


Academic Staff Profile Template

1.1 Personal Profile

1.1.1 Personal Details

<p>Name: Dr George Gachara Maina Title/Qualification: Dr/PhD Department: Medical Laboratory Science Designation/Position: Lecturer Email: Gachara.george@gmail.com Contact Address: 34556-00100 Nairobi Area of Specialization: - Molecular Virology Research Interests: - Molecular epidemiology and evolution of viruses - Viral oncogenesis</p> <p>Google Scholar- https://scholar.google.com/citations?user=02U5ycgAAAAJ&hl=en</p> <p>ORCID iD- https://orcid.org/0000-0001-5428-9565</p>	
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1.1.2 Academic & Professional Qualifications

-PhD

1.1.3 Employment History

Year (from-to)	Organization	Position held/Responsibility
1995-2001	Kisumu Polytechnic	Lecturer, Laboratory technology
2001-2006	Kabete National Polytechnic	Lecturer, Applied Biology / Head Medical laboratory section
2007-2009	Centre for Mathematics, Science and Technology Education in Africa	National Trainer, Applied Biology
2009-to date	Kenyatta University	Lecturer, Virology

1.1.4 Achievements

- Undertook the first study in the country that isolated and characterized local circulating influenza viruses during my MSc studies.
- My PhD studies characterized the first complete genome sequences of influenza viruses in Kenya

1.2 Publications

1.2.1 Referred Journals

- Aluora, P.O., Muturi, M.W. & Gachara, G. Seroprevalence and genotypic characterization of HBV among low risk voluntary blood donors in Nairobi, Kenya. *Virology* 17, 176 (2020).
- Jepkemei, K. B.; Ochwoto, M.; Swidinsky, K.; Day, J.; Gebrebrhan, H.; McKinnon, L. R.; Andonov, A.; Oyugi, J.; Kimani, J.; Gachara, G.; Songok, E. M.; Osiowy, C., Characterization of occult hepatitis B in high-risk populations in Kenya. *PLOS ONE* 2020, 15 (5)
- Opanda S, Bulimo W, **Gachara G**, Ekuttan C, Amukoye E. Assessing antigenic drift and phylogeny of influenza A (H1N1) pdm09 virus in Kenya using HA1 sub-unit of the hemagglutinin gene. *PLoS One*. 2020;15(2):e0228029.
- Etta EM, Alayande DP, Mavhandu-Ramarumo LG, **Gachara G**, Bessong PO. HHV-8 Seroprevalence and Genotype Distribution in Africa, 1998 - 2017: A Systematic Review. *Viruses*. 2018;10(9).
- **Gachara G**, Magoro T, Mavhandu L, Lum E, Kimbi HK, Ndip RN, Bessong P.O. Characterization of occult hepatitis B virus infection among HIV positive patients in Cameroon. *AIDS Res Ther*. 2017;14(1):11
- **Gachara G**, Mavhandu LG, Rogawski ET, Manhaeve C, Bessong PO. Evaluating Adherence to Antiretroviral Therapy Using Pharmacy Refill Records in a Rural Treatment Site in South Africa. *AIDS Res Treat*. 2017;2017:5456219
- Magoro T, **G Gachara**, L Mavhandu, E Lum, H. K Kimbi, R. N Ndip, P. O Bessong. Serologic and genotypic characterization of hepatitis B virus in HIV-1 infected patients from South West and Littoral Regions of Cameroon. *Virology Journal*. 2016;13:178.
- **Gachara G**, Symekher S, Otieno M, Magana J, Opot B, Bulimo W: Whole genome characterization of human influenza A(H1N1)pdm09 viruses isolated from Kenya during the 2009 pandemic. *Infect Genet Evol* 2016, **40**:98-103.
- Hassan, J. A., **G. Gachara**, F. Mbugua, J. Muchiri, S. Symekhah, G. Nakitari, P. Borus, T. Kamau, and J. Kombich. "Potency status of oral polio virus vaccine among retrieved field samples in Kenya." *International Journal of Infectious Diseases* 21 (2014): 441.
- S. Symekher, **G. Gachara**, J. Simwa, J. Gichogo, M. Rotich, M. Ng'ayo and J. Magana, "Human Bocavirus Infection in Children with Acute Respiratory Infection in Nairobi, Kenya," *Open Journal of Medical Microbiology*, Vol. 3 No. 4, 2013, pp. 234-238.
- Janet Majanja, Rachel Achilla, Rose Njoroge, Sylvanus Mukunzi, Meshack Wadegu, Wallace D. Bulimo, James Njiri, Josphat Mwangi, **George Gachara** and Eyako K. Wurapa, 2013. Impact of the influenza A(H1N1)pdm09 virus on the circulation dynamics of the seasonal influenza strains in Kenya. *Am. J. Trop. Med. Hyg.*,88(5), 2013, pp. 940-945
- Wallace D. Bulimo, **George Gachara**, Benjamin H. Opot, Margaret W. Murage and Eyako K. Wurapa, 2012. Evidence in Kenya of reassortment between seasonal influenza A(H3N2) and influenza A(H1N1)pdm09 to yield A(H3N2) variants with the matrix gene segment of A(H1N1)pdm09. *Afr. J. Pharmacol. Ther.* 1(1): 1-7
- **Gachara G**, Symekher S, Mbithi J, Simwa J, Ng'ayo M, Magana J and Bulimo W. 2011. Amino acid sequence analysis and identification of mutations in the NS gene of 2009 influenza A (H1N1) isolates from Kenya. *Virus Genes*; **43**: 27-32

- **George Gachara**, Joseph Ngeranwa, Japheth Mukuru Magana, James Maylor Simwa, Peris Wairimu Wango, Samwel Morris Symekher Lifumo and Walter Onalo Ochieng. 2006. Influenza virus strains in Nairobi, Kenya. *Journal of Clinical Virology*. **35**, (1), 117-118.

1.2.2 Books and Books Chapters

1.2.3 Conference/Workshops/Seminar Papers

1.2.3.1 Conference Papers

- McManus KA, **Gachara G**, Dillingham R, Bessong PO. "*One HIV clinic's experience: Mortality and associations with mortality in people living with HIV initiated on ART in Limpopo, South Africa*". A poster presented during the 19th International Conference on Aids and STI's in Africa (ICASA) held from 3rd – 10th December 2017 at the Sofitel Abidjan Hotel Ivoire, Abidjan, Côte d'Ivoire
- **Gachara, George.**, Mavhandu, Lufuno., Manhaeve, Cecile, and Bessong, Pascal. *Assessing the cascade of HIV diagnosis, care and treatment in a rural South African setting*. Poster presentation at the 11th International Conference on HIV Treatment and Prevention Adherence held at Fort Lauderdale, MI, USA, May 9-11, 2016.
- **Gachara, George**, Symekher, Samuel., Otieno, M., Magana, Japheth., Opot, B. and Bulimo, Wallace. *Origins, molecular epidemiology, and genetic diversity of Influenza A(H1N1)pdm09 virus in Kenya: A Bayesian Coalescent Analysis*. Oral Presentation at the 3rd Medical and Veterinary Virus Research in Kenya (MVVR-K) symposium, held at the Hilton Hotel hotel, Nairobi, Kenya, 16th -17th October 2014
- **Gachara, George**, Symekher, Samuel., Otieno, M., Magana, Japheth., Opot, B. and Bulimo, Wallace. *Evolutionary analyses of influenza A/H1N1pdm virus during the early, peak and late phases of the pandemic in Kenya*. Oral Presentation at the 2nd Medical and Veterinary Virus Research in Kenya (MVVR-K) symposium, held at the Sarova Panafric hotel, Nairobi, Kenya, 18th -19th October 2012.
- S. M. Kaburu, W. Bulimo, **G. Gachara** and J. Ongus. *Burden of human rhinovirus infections in influenza like illnesses in Kenya*. Poster during the 16th International Society for Infectious Diseases held on 2nd-5th April 2014 in Cape Town, South Africa.
- **Gachara, George**, Magana, Japheth. , Mbithi, John, Symekher, Samuel and Bulimo, Wallace. *Sequence analysis of the Neuraminidase (NA) gene of pandemic H1N1 influenza A virus in Kenya*. Poster presentation during the XIV International Symposium on Respiratory Viral Infections held on 23rd – 26ndMarch 2012 at the Grand Hyatt Istanbul, Turkey.
- **Gachara, George**, Magana, Japheth., Mbithi, John., Symekher, Samuel and Bulimo, Wallace. *Comparison of selection pressures on the Haemagglutinin (HA) gene of pandemic (2009) and seasonal influenza A viruses in Kenya*. Poster presentation during the XIV International Symposium on Respiratory Viral Infections held on 23rd – 26ndMarch 2012 at the Grand Hyatt Istanbul, Turkey.
- **Gachara, G**, Mbithi, J, Magana, J, Symekher, S and Bulimo, W. *The molecular evolution of two internal genes, M & NS in pandemic H1N1 influenza A virus*. Poster

presentation during the 1st Medical and Veterinary Virus Research in Kenya (MVVR-K) symposium, held at the Silver Springs Hotel, Nairobi; 8-9 September 2011

- **G. Gachara**, SML. Symekher, J. Simwa, and JM Magana. *Evolutionary Pattern of the Hemagglutinin Gene of Influenza B Viruses isolated in Kenya 2005-2009*. Oral Presentation at the 1st KEMRI annual scientific & health (KASH) conference, 9th - 11th February 2011
- **Gachara, G.**, Symekher, S, Mbithi, J, Simwa, J, Ng'ayo, M., and Bulimo, W. *Amino acid sequence analysis and identification of mutations in the NS gene of 2009 influenza A (H1N1) isolates from Kenya*. Poster Presentation in the 2nd African National Influenza Surveillance and Epidemiology (ANISE) Conference, Noguchi Institute, Accra, Ghana, 11th – 12th January, 2011.
- Symekher, S.M.L, **Gachara, G.**, Gikera, C., Simwa, J., and Magana, J. *Description of patients positive for Influenza and RSV in a sentinel surveillance site in Nairobi, Kenya*. Poster Presentation in the 2nd African National Influenza Surveillance and epidemiology (ANISE) Conference, Noguchi Institute, Accra, Ghana, 11th – 12th January, 2011.
- SML. Symekher, **G. Gachara**, J. Simwa, and JM Magana. *Prevalence and seasonality of Influenza viruses in Nairobi, Kenya; 2001-2009*. Poster Presentation in the 2nd African National Influenza Surveillance and Epidemiology (ANISE) Conference, Noguchi Institute, Accra, Ghana, 11th – 12th January, 2011.
- SML. Symekher, **G. Gachara**, J. Simwa, W. Ochieng and JM Magana. *Trends of influenza virus isolates in Nairobi Kenya between 2005 – 2006*. A poster presentation during the 3rd Annual Makerere University FoM and SPH Scientific Conference 29th -31st August 2007.
- **G. Gachara**, SML. Symekher, and J. Simwa. *Comparison of the haemagglutinin gene of influenza B virus isolated in Nairobi with that of the vaccine strain*. Poster presentation at the 27th African Health Sciences Congress held in Durban, South Africa on 3rd to 7th December 2006.
- **G. Gachara**, SML. Symekher and J. Simwa, *Genetic characterization of influenza viruses isolated in Nairobi, Kenya and their phylogenetic relationship with those isolated recently in Southern Africa*. An oral presentation at the 21st Annual Joint Scientific Meeting held at Arusha International Conference Centre, Tanzania on March 7th to 9th 2006.
- **Gachara. G**, SML. Symekher, J. Simwa, and W. Ochieng. *Antigenic characterization of influenza viruses isolated in Kenya*. An oral presentation at the 21st Annual Joint Scientific Meeting held at Arusha International Conference Centre, Tanzania on March 7th to 9th 2006.

1.2.3.2 Workshops Papers

1.2.3.3 Seminar Papers

- McManus Katie, **Gachara George**, Dillingham Rebecca, Bessong Pascal. *One HIV clinic's experience: Mortality and associations with mortality in people living with HIV initiated on ART in Limpopo, South Africa*. A poster presented during the 19th

International Conference on Aids and STI's in Africa (ICASA) held from 3rd – 10th December 2017 at the Sofitel Abidjan Hotel Ivoire, Abidjan, Côte d'Ivoire

- **Gachara, George.**, Mavhandu, Lufuno., Manhaeve, Cecile, Rogawski, E, and Bessong, Pascal. *Evaluating adherence to antiretroviral therapy using pharmacy refill records in a rural treatment site in South Africa*. Oral presentation at the International Symposium on Global Health Research in Africa, held at the 2 Ten Hotel, Thohoyandou, South Africa, 16-17 March 2017
- **Gachara, George.**, Mavhandu, Lufuno., Lum, Emmaculate., Kimbi, Helen., Ndip, Roland, and Bessong, Pascal. *Serologic and genotypic characterization of hepatitis B virus in HIV-1 infected patients from South West and Littoral Regions of Cameroon*. Oral presentation at the International Symposium on Global Health Research in Africa, held at the 2 Ten Hotel, Thohoyandou, South Africa, 16-17 March 2017
- **Gachara, G.**, Symekher, S, Mbithi, J, Simwa, J, and Bulimo, W. *Mutational analysis of the NS gene of pandemic H1N1/09 influenza virus in Kenya* An oral presentation at the Kenya Young Scientists (KEYS) Seminar series 4 held at Jumuia guest house, Kisumu Kenya on 22nd October 2010.

1.2.5 Student Co-authored Publications

- Milanoi S, Ongus JR, **Gachara G**, Coldren R, Bulimo W: Serotype and genetic diversity of human rhinovirus strains that circulated in Kenya in 2008. *Influenza and Other Respiratory Viruses* 2016. *Doi: 10.1111/irv.12373*

1.2.4 Other Publications

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1.3 Research

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1.4 Funded Projects

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1.5 Conferenced/Workshops/Seminars Attended

1.5.1 Conferences Attended

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1.5.1 Workshops Attended

- 15th – 17th June 2010 Applied Biosystems 7500 Fast Real-Time PCR System Training Course held at KEMRI-CVR, Nairobi, Kenya.
- 31 October – 2 Nov 2011 Working with the Human Genome Sequence workshop held at KEMRI/Wellcome Trust Research Programme, Kilifi, Kenya.
- 23 April – 27 April 2012 The theory and implementation of various phylogenetic methods. Conducted by NESCent and held at KEMRI/Wellcome Trust Research Programme, Kilifi, Kenya
- 16 Sept – 18 Sept 2014 WHO/TDR Scientific Research Publication and Grant Writing Workshop held at KCB training centre, Nairobi
- 9th Oct – 15th Oct 2016 3rd Annual Short Course in Medical Virology of the Global Virology Network (GVN), Baltimore, MD, USA
- 1st Oct 2015 - 30th Nov 2016 Water and Health in Limpopo (WHIL) Post-Doctoral Fellow

1.5.1 Seminars Attended

1.6 Supervision of Postgraduate Students

1.6.1 Masters

- Jumba Gweyani Gloria (W64/70261/2011, University of Nairobi 2012-2015) MSc Thesis “Molecular Characterization of Influenza B viruses isolated during Influenza surveillance in Kenya from 2011-2012”
Role: Co-supervisor
Status: Graduated
- Nchagwa Edward Mangare (P150/CE/24316/2013, Kenyatta University) MSc Thesis “Seroprevalence of Cytomegalovirus infection and associated risk factors among HIV infected patients attending Thika Level 5 Hospital, Kenya”
Role: Co-supervisor
Status: Graduated
- Sylvia Milanoi Kaburu (TM305-1439/2010, Jomo Kenyatta University of Agriculture and Technology) MSc thesis “Molecular characterization of human Rhinovirus strains circulating in Kenya during a surveillance of influenza like illness”
Role: Co-supervisor
Status: Graduated
- Issa Suleiman (P150/CE/24988/2013, Kenyatta University) MSc Thesis “Detection and molecular characterization of antibiotic resistance genes in *Pseudomonas* isolates from selected hospitals in Mombasa County, Kenya”
Role: Supervisor
Status: Graduated
- Okoti Patrick Aluora (P150/28634/2015, Kenyatta University) MSc “Genotypic characterization of Hepatitis B virus among voluntary blood donors in Nairobi regional blood transfusion centre, Kenya”
Role: Supervisor
Status: awaiting defence
- Eric Kitangala Ayieza (P150/28478/2015, Kenyatta University) Msc “Determination of the molecular characteristics of Hepatitis C virus among low risk populations in Kenya”
Role: Supervisor
Status: Data collection
- Beatrice J Kiptoon (P150/37201/2016, Kenyatta University) MSc “Determination and characterization of occult Hepatitis B in high-risk populations in Kenya”
Role: Supervisor
Status: Data analysis

1.6.2 Ph. D

- Peris Auma Ambala (P97/38389/2016, Kenyatta University) PhD “Molecular characterization of *Filoviruses* circulating In Humans, Wild Caught Non-Human Primates, Bats and Rodents in Kenya”
Role: Supervisor
Status: Third year

1.7 Professional/Consultancy (Editor/Peer review in journals, Networks/Collaborations, External Examiner, Patents)

- School of Biological sciences, Jomo Kenyatta University of Science and Technology – Postgraduate External examiner

1.8 Community Service and Other Engagements

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1.9 Affiliation of Professional Bodies

- Member of the American Society for Microbiology; Global outreach programme (Member number 56590052)

- Member of the World Society for Virology

2.0 National and International awards and Recognitions

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2.1 Administrative Positions Held

2.1.1 Recognized university administrative positions

- Department of medical laboratory science examinations coordinator 2012-2015

- Director Kenyatta University Funeral Home, September 2019 to date