Aaron T. asare

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RESEARCH

Interests	Plant Biotechnology: Tissue Culture · Genetics and Breeding
Areas	Plant Science · Molecular Biology · Agronomy and Crop Science · Food Science · Nutrition and Dietetics · Genetics

RESEARCH SUMMARY

37	363	8	7	1.30	25%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 37 publications listed below, 2010–2026. Field-weighted impact is the mean over the 24 works scored for it; 1.00 is the world average for works of the same field, type and year. 6 of the 24 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Dr. 2001–present
Department of Molecular Biology and Biotechnology, University of Cape Coast School of Biological Sciences, Cape Coast, Ghana

EDUCATION AND QUALIFICATIONS

PhD 2006–2013
Department of Molecular Biology and Biotechnology, University of Cape Coast School of Biological Sciences, Cape Coast, Ghana

PUBLICATIONS

Journal articles 37

1. John Kwaku Prosper Adotey, Caleb Mawuli Agbale, Samuel Tetteh, Christiana Odumah Hood, Samuel Acheampomg, Carlos Kwesi Tettey, Rosemond Godbless Dadzie, Emmanuel Ogyiri Adu, Francis Nkrumah, Mandela Toku, Agnes Tutuwaa, **Aaron Tettey Asare** (2026). Characterization of Starch From Four Cassava Varieties Using Fourier Transform Infrared Spectroscopy, Powder x-ray Diffraction, and Scanning Electron Microscopy. *Starch - Stärke*. https://doi.org/10.1002/star.70185
2. **Aaron Tettey Asare** (2026). Development of Genetic and Genomic Resources for Cowpea (Vigna unguiculata) Towards Molecular Breeding for Plant Performance and Seed Composition Traits. *CANVAS 2026*. https://scisoc.confex.com/scisoc/2026am/meetingapp.cgi/Paper/176066
3. **Aaron T. Asare**, Peter Haruna, Isaac K. Galyuon, Daniel Asante, Joshua Yeboah Asiamah (2026). Heterotic response and inbreeding depression in seed traits and other related attributes of cowpea (Vigna unguiculata [L.] Walp.). *Electronic Journal of Plant Breeding*. https://doi.org/10.37992/2026.1701.004
4. Emmanuel Ogyiri Adu, Nazir Kizzie-Hayford, Rosemond Godbless Dadzie, Salifu Seidu-Larry, Vivianne Geraldo, Godfred Inkoom, **Aaron Tettey Asare**, Jerry Ampofo-Asiama (2026). Influence of harvest time and cultivar type on the β-carotene content and quality of biofortified cassava in Ghana. *International Anatolian Agriculture, Food, Environment and Biology Congress*. http://www.targid.net/index.php/TURSTEP/article/view/881

5. Zipei Cui, Michael Ackah, Frank Kwarteng Amoako, Jianbin Li, **Aaron Tettey Asare**, Changyu Qiu, Qiang Lin, Owuraku Amponsah Abu, Isaac K. A. Galyuon, Xueying Jin, Mengdi Zhao, Weiguo Zhao (2026). Metabolomic and physiological responses of mulberry plants to exogenous molybdenum enhance amino acid and sugar metabolism. *Plant and Soil*. https://doi.org/10.1007/s11104-026-08495-7

6. Doris Mensah-Wonkyi, Wilfred Elegba, Emmanuel Ogyiri Adu, Andrew Sarkodie Appiah, Rosemary Kusi-Adjei, Elvis Asare-Bediako, Grace. C. van der Puije, Joshua Yeboah Asiamah, Asamoah Oppong Zadok, Kofi Afari, Josiah Wilson Tachie-Menson, **Aaron Tettey Asare** (2026). Prevalence of Cassava Mosaic Geminiviruses in the Volta Region of Ghana. *The Open Agriculture Journal*. https://doi.org/10.2174/0118743315450389260319070029

7. Nazir Kizzie-Hayford, Jerry Ampofo-Asiama, Rosemond Godbless Dadzie, Salifu Seidu-Larry, Vivianne Geraldo, Claudia Asantewaa Gyimah, Baffour Kyei-Asante, Godfred Inkoom, Bernice Hayford, Christiana Odumah Hood, Jesse Adu Kwasi Baidoo, **Aaron Tettey Asare** (2025). Effects of Sprouting and Fermentation on the Physicochemical Properties and Nutritional Composition of Cowpea Flour, and Consumer Acceptability of Composite Doughnuts Made Thereof. *Legume Science*. https://doi.org/10.1002/leg3.70045

8. Emmanuel Ogyiri Adu, Paul Agu Asare, Kingsley Joseph Taah, Godwin Amenorpe, Andrews Danquah, **Aaron Tettey-Asare**, Doris Mensah-Wonkyi, Asamoah Oppong Zadok, Kofi Afari, Joshua Yeboah Asiamah (2025). Evaluation of dry matter, mealiness and starch contents of yellow-flesh cassava (Manihot esculenta, Crantz) genotypes in Ghana. *Journal of Agricultural Food Science and Biotechnology*. https://doi.org/10.58985/jafsb.2025.v03i03.84

9. Joshua Yeboah Asiamah, Sakina Haruna Mahdi, Kusum R. Tamang, Christian Bryan Carson, Prabesh Koirala, Emily Anne Reed, **Aaron Tettey Asare**, Anu Augustine, Milind B. Ratnaparkhe, Kailash C. Bansal, Babu Valliyodan (2025). Genome editing in grain legumes for food security. *Frontiers in Genome Editing*. https://doi.org/10.3389/fgeed.2025.1572292

10. Haonan Li, Michael Ackah, Frank Kwarteng Amoako, **Aaron Tettey Asare**, Jianbin Li, Zhenjiang Wang, Qiang Lin, Changyu Qiu, Mengdi Zhao, Weiguo Zhao (2025). The Targeted Metabolomic Signatures of Phytohormones in Leaves of Mulberry (Morus alba L.) Are Crucial for Regrowth and Specifically Modulated by the Differential Stubble Lengths. *Plants*. https://doi.org/10.3390/plants14071126

11. Jianbin Li, Michael Ackah, Frank Kwarteng Amoako, **Aaron Tettey Asare**, Manman Shen, Zhenjiang Wang, Qiang Lin, Changyu Qiu, Meina Zhu, Mengdi Zhao, Weiguo Zhao (2025). Transcriptome-based analysis reveals key molecular mechanisms and functional characterization of MaCAX3 gene involved in manganese stress responses in mulberry plants. *BMC Plant Biology*. https://doi.org/10.1186/s12870-025-06767-5

12. **Aaron T. asare** (2024). Assessment of genetic diversity for yield, yield attributes and water use efficiency related traits in groundnut [Arachis hypogaea L.]. *Electronic Journal of Plant Breeding*. https://ejplantbreeding.org/index.php/EJPB/article/view/283

13. R. E. Puobi, **A. T. Asare**, E. P. Otwe, I. K. A. Galyuon (2023). Drought Tolerance in Soybean (Glycine max L. Merr.) Genotypes during the Flowering Stage of Development. *Journal of Advances in Biology & Biotechnology*. https://doi.org/10.9734/jabb/2023/v26i11663

14. Jackson Nyarko, **Aaron T. Asare**, Benjamin A. Mensah, Francis Adjei (2022). Assessment of the response of fifteen cowpea [Vigna unguiculata L. (Walp.)] genotypes to infestation by Callosobruchus maculatus Fab. (Coloeptera: Bruchidae). *Cogent Food & Agriculture*. https://doi.org/10.1080/23311932.2022.2095713

15. Christian Adler Phares, Kofi Atiah, Kwame Agyei Frimpong, Andrews Danquah, **Aaron T. Asare**, Samira Aggor-Woananu (2020). Application of biochar and inorganic phosphorus fertilizer influenced rhizosphere soil characteristics, nodule formation and phytoconstituents of cowpea grown on tropical soil. *Heliyon*. https://doi.org/10.1016/j.heliyon.2020.e05255

16. Peter Haruna, **Aaron T. Asare**, Francis Kusi (2020). Assessment of Striga gesnerioides (Willd.) Resistance and Genetic Characterization of Forty-Six Cowpea (Vigna unguiculata (L.) Walp.) Genotypes in Ghana. *International Journal of Agronomy*. https://doi.org/10.1155/2020/3635157

17. S. M. A. Tagoe, T. A. Mensah, **A. T. Asare** (2020). Effect of Rust (Uromyces Phaseoli Var. Vignae) Infection

on Photosynthetic Efficiency, Growth and Yield Potentials of Cowpea (Vigna Unguiculata L. Walp) in an Open Field System. *Global Journal of Human Social Science*. https://doi.org/10.34257/gjsfrcvol20is2pg49

18. Frank Essem, Erik W. Ohlson, **Aaron T. Asare**, Michael P. Timko (2019). Genetic markers linked to Striga gesnerioides resistance for the improvement of Ghanaian cowpea (Vigna unguiculata) cultivars. *Plant Breeding*. https://doi.org/10.1111/pbr.12702
19. **A. T. Asare**, T. A. Mensah, S. M.A. Tagoe, D. K.A. Asante (2019). Identification of New Sources of Rust Resistance in Cowpea (Vigna Unguiculata L. Walp) Germplasm Using Simple Sequence Repeat Markers. *Legume Research - An International Journal*. https://doi.org/10.18805/lr-488
20. Peter Haruna, **Aaron T. Asare**, Elvis Asare-Bediako, Francis Kusi (2018). Farmers and Agricultural Extension Officers Perception ofStriga gesnerioides(Willd.) Vatke Parasitism on Cowpea in the Upper East Region of Ghana. *Advances in Agriculture*. https://doi.org/10.1155/2018/7319204
21. Elvis Asare-Bediako, Faustina Agyarko, Kingsley Taah, **Aaron Asare**, Justice Sarfo, Kwame Frimpong, Joseph Nyarko (2018). Prevalence of Mosaic and Leaf Curl Diseases of Okra (Abelmoschus esculentus L. Moench) in the Central Region of Ghana. *Journal of Experimental Agriculture International*. https://doi.org/10.9734/jeai/2018/37421
22. TA Mensah, **Aaron Tettey Asare**, DS Agyirifo (2018). Screening of cowpea (Vigna unguiculata L. Walp) genotypes for rust (Uromyces phaseoli var. vignae) resistance in Ghana. *Plant*. https://www.academia.edu/download/124548782/10.11648.j.plant.20180604.11.pdf
23. **AT Asare** (2018). Survey on cowpea [Vigna unguiculata (L.) Walp] cultivation in Upper East Region of Ghana. *International Journal of Current Research*. https://scholar.google.com/scholar?cluster=16681505775357181731&hl=en&oi=scholarr
24. A Antwi-Wiredu, S. Amiteye, **A. T. Asare**, R. Kusi-Adjei, R. G. Diawuoh, C. O. Aryee, G. Y. P. Klu (2018). The use of Microsatellite Markers in Genetic Variation Analysis of Some Introduced Rubber Tree (Hevea brasiliensis) Clones Cultivated in Ghana. *Journal of Agricultural Sciences – Sri Lanka*. https://doi.org/10.4038/jas.v14i1.8452
25. **Aaron Tettey Asare**, Francis Mensah, Samuel Acheampong, Elvis Asare-Bediako, Jonathan Armah (2017). Effects of Gamma Irradiation on Agromorphological Characteristics of Okra (Abelmoschus esculentus L. Moench.). *Advances in Agriculture*. https://doi.org/10.1155/2017/2385106
26. **Aaron T. Asare**, Bhavani Shankara Gowda, Isaac Galyuon, Lawrence M. Aboagye, Jemmy F. Takrama, Francis Kwame Padi, Michael P. Timko (2017). Identification of potential sources of striga resistance in cowpea [Vigna Unguiculata (L.) walp.] accessions from Ghana. *Journal of Microbiology and Biotechnology Research*.
27. **T. A. Mensah A. T. Asare** (2017). Screening and Determination of Sterilization Protocol and Optimum Growth Regulators for Micropropagation of Sugar Cane (Saccharum officinarum L.) in Ghana. *THE INTERNATIONAL JOURNAL OF SCIENCE & TECHNOLEDGE*.
28. **Aaron T. asare** (2017). Variation in the susceptibility of okra (Abelmoschus esculentus L. Moench) genotypes to okra mosaic virus and Podagrica species under field conditions. *Journal of Plant Breeding and Crop Science*. https://academicjournals.org/journal/JPBCS/article-full-text/F96D88664529
29. S Acheampong, Isaac KA Galyuon, **AT Asare** (2015). Effects of sterilization protocols, benzylaminopurine and type of explants on growth initiation of pineapple (Ananas comosus (L.) Merr.) cultures. *Journal of Basic & Applied Sciences*. https://www.researchgate.net/profile/Aaron-T-Asare/publication/295918449_Effects_of_sterilization_protocols_benzylaminopurine_and_type_of_explants_on_growth_initiation_of_pineapple_Ananas_comosus_L_Merr_cultures/links/56d07b4308ae4d8d64a38ec1/Effects-of-sterilization-protocols-benzylaminopurine-and-type-of-explants-on-growth-initiation-of-pineapple-Ananas-comosus-L-Merr-cultures.pdf
30. **Aaron T Asare**, GE Adukpo (2013). Assessment of functional properties and nutritional composition of some cowpea (Vigna unguiculata L.) genotypes in Ghana. *Asian Journal of Plant Science and Research*. https://www.academia.edu/download/78777771/jabs_0613_578.pdf
31. Robert Agbemafle, Genevieve E Adukpo, **Aaron T Asare**, Edward A Obodai (2013). Effects of pre-storage treatments (using brine and vinegar) and refrigerated storage on vitamin c, β carotene, microbial load and

shelf-life of red pepper (Capsicum frutescens). *Asian Journal of Plant Science and Research*. https://ir.ucc.edu.gh/items/59fe2745-fae3-4003-b2d8-6745574ac998

32. **AT Asare**, IKA Galyuon (2013). Identification of potential sources of striga resistance in cowpea [Vigna unguiculata (L.) Walp.] accessions from Ghana. *Journal of Microbiology and Biotechnology Research*.

33. **Aaron T. Asare**, Isaac Galyuon, Francis Kwame Padi, Emmanuel Plas Otwe, Jemmy F. Takrama (2013). RESPONSES OF RECOMBINANT INBRED LINES OF COWPEA [(VIGNA UNGUICULATA (L.) WALP] TO STRIGA GESNERIOIDES INFESTATION IN GHANA. *European Scientific Journal ESJ*.

34. Agbemafle, Robert, E.Adukpo, Genevieve, **T. Asare, Aaron**, A. Obodai, Edward (2011). Effects of pre-storage treatments (using brine and vinegar) and refrigerated storage on vitamin c, ?Ž?^{2}-carotene, microbial load and shelf-life of red pepper (Capsicum frutescens). *HAL (Le Centre pour la Communication Scientifique Directe)*.

35. **AT Asare**, IKA Galyuon (2011). Effects of sucrose on development of cultures of some accessions of Dioscorea spp. *J. Ghana Sci. Ass*. https://ghanascience.gov.gh/wp-content/uploads/2018/04/12-19-Asare2-1.pdf

36. **AT Asare**, IKA Galyuon (2011). Evaluation of agro-morphological diversity in some segregating lines of cowpea (Vigna unguiculata L. Walp). *Journal of Ghana Science Association*. https://ghanascience.gov.gh/wp-content/uploads/2018/04/1-11-Asare-1.pdf

37. **Aaron T. Asare**, Bhavani S. Gowda, Isaac K. A. Galyuon, Lawrence L. Aboagye, Jemmy F. Takrama, Michael P. Timko (2010). Assessment of the genetic diversity in cowpea (Vigna unguiculataL. Walp.) germplasm from Ghana using simple sequence repeat markers. *Plant Genetic Resources*. https://doi.org/10.1017/s1479262110000092