

# Judit KUMUTHINI

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## EXECUTIVE SUMMARY

I have a PhD in Bioinformatics and over twelve years of managerial experience. I am currently looking to embark on a high impact and purposeful challenge in a leadership role in translational research, education, innovation, policy or advocacy for human health.

## PERSONAL PROFILE

I have been the Bioinformatics Human Capital Development Manager for the past six years at the Centre for Proteomic and Genomic Research (CPGR) based in Cape Town, South Africa. Prior to that I rolled out the Bioinformatics Service and Research Platform from inception, and functioned as the bioinformatics manager for over five years. My initial tertiary education commenced with Hons in Biomedical Sciences at the University of Westminster, London. Thereafter, I specialised in Bioinformatics and obtained an MSc in this discipline from the University of Abertay, Dundee, Scotland, followed by a PhD from Cranfield University, UK. The knowledge, skills and expertise gained in Bioinformatics, combined with over eleven years of managerial, leadership and technical experience, has resulted in my commitment to developing Precision Medicine to advance a next generation of health interventions enhancing the Genomics and Bioinformatics capacity in Africa. Currently, I am a Co- Principal Investigator on the NIH funded H3ABioNet (Human Hereditary and Health Bioinformatics Network); a pan African consortia investigating research and translational advancement in determining genetic and environmental factors in a wide range of communicable and non-communicable diseases. In this role, I support and lead my team to provide bioinformatics expertise to life scientists addressing a wide range of biomedical and ethical questions from genomics to systems biology in Human Hereditary and Health, including projects, data, finance, stakeholders and grant management, and as well as sustainable strategic partnership development.

I am well connected with key local and international bioinformatics and genomics stakeholders through active involvement in various networks, societies, initiatives, projects and interest groups as part of my work. My leadership skills coined with personal drive and an aptitude for being globally and nationally competitive whilst working collaboratively at the same time is something that I take pride in. My passion for interacting with people and my excellent networking ability enable me buy in from key stakeholders globally. I am committed to develop enabling capacity with the focus of launching Personalized and Precision Medicine for enhancing modern health care for all.

In the past two years, I spearheaded the international meta data standardization in pharmacogenomics in an effort to enable sustainable Precision Medicine research, translation and have published DMET array data, pharmacogenomics Minimum Information Reporting guidelines, and followed by Research and Clinical Reporting for Stroke and Kidney diseases. Later, published how to integrate array and NGS data to detect genetic modifiers for genetic rare disease in the Caucasian Afrikaner community and more recently through my advocacy and leadership role helped launch the Protea Declaration to promote awareness of genetic rare diseases which is published in Nature Genetics titled “A call for global action for rare diseases in Africa”. Currently, I am working on an international proposal for the Pan African Precision Medicine Initiative where I am the chair of the Health Economics Task Force. Prior to that, I was a member of the Steering Committee as well as the chair of Education and Training Committee at the National Bioinformatics Service Platform (BSP) of South Africa. Before that, I was the Associated Node Manager for EMBNET, where I was elected as the Public Relations and Publicity Committee Member.

In my own initiative, established the mini internship programme (MIP) from 2011, the Knowledge Transfer Program (KTP, [www.ktp.cpgr.org.za](http://www.ktp.cpgr.org.za)) from 2013 and the online training programmes, aimed at developing specific skill sets required for the next generation of in-silico biologists and bioinformaticians. I have successfully supervised many postgraduate students at various levels at Cranfield University, Stellenbosch University and University of Cape Town. My broad research interests include health informatics, precision medicine and pharmacogenomics, data standardisation in bioinformatics and training and open science.

During my academic and professional career, I have developed strong data analysis, teams, project and program management skills. I am an outgoing, optimistic person with a positive attitude when facing new challenges and I am full of ideas with the ability to think outside the box. I have a strong interest in Bioinformatics issues and awareness concerning Knowledge Integration and Extraction in “Omics” technology, big data revolution, machine learning, artificial intelligence, data standards and ontologies, good clinical and laboratory practices and implementation of precision medicine at national and global level. I am passionate about ethically adding and maintaining value to data, research participants and to humanity. I have demonstrated and delivered leadership, management, planning and team working skills through my employment history. I always aim for success and I am committed to my work.

## WORK AND ROLE EXPERIENCE

- Apr 2013 - August 2019  
CPGR Human Capital Development Manager: Bioinformatics  
My responsibilities included to setting up a new Human Capacity Development platform to cater the South African bioinformatics landscape and manage all the wet and dry labs, internal and external trainings to foster and strategically align CPGR to facilitate a sustainable collaborative research environment focused at developing next generation of African scientists ready to tackle genomic revolution. Day to day activities include: training scientists, post-docs and doctorate students, the assessment of training level requirements for projects, trainers and trainees, sourcing of trainees and resources through scientific networks and societies e.g. skilled trainers and travel fellowships, developing feedback questionnaires and systems, collecting feedback, report writing, grant writing, mentoring, supervising interns and bioinformaticians, providing consultation for colleagues, hosting workshops and online training programs, human resource recruitment, team and talent management, data management, strategic planning, project management, grant writing, operations management, fund raising, obtaining funding through strategic partnerships and marketing.
- Apr 2013 - Apr 2015  
CPGR Programme Manager: KTP (Bioinformatics)  
Knowledge Transfer Programme (KTP, [www.ktp.cpgr.org.za](http://www.ktp.cpgr.org.za)), a match making platform developed from my own initiative from inception to uniquely suit the African scientists to have access to accredited bioinformatics experts to collaborate and get trained; overall establishment and management of the review and scientific advisory committees, managing conflict of interests, project facilitation, sourcing of skilled experts, trainees, host institution memberships and review of members, managing transfer of knowledge to local trainers, raising fund for KTP, grant and business plan writing, strategic planning, reporting, public relation and outreach, managing development of the system, monitoring of the programme and marketing.
- Jul 2012 - Current  
CPGR | SANBI H3ABioNet Project: Co-Principal Investigator  
I am a Co-PI and Node Manager for the NIH funded H3ABioNet project, with budget over 12 million ZAR for five years. I manage a team of scientists and post-docs to provide technical support to the H3A consortia research projects, provide trainings to H3A members, with the mission to develop complex computational models, tools and pipeline and focusing on Exploring African-specific Pharmacogenes using existing Drug-Genes Relationships and Computational Statistics for human and environmental health prediction. I am responsible for grants, financial, projects, team and data management, as well as node management. I am a member of various committees and workgroups of H3A consortia. Including Health Informatics, Data Standard, Education and Training and Out reach and Sustainability work package of H3ABioNet to achieve the overall aims and objectives of the consortia.

- Aug 2008 - Apr 2013  
CPGR  
Bioinformatics Manager  
My responsibilities included the management of numerous genomics, transcriptomics and bioinformatics projects and all the dry lab activities including software and hardware procurement, developing and supporting data management solutions. The data analysis, reporting, algorithm and pipeline development, database set-up and implementation, and provision of bioinformatics web services to African scientists and researchers from all over the world. Also team and project management, risk identification and mitigation, strategic planning and business plan writing, grant writing, bio consultation to clients, client expectation and operations management and quote generation.
- Aug 2009 - 2016  
EMBNET  
Bioinformatics Node Manager  
My responsibilities include providing Bioinformatics training in South Africa, managing user support and services, reporting node activities to the board, international bioinformatics activities coordination and market EMBNET activities in South Africa. In addition my responsibilities as the elected Public Relations and Publicity (PR & P) committee member included a bioinformatics advisory role, facilitator, and initiator of various bioinformatics activities for EMBNET.
- May 2008 - May 2009  
Uni. of Stellenbosch  
Bioinformatics Consultant  
My responsibilities included Bioinformatics data analysis, training undergraduate and postgraduate students, ad-hoc bioinformatics data management support on various biotechnology projects for Institute of Wine Biotechnology (IWBT) and bioconsultation. In addition I was bioinformatics project manager and played an advisory role.
- Feb 2008 - Aug 2008  
Uni. of Cape Town  
Post Doctoral Research Fellow / Senior Bioinformatician  
My role included Bioinformatics software and tools evaluation, data analysis, established bioinformatics service pipeline for South African biotechnology community and experimental design and project planning. In addition my responsibilities at UCT (University of Cape Town) include supervision of master students to develop novel algorithms for biomarker discovery and quality knowledge extraction from protein and peptide array data.
- Jul 2007 - Nov 2007  
Cranfield Uni.  
Supervisor and Invited Lecturer  
I have supervised two MSc Bioinformatics projects on my own initiative: Bayesian belief networks optimization for learning genetic network from microarray data and novel missing values replacement and data dimensionality reduction algorithms development. Led practical sessions and demonstrated various Bioinformatics MSc modules.
- Jun 2006 - Dec 2006  
Glaxo Smith Kline  
Drug Target Scientist  
I was head hunted as part of a Bioinformatics Research group at GSK, UK. Where my duties involved analyzing Human Genome microarray data and knowledge extraction from aggregation of clinical and phenotype information for disease specific biomarker discovery and target identification using Bayesian statistics. Bayesian network and parameter learning for predictive model building. Also providing training to the research group on Bayesian analysis techniques using BayesiaLab.

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| Mar 2002 - Nov 2002<br>Uni. of Abertay Dundee | Graduate Enterprise Programme (EMBREONIX)<br>I piloted an Online GP-Patient Communication System on my own initiative, as part of the Graduate Business Enterprise Programme at University of Abertay Dundee. My interest in health informatics and health data sharing to improve National Health Systems in the UK led me to take advantage of this opportunity presented to me when I was completing my MSc in Bioinformatics as part of Post Graduate Diploma in Bio-entrepreneurship . |
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## PUBLICATIONS

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|---|--|
| Radouani, F, Zass, L., et al.           | <i>A Review of Clinical Pharmacogenetics Studies in African Populations.</i> 2020. <i>Personalized Medicine.</i> Accepted. PME-2019-0110.R2.   |
| Baynam, S. G., Groft, S., et. al.       | <i>A call for global action for rare diseases in Africa.</i> <i>Nature Genetics.</i> 2020. 52, 21-26. doi.org/10.1038/s41588-019-0552-2  |
| Kumuthini, J., Michael, C., et al.      | <i>Ten Simple Rules for Providing Effective Bioinformatics Research Support.</i> 2019. <i>PLOS Computational Biology.</i> Accepted. PCOMPBIOL-D-19-01383R1.  |
| Chimusa, E.R., Kumuthini, J et. al.     | <i>Detecting genetic modifiers of spondyloepimetaphyseal dysplasia with joint laxity in the Caucasian Afrikaner community.</i> 2019. <i>Hum. Mol. Genet.</i> 28, 1053-1063. <a href="https://doi.org/10.1093/hmg/ddy373">https://doi.org/10.1093/hmg/ddy373</a> .  |
| Kumuthini, J., Zass, L. et al.          | <i>The H3ABioNet Helpdesk: an online bioinformatics resource, enhancing Africa's capacity for genomics research.</i> 2019. <i>BMC Bioinformatics.</i> 20, 741. doi.org/10.1186/s12859-019-3322-3.  |
| Mizzi C and Dalabira E et. al.          | <i>A European Spectrum of Pharmacogenomic Biomarkers: Implications for Clinical Pharmacogenomics.</i> 2016. <i>PLOS One</i> :11(9):e0162866. DOI: 10.1371/journal.pone.0162866   |
| Kumuthini, J., van Woerden, C.S., et al | <i>Proposed Minimum Information Guideline for Kidney Disease: Research and Clinical Data Reporting – A Cross Sectional Study.</i> <i>BMJ Open.</i> 2019. 9:e029539. doi: 10.1136/bmjopen-2019-029539   |
| Kumuthini, J., Zass, L. et al.          | <i>H3ABioNet Consortium's Data and Standards Working Group as members of the H3ABioNet Consortium. Proposed Guideline for Minimum Information Stroke Research and Clinical Data Reporting.</i> 2019. <i>Data Science Journal</i> , 18(1)26. DOI: 10.5334/dsj-2019-026.   |
| Kumuthini, J., Zass, L. et al.          | <i>Human Genome Informatics.</i> 2018. Chapter 9 - Minimum Information Required for Pharmacogenomics Experiments. in: Lambert, C.G., Baker, D.J., Patrinos, G.P. (Eds.) Academic Press, pp. 179-193. <a href="https://doi.org/10.1016/B978-0-12-809414-3.00009-7">https://doi.org/10.1016/B978-0-12-809414-3.00009-7</a> |

- Jongeneel, C.V., Achinike-Oduaran, O. et al. *Assessing computational genomics skills: Our experience in the H3ABioNet African bioinformatics network.* 2017. *PLOS Comput. Biol.* 13(6), e1005419. <https://doi.org/10.1371/journal.pcbi.1005419>
- Kumuthini, J and Mamana , M., et. al. *Minimum Information required for a DMET experiment reporting.* 2016. *Pharmacogenomics*:17(14):1533-45. doi: 10.2217/pgs-2016-0015
- Chimusa, E., Kumuthini, J et. al. *Broadband Bioinformatics skills transfer with the Knowledge Transfer Programme: educational model for upliftment and sustainable development.* 2015. *PLOS Computational Biology*: 11(11), 1-9. e1004512. <https://doi.org/10.1371/journal.pcbi.1004512>
- Mulder. N et. al. *H3ABioNet, a Sustainable Pan-African Bioinformatics Network for Human Heredity and Health in Africa.* 2015. *Genome Research*. 26: 271-277. doi:10.1101/gr.196295.115.
- Attwood, T. K et. al. *Correction: GOBLET: The Global Organisation for Bioinformatics Learning, Education and Training.* 2015. *PLoS Computational Biology* 11(5). doi:10.1371/journal.pcbi.1004281.
- Rotimi C, Abayomi A, et. al. *Enabling African Scientists to Engage Fully in the Genomic Revolution: 2014. Science. Insights Perspectives, 344( 6190) 1346–1348.* doi:10.1126/science.1251546
- O. T. Bishop, J. Kumuthini et al. *Bioinformatics Education - Perspectives and Challenges out of Africa.* 2015. *Briefings in Bioinformatics*:16(2), 355-364. doi: 10.1093/bib/bbu022.
- Botha, G and Kumuthini, J *Minimum Information About a Peptide Array Experiment (MIAPepAE).* *EMBnet Journal*: 2012, 18.1: 14-21. [doi.org/10.14806/ej.18.1.250](https://doi.org/10.14806/ej.18.1.250)
- Kumuthini, J., Jouffe, L. et. al. *BIRD. Chapter: Novel Graph Optimisation Algorithm for Extraction of Gene Regulatory Network from Temporal Microarray Data. Lecture Notes in Bioinformatics, pp 28-37. Springer Verlag, 2007. DOI:10.1007/978-3-540-71233-6-3*
- Kumuthini, J et. al. *Gene regulatory network of human adipocyte differentiation. Conference Proceedings, BMC Systems Biology 2007, 1(Suppl 1):P57.*
- Kumuthini, J *Extraction of Genetic Networks (GN) Using Static Bayesian Belief Networks From Genome-Wide Temporal Microarray Data. Conference Proceedings. BMC Bioinformatics 2005, 6(Suppl 3):S8.*

## PATENTS

23 July 2009 Title: *An in vitro method of diagnosis of cancer ("CT-100 Array")*, Blackburn. J, Kumuthini. J and Safari. JM . Status: *Granted*. Region Territory: *South Africa - Complete*

## SELECTED INVITED TALKS

- 2019 Omics Data Standardization, SMC, Moroccan Classification Society. Marrakesh, Morocco.
- 2019 Protea Declaration for Rare Diseases. 13th H3Africa Consortium Meeting. Tunis, Tunisia.
- 2018 Minimum Information Required for Pharmacogenomics Experiments. 4th Global Genomic Medicine Collaborative Conference. Cape Town, South Africa.
- 2017 SMC. Data Engineering In Bioinformatics, Image and Data Analysis. Tangier, Morocco.
- 2017 Minimum Information required for a DMET Experiment reporting. HGVS, Implementing Pharmacogenomics in Modern Health Care, Copenhagen, Denmark.
- 2016 International Conference on Rare Diseases and Orphan Drugs ICORD, Stellenbosch, Cape Town.
- 2016 Bioinformatics Resources, University of Stellenbosch, Cape Town.
- 2015 Foundation Genomics Training, CPGR, Cape Town.
- 2014 Pharmacogenomics and Genomic Medicine- Bridging Research and the Clinic & Golden Helix Summer School, Aegina Island, Greece.
- 2014 Scientific Meeting 2014 "NGS Data after the Gold Rush" & MC Meeting, Norwich, UK.
- 2013 Department of Biomedical Sciences, Faculty of Health Sciences and Medicine, University of Stellenbosch.
- 2013 Bioinformatics Service Platform interim Steering Committee, CHPC, Cape Town, South Africa.
- 2010 Cape Biotech Forum, Stellenbosch, South Africa.
- 2010 Bioinformatics, Biochemistry Division, North West University, South Africa.
- 2010 Full list available on request

## SELECTED ORAL PRESENTATIONS

- 2019 Data harmonization in Precision Medicine. Data Engineering In Bioinformatics, Image and Data Analysis. Morocco.
- 2018 Minimum Information Required: Guideline for Stroke Research and Clinical Data Reporting. ISMB. Washington, USA.
- 2018 Stroke Research and Clinical Data Reporting Standardization. Grootteschuur Hospital, University of Cape Town.
- 2017 Kidney Disease Research and Clinical Data Reporting Standardization. Red Cross Children Hospital, South Africa.
- 2017 H3Africa and H3ABioNet Infrastructure. University Seminar Series: Cape Peninsula University of Technology.
- 2017 Minimum Information Required: Stroke Research and Clinical Data Reporting Guideline. Women in Data Science: Africa.
- 2016 International Conference on Pharmacogenetics and Precision Medicine, University of Cape Town, South Africa.
- 2016 Reproducibility, standards and SOP in bioinformatics. CHARM, Rome, Italy.
- 2013 NGS applications in Bioinformatics, African Institute for Mathematics and Statistics, Muizenberg, South Africa.
- 2013 Bioinformatics Capacity Development in Africa: KTP, H3ABioNet Annual Meeting, JHB, South Africa.
- 2013 Bioinformatics User Support Work Group, H3ABioNet Annual Meeting, JHB, South Africa.
- 2013 Bioinformatics Capacity Development in Africa: KTP, ASHG Annual General Meeting, JHB, South Africa.
- 2005 Microarray Gene Expression Analysis: Power and Potential of Standardisation, Norwegian University of Science and Technology, Trondheim, Norway.



## POSTERS

- 2019 Development of an African Precision Medicine Portal. 13th H3Africa Consortium Meeting. Tunis, Tunisia.
- 2019 Minimum Information Required: Guideline for Stroke Research and Clinical Data Reporting. 13th H3Africa Consortium Meeting. Tunis, Tunisia.
- 2018 Minimum Information Required: Guideline for Stroke Research and Clinical Data Reporting. SciDataCon. Botswana.
- 2018 The H3ABioNet Helpdesk: an online bioinformatics resource, enhancing Africa's capacity for genomics research. ISMB. Washington, USA.
- 2018 Minimum Information Required: Guideline for Stroke Research and Clinical Data Reporting. African Society of Human Genetics Conference. Kigali, Rwanda.
- 2017 Minimum Information required for a DMET Experiment reporting. ISMB/ECCB. Copenhagen, Denmark.
- 2017 GOBLET Standards Committee: best practices and standards in bioinformatics and biocuration. USA.
- 2019 Data Management Plans by the H3ABioNet. 13th H3Africa Consortium Meeting. Tunis, Tunisia.
- 2016 F1000Research. Global mapping of bioinformatics training in Australia.
- 2014 Knowledge Transfer Programme, H3ABioNet Annual General Meeting, Casablanca, Morocco.
- 2014 Bridging the gap through the Knowledge Transfer Programme, H3A Annual General Meeting, Cape Town, South Africa.
- 2013 Knowledge Transfer Programme, ASHG Annual General Meeting, JHB, South Africa.
- 2013 Knowledge Transfer Programme, ISMB conference, Berlin, Germany.
- 2013 Bioinformatics Training and Education: towards a sustainable global network, ISMB conference, Berlin, Germany.
- 2010 Next generation sequencing data analysis at CPGR. Judit Kumuthini, James Dominy et al.. EMBNET next generation sequencing workshop, Bari, Italy.
- 2010 The CPGR Project collaboration and content management system (PCCMS). Judit Kumuthini, James Dominy et al.. ISMB, Ghent, Belgium.
- 2010 Novel normalization method for custom antigen arrays. Jean-Michel Safari Serufuri, Judit Kumuthini, et al. ASBCB Mali.
- 2010 Full list available on request

## EDUCATION AND QUALIFICATIONS

- 2002-2007 PhD, **Cranfield University**, United Kingdom  
Dissertation: "Extraction of Genetic Network from Post Genomic Microarray Data using Bayesian Belief framework," Supervisor: Prof. Conrad Bessant.
- 2001-2002 MSc Bioinformatics, **University of Abertay**, Dundee  
Data Modelling, Procedural Programming, System development, Practical IT, Data Engineering, Bio Computing, and Bio Information Services. Research Project: "Investigation of whether synthetic phage display peptides that appear to specifically bind to the neurotrophin receptor P75ntr, occur in nature." *Distinction*
- 1998-2001 BSc (Hons) in Biomedical Sciences, **University of Westminster**, London  
Cell Biology & Biochemistry, Microbiology & Immunology, Genetics & Molecular Biology, Physiological Regulation, Physiological Systems, Investigative Pathology, Blood & Disease, Microbes & Disease, Tissues & Disease, Body Fluid Chemistry & Disease, Parasitology, Biometrics, Research Methods, and Laboratory Techniques.
- 1995-1998 A-Levels, **Newham College**, London, UK.  
Biology, Chemistry, Pure Mathematics and statistics.
- 1994-1995 GCSEs, **Newham College**, London, UK.  
Mathematics, Physics, English, Tamil, Biology and Chemistry.

## SPECIAL ACHIEVEMENTS AND AWARDS

- 2019 Scientific Advisory Committee Member. The African Centers of Excellence in Bioinformatics (ACE)
- 2019 Scientific Reviewer. Frontiers journal
- 2019 Program Committee Member, SMC, Second conference of The Moroccan Classification Society. Morocco
- 2019 Global Council Member. The African Centers of Excellence in Bioinformatics (ACE)
- 2017 NIH: H3ABioNet Project II, (Over 10 Million ZAR, for 2017-2022)
- 2013 EU-COST ACTION: SeqAhead, ( 180,000 ZAR for 2014)
- 2012 NIH: H3ABioNet Project, (Over 10 Million ZAR for 2012-2017)
- 2010 EMBRACE: NGS Workshop II (Italy, Bari)
- 2009 CBT human capital development fund for training
- 2008 Post Doctoral Award (University of Cape Town)
- 2005 ERASMUS, BOKU University (Vienna, Austria)
- 2003-2005 Departmental Representative for Research Committee
- 2002-2005 First Aider at Cranfield University
- 2002 ESF PgDip Bioentrepreneurship
- 2001 ESF women into Information Technology for MSc. Bioinformatics
- 1999-2000 Student representative for BSc Biomedical Sciences and Msc. Bioinformatics
- 1992 Senior Sports Captain and under 16 Athletics Champion

## TRAINING

- ADME Workshop, H3Africa-GSK Collaboration, Johannesburg, WITS, South Africa, (2019).
- Genomics Clinical Laboratory Practice (GCLP) , NHLS, UCT, Cape Town, South Africa, (2019).
- Bioinformatics Education Summit, Bioschemas, UCT, Cape Town, South Africa, (2019).
- Global Bioinformatics Learning Education Training - Train The Trainer Workshop, UCT, Cape Town, South Africa, (2019).
- ADME Workshop, H3Africa-GSK Collaboration, Johannesburg, WITS, South Africa, (2019).
- ADME Workshop, H3Africa-GSK Collaboration, Johannesburg, WITS, South Africa, (2018).
- NGS Analysis for Monogenic Disease in African Populations. Wellcome Trust Advanced Courses. Kigali, Rwanda, (2018).
- ISO 17025:2017 Interpretation and Auditing of a Laboratory Management System. Cape Town, South Africa, (2018).
- Environmental Health in Africa Workshop, H3Africa. Kigali, Rwanda, (2018).
- Case Studies in Personalized Medicine. Coursera. Online, (2017).
- Foresight, Innovation and Leadership, TIA, Cape Town, South Africa, (2015).
- Individual Voice Programme, Voice Clinic, Cape Town, South Africa, (2014).
- ISO 9001:2008, QSI, Cape Town, South Africa, (2013).
- Grant writing, H3A/NIH, UCT, Cape Town, South Africa, (2013).
- Finance For Non-Financial Managers, Graduate School of Business (GBS), UCT, South Africa, (2013).
- NGS training in high performance computing, COST workshop, Uppsala, Sweden, (2012).
- Intellectual Property Management, Cape BioTech, Cape Town, South Africa, (2011).
- eBio Kit workshop, SANBI, UWC, Cape Town, South Africa, (2011). Trainer.
- Next generation sequence analysis, Bari, Itali (2010).
- Tuberculosis Diagnostic Research: Beyond the Basics, University of Stellenbosch, South Africa (2010).
- Project Management, Technology Innovation Agency (TIA), Cape Town, South Africa, (2010).

## INTERESTS AND ACTIVITIES

I thoroughly enjoy going on expeditions and navigations. My hobbies also include hiking, photography, cooking and travelling. I've claimed the highest mountain in Africa (Kilimanjaro). I completed many seventeen mile sponsored walks for St. Joseph's Hospice in London and 50 mile cycle races for Leukemia Cancer Research, UK. During my PhD studies, I was the house rep at Cranfield University and a committed rep for Department of Analytical Science and Informatics (DASI). I was the President of the Abertay Photographic Society and also the MSc. Bioinformatics representative. I was also Executive committee member of Student Disciplinary Committee at Abertay University.

## MISCELLANEOUS INFORMATION

I am a British Citizen with a Permanent Residency Permit in South Africa. I have a valid driving license.

## REFERENCES

- |                           |  |
|---------------------------|--|
| Prof. Himla Soodyall      | Bioinformatics   ASSAF   Pretoria   South Africa   Himla@assaf.org.za.   |
| Prof. Conrad Bessant      | Bioinformatics   Queen Mary   University of London   UK   C.bessant@qmul.ac.uk.  |
| Prof. Erik Boncam Rudloff | Director of SGBC   Sweden   PI of B3Africa project   erik.bongcam@slu.se.  |
| Mr. Ben Durham            | Chief Director of Biotechnology and Health Innovation   Department of Science and Innovation (DSI)   South Africa   Ben.Durham@dst.gov.za. |