

CURRICULUM VITAE

Name: Mrs Sandra Abankwa Kwarteng, PhD

Maiden Name: Sandra Baffour-Awuah

DETAILS

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Kumasi-Ghana

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Google Scholar: <https://scholar.google.com/citations?user=bCbUoiMAAAAJ&hl=en>



PERSONAL STATEMENT

I am a versatile, assiduous and determined scientist specialized in Medical Entomology. Currently, I am a lecturer at the Kwame Nkrumah University of Science and Technology (KNUST). It is through this position and previous positions that I have had a unique vantage point from which to undertake teaching, research and consultancy.

I have a broad background in medical entomology and other vector-borne diseases, with specific training and expertise in tropical infectious diseases. I have over ten years of research experience working on new and improved biological control methods in controlling the population of mosquito vectors in a bid to augment the efforts of vector control tools in the region. My research includes conducting surveillance study of ticks and mosquito-borne bacterial and viral disease risk to public health in Kumasi, and bacterial and ethnobotanical interventions for malaria control. I have been immensely groomed in the conduct of research in infectious disease during the management and coordination of several entomological and parasitological studies including examining the prevalence of malaria and anaemia among school pupils before and after the application of biolarvices on one hand and the indoor residual spraying intervention on the other. I have as well coordinated studies to determine how attractive schistosomiasis and malaria comorbid individuals are to mosquitoes which are furthermore being immunologically assessed to determine whether *S. haematobium* infection increases the transmission of *P. falciparum* gametocytes from co-infected subjects to mosquitoes.

PROFICIENCIES

Teaching	Monitoring and Evaluating Scientific Research
Communicating Scientific Research	Scientific Project Site Management
Supervising and Mentoring	Operationalizing Scientific Research Protocol
Designing and Planning of Scientific Research	Managing Scientific Projects
Developing Scientific Capacity	Managing and Operating Laboratory Studies

RESEARCH INTERESTS/FOCUS

Medical Entomology	Zoonotic Diseases
Parasitology	Vector Biology
Infectious Diseases	Neglected Tropical Diseases

PROFESSIONAL SKILLS

Cognitive Skills	Strategic Leadership
Interpersonal Skills	Diversity and Inclusion Skills
Team playing Skills	Record Keeping
Organizational Skills	Work Ethics

EDUCATION

November 2017	PhD (Entomology) Kwame Nkrumah University of Science and Technology (KNUST).
June 2013	MPhil (Entomology) Kwame Nkrumah University of Science and Technology (KNUST).
June 2008	BSc (Biological Science) Kwame Nkrumah University of Science and Technology (KNUST).
December 2010	Diploma (Geo-Information and Earth Observation) University of Twente (KNUST campus).
August 2003	Senior Secondary School Certificate Examination St. Louis Secondary School, Kumasi, Ghana-West Africa.

PROFESSIONAL EXPERIENCE

Jul 2017- Present	Postdoctoral Research Fellow Ellis Owusu-Dabo Research Group (AG-EOD), School of Public Health (SPH), Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
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- Jul 2010-Jun 2017 Research Scientist
Ellis Owusu-Dabo Research Group (AG-EOD), Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR), Kumasi-Ghana.
- Oct 2014-Jun 2015 Visiting Early Career Scientist
Young Scientists' Exchange and Mobility Programme in the ECOWAS Region, West Africa Health Research Network (WAHRNET), Centre Muraz Research Institute, Bobo-Dioulasso-Burkina Faso.
- Jan 2014-Dec 2014 Research Fellow
African Programme for Advanced Research Epidemiology Training (APARET).
- Aug 2011-Dec 2017 Development and Management of the Insectary and Malariasphere
Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR), Kumasi-Ghana.
- May-Dec 2010 Graduate Intern
Centre for Scientific and Industrial Research /Crop Research Institute (CSIR), Fomesua-Ghana.
- May-Jul 2005-2007 Student Intern, Kojach Pharmacy, Kumasi-Ghana.
Dec-Jan 2005-2007

GRANTS AND RESEARCH EXPERIENCE

- 2017-Present Team Lead- Mosquito and Tick-borne Infections Surveillance
Investigating viral and bacterial prevalence with their respective arthropod vectors inherent to the Kumasi Metropolis.
- 2017-2018 Coordinator (Entomology phase) - TRANSMAL Study
Determining the attractiveness of malaria vectors in subjects co-infected with schistosomiasis and malaria.
- 2017 Coordinator – AGAMal Study
Assessing the effect of indoor residual spraying within four districts in the Savannah and Forest areas of Ghana.
- 2017 Study Coordinator - SIM Vector Study
Investigating the transmission of *Onchocerca volvulus* by *Simulium sanctipauli* and the intermittent disappearance of the vector in the Upper Denkyira District, Ghana.
- 2014-2017 Co-Investigator - *Bti* and *Bs* Study
The role of *Lysinibacillus sphaericus* in malaria control: a community trial in Kumasi, Ghana.

- 2014 Principal Investigator – APARET STUDY
Identifying missed opportunities of tuberculosis identification in cattle and pigs as a result of limitations in routine physical diagnostic at the Kumasi Abattoir to inform policy.
- 2011 Study Coordinator - SIM Vector Study
Onchocerciasis control in the Upper Denkyira East Municipal of Ghana.

TEACHING/MENTORSHIP EXPERIENCE

- June 2021-Present Mentor
Women in Science, Technology, Engineering and Mathematics (WiSTEM) & Mastercard Foundation Mentoring Program, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
- Aug 2020-Present Lecturer
Department of Theoretical and Applied Biology
College of Science, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
- Aug 2018-July 2020 Lecturer
Department of Basic and Applied Biology, School of Science, University of Energy and Natural Resources (UENR), Sunyani-Ghana.
- February 2020 Lecturer
Short course on Scientific Capacity Development in Resource-Limited Settings: lessons on taking advantage of the unconventional route, KSMD Research Webinar for Medical Students, online.
- Aug -Dec 2009 Tutor
Introduction to Microsoft Office Applications and IT (word, excel, powerpoint), Smart Business and Technology Institute Kumasi, Kumasi, Ghana.

PROFESSIONAL MEMBERSHIP IN SOCIETIES

- 2021-Present Secretary of Camp Committee
WiSTEM Girl's Camp Planning Committee, Women in Science, Technology, Engineering and Mathematics (KNUST chapter).
- 2021-Present Coordinator –College of Science Mentors and Mentees
Women in Science, Technology, Engineering and Mathematics (WiSTEM)- Mastercard Foundation Mentoring Program, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.

2021-Present	Head of Reviewers Team (Biology) Junior Science and Mathematics Quiz Programme (JSMQ), Kwame Nkrumah University of Science and Technology (KNUST).
2021-Present	Secretary of Departmental Accreditation Committee Theoretical and Applied Biology, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
2021- Present	Fellow Africa Hall of Residence, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana.
2020- Present	Member University Teachers Association, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana.
2018- 2020	Member University Teachers Association, University of Energy and Natural Resources (UENR), Sunyani-Ghana.
2020- Present	Member Ghana Science Association (KNUST chapter).
2020- Present	Member Women in Science, Technology, Engineering and Mathematics (KNUST chapter).
2018- Present	Member Organization of Women in Science for the Developing World (OWSD) (KNUST chapter).
2018-2020	Member Women in Science, Technology, Engineering and Mathematics (UNER chapter)
2014-Present	Fellow West African Health Research Network (WAHRNET).
2014-Present	Fellow African Programme for Advanced Research Epidemiology Training (APARET).

WORKSHOPS AND COURSES

July 2022	Grant Writing and Disease Modelling Workshop Centre for Vector-Borne Disease Research (CVBDR) University of Ghana, Accra-Ghana
June 2022	Bridging the Gender Gap in Leadership for Women in STEM Leadership Workshop for Early Career Females in Academia Office of Grants and Research Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
March 2022	Capacity Building Workshop-Data Analysis International Programmes Office (IPO) & Women in Science, Technology and Mathematics (WiSTEM) & Laboratory for Interdisciplinary Statistical Analysis (LISA) Kwame Nkrumah University of Science and Technology (KNUST).
February 2022	College of Sciences Seminar Series for Senior Members Education Assessment Measurement and Curriculum Development Faculty of Biosciences, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana
February 2022	Capacity Building Workshop - Digital Literacy E-Learning Centre, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana
September 2021	Workshop on SDGs and Universities: Actions towards KNUST's Mandate @ 70 and beyond', 9 th Summer School Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
August 2021	Website Management Training for Women in Science, Technology, Engineering and Mathematics (WiSTEM) University Information Technology Services Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
July 2021	Research Philosophies, Approaches and Strategies Workshop West Africa Built Environment Research Conference Kwame Nkrumah University of Science and Technology (KNUST).
July 2021	Career Progression Workshop Women in Science, Technology, Engineering and Mathematics (WiSTEM) KNUST-Chapter, Kumasi-Ghana.

April 2021	Workshop for Recently Recruited Young Female Academic and Administrators International Programmes Office (IPO) & Women in Science, Technology and Mathematics (WiSTEM), Kwame Nkrumah University of Science and Technology (KNUST).
November 2020	SciVal: What's new and coming soon, Elsevier Research Intelligence Training Academy Researcher Academy on Campus, Online
December 2020	Research Communication WRITE-SHOP for Early Career Scientist, Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR), Filariasis Team, Elmina, Ghana
October 2020	Workshop on Access to Library Resources for Teaching, Learning and Research Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
October 2020	Capacity Building Workshop Women in Science Technology and Mathematics (WiSTEM _{GH}) Takoradi Technical University, Online
February 2019	UENR-ACU Mentor-Mentee Pairing Workshop University of Energy and Natural Resources (UENR), Sunyani, Ghana
January 2019	Workshop on Good Assessment Practices in Higher Education: Improving Teaching and Learning Quality Assurance and Planning Unit, University of Energy and Natural Resources, Sunyani, Ghana
November 2018	Workshop on Setting the Stage for Achieving the SDGs Organisation of Women in Science in Developing countries-OWSD @ 25, Kumasi, Ghana
May 2018	Certificate Course on Implementation Research World Health Organisation (WHO)/TDR, United Nations University-International Institute for Global Health, Monash University, Mass Online Open Course
May 2018 & July 2013	First Aid Training Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR) Kumasi- Ghana
July 2017	Junior Researchers Training on Proposal Writing and Small Grant Application

	USAID/ Research and Development Department, Ghana Health Service Workshop, Accra-Ghana
June 2017	Research Project Management and Contract Negotiations Workshop, USAID/Ghana Evaluate for Health Project, Kumasi-Ghana
May 2017	Introduction to Clinical Research and Development Workshop Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR), Kumasi-Ghana
February 2017	Knowledge Management and Knowledge Translation Workshop, USAID/ Ghana Evaluate for Health Project Workshop, Kumasi-Ghana
Mar 2015-Apr 2015	Beginner French Language Studies, Centre de Langues et de Formation, Bobo Dioulasso, Burkina Faso
April 2014	Project Management Workshop African Programme for Advanced Research Epidemiology Training (APARET), Zanzibar-Tanzania
January 2014	Introduction to Proposal Writing African Programme for Advanced Research Epidemiology Training (APARET), Kampala-Uganda
August 2010	Waste Management Training Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR) Kumasi, Ghana

PUBLICATIONS

1. **Abankwa Kwarteng, S.** Nimako, S., Sylverken, A. A., Kwarteng A., Boakye P., Okyere, Twumasi-Ankrah, S., Williams I., Asiedu Agyei S., Owusu-Dabo, E. Prevalence of malaria and anaemia among school pupils before and after Indoor Residual Spraying (IRS) in selected districts of the Southern and Northern parts of Ghana: Across-sectionall study. *PLOS ONE*. Under review.
2. **Abankwa Kwarteng, S.** (2021). Mosquitoes Small Bite Big Threat. *Everyday Science for Schools Magazine*. 8(2), p 43.
3. Akuamoah-Boateng, Y., Brenyah Caren R., **Abankwa Kwarteng S.**, Obuam P., Owusu-Frimpong I., Addo Agyapong K., Badu K. (2021). Malaria transmission, vector diversity and insecticide resistance at a peri-urban site in the forest zone of Ghana. *Frontiers in Tropical Diseases, section Vector Biology*. <http://doi.org/10.3389/fit2021.739771>.
4. Nkansah, D., Henry H., Twumasi-Ankrah, S., **Baffour-Awuah, S.**, Adjei-Kusi, P., Yar, D., Owusu-Dabo, E. (2020). Three monthly doses of 60 mg/kg praziquantel for

Schistosoma haematobium infection is a safe and effective treatment regimen. *BMC Infectious Diseases* 20(1). <http://doi.org/10.1186/s12879-020-05053-z>

5. Agyemang, AN, Badu K, **Baffour-Awuah, S.**, Owusu-Dabo E, Biritwum, NK, Garms, R, Kruppa, TF. (2018). Evaluation of onchocerciasis control in the Upper Denkyira East Municipal in the forest area of Ghana: Responses of participants and distributors to the CDTI programme. *Acta Tropica*. 185, p 357-362.
6. **Baffour-Awuah, S.**, Annan, A. A., Maiga-Ascofare, O., Dieudonné, S. D., Adjei-Kusi, P., Owusu-Dabo, E., & Obiri-Danso, K. (2016). Insecticide resistance in malaria vectors in Kumasi, Ghana. *Parasites & Vectors*, 9, 633. <http://doi.org/10.1186/s13071-016-1923-5>.
7. Amegashie, E.A., Owusu-Dabo, E., Salifu, S.P., Awuah, A.A.A., **Baffour-Awuah, S.**, Addofoh, N., Annan, A. and Winter, C.H. (2016). Sero-prevalence and occupational risk factors for Brucella infection among slaughterhouse workers and butchers in Kumasi, Ghana. *Journal of Epidemiological Research*, 3(1), p.17.
8. Dogbe, J., Owusu-Dabo, E., Edusei, A., Plange-Rhule, G., Addofoh, N., **Baffour-Awuah, S.**, Sarfo-Kantanka, O., Hammond, C. and Owusu, M. (2016). Assessment of prison life of persons with disability in Ghana. *BMC international health and human rights*, 16(1), p.20.
9. Garms, R., Badu, K., Owusu-Dabo, E., **Baffour-Awuah, S.**, Adjei, O., Debrah, A.Y., Nagel, M., Biritwum, N.K., Gankpala, L., Post, R.J. and Kruppa, T.F. (2015). Assessments of the transmission of *Onchocerca volvulus* by *Simulium sanctipauli* in the Upper Denkyira District, Ghana, and the intermittent disappearance of the vector. *Parasitology Research*, 114(3), pp.1129-1137.
10. Annan, A.A., Owusu-Dabo, E., **Baffour-Awuah, S.**, Nartey, R., Nimako, S., Ayimbire, A.G., Salifu, P.S., Amoyaw, F., Segbaya, S. and Ohene, B.K. (2014). Insecticide resistance in malaria vector mosquitoes at 5 selected districts in Ghana, West Africa. *East African Journal of Public Health*, 11(4), pp.830-838.
11. **Baffour-Awuah, S.**, Owusu-Dabo, E., Kruppa, T., Annan, A., Nartey, R., Dogbe, J., Pandam, S., Becker, N., Oppong, S. and Obiri-Danso, K. (2014). *Lysinibacillus sphaericus* biolarvicide, an efficacious tool in the control of *Anopheles gambiae* in Kumasi, Ghana. *East African Journal of Public Health*, 11(4), pp.903-913.
12. Nartey, R., Owusu-Dabo, E., Kruppa, T., **Baffour-Awuah, S.**, Annan, A., Oppong, S., Becker, N. and Obiri-Danso, K. (2013). Use of *Bacillus thuringiensis var israelensis* as a viable option in an Integrated Malaria Vector Control Programme in the Kumasi Metropolis, Ghana. *Parasites & vectors*, 6(1), p.116.

CONFERENCE PRESENTATIONS

1. **Sandra Abankwa Kwarteng**, Portia Boakye Okyere, Kennedy Gyau , Christopher Nii Kpakpo, Ameyaw Afuaa Janet, Adjei Emmanuel, Hayford Manuella, Anhwere, Naomi Efuah, Samuel Nkansah Darko (2022). Acceptance and risk perception of COVID-19 vaccine at a tertiary institution and its environs in Kumasi, Ghana. Poster Presentation. “The Role of Basic Sciences for Sustainable Development”. 11th GSA Research Seminar and Poster Presentations, 7th – 8th June 2022.
2. **Sandra Baffour-Awuah**, Oumou Maiga-Ascofare, Richard Larbi, Henry Hanson, Patrick Obuam, Priscilla Adjei-Kusi, Denis Yar, Ellis Owusu-Dabo (2021). Impact of antihelminthic treatment on the attractiveness of *Anopheles* to malaria and schistosomiasis co-infection. Poster Presentation. “COVID-19 Pandemic: Scientific Updates and the Way Forward”. 10th GSA Research Seminar and Poster Presentations (Webinar 2021), 27th - 28th April 2021.
3. **Sandra Baffour-Awuah**, Oumou Maiga-Ascofare, Richard Larbi, Henry Hanson, Patrick Obuam, Priscilla Adjei-Kusi, Denis Yar, Ellis Owusu-Dabo (2018). The attractiveness of *S. haematobium* and *P. falciparum* infection to *Anopheles*. Oral Presentation. 3rd Scientific Conference of West African Health Research Network (WAHRNET). Cotonou, Benin, 5th to 7th March 2018.
4. **Sandra Baffour-Awuah**, Augustina Angelina Annan, Oumou Maiga-Ascofare, Soma Dieudonné, Priscilla Adjei-Kusi, Ellis Owusu-Dabo, & Kwasi Obiri-Danso (2017). Malaria vector resistance profiling Kumasi, Ghana. 10th Ghana Biomedical Convention- A New Era of Biomedical Research and Development in West Africa. Convention of Biomedical Research, Ghana (CoBReG), Accra, Ghana, 26th – 28th July 2017.
5. **Sandra Baffour-Awuah**, Ellis Owusu-Dabo, Thomas Florian Kruppa, Norbert Becker, Samuel Oppong, Kwasi Obiri-Danso (2014). *Lysinibacillus sphaericus* biolarvicide, an efficacious tool in the control of *Anopheles gambiae* in Kumasi, Ghana. Poster presentation. 7th Annual Scientific Conference of the Ghana Biomed Convention, Cape Coast, Ghana, 30th July - 1st August, 2014.
6. **Sandra Baffour-Awuah**, Ellis Owusu-Dabo, Thomas Kruppa, Norbert Becker, Samuel Oppong⁵ and Kwasi Obiri-Danso (2013). *Bacillus sphaericus*, an added tool in the control of the *Anopheles*, malaria vector, in the Kumasi metropolis, Ghana. The role of candidate miRNAs in T cell response during acute pulmonary tuberculosis. Oral presentation, 2nd scientific conference of the West African Health Research Network, Ouagadougou, Burkina Faso, 5th-7th March 2013.
7. **Sandra Baffour-Awuah**, Ellis Owusu-Dabo, Thomas Kruppa, Augustina Annan, Norbert Becker, Samuel Oppong and Kwesi Obiri-Danso (2013). *Lysinibacillus sphaericus* biolarvicide, an efficacious tool in the control of *Anopheles gambiae* in Kumasi, Ghana. Oral presentation, Trends of Cancer Research and Management. KNUST- College of Health Science scientific conference, Kumasi, Ghana, 14th-15th November 2013.

COMMUNITY SERVICE

March 2022	Plenary Speaker-Beyond the walls of KNUST Biological Science Students Association (Biossa) Department of Theoretical and Applied Biology, College of Science, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
January 2022	Speaker-Biological Science Programme Details and Job Prospects Department of Theoretical and Applied Biology, College of Science, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
November 2021	Invigilator Pranso Registered Midwifery Invigilation Team Ministry of Health Diploma Terminal Examination Ashanti Region-Ghana.
October 2021	Rapporteur 4 th College of Science Retreat –Rock City Nkwatia Ghana
September 2021	Moderator Workshop on SDGs and Universities: Actions towards KNUST’s Mandate @ 70 and beyond’, College of Science, 9 th Summer School Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
August 2021	Role Model/Resource Person Mamfe Methodist Girs Senior High School by Women in Science, Technology, Engineering and Mathematics (WiSTEM), KNUST-Chapter, Kumasi-Ghana.
July 2021	Moderator Women in Science, Technology, Engineering and Mathematics (WiSTEM) Career Progression Workshop KNUST-Chapter, Kumasi-Ghana.
June 2021	Facilitator-Mentors Meet Mentees Programme Women in Science, Technology, Engineering and Mathematics (WiSTEM)- Mastercard Foundation Mentoring Program, Kwame Nkrumah University of Science and Technology (KNUST), Kumasi-Ghana.
February 2021	Speaker- Research Implementation and Protocol Operationalization Dentistry and Medical Science Association Research Webinar Kwame Nkrumah University of Science and Technology School of Medicine and Dentistry (KSMD)

October 2020	Plenary Speaker Women in Science Technology and Mathematics (WiSTEM _{GH}), Takoradi Technical University Capacity Building Workshop, Online
Sept 2019-Jul 2020	Coordinator Biological Science, Departmental Weekend Programmes, Department of Basic and Applied Biology, University of Energy and Natural Resources (UENR), Sunyani, Ghana.
December 2019	Independent Assessor Evaluation of the mOPV ₂ Vaccination Campaign Ahafo, Bono and Bono East Regions.

REVIEWS AND EDITORIALS

2021-Present	Reviewer, Scientific African Journal
2021-Present	Reviewer, PLOS Neglected Tropical Diseases
2021-Present	Reviewer, PLOS ONE
2017-Present	Journal of JSM Environmental Science & Ecology
2015-Present	Tropical Medicine & International Health
2014-Present	Reviewer, BMC Infectious Diseases
2017- Present	Reviewer, Parasites & Vectors

REFEREES

Prof Ellis Owusu-Dabo (BSc, MB ChB, MSc, MWACP, FGCP, PhD)

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Prof Kwasi Obiri-Danso (BSc, MPhil, PhD)

Department of Theoretical and Applied Biology
Kwame Nkrumah University of Science and Technology
Kumasi
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E-mail: obirid@yahoo.com

Prof Yaw Afrane (BSc, MPhil, PhD)

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Accra, Ghana
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