



RESEARCH SCIENTIST

[reginaamabanu@csir-water.com](mailto:reginaamabanu@csir-water.com) ;

[amareggi@yahoo.co.uk](mailto:amareggi@yahoo.co.uk)

+233-030-2775352/

Environmental Biology and Health Division –Microbiology Unit.

August 2017 to date.....PhD Candidate.

(Environmental Sanitation & Waste Management) Department of Civil Eng. KNUST

June, 2005.....MPhil Botany (Mycology), UNIV. OF GH. LG.

May, 2000..... Bsc. (Hons) Botany (Microbiology) ,UNIV. OF GH. LG.

## Profile

Regina Ama Banu was appointed as a Research Scientist (Microbiologist) of the Environmental Biology and Health Division of the CSIR Water Research Institute. She had been involved in various research studies on water and its related resources since September 2008. She obtained her Bachelor's Degree in Botany (Microbiology) in 2000, Master's degree in Botany (Mycology) in 2005 from the University of Ghana, Legon.

She is currently a PhD candidate at the Kwame Nkrumah University of Science and Technology with the Regional Water and Environmental Sanitation Center, Kumasi. On completion, she would earn a doctoral degree in Environmental Sanitation and Waste Management. For the past 10 years, her work has involved isolating specific pathogens like *Vibrio cholera*, *Legionella* sp, *Salmonella* sp, *E.coli*, *Aeromonas* sp from a wide range of environmental samples while suggesting appropriate control methods.

She also has expertise in monitoring and evaluating water and wastewater treatment facilities. She has helped various laboratory interns to develop microbiological sampling, isolation and safety skills. Regina, has supervised a number of postgraduate and undergraduate students from several tertiary institutions including the University of Ghana, Kwame Nkrumah University of Science and Technology, Cape Coast University, Accra Technical University and University of Development Studies.

Through the WHO Global Tricycle Project, Regina has developed expertise in AMR and isolation of resistant bacteria from Environmental Samples; a project currently running to quantify ESBL *E.coli* from surface samples.

Regina has a teachable spirit but also loves to share her knowledge.

**Active Affiliations:**

Associate Member, Ghana Science Association  
American Society for Microbiology

**Projects Undertaken**

1. Assessment of the state of drinking Water quality of pupil in Crèche schools (children less than age in parts of Greater Accra.
2. Monitoring of the slow sand filtration systems in Anfoeta Tsebi and Akome in the Volta Region.

3. Microbial Quality of Water from Rainwater harvesting systems in Accra collaborative research between SINTEF-Norway, CSIR-Water Research Institute(WRI) and the CSIR-Science and Technology Policy Research Institute (STEPRI) of Ghana.

4. Establishing control strategies to mitigate identifiable route courses of the intermittent Cholera outbreaks in Ghana. Preliminary studies involved the analysis of water samples (drain samples, sachet water, hand rinse samples, borehole), and food produce for pathogens.

5. Enumeration of *Legionella pneumophila* in water distribution in systems from hospitality industries Accra.

6. Independent Quality Assessment of sachet water sold in Accra

## **Research Interest**

1. Epidemiology of multidrug resistance bacteria
2. Environmental Microbiology
3. Mycology
4. Environmental Sanitation
5. Water Supply and Delivery systems
6. Waste Water Treatment and Reuse
7. Environmental Biotechnology

## **Current Research**

WHO's Integrated Global surveillance of ESBL-producing *E. coli* in the environment using a "One Health" approach, "The Tricycle Project" in Ghana.

## **Publications**

1. Banu R. A, Ansa E. D.O., Akrong M. O., Ansa G. A., and Mohammed B., (2018). Microbial Water Quality Assessment of Packaged Drinking Water of Pre-School Children in some Parts of Accra, Ghana Journal of Science 59

2. Damman, S., Helness, H., Amisigo, B., Banu, R. A., Asante, K. A., Bjørkvoll, T., Akuffo-Bea K. A. M., Logah F., Williams P. A., Amu-Mensah F., and Essegbey, M. F. G. (2017). Sustainability and the Social Construction of Technology: The Case of RWH as Source of Water Supply in Greater Accra. European Journal of Sustainable Development, 6(4), 41-52. [www.ecsdev.org/ojs/index.php/ejsd/article/view/546](http://www.ecsdev.org/ojs/index.php/ejsd/article/view/546)

3. Sedzro, M.D., Banu R. A., and Akrong M.O. (2017). Evidence Based review of legionella elimination in building water systems International Journal of Water Resources and Environmental Engineering 9 (1) 22-32.

4. Ansa, E.D.O., Andoh, A.H., Banu, R. A. and Ansa, G.A. (2017). Photo reactivation in bottled drinking water after inactivation with pulsed ultra-violet light. *Ghana Journal of Science*. Ghana J. Sci. 57, 57-64.
5. Ansa, E.D.O., Andoh, A.H., Nienu, P., Banu, R. A, Akrong, M., Acheampong, M.A., and Adiyiah J. (2016). Sunlight inactivation of faecal coliforms in domestic wastewater. *Desalination and Water Treatment* 57 (30):13979-13986. DOI: 10.1080/19443994.2015.1063010
6. Terkpe, M., Akrong, M. O., Banu, R.A., Asmah, M.H. and Ansa, E.D.O. (2016). Bacteriological Quality of Drinking Water in the Atebubu-Amantin District of the Brong-Ahafo Region of Ghana. *Applied Water Science*, DOI: 10.1007/s13201-016-0457-5
7. Ansa, E.D.O., Awuah, E., Andoh, A., Banu, R.A., Dorgbetor, W.H.K., H.J., Lubberding, H.J. Gijzen (2015). A review of the mechanisms of faecal coliform removal from algal and duckweed waste stabilization pond system. *American Journal of Environmental Science* 11(1): 28-34. DOI: 10.3844/ajessp.
8. Akrong M.O., Ampofo J.A., Banu R.A, and Danso S.K.A. (2015). Assessment of Bacteria and Heavy metals contamination in lettuce at Farm Gate and Market in the Accra Metropolis. *British Microbiology Research Journal* 5 (7)226-234.
9. Banu, R.A, Odamtten, G.T., and Kpodo. K. (2008). Comparative Moisture Sorption, Insect Infestation, and Aflatoxin Production by Resident *Aspergillus Flavus* Link Spores in Solar and Sun-Dried Cassava Accessions Before and After Gamma Irradiation *Journal of Ghana Science Association*. 10(1) 74-91.

[Regina Banu - Google Scholar Citations](#)