suid-Afrika.





Profs Lizette Joubert and Marena Manley at the awards ceremony in 2018, where Prof Joubert received an honorary medal from the South African Academy for Science and Technology for her contribution towards research on Rooibos-, Honeybush and herbal tea.



WOMXN'S MONTH

Lizette Joubert
Principal Researcher at ARC Infruitec-Nietvoorbij and extraordinary professor at Stellenbosch University.

Cecilia Bester
Geneticist and plant breeder, overseeing research at ARC

"Rooibos and honeybush researchers Prof Lizette Joubert and Dr Cecilia Bester of the Agricultural Research Council"

"Prof Joubert and Dr Bester are leading the team that are working on a project which aims to strengthen the industry and its people, and to ensure that the indigenous teas being produced in South Africa are ultimately of such a high standard that it can compete on the tea markets of the world. This includes developing seed orchards, nurseries and honeybush tea plantations in rural communities"

Nominated by Engela Duvenage

WOMXN IN STEM



Photo top left: One of the regular visits to Prof Lizette Joubert by her international research collaborators from Tokyo University of Agriculture and Technology, Fuchu, Japan, in 2017 to learn more about honeybush tea. F.l.t.r: Japanese post-graduate students, Oji Nakamura and Kazunobu Okon, Prof Joubert, Prof Yutaka Miura, Marlise Joubert. Photo supplied by Lizette Joubert.

Photo left: A recent USA-grown tea tasting session on different teas from Willamette Valley, Oregon. Tea samples were provided by research collaborator, Ann Colonna, from the Food Innovation Center, Oregon State University, USA. F.l.t.r. Dr Erika Moelich, Ms Nina Muller, Prof Joubert, Dr Brigitte du Preez and Dr Debra van der Merwe.

Prof Marena Manley elected to the South African Academy of Science and Art's Council

The South African (SA) Academy of Science and Art's Council for the term 2023 to 2026 was announced at its Annual General Meeting on Thursday, 28 September. Prof Marena Manley from the Department of Food Science was elected to the Council as well as the Standing Committee. She will serve under the chair, Prof Ilse Feinauer from the Department of Afrikaans and Dutch, also from Stellenbosch University (SU). Prof Leopoldt van Huyssteen (former Dean of the Faculty of AgriSciences, SU) was elected as vice-chair. (see photo below)

Prof Manley has been a member of the SA Academy since 2013. The general objectives of the Academy are the promotion of arts, science, technology and literature (in Afrikaans). The Academy is known for the regular awarding of Literary Prizes, such as the Hertzog Prize, and other prestigious arts and science awards.

Prof Marena Manley joined SU in 1997 where she initiated and implemented near infrared spectroscopy research as applied to food and agricultural products. This was followed by the introduction of NIR hyperspectral imaging research in the mid-2000s. Her research group was one of the first to do such work in South Africa and Africa, and to publish grain NIR hyperspectral imaging investigations internationally. Marena received the Cereal Science and Technology Southern Africa prize for sustained excellence in Cereal Science research and development in 2010. In 2014 she received the SA Academy of Science and Art's Medal of Honour from the Faculty of Natural Sciences and Technology. During the December 2022 graduation ceremony, she was awarded a Chancellor's Award in recognition of her research excellence at SU.

Until now, Marena has acted as a supervisor for more than 70 postgraduate students and has published 120 peer-reviewed articles. In addition to NIR spectroscopy and hyperspectral imaging research, Marena and her postgraduate students are also investigating X-ray microcomputed tomography and nuclear magnetic resonance as analysis techniques. In her current research, these techniques are used to study and characterize the quality of cereals, baked goods, and other food products such as chocolates.



Food Science students well presented at the 2023 Rector's awards

Congratulations to Food Science students Kim Mannix, who has been recognized as one of the Top Master's students at SU for 2022, Iksha Bhowen and Jana Schreuder, who received Rector's Awards for Excellent Academic Achievement based on their undergraduate marks.

Kim successfully completed her MSc in Food Science, graduating with honors, (87% average) in March 2023.

Jana, is currently pursuing her MSc degree under the supervision of Drs Paul Williams and Diane Rip. Her research focuses on investigating whether Portable Near-infrared Hyperspectral Imaging can be used to detect *Listeria monocytogenes*. Jana's mother, Mrs. Liza Schreuder, accepted the award on her behalf. She graduated in 2022 with an average of 79.53%.

Iksha Bhowen who graduated with an average of 78.33% is enrolled in the MSc in Food & Nutrition Security at SU.



From left to right: Kim Mannix, Iksha Bhowen and Jana Schreuder



Anuga 2023

Where Innovations take center stage and the future gets a flavourful touch!



OCTOBER 7-11 2023
COLOGNE, GERMANY



I attended the incredible Anuga Food Fair in Cologne, Germany from 7-11 October this year. Anuga is regarded as the world's leading trade fair for food and beverages, providing a complete overview of trends and themes (10 trade shows under one roof).



The Anuga Taste Innovation Show powered by Anuga HORIZON was definitely a highlight and very inspirational. This section of Anuga displays products selected by a panel of international expert journalists and market research analysts. The products are regarded as the most intriguing innovations from several submissions. This year 689 companies submitted over 2 200 ideas! The jury selected 68 products and concepts for the display, which excelled in terms of creativity, innovation, sustainability, and execution. The top 10 products stood out as particularly innovative and included an apricot kernel yogurt alternative from Austria (I found it tasted surprisingly good!).

On the Green Side sponsored my attendance ticket and in turn I assisted at their stall. It was an excellent opportunity to learn more about this outstanding South African plant based meat alternative and also taste similar products from the international role-players.

It was also a great opportunity to reconnect and network with South African and international attendees. Staying informed about international trends and innovation in the global food industry is essential for our Product Development module.



Every five to six years it is mandatory for departments to be externally evaluated as part of the Department of Higher Education and Training quality control. Previous evaluations took place in 1998, 2003, 2008, 2016 and due to Covid, again now in 2023.

The process involves the Department compiling a Self-evaluation Report which for this round covered the period from 2017 to 2022. This report looks at all aspects from undergraduate teaching to research outputs and funding to the curriculum and graduate attributes – pretty much everything.

An external panel then gets the opportunity to review the self-evaluation report, interview students and staff and familiarise themselves with the curriculum and all aspects of the Department. Thereafter they compile a report of commendations and recommendations.

This year the self-evaluation report was expertly compiled by Drs Jeannine Marais and Diane Rip, with support from the rest of the staff. The external evaluation panel consisted of Prof Bob Roberts, Head of the Department of Food Science, The Pennsylvania State University, USA; Prof Gyebi Doudu, Head of the Department of Consumer and Food Sciences, University of Pretoria and Dr Martin Dovey, former Innovation Director of Kerry and now private consultant with CACG. The panel visited the Department from the 27-29 November to conduct their Site Visit. The panel was generally very impressed with the self-evaluation report and the activities of the Department. We are currently awaiting the panel's final report.



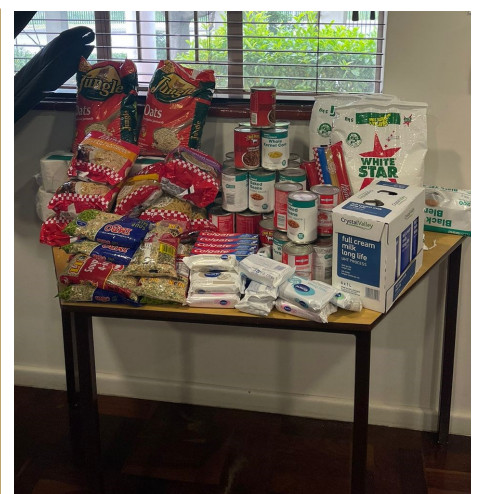
Photo from left to right: Dr Martin Dovey, Prof Bob Roberts, Prof Gunnar Sigge and Prof Gyebi Doudu



#move4food

Bridge the GAP

All proceeds of the annual Food Science dance went to support students in need.



Maricel Krügel, aka Dr K, saying goodbye after 7 years

Dr Maricel Krügel started at the Food science department in July 2016 and left the Department almost 7 years later, at the end of March 2023. She started out teaching first and fourth year modules, but eventually continued with only the fourth year module, New Product Development (NPD). With Product development, she always tried to be creative, different and relevant, always pushing innovation.

The Product development module has gained a lot of traction from industry in the last six years. Throughout the years Maricel built the curriculum and a lot of development in various aspects in NPD has been achieved. Various technical aspects such as ingredient and packaging regulations, budgeting, the use of electronic supplier and product development documents, online nutritional programmes, the purpose of and use of ingredients and the identification of the target market using the customer discovery process part of design thinking were introduced into NPD. In the later years, she also shifted the focus to the outcome of group work and soft skill development (e.g. communication and conflict management). Maricel decided to show students how to use their natural talents and strengths and how each student could use their natural talents to contribute to the team.

Maricel had a solid team of colleagues who contributed to the success of the NPD program. Over the years she managed to build good relationships with various companies that invested a lot of time and money into the Product development programme. In 2022 a record amount of people attended the NPD student presentation day and a total value of R115 500 prizes were donated towards the day.

The NPD themes from 2017 to 2023 were:

2017 *Profit rather than waste*. Each student group had to develop a product where value was added to food waste or the value engineering of co-products obtained from manufacturing, to enable sustainable food product production. Food products that were developed: gluten-free bread that mainly used carrots that could not be sold on the market due to aesthetics; brewing of a craft beer using bread waste; instant noodles made from

pumpkin and other vegetable waste; purple pretzels made using grape pomace waste; toffee manufactured using sweet whey waste; a baked snack that mainly consisted of spent coffee grounds and vegetable waste; and coffee flavoured yoghurt with flakes made from banana peels.

2018 *Local is Lekker*. Each student group had to address South African challenges by utilizing regional and sustainable sources to develop innovative food products. Food products that were developed: Lactose free Amasi-based ice cream; a smoke and chili flavoured fish spread made from locally and sustainably sourced catfish; bobotie flavoured sorghum and alfalfa-based baked snack; bean balls canned in a chakalaka sauce; a chakalaka sandwich slice made from Bambara nuts; and a breakfast cereal made from brewer's spent grain, butternut waste and wheat flour.

2019 *Protein gone wild*. Each NPD group had to develop a product by using alternative proteins. The students were not allowed to use meat, dairy or the more known protein sources. Examples of the food products that were developed: Dairy-free hemp and pea-based cream cheese; garlic and rosemary flavoured mushroom and legume-based tortilla style chip; vegan legume-based lactose-free dairy alternative snack; vegetable and legume-based instant soup concentrate; ginger and cinnamon sweet cookie spread that included black soldier fly larvae as the main protein source; and a vegan fava-bean and yeast-based savoury spread.



2020 Sustainability and affordability. Each NPD group had to address sustainable and affordable nutrition for the South African consumer. They had to clearly identify their South African target market. Products that were developed are: Chicken-flavoured gluten meat substitute strips in a chakalaka sauce with red kidney beans; savoury flavoured bean and vegetable corned meat substitute; and a vegan liquid egg alternative made from green mung bean and upcycled aquafaba.

2021 Geriatric Food: Each group had to develop a product targeting the aging population of 60 years and up. Design thinking was used during this process where students had to connect with their chosen target age group and solve a specific food or nutrition related problem for their potential customer.

2022 Food with a South African twist – An innovative twisting idea! In line with this theme each NPD group had to develop a product that showed an innovative approach to achieve the end result by either the ingredients used and / or the processing method. They again had to develop the product for the South African palate, and therefore had to clearly sketch a bio of their proposed target market within SA.

2023 Pantry Party – unnovate to innovate. In this theme the focus was to go back to doing things in a time-honoured way, in order to create authentic and meaningful value.

During all these years the students had to always ensure a scientific approach during all the phases of NPD, from talking to potential customers, gathering data and developing the food product. Maricel also worked closely with InnovUS and The LaunchLab to try and commercialise products.

Maricel conducted research projects supervising and co-supervising various MSc and a PhD students. She mostly worked on research projects in conjunction with the Food Industry and loved to be involved in a variety of research projects. She cherished the growth process of each student and usually ended up being friends once the student graduated.

Maricel was very interested in curriculum development and Teaching and Learning. She successfully and with merit completed the Scholarship of Educational Leadership at the University as a representative of the AgriSciences Faculty. She adopted many of the skills she learned there in her Food Science research. She was also invited to teach online for a semester at KU Leuven University in Belgium. In between all this, Maricel found time to say yes to the radio interviews she was invited to do over the years. She loved to travel and presented at various international and national conferences over the years. Her guilty pleasure was to collect perfumes and shoes from all over the world!

Maricel said that she enjoyed every minute of her journey at the Department of Food Science. She resigned with a heavy but happy heart and will cherish her time there forever. Each colleague will have a special place in her heart forever, especially the NPD team. It was a privilege to have Maricel as part of our team for almost seven years. She made a huge contribution in developing NPD with such passion, and we will always remember her fondly. The Krügel family is now on their next journey living and working in Saskatchewan, Canada.



International Conference on near-infrared (NIR) spectroscopy: Prof Marena Manley, Dr Paul Williams and Food Science postgraduate students



The International Conference on NIR spectroscopy series is known as the world's leading biannual conference on this fast growing technology. PhD student, Rumbidzai Matenda and MSc students, Mia Schutte and Mari van Wyk had the opportunity to attend NIR 2023 in Innsbruck, Austria from 20 to 24 August 2023, accompanied by their supervisors, Dr Paul Williams and Prof Marena Manley. The students were each awarded an ICNIRS John Shenk Travel Grant of 1000 Euros.

Rumbidzai presented a flash talk (*Differentiation of Listeria monocytogenes serotypes using NIR hyperspectral imaging*) while Mia (*ANOVA-simultaneous component analysis (ASCA) to characterise effect of temperature on FT-NIR spectral data of roasted wheat*) and Mari (*Sourdough FT-NIR spectra: effect of dough yield and flour type using ASCA*) presented posters. After attending the NIR2023 conference, Mia and Mari visited Prof. Federico Marini, a collaborator on both research projects, at the University of Rome "La Sapienza" in Rome. This research visit was funded by Stellenbosch University International office.

Dr Paul Williams presented an oral (*Approaching authenticity issues in processed meat products with hyperspectral imaging*; PhD – Kiah Edwards), a flash talk (*The use of Near Infrared Spectroscopy for the analysis of Fumonisin B1 dissolved in water and methanol*; PhD – Anja Laubscher) and a poster (*Early detection of mycotoxigenic fungi on maize using spectral imaging: considerations*; MSc – Kim Mannix) in collaboration with his students. Dr Williams currently serves on the Editorial Board of the Journal of NIR spectroscopy and completed his term on the ICNIRS President's Advisory Committee at NIR2023.



Photos left: Mari van Wyk, Rumbidzai Matenda, Mia Schutte, Prof Marena Manley and Dr Paul Williams



Prof Marena Manley and Dr Paul Williams

Prof Marena Manley with Rumbi, Mia & Mari at the poster presentations



The SU team with Extraordinary Professors Glen Fox and Federico Marini, photo below, right

The John Shenk Travel Grant recipient with Dr Peter Tillman of the ICNIRS Committee (photo below, right)



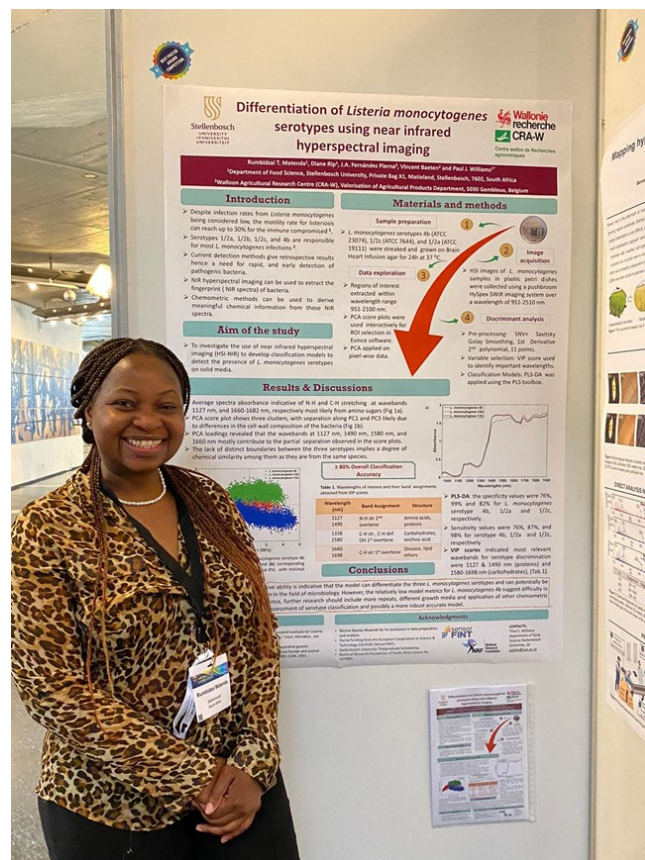
Adventures in Europe: *Listeria* 'chronicles

The fight against food pathogens is an unending one and 2023 was yet another year where I had the opportunity to travel to Europe in a bid to fight the war one sensor at a time. At the end of July 2023, I travelled to the Walloon Agricultural Research Centre (CRA-W), Gembloux, Belgium for a short-term scientific mission under the SensorFint cost action CA1945. It was a pleasure working with renowned chemometricians and experts of hyperspectral imaging. The visit was very enlightening as I gained a deeper understanding of the data analysis techniques used in applied chemistry and related fields.

Following my enriching experience in Belgium, I had the opportunity to attend the 21st International Conference on Near Infrared Spectroscopy (NIR2023) held between 20-24th August in Innsbruck, Austria. I had the honour of delivering both an oral presentation and a poster presentation on the detection of *Listeria monocytogenes* using hyperspectral imaging. This experience allowed me to connect with fellow researchers and experts from around the world. The exchange of ideas and the vibrant discussions that followed were truly inspiring. I also had the chance to learn about the latest developments and breakthroughs in various scientific fields, broadening my horizons and expanding my knowledge base.

All these would not have been possible without the financial support of the Department of Science and Innovation (SA) and Stellenbosch University post graduate office to whom I am incredibly grateful.

Science is a collective endeavour, and through such experiences, we collectively advance our understanding and make strides in improving our world. I look forward to further opportunities to learn, grow, and contribute to the ever-evolving field of science.



Rumbidzai in front of her poster at the NIR2023 conference



In a remarkable fusion of expertise and culture, August 2023 marked a significant milestone for the Department's Sensory Research Facility colleagues, Dr Erika Moelich and Dr Brigitte du Preez, specialising in the sensory analysis of indigenous SA herbal teas, amongst others, the two sensory scientists embarked on an enlightening journey to the Food Innovation Centre at the University of Oregon State, Portland. Their mission? To replicate and expand upon a comprehensive sensory consumer study initially conducted in SA, to a diverse American palate.

Novel Sensory and Consumer Research on Honeybush Tea

The first consumer study, and specifically the first cross-cultural consumer study on honeybush tea using sensory analysis techniques, was conducted. The study formed part of an Agricultural Research Council project in which different honeybush species were tested. Honeybush batches processed at two different conditions were tested: traditional high temperature oxidation, and novel ultra-high temperature oxidation under high pressure.

The study consisted of four research phases: 1) *Descriptive Sensory Analysis* by a trained panel to obtain the full sensory profile of the tea batches; 2) *On-line Consumer Survey* to determine consumers' overall perception of honeybush tea, and consumption and purchase patterns, 3) *SA Consumer Focus Group Sessions* to establish descriptive terminology and consumers' opinion of the tea batches, and 4) *SA and USA Consumer Analysis* to determine consumers' perception, preference and purchase intent.

Regular herbal tea drinkers were recruited for the *Consumer Analysis Research Phase*, and a total of 116 SA and 114 American consumers participated. This cross-cultural approach allowed for a more comprehensive analysis of consumer preferences, as it considered the diverse tastes and habits of herbal tea enthusiasts from both continents. USA is one of the major export markets of honeybush tea. Although the formal honeybush industry is still young compared to the established rooibos industry, honeybush has achieved a global presence contributing to the increasing market share for herbal and speciality teas.

A Meeting of Minds and Tastes

The Food Innovation Centre (FIC), a hub of culinary exploration and scientific inquiry, welcomed our scientists with open arms. They plunged into their project, working alongside American counterpart, Ann Colonna, to compare and contrast the sensory experiences of herbal tea consumers from two different continents. The set-up in Stellenbosch was identical to that in Portland: a sensory lab equipped with individual computerised tasting booths, controlled lighting, and temperature, all designed to ensure a neutral environment for unbiased feedback. All consumer responses were captured electronically using the industry-leading Canadian Compusense®20 software programme.

Ann Colonna, who serves as the Sensory Program Director at the FIC, assists industry clients with sensory and consumer testing and collaborates in research designed to advance the Pacific Northwest agriculture and food products. The FIC boasts an extensive consumer data base (more than 40 000 consumers) from which potential consumers are screened and recruited for specific consumer projects. Earlier this year, Ann Colonna visited South Africa for the International Society for Horticultural Science (ISHS) XIV International Pear Symposium at SU and has also presented her work as guest lecture to the Sensory Science Undergraduate Programme, Department of Food Science, SU.

Reflecting on a Successful Collaboration, bridging continents in Tea research

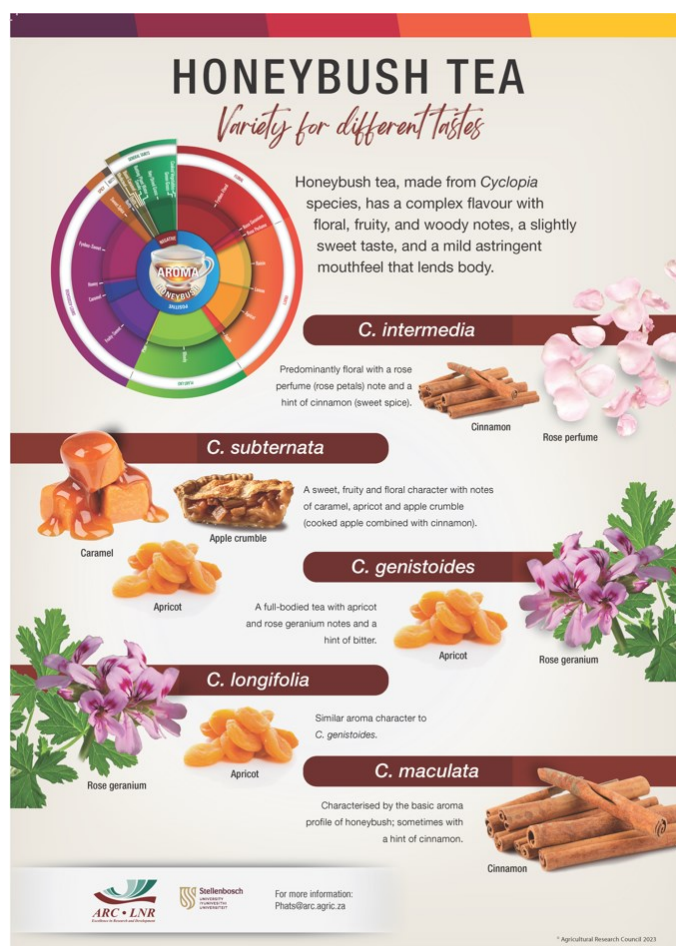
The visit was not only a scientific endeavor; it was a cultural exchange that enriched the understanding of global taste preferences, and also opened doors for future collaborations in food science. With more than 1600 cups of honeybush tea later, the data collected will contribute valuable insights to the global understanding of honeybush tea perception, potentially guiding future product developments and marketing strategies.

The study forms part of an extensive research project headed by Prof Lizette Joubert and Dr Cecilia Bester from ARC Infruitec-Nietvoorbij [[HONEYBUSH \(arc.agric.za\)](https://arc.agric.za/)]. Most recent publications on honeybush include:

Mabizela, G.S., Du Preez B.V.P., Human, C., Muller, M., De Beer, B., Van der Rijst, M., Slabbert, M.M., Bester, C., Joubert, E. (2022). A balancing act – Optimising harvest season of *Cyclopia genistoides* (honeybush tea) for enhanced phenolic content and acceptable sensory profile. *Journal of Food Composition and Analysis*, 110, 104583 <https://doi.org/10.1016/j.jfca.2022.104583>

Olayoku, F.R., Verhoog, N.J.D. & Louw, A. (2023). *Cyclopia* extracts act as selective estrogen receptor subtype downregulators in estrogen receptor positive breast cancer cell lines: Comparison to standard of care breast cancer endocrine therapies and a selective estrogen receptor agonist and antagonist. *Frontiers in Pharmacology*. <https://doi.org/10.3389/fphar.2023.1122031>

Joubert, E., Petrus, A., Du Preez, B.V.P., Human, H., Muller, M., Van der Rijst, M., De Beer, D., & Moelich, E.I. (2022). Pre-oxidation drying of *Cyclopia* plant material to eliminate a bottleneck in conventional manufacture of traditional honeybush tea – impact on infusion quality, *Applied Food Research*, Volume 2, Issue 2, 100182, <https://doi.org/10.1016/j.afres.2022.100182>.



Honeybush tasting notes of the major honeybush species were recently published on request of honeybush industry partners. The tasting notes were based on honeybush sensory data at SU in collaboration with ARC Infruitec-Nietvoorbij, and may be used as marketing tool and on tea packaging to enhance consumer awareness on the sensory profile of honeybush.



Honeybush infusions were prepared in the Test Kitchen and served in the Sensory Lab at the Food Innovation Center, OSU, Portland. From left to right, Ann Colonna, Brigitte du Preez and Erika Moelich.



This international partnership promised not only scientific discovery but also a chance to explore the vibrant food scene of Portland and surrounds, including the Portland Farmers' Market, Multnomah Falls, and Cannon Beach



Dr Erika Moelich and Dr Brigitte du Preez from the Sensory Research Facility presented a total of seven Rooibos Sensory Workshop sessions to four major rooibos tea processing companies in 2023. Delegates were trained in the rooibos sensory lexicon and sensory quality control of rooibos production batches. Each delegate received a copy of the '*Rooibos Sensory Lexicon – An Illustrated Guide*' which was developed by ARC Infruitec-Nietvoorbij and SU.

Exploring Collaborations in Nairobi – May 28 to June 1, 2023

Dr PJ Williams

Join me on a journey as I share the tales of my recent academic escapades, a whirlwind of discovery and collaboration that has taken me to fascinating corners of the academic world.

I am thrilled to share the highlights from my recent journey to Nairobi, Kenya, spanning from May 28 to June 1, 2023. The primary goal was to establish and re-establish collaborations between Stellenbosch University (SU) and key universities in the region. As part of the SU delegation, we engaged with esteemed academic institutions, including:

- Jomo Kenyatta University of Agriculture and Technology (JKUAT)
- Kenyatta University
- University of Nairobi

These discussions set the stage for potential collaborative projects, strengthening the bonds between SU and these esteemed institutions in Nairobi.



Dr Paul Williams, Mr Sebastian Orth as part of the SU delegation to Kenya

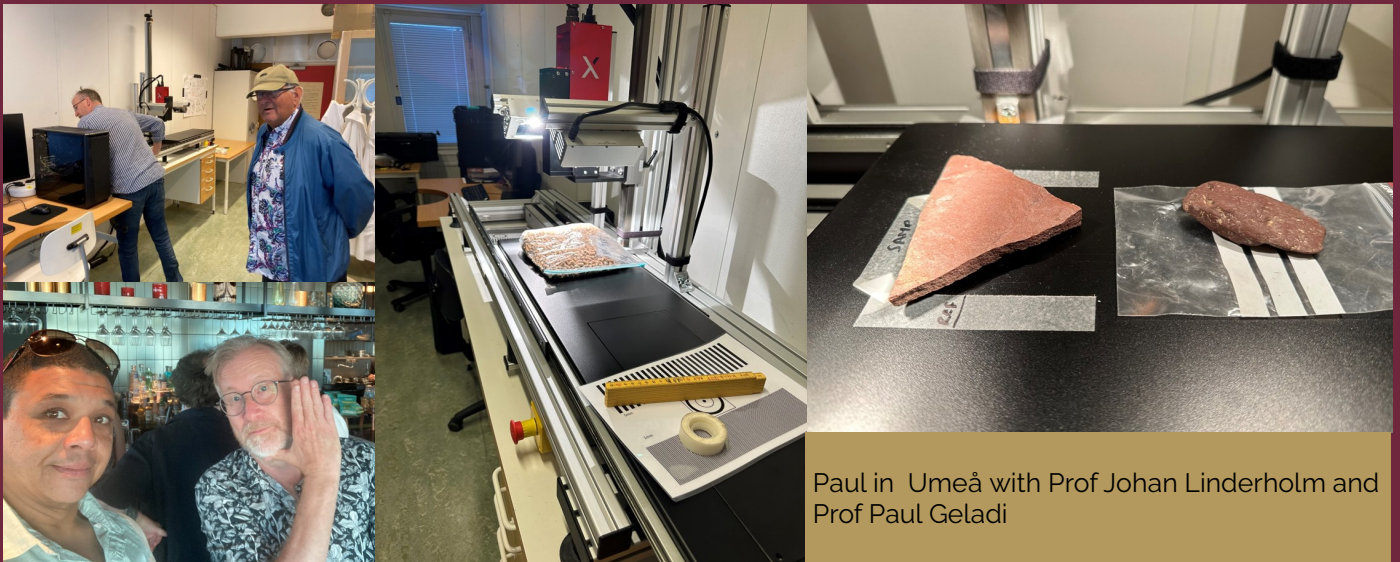
In the lab with Dr Irene Orina (Stellenbosch University graduate) and Dr Elizabeth Wafula from JKUAT



Umeå University, Sweden: Where I Got Hit by Stone Age Stones, Modern Saw Dust, and the Wonders of Imaging Spectroscopy, 8 - 28 June, 2023

In June, I embarked on a research visit to Umeå, Sweden, immersing myself in collaboration with Prof Johan Linderholm at the Environmental Archaeology Laboratory, Umeå University. Highlights of the visit included:

- Training on the field-based HySpex NIR-camera system
- Exploring applications of spectroscopy and hyperspectral imaging in archaeology
- Collaborations with Prof Paul Geladi and Dr Michael Finnel on hyperspectral imaging of wood pellets
- Adventures in hyperspectral imaging of rocks, red ochre stone, and sediments with Prof Linderholm



Paul in Umeå with Prof Johan Linderholm and Prof Paul Geladi

Research Visit to Nottingham Trent University – October 31, 2023, to January 3, 2024

In my latest adventure, I find myself at Nottingham Trent University (NTU), delving into physics in Prof Robert Morris's lab as part of SucChaQuality, a Horizon-MSCA-RISE funded project (2021-2024), where SU is one of 11 partners. During this visit:

I am receiving training in NMR and MRI techniques

We initiated and commenced the "MR-Braai" project, dedicated to monitoring and visualizing meat cooking with MRI (Who knew meat cooking would meet MRI in the name of science?)

I have the ambitious goal of implementing NMR and MRI techniques into my research at the Department of Food Science.



#I4GDatacampScholarship 2023: A Proud Achievement

Breaking away from the global escapades, I am thrilled to announce the achievement of the Ingressive For Good scholarship (#I4GDatacampScholarship 2023). This scholarship paved the way for an enlightening online data science course with Python on the Data Camp platform for which I have earned certification as an Associate Data Scientist. The journey included conquering two challenging online exams and a rigorous practical examination.



Meat at the Heart of Tradition

Dr J Marais

Picture this: a delectable medley of pasta, bread, cheese, and savoury cured meats – a tantalizing array that epitomizes Italy's renowned culinary treasures.

I was fortunate to participate in the 69th *International Congress of Meat Science and Technology* (ICoMST; 20-25 August 2023) hosted by the University of Padova, Italy. August in Padova usually sees temperatures between 20-31°C, however, this year the European summer was amplified with temperatures rising close to 40°C. If the surplus of cured meats from the sponsor didn't leave you parched, the hot weather certainly did.

Given my research focus on sensory evaluation of food products, particularly centred on meat and meat alternatives, I was thrilled to participate in the 69th ICoMST. This yearly gathering brings together experts, researchers, academics, and industry professionals from around the globe to share and deliberate on the most recent advancements and research in Meat Science and Technology. The Congress typically covers a wide range of topics, and the 2023 program featured discussions on *Muscle Biology and Biochemistry*, *Meat Safety*, *Traditional Meat Products*, *Innovation in Meat Processing*, *Meat Alternatives*, and *Meat and Health*.

The ICoMST typically spans from Sunday (for registration and welcoming) to Friday, including a Technical and Scenic Tour on Wednesday. I participated in Tour 2, which entailed a visit to a dry-cured ham factory (Consorzio del Prosciutto di San Daniele) in the morning and a wine cellar (Vigneti Pittaro) in the afternoon. The experience at these authentic Italian locations was exceptional. The process of producing dry-cured hams at San Daniele Ham left me speechless as it involves a centuries-old tradition, resulting in a delectable product that is aged for a maximum of 48 months. The hams' maturity is assessed by piercing them with a horse bone needle and evaluating the aromas. This bone can be repeatedly utilised due to its rapid absorption and release of scents.

I am thankful for the enriching experience. Attendance of international congresses and conferences is of utmost importance for academics, enabling the exchange of knowledge. In addition, this experience provided fresh perspectives on research advancements and afforded me the opportunity to network with global stakeholders in the field of Meat Science and Technology.



Dr Jeannine Marais (from the Department of Food Science, SU) and Prof Phillip Strydom (from the Department of Animal Sciences, SU) during the poster presentation of our jointly supervised project's work.

Inside the maturation room of the dry-cured ham factory (Consorzio del Prosciutto di San Daniele).

This picture of a meal at the BBQ Dinner event during ICoMST demonstrates that nobody leaves a Meat Science Congress feeling hungry.

Dr Debora van der Merwe's return to Food Science, SU

We are proud to announce that, Dr Debora van der Merwe (PhD Food Science) joined our team in July this year as lecturer. She is responsible for teaching the FS478 module New Product Development (NPD).

Her career in the food industry started at age four on the farm where she grew up. She spent most of her time with her father and grandfather, planting fruit trees or checking on livestock and vegetables and was inspired with her mother's innovative approach to food preparation. After school she took a gap year and worked in London before starting her studies in BSc Food Science at the University of Stellenbosch in 1999. During her postgraduate studies she taught at Stellenbosch University and at Cape Peninsula University of Technology (CPUT) and enjoyed working with students and being involved in the development of young minds.

Following her PhD, she worked at Food and Allergy Consulting and Testing Services (FACTS), consulting on labelling legislation and allergen control. She was involved in creating, hosting, and presenting several workshops and was also registered as a Voluntary Incidental Trace Allergen Labelling (VITAL) trainer with the Allergen Bureau (Australia). Having gained in-depth knowledge on scientific research of health aspects of food products, and knowing the restrictions in terms of legislation, product development was a logical next step. She joined Babylonstoren in 2017 and developed a seasonal, fresh-fruit-juice range using High Pressure Processing (HPP). Overseeing development and launching the non-alcoholic Aperitif, bitter*lekker* in 2019 was a big highlight. She was also involved in hosting and presenting workshops and Facebook live talks and later worked as part of the product development and marketing teams, overseeing the complete food range and food campaigns at Babylonstoren. The benefits of seasonal eating, when considering sustainability and health, fit in with a long-time passion for healthy living.

Throughout her career in the food industry, she presented many guest lectures and invited talks and stayed involved with the Department of Food Science through acting as NPD judge, external examiner and invited guest lecturer for the NPD course. While at Babylonstoren she collaborated with the University of Stellenbosch and developed and launched a fresh almond milk for Babylonstoren, as part of a master's degree project in Food Science with Prof Gouws as the main study-leader.

As mentoring and teaching remained an essential part of her work throughout her career, she mostly had an intern or student doing holiday work on her heels. The opportunity to lecture at the Food Science Department combines her passion for innovation, NPD and teaching.

Watch this space... interesting developments to come.





Achievements at SAAFoST

Many students, including those from the Department of Food Science, presented at the South African Association for Food Science and Technology (SAAFoST) 25th Biennial Congress, hosted at the Cape Town International Convention Centre, 28-30 August 2023.

Two students received awards for their research offerings. PhD student, **Kyle Corbett**, received the Guido Dreosti Award for best oral. He presented work on *Listeria monocytogenes* lineage I prevalence in food factories and addressed sanitizer resistance. MSc student, **Karlene Lambrechts**, received the Lazar Ginsburg award for the best poster. She presented work on 'Genetic diversity of *Listeria monocytogenes* from the fish industry in the Western Cape, South Africa using whole genome sequencing.' The table below highlights the poster and oral offerings per student in the Department of Food Science.



Winners at SAAFoST: Left: Karlene Lambrechts (Lazar Ginsburg award for the best poster), middle: Dr Diane Rip (research supervisor), right: Kyle Corbett (Guido Dreosti Award for best oral).

Posters

Denise Coetzee (MSc): Prof P Gouws supervisor, Dr D Rip co-supervisor

Novel and emerging foodborne bacteria identified in commercial South African ready-to-eat leafy greens while screening for *Listeria monocytogenes* and *Salmonella* species.

Tarien Riekert (MSc): Prof P Gouws supervisor, Dr D Rip co-supervisor

Detection of *Salmonella* throughout a South African poultry slaughter facility

Margot Küster (MSc): Prof G Sigge supervisor, Drs C Lamprecht & D Rip co-supervisors

Investigating the presence of Antibiotic Resistant Bacteria (ARB) in Ultraviolet (UV)-Treated River Water used for fresh produce irrigation

Nicole Meyer (MSc): Prof P Gouws supervisor, Dr M Krügel co-supervisor

The prevalence of foodborne pathogens in retail delicatessens from South Africa

Karlene Lambrechts (MSc): Dr D Rip supervisor, Prof P Gouws co-supervisor

Genetic diversity of *Listeria monocytogenes* from the fish industry in the Western Cape, South Africa using whole genome sequencing. **Karlene was the winner in the Poster category.**

Orals

Kyle Corbett (PhD): Prof P Gouws supervisor, Dr D Rip co-supervisor

Listeria monocytogenes Lineage Type I: The dominant type in two ready-to-eat food factories absence of certain sanitiser resistance genes. **Kyle was the winner in the oral category.**

Christina Enslin (MSc): Prof P Gouws supervisor, Drs M Krügel & D van der Merwe co-supervisors, Dr J Marais, collaborator

Development of a clean label, nutritious and safe ready-to-drink high pressure processed almond milk for the South African market.



Two board members representing SU at IFT FIRST 2023



Prof Gunnar Sigge and Jana Schreuder set flight to Chicago, Illinois in the United States of America on 13 July, where they were welcomed as board members of the IFT and IFT Student Association at the Institute of Food Technologists' annual event and expo, IFT FIRST. IFT is a not-for-profit scientific society that provides high-quality, relevant, and essential education to food industry professionals from around the world. IFT FIRST attracts more than 17 000 attendees from food companies, universities, research centres, government, and related industries annually.

It is the second year that Prof Sigge is representing Stellenbosch University's Food Science Department on IFT's Board of Directors, and he will continue his work as the only South African member in this prestigious leadership position until September 2024. Most recently, Prof Sigge was also appointed as the 2023/24 Chairperson-elect for the International Division of IFT and will Chair the International Division in 2025. Prof Sigge's highlight of this year's IFT FIRST event was the networking opportunities, the interaction with the IFT student association and a keynote titled "Embedding Innovation into Everyone's DNA" by Duncan Wardle, former Head of Innovation and Creativity at Disney.

While in Chicago in July, Jana was an incoming member of the student association's Board of Directors and officially took office on 1 September 2023. She was invited to attend her first FIRST and shadow the current Board Members in preparation for her term. She is currently the only non-US residing member of the student board and was elected to the Board as part of a strategic initiative to help steer the organisation to become more prominent internationally. It was Jana's first trip to the USA and she reported that it was a surreal experience to meet so many influential food science professionals from around the globe. She explains that in 2018, Prof Sigge presented a video of what it was like to work as a food scientist at NASA at the Food Science Open Day presentation she attended. After watching the video, she was convinced that she wanted to become a food scientist. Five years later, after returning from Chicago she was extremely excited to report that while attending IFT FIRST, she was lucky enough to make the acquaintance of both Vicky Kloeris and Michelle Perchonok, two retired NASA food scientists, and two of the people that appeared in said video.

Prof Sigge and Jana are excited to be serving in their respective positions within IFT for the 2023/2024 leadership term and Jana expressed her gratitude towards the Institute of Food Technologists for funding her IFT FIRST experience.



IN MEMORIUM



Dawie Basson

11 October 1940 – 22 September 2023

Dawie Basson(right) with Prof Trevor Britz, 2013

This year we had to say farewell to one of the stalwarts of the Food Science department, when Dawie Basson passed away at the age of 82.

Dawie Basson enrolled for the degree in Food Science in 1959, graduated with his BSc Food Science in 1962, his Honours in 1963 and his MSc in 1964 – all *cum laude*! Dawie stayed on at the Department and was promoted to Senior Lecturer in 1966. Dawie retired in 2000 after 36 years at the Department of Food Science.

Although he lectured cereal science and meat science modules, he was widely known for his work in the meat science discipline. He was particularly fondly remembered for his smoked chickens – which were an annual treat and busy time in the department. Dawie was well-versed in most aspects of food science and actively engaged in all spheres – even in wine-making.

Dawie played an important stabilising role in 1994-1995 as Acting Chairperson and was instrumental in supporting the rebuilding of the Department until his retirement at the end of 2000. Dawie will always be remembered for his quiet, wise, friendly and empathetic support of younger staff members.

Ashwin Arendse

In May we were shocked and saddened by the sudden passing of Ashwin. Although Ashwin worked at SU's, IT division, he was definitely part of the Food Science family through his wife, Megan. Those who didn't know Ashwin personally, still felt as if they did through Megan's stories. Our heartfelt condolences to Megan, their two boys, Micah and Angelo as well as the rest of the Arendse family. Photo left: Ashwin, Megan and their kids.

Pholisa Dumalisile

In March 2023, Pholisa Dumalisile, PhD graduate passed away, merely two years after her graduation in 2021.

Pholisa worked at Pepsico, as part of the SQA team at the time. Our condolences to her family.

Photo right: Pholisa at her graduation ceremony in 2021.



December 2023 Graduation





Bachelors of Science in Food Science

Bhore, Zaakirah

Blignaut, Anja

Boshoff, Yvette (*cum laude*)

Carter, Megan Maré

Clouston, Arabella Shenley

Dellar, Kelsey Paige (*cum laude*)

Doms, Christopher

Du Toit, Tanja

Duval, Chloe Christie

Engelbrecht, Elma

Erasmus, Anje Raen

Haines, Hannah Grace (*cum laude*)

Havenga, Lara

Hildebrandt, Courtney Lee

Joubert, Jeanne Irene

Kemp, Anike

Loggie, Hannah Rose

Mukuwane, Nqobile Anesu Tendai

Niemandt, Jozanne

Olivier, Ilke

Oosthuizen, Marla Malani

Opperman, Lara

Otto, Jaco

Peoples, Jenna Alexandra

Rabie, Tristan Michael

Roth, Zan-Mari

Roux, Amy

Roux, Jolida

Sass, Clio

Scott, Kayla

Sequeira, Alicia Dos Santos

Theunissen, Lize (*cum laude*)

Van Niekerk, Nadia

Van Rooyen, Dane

Verreynne, Carli

Ward, Katherine Helena

Masters of Science in Food Science

Coetzee, Denise (*cum laude*)

Enslin, Christina

Groenewald, Jadri

Lambrechts, Karlene (*cum laude*)







December 2023 Graduation



Dear Alumni & Friends of Food Science SU,

As we approach the end of 2023, we extend heartfelt wishes for a blessed season and a prosperous 2024 to each one of you.

We are immensely grateful for your interest and support throughout the year. Our success is a testament to the collaborative efforts of our remarkable students and the dedicated staff, who work seamlessly together under the kind guidance of our Head of Department, Prof Gunnar Sigge.

Our students and staff consistently make us proud, providing us with compelling reasons to celebrate and share their achievements. As I compiled this newsletter, it brought me great joy to witness the collective efforts that made it possible. A special expression of gratitude goes to Petro Du Buisson for her exceptional care and assistance.

May the holiday season bring you peace and joy.

Kind regard

Anchen Lombard

Food Science, Stellenbosch University