
CHARLES KWASI ANTWI (Ph.D.)

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SUMMARY

A highly analytical Food Scientist and early-career researcher with interests in food chemistry, processing technologies and the safety of food. My research focuses on optimising the nutritional and functional quality of agricultural produce, with a particular emphasis on African indigenous crops.

LECTURERSHIP EXPECTED OBJECTIVE

- To enhance onboarding of student in solving food system related issues.
- To elucidate experimental knowledge in achieving department goals.
- To foster a success-oriented mindset and sense of belonging for department and institutional growth and integrity.
- To always strive for department and institutional excellence.
- To contribute to community impact through academics.

EDUCATIONAL INSTITUTIONS ATTENDED AND ACADEMIC QUALIFICATIONS

University of Pretoria, South Africa

Doctor of Philosophy, Food Science

01/2021-05/2026

Wageningen University and Research, The Netherlands

Master of Science, Food Biotechnology

02/2017-02/2019

University of Education, Winneba- Ghana

Diploma in Education (Distinction)

08/2014-08/2016

University for Development Studies, Tamale (Ghana)

Bachelor of Science, Agriculture Technology (Specialization in Biotechnology)

08/2008-06/2012

ACADEMIC AND UNIVERSITY SERVICE/AWARD

- Completed Nestle Science and Technology Seminars 2024 on Food Toxicology and Risk Assessment, 16th July, 2024.
- A winner of the Sorghum Idea Challenge (SIC) at the World Sorghum Conference, 2023, held in Montpellier-France.
- Board Member United Community of Africa Students-Wageningen University and Research (01/2018-01/2018).
- Chairperson at Ghanaian Students Association at Wageningen University and Research, The Netherlands (01/2018- 01/2019).
- Parents Teacher Association Secretary/Assistant Headteacher at Adoe Basic (04/2013-02/2017)
- Welfare Committee Chairman at Adoe Basic School (09/2015-02/2017).
- Student Hostel President at the University for Development Studies, Tamale (Ghana) (08/2011-07/2012).
- Entertainment Committee Chairperson at University for Development Studies and

Biotechnology Students Association of Ghana (BIOSAG) (05/2011- 01/2012).

- Judiciary Committee Representative at University for Development Studies, GAAS, (03/2009-02/2010).
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PREVIOUS RESEARCH

- **Doctoral Thesis Title:** Techno-functional and nutritional properties of puffed-extruded sorghum snacks with enzyme-treated sorghum bran.
 - **Master's Thesis Title:** Effects of Alkaline Cooking on the Physicochemical and Functional Properties of Maize.
 - **Bachelor's Thesis Title:** The Role of Maize Tassels in Amelioration of Heavy Metals from Contaminated Soils and Its Effects on Vegetables.
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SCIENTIFIC RESEARCH PUBLICATIONS

1. **Antwi, C. K.**, Rosa-Sibakov, N. and Emmambux, M. N., 2024. Impact of added enzyme-treated bran on the techno-functional properties of puffed-extruded sorghum snack. Journal of Cereal Science, 120, p.104051. <https://doi.org/10.1016/j.jcs.2024.104051> (IF=3.7)
 2. Agyeman, O., Shuai, L., Baion, Y. M. and **Antwi, C. K.**, 2021. Profitability analysis of small ruminants (goat and sheep) production in rural communities of Ghana. Agricultural & Forestry Economics and Management, 4(1), pp.33-39. <https://doi.org/10.23977/agrfem.2021.040107>
 3. Kumi, M., Quianoo, A.K., and **Antwi, C. K.**, 2013. The Role of Maize Tassels in Amelioration of Heavy Metals from Contaminated Soils and its Effects on Vegetables. Journal of Environment and Earth Science, 3(1) pp.192-199 ref. 18.
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RESEARCH, TEACHING AND SUPERVISION EXPERIENCE

- Lecturer : Food Science and Technology Department at the University of Energy and Natural Resources, Sunyani-Bono Region-Ghana (2026.....)
- Teaching Assistant and laboratory demonstrator: Consumer and Food Sciences Department, University of Pretoria-South Africa. (2023-2025)

Responsibilities

- Teaching.
- Marking of assignments and lab reports.
- Assisting students in lab experiments.
- A sensory panellist and trained panellist: Consumer and Food Sciences Department, University of Pretoria-South Africa. (2023-2025)

Responsibility

- Train respondents to effectively conduct sensory evaluation on food products.
- Intern at the Commonwealth and Industrial Research Organization CSIRO (Australia) (2018-2019)

Responsibility

- Working on reducing simple sugars in fruit juice through fermentation and High-Pressure Processing (HPP).
- Teacher at Adoe Junior High School, Nkoranza, Ghana. (2013-2017)

Responsibility

- Taught integrated science at the Junior High School.
- Student Intern: Ghana Water Research Institute and Savanna Agriculture Research Institute - Tamale, Ghana.

(2011-2011)

Responsibilities:

- Performed laboratory research analysis.
- Trained local communities on sustainable water preservation.
- Collected data for water filtration projects.
- Treatment of contaminated water using plants.

▪ Trainee at Biotechnology and Nuclear Agriculture Research Institute, GAEC-Ghana.

(2012-2012)

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- National service personnel and Trainee at Biostatistics and Medical Records Department:
Komfo Anokye Teaching Hospital, Kumasi-Ghana.

(2012-2013)

Responsibilities:

Assisted in managing patient database.

Performed trend analysis on patients' data.

Assisted medical officers in retrieving patients' data.

RESEARCH AND TECHNICAL SKILLS

- Application of scientific theory to quantitative data
 - Prepare samples and conduct scientific experimentations.
 - Prepare samples and conduct sensory evaluation.
 - Prepare and conduct biochemical experiments (TBARS, Carbonyl, Sulfhydryl, DPPH, ABTS etc.)
 - Handle lab equipment (FTIR, TPA, DSC, XRD, SEM, E-NOSE, Colorimeter, Spectrophotometer etc.)
 - Data collection, entry and analysis.
 - LC-ESI-QTOF-MS and HS-GC-IMS data collection, entry and analysis.
 - Report writing.
 - Statistical software and visualization tools (SPSS, Graph Prism, OriginPro, and TbTools)
 - Microsoft Word, Excel, and Power point.
 - Oral communication and presentation skills.
 - Scientific research ability.
 - Great at problem-solving.
 - Organizational planning skills.
 - Attentive listening.
 - Information gathering and management.
 - Flexibility and reliability
 - Critical thinker.
 - Collaboration.
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AFFILIATE JOURNAL: PEER-REVIEWER

1. Food Chemistry
2. Food Bioscience
3. Applied Food Research
4. Asian Food Science Journal
5. Food Research International
6. Food Science and Engineering
7. Current Opinion in Food Science
8. Current Research in Food Science
9. European Journal of Nutrition & Food Safety
10. Asian Journal of Food Research and Nutrition

MAJOR SUBJECTS

Bioprocessing Design	Food Packaging Technology	Food Processing and Storage
Food Biorefinery and Enzymology	Plant Biotechnology	Food Science and Technology
Food production and preservation	Molecular Microbiology	Environmental Biotechnology
Food Functional Materials	Food Biotechnology	Advanced Fermentation Science

CONFERENCE AND SEMINARS ATTENDED

- Presented my PhD thesis at a 3MT Competition and Postgraduate Research Day, August 2023, at the University of Pretoria, South Africa.
- 24th Biennial Virtual SAAFoST Congress 2021 held in KwaZulu-Natal, South Africa.
- 25th Biennial SAAFoST Congress 2023 held in Cape Town, South Africa.
- ICFSFPT 2023: International Conference on Food Science and Food Packaging Technologies. Vancouver, Canada.

AFFILIATIONS & MEMBERSHIP OF LEARNED SOCIETIES

- South African Association for Food Science & Technology (SAAFoST)
- United Community of Africa Students-Wageningen University and Research Ghanaian Students Association-Wageningen University and Research
- University for Development Studies Association of Students in Agriculture and Related Sciences (GAAS)
- Biotechnology Students Association of Ghana (BIOSAG)
- Ghana National Association of Graduate Teachers (NAGRAT)

KEY COMPETENCIES

- A highly organized and dedicated person who believes in teamwork and has positive attitude towards work.
- Very determined, hardworking with the ability to learn and adapt to a new environment quickly and create and apply ideas and solutions.
- Possess very good oral and writing communication skills.
- Thrives working in a challenging environment to seek out new responsibilities irrespective of reward and recognition.
- Strive for quality in everything I do.

HOBBIES

- I enjoy reading, listening to music, traveling, playing of cards, watching football and touring.

REFEREES

Prof. Gyebi K. Duodu
Head of Department, Consumer and Food Sciences,
University of Pretoria.

Email: gyebi.duodu@up.ac.za

Dr. Natalia Rosa-Sibakov
(Ph.D. co-supervisor)
A Research Scientist
VTT Technical Research Center, Finland

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Dr. Onu Ekpa
(Msc. co-supervisor)

(Global Regulatory Intelligence Associate Manager at Reckitt-Netherlands)

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Dr. Pablo Otero Julianio

(Group leader, Food Processing and Supply Chains-CSIRO, Australia)

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