



## Curriculum Vitae

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### PERSONAL STATEMENT

I am passionate, adaptive and fast-learning person with a broad and acute interest in the discovery of new innovative Organic principles, I particularly enjoy collaborating with scientists from different disciplines to develop novel skills and solve new challenges.

### EDUCATIONAL BACKGROUND

2021 Feb-Dec. **PGDTLHE**, University of Education Winneba

- Post Graduate Diploma in Teaching and Learning in Higher Education

2018-2020: **PhD** Organic chemistry, University of KwaZulu-Natal **South Africa.**

- Trouble shooting green solvents as alternative replacement for hazardous solvents in Solid phase peptide synthesis with specific emphases on N-butylpyrrolidinone(NBP). Synthesis of Pharmaceutical active ingredients (API) as hit to drug development.

2014 -2017: **M.Sc.** Organic Chemistry, University of KwaZulu-Natal, **South Africa.**

- Screen of south African medicinal plants based on Ethnobotany. The study involves the selection of specific medicinal plants and examining them scientifically for bioactive secondary metabolite.

2005-2009: **B.Sc.** Applied Chemistry, University for Development Studies, **Ghana.**

- Fixation of phosphorus on soil samples at the Tono irrigation farms in Navrongo, in the Kassina Nankana District of the Upper East Region of Ghana.

2001-2004: **Senior Secondary School Certificate**, Ghana Secondary School, **Ghana.**

1998-2001: **Basic Edu. Certificate**, Suguru Roman Catholic Jnr. Sec. School **Ghana.**

### RELEVANT EXPERIENCE

April 2024-

Postdoctoral research fellow, University of KwaZulu-Natal, **South Africa**

- Researching into synthetic methodology development in Solid phase peptide synthesis with relevant applications to the pharmaceutical and industrial settings.
- Development, synthesis and characterization of Active Pharmaceutical Ingredients (API) as hit to drug discovery.

2021-Till date: University of Education, Winneba; **Lecturer**

- ***Undergraduate Courses I teach:***
  - Radio and Nuclear Chemistry,
  - Rate of reactions and Surface Chemistry,
  - Synthetic methodology
- ***Graduate Courses I teach:***
  - Medicinal Chemistry
  - Industrial Chemistry
  - Advance Spectroscopy and Separation Techniques
- ***My Supervisory role:***
  - 9 Master of Philosophy students under my supervision for their degrees

- 2018-2020: University of KwaZulu-Natal; **Teaching assistant.**
- Practical demonstrator and tutoring of CHEM 202, CHM 101 and CHM 195.
- 2014-2016: University of KwaZulu-Natal; **Teaching assistant.**
- Practical demonstrator and tutoring of CHM 101 and CHM 195.
- 2013-2014: Mohinani Group of Companies-Polysacks; **Quality Control Supervisor,**
- Responsibilities; Monitoring the production line and ensuring that quality of the products are met.
- 2010-2013: Savanna Diamond Cement Co.– Buipe; **Quality Control Chemist,** Ghana.
- Responsibilities; Monitoring the plant's operations, conducting full chemical analysis on incoming, in process and final product before release to the market, Management of non-conform product, preparation of production report.
- 2010 June- Dec: West African Cement (WACEM); **Quality Assurance Chemist,** Togo.
- Responsibilities; Control of plant operations, Design of raw mix for clinker production based on modulli values, hourly testing of total carbonate and Iron (II) Oxide on kiln feed, Manual chemical analysis on raw materials and final clinker product, X-ray analysis on raw materials and final clinker product, Designing of corrective materials for total carbonate, Aluminum (II) Oxide, Iron (II) Oxide correction in clinker production.
- 2010 Dec: Fortia Cement Grinding Unite, **Quality Assurance Chemist,** Togo.
- Responsibilities; Monitoring plant operations, conducting full chemical analysis on incoming materials, in process and final product before release to the market, Management of non-conform and preparation of production report, X-ray analysis of cement product, physical testing on cement samples (Blains, Water consistency, residue determination, compressive and flexural strength test and setting time) and monitoring and coordinating the activities of process and quality control.

2008 Aug-Sep: CSIR- Savanna Agricultural Research Institution, Chemist (**Internship**).

- Responsibilities; Determination and monitoring the effects of major and minor nutrients on plants, implementing and evaluating new farming practices and testing of new and proposed varieties of crops.

## CONFERENCES AND PRESENTATION

- ACS, 24<sup>th</sup> Annual Green Chemistry and Engineering Conference, Virtual, June 15, 2020.
- Pan Africa Chemistry Network congress; poster presentation; Accra; November 2017.
- SACI postgraduate research day; Identification of an herbicidal compound from *Artemisia. afra*, Harwood College, Durban, November, 2016 SACI postgraduate research day; Poster presentation; Cape Town; December, 2015.
- DST/NRF postgraduate research presentation; Pietermaritzburg; Natural products as source of bioactive compounds; December 2016.
- RSC road show; Westville Durban; December 2014.

## SELECTED PUBLICATIONS

- **Alhassan Mahama.** (2025). Extraction, Isolation and Characterization of sesquiterpene lactone (1 $\alpha$ ,4 $\alpha$ -dihydroxyguaia-2,10(14),11(13)-trien-12,6 $\alpha$ -olide) From *Artemisia afra* Jacq. ex Willd. *MSI Journal of Medicine and Medical Research (MSIJMMR)*, 2(8), 01–11. <https://doi.org/10.5281/zenodo.16931267>
- Jacinta Ochire, Jacob Amenano, Churchlife Agava Agbetum, Ibrahim Chikowe, Emmanuel Kyame Oppong, & **Alhassan Mahama.** (2025). GC-MS Profiling and Phytotoxicity Activity of Essential oil Extract of *Elaeis Guineensis* Jacq. seeds. *MSI Journal of Medicine and Medical Research (MSIJMMR)*, 2(9), 01–14. <https://doi.org/10.5281/zenodo.17189377>
- Okpara, M. O., Vaaltyn, M. C., Watson, J. L., **Alhassan, M.**, Albericio, F., de la Torre, B. G., ... & Edkins, A. L. (2024). Modulators of the Hop-HSP90 protein–protein interaction disrupt KSHV lytic replication. *ACS Infectious Diseases*, 10(11), 3853–3867.
- Apeadido, S., Nanor, E., Koomson, C. K., & **Alhassan, M.** (2024). Empowering Science Education: Unveiling the Potential of Advance Organisers in Fostering Science Process Skills within Cooperative Learning Environments. *African Journal of Educational Studies in Mathematics and Sciences*, 20(1), 113–136.
- Nanor, E., Hanson, R., & **Alhassan, M.** (2024). Effect of Stad Model of Cooperative Learning on Students' Learning Outcome on Nomenclature of Hydrocarbon. *International Journal of Scientific Research and Management*, 12(03), 3264–3274.

- Owusu, G. H., Oppong, E. K., Akompi, F. N., Addo, J. K., **Alhassan, M.**, & Tetteh, S. K. (2024). Antioxidant Potency of Essential Oil Extract from *Lantana Camara* Growing in the Central Region of Ghana. *Elixir Organic Chemistry 187* (2024) 57298-57304
- Tetteh, S. K., Oppong, E. K., **Alhassan, M.**, Akompi, F. N., Neglo, D., Boi-Doku, A., & Hayford, G. O. (2024). GC-MS and Bioactivity Analysis of the Acetone Methanol Extract of the Mesocarp of Cocoa Pod Husk and Potential Utilizations. *Elixir Organic Chemistry 187* (2024) 57291-57297
- Nandhini, K. P., **Alhassan, M.**, Veale, C. G., Albericio, F., & de la Torre, B. G. (2023). Methionine-Containing Peptides: Avoiding Secondary Reactions in the Final Global Deprotection. *ACS omega*, 8(17), 15631-15637.
- Victus Bobonkey Samlafo, Kwasi Gameli Tordzro, Bright Ankudze, **Alhassan Mahama**, (2022). Assessment of Seasonal Variations in Water Quality of River Tordzie, Ghana, *Resources and Environment*, 12 (2), 59-65
- Veale, C. G. L.; Mateos-Jiménez, M.; Vaaltyn, M. C.; Müller, R.; Makhubu, M. P.; **Alhassan, M.**; de la Torre, B. G.; Albericio, F.; Mackay, C. L.; Edkins, A. L.; Clarke, D. J. (2021). A native mass spectrometry platform identifies HOP inhibitors that modulate the HSP90–HOP protein–protein interaction. *Chem. Commun.*, 57 (83), 10919-10922.
- **Alhassan, M.**, Al Musaimi, O., Collins, J. M., Albericio, F., & de la Torre, B. G. (2020). Cleaving protected peptides from 2-chlorotriyl chloride resin. Moving away from dichloromethane. *Green Chemistry*, 22(9), 2840-2845.
- **Alhassan, M.**, Kumar, A., Lopez, J., Albericio, F., & de la Torre, B. G. (2020). Revisiting NO<sub>2</sub> as protecting group of arginine in solid-phase peptide synthesis. *International journal of molecular sciences*, 21(12), 4464.
- Kumar, A., **Alhassan, M.**, Lopez, J., Albericio, F., & de la Torre, B. G. (2020). N-Butylpyrrolidinone for Solid-Phase Peptide Synthesis is Environmentally Friendlier and Synthetically Better than DMF. *ChemSusChem*. 13(19), 5288-5294. doi:10.1002/cssc.202001647
- Othman Al Musaimi, Benjamin D. Summers, **Alhassan, M.** Beatriz G. de la Torre, Fernando Albericio, Simona Serban, Alessandra Basso. (2020). Analytical methodologies to assure successful peptide synthesis when utilizing polystyrene/DVB resins. *Chimica oggi* 38 (5):48-51.
- de la Torre, B. G., Kumar, A., **Alhassan, M.**, Bucher, C., Albericio, F., & Lopez, J. (2020). Successful development of a method for the incorporation of Fmoc-Arg (Pbf)-OH in solid-phase peptide synthesis using N-butylpyrrolidinone (NBP) as solvent. *Green Chemistry*, 22(10), 3162-3169.

## **PERSONAL QUALITIES**

- Good communication, writing and organizational skills
- Ability to work under pressure with little or no supervision
- Easy and passionate to be trained and face new challenges
- Ability to work effectively with colleagues as a team player

## **REFERENCE**

**1.** Prof. Fernando Albericio  
Professor in Chemistry  
University of KwaZulu-Natal  
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**2.** Dr. Othman Al Musaimi  
Lecturer in Medicinal Chemistry.  
School of Pharmacy  
Newcastle University  
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**3.** Prof Fanie Van Heerden  
Professor in Chemistry  
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