

Okezie Emmanuel

Department of Biochemistry, Abia State University

SUMMARY OF QUALIFICATION

Assistant lecturer at Abia State University Uturu in the Department of Biochemistry. Has a strong interest in the life sciences and research, which is exemplified by 5 years of experience in national assignment and academic settings. Volunteered as a key worker for the National Health Service (NHS) to help UK government tackle COVID-19. Authored and/or contributed to over 25 publications, 13 oral and poster/infographic presentations at seminars/symposia in Nigeria and United Kingdom. Awarded a Commonwealth Scholarship for MSc taught course and received a research grant from Tertiary Education Trust Fund (TETFUND), Nigeria to carry out biochemical studies.

ACADEMIC QUALIFICATIONS

2019-2020 University of Reading, UK

MSc Nutrition and Food Science

- Developed in depth nutrition and food science skills through key modules: Nutrigenetics and Personalized Nutrition, Nutrition Concepts, Statistical Genetics, Genetic Epidemiology, Microbiology, Molecular Biology, Practical and lectures in Microbes in Health and Diseases (Gut microbiome research), Food Reformulation, Research and Study Skills, Public Health in Nutrition, Nutrition Communication.
- Completed a research project entitled 'A review of the phytochemical and nutrient content of cowpea (*Vigna unguiculata* (L.) Walp.)'.

2011-2015 Abia State University Uturu, Nigeria

BSc Biochemistry (First Class Honours)

- Developed in depth background in Biochemistry through key courses: Molecular biology and Genetics, General Biochemistry (Nutritional, Pharmaceutical, and Industrial), Advanced Protein Chemistry and Enzymology, Metabolism and Integration of Metabolic Pathways, Immunology, Microbiology, Biotechnology, Mathematical Applications and Biophysics.
- Completed a 12,144-word research project entitled 'Toxicological evaluation of aqueous dried leaf extract of *Senna alata* in Wistar rats'

RELEVANT NUTRITION AND FOOD EXPERIENCE

2019-date Royal Society for Public Health (RSPH), UK (Pass)

Food Safety, Food Manufacturing (603/0716/X)

- Developed critical thinking, knowledge, and training on RSPH level 2 awards in food safety, handling, and manufacturing.

FURTHER EMPLOYMENT EXPERIENCES

2018-2020 Graduate Assistant, Department of Biochemistry, Abia State University, Nigeria

- Assisted in carrying out laboratory experiments such as haematology, serum chemistry test, enzymes assay and biomolecule tests for undergraduate Biochemistry and Medical students.

- Assisted in teaching the following courses students who offer Biochemistry as their major and minor courses.
- Graded assignment and examination scripts.
- Assisted in supervising undergraduates' examinations and tests.

2020-date Assistant lecturer, Department of Biochemistry, Abia State University, Nigeria

- Teach the following courses: Molecular biology, Advanced Protein Chemistry, Integration of Metabolic Pathway, and Nutritional Biochemistry
- Timetable and examination officer, Department of Biochemistry.
- Research and Seminar coordinator.
- Supervising undergraduate research seminar and project.

2019-2020 Mitie, United Kingdom (Key worker/Operatives-COVID-19 Testing)

- Directed patients and handing over a self-test kit to them.
- Explained to the patients while putting on Personal Protective Equipment (PPE), the procedures on how they can effectively make the swab of their tonsils and nostrils.
- Assisted in doing the test on individuals who cannot confidently do it themselves.

2016-2017 Serving Teaching Corps Staff, Nigerian Defence Academy (NDA)

- Taught chemistry and mathematics; set and graded examination scripts
- Assisting science instructors in teaching Nigerian cadets' science courses as their Non-Military Courses.
- Organized seminars and headed the installation of submersible pump for NDA corps member.

2018 Joint Admission Matriculation Board (JAMB)

- Supervised mock and JAMB examination for students who aspire to be admitted into Nigerian University.
- Checked and evaluated students' documents for eligibility before the examination.
- Collected and documented registration slips from students after the examination.

2014 Laboratory Scientist (Industrial Training), Abia State University Uturu Clinic

- Carried out diagnostic assays on patients.
 - Haematology test (PCV, HB, WBC total and Differential) Serology test (Widal test)
 - Malaria parasite test
 - Clinical chemistry test (kidney function test, liver function test, lipid profile test, blood glucose test)
 - Pregnancy test
 - HIV test
 - Urinalysis test (Both microscopic with the use of microscope and macroscopic using combi-9 strip).

2009-2011 Major Model School

- Taught O' level Chemistry and Mathematics to Senior Secondary students ranging from SSS I to SSS III.
- Prepared SSS III students for their senior school certificate examination.

- Supervised examinations and graded scripts.
- Taught Chemistry practical on preparation of standard solution, titration, and quantitative analysis of salt, flame tests (anions and cations) and solubility tests.

VOLUNTEERING ACTIVITIES

- A key worker in tackling COVID-19 with National Health Service (NHS) under Mitie Company, UK (2019-2020).
- National Youth Service Corps, Nigerian Defence Academy (2016-2017)
- Community Development Service (CDS), Independent Corrupt Practices Commission, Nigeria (2017).
- CDS, Economic and Financial Crimes Commission, Nigeria (2017).
- Representative of ABSUU in Biochemistry Conference at the University of Nigeria Nsukka (2015).

SCHOLARSHIP, PRIZES AND RECOGNITIONS

- Overall university best graduating student, 25th convocation of 2014/2015 graduands, Abia State University Uturu.
- Best Graduating Student for the Department of Biochemistry and Faculty of Biological and Physical Sciences, Abia State University Uturu, 2014/2015 academic set.
- Vice Chancellor's Recommendation award into academia as a graduate assistant, Department of Biochemistry, Abia State University.
- Jones Udeogu's part-funding awards for undergraduate tuition fee as the best student in my locality (2014 and 2015).
- Commonwealth Scholarship 2019, a fully funded scholarship for master's taught at the University of Reading, United Kingdom (2019-2020).
- Recipient of the Distinguished University Fellowship award of the Ohio State University for my doctoral studies.
- ENGIE-Axiom Fellowship award for doctoral studies.
- Recipient of a Diversity Fellowship through the 2022 College of Food, Agricultural, and Environmental Sciences (CFAES) Fellowship Competition.

CONFERENCES ATTENDED

- International Webinar organized by Department of Chemistry, SRM University, Delhi-NCR Sonapat in Association with the University of Reading, 19th May, 2020.
- International Webinar Conference: Food and Immune System During COVID-19 Pandemic organized by Undergraduate Program of Food Technology, Institut Teknologi Sumatera in collaboration with Indonesia Association of Food Technologist (PATPI) Lampung on June 2, 2020.
- Xcellogen Biotech India Pvt. Ltd, Webinar on Nutrigenomics, 9th May 2020.
- International webinar on Nutrigenetics: A Novel approach towards personalized nutrition, 7th November, 2020.
- Second Food and Nutritional Sciences Research Symposium, University of Reading, UK, 5th November 2019.
- Annual Biochemistry Conference held in University of Nigeria Nsukka, April 2015.

CONFERENCE PROCEEDING

Ugbogu, E. A., Ikpeazu, V.O., Uche-Ikonne, C. and **Emmanuel, O.** (2018). Oral safety evaluation of aqueous extract of boiled *Stigma maydis* (corn silk) in rats. *Journal of Forensic Toxicology and Pharmacology*, 7. <https://doi.org10.4172/2325-9841-C5-021>. 16th Global Summit on Toxicology and Applied Pharmacology. October 15-16, 2018. Las Vegas, USA.

RESEARCH GRANT AWARD

TETFUND Institution Base Research Co-Researcher

1. Wound healing activity, anti-inflammatory effect and toxicity of aqueous extract of *Musa paradisiaca* Stem and *Cucurbita pepo* Leaf in rats. *TETFUND/ABSU/RP/2018*
2. Protective and curative effect of coconut water on carbon tetrachloride-induced toxicity in rats. *TETFUND/ABSU/RP/2018*

JOURNAL PUBLICATIONS

https://www.researchgate.net/profile/Emmanuel_Okezie

1. **Emmanuel, O.**, Uche, M. E., Dike, E. D., Etumnu, L. R., Ugbogu, O. C. and Ugbogu, E. A. (2022). A review on *Garcinia kola* heckel: traditional uses, phytochemistry, pharmacological activities, and toxicology. *Biomarkers*, **27**(2):101-117.
2. Ugbogu, E. A., **Emmanuel, O.**, Uche, M. E., Dike, E. D., Okoro, B.C., Ibe, C., Ude, V. C., Ekweogu, C. N., Ugbogu, O. C. (2022).The ethnobotanical, phytochemistry and pharmacological activities of *Psidium guajava* L. *Arabian Journal of Chemistry*, **15**(5): 103759.
3. Ugbogu, O. C., **Emmanuel, O.**, Agi, G. O., Uche, M. E., Nnanna, R. O. and Ugbogu, E. A. (2021). A review on the traditional uses, phytochemistry, and pharmacological activities of clove basil (*Ocimum gratissimum* L.). *Heliyon*. <https://doi.org/10.1016/j.heliyon.2021.e08404>.
4. Ugbogu, E. A., **Emmanuel, O.**, Dike, E. D., Agi, G. O., Ugbogu, O. C., Ibe, C. and Iweala, E. J. (2021). The phytochemistry, ethnobotanical, and pharmacological potentials of the medicinal plant- *Vernonia amygdalina* L. (bitter Leaf). *Clinical Complementary Medicine and Pharmacology*, **1**(1): 100006. <https://doi.org/10.1016/j.ccmp.2021.100006>.
5. Ibeh, L. N., Ijioma, S. N., **Emmanuel, O.**, Timothy, O. C. and Ugbogu, E. A. (2021). *Psidium guajava* leaf extract improves gastrointestinal functions in rats and rabbits: an implication for ulcer and diarrhoea management. *Biomarker*, **26**(8): 737-746. <https://doi: 10.1080/1354750X.2021.1992651>.
6. Elekwa, I., Ude, V. C., **Emmanuel, O.**, Amachaghi, V. O. and Ugbogu, E. A. (2021). *In vivo* studies on the ameliorative effect of coconut water against carbon tetrachloride induced toxicity in rats. *Biomarkers*. <https://doi.org/10.1080/1354750X.2021.1946848>
7. **Emmanuel, O.**, Okezie, U. M., Iweala, E. J. and Ugbogu, E. A. (2021). Pretreatment of red palm oil extracted from palm fruit (*Elaeis guineensis*) attenuates carbon

- tetrachloride induced toxicity in Wistar rats. *Phytomedicine Plus*, **1**:100079. <https://doi.org/10.1016/j.phyplu.2021.100079>
8. Atowa, C. O., Benedict, C. O., Umego, E. C., Atowa, A. O., **Emmanuel, O.**, Ude, V. C. and Ugbogu, E. A. (2021). Nutritional values of *Zonocerus variegatus*, *Macrotermes bellicosus* and *Cirina forda* insects: Mineral composition, fatty acids and amino acid profiles. *Scientific African*, **12**: e00798.
 9. Akara, E. U., **Emmanuel, O.**, Ude, V. C., Uche-Ikonne, C., Eke, G. and Ugbogu, E. A. (2021). *Ocimum gratissimum* leaf extract ameliorates phenylhydrazine-induced anaemia and toxicity in Wistar rats. *Drug Metabolism and Personalized Therapy*. <https://doi.org/10.1515/dmdi-2020-0185>.
 10. Ikonne E. U., Ikpeazu, V. O., Ugbogu, O., **Emmanuel, O.**, Nwakuche, I. P., Iweala, E. J., Ugbogu, E.A. (2021). A review on the clinical trials of repurposing therapeutic drugs, mechanisms and preventive measures against SARS-CoV-2. *Drug Metabolism and Personalized Therapy*. <https://doi.org/10.1515/dmpt-2020-0184>.
 11. Ijioma, S. N., **Emmanuel, O.**, Nosiri, C. I. and Ugbogu, E. A. (2020). Evaluation of toxicity profile and pharmacological potentials of *Aju Mbaise* polyherbal extract in rats. *Scientific African*, **11**: e00681.
 12. Mbanaso, E., Nwankwo, A., Ijioma, S., **Emmanuel, O.**, Ugbogu, E., Nwagbara, N. and Ugwuanyi, K. (2020). Haematoprotective and RBC membrane stabilizing effects of *Justicia carnae* leaf extracts in sodium nitrate intoxicated Wistar rats. *Journal of Basic and Clinical Physiology and Pharmacology*, **32**(1):20190275.
 13. Ogbonna, C. E., Ude, V. C., Ugbogu, O. C., **Emmanuel, O.**, Nnorom, C. I. and Ugbogu, E. A. (2020). Effect of quarrying and stone crushing activities on nutritional composition, heavy metals, and oxidative stress indices of *Aspilia africana*. *Pakistan Journal of Biological Sciences*, **23**(8):1044-1054.
 14. Ogbonna, C. E., Ikpeazu, V. O., **Emmanuel, O.**, Uzoma E. U. and Ugbogu, E. A. (2020). Impacts of quarry mining activities on herbaceous plant- *Ageratum conyzoides* L. in Ugwuale-Uturu, Abia State, Nigeria. *Pakistan Journal of Biological Sciences*, **23**(6):795-803.
 15. Ugbogu, E. A., **Emmanuel, O.**, Ude, V. C., Ijiomah, S. N., Ugbogu, O. C. and Akubugwo, E. I. (2020). Nutritional composition and toxicity profile of *Cantharellus species* (purple mushroom) in rats. *Scientific African*, **8**: e00375.
 16. Okereke, G., **Emmanuel, O.**, Ude, V. C., Ekweogu, C. N., Ikpeazu, V. O. and Ugbogu, E. A. (2020). Physicochemical characteristics, acute and subacute toxicity of cashew nutshell oil in Wistar rats. *Scientific African*, **8**: e00391.
 17. Ugbogu, E. A., Nwoku, C. D., Ude, V. C. and **Emmanuel, O.** (2019). Evaluating bioactive constituents and toxicological effects of aqueous extract of fermented *Pentaclethra macrophylla* seeds in rats. *Avicenna Journal of Phytomedicine*, **10**(1): 101-113.

18. Ekweogu, C. N., Ude, V. C., Nwankpa, P., **Emmanuel, O.** and Ugbogu, E. A. (2019). Ameliorative effect of aqueous leaf extract of *Solanum aethiopicum* on phenylhydrazine-induced anaemia and toxicity in rats. *Toxicological Research*, 1-12.
19. Ikpeazu, V. O., **Emmanuel, O.**, Ekweogu, C. N., Akara, E. U. and Ugbogu, E. A. (2019). A comparative nutritional assessments of leaf extracts of *Ocimum gratissimum* and *Solanum aethiopicum*. *American Journal of Biomedical Research*, **7**(2): 27-31.
20. Ugbogu, E. A., Akubugwo, E. I., Ude, V. C., **Emmanuel, O.**, Okomba, N. O., Ibe, C. and Onyero, O. (2019). Safety evaluation of an aqueous extract of *Termitomyces robustus* (Agaricomycetes) in Wistar rats. *International Journal of Medicinal Mushrooms*, **21**(2):193–203.
21. Ugbogu, A. E., Elghandour, M. M. M. Y., Ikpeazu, V. O., Buendía, G. R., Molna, O. M., Arunsi, U. O., **Emmanuel, O.** and Salem, Z. M. A. (2019). The potential impacts of dietary plant natural products on the sustainable mitigation of methane emission from livestock farming. *Journal of Cleaner Production*, **213**: 915-925.
22. Ikpeazu, V. O., Ugbogu, A. E., **Emmanuel, O.**, Uche-Ikonne, C., Okoro, B. and Nnaemeka, J. (2018). Evaluation of the safety of oral intake of aqueous extract of *Stigma maydis* (corn silk) in rats. *Acta Scientiarum Polonorum Technologia Alimentaria*, **17**(4): 387–397.
23. Ugbogu, A. E., **Emmanuel, O.**, Salem, Z. M. A. and Elghandour, M. M. M. Y. (2018). Nutritional composition of *Termitomyces robustus* (Agaricomycetes) and *Lentinus squarrosulus* (Mont.) singer in South East Nigeria. *Agroforestry System*. <https://doi.org/10.1007/s10457-018-0323-6>.
24. Ugbogu, A. E. and **Emmanuel, O.** (2018). Nutritional potential of aqueous soaked fermented *Pentaclethra macrophylla* (Benth) Seeds. *American Journal of Food Science and Technology*, **6**(3):108-113.
25. **Emmanuel, O.**, Ugbogu, A. E., Uwadinachi, A., Okeke, S. and Achuluno, V. (2018). A comparative study on micronutrients and antinutrients of leaf extracts of *Pterocarpus soyauxii* and *Pterocarpus santalinoides*. *Journal of Complementary Medicine Research*, **7**(2):131-137.
26. Elekwa, I., Ugbogu, A. E., Okereke, S. C. and **Emmanuel, O.** (2017). A review of selected medicinal plants with potential health benefits in South-eastern Nigeria. *International Journal of Pharmaceuticals and Chemical Sciences*, **6**(4): 162-171.
27. Ugbogu, A. E., Arunsi, U. O., Uche-Ikonne, O. O., Ude, V. C. and **Emmanuel, O.** (2017). Antiulcerogenic potentials of fermented aqueous extract of *Pentaclethra macrophylla* (Benth) Seeds. *American Journal of Biomedical Research*, **5** (3):57-64.
28. Emmanuel, O., Ugbogu, A. E., Odungide, A. A. and Atani, C. S. (2017). Proximate, antinutritional and mineral estimation of some selected consumed green vegetables in Afaha Eket, Akwa-Ibom state, Nigeria. *American Journal of Food Science and Technology*, **5**(5):182-191.

29. Ugbogu, A. E., Emmanuel, O., Elekwa, I., Uhegbu, F. O., Akubugwo, E. I., Chinyere, G. C., Ewuzie, F. and Ugorji, C. J. (2016). Toxicological assessment of the aqueous dried leaf Extracts of *Senna alata* L. in Wistar rats. *African Journal of Pharmacy and Pharmacology*, **10**(34): 709-717.
30. Ugbogu, A. E., **Emmanuel, O.**, Uche-Ikonne, C., Duru, M. and Atasie, O. C. (2016). Toxicity evaluation of the aqueous stem extracts of *Senna alata* in Wistar Rats. *American Journal of Biomedical Research*, **4**(4): 80-86.

TEXT BOOK

1. Ugbogu, A.E., **Emmanuel, O.** and Ijioma, S.N. (2017). Introductory Practical Biochemistry 1

ADDITIONAL SKILLS

- **IT Skills:** Competent user of Microsoft Word, Microsoft Power point and Microsoft Excel.

Statistical Software:

Graphpath prism, SPSS, Gretl, STATA

• Instruments:

- H^1 NMR,
- GCMS, mass spectrometry
- UV-Vis, FT-IR

• Techniques:

- Purification methods such as extraction both solvent and Soxhlet extraction process
- Chromatography, prep TLC
- Laboratory animal handling e.g., Wistar rats, mice

EXTRA-CURRICULAR ACTIVITIES

- Reading, cooking, teaching, researching, and watching of football.

REFEREES

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