CURRICULUM VITAE



Wallace Dimbuson Bulimo

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PERSONAL DATA

Date of Birth: 23 Dec 1967 Nationality: Kenyan

Marital Status: Married, Two Children

Present Appointments:

1. Designation: Associate Professor

Position: Associate Professor and Researcher, Department of Biochemistry University of Nairobi;

http://profiles.uonbi.ac.ke/wallacebulimo/

Address:

Department of Biochemistry

School of Medicine

University of Nairobi

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Nairobi

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2. Designation: Chief Research Officer

Position: Principal Investigator and Virologist, the AFHSC-GEIS Influenza Program at USAMRU-K

http://www.usamrukenya-deid.org/dr-wallace-bulimo

Address:

The U.S. Army Medical Research Directorate - Kenya

P.O. Box 606, Village Market, 00621,

Nairobi,

Kenya

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E-mail: Wallace.Bulimo@usamru-k.org; bulimow@gmail.com;

EDUCATION PROFILE

Doctor of Philosophy in Molecular Virology (1999)

Thesis Title: The Role of UBCv1 Enzyme of African swine fever Virus. **Institution:** Institute for Animal Health, Pirbright/University of Hertfordshire, United Kingdom. **Supervisors:** Dr Linda K. Dixon, Prof. John Mayer.

Master of Science in Biochemistry (1997)

Thesis Title: A study to identify the presence of Interleukin 10 and Interferon gamma in Leukocytes during Theileria parva Infection in Cattle. Institutions: Institute for Animal Health, Compton/International Livestock Research Institute (ILRI)/Department of Biochemistry, University of Nairobi, Kenya. Supervisors: Prof. Dominic Makawiti, Dr Robert Collins and Prof. Declan McEever.

Bachelor of Science (Honors) in Biochemistry and Chemistry (1993)

Institution: University of Nairobi; Departments of Biochemistry and Chemistry

EMPLOYMENT HISTORY

Position	Organization	From	То	Current?
1. Associate	Department of Biochemistry	20 th June 2014	Present	Yes
Professor	University of Nairobi	20 Julie 2014	Present	163
2. Senior Lecturer	Department of Biochemistry,	05/05/2011	18/06/ 2014	No
	University of Nairobi	03/03/2011	16/00/ 2014	INO
3. Consulting	US Army Medical Research Unit –			
Virologist	Kenya (USAMRU-K)	01/05/2006	Present	Yes
4. Lecturer	Department of Biochemistry,	16/02/2002	04/05/2010	No
	University of Nairobi	16/02/2002	04/05/2010	No
5. BioNet-Africa	International Centre for Insect			
Research Intern	Physiology and Ecology (ICIPE)	01/06/2001	31/01/2002	No
6. Postdoctoral	Institute for Animal Health,	01/11/1000	20/12/2000	No
Research Fellow	Compton, Berkshire, UK	01/11/1999	30/12/2000	No
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PROFESSIONAL SKILLS ACQUIRED AND LINKAGES ESTABLISHED

Carried out my MSc, PhD and postdoctoral research activities at the Institute for Animal Health (IAH), the largest research institute in the United Kingdom dedicated to the study of infectious diseases of farm animals and one of eight research institutes of the Biotechnology and Biological Sciences Research Council (http://www.bbsrc.ac.uk/). The IAH (now called the Pirbright Institute http://www.pirbright.ac.uk/) is a world leading centre of excellence in research and surveillance of virus diseases of farm animals and viruses that spread from animals to humans. Working to enhance capability to contain control and eliminate these economically and medically important diseases the Institute's highly innovative fundamental and applied bioscience contributes to global food security and health improving quality of life for animals and people. I employed cutting edge molecular biology cell biology and genetic engineering techniques to study the African swine fever virus at the level of pathogenicity and viral replication.

During the Master of Science research project carried out through a collaborative agreement between IAH (http://www.pirbright.ac.uk/), ILRI (http://www.pirbright.ac.uk/), I acquired varied immunological cell biology and molecular biology techniques.

Since May 2006, I have been involved in setting up and coordinating networks of influenza and other respiratory diseases surveillance and research. The networks cover all geographical regions of Kenya as well as the East and Central African Region. Activities in Kenya involve the Kenya Medical Research Institute (KEMRI; http://www.kemri.org) the US Army Medical Research Unit – Kenya (USAMRU-K; http://www.kemri.org) the US Army Medical Research Unit – Kenya (USAMRU-K; http://www.mod.go.ke/) and the Centers for Disease Control and Prevention – Kenya (CDC-Kenya); http://www.mod.go.ke/) and the Centers for Disease Control and Prevention – Kenya (CDC-Kenya); http://www.cdckemri.org/). In the region, our collaborators in this network include the Makerere University Walter Reed Project (MUWRP) in Uganda, the University of Buea & the Global Virus Forecasting Initiative (both in the republic of Cameroon) and Tanzania Peoples' Defense Force (TPDF) Tanzania. Internationally, the program is supported by the US Department of Defense Armed Forces Health Surveillance Center Global Emerging Infections Surveillance and Response System (AFHSC-GEIS; http://www.afhsc.mil/geis). We also collaborate with the US Air Force School of Aerospace Medicine (USAFSAM; http://www.wpafb.af.mil/afrl/711hpw/usafsam.asp) and the Naval Health Research Center (NHRC; http://www.med.navy.mil/sites/nhrc/Pages/default.aspx).

PROFESSIONAL EXPERIENCES ACQUIRED

I have acquired broad experiences in clinical applications, training development, biomedical research, teaching, and mentorship.

- Supervised over 20 MScs and 7 PhDs to completion, all of whom have taken up key and strategic scientific research and administrative roles in leading institution in Kenya and globally.
- Supervised over 35 scientific staff that functioned to locate, identify, and respond to emerging
 infectious disease threats before they threatened Kenya and the larger world community,
 while serving as the director of the Kenya National Influenza Centre.
- Oversaw activities of numerous clinical surveillance sites throughout Kenya to conduct surveillance for influenza and influenza-like-illnesses (ILI) and Severe Acute Respiratory infections (SARI), e.g. RSV, adenovirus, metapneumovirus, parainfluenza and Enteroviruses.
- Served as Principal Investigator on numerous research protocols and coordinated activities on many other research protocols aimed at developing medical products and information to protect the health of Kenyans and the larger East Africa community.
- Established several scientific partnerships with academia and government agencies in Kenya and the United States to research influenza and other relevant infectious agents within the East African region.
- Conceived, established and led a vibrant internship program that educated, trained and guided young scientists, in addition to more experienced colleagues, to achieve maximum scientific impact while developing and mentoring future generations of biomedical scientists.
- In sum, proven ability to lead, teach, communicate, conduct scholarly research and mentor subordinates to reach peak levels of academic and scientific advancement.

Duties and Responsibilities at KEMRI/USAMRU-K

- Supervise the running for the Kenya National Influenza Center (NIC) laboratory.
- Provide technical and scientific expertise and advice in virology.
- Enforce conduct of the "Influenza Surveillance in Kenya" study according to the guidelines stipulated in the Walter Reed Army Institute of Research (WRAIR; http://wrair-www.army.mil/) and KMRI Ethical Review committees approved protocol.
- Oversee Quality Assurance/Quality Control and Biosecurity/Biosafety/Lab safety at the Kenya NIC

- Plan and lead the conduct of research at the NIC.
- Analyze and interpret data.
- Train and mentor technical staff and students of the NIC.
- Supervise technical staff and students of the NIC.
- Evaluate technical staff and students.
- Author scientific reports, technical publications and peer-reviewed articles and forward these to the GEIS coordinator/other collaborators of the program.
- Hold in custody patients' records, periodically make amendments to the approved protocol and communicate with the KEMRI and WRAIR IRBs.
- Attend scientific conference, seminars, technical working groups and other meeting relevant to the GEIS influenza surveillance program interests.
- Any other duties assigned by the GEIS coordinator, USAMRU-K Commander or Director
 KEMRI including communication with governments and the general public.

UNIVERSITY TEACHING AND SUPERVISION EXPERIENCE

Curriculum Development

- Together with key individuals, I (in the period April 2005 June 2006)
 conceptualized, planned and developed curricular and course programs and
 Regulations and Syllabi for Postgraduate Diploma (PGD), Master of Science (MSc.)
 and Doctor of Philosophy (PhD) Degree programs in Biotechnology and
 Bioinformatics for the Centre for Biotechnology and Bioinformatics (CEBIB;
 http://cebib.uonbi.ac.ke/), at the College of Physical and Biological Science (CBPS)
 of the university of Nairobi. This also involved development and validation of a
 business plan for the establishment of the Centre.
- In 2013, together with others, conceptualized planed and developed the course programs and regulations and syllabi for postgraduate Master of Science (MSc) degree program in Forensic Science, (http://biochem.uonbi.ac.ke/), at the Department of Biochemistry, School of Medicine (SOM), College of Health Sciences (CHS) of the University of Nairobi.

Doctorate Degree Supervision

Successfully supervised PhDs:

Zakayo Limiri Thaimuta. Effects of Stavudine on Mitochondrial Genome and Fatty Acid Oxidation and Their Interventions in Mouse Model. Department of Pathology, University of Nairobi; 2014. Dr Thaimuta is a lecturer in the Department of Pathology, University of Nairobi.

Evelyn G Wagaiyu: A Comparative Study to Assess Interleukin 1 Polymorphisms and Their Relationship with Chronic Periodontitis in Two Kenyan Coastal Communities. Department of Periodontology/Community and Preventive Dentistry School of Dental Sciences, College of Health Sciences, University of Nairobi; **2013**. Professor Wagaiyu is the immediate former Dean School of Dental Sciences, University of Nairobi.

Bonventure Juma. Molecular Epidemiology of Enterotoxigenic *E. coli* in Machakos District Hospital in Eastern Province. Department of Medical Microbiology, Jomo Kenyatta University of Agriculture and Technology; **2013**. Currently Dr Juma is a Senior Research Officer at the Centers for Disease Control and Prevention (CDC– Kenya).

George Gachara. Molecular Epidemiology and Evolution of the Pandemic Swine Origin Influenza Virus (S-OIV) H1N1 in Kenya. The School of Health Sciences Kenyatta University; **2013**. Dr Gachara is currently a lecturer at Kenyatta University, Nairobi, Kenya.

Edward Okoth. Epidemiology of African swine fever virus in wild and domesticated pigs in Kenya. Department of Pathology Public Health Pharmacology and Toxicology, University of Nairobi; **2012**. Currently, Dr Okoth is Research Scientist at the International Livestock Research Institute (ILRI).

Fred Lunyagi Eyase. Identification and characterization of the interacting partners of two *Plasmodium falciparum* cylin-dependent kinases Pfpk6 and Pfmrk. ITROMID, Jomo Kenyatta University of Agriculture and Technology (JKUAT); **2012**. Dr Eyase is currently the Senior Research Officer at the United States Army Medical Research Unit – Kenya.

Oyamo George Osanjo. Application of glycosylhydrolases in biocatalysis: Regioselective synthesis of fucosyl-oligosaccharides with α -L-fucosidases. Department of Biochemistry; University of Nairobi, **2007**. Currently, Dr Oyamo is a Senior Lecture at the Department of Pharmacology and Pharmacognosy, School of Pharmacy, University of Nairobi.

Laila Abubakar. Molecular Characterization of the Lectin-Trypsin complex from the midgut of the tsetse fly *Glossina fuscipes fuscipes* (Newstead) and its role in determining the susceptibility to trypanosome infection. PhD, Department of Biochemistry University of Nairobi, **2003**. Currently, Professor Abubakar the Deputy Vice-Chancelor in charge of Finance and Administration at the Technical University of Mombasa.

Current PhDs under supervision:

Lucy Wanjiru Kariuki. Genotypic Characterization of Rift Valley Fever Virus Isolates from Kenya. Department of Biochemistry, University of Nairobi.

Rachel Achila. Molecular Characterization of Adenoviruses Circulating in Kenya. ITROMID, Jomo Kenyatta University of Agriculture and Technology.

Rosemary Nzunza. Antigenic and Genetic Variability of Human Metapneumoviruses (hMPV) in Kenya. ITROMID, Jomo Kenyatta University of Agriculture and Technology.

Julia Wangui. The Variability in G Protein Gene of Human Respiratory Syncytial Viruses in Kenya. The School of Health Sciences, Kenyatta University.

Musa Otieno Ng'ayo: Etiology of Sub-Optimal Responses to Non-Nucleoside Reverse Transcriptase Inhibitor (NNRTI) among HIV patients in Nairobi, Kenya. Department of Pharmacology and Pharmacognosy, School of Pharmacy, University of Nairobi.

Francis M. Mbugua: Molecular Sub-Typing of Wild-Type Rubella Viruses Circulating In Kenya. Institute of Tropical Medicine and Infectious Diseases (ITROMID). Jomo Kenyatta University of Agriculture and Technology.

Osundwa Mulama Tom: Prevalence and Etiologic Role of Genes and Environmental Factors in Non Syndromic Cleft Lip and Palate in Kenyans. Institute of Tropical Medicine and Infectious Diseases (ITROMID). Jomo Kenyatta University of Agriculture and Technology.

Githaiga John. Novel Machine Learning Approaches to Cancer Disease Diagnostics in Human Body Fluid Media via Laser Raman Based Hyperspectral Imaging and Analysis Techniques. University of Nairobi.

Master of Science Degree Supervision

Successfully supervised MScs:

Lorna Jemosop Chebon. Population Genetics of *Plasmodium Falciparum* Surviving Artemisinin Treatment in Children Taking Part in an Efficacy Clinical Trial In Kisumu County; 2017

Lenata Anastacia Sipulwa. Molecular Characterization of Human Coronavirus Strains That Circulated in Kenya in 2009-2012. Institute of Tropical Medicine and Infectious Diseases (ITROMID). Jomo Kenyatta University of Agriculture and Technology; 2016

Gwen Gweyani Jumba. Molecular characterization of influenza B viruses isolate during influenza surveillance in Kenya from 2011-2012. UNITID, university of Nairobi; 2015

Janet Majanja. Analysis of Prostaglandin $F_{2\alpha}$ Synthase in Old and New-world species of Leishmania. Institute of Tropical Medicine and Infectious Diseases (ITROMID). Jomo Kenyatta University of Agriculture and Technology; 2015.

Silvanos Mukunzi Opanda. Genetic Characterization of Human Respiratory Enteroviruses Isolated in Kenya from 2008 to 2011. Institute of Tropical Medicine and Infectious Diseases (ITROMID). Jomo Kenyatta University of Agriculture and Technology; 2015.

Frederick Mbui. Genetic Analysis of Respiratory Adenoviruses among Pediatric Patients Attending New Nyanza Provincial General Hospital in the Period June 2010-2012. Department of Biochemistry, School of Medicine, University of Nairobi; 2015

Antony Mwololo. Determination of Human Papiloma Virus infections using biomarkers at Kenyatta National Hospital. Department of Biochemistry, School of Medicine, University of Nairobi; 2014.

Joshua Kimutai Kiptinness. Molecular characterization of HPIV1 in Children attending Mbagathi District hospital. ITROMID, Jomo Kenyatta University of Agriculture and Technology; 2013

Olubayo Luicer Anne Ingasia. Polymorphisms in *Pfcrt, Pfcytb* and *Pfmrp1* genes and their effects on antimalarial drug resistance in *Plasmodium falciparum* isolates in Western Kenya. ITROMID, Jomo Kenyatta University of Agriculture and Technology; 2013

Abdirahman Issak Abdi. Nucleotide sequence polymorphisms in the gene encoding Erythrocyte Binding Proteins, EBL-1 in Kenyan *P. falciparum* field isolates. Department of Biochemistry, University of Nairobi, 2012. Currently, Dr Abdi is a Postdoctoral Fellow working on Immunology of Malaria at the KEMRI-Wellcome Trust Research Program.

Samwel Morris Lifumo Symekher. Prevalence and Trends of Influenza and Parainfluenza Viruses in Hospitalised Children with Acute Respiratory Infection in Kilifi District Hospital, Kenya. School of Public Health and Community Development. Maseno University; 2012.

Dennis Wekesa Juma. Molecular monitoring of pfATPase6 single nucleotide polymorphism (SNPs) in relation to artemisinin resistance in Western Kenya. Institute of Tropical Medicine and Infectious Diseases. Jomo Kenyatta University of Agriculture and Technology; 2012

Linani Dickson Omucheni. Multispectral Imaging of Human Blood Media Applied to Malaria Diagnostics. Master of Science (M.Sc) in Physics, at the University of Nairobi; 2012

Tirus Wanyoike. Phylogenetic Analysis, Molecular Modeling and Activity Profiling of an Alpha –L-Fucosidase. Institute of Tropical Medicine and Infectious Diseases. Jomo Kenyatta University of Agriculture and Technology, 2010.

Paul Visendi. Creation of a public resource for housing and analyzing genomic data extracted from *Theileria parva* and other apicomplexan species to facilitate vaccine and diagnostic development. Centre for Biotechnology and Bioinformatics, University of Nairobi, 2010.

Eva Aluvaala. Probing the Trans Sialidase Activity of the Neuraminidase Derived From Human (H3N2) Influenza A Virus. Institute of Tropical Medicine and Infectious Diseases. Jomo Kenyatta University of Agriculture and Technology, 2010.

Nyamu, Emily N. IRF6 gene variants in Kenyan patients with non-syndromic cleft lip and palate. Department of Oral and Maxillofacial Surgery, University of Nairobi, 2009.

Solomon Gikundi. Molecular Characterization of Influenza A Subtypes in Kenya. Institute of Tropical Medicine and Infectious Diseases. Jomo Kenyatta University of Agriculture and Technology, 2009.

Victor O. Otieno. Design and Implementation of Avian Influenza Surveillance and Monitoring Program in Kenya using Environmental Sampling. Great Lakes University of Kisumu. Mr Otieno is a Research Officer at KEMRI/USAMRU-K, 2009.

Musa Abdul Hassan. Effect of serum lipid levels on the survival of three mouse strains following *Trypanosoma congolense* infection. Department of Biochemistry, University of Nairobi, 2006. Currently, Dr Hassan is a Postdoctoral Fellow in the USA

Evans N. Nyaboga. Characterization of transgenic Sweet Potato (*Ipomea batatas* L.) plants and the reaction of the transformation following virus infection. Department of Biochemistry, University of Nairobi, 2006. Currently, Mr Nyaboga is a PhD Student.

Edward Muge. Isolation of Functional Camel Single Domain Antibody Fragments against Pesticides (DDT and Pyrethrin) and Chloroquine. MSc, Department of Biochemistry, University of Nairobi, 2005. Currently, Dr Muge is a Lecturer at the Department of Biochemistry University of Nairobi.

Richard Kangethe. An evaluation of *Theileria Parva* homolog sequences for T-lymphocyte activity. MSc, Department of Biochemistry, University of Nairobi, 2005.

Fredrick L. Eyase. Identification and characterization of interacting partners of two *Plasmodium*

falciparum Cyclin-Dependent Kinases (CDKs); Pfpk6 and Pfmrk. MSc, Department of Biochemistry, Jomo Kentatta University of Agriculture and Technology, 2005. Currently, Dr Eyase is a Senior Research Officer with the US Army Medical Research Unit – Kenya.

Victor A. Mobegi. Genetic characterization of African Chicken using mitochondrial DNA D-loop sequences. MSc, Department of Biochemistry, University of Nairobi, 2005. Currently, Dr Mobegi is a Postdoctoral Fellow in the UK.

Leah Tsuma. The Isolation and Characterisation of Glycosidases from Extremophiles found in Kenyan Soda Lakes and Hot Springs. MSc, Department of Biochemistry, Jomo Kenyatta University of Agriculture and Technology, 2004.

Current MScs under supervision:

Sylvia Milanoi Kaburu. Molecular Characterization of Human Rhinovirus Strains Circulating in Kenya during a Surveillance of Influenza-Like-Illness. ITROMID, Jomo Kenyatta University of Agriculture and Technology.

Meshack Omondi Wadegu. Antiviral Susceptibility of Influenza A(H1N1) and Influenza A(H3N2) Isolates Obtained in Kenya During 2008-2011. ITROMID, Jomo Kenyatta University of Agriculture and Technology.

Ngina Winie. Chemometrics-Assisted X-Ray Fluorescence and Scattering Spectrometry of Trace Elements and Alterations in in vitro Plasmodium-Infected Blood Media. Department of Physics, University of Nairobi.

Musyoka Diana. Chemometrics-Assisted Laser Induced Breakdown Spectroanalysis of Human Blood Applied to Malaria Diagnostics. Department of Physics, University of Nairobi.

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Bachelors and Masters Degree Programs Taught at the University of Nairobi:

School/Faculty

1. School of Medicine
2. School of Medicine
3. Faculty of Science
4. School of Medicine
5. School of Medicine
6. School of Medicine
7. School of Medicine
8. School of Medicine

School of Medicine Biochemistry, Master of Medicine (Pediatrics)
 Faculty of Veterinary Medicine Biochemistry, Bachelor of Laboratory Technology 1st year
 School of Nursing Biochemistry, Bachelor of Science in Nursing
 School of Nursing Biochemistry, Masters of Science in Nursing

SENIOR MENTORSHIPS

Mentor for Dr Benson Wamalwa (Natural Resources Research Fellow), Department of Chemistry, University of Nairobi. **Program:** VolkswagenStiftung (Volkswagen Foundation Germany) Cooperative Research Projects in Sub-Saharan Africa. **Funded project**: Screening Polyextremophiles (Euro 100,000.00). Period: 2011-2013.

INTERNATIONAL JOURNAL REVIEWER

- 1. Insect Science and Its Application (ISSN: 0191-9040)
- 2. Biomedcentral (BMC) Infectious Diseases (ISSN: 1471-2334)

JOURNAL EDITORIAL BOARD

Editor, African Journal of Pharmacology and Therapeutics (ISSN: 2303-9841)

BOOK REVIEW

A Concise Treatise of Proteins and Nucleic acids. By Prof. Gabriel N. Magoma, Jomo Kenyatta University of Agriculture and Technology (JKUAT).

PROFESSIONAL AND ACADEMIC LEADERSHIP/MANAGEMENT: NATIONAL AND INTERNATIONAL

National:

- 1. Member of pre-selection committees for PhD applicants for Fellowships from the German Academic Exchange Service, DAAD, Nairobi Office (http://nairobi.daad.de/).
- 2. Member, Strategic Planning Committee, University of Nairobi Institute of Tropical and Infectious Diseases (UNITID).
- 3. Member, Centre for Biotechnology and Bioinformatics (CEBIB) Steering Committee, College of Physical and Biological Sciences (CBPS), University of Nairobi
- 4. Member, joint Kenya ministries of Health, Livestock development and Wildlife Zoonotic Diseases Technical Working Group (ZDTWG)

- 5. Member, Kenya Association for the Prevention of Tuberculosis and Lung Diseases (KAPTLD)
- 6. Member, Kenya National Influenza Taskforce (KNIT)
- 7. Director- Traditional Healthcare Integration Network (THIN)
- 8. Member, College of Health Sciences Library Committee
- 9. Member, Faculty of Veterinary Medicine Library Committee
- 10. Member, Department of Biochemistry Syllabi Review Committee
- 11. Member, Department of Biochemistry Laboratory Manual Preparation Committee
- 12. Member, College of Physical and Biological Sciences' Centre for Bioinformatics and Biotechnology (CEBIB) Stakeholders Committee
- 13. Coordinator, BSc. in Wildlife Management II (Biochemistry/Biotechnology)
- 14. Coordinator, MDS/M. Med. (Pediatrics) I (Biochemistry/Molecular Biology)
- 15. Resource person, Institutional Biosafety Committee (IBC), University of Nairobi.
- 16. Member, UoN College of Health Sciences Disability Mainstreaming Committee

International:

- Member, US Department of Defense Joint Influenza Surveillance Working Group (JISWG: 2007present)
- 2. Member, Africa Flu Alliance Initiative (AFA: 2010-present)
- 3. Member, African Network for Influenza Surveillance & Epidemiology (ANISE: 2009-present)

MEMBERSHIP IN LEARNED SOCIETIES

- 1. The Kenyan Society for Basic and Applied Pharmacology (KeSoBAP; 2011-present)
- 2. American Society for Tropical Medicine and Hygiene (2011-present)
- 3. International Society for Influenza and other Respiratory Virus Diseases (ISIRV: June 2007 present)
- 4. American Society for Microbiology; USA (ASM: 2004 present)
- 5. Biochemical Society of Kenya; Kenya (BSK: 1994 present)
- 6. Society for General Microbiology UK (SGM: 1995 2000)

SCHOLARSHIP AND MERITORIOUS AWARDS

- University of Nairobi School of Medicine Dean's Award winner for Excellence in Scholarship, Research & Student Supervision (2015).
- 2. University of Nairobi School of Medicine Dean's Award winner for Excellence in Scholarship, Research & Student Supervision (2014).

- 3. United States of America Government's International Conference on Emerging Infectious Diseases
 Leaders Program Finalist Award recognizing people who have contributed to significant
 improvements in the identification, prevention and control of emerging infectious diseases (2012).
- 4. BioNet-Africa Research Internship Scholarship Award to clone and characterize genes involved in transformation of Trypanosomes from bloodstream forms to procyclic (mid-gut) forms at ICIPE (2001).
- 5. IAH postdoctoral research fellowship Award to identify bovine CTL-specific *T.parva* epitopes (1999).
- 6. IAH PhD scholarship Award to study Molecular cell biology of the African swine fever virus at the IAH (1995).
- 7. ILRI studentship Award to study Immunology at the IAH, UK (1994).
- 8. The German Academic Exchange Service, DAAD scholarship Award to study for MSc. in Biochemistry at the University of Nairobi (1993).
- 9. Kenya Government Scholarship Award to study for BSc., University of Nairobi (1989).

RESEARCH GRANTS RECEIVED AND PROJECT ROLES

Year	Funding Agency	Proposal Title	Amount	Role
FY15	United States of America Department of Defense, Global Emerging Infections Surveillance and Response System (DoD GEIS).	Human Influenza Surveillance in Kenya	USD 241, 353	Principal Investigator and Virology Chief
FY 2010 -	United States of America	Human Influenza	USD	Principal
2014	Department of Defense, Global Emerging Infections Surveillance and Response System (DoD GEIS).	Surveillance in Kenya	5,000,000	Investigator and Virology Chief
FY 2010	United States of America Department of Defense, Global Emerging Infections Surveillance and Response System (DoD GEIS).	Establishment of a Viral Genomics Platform at the GEIS- Supported Kenya National Influenza Centre	USD 294,000	Proposal Writer, Principal Investigator and Virology Chief
FY2009	United States of America Department of Defense, Global Emerging Infections Surveillance and Response System (DoD GEIS).	Human Influenza Surveillance in Kenya	USD 2,000,000	Principal Investigator and Virology Chief
FY2009	World Health Organization (WHO); Kenya Country Office.	The 2009 Influenza A H1N1 Pandemic Response in Kenya and	KES 2,200,000	Principal Investigator and Virology
M/ Dellers				D 1C

		the Region		Chief
FY 2008	United States of America Department of Defense, Global Emerging Infections Surveillance and Response System (DoD GEIS).	Human Influenza Surveillance in Kenya	USD 2,000,000	Principal Investigator and Virology Chief
FY 2007	United States of America Department of Defense, Global Emerging Infections Surveillance and Response System (DoD GEIS).	Human Influenza Surveillance in Kenya	USD 2,000,000	Principal Investigator and Virology Chief

CURRENT RESEARCH THEMES

- 1. Surveillance of Respiratory viral diseases in Kenya
- 2. Viral Genomics
- 3. Functional genomics and proteomics of *P. falciparum*

RESEARCH INTERESTS

Centered on using molecular biology and Bioinformatics techniques to understand:

- 1. Molecular virology
- 2. Molecular mechanisms of immunity
- 3. Vaccine and diagnostics research
- 4. Host-parasite interactions
- 5. Biotechnology

COLLABORATIONS

Current projects:

Institution	Individual	Project
International Livestock Research Institute (ILRI)	Edward Okoth PhD	Molecular Epidemiology of the African Swine Fever Fever (ASF)
KEMRI Wellcome Trust, Kilifi	James Nokes PhD	The epidemiology and control of respiratory syncytial virus (RSV)
Kenya Medical Research Institute (KEMRI)	Rosemary Sang PhD	Characterization of Rift Valley Fever Virus (RVFV) Isolates from Kenya
US Army Medical Research Unit –Kenya (USAMRU-K)	Edwin Kamau PhD	Functional Genomics of Kenyan Plasmodium falciparum isolates

Completed collaborative projects:

Institution International Livestock Research Institute (ILRI)	Individual Evans Taracha PhD	Project East Coast Fever (ECF) vaccines
International Livestock Research Institute (ILRI)	Olivier Hanotte PhD	Genetic characterization of African Chicken
International Livestock Research Institute (ILRI)	Fuad Iraqi PhD	Effect of serum lipid levels on Trypanosoma congolense infections
International Livestock Research Institute (ILRI)	Richard Bishop PhD	Genomics of Nairobi Sheep Disease Virus
Kenya Agricultural Research Institute (KARI)	Elija M. Ateka PhD	Transgenic Sweet Potato (<i>Ipomea batatas L.</i>) resistant to sweet potato feathery mottle and chlorotic stunt viruses
Walter Reed Army Institute of Research (WRAIR)	Norman C. Waters PhD	Functional Genomics of Plasmodium falciparum Cyclin- Dependent Kinases (CDKs)

CONTRACT TRAINING

I offered Biosafety training course to all employees of the International Livestock Research Institute (ILRI) staff from the 20th to 24th February 2006. The activities involved conceptualization design and development of the course curriculum as well as course materials delivery of the lectures and overall evaluation of the course.

ETHICAL TRAINING IN RESEARCH

Trained and well versed and certified (annually) through the Collaborative Institutional
Training Initiative (CITI) program at the University of Miami
(https://www.citiprogram.org/index.cfm?pageID=86) in all matters dealing with ethics
of scientific research. Certification attained include: Animal Care and Use (ACU),
Biosafety and Biosecurity (BSS), Export Control (EC), Good Clinical Practice (GCP),
Human Subjects Research (HSR), Information Privacy and Security (IPS) and
Responsible Conduct of Research (RCR).

MAJOR NATIONAL AND REGIONAL INFRASTRUCTURAL ACCOMPLISHMENTS:

- 1. 2006 -2008: Established an East and Central Africa regional network of Influenza Surveillance involving military and civilians in Kenya, Uganda, Tanzania and Cameroon.
- 2010 2012: Helped establish scientific medical disease surveillance in the Kenya Military

CONFERENCE AND SYMPOSIA ORGANIZED:

- Conceptualized, fundraised and organized and hosted the 1st Medical and veterinary
 virus research in Kenya symposium at the Silvers Springs Hotel in Nairobi 8 9
 September 2011. The two days symposium brought together over 90 researchers with
 an interest in virus research in medical and veterinary fields drawn from both research
 and tertiary institutions from across the country. There were also representatives
 from the USA and Uganda.
- 2. Building on the success of the previous year, fundraised and organized and hosted the 2nd Medical and veterinary virus research symposium at the PanAfric Hotel in Nairobi 18th - 19th October 2012. The two days symposium brought together over 100 researchers with an interest in virus research in medical and veterinary fields

CONFERENCES AND SEMINARS ATTENDED

- 1. Options for the Control of Influenza VII. Cape Town, South Africa; 2013.
- USAMRU-K Department of Emerging Infections Training Workshop, Mombasa, Kenya
 2013
- Zoonotic Disease Forum workshop. September 23-25, 2010 the Great Rift Valley Lodge
 & Golf Resort, Naivasha, Kenya.
- National Inventory of Core Capabilities for Pandemic Influenza Preparedness and Response Meeting. August 31st, 2010- Silver Springs Hotel, Nairobi
- 5. GEIS 4th Annual Conference **2010**, Turtle Bay Beach Club 25-31 Jul.
- 6. The Africa Flu Alliance conference held in Marrakech Morocco from 3-4 June 2010.
- 7. The Zoonotic Technical working Group meeting organized by the Kenya Government ministries of Public Health & Sanitation and Livestock development at Safari Park Hotel on the 24th March, **2010**.
- 8. Avian Influenza and other Zoonotic Infections Project (AIZIP) Stakeholders'

- Consultation Workshop, Silver Springs Hotel Nairobi, 19th and 20th August, **2008**
- Knowledge Management Africa 2007 Second Biennial Conference. Theme: Knowledge to Remobilize Africa, held at the Kenyatta International Conference Centre, Nairobi Kenya on 17-19 July 2007.
- 10. The 9th Annual Joint Influenza Working Group held on 30-31 May **2007**, at the Admiral Kidd Conference Center, Naval Health Research Center, San Diego, CA, USA.
- 11. An international consultation—The Research Community's Response to Avian Influenza, with Special Reference to the Needs of Developing Countries, held 14-16 June 2006 in Nairobi, Kenya— organized by the International Food Policy Research Institute (IFPRI) and the International Livestock Research Institute (ILRI).
- 12. Third Annual Africa genome conference. The Theme of the Conference was: *A Time to Heal; Cracking Africa's Killer Diseases*. March 21-24, **2005**: Windsor Golf & Country Club, Nairobi, Kenya.

INVITED PRESENTATIONS AT CONFERENCES/SEMINARS:

- Influenza Virus Characterization: the Kenyan Perspective. National Influenza Surveillance Symposium 30th – 31st October 2013, Kampala Uganda.
- Influenza Surveillance in Kenya. 2nd MVVR-2 symposium held on 18th-19th October
 2012 Sarova Panafric Hotel Nairobi Kenya.
- Influenza Virus Characterization: Kenyan Summary for 2009 -2011. 3rd Annual African Network for Influenza Surveillance and Epidemiology Meeting Crowne plaza, Nairobi 1st -3rd February 2012.
- The Influenza Sentinel Surveillance System in Kenya and its Role in the 2009 Pandemic Influenza Outbreak Response. GEIS 4th Annual Conference 2010, Turtle Bay Beach Club 25-31 Jul.
- 5. Influenza Surveillance in Kenya. AFRIFLU: an international conference focusing on influenza in Africa, Marrakech, Morocco 1st and 2nd June 2010.
- National Pandemic Influenza Vaccination Awareness Lecture. Kenya Forces Memorial Hospital, Nairobi, Kenya. 7th May, 2010.
- GEIS Influenza surveillance in Sub-Saharan Africa. The 2010 US DOD Joint Influenza Surveillance Working Group in San Antonio, Texas at the Hyatt Regency Hill Country Resort and Spa 13-14 April 2010.
- 8. The Influenza Sentinel Surveillance System in Kenya: Three-and-Half Years on...

- KAPTLD Taskforce Steering group. 9th April 2010.
- 9. Influenza Taskforce Working Group Consultative Meeting to discuss a position paper answering the question on 'Whether the country really needs the vaccine' and 'What is the appropriate time for vaccination'. On 9th and 16th February, 2010.
- 10. The 1st National Scientific Lung Health Conference organized by the Kenya Ministry of Health at the Kenyatta International Conference Centre, Nairobi. Title: State of the Art in Respiratory Virus diagnosis. 8th October 2009. Presented a paper on Viral Diagnostics.
- 11. USAMRU-K GEIS overview. University of Nairobi, Department of Biochemistry. 6th October 2009.
- 12. Training on influenza cell culture and egg inoculation techniques organized by CDC Kenya at Silvers Springs Hotel, Nairobi. 3rd-14th August 2009.
- 13. Update of Influenza Surveillance Activities at USAMRU-Kenya. Influenza Meeting organized and hosted by KAPTLD for all Kenyan Healthcare Practitioners. 30th April 2009.
- 14. Influenza Sentinel Surveillance in Kenya. The Kenya Association for the Prevention of Tuberculosis and other Lung Diseases (KAPTLD) Taskforce. Nairobi 18th March 2009.
- 15. An Assessment of the Implementation of the First Comprehensive Influenza Surveillance Activity in Kenya. The Nairobi Hospital Continuing Medical Education. 06^{th} May 2008.
- 16. The regional Multinational Influenza Seasonal Mortality Study (MISMS) meeting for Africa in Senegal on April 21-25, 2009. Title: Presented a paper titled: Molecular Characterization and Phylogenetic Analysis of Human Influenza A/H1N1 Viruses Circulating in Kenya, 2007-2008.
- 17. The First Comprehensive Influenza Surveillance Activity in Kenya. Armed Forces Memorial Hospital, Kenya Department of Defense. 10th Aug 2007.
- 18. The Afriflu: an international conference focusing on influenza in Africa held in Marrakech, Morocco from 1-2 June 2010. Presented a paper titled: Influenza Surveillance in Kenya.
- 19. The DOD Joint Influenza Surveillance Working Group (JSWG) meeting held in San Antonio, Texas at the Hyatt Regency Hill Country Resort and Spa from 13-14th April 2010. Presented a paper title: GEIS Influenza surveillance in Sub-Saharan Africa

- 20. Africa Influenza Scientific Symposium on 7–11 December 2009 in Johannesburg South Africa. Elected a member of the Steering Committee and chaired a number of the sessions.
- 21. Laboratory Training course on "Diagnosis of Influenza: Laboratory for Emerging Infectious Diseases; Faculty of Science; University of Buea Republic of Cameroon, November 12-20, 2009. Participated as a trainer
- 22. GEIS 3RD Annual Conference 2009, Voi Wildlife Lodge 05-11 Jul. Presented an overview/update and observations on "Influenza Surveillance on Kenya" Protocol.
- 23. The Kenya Paediatric Association Annual Scientific Conference held on 13th 17th

 August 2008, at the Travelers Beach Hotel, Mombasa Kenya. Presented a paper entitled: *Influenza Impact on Child Health*
- 24. The 10th Annual Joint Influenza Working Group held on 29 April 1 May 2008, at the El Tropicano Riverwalk; San Antonio, TX, USA. Presented a paper entitled: Update of Influenza Surveillance Activities at USAMRU-Kenya
- 25. Sanofi Pasteur's Annual Influenza Meeting at the Grand Regency Hotel 26th March, 2008. Theme: Advancing the Influenza Agenda in Kenya. Presented a paper entitled: An Assessment of the Implementation of the First Comprehensive Influenza Surveillance Activity in Kenya
- 26. Promoting Biosafety and Biosecurity within the Life Sciences: An International Workshop in East Africa. Hotel Africana, Kampala, Uganda. March 11-12 2008. Round Table panelist.
- 27. International Symposium on Avian Influenza: Epidemiologic, Basic and Applied Research. The Claridges; New Delhi. India October 29-31, 2007. Presented a paper: Influenza Surveillance and Sub-typing in Kenya, 2006-07
- 28. DoD Global Emerging Infections Surveillance and Response System (DoD-GEIS) Annual Conference held on July 22-28, 2007 at Mnarani Beach Club, Kilifi, Kenya. Presented a talk entitled: *Overview Human Influenza Protocol, and Molecular diagnostics of Respiratory illnesses*.
- 29. Options for the Control of Influenza VII held on June 17-23, 2007 at Metro Toronto Convention Centre, 255 Front Street, West Toronto, Ontario, Canada. Presented a poster entitled: *Description of a Distinct Antigenic Drift Variant of Influenza A (H3N2) Circulating in Nairobi, Kenya*.

- 30. Avian Influenza Consultation Meeting focusing on the research community's response to avian influenza, with special reference to the needs of developing countries. I chaired a group session focusing on training as a service needs to support preparedness and emergency response in developing countries. The meeting was organized by International Livestock Research Institute (ILRI) and International Food Policy Research Institute (IFPRI). 14th-16th June, 2006: Windsor Golf & Country Club, Nairobi; Kenya.
- 31. Kenya State of Environment (SoE) Report 2005 working group. The theme focused on: Pollution and Waste Management. Chaired a session on identification of pollution indicators. November 9-11, 2005: The College of Insurance, Nairobi, Kenya
- 32. Training Course for Field Staff on Deliberate Release of Genetically Modified

 Organisms as per the Biosafety Bill. Presented a paper entitled: *Introduction to Modern (Molecular) Biotechnology*. November 02-04, 2005: PanAfric Hotel; Nairobi,

 Kenya.
- 33. A Phase I/II Clinical Trial to Evaluate the Safety and Immunogenicity of a Multiclade HIV-1 DNA Plasmid Vaccine Boosted by a Multiclade HIV-1 Recombinant Adenovirus-5 Vector Vaccine in HIV Uninfected Adult Volunteers in East Africa. As a resource person of the University of Nairobi Institutional Biosafety Committee; Presented a Paper entitled: *Use of Viral Vectors in Vaccine Delivery and Gene Therapy*. August19-20, 2005: Pan Afric Hotel, Nairobi, Kenya.

PUBLICATIONS

Curricular and Policy Documents:

James Ochanda, Francis Mulaa, **Wallace Bulimo**, Catherine Getao *et al.*, Curricular Regulations and Syllabi for Postgraduate Diploma (PGD) Master of Science (MSc) and Doctor of Philosophy (PhD) Degree programs in Biotechnology and Bioinformatics; the Centre for Biotechnology and Bioinformatics College of Physical and Biological Sciences University of Nairobi.(2006).

Oral and Poster presentations:

- 1. Achilla. RA, **Bulimo. WD**, Majanja. JM, Wadegu. MO, Mukunzi. SO, et al. **Influenza surveillance in Kenya2006-2013:** experiences and lessons learned 2014 16-17 October 2014; Hilton Hotel; Nairobi, Kenya.
- Gachara G, Symekher S, Otieno M, Magana J, Opot B, et al. Origins, Molecular Epidemiology and Genetic Diversity of Influenza A(H1N1)pdm09 Virus in Kenya: A Bayesian Coalescent Analysis; 2014 16-17 October 2014; Hilton Hotel; Nairobi, Kenya.
- 3. Jumba G, Gachara G, Bulimo W. Neuraminidase Inhibitor activities on Influenza B isolates obtained in Kenya, 2011-2012; 2014 16-17 October 2014; Hilton Hotel; Nairobi, Kenya.
- 4. Majanja J, **Bulimo W**, Achilla R, Wadegu M, Mukunzi S, et al. **Seasonal trend of Influenza in Kenya from January - October 2013; 2014** 16-17 October 2014; Hilton Hotel; Nairobi, Kenya.
- Mbui FM, Achila RA, Opot BH, Wadegu MO, Majanja JM, et al. Phylogenetic characterization of respiratory human adenoviruses isolated from pediatrics patients in New Nyanza Provincial General Hospital; Kenya.; 2014 16-17 October 2014; Hilton Hotel; Nairobi, Kenya.
- 6. Milanoi S, Opanda S, Opot B, Gachara G, Ongus J, et al. Species and Serotype Diversity of Human Rhinoviruses from patients presenting with Influenza like illness in Kenya in 2008.; 2014 16-17 October 2014; Hilton Hotel; Nairobi, Kenya.
- 7. Nyambura J, Achilla R, Mitei K, Mukunzi S, Njiri J, et al. Co-circulation of Human Parainfluenza viruses in Kenya, Jan 2013-Sep 2013; 2014 16-17 October 2014; Hilton Hotel; Nairobi, Kenya.
- 8. Ocholla S, Jumba G, **Bulimo W**, Achilla R, Wadegu MO, et al. **The Appropriateness of WHO influenza B vaccine component to Kenya in 2011-2012**; 2014 16-17 October 2014; Hilton Hotel; Nairobi, Kenya.
- 9. Opanda S, Wamunyokoli F, Khamadi S, Rodney C, **Bulimo W**. **Molecular typing of respiratory human enteroviruses** isolated in Kenya between 2008 -2011 using the VP1 gene; 2014 16-17 October 2014; Hilton Hotel; Nairobi, Kenya.
- 10. Sipulwa LA, Ongus JR, Bulimo WD. **Molecular characterization of human coronavirus circulating in Kenya, 2009-2012; 2014 16-17 October 2014**; Hilton Hotel; Nairobi, Kenya.
- 11. Wadegu M, Bulimo W, Osanjo G, Wamunyokoli F, Coldren R. Neuraminidase Inhibitor Susceptibility of Influenza A isolates obtained in Kenya, 2008-2011.; 2014; Hilton Hotel; Nairobi, Kenya.
- 12. Wangui J, **Bulimo W**, Nokes J, Wurapa E, Nyaigoti C, et al. **Genotypic Diversity of HRSV-A in out-patients with Acute Respiratory Infections in Kenya 2007-2010**; 2014 16-17 October 2014; Hilton Hotel; Nairobi, Kenya.
- 13. Sylvia M. Kaburu, Wallace D. Bulimo, Juliet Ongus and George Gachara. **Contribution of Human rhinovirus infections**among patients with influenza-like illness in Kenya. The 16th International congress on Infectious diseases, 2nd April-5th April 2014, Cape Town, South Africa.
- 14. Stephen Ocholla, Silvanos Mukunzi, Wallace D. Bulimo, Rachel A. Achilla, Janet Majanja, Meshack Wadegu, Finnley Osuna, Janet Nyambura, Josphat Mwangi, Ken Mitei, Julia Wangui, James Njiri, Benjamin Opot, David C. Schnabel, Eyako K. Wurapa. A Sudden Switch of Circulation of Influenza B Lineages in Kenya in the Period 2007 2013. American Society of Tropical Medicine and Hygiene (ASTMH) 62nd Annual Meeting November 13-17, 2013 Marriott Wardman Park. Washington, DC, USA.
- 15. Silvanos Mukunzi, Wallace D. Bulimo, Rachael A. Achilla, Meshack Wadegu, Janet Majanja, Benjamin Opot, Finnley Osuna, Stephen Ocholla, Janet Muthoni, Keneth Kibet, Josephat Mwangi, James Njiri, and Eyako Wurapa. Molecular Characterization of Human Enterovirus 68 Isolated in Kenya During 2008 to 2011. American Society of Tropical Medicine and Hygiene (ASTMH) 62nd Annual Meeting November 13-17, 2013 Marriott Wardman Park. Washington, DC,

USA.

- 16. Nzunza R, Wurapa E, Kariuki N, Chek J, Ongus J, **Bulimo W**. **Epidemiological and clinical description of human metapneumovirus infectious diseases in Mbagathi District Hospital, Kenya, in 2008**. In: Options for the Control of Influenza VIII. Cape Town, South Africa; 2013:
- 17. Mukunzi S, **Bulimo W**, Achilla R, Wadegu M, Majanja J, Opot B, Osuna F, Muthoni J, Njiri J, Mwangi J, Kibet K, Ochola S, Wurapa E. **Genetic variants of influenza A (H1N1) pdm09 virus circulating in Kenya, 2010 to 2011**. In: Options for the control of influenza VII. Capetown, South Africa; 2013.
- 18. Mitei. K, **Bulimo. W**, Achilla. R, Majanja. J, Wadegu. M, Mukunzi. S, Mwangi. J, Wangui. J, Osuna. F, Opot. B, Ochola. S, Njiri. J, Wurapa. E. **Detection of Respiratory Viruses other than Influenza in Children in Kenya, 2007-2011**. In: XV International Symposium on Respiratory Viral Infections. Rotterdam, Netherlands: The Macrae Foundation, Rancho Santa Fe, CA 92067; 2013.
- 19. Osuna. F, **Bulimo. W**, Achilla. R, Majanja. J, Wadegu. M, Mukunzi. S, Njiri. J, Mwangi. J, Opot. B, Mitei. K, Nyambura. J, Wurapa. E. **Molecular Evolution of HA1 Gene of the Influenza A (H1N1) pdm09 Strain in Kenya During the 2009-2010 Period**. In: XV International Symposium on Respiratory Viral Infections. Rotterdam, Netherlands; 2013.
- 20. Wadegu M, **Bulimo W**, Achilla R, Mukunzi S, Majanja J, Opot B, Osuna F, Muthoni J, Njiri J, Mwangi J, Kibet K, Ocholla S, Wurapa E. **Characterization of neuraminidase inhibitor susceptibility of influenza A isolates obtained in Kenya, 2008-2011**. In: Options for the Control of Influenza VII. Cape Town, South Africa; 2013.
- 21. Keneth Mitei, **Wallace Bulimo**, Rachel Achilla, Janet Majanja, Meshack Wadegu, Silvanos Mukunzi, Josephat Mwangi, Julia Wangui, Benjamin Opot, Finnley Osuna, James Njiri and Eyako K. Wurapa. **Human Parainfluenza Viruses Infections in Children, Kenya (2007-2011).** 3rd Annual African Network for Influenza Surveillance and Epidemiology Meeting Crowne plaza, Nairobi 1st -3rd February 2012.
- 22. Gachara George, Symekher Samuel, Mbithi John, Magana Japheth, **Bulimo Wallace**. **Analysis of Antigenic Drift in the**Neuraminidase (NA) gene of Pandemic H1N1 Influenza A Virus in Kenya. 3rd Annual African Network for Influenza

 Surveillance and Epidemiology Meeting at Crowne plaza, Nairobi 1st -3rd February 2012.
- 23. Meshack Wadegu, Wallace D. Bulimo, Rachel A. Achilla, Janet Majanja, Silvanos Mukunzi, Finnley Osuna, Julia Wangui, Janet Nyambura, James Njiri, Benjamin Opot, David C. Schnabel, Eyako K. Wurapa. Molecular Antiviral Susceptibility Testing of Influenza A Virus Isolates Obtained in Kenya in the year 2008-2009. 3rd Annual African Network for Influenza Surveillance and Epidemiology Meeting at Crowne plaza, Nairobi 1st -3rd February 2012.
- 24. Janet Majanja, Wallace Bulimo, Rachel Achilla, Meshack Wadegu, Silvanos Mukunzi, Josephat Mwangi, Julia Wangui'Finnley Osuna' Janet Nyambura, Benjamin Opot' James Njiri¹and Eyako K. Wurapa. Molecular characterization of human Influenza B viruses circulating in Kenya during the period 2008-2009. 3rd Annual African Network for Influenza Surveillance and Epidemiology Meeting at Crowne plaza, Nairobi 1st -3rd February 2012.
- 25. Gachara, G, Symekher, S, Mbithi, J, Magana J, Bulimo, W. Sequence Analysis of the Neuraminidase (NA) Gene of Pandemic H1N1 Influenza A Virus in Kenya. XIV International Symposium on Respiratory Viral Infections at Istanbul, Turkey 23-26 March 2012.
- 26. Gachara, G, Symekher, S, Mbithi, J, Magana J, Bulimo, W. Comparison of Selection Pressures on the Haemagglutinin (HA) Gene of Pandemic (2009) and Seasonal Influenza A Viruses in Kenya. XIV International Symposium on Respiratory Viral Infections at Istanbul, Turkey 23-26 March 2012.
- 27. Meshack Wadegu , Wallace D. Bulimo, Rachel A. Achilla, Janet Majanja, Silvanos Mukunzi, Finnley Osuna, Julia Wan-gui , Ken Mitei, Stephen Ocholla, Janet Nyambura, Josephat Mwangi, James Njiri , Benjamin Opot, David C. Schnabel, Eyako K. Wurapa. Genotypic characterization of Oseltamivir susceptibility of Influenza A viruses isolated in Kenya from 2008 to 2011. 15th International Congress on Infectious Diseases Bangkok Thailand June 13th -16th 2012.

- 28. Janet Nyambura, Wallace D. Bulimo, Rachel A. Achilla, Janet Majanja, Silvanos Mukunzi, Finnley Osuna, Julia Wangui, James Njiri, Benjamin Opot, Meshack Wadegu, Josphat Mwangi, Eyako K. Wurapa. Initial Spatial and Temporal Distribution / Dynamics of Pandemic H1N1 Influenza Virus in Kenya between August 2009 and August 2010.15th International Congress on Infectious Diseases Bangkok Thailand June 13th -16th 2012.
- 29. Julia Wangui, **Wallace Bulimo**, James Nokes, Charles Nyaigoti, Clayton Onyango, Rachel Achilla and Eyako Wurapa. **Prevalence of Acute Respiratory Infections Caused by RSV and Adenoviruses, Kenya in 2007 –2009.** 15th International Congress on Infectious Diseases Bangkok Thailand June 13th -16th 2012.
- 30. Finnley Osuna, Wallace Bulimo, Janet Majanja, Meshack Wadegu, Silvanos Mukunzi, James Njiri, Josphat Mwangi, Benjamin Opot, Kenneth Mitei, Janet Nyambura, Rachel Achilla, and Eyako Wurapa. Surveillance of Respiratory Syncytial Virus in Kenya from 2006-2010. 15th International Congress on Infectious Diseases Bangkok Thailand June 13th -16th 2012.
- 31. K. Mitei, **W. Bulimo**, R. Achilla, J. Majanja, J. Mwangi, J. Njiri, E. Wurapa. **A review of laboratory-confirmed cases of human parainfluenza viruses in Kenya (2007-2011).** 15th International Congress on Infectious Diseases Bangkok Thailand
 June 13th -16th 2012.
- 32. RA Achilla, **WD Bulimo**, JM Majanja, MO Wadegu, SO Mukunzi, BH Opot J Mwangi, JW Mwangi, J.O. Njiri, F Osuna, JM Nyambura, SO Ocholla, KM Mitei, and EK Wurapa. "**Drastic decline of pandemic (2009) H1N1 Influenza cases in sentinel surveillance sites in Kenya; May 2011-May 2012."** International Society for Influenza and other respiratory virus diseases conference Munich Germany 5th-8th September 2012.
- 33. Benjamin Opot, Finley Osuna, George Gachara, Meshack Wadegu, Rachel Achilla, Janet Majanja, Eyako Wurapa and Wallace Bulimo. Analyses of selection pressure on the Hemagglutinin gene of Influenza A/H3N2 Viruses circulating in Kenya 2007-2011. 2nd MVVR-2 symposium held on 18th-19th October 2012 Sarova Panafric Hotel Nairobi.
- 34. Finnley Osuna, **Wallace Bulimo**, Rachel Achilla' Benjamin Opot, Meshack Wadegu, Silvanos Opanda, Keneth Mitei, James Njiri, Janet Nyambura, Josphat Mwangi, Janet Majanja and Eyako Wurapa. **Amino acid changes at the hemagglutinin antigenic site amongst Kenyan Influenza A(H1N1)pdm09 viruses in 2009-2011.** 2nd MVVR-2 symposium held on 18th-19th

 October 2012 Sarova Panafric Hotel Nairobi Kenya.
- 35. Joshua Kiptinness, Eyako Wurapa, **Wallace Bulimo**, Fred Wamunyokoli. **Molecular Characterization of HPIV1 in Infants Attending Mbagathi District Hospital, Nairobi, Kenya**. 2nd MVVR-2 symposium held on 18th-19th October 2012 Sarova Panafric Hotel Nairobi Kenya.
- 36. Julia Wangui, **Wallace Bulimo**, James Nokes, Charles Nyaigoti, Clayton Onyango, Rachel Achilla, Meshack Wadegu, and Eyako Wurapa. *Prevalence of* Respiratory Syncytial Virus in Out-Patients with Acute Respiratory Infections in Kenya in **2007 2009**. 2nd MVVR-2 symposium held on 18th-19th October 2012 Sarova Panafric Hotel Nairobi Kenya.
- 37. Keneth Mitei, **Wallace Bulimo**, Rachel Achilla, Janet Majanja, Meshack Wadegu, Silvanos Mukunzi, Josephat Mwangi, Julia Wangui, Benjamin Opot Finnley Osuna, Janet Nyambura, James Njiri and Eyako K. Wurapa. **Surveillance of Human Parainfluenza viruses in Kenya during the 2007-2011 Period.** 2nd MVVR-2 symposium held on 18th-19th October 2012

 Sarova Panafric Hotel Nairobi Kenya.
- 38. Meshack Wadegu, **Wallace D. Bulimo**, Rachel A. Achilla, Janet Majanja, Silvanos Mukunzi, Finnley Osuna, Julia Wangui, James Njiri, Benjamin Opot, David C. Schnabel, Eyako K. Wurapa. **Genotypic characterization of Resistance to**Neuraminidase Inhibitors amongst Influenza A viruses that circulated in Kenya from 2008 to 2011. 2nd MVVR-2 symposium held on 18th-19th October 2012 Sarova Panafric Hotel Nairobi Kenya
- 39. Nzunza Rosemary, Wurapa Eyako, Kariuki Njenga, Chek John, Ongus Juliette, **Bulimo Wallace**. **Epidemiological and Clinical Description of Human Metapneumovirus Infections in Mbagathi District Hospital, Kenya in 2008.** 2nd MVVR-2 symposium held on 18th-19th October 2012 Sarova Panafric Hotel Nairobi Kenya.

- 40. Rachel A. Achilla, Wallace D. Bulimo, Janet M. Majanja, Meshack O. Wadegu, Silvanus O. Mukunzi, Josphat Mwangi, Julia W. Mwangi, James O. Njiri, Benjamin H. Opot and Eyako K. Wurapa. Respiratory Adenovirus Species Circulating in Kenya From 2007-2010. 2nd MVVR-2 symposium held on 18th-19th October 2012 Sarova Panafric Hotel Nairobi Kenya
- 41. Samwel M.L. Symekher, **Wallace D. Bulimo**, Rose Kakai, James Simwa, Annette Sang, and Japhet Magana' **Epidemiology** and Molecular Characterization of Influenza Viruses Isolated From Children Admitted at The Kenyatta National **Hospital in April-July 2008**. 2nd MVVR-2 symposium held on 18th-19th October 2012 Sarova Panafric Hotel Nairobi Kenya
- 42. Silvanos Mukunzi, **Wallace D. Bulimo**, Rachel A. Achilla, Meshack Wadegu, Janet Majanja, Benjamin Opot, Finnley Osuna, Alice Ketta, James Njiri, Josephat Mwangi and Eyako Wurapa. **Molecular Characterization of Human Enterovirus 68 Strains Circulating in Kenya between 2008 2010.** 2nd MVVR-2 symposium held on 18th-19th October 2012 Sarova Panafric Hotel Nairobi Kenya.
- 43. Alice Ketta, **Wallace Bulimo**, Rachel Achilla, Meshack Wadegu, Janet Majanja, Silvanos Opanda, Benjamin Opot, Finnley Osuna, Janet Muthoni, Keneth Mitei, Julia Wangui, James Njiri, Josephat Mwangi and Eyako Wurapa. **Respiratory Non-Influenza viruses circulating in Kenya between January–August 2012. 2nd MVVR-2 symposium held on 18th-19th October 2012 Sarova Panafric Hotel Nairobi Kenya.**
- 44. Angeyo HK, Kaduki KA, **Bulimo DW**, Dehayem-Massop A. 2012. **Developments in Medical Elementology and Spectral Diagnostics of Disease via Chemometrics and Machine Learning Assisted Trace Spectroanalytics and Imaging Towards Applications in Nanomedicine**, 1st Pan-African Summer School in Nanomedicine, Pretoria, South Africa.
- 45. Omucheni DL, Kaduki KA, **Bulimo WD**, Angeyo HK. 2012. **Application of Principal Component Analysis (PCA) to Multispectral Imaging Microscopy for Malaria Diagnostics**, African Spectral Imaging Network (AFSIN) International Workshop on Spectral Imaging in Remote Sensing, Nairobi, Kenya.
- 46. Omucheni DL, Angeyo HK, Kaduki KA, **Bulimo WD**. 2012. **Utility of Multivariate Chemometrics Techniques in Multispectral Image Analysis: An Application to Malaria Diagnostics**, 2nd African-European Conference on Chemometrics, Stellenbosch, South Africa.
- 47. Silvanos Mukunzi, **Wallace D. Bulimo**, Rachel A. Achilla, Meshack Wadegu, Janet Majanja, Denis Mwala, Eyako Wurapa. **Genetic analysis of Influenza A [H3N2] viruses co-circulating with pandemic H1N1 virus in Kenya Year 2009-2010.** 2nd Africa Network of Influenza Surveillance and Epidemiology (ANISE) Conference, Accra, Ghana, January 11th-12th 2011.
- 48. Rachel Achilla, **Wallace Bulimo**, David Schnabel, Eyako Wurapa. **Characterization of Adenoviruses Circulating in Kenya.**2nd Africa Network of Influenza Surveillance and Epidemiology (ANISE) Conference, Accra, Ghana, January 11th-12th
 2011.
- 49. Gachara George, Symekher Samuel, Mbithi John, Simwa James, Ng'ayo Musa, **Bulimo Wallace**. **Amino acid sequence** analysis and identification of mutations in the NS gene of 2009 influenza A (H1N1) isolates from Kenya. 2nd Africa Network of Influenza Surveillance and Epidemiology (ANISE) Conference, Accra, Ghana, January 11th-12th 2011.
- 50. Gachara George, Symekher Samuel, Mbithi John, Simwa James, **Bulimo Wallace**. **Changes in Haemagglutinin epitopes of human influenza B viruses in Kenya, 2005-2009.** 2nd Africa Network of Influenza Surveillance and Epidemiology (ANISE) Conference, Accra, Ghana, January 11th-12th 2011.
- 51. Finnley Osuna, **Wallace Bulimo**, Rachel Achilla, Janet Majanja, Meshack Wadegu, Silvanos Mukunzi, Dennis Mwala, Josephat Mwangi, Julia Wangui, David Schnabel, Eyako K. Wurapa. **Survey of Respiratory Syncytial Virus Occurrences in Kenya from 2006-2010**. The XIII International Symposium on Respiratory Viral Infections, the Rome Marriott Park Hotel, Rome, Italy, 13-16 March 2011.
- 52. Janet Majanja, **Wallace Bulimo**, Rachel Achilla, Meshack Wadegu, Silvanos Mukunzi, Dennis Mwala, Josephat Mwangi, Julia Wangui, Finnley Osuna, David Schnabel, Eyako K. Wurapa. **Non-Influenza Respiratory Virus Infections in Kenya:**

- **2007-2010.** The XIII International Symposium on Respiratory Viral Infections , the Rome Marriott Park Hotel, Rome, Italy, 13-16 March 2011. (Oral Presentation)
- 53. Finnley Osuna, Rachel Achilla, David Schnabel, Janet Majanja, Meshack Wadegu, Silvanos Mukunzi, James Njiri, Benjamin Opot, Eyako Wurapa and Wallace Bulimo. Co-circulating Respiratory Viral Pathogens during the pH1N1 Outbreak of 2009 In Kenya. 1st International Scientific Conference at the College of Health Sciences University of Nairobi from 15th-17th June 2011.
- 54. Silvanos Mukunzi, Eyako Wurapa, Rachael Achilla, Meshack Wadegu, Janet Majanja, Julia Wangui, Finnley Osuna, James Njiri, Josphat Mwangi and Wallace Bulimo. Many pandemic Influenza A (H1N1) viruses that circulated in Kenya during the 2009-2010 Influenza seasons belonged to clade 7. 1st International Scientific Conference at the College of Health Sciences University of Nairobi from 15th-17th June 2011.
- 55. Benjamin Opot, Finley Osuna, Meshack Wadegu, Rachel Achilla, Eyako Wurapa and Wallace Bulimo. Establishment of

 DNA sequencing capacity at the Kenyan National Influenza Centre to underpin molecular virology research at

 USAMRU-K. 1st International Scientific Conference at the College of Health Sciences University of Nairobi from 15th-17th

 Lune 2011
- 56. Achilla A. R, Wurapa K. E, **Bulimo D. W**. **Respiratory adenovirus Species Circulating In Kenya, 2007-2010.** 1st International Scientific Conference at the College of Health Sciences University of Nairobi from 15th-17th June 2011. (Oral Presentation).
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CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe me, my qualifications, and my experience.

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