MAWULI KWAMLA AZAMETI
C. K. Tedam University of Technology and Applied Sciences, P.O. Box 24, Navrongo, Upper East Region, Ghana • mawuli21@gmail.com • www.linkedin.com/in/mawuli21 • +233 244144205

An enthusiastic, highly self-motivated, and result-oriented researcher with appreciable experience in plant research at highly reputed international research institutes. Specialized in Molecular Biology and Plant Biotechnology, with expertise in functional genomics. A proactive individual with considerable experience as a Lecturer/Teacher/Headmaster, possessing adequate administrative, verbal, and written communication skills along with effective teaching methods that promote a stimulating learning environment.

EDUCATION

Indian Agricultural Research Institute, Pusa, New Delhi, India 2018 – 2022
Doctor of Philosophy in Molecular Biology and Biotechnology

Professor Jayashankar Telangana State Agricultural University, Hyderabad, India 2015 –2017
Master of Science in Molecular Biology and Biotechnology (**First Class**)

University of Education, Winneba, Mampong – Ashanti, Ghana 2009 –2013
Bachelor of Science in Agriculture Education (**First Class Honours**)

University of Cape Coast, St. Francis College of Education, Hohoe, Ghana 2001 –2004
Teacher's Certificate 'A' (3-year post-secondary)

Agotime Senior High School, Agotime – Kpetoe, Ghana 1998 –2000
Senior Secondary School Certificate

PROFESSIONAL WORK EXPERIENCE

C.K. Tedam University of Technology and Applied Sciences, Navrongo, Ghana March 2022- Date
Lecturer

- Develop and deliver teaching material for biology-related courses at the undergraduate and postgraduate levels.
- Use a variety of learning modalities and support materials to facilitate the learning process and accentuate presentations.
- Utilize instructional technologies in course delivery for both in-class and online instruction to engage and educate students.
- Conduct research and publish findings.
- Undertake the supervision of research projects and dissertations for students in the department.
- Develop and implement outreach programs with other staff in the department.
- Develop new modules, programs, and innovative teaching.
- Develop concepts that lead to industrialization and innovation.
- Grade assignments according to strict institutional policies and uphold guidelines for academic integrity while disciplining plagiarism and cheating accordingly.
- Evaluate and revise lesson plans and course content to achieve student-centered learning.
- Mentor undergraduate and graduate students in effective next steps for education and career preparedness.
- Author well-regarded lecture handouts to present credible information to undergraduate and graduate students.

Council for Scientific and Industrial Research (CSIR) August 2021-February 2022
Food Research Institute (FRI), Accra, Ghana
Principal Technologist (Molecular Biologist)

- Wrote research proposals to obtain external funds.
- Conducted research. Analyzed data and interpreted results; drafted scientific reports. Wrote scientific manuscripts for publication purposes.
- Attended and presented at scientific conferences and seminars.
- Performed duties in accordance with applicable standards, policies, and regulatory guidelines to promote a safe working environment.
- Used critical thinking to break down problems, evaluate solutions and make decisions.

Indian Council of Agricultural Research (ICAR), Pusa, New Delhi, India July 2018 – July 2021
National Institute for Plant Biotechnology
International Research Fellow

- Conducted field and lab research. Analyzed data and interpreted results; drafted scientific reports. Wrote scientific manuscripts for publication purposes.
- Attended and presented at scientific conferences and seminars. Wrote research proposals to obtain external funds.
- Supervised and mentored master students, interns, and trainees.

Ghana Education Service September 2013 – July 2015
School Manager/Headmaster

- Planned, prepared, and reviewed the school curriculum with teachers.
- Improved visibility of the school and increased enrolment by up to 64 percent. Liaised with the Education office to increase teaching staff by up to 60 percent.
- Built productive relationships with parents of students facing difficult situations at school or at home.
- Performed classroom evaluations to assess teacher strategies and effectiveness.
- Trained teachers on effective teaching techniques, classroom management strategies, and behaviour modification.
- Established a positive, stimulating learning environment for students and an exciting education-focused setting for teachers.
- Monitored and evaluated educational programs to maintain high-quality performance objectives and standards.
- Kept school in full compliance with established policies, legal requirements, and student safety standards.
- Observed teachers, documented activities, and implemented improvement plans to optimize classrooms.
- Prepared school budget and submitted it to the school board with recommendations for capital expenditures and cost-saving initiatives.
- Coordinated school budgets and solicited additional funding from grant programs with well-written applications.

Ghana Education Service September 2004 – August 2009
Science Teacher

- Planned and delivered well-structured lessons to students at all levels; Examined and assessed student performance.
- Coordinated the school Mathematics and Science quiz events. Founded and acted as a patron for the school science club. Planned and supervised all extra curriculum activities.
- Encouraged student interest in Science, Technology, Engineering, and Mathematics (STEM) and participation in the high school district and national science competitions.
- Assessed submitted class assignments, determined grades, and reviewed work with struggling students to boost their chances of success.

- Assessed student comprehension through regular quizzes, tests, and assignments.

RESEARCH EXPERIENCE

National Institute for Plant Biotechnology, Indian Agricultural Research Institute 2018 – 2021
Biotechnology and Climate Change Laboratory
Ph.D. Research Fellow

- Generated heat stress-responsive transcriptome data in wheat. Identified and characterized novel differentially expressed genes from heat stress-responsive transcriptome data in wheat.
- Validated differentially expressed genes using quantitative Real-Time Polymerase Chain Reaction (qRT-PCR) analysis. Isolated, cloned, and sequenced heat stress-responsive genes. Performed functional validation of the heat stress-responsive candidate genes in plant model systems.
- Identified metabolites responsive to heat stress in wheat.

Indian Institute of Rice Research 2015 – 2017
Researcher (Master of Science)

- Screened rice germplasm lines for blast disease resistance. Genotyped the germplasm lines using SSR markers.
- Determined the population structure of some popular rice varieties in India. Identified rice novel genomic regions influencing blast disease resistance through association mapping.

University of Education, Winneba, Ghana 2012 – 2013
College of Agriculture Education
Researcher (Bachelor of Science)

- Evaluated the growth performance of broilers fed a cassava flour-based diet supplemented with lysine and methionine. Evaluated the effects of the inclusion of cassava flour on carcass and organ characteristics of broiler chickens.
- Analyzed the effects of the inclusion of cassava flour on blood parameters (Hematology) in broiler chickens.
- Determined the economy of production when cassava flour was used to replace maize as a natural growth promoter on broiler chickens.

GRANTS

- World Bank Funded Research Grant: National Agricultural Higher Education Project- Centre for Advanced Agricultural Science and Technology (NAHEP-CAAST). 2019

SCHOLARSHIPS & FELLOWSHIPS

- Netaji Subhas – ICAR International Fellowship to pursue PhD in Molecular Biology and Biotechnology at the Indian Agricultural Research Institute: 2018 – 2021.
- Indian Council for Cultural Relations (ICCR) Scholarship to pursue M.Sc. (Ag) Molecular Biology and Biotechnology at Professor Jayashankar Telangana State Agriculture University, India: 2015 – 2017.

PROFESSIONAL MEMBERSHIP

- University Teachers Association of Ghana (UTAG)
- International Society for Molecular Plant-Microbe Interactions
- Genetics Society of America
- American Society for Microbiology
- Asia Society of Researchers
- International Chemical Biology Society
- International Association for Agricultural Sustainability

PUBLICATIONS

- **Azameti**, M.K. and Imoro, A-W.M. (2023). Nanotechnology: A promising field in enhancing abiotic stress tolerance in plants, Crop Design, 100037, https://doi.org/10.1016/j.cropd.2023.100037.
- **Azameti, M.K.,** Ranjan, A., Singh, P.K. et al. (2022). Transcriptome profiling reveals the genes and pathways involved in thermo-tolerance in wheat (*Triticum aestivum* L.) genotype Raj 3765. Scientific Reports 12, 14831. https://doi.org/10.1038/s41598-022-18625-7
- **Azameti M. K.,** Singh P. K., Gaikwad K., Dalal M., Arora A., Rai V. and Padaria J. C. (2022). Isolation and characterization of novel gene TaSSRP differentially expressed in wheat (*Triticum aestivum* L.) genotypes under heat stress. Indian J. Genet. Plant Breed., 82(2): 224-226.
- Dauda, W.P., Abraham, P., Glen, E., Adetunji, C.O., Ghazanfar, S., Ali, S., Al-Zahrani, M., **Azameti, M.K**., Alao, S.E.L., Zarafi, A.B., Abraham, M.P., Musa, H. (2022). Robust Profiling of Cytochrome P450s (P450ome) in Notable *Aspergillus* spp. *Life 12*, 451. https://doi.org/10.3390/life12030451
- Dauda, W.P., Morumda, D., Abraham, P., Adetunji, C.O., **Azameti, M.K.,** et al. (2022). Genome-Wide Analysis of Cytochrome P450s of Alternaria Species: Evolutionary Origin, Family Expansion and Putative Functions. J. Fungi 2022, 8, 324. https://doi.org/ 10.3390/jof8040324
- Kumar, R.R., Sareen, S., Padaria, J.C., **Azameti, M.K.** et al. (2022). Insight into Genetic Mechanism and CDPK-Based Signalling Network Underlying Balanced Source to Sink Carbon Transfer in Wheat Under Multiple Stresses. J Plant Growth Regul . https://doi.org/10.1007/s00344-022-10715-0
- Dauda, W. P., Peter, G. W., Abraham, P., Adetunji,C. O., Glen, E., Morumda, D., Ogra, I. O.,Abraham, S. E., **Azameti, M. K**., Ghazanfar, S.,Osemwegie, O. O., Olaniyan, O. T., and Anyakudo,M. M. C. (2022). Bioinformatics Based Structural Analysis of Cytochrome P450 genes in *Candida tropicalis*. Nigerian Journal of Parasitology 43(2) 345-356. https://dx.doi.org/10.4314/njpar.v43i2.17
- Dauda, W. P., Ogra, I. O., Abraham, P., Adetunji, C. O., …**Azameti, M. K** (2022) Elucidating the evolutionary and structural features of cytochrome P450 genes in Cryptococcus neoformans using in-silico approaches, NABDA Journal of Biotechnology Research, 1 (1)
- **Azameti, M.K** and Dauda, W.P. (2021). Base Editing in Plants: Applications, Challenges, and Future Prospects. Front. Plant Sci. 12:664997. doi: 10.3389/fpls.2021.664997
- **Azameti, M.K.,** Dauda, WP., Panzade, K. and Vishwakarma, H. (2021). Identification and Characterization of Genes Responsive to Drought and Heat Stress in Rice (*Oryza Sativa* L.). Vegetos **34,** 309–317. https://doi.org/10.1007/s42535-021-00198-x
- **Azameti, M.K.,** and Padaria, J.C (2021). Understanding Wheat Thermo-Tolerance Mechanisms for Enhanced Sustainable Production. In; Climate Change and Sustainable Development. (Ed: Rajbir Singh). Springer
- Dauda, W.P., Glen, E., Abraham, P., **... Azameti, M.K.** et al. (2021). Comparative Phylogenomic Analysis of Cytochrome P450 Monooxygenases From *Fusarium* Species. Research Square; DOI: 10.21203/rs.3.rs-1097665/v1.
- **Azameti, M.K.,** Vishalakshi, B., Umakanth, B. et al. (2020). Molecular characterization of popular rice (*Oryza sativa* L.) varieties of India and association analysis for blast resistance. Genet Resour Crop Evol **67,** 2225–2236.
- Zanu, H. K., **Azameti, M. K**., and Asare, D. (2017). Effects of dietary inclusion of cassava root flour in broiler diets on growth performance, carcass characteristic and haematological parameters. International Journal of Livestock Production, 8(3), 28-32.

MANUSCRIPT UNDER REVIEW

- **Azameti, M.K**, Tanuja, N., Kumar, S., Maniraj R., et al. Transgenic Tobacco Plants Overexpressing a wheat Salt Stress Root Protein (TaSSRP) Exhibit Enhanced Tolerance to Heat Stress. Under Review, Plant Physiology and Biochemistry.

CONFERENCES/SEMINARS

- **Azameti M.K** (2021). Novel salt stress root protein RS1 from wheat has a role in heat stress tolerance. International Conference on Research Initiatives for Agriculture, Biotechnology and Allied Sciences (ICRIABAS-2021), India.
- Dauda, W.P and **Azameti M.K** (2021). Genome-wide Analysis of Cytochrome P450 Genes of *Xylaria sp. FL1777* for Bioremediation: Annotation and Evolutionary Relationships. ISCB-Africa ASBCB Conference on Bioinformatics
- Kumar P, Vishwakarma H, **Azameti M.K**, Sareen S & Padaria JC (2020) Transcriptome profiling in *Aegilops peregrina* under heat stress. In: National seminar on Emerging trends in Biotechnology and agricultural resources, held on 24th January 2020, organized by Dr. MPS Group of Institutions, Agra, UP, India (Poster Presentation), pp175
- **Azameti, M.K.** (2020). International Conference on Biotechnology, Bioinformatics, and Biomedicine. AIMST University, India
- **Azameti, M.K.** (2019). Application of Base Editing for Crop Improvement. National Institute for Plant Biotechnology Doctoral Seminar, New Delhi, India
- **Azameti, M.K.** (2019). Role of Heat Responsive Genes for Stress Tolerance in Plants. Division of Plant Physiology Doctoral Seminar, Indian Agricultural Research Institute, New Delhi, India
- **Azameti, M.K.** (2016). Metabolic Engineering for Value Addition in Crop Plants. Institute of Biotechnology Departmental Seminar, Professor Jayashankar Telangana State Agric University, Hyderabad, India

REFERENCES

Available upon request.