

**SHEKU ALFRED KANU
CURRICULUM VITAE**

1. BIOGRAPHICAL SKETCH

1.1 GENERAL INFORMATION

Surname	Kanu					
First names	Sheku Alfred			ID Number	8276845	
Citizenship	Sierra Leonean			Title	Dr.	Female
						Male
						X
Place of birth	Sierra Leone			Date of birth	5 September 1966	
Population group	African	X	Coloured		Indian	
					White	Other (Please specify)
Department	Department of Crop Science, School of Agriculture and Food Sciences, Njala University, Campus			Position	Lecturer !	
Direct Telephone	+ 232 78473400/ +232 34508912			Skype	popfred.kanu	
E-mail	Kanu.popfred@gmail.com					
Date of appointment	25 October 2020			Permanent full-time		Temporary full-time
						X

1.2 ACADEMIC QUALIFICATIONS OBTAINED

Degree/Diploma	Field of study	Higher education institution	Year	Distinctions
D. Tech (PhD)	Agriculture	Tshwane University of Technology (TUT)	2012	None
M. Tech	Agriculture	Cape Peninsula University of Technology (CPUT)	2005	Upgraded
Adv. Dip.	Computer applications (Word, Excel, Powerpoint & Access)	Candid Computer College	2002	None
B. Sc (Hons)	Zoology	Fourah Bay College, University of Sierra Leone (USL)	1993	Honours
G.C.E 'A' Level	Certificate	Sierra Leone Grammar School, Freetown, Sierra Leone	1987	None
G.C.E 'O' Level	Certificate	W.A.M Collegiate School, Freetown, Sierra Leone	1984	One (Biology)

1.3 WORK EXPERIENCE TO DATE		
Name of employer	Capacity and/or type of work	Period From mm//yy to mm//yy
Njala University (NU)	Lecturer 1	Oct. 2019- present
Public & Private	Consultant	May 2017- Present
University of South Africa (UNISA)	Research Fellow & Academic Associate	May 2018 – May 2021
University of South Africa (UNISA)	Postdoctoral Researcher	May 2017-April 2018
University of South Africa (UNISA)	Senior Lecturer	March 2016-April 2017
University of South Africa (UNISA)	Postdoctoral Researcher	January 2015-February 2016
Tshwane University of Technology (TUT)	Postdoctoral Fellow/Lecturer	July 2012- July 2014
Tshwane University of Technology. (TUT)	Part-Time Laboratory Assistant	July 2011-December 2011
University of Cape Town (UCT)	Demonstrator/Tutor	June 2004-December 2005
University of Botswana (UB), Gaborone, Botswana.	Demonstrator/Teaching Assistant	September 1999-June 2002
Njala University College, University of Sierra Leone, Tower Hill, Freetown, Sierra Leone.	Teaching Assistant	Jan. 1996 –Feb. 1999

2. TEACHING ACTIVITIES

2.1 Courses presented		
Course	Level (e.g. second year, Masters)	Self-developed (Yes or No)
Post-Harvest Physiology (COS 616)	Masters	Yes
Research Methods (SAF 712/812)	Masters & PhD	No
Scientific Writing (SAF 713/813)	Masters & PhD	No
Statistical Methods (SAF 714/814)	Masters & PhD	No
Plant Nutrition (COS 614)	Masters	No
Post-Harvest Losses in Fruits and Vegetables (COS 327)	Honours/final year	Yes
Crop Production II	Third year	Yes
Crop Production III	Third year	Yes
Fruit Production I	Third year	No
Green Chemistry	B. Tech/Hons	No
Waste Management	B. Tech/Hons	No
Biology 101 (BIO101)	First year	No
Biology 202 (BIO202)	Second Year	No

2.2 Other education and pedagogic courses presented		
Course	Year	Institution

Agricultural Genetics	2017	Association of South African Agricultural Education
Data Analysis	2017	University of South Africa
Principal Component Analysis	2015	University of South Africa

3 CONSULTANCY OUTPUTS

3.1 Project and consultancy reports

1. Technical Consultant for the Needs Assessment Survey of Medical Laboratory Services for Investment Purposes. The Survey covered 8 Districts including the top three big cities in Sierra Leone in 2023.
2. Technical Consultant for Need Assessment Survey on the Challenges facing SME's and Farming Groups in Koinadugu District, Northern Sierra Leone. In 2022, EGC in Partnership with Grant Proposal Consulting Firm undertook a study of challenges affecting the SME's and Farming Groups in Koinadugu District.
3. Technical Consultant for the Market Research on Self Employment in Kono District of Sierra Leone. In 2021, the Consultancy was undertaken to provide a market research information on self-employment in Kono district to provide the underlining data for the TVET program implemented by Government Technical Institute in Kono.
4. Local Consultant in "Environmental and Social Impact Assessment for Cocoa Garden Establishment" organized by Lizard Earth. Sierra Leone. I worked with Five (5) international consultants from the Netherlands and the final report was published in 2022.
5. Consultant for "Urban Agriculture Support Project", a community engagement joint project between the City of Johannesburg and Afrika Tikkun together with the University of South in Diepsloot, Johannesburg, South Africa. The objective was to train youths in the production of vegetables in back yard gardens and this two-year project was completed in 2018.
6. Consultant for the development of course contents for Crop Production (II&III) modules for the department of Agriculture and Animal Health, School of Agriculture and Environmental Sciences, University of South Africa in 2018.

4 RESEARCH ACTIVITIES

4.1 Student Supervised to completion

Degree Programme	No of Students	Supervisor	Institution	Date completed
PhD. Agriculture	Three (3)	Dr SA Kanu	UNISA	2023
MSc. Agriculture	Five (5) Six (6)	Dr SA Kanu	UNISA NU	2018-2021 2021-2022
B Tech. Agricultural Managment (Honours)	Two (2)	Dr SA Kanu	UNISA	2015
B. Tech. Environmental Science		Dr SA Kanu	TUT	2014

5 RESEARCH OUTPUTS

5.1 Publications in peer-reviewed or refereed journals

- Udeh, E.L., Ngmenzuma, T.Y., Maseko, S.T., Nyila. M.A., **Kanu, S.A.**, and Mohale, K.C. (2023). Gas exchange and carbon assimilation of Bambara groundnut landraces co-inoculated with *Bradyrhizobium japonicum* and *Bacillus subtilis* under simulated drought stress. *Scientific African*, 21:e01823.
- Turay B.S., Bah A.M., Amara D.M.K., Kallon V.I., and **Kanu S.A.** (2022). Germination, growth and yield responses of eggplant and okra grown on anthill and termite mound soils. *Biology and Life Science Forum*, 16, 13. <https://doi.org/10.3390/IECHo2022-12496>.
- Payazi A.M., **Kanu S.A.** and Muedi H.T.H. (2022) Dry Bean Anthracnose *Colletotrichum lindemuthianum* Pathogenic Variability in South Africa. *African Journal of Food, Agriculture, Nutrition and Development*, 22(5): 20415-20425. <https://doi.org/10.18697/ajfand.110.20665>
- Ogugua, U.V., Kanu, S.A. and Ntushelo, K., (2022). Gibberellic acid improves growth and reduces heavy metal accumulation: A case study in tomato (*Solanum Lycopersicum* L.) Cultivar (Heinz 1370) Seedlings Exposed to Acid Mine Water. *Heliyon*. <https://ssrn.com/abstract=4156279> or <http://dx.doi.org/10.2139/ssrn.4156279>.
- Udoka, O., Kalu, C.M., **Kanu, S.A.** and Ntushelo, K., (2021). Growth stimulation and yield enhancement of the tomato cultivar Heinz 1370 by *Bacillus subtilis* (strain BD233) under glasshouse conditions. *Academia Letters*, p.2
- Nevhulaudzi T., Ntushelo K. and **Kanu S.A.** (2020). Interaction effect of *Bacillus subtilis* inoculation and acid mine water irrigation on cowpea's growth, physiology and nutritional quality. *Scientific African*, 9: e00541. <https://doi.org/10.1016/i.sciaf.2020.e00541>
- Nevhulaudzi T., Ntushelo K. and **Kanu S.A.** (2020). Growth and nutritional responses of cowpea (cv. Soronko) to short-term elevated temperature. *HortSci. Journal*, 55(9):1455-1499. <https://doi.org/10.21273/HORTSCI15132-20>.
- Udeh E.L., Nyila M.A. and Kanu S.A. (2020). Nutraceutical and antimicrobial potentials of Bambara groundnut (*vigna subterranean*): a review. *Heliyon* e05205. <https://doi.org/10.1016/j.heliyon.2020.e05205>
- Mndzebele B., Ncube B., Nyathi M., **Kanu, S.A.**, Fessehazion M., Amoo S.O., Mabhaudhi T., and Modi, A. (2020) Nitrogen fixation and nutritional yield of cowpea-amaranth intercrop. *Agronomy*, 10:565-580. DOI: 10.3390/agronomy10040565.
- Theka-Kutumela, M.P., **Kanu, S.A.**, Araya H.T., Sedibe, M.M., and Mudau, F.N. (2020). Physiological and phytochemical responses of baby spinach (*Spinacia oleracea* L.) cultivars to combined NPKS nutrition and *Bacillus subtilis* BD233 inoculation using LC-MS. *Applied Ecology and Environmental Research*, 18(2):2129-2140.

- Tshikhudo, P.P., Ntushelo, K., **Kanu, S.A.** and Mudau, F.N. (2019) Influence of ecological parameters on growth of bush tea (*Athrixia phylocoides* DC.) in Limpopo province, South Africa. *Applied Ecology and Environmental Research*, 18(3):4167-4177.
- Tshikhudo P.P., Ntushelo K., **Kanu S.A.**, and Mudau F.N. (2019) Growth response of bush tea (*Athrixia phylocoides* DC.) to climate conditions in Limpopo province, South Africa. *South African Journal of Botany*, 121:500-504.
- **Kanu S.A.** and Dakora F.D. (2018). Effect of lumichrome on seed germination of four legumes and three non-leguminous crops. *Acta Horticulturae*, 1204: 101-110. DOI: 10.17660/ActaHortic.2018.1204.13. <https://doi.org/10.17660/ActaHortic.2018.1204.13>.
- Ogugua U.V., Ntushelo K., Makungu M.C. and **Kanu S.A.** (2018). Effect of *Bacillus subtilis* BD233 on seedlings growth of sweet pepper (*Capsicum annuum*), Swiss chard (*Beta vulgaris*) and lettuce (*Lactuca sativa*). *Acta Horticulturae*, 1204: 201-210. DOI: 10.17660/ActaHortic.2018.1204.26. <https://doi.org/10.17660/ActaHortic.2018.1204.26>.
- Mathiba M.T., Reddy V.S.G., Ntushelo K. and **Kanu S.A.** (2017) Omics technologies as tool to understand environmental factors for okra (*Abelmoschus esculentus* L.) growth and adaptation. *South African Journal of Plant and Soil*, 1-7. DOI: 10.1080/02571862.2017.1335891.
- **Kanu S.A.**, et al. (The Legume Phylogeny Working Group (LPWG)) (2017) A new subfamily classification of the Leguminosae based on a taxonomically comprehensive phylogeny. *Taxon*, 66 (1): 44-77.
- Nemutanzhela M.V., Modise D.M., Siyoko K, J. and **Kanu S.A.** (2017) Assessment of growth, stomatal conductance and chlorophyll content of two potato cultivars under irrigation with Fly Ash-treated Acid Mine Drainage. *American Journal of Potato Research*, 94(1): 1-12.
- **Kanu S.A.** and Dakora F.D. (2015) Symbiotic functioning, structural adaptation and subcellular organization of root nodules from *Psoralea pinnata* (L.) plants grown naturally under wetland and upland conditions in the Cape Fynbos of South Africa. *Protoplasma*, 1-9. DOI 10.1007/s00709-015-0922-2 (<http://www.ncbi.nlm.nih.gov/pubmed/26669320>).
- Dakora F.D., Matiru V. and **Kanu S.A.** (2015) Rhizosphere ecology of lumichrome and riboflavin, two bacterial signal molecules eliciting developmental changes in plants. *Frontiers for Plant Science*, 6:700. doi: 10.3389/fpls.2015.00700.
- **Kanu S.A.**, Zvinowanda C., Moyo, M. and Okonkwo J.O. (2015) Biosorption of lead from aqueous solutions using Rooibos tea by-products. *Desalination and Water Treatment*, 1-9. doi: 10.1080/19443994.2015.1004116.
- **Kanu S.A.**, Khamlich, S., Moyo, M. and Okonkwo J.O. (2014) Adsorption of cadmium from aqueous solution using the natural adsorbent-Rooibos shoots. *Toxicological and Environmental Chemistry*, 96(10):1452-1462.
- Nevhulaudzi T., Kambewa C. and **Kanu S.A.** (2014) Water quality around the Sheba Mine: A case study of the Mlambomlwane River in Mpumalanga Province, South Africa. *Scholarly Journal of Scientific Research and Essay (SJSRE)*, 3(9):112-119.

- **Kanu S.A.**, Barnabas A.D., Przybylowicz W.J., Mesjasz-Przybylowicz J. and Dakora F.D. (2014) Elemental distribution in tissue components of N₂-fixing nodules of *Psoralea pinnata* plants growing naturally in wetland and upland conditions in the Cape Fynbos of South Africa. *Protoplasma*, 251(4):869-879, DOI 10.1007/s00709-013-0589-5.
- **Kanu S.A.**, Okonkwo O.J. and Dakora F.D. (2013) *Aspalathus liniaris* (Rooibos tea) as potential phytoremediation agent: A review on tolerance mechanisms for aluminium uptake. *Environmental Review*, 21: 85–92, dx.doi.org/10.1139/er-2012-0055.
- **Kanu S.A.** and Dakora F.D (2012) Symbiotic nitrogen contribution and biodiversity of root-nodule bacteria nodulating *Psoralea* species in the Cape Fynbos of South Africa. *Soil Biology and Biochemistry*, 54: 68-76.
- **Kanu S.A.** and Dakora F.D. (2012) Effects of N and P nutrition on extracellular secretion of lumichrome, riboflavin and indole acetic acid by N₂-fixing bacteria and endophytes isolated from *Psoralea* nodules. *Symbiosis*, 57:15-22.
- **Kanu S.** and Dakora F.D. (2009) Thin-layer chromatographic analysis of lumichrome, riboflavin and indole acetic acid in cell-free culture filtrate of *Psoralea* nodule bacteria grown at different pH, salinity and temperature regimes. *Symbiosis*, 48: 173-181.
- **Kanu S.**, Chimpango S.B.M., Sprent J.I. and Dakora F.D. (2008) African species belonging to the tribe Psoraleae produce ureides, a symbiotic trait characteristic of the Phaseoleae. In: *Biological Nitrogen Fixation: towards poverty alleviation through sustainable agriculture*. (Dakora F. D., Chimpango S. B. M., Valentine A. J., Elmerich C., & Newton W. E., eds), p 281. Springer, Netherlands.
- **Kanu S.**, Matiru V.N. and Dakora F.D. (2007) Strain and species differences in rhizobial secretion of lumichrome and riboflavin, measured using thin-layer chromatography. *Symbiosis*, 43: 37-43.
- Dakora F.D., **Kanu S.** and Matiru V.N. (2005) Ecological significance of lumichrome and riboflavin as signals in the rhizosphere of plants. In: *Biological Nitrogen Fixation, Sustainable Agriculture and the Environment* (Wang Y., Elmerich C., & Newton W. E., eds), p 253-256. Springer, Netherlands.

6.2 Submitted Research Articles

- Ogugua, U.V., Kanu, S.A. and Ntushelo, K., (2023). Relationship between different physiological processes of tomato seedlings exposed to acid mine water uncovered using correlation analysis. *Heliyon (In Press)*.
- Taulu, S. and Kanu, S.A. (2023). Factors affecting adoption of conservation agriculture in promoting sustainability and resilience to farm production: a case study of Livingstone district, southern Zambia. *African Journal of Science, Technology, Innovation and Development (In Press)*.
- Taulu, S. and Kanu, S.A. (2023). Smallholder farmers' perception of conservation agriculture as an innovative strategy to overcome climate change in southern Zambia. Submitted to the *Journal of International Agricultural Extension Education*.
- Nevhulaudzi T., Ntushelo K. and **Kanu S.A.** (2023) Seed germination indices of three cowpea genotypes exposed to *Bacillus subtilis* and elevated temperature. Submitted to the *Seed Science and Technology Journal*.

6.3 Published full-length conference papers/keynote addresses

- Ogugua U.V., Ntushelo K., Makungu M.C. and Kanu S.A. (2017) Effect of *Bacillus subtilis* BD233 on growth of Sweet pepper (*Capsicum annuum*), Swiss chard (*Beta vulgaris*) and Lettuce (*Lactuca sativa*). Acta Horticulturae.
- Kanu S.A. and Dakora F.D. (2017) Effect of lumichrome on seed germination of four Legumes and three non-leguminous crops. Acta Horticulturae.

6.4 Non-refereed publications or popular articles

- Makungu M.C., Agyepong A.O., Antwi M., Maake M.A., Masekoameng M.R., Mogoje B.L., Mohale K.C., Mthombeni D.L., Sehlakgwe P.F., Theka M.P., Madzhie L.R. and **Kanu S.A.** (2017). Food Resilience project within City of Johannesburg Metropole: An urban agriculture collaboration with the University of South Africa involving Family Farming. The fifth Annual Symposium of Community Engagement, Book of Abstract, P16. Vanderbijlpark, South Africa.
- Nevhulaudzi T., Ntushelo K. and **Kanu S.A.** (2017). Interactive effect of *Bacillus subtilis* and elevated temperature on seed germination of three cowpea cultivars. State of the World's Plants Symposium, Book of Abstract P24. Royal Botanic Gardens, Kew, United Kingdom.
- **Kanu S.A.** and Ntushelo, K. (2015) Interactive effects of *Bacillus subtilis* and seaweed (kelpak) on growth, secondary metabolites and yield of potato (*Solanum tuberosum* L.) under glasshouse conditions. Second Conference on Ecology of Soil Microorganism, Microbes as Important Drivers of Soil processes, Book of Abstract P153. Prague, Czech Republic.
- **Kanu S.A.** and Dakora F.D. (2010) N₂ fixation and biodiversity of the root-nodule bacteria nodulating *Psoralea* species in the Cape Fynbos of South Africa. International Symposium on Biological Nitrogen Fixation in Africa, Symposium Proceedings P37. Cape Town, South Africa.
- **Kanu S.A.**, Jaffer M., Mesjasz-Przybylowicz J., Przybylowicz W.J., Barnabas A.D. and Dakora F.D. (2010) A comparison of fixation methods for the studies of tissue ultrastructure and elemental distribution in *Psoralea pinnata* nodules. International Symposium on Biological Nitrogen Fixation in Africa, Symposium Proceedings P 79. Cape Town.

6.5 Patents

None

6.6 Technical reports

- Kanu S.A., Jaffer M, Bucher R.M., Mesjasz-Przybylowicz, J., Przybylowicz, W. and Dakora, F.D. (2009). Structural organization and elemental distribution in root nodules of *Psoralea pinnata* (L) by TEM and Micro-PIXE. A technical report presented at the Materials Research Department (MRD) Users Meeting, May 2009, iThemba LABS, Somerset West, Cape Town, South Africa.

- Kanu S., Jaffer M., Mesjasz-Przybylowicz J. and Dakora F.D. (2008). Structural organization of *Psoralea pinnata* root nodules using chemical and cryofixation/freeze-substitution, using Light Microscopy (LM) and Transmission Electron Microscopy (TEM). A technical report presented at the MRD Users Meeting, May 2008, iThemba LABS, Somerset West, Cape Town, South Africa.

6 OTHER SCHOLARLY RESEARCH-BASED CONTRIBUTIONS

7.1 Participation in conferences, workshops and short courses - specify type of contribution

Provide full details of participation in national and international. Conferences etc

7.1.1 National

- Makungu M.C., Agyepong A.O., Antwi M., Maake M.A., Masekoameng M.R., Mogoje B.L., Mohale K.C., Mthombeni D.L., Sehlakgwe P.F., Theka M.P., Madzhe L.R. and **Kanu S.A.** (2017). Food Resilience project within City of Johannesburg Metropole: An urban agriculture collaboration with University of South Africa involving Family Farming. A paper presented at the fifth Annual Symposium of Community Engagement. Vanderbijlpark, South Africa.
- **Kanu S.A.** and Dakora F.D. (2016) Effect of lumichrome on seed germination of four Legumes and three non-leguminous crops. A paper presented at the SEST 2016 Seed Indaba Africa on the 11-14 September 2016, at the University of Pretoria, Pretoria, South Africa.
- Nemitandani L, Mathiba, M. T., **Kanu, S.A.** and Ntushelo. K. (2016) The effect of boric acid on growth and yield of potato post-inoculation with *Pectobacterium carotovorum* subsp. *brasiliense*. Poster presented at the 2016 Combined Congress held on the 18-21 January 2016, at the Monte Bello Estate, Bloemfontein, South Africa.
- Nematswerani M., Mathiba M. T., **Kanu S. A.** and Ntushelo K. (2016) The growth and yield of potato post-inoculation with *Pectobacterium carotovorum* subsp. *brasiliense*. Poster presented at the 2016 Combined Congress held on the 18-21 January 2016, at the Monte Bello Estate, Bloemfontein, South Africa.
- **Kanu S.A.** and Ntushelo K. (2016) Effect of proportions of acid mine water and *Bacillus subtilis* on growth and yield of potato. Paper presented at the 2016 Combined Congress held on the 18-21 January 2016, at the Monte Bello Estate, Bloemfontein, South Africa.
- **Kanu S.A.** and Dakora F.D. (2016) Symbiotic performance of *Psoralea pinnata* (L.) grown under two contrasting habitats in the Cape Fynbos of South Africa. Paper presented at the 2016 Combined Congress held on the 18-21 January 2016, at the Monte Bello Estate, Bloemfontein, South Africa.
- **Kanu S.A.** and Okonkwo J.O. (2014) Rooibos tea by-product as biosorbent for Pb(II) removal from aqueous solutions. Paper presented at the 2014 Combined Congress, 20-23 January 2014, Rhodes University, Grahamstown, South Africa.

- **Kanu S.**, Chimphango S.B.M., Sprent J.I. and Dakora F.D. (2013) Re-classification of members of the Psoraleae in the tribe Phaseoleae. Paper presented at the 2013 Combined Congress, 21-24 January 2013, University of Kwa-Zulu Natal, Westville, Durban, South Africa.
- **Kanu S.A.**, Okonkwo O.J. and Dakora F.D. (2013) *Aspalathus linearis* (Rooibos tea) as potential phytoremediation agent: A review on aluminum tolerance mechanisms. Paper presented at the 6th International Legume Conference, 6-11 January 2013, University of Johannesburg, Johannesburg, South Africa.
- **Kanu S.A.** and Dakora F.D. (2012) Extracellular secretion of lumichrome, riboflavin and indole acetic acid by *Psoralea* nodule bacteria is altered by phosphorous and nitrogen nutrition. Paper presented at the 2012 Combined Congress, 16-19 January 2012, North West University, Potchefstroom, South Africa.
- **Kanu S.** and Dakora F.D. (2010) N₂ fixation and biodiversity of the root-nodule bacteria nodulating *Psoralea* species in the Cape Fynbos of South Africa. Paper presented at the International Symposium on Biological Nitrogen Fixation in Africa, 21-26 November 2010, Cape Town, South Africa.
- **Kanu S.A.**, Jaffer M., Barnabas A.D., Przybylowicz W. J., Mesjasz-Przybylowicz, J. and Dakora, F.D. (2010) A comparison of fixation methods for the studies of tissue ultrastructure and elemental distribution in *Psoralea pinnata* nodules. Paper presented at the International Symposium on Biological Nitrogen Fixation in Africa, 21-26 November 2010, Cape Town, South Africa.
- **Kanu S. A.**, Jaffer M., Barnabas A.D., Mesjasz-Przybylowicz J. and Dakora F.D. (2009). Internal structure of root nodules of *Psoralea pinnata* (L) from two contrasting habitats. Paper presented at the 47th Annual Conference of the Microscopy Society of Southern Africa (MSSA), 8–11 December 2009, University of KwaZulu-Natal, Durban, South Africa.
- **Kanu S.** and Dakora F.D. (2009) Thin-layer chromatographic analysis of lumichrome, in cell-free culture filtrate of *Psoralea* nodule bacteria in response to environmental factors. Paper presented at the Faculty of Science Research Day, 24 May 2009. Tshwane University of Technology, Pretoria, South Africa.
- **Kanu S.** and Dakora F.D. (2008) Effects of bacterial exposure to two pH levels in the synthesis and cellular release of lumichrome and riboflavin by isolates of *Psoralea* species. Paper presented at the Royal Society of South Africa Centenary Congress, 17-18 April 2008, Cape Town, South Africa.
- **Kanu S.**, Chimphango S B.M., Sprent J.I. and Dakora F.D (2007). African species belonging to the tribe Psoraleae produce ureides, a symbiotic trait characteristic of the Phaseoleae. A poster paper presented at the 15th International Congress on Nitrogen Fixation, 21 - 26 January 2007, Cape Town, South Africa.

Short courses

- 3-7 August 2015: SIMCA- Metabolomics workshop held at the University of Pretoria, Pretoria, South Africa.
- 17-19 September 2013: Generic research competency course: Presenting and Publishing R&I outcomes” held at the Pretoria Campus, Tshwane University of Technology, Pretoria, South Africa.

- 20-24 May 2013: Generic research competency course: “License to Supervise” held at the Pretoria Campus, Tshwane University of Technology, Pretoria, South Africa.
- 9-11 February 2009: Synchrotron Techniques in research course held at the Department of Science and Technology building, CSIR campus, Pretoria, South Africa.
- 29 May – 2 June 2006: Stable Light Isotope course held at the University of Cape Town, Rondebosch, Cape Town, South Africa.
- Jan - Dec 2002: Advanced Diploma in Computer Applications: Microsoft Word Processing, Excel, Access, Computer Maintenance and Programming (C++), Candid Computer College, Gaborone, Botswana.
- October 2002: A one-week course in Post-Harvest Pest Management held at the University of Botswana, Gaborone, Botswana.
- 1996-1997: One-year certificate course in Church Ministry and Administration, Bible Training College, Congo Cross, Freetown, Sierra Leone.
- May 1997: A one-week course on Reproductive Health Management, organised by United Nation Human Development Programme in Freetown, Sierra Leone.

Workshops

- 21-25 November 2016. Moderator Training Workshop: specific outcomes of the Unit Standard: 115759 Conduct Outcomes Based Assessment.
- 19-25 August 2016. Assessor Training Workshop: specific outcomes of the Unit Standard: 115753 Conduct Outcomes Based Assessment.
- 3-7 August 2015: SIMCA metabolomics data analysis workshop presented at the centre of bioinformatics and computational biology, University of Pretoria by Dr. Ruey-Ling Loo and Mr. Torben Kimhofer from Imperial College, London, UK.
- 6-7 December 2009: A two-day Phil Robinson's Light Microscopy Course/workshop. Organised by the Microscopy Society of Southern Africa 2009, held at the Electron Microscopy Unit, Westville Campus, University of KwaZulu-Natal, Durban
- 12-13 February 2009: A two-day Synchrotron Users Workshop held at the Department of Science and Technology building, CSIR campus, Pretoria, South Africa.
- 20-22 February 2007: Postgraduate Research Indaba 2007, organised by the National Research Foundation and held at University of South Africa (UNISA), Pretoria, South Africa.
- August 2006: Two days’ workshop on Proposal Writing Skills and Research Methodology held at the Bellville Campus, Cape Peninsula University of Technology, Cape Town, South Africa.
- May-June 2001: A workshop on the Components Essential for Safe and Effective Post Harvest Management, held at the University of Botswana, Gaborone, Botswana.
- 10-12 February 1999: A workshop on Trade and Environment, Harare, Zimbabwe.
- November 1998: A workshop on the National Agricultural Master Plan, Freetown, Sierra Leone.

- June 1996: A workshop on Reproductive Health Management, Freetown, Sierra Leone.

7.1.2 International

- **Kanu S.A.** and Ntushelo K. (2015) Interactive effects of *Bacillus subtilis* and seaweed (kelpak) on growth, secondary metabolites and yield of potato (*Solanum tuberosum* L.) under glasshouse conditions. Poster presented at the Second Conference on Ecology of Soil Microorganism, 29 Nov-3 Dec. 2015, Prague, Czech Republic.
- **Kanu S.A.** and Dakora F.D. (2011). Ecophysiological studies and biodiversity of root-nodule bacteria nodulating *Psoralea* species in the Cape Fynbos of South Africa. A poster presented at the 17th International Congress on Nitrogen Fixation, 27 Nov-1 Dec 2011, Fremantle, Western Australia.
- **Kanu S.A.**, Jaffer M., Barnabas A.D., Przybylowicz W.J., Mesjasz-Przybylowicz J. and Dakora F.D. (2010) Internal organization and symbiotic functioning of *Psoralea pinnata* nodules developed under wetland and dry-land condition in the Cape Fynbos. Paper presented at the 14th International Congress of the African Association for Biological Nitrogen Fixation, 12-16 December 2010, Bamako, Mali.
- **Kanu S.A.**, Barnabas A.D., Przybylowicz W.J., Mesjasz-Przybylowicz J. and Dakora F.D. (2010) Elemental distribution in tissues of *Psoralea pinnata* nodules, measured using particle-induced X-ray emission and backscattering spectroscopy. Paper presented at the 14th International Congress of the African Association for Biological Nitrogen Fixation, 12-16 December 2010, Bamako, Mali.
- **Kanu S.A.**, Jaffer M., Mesjasz-Przybylowicz J., Przybylowicz W.J. and Dakora F.D. (2009) Structural organization and elemental distribution in root nodules of *Psoralea pinnata* (L.) by TEM and Micro-PIXE. A poster presented at the 16th International Congress on Nitrogen Fixation, 14-19 June 2009, Big Sky, Montana, USA.
- Dakora F.D., **Kanu S.** and Matiru V.N (2004). Rhizobial exudation of riboflavin and lumichrome: Assessing plant response and the effects of pH and temperature. Paper presented at the 11th International Conference of the African Association for Biological Nitrogen Fixation, 22-27 November 2004, Dakar, Senegal.

7.2 Teamwork and collaboration with others:

Other researchers (international)

- Dr. Maina M. Muniafu, School of Arts and Sciences, United States International University, PO Box 14634, Nairobi, Kenya (2008- 2009)
- Dr. Ado A. Yusuf, Department of Soil Science, Faculty of Agriculture, Ahmadu Bello University, PMB 1044, Zaria, Nigeria (2008-2009).

Other research institutions (national)

- Microscopy Unit, University of Cape, Rondebosch, Cape Town, South Africa.
- Materials Research Department, iThemba LABS, Somerset West, Cape Town, South Africa.

- Agricultural Research Council-Roodeplaar Vegetable and Ornamental Plant Institute, Private Bag X293, Pretoria, 0001, South Africa.

7.3 Membership in national and international bodies

- South Africa Society of Crop Production (SASCP): Ordinary member
Website: www.sascp.org.za
- Southern Africa Association of Botanist (SAAB): Ordinary member
Website: <http://www.saab.co.za>
- Southern African Society of Horticultural Sciences (SASHS): Ordinary member
Website: <http://www.sashs.co.za>
- Microscopy Society of South Africa (MSSA): Ordinary member
Website: http://www.microscopy.org.za/mssa_2011.htm
- Legume Society: Ordinary member
Website: <http://lsc1.nsseme.com>

7.4 Visits to local and overseas universities or research institutes as guest professor or researcher

None

8 ARTISTIC OUTPUTS (if applicable)

8.1

Not applicable

9 MANAGEMENT AND ADMINISTRATIVE DUTIES

- August 2013-July 2014: Adviser to “Women in Science Network”, an organization that aims to actively recruit African women in science related subjects at the Tshwane University of Technology.
- May 2008- Oct. 2009: Deputy Chairperson, Postgraduate Forum (PGF), Tshwane University of Technology, Pretoria, South Africa.
- May 2008- Oct. 2009: Postgraduate Forum Representative at the Faculty of Science Research and Innovation Committee (FRIC) and Central Research and Innovation Committee (CRIC) at the Tshwane University of Technology.

10 COMMUNITY SERVICE OR PROFESSIONAL SKILLS

10.1 Outreach projects

- Participated as instructor/tutor in the “Urban Agriculture Support Project”, a community engagement joint project between the City of Johannesburg and Afrika Tikkun together with the University of South in Diepsloot, Johannesburg, South Africa.
- Participated as instructor/tutor in the “Urban Agriculture Support Project”, a community engagement joint project between the City of Johannesburg and Sparrow Village (Hospice & Orphanage) together with the University of South in Maraisburg, Roodepoort, Johannesburg, South Africa.

10.2 Professional service performed

Public lectures presented at University of South Africa radio (2015-2016)

10.3 Clinical service

None

10.4 Involvement with other universities/scientific institutions

- External examiner (master’s dissertation and doctoral thesis) for the Nelson Mandela African Institution of Science and Technology, Arusha, Tanzania.
- External examiner (master’s dissertation and doctoral thesis) for the Tshwane University of Technology, Pretoria, South Africa.
- External examiner (master’s dissertation and doctoral thesis) for the University of Limpopo, Limpopo, South Africa.
- Internal examiner (master’s dissertation and doctoral thesis) for the University of South Africa, Pretoria, South Africa.

10.5 Referee duties

- May 2013-present: Reviewer for scientific journals namely Advanced Journal of Agricultural Research, Environmental Review, Crop & Pasture Science, Journal of Science and Technology and The Plant Journal.
- May 2013-present: Member of the Editorial Board of the Advanced Journal of Agricultural Research

11 REFEREES

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