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CAROLINE WANGARI NGUGI

1.0 PERSONAL INFORMATION

NAME : Dr. Caroline Wangari Ngugi

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NATIONALITY: Kenyan

GENDER : Female

DATE OF BIRTH : 27th January 1982

1.2 Personal Profile

- I am a Passionate, self-driven lecturer and researcher with over 10 years in both academia and research at different levels. A strong background in medical microbiology and molecular epidemiology with strong interest in creating research ideas that will enhance the nation's efforts in the management and control of cancer, infectious and other related diseases as well improving maternal health care. Able to use own initiative and work as part of a team, proven leadership skills, including developing award winning research grants, managing and motivating research teams to achieve research goals and objectives. Noted as an effective communicator at all levels of research and academia and have the ability and passion of mentoring students to achieve high academic and research qualifications. Above all I am a person of integrity. I have acquired training in public policy and management as well as in leadership.
- Strong proficiency in developing research proposals, reports, manuscripts and academic curriculums with strong adherence to regulatory standards.
- Leadership qualities working with Boards of management at board and committee level including: Chairman, Board of Governors Githuya Secondary School, Founder Member and Treasurer of Kenya National Young Academy of Sciences, committee member Infectious and Parasitic Disease programme-KEMRI, committee Member Africa-ai-Japan Project, committee

Key Skills

Team Leadership

- Able to translate research strategy and objectives into actionable plans for the team and inspire people to conduct research and deliver results beyond expectations
- Plays a highly influential role in nurturing positive organisational culture that focuses on creating the right environment for people and teams to flourish. Recognizes team and individual contribution

Drive for Results:

- Demonstrable track record exceeding role requirements evidenced by different research projects carried out successfully and the academic achievements obtained continuously over the years that have seen me rise from a graduate assistant.
- Identifies obstacles to achieving the organization's strategy; anticipates and overcomes barriers in order to complete important tasks on time, well able to adapt to complex situations keeping in mind the goals ahead

Coaching and Mentoring:

- Proactively creates inspiring, challenging and relevant development opportunities for my students and translates them into clear, mutually agreed targets and monitors progress as they progress in their academics successfully
- Selects communication methods based on the needs of the recipients in order to assess strengths and weaknesses and thus agree on targets with co-workers and other team members
- Mentoring colleagues (3) from my Department, with proven positive outcomes such as career and educational development.
- Students mentored and supervised include over 25 postgraduate students and undergraduate students

Planning & Organisation

- Trained in proposal development and management and have successfully overseen the development of award winning grants and implementation of projects
- Breaks projects into key activities; identifies priorities and objectives, as well as resource, timing and cost implications

2.0 QUALIFICATIONS

2.1 Academic Qualifications

- 1) 2009: PhD in Epidemiology (Molecular epidemiology) Jomo Kenyatta University of Agriculture and Technology
- 2) 2005: MSc (Molecular Medicine) Jomo Kenyatta University of Agriculture and Technology
- 3) 2001: BSc(Medical Microbiology, Hons) Jomo Kenyatta University of Agriculture and Technology

2.2 Professional Courses

- Certificate in Fundamentals of Implementation Science in Global Health, University of Washington, Seattle, USA, August 2017
- Certificate in Implementation Science, Kenyatta National Hospital&HIV Care Cascade Training, May 2017, Kenya
- Certificate Cooperate Governance, Kenyan Network for Women on Boards, 2016
- Certificate Women in Leadership November 2014, Strathmore Business School, Nairobi Kenya
- Biomedical Research Basic Course. July, 2013. Collaborative Institutional Training Initiative, University of Miami (Online training)
- Biomedical research Basic Course, CITI, University of Miami, 2016
- Post-Doctoral Leadership Training Meeting, Lagos, Nigeria. May 2- 4 2013
- Certificate courses from Global Health eLearning center:

- Cervical cancer prevention (low resource settings) (August 2010)
- ❖ Fostering change in health services. (August 2010)
- ❖ Gender, Sexual and Reproductive Health 101, (August 2010)
- Youth Reproductive Health (September 2010)
- Data Quality(September 2010)
- ADDRF PhD scientific writing conference (July 2010)-Africa Population Health research Centre Kenya
- ADDRF PhD proposal writing workshop (September 2009) –African Population Health Research Centre, Nairobi
- Introductory course to Bioinformatics (2009) International Livestock Research Institute Kenya.
- German Academic Exchange Service (DAAD) PhD Proposal writing workshop (April 2009) ICIPE, Kenya
- Effective scientific communication and publishing (2006)-Training Centre in Communication, Nairobi.

3.0 EMPLOYMENT HISTORY

- 1) 2011 to date: Lecturer, Department of Medical Microbiology, Jomo Kenyatta University of Agriculture and Technology
- 2) 2007-2011: Assistant Lecturer, Department of Medical Microbiology, Jomo Kenyatta University of Agriculture and Technology
- 3) 2005-2007: Graduate Assistant, Department of Medical Microbiology, Jomo Kenyatta University of Agriculture and Technology

4.0 ADMINISTRATIVE RESPONSIBILITY

4.1 At Jomo Kenyatta University of Agriculture and Technology

- 1) 2017 February, Ag Dean, School of Biomedical Sciences
- 2) 2016 to date: Member, JKUAT, Ethics Committee
- 2015 to date: Member of the School of Biomedical Sciences, Board of Post Graduate Studies
- 4) 2016 to date: Member of the icMob sub task force Africa-ai-Japan project
- 5) 2016 to date: Member of the Main task force Africa-ai-Japan project
- 6) 2012 to Date: Member of the University Departmental Quality Management Team
- 2015 to date: Coordinator and class advisor for Departmental post graduate programmes
- 8) 2011-2014: Coordinator undergraduate research projects and 4th year class advisor
- 9) 2007-2009: Departmental assistant examination officer
- 10) 2012-to date: Acting Chairman for the Department of Medical Microbiology on different occasions

4.2 At Other Institutions

- 1) 2016 to date: Chairman, Board of Management, Githuya Secondary School
- 2) 2014 to date: Treasurer/ Founder Member, Kenya National Young Academy of Sciences
- 3) 2015 to date: Member, Kenya Infectious and Parasitic Diseases Programme
- 4) 2011-2013: Council Member, Kenya Ladies Golf Union

5.0 EXTERNAL FELLOWSHIPS AND GRANTS

• 2015: Strengthening the health system capacity and responsiveness towards improving emergency obstetric care in Vihiga County, Kenya". IDRC

- 2015-2017: NACOTSI grant/RCD/ST&I/6th CALL PHD/240. Ksh, 740,000. In collaboration with my PhD student (Susan N Maina)
- 2012: National council for Science and Technology, Kenya. Research grant, (105,000 USD)
- **2011**: International Papillomavirus Society. Travel grant, 2011 (UDS 1000)
- **2009**: African Doctoral Dissertation Research fellowship (ADDRF). Research grant, (10,000 USD)
- 2009: German Academic Exchange Service (DAAD), In Country PhD scholarship

5.1 INTERNAL GRANTS

- 2002-2007: JKUAT staff school fees waiver and research grant for MSc Molecular Medicine
- 2008-2011: JKUAT staff school fees waiver and research grant for PhD studies
- 2016: Africa-ai-Japan Project, Post graduate students grant Ksh 200,000. In collaboration with Msc student (James Gachugia)
- 2016: Africa-ai-Japan Project, Post graduate students grant Ksh 200,000. In collaboration with Msc student
- 2016: Africa-ai-Japan Project, Post graduate students grant Ksh 200,000. In collaboration with Msc student
- 2016: Africa-ai-Japan Project, Post graduate students grant Ksh 200,000. In collaboration with Msc student

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6.0 POSTGRADUATE SUPERVISION

6.1 PhD Supervision (completed)

- 1. Lawrence Guantai (TM 402-1023/2011), **PhD Medical Microbiology** (2012). Jomo Kenyatta University of Agriculture and Technology. Association of Specific *Helicobacter pylori cag*A and *vac*A gene polymorphisms with clinical outcome in Patients with Dyspepsia Presenting at Kenyatta National Hospital, Kenya
- 2. Grace W Mbuthia (TM410-1984/2013), **PhD Public Health** (2014). Jomo Kenyatta University of Agriculture and Technology. Substance Abuse and Risky Sexual Behavior among University students in Coastal Region, Kenya.

6.1.2: PhD Supervision (Ongoing)

- Susan Mukiri Maina. PhD Infectious Diseases and Vaccinology (2014). Jomo Kenyatta University of Agriculture and Technology. Evaluation of Medical Waste Management and Characterization of Pathogenic Microorganisms Present in Medical Waste in Selected Hospitals in Kenya.
- Martin Owallah Ogwang, PhD Infectious Diseases and Vaccinology (2016). Jomo Kenyatta University of Agriculture and Technology. Genotypic characterization of Mycobacterium tuberculosis Recovered from Newly Diagnosed, Repeat and TB-HIV co-infected Patients Reporting to Clinics in Western Kenya

6.2 Masters Supervision

6.2.1 Completed

 Mabeya Nyatichi Sepha (TM 325-3316/2014). MSc Infectious Diseases and Vaccinology (2015). Jomo Kenyatta University of Agriculture and Technology. Seroprofile, Genetic Diversity and Drug Resistance OF HepatitisS B Virus among HIV

- Infected Individuals attending Mama Lucy Comprehensive Care Clinic in Nairobi, Kenya.
- 2. Sostine Khisa Makunja(PG/MPH/00044/2012). Master's in Public Health. Maseno University. Assessing Awareness of Cervical Cancer Risk Factors and Practice of Cervica Cancer Screening amog Women in Kitale Municipality, Kenya.

6.2.2 ON GOING

- 1. Riungu Morris Gitonga (TM/310/1158/2011), MSc Public Health (2013). Jomo Kenyatta University of Agriculture and Technology. Khat use and Perceptions on the Associated Problems among Youths in Maua Town, Meru, Kenya.
- 2. Koigi K Peter (P57/20962/2010). MSc Infectious Diseases, Kenyatta University (2012). A Comparative Study of HIV-1 Drug resistance Mutation Testing using Dried Blood Spots and Plasma Samples.
- 3. Victor Mburu Macharia (TM303/2126/2014). Msc Medical Virology (2015). Jomo Kenyatta University of Agriculture and Technology. Influence of HSV-2 Viral Quantity on HIV Subtypes among HSV-2/HIV Co-infected Sexually Active Fishermen along Lake Victoria in Kisumu.
- 4. **Juma Arnold** (TM325-3317/2015). MSc Infectious Diseases and Vaccinology (2015). Jomo Kenyatta University of Agriculture and Technology. Antimicrobial Susceptibility Profiles and Genotypic Characterization of Selected Enterobactericiae Strains Isolated from Food Handlers in Nairobi, Kenya.
- Samuel Mosigisi Mataara (TM325-3314/2015). MSc Infectious Diseases and Vaccinology (2015). Jomo Kenyatta University of Agriculture and Technology. The Prevalence and characteristics of Extended Spectrum β-Lactamase producing Enterobacteriaceae in Urine Samples collected from Selected Sites for Diagnosis at Pathologist Lancet, Nairobi, Kenya.
- **6. James Gachugia Mwangi** (TM325-3332/2015). MSc Infectious disease and Vaccinology. Jomo Kenyatta University of Agriculture and Technology. Evaluation of Loop Mediated Isothermal Amplification Assay in the Detection of Falciparum Malaria at the Lake Region of Kenya
- 7. Ng'ang'a Grace Wanjiru (TM 325–2786/2015). MSc Infectious disease and Vaccinology. Jomo Kenyatta University of Agriculture and Technology. Bacterial and Parasitic Co-infection and presence of resistant Genes in Enterics as contributory Factors of Diarrhoea in Children below 5 years attending Mukuru kwa Njenga Hospitals
- 8. **Hellen Onyango (TM325-3326/ 2015).** MSc Infectious Diseases and Vaccinology. Jomo Kenyatta University of Agriculture and Technology Epidemiology of Urinary Tract Infections and Associated Risk Factors among Pregnant Women in Pumwani Hospital
- 9. Rose Kamoni (TM303-2766/2015). MSc Medical Virology. Jomo Kenyatta University of Agriculture and Technology. Sustainability of Immune Response to Hepatitis B Virus Vaccination Three Years after Vaccination among HIV infected and Uninfected Adults in Kenya
- 10. Mercy Kariuki (TM 325-5711/2015). MSc Infectious Diseases and Vaccinology. Jomo Kenyatta University of Agriculture and Technology. Antimicrobial Properties of Medicinal Plants used among the Maasai Community in Kenya
- 11. Mukonyi Roy Mulandi (TM302-2908/2014). MSc Medical Microbiology. Jomo Kenyatta University of Agriculture and Technology. Nasal Carriage and Antibiotic Susceptibility of Methicillin Resistant Staphylococcus aureus among School Children from Kenyatta University Primary School and Jomo Kenyatta Academy and their Respective Family Contacts.

12. **Kajambo Muli Rama (TM)** MSc Medical Epidemiology. Jomo Kenyatta University of Agriculture and Technology. Etiology of Genito-Urinary Tract infections in Females attending Out- Patient Clinic in Kwale and Kinango Sub-county Hospitals, Kenya

7.0 CONFERENCES AND SEMINARS

Participation in Conferences

- Harnessing Science, Engineering and Medicine to address African Challenges, Inter Academy Council Meeting, Nairobi, September, 2016
- 2. Humbolt Kolleg 2016, Research and Networking, Laying the Foundation for a Sustainable Development goals, Naivasha, Kenya, April 2016
- 3. 9TH Stop, Cervical, Breast & Prostrate Cancer in Africa Conference, Nairobi, Kenya, July 2015
- 4. Scientific Symposium for Emerging scholars in Health, Nairobi, Kenya. July 15-17 2013
- 5. The 27th International Human Papillomavirus Conference. 17th -22nd September 22, 2011 in Berlin, Germany
- 6. 1st Medical and Veterinary Virus Research Symposium in Kenya, 8th 9th September, 2011, Nairobi, Kenya
- 7. Scientific, technology and industrialization conference (2005) Jomo Kenyatta University of Agriculture and Technology
- 8. Scientific, technology and industrialization conference (2006) Jomo Kenyatta University of Agriculture and Technology

8.0 RESEARCH AND PUBLICATIONS

8.1 Articles in Refereed Journals

- Mabeya SN, Ngugi CW, Lihana RW, Khamadi SA, Nyamache AK. AIDS Res Hum Retroviruses. Predominance of Hepatitis B Virus genotype A among treated HIV infected patients experiencing high HBV drug resistance in Nairobi, Kenya. 2017 Mar 19. doi: 10.1089/AID.2017.0019. [Epub ahead of print]
- Ng'ang'a Grace Wanjiru, Caroline Wangari Ngugi, Samuel Kariuki. Antimicrobial Resistance, Bacterial and Parasitic co-infections in Children Below 5 Years with Diarrhea, Attending Mukuru Kwa Njenga Health Clinics. Imperial Journal of Interdisciplinary Research (IJIR) Vol-3, Issue-4, 2017 ISSN: 2454-1362, http://www.onlinejournal.in
- 3. Grace Wambura Mbuthia, Peter Wanzala, Caroline Ngugi, Henry Nyamogoba Assessing the effectiveness of alcohol and drug abuse awareness campaigns among University students in Kenya:a quasi-experimental study [English] [Original Research] PDFFulltext» doi: 10.5455/medscience.2017.06.8593 Published Online: Feb 27, 2017
- Victor Mburu Macharia, Caroline Ngugi, Raphael Lihana and Musa Otieno Ngayo. HIV-1 Drug resistance and the Role of Herpes Simplex Virus-2 among Fishermen along the Shores of Lake Victoria, Kisumu, Kenya. Journal of HIV and Retrovirus. Vol 2 no3:26,2016 (ISSN 2471-9676)

- 5. Caroline Wangari Ngugi; Dietmar Schmidt; Karanja Wanyoro; Hamadi Boga; Peter Wanzala; Anne Muigai; John Mbithi; Magnus von Knebel Doeberitz; Miriam Reuschenbach. p16INK4a/Ki-67 dual stain cytology for cervical cancer screening in Thika district, Kenya. *Infectious Agents and Cancer* 2015, 10:25 doi:10.1186/s13027-015-0020-2
- 6. Mbuthia G, Wanzala P, Ngugi C, Nyamogoba, H. Patterns of risky sexual behaviour and associated factors among undergraduate University students in the Coastal region Kenya (AJHS/2015/458)
- Mbuthia G, Wanzala P, Ngugi C.W, Nyamogoba, HDN. A qualitative study on alcohol and drug abuse among undergraduate University students in the Coastal region of Kenya (AJHS/2015/460)
- 8. S.N. Mabeya, C.Ngugi, A.K.Nyamache, R. Lihana. Prevalence of Hepatitis B Virus infections among HIV infected Individuals in Nairobi, Kenya. East African Medical Journal Vol. 93 No. 6 June 2016
- 9. Lawrence Guantai M'itonga, Andrew Nyerere Kimang'a, Caroline Wangari Ngugi, Thomas M. Mutie. Association of Helicobacter Pylori VacA Gene Polymorphisms and CagA Gene with Clinical Outcome in Dyspeptic Patients. International Journal of Health Sciences & Research (www.ijhsr.org) 436 Vol.5; Issue: 9; September 2015
- 10. Lawrence Guantai M'itonga1, Andrew Nyerere Kimanga, Caroline Wangari Ngugi, Thomas M. Mutie Clinical Relevance of CagA EPIYA Motifs In Helicobacter pylori Among the Dyspeptic Patients in Kenya. Int J Med Health Sci. Oct 2015,Vol-4;Issue-4
- 11. Maina Susan Muthoni*, Andrew Nyerere K and Caroline Wangari Ngugi. Assessment of Level of Knowledge in Medical Waste Management in Selected Hospitals in Kenya. Appied Microbiology: Open Access. November 2016. DOI: 10.4172/2471-9315.1000124
- 12. Peter Koigi, Musa Otieno Ngayo, Samoel Khamadi, Caroline Ngugi and Anthony Kebira Nyamache. HIV type 1 drug resistance patterns among patients failing first and second line antiretroviral therapy in Nairobi, Kenya__BMC Research Notes 2014, 7:890 doi:10.1186/1756-0500-7-890
- 13. C.W.Ngugi, Hamadi Boga, P Wanzala, A.W.T. Muigai, J.N.Mbithi. Factors affecting uptake of cervical cancer screening amongst women in Kenya. Health care for women international. 2012. Volume 33, Issue 7: 595-613
- 14. C.W.Ngugi, Schmidt D, Wanyoro RK, Hamadi Boga, P Wanzala, A.W.T. Muigai, J.N.Mbithi, von Knebel Doeberitz M, Reuschenbach M. Human Papillomavirus prevalence in Thika District, Kenya. African Journal of Health Science, Volume 19, Nos. 3-4 (Issue No 38).
- 15. C.W.Ngugi, Hamadi Boga, P Wanzala, A.W.T. Muigai, J.N.Mbithi Prevalence of Human Papillomavirus infection by age and cervical cytology in Thika, Kenya. 1st

Medical and Veterinary Virus Research Symposium in Kenya, 8th – 9th September, 2011, Nairobi, Kenya

- 16. C.W.Ngugi, Schmidt D, Wanyoro RK, Hamadi Boga, P Wanzala, A.W.T. Muigai, J.N.Mbithi, von Knebel Doeberitz M, Reuschenbach M.The utility of p16ink4a/ki67 Dual Stain Cytology in Samples from Kenyan Women. The book of Abstracts. The 27th International Human Papillomavirus Conference. 17th -22nd September 22, 2011 in Berlin, Germany
- 17. C.W.Ngugi, Schmidt D, Wanyoro RK, Hamadi Boga, P Wanzala, A.W.T. Muigai, J.N.Mbithi, von Knebel Doeberitz M, Reuschenbach M. p16ink4a/ki67 Dual Stain Cytology in Samples from Kenyan Women. The book of Abstract.; Eurogin Conference, May 8th -11th, 2011, Lisbon, Portugal
- 18. C.W.Ngugi, Hamadi Boga, P Wanzala, A.W.T. Muigai, J.N.Mbithi. Cervical cancer in resource poor settings: awareness and prevention in the era of Human Papilloma Virus vaccination. The book of Abstracts, The 9th international Conference on Urban Health (ICUH 2010), New York, October 27-29, 2010
- 19. C.W. Ngugi, Khamadi, S., A.W.T. Muigai (2007). Detection of Drug Resistance Mutations in Human Immunodeficiency Virus by Mutagenically separated Polymerase Chain Reaction. Proceedings of the 2007 Scientific, Technological and Industrialization conference, "Galvanizing Science and technology for Industrialization: Towards the Millennium Development Goals," 25th 27th October, 2007 pg 200-215
- 20. C.W. Ngugi, Suleimann, S., A.W.T. Muigai (2005). Co-trimoxazole and Disinfectant Resistance of Enteric Bacteria Isolated from Domestic and Health Institution Discharges. Proceedings of the 2005 Scientific, Technological and Industrialisation conference, Leveraging Indigenous Products and Technologies Through Research for Industrialisation and Development, 27th-28th October, 2005, pg 196-205

9.0 Consultancies

- 2014: Research Consultant, African Cancer Foundation. A research on survey on Prevalence of cancer, Capacity of Diagnostics and Treatment in Kenya
- 2016 to date: Research Consultant with a research group from Heidelberg University, Department of tumor Biology, Germany

10.0 NETWORKING AND COLLABORATION WITH EXTERNAL ORGANIZATIONS

- 2011 to date- carried out a study on p16INK4a/Ki-67 dual stain cytology for cervical cancer screening in Thika district, Kenya with collaboration with researchers from Thika Level Five Hospital and Kenya Medical Research Institute
- 2016 to date carried out a study on Strengthening the health system capacity and responsiveness towards improving emergency obstetric care in Vihiga County, Kenya in collaboration with Vihiga Country and Kenya Medical Research Institute

10.0 COMMUNITY OUTREACH

• 2016 to date: Chairman, Board of Management, Githuya Secondary school

• 2016 to date: Mentorship, Maryhills Girls High School, Safaricom, Technovation Challenge

11.0 Membership in Professional Bodies

Member: American Society of Microbiology

Member: Bioinformatics Club, Jomo Kenyatta University of Agriculture and Technology

Member: Kenya Society of Microbiology

Founder Member/Treasurer: Kenya National Young Academy of Sciences

Volunteer Member: Africa Cancer Foundation

February 2010 to date: Member, Kenya Alumni DAAD Scholars Association (KDSA)

12.0 REFEREES

1. Prof. A.W.T Muigai,

Professor of Genetics, Jomo Kenyatta University of Agriculture and Technology, P.O.BOX 62000-00200 Nairobi, Kenya

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3. Dr A. k. Nyerere

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4. Prof Peter Ngure

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