

## Curriculum Vitae

Name: **Mahama Alhassan**

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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

- 2021-2021                    **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) using Solid Phase Peptide Synthesis approach (SPPS).
- 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

- 2021- University of Education, Winneba; **Lecturer**
- Courses I teach include CHE 243; Radio and Nuclear Chemistry, CHE 822; Medicinal Chemistry (M. Phil), CHE 352; Rate of reactions and Surface Chemistry, CHE 351; Synthetic methodology
  - Supervision role: Supervising **8** undergraduate students for their long assays and **4** Master of Philosophy students for their thesis
- 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

- 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*.
- 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., A native mass spectrometry platform identifies HOP inhibitors that modulate the HSP90–HOP protein–protein interaction. *Chem. Commun.* 2021, 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 Chem.* 22, 2840-2845. <http://doi.org/10.1039/D0GC00834F>
- **Alhassan, M.**; Kumar A.; Lopez J.; Albericio F.; de la Torre B. G., (2020). Revising NO<sub>2</sub> as Protecting Group of Arginine in Solid Phase Peptide Synthesis. *Int. J. Mol. Sci.*, 21, 4464. [doi:10.3390/ijms2124464](https://doi.org/10.3390/ijms2124464)
- Clinton G. L. Veale, Maria Mateos-Jiménez, Michaelone C. Vaaltyn, Ronel Muller, Matodzi P. Makhubu, **Mahama Alhassan**, Beatriz G. de la Torre, Fernando Albericio, C. Logan Mackay, Adrienne L. Edkins and David J. Clarke. (2020). A New Native Mass Spectrometry Platform Identifies Inhibitors of the HSP90 – HOP Protein-Protein Interaction. *Chemrxiv*. [doi:10.26434/chemrxiv.12459800.v1](https://doi.org/10.26434/chemrxiv.12459800.v1)
- 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](https://doi.org/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*. doi:10.1039/C9GC03784E
- **Alhassan, M.** (2017). South African plants as a source of herbicides: identification of a compound with phytotoxic activity from *artemisia afra* jacq. ex willd (dissertation).

## 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  
Email; Albericio@ukzn.ac.za

2. Prof. Beatriz G. de la Torre  
Professor in College of Health Scn.  
University of KwaZulu-Natal  
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3. Prof Fanie Van Heerden  
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