



Dr. Peter Edome Akwee, PhD.

Dean/Senior Lecturer

Biological and Physical Sciences Department

School of Science and Technology

Turkana University College

(A Constituent College of Masinde Muliro University of Science and Technology)

Email: pedome@tuc.ac.ke

About Me

I am a natural scientist specialized in the area of Plant Genetics. I graduated top of my class with Bachelor of Education Science Degree (Botany and Chemistry-First Class Honors (Moi University-Kenya, 2006). I am a holder of MSc. Ed. Biology (Masinde Muliro University of Science and Technology), Doctor of Philosophy in Botany specialized in Plant Genetics (Maseno University-Kenya, 2016). After graduation, I joined the Department of Biological Sciences of Masinde Muliro University of Science and Technology as a Graduate Teaching Assistant in 2007, then got promoted to Assistant Lecturer in 2010 and rose steadily through the ranks to a Lecturer position in

2013. In 2017, I was seconded by Masinde Muliro University of Science and Technology (MMUST) to Turkana University College. In the same year, I was interviewed and promoted to the position of Senior Lecturer in the Department of Biological and Physical Sciences where I serve as acting Dean, School of Science and Technology up to date.

I have served both in academic and administrative leadership positions at various echelons of the university. I have served as an acting Deputy Principal (Academics and Students Affairs) from January to July 2020 at Turkana University College. At Masinde Muliro University of Science and Technology, I have also served Campus coordinator from 2015 to March, 2017). I have also served as Faculty Zonal Coordinator for Industrial attachment at MMUST (2013-2015); Assistant Examination officer (2007-2013). I have served in many University College Academic Board and Deans Committees including being chairperson of several Ad Hoc Committees of the University College. My teaching philosophy is that teaching profession is a call and deserves an honor. My philosophy is based on respect for the expertise and diversity of learning styles and educational goals of the students with whom I have the privilege of engaging in a co-learning experiences. I have a student-oriented approach to the extent that I strive for students to get the best possible product out of me. Over the last ten (16) years at the university, I have published several peer-reviewed articles and participated in numerous regional and international conferences

Academic Qualifications

- ❖ Doctor of Philosophy in Botany (Genetics) – Maseno University, Kenya.
- ❖ Master of Science Degree in Science Education (Biology), Masinde Muliro University of Science and Technology, Kenya.
- ❖ Bachelor of Education Science Degree –(Botany major and Chemistry) (First Class Honors -Moi University, Kenya.

Professional Memberships and Activities

- ✚ Entomological Society of Kenya
- ✚ Horticultural Association of Kenya
- ✚ Kenya Germany DAAD Scholars Association
- ✚ Masinde Muliro University chapter-DAAD scholars Association
- ✚ University Academic Staff Union (UASU, Kenya)
- ✚ Turkana Professional Association

Research Interests

- Genetics and Biodiversity Conservation
- Ethnobotany and Plant Ecology
- Food Security and Climate Change Adaptation
- Contemporary Issues in Science, Technology and Society
- Environmental Science and Fisheries resources

PUBLICATIONS

- 1) Rowan, J., Akwee, P.E., Feibel, C., Harmand, S., Henkes, G., Hildebrand, E., Lewis, J., Patricia Princehouse, P., Taylor, N., Nengo, I. **(2021)**. Raising up African paleoanthropologists: An innovative Master's program at Turkana University College, Kenya Raising up African paleoanthropologists: An innovative Master's program at Turkana University College, Kenya. *Evolutionary Anthropology Journal* 2021 Dec 31. doi: 10.1002/evan.21933.
- 2) Clement, N.E., **Akwee, P.E.**, Bitok, J., Kariuki, P. **(2020)**. Factors Associated with Non-adherence to Anti-Retroviral Therapy among Clients in Lodwar County and Referral Hospital, Turkana County, Kenya. *Journal of Advances in Medicine and Medical Research* ISSN: 2456-8899 Vol. 32 (18): Pg. 10-16
- 3) Mbatia, E., Wanjala, M., **Edome, P.A.** **(2020)**. The Biology Content Knowledge and Skills Exhibited by Pre-Service Biology Teachers in Kenyan Universities. *East African Scholars Journal of Education, Humanities and Literature*. ISSN: 2617-443X (Print). Vol.4 (8): Pg. 88-97 ISSN: 2617-7250 (<https://www.easpublisher.com/easjhcs>)

- 4) Mbatia, E., Wanjala, M., **Edome, P.A. (2020)**. The Biology Teachers' Training Needs and Competencies in the Use of Technology for Biology Instruction in Kenyan Secondary Schools. *East African Scholars Journal of Education, Humanities and Literature*. ISSN: 2617-443X (Print) Vol.4 (8): Pg. 98-109 ISSN: 2617-7250
(<https://www.easpublisher.com/easjhcs>)
- 5) **Akwee, P.E. (2019)**. A critical review of the effect of Climate Change on Turkana pastoral livelihoods. A case study of pastoralists in Turkana County, Kenya. *Published on proceedings of 3rd International workshop on Enhancing Food Security and Universal Health Care for sustainable development. Kibabii University, Bungoma Kenya. 12th -14th June, 2019.*
- 6) **Akwee, P.E., Palapala, V.A (2017)**. A comparative assessment of taro {*Colocasia esculenta* L. (Schott)} phenotypic corms/cormels characteristics of Kenya and Tarogen core taro collections for taro crop improvement and breeding. *International Journal of Innovative Research and Advanced Studies Vol. 4 (11): Pg. 418-423 ISSN 2394-4404*
- 7) **Mutu, P.L., Akwee, P.E., Wakhungu, J.W. (2017)**. Environmental drought effects on Human Vulnerability to the Turkana pastoral population of Ilemi Triangle Region, Turkana county in the Northern Kenya. *International Journal of Innovative Research and Advanced Studies Vol.4 (11): Pg. 424-436 ISSN 2394-4404*
- 8) **Akwee, P.E. (2017)**. Analysis of genetic diversity and richness of Western, Nyanza and Central Kenya taro genotypes {*Colocasia esculenta* L. (Schott)} using Simple Sequence Repeat Markers (SSR Molecular Based Markers). *International Journal of Innovative Research and Advanced Studies Vol.4(8): Pg. 25-29 ISSN 2394-4404*
- 9) Palapala, V.A., **Akwee, P.E. (2017)**. Genetic variation of introduced cocoyam germplasm in Kenya. *Journal of Agricultural Science and Food Technology*. ISSN 2465-7522
- 10) Palapala, V.A., **Akwee, P.E. (2016)**. Genetic structure and geographical relationship of selected {*Colocasia esculenta* L. (Schott)} germplasm using SSRs.

- Journal of Advances in Biology and Biotechnology 10(3): 1-14, 2016; Article no. JABB. 28479. ISSN: 2394-1081 (www.sciencedomain.org).
- 11) Palapala, V.A., Akwee, P.E. (2016). Genetic diversity analysis of Kenya taro {*Colocasia esculenta* L. (Schott)} accessions using Simple Sequence Repeat Markers. *Sky Journal of Agricultural Research*, Vol. 5(5): 076-086. ISSN 2315-8751 (<http://www.skyjournals.org/SJAR>).
 - 12) Palapala, V.A., Akwee, P.E. (2016). Evaluation of polymorphism generated by Single Sequence Repeat Markers in selected taro {*Colocasia esculenta* L. (Schott)} populations. *Journal of Medical and Biological Science Research*, Vol. 2(8). ISSN 2449-1810 (<http://pearlresearchjournals.org/journals/jmbsr/index.html>).
 - 13) Akwee, P.E. (2016). Assessment of the phenotypic characters, genotypic agronomic performances and genetic diversity of kenyan and tarogen core taro [*colocasia esculenta* (L.) Schott.] Germplasm. Unpublished PhD Thesis, Maseno University, Kenya.
 - 14) Nabie, A., Owiti, D.O., Edome, P.A. (2016). Mind mapping technique and student achievement by gender in ecology concepts in Hamisi Sub-County, Kenya. *International advanced journal of teaching and learning*, Vol 2(5): 1-9. ISSN: 2488-9059 (<http://www.ztjournal.com>)
 - 15) Omaset, J.O., Ongunya, R.O., Edome, P.A. (2016). Teacher competence as a determinant of computer Based Instruction in secondary school biology in Teso South Sub-County, Kenya. *Journal of Educational policy and entrepreneurial research (JEPER)* Vol. 3(4): 83-91. ISSN: 2408-770X (print); 2408-6231 (online). (<http://www.ztjournal.com>)
 - 16) Akwee, P.E., Netondo, G., Palapala, V.A. (2015). Comparative analysis of phenotypic characterization of Kenya and Pacific Islands tarogen germplasm collections *Colocasia esculenta* L. (Schott). *Scientia Agriculturae* 9 (2), 113-119 ISSN 2311-0228 www.pscipubcom (DOI:10.15192/PSC.SA.2015.9.2.113119).

- 17) **Akwee, P.E.**, Netondo, G., Kataka, J.A., Palapala, V.A. (2015). A critical review of the role of taro *Colocasia esculenta* L. (Schott) to food security: A comparative analysis of Kenya and Pacific Island taro germplasm. *Scientia Agriculturae* 9 (2), 101-108 ISSN 2311-0228 www.pscipubcom (DOI:10.15192/PSC.SA.2015.9.2.101108)
- 18) **Akwee, P.E.**, Toili, W.W., Palapala, V.A. (2012). Effectiveness of Computer Based Technology integration in teaching and learning of Gene Concept among high school students, Kenya. *European journal of Health and Biology Education Vol 1 issue 4(May 2012)* ISSN 2277-5978.
- 19) Wanyonyi, M., Mulavu, W.G., **Akwee, P.E.** (2012). Exploring students' perceptions of chemical bonding concepts in secondary schools in Kenya. *Global Journal of Management Science and Technology (www.gjmst.com)* Vol 1 issue 4(May 2012) ISSN 2277-5978.
- 20) Mulavu, W.G., Amadalo, M.M., Wanyonyi, M., **Akwee, P.E.**, Twoli, N. (2012). Evaluation of students' perceptions towards structure and chemical bonding upon using molecular models concepts in selected Kenya public secondary schools. *Global Journal of Management Science and Technology (www.gjmst.com)* Vol 1 issue 4 (May 2012) ISSN 2277-5978.
- 21) Mwendwa, K.A., Toili W.W., **Akwee, P.E.**, Michieka, R., and Agevi, H. (2011). An analysis of secondary school Biology and Chemistry curriculum and KCSE exams in relation to environmental education in Kenya. (*In press. East African Journal of Engineering, Science and Technology*).
- 22) Gweyi-Onyango, J. P, **Akwee, P.E.**, Onyango, A. C., Agevi, H., and Pakia, M., (2011). Genotypic yield responses of cow pea (*Vigna unguiculata*) to sub-optimal phosphorus supply in acid Alfisols of Western Kenya: A comparative analysis of legumes. *Journal of Agricultural Sciences*, 2(1):1-8(2011) ISSN 0976_6898

- 23) **Akwee, P. E., Palapala, V.A.** and Gweyi-Onyango, J.P., **(2010)**. A comparison of plant species compositions of grasslands in Saiwa Swamp National Park (SSNP) and Kakamega Forest, Kenya. *Journal of International Biodiversity Vol 1(2):77(2010)*.
- 24) **Akwee, P.E. (2010)**. *Integration of Computer-Based Technology in teaching and learning of Gene Concept in Kakamega Central District Schools, Kenya. Unpublished Msc. Thesis, Masinde Muliro University of Science and Technology*
- 25) Gweyi-Onyango, J. P, **Akwee, P. E.**, Onyango, A. C., Agevi, H., and Pakia, M., (2009). Differential Genotypic yield responses of cow pea (*Vigna unguiculata*) to sub-optimal phosphorus supply in acid Alfisols of Western Kenya. *Paper Published on proceedings of 9th HAK workshop on sustainable crop production and presented at international Scientific HAK conference held at Arusha, Tanzania, December 2-5, 2009.*
- 26) **Akwee, P. E.**, Ondieki, D., Daniel, S., Nandi, O. M. J., and Palapala, V. A., **(2008)**. Growth and Characterization of four Bambara groundnut (*Vigna subterranea* (L) Verdc.) accessions in Kakamega, Kenya. *Published on proceedings of 8th HAK workshop on sustainable crop production. Masinde Muliro of Science and Technology, Kakamega Kenya. December, 2008.*
- 27) **Akwee, P. E.** and Gweyi-Onyango, J. P. **(2008)**. Environmental and socio-economic aspects on Utilization of Wild Fruits in Arid and Semi-arid areas of Kenya. *Published on proceedings of 8th HAK workshop on sustainable crop production. Masinde Muliro University of Science and Technology, Kakamega Kenya. December, 2008.*