

Patrick Opere Sakyi
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Education & Qualifications

2019-Till date

University of Ghana, Legon: PhD

Research Area: Medicinal Chemistry

Research: Application of computational-based techniques in the development of novel and efficient therapeutic agents for all forms of diseases especially neglected tropical diseases. Exploration of key pharmacophores from natural products in the design of new drug candidates.

Thesis Title: “Chemoinformatic-Based Identification of Potential Leishmanicides Targeting the Sterol Methyltransferase in the Sterol Biosynthetic Pathway.”

2015-2015

Institute for Professional and Executive Development (IPED)

Diploma (Health and Safety)

2013-2013

Graduate Training Institute

Certificate (Project Management)

2008-2011

University of Ghana, Legon: MPhil

Research Area: Synthetic Chemistry

Research: Synthesis of cobaloximes and their derivatives as mimetics of Vitamin B12 and their photolytic reactions

Thesis Title: “The Photolytic Cleavage of Methylpyridinecobaloxime as a Mimetic of Vitamin B12”

2001-2005

University of Ghana, Legon: BSc

Research Area: Organic Chemistry

Research: Phytochemical Screening

Thesis Title: “Phytochemical Screening of Natural Products from Some Local Medicinal Plants.”

Career Summary

2020-Present: Lecturer, University of Energy and Natural Resources (UENR)

2018-2019: Assistant Lecturer, University of Energy and Natural Resources (UENR)

2014-2017: Senior Course Tutor [Center for Continuing Education, University of Cape Coast (UCC)]

2013-2017: Relationship Officer/Branch Manager (Express Savings and Loans)

2008-2013: Teacher/Head of Science Department (The Lincoln Senior High School)

2009-2011: Teaching Assistant/Laboratory Coordinator (University of Ghana, Legon)

2005-2006: Environmental Officer (Anglogold Ashanti Iduapriem Mine Limited, Tarkwa)

Award

August, 2019: GNPC's Award for PHD studies- GH¢45,000.00

Training and Workshops attended

- One-day Natural Products Isolation Workshop. January 18th, 2022, Virtual
- First Annual Meeting of the Computer-aided Drug Discovery Programme at Noguchi Memorial Institute for Medical Research. Date 7th July, 2021, Noguchi Memorial Institute for Medical Research, Legon
- 32nd Biennial Conference – Certificate of Participation. 6-8th October, 2021, Virtual
- One-day workshop for Senior Members on the New Criteria for Appointments and Promotions. 20th October, 2021, UENR
- Participant of a one-day workshop Capacity Building on Enhancing Your Scientific Writing Skills for Academic Excellence organized by Ghana Science Association UENR Chapter
- Participant of a two-day workshop for Capacity Building in Curriculum Development in Mounting of New Programmes – NCTE and NAB requirements
- Participant of the 16th Biennial Workshop of the Ghana Science Association held at the Allotey Auditorium, College of Science, KNUST
- Participant of a two-day workshop for Curriculum Development Organized by Centre for Climate Change and Gender Studies at University of Energy and Natural Resources
- Participant of a two-day workshop for Good Assessment Practices in Higher Education: Improving Teaching and Learning organized by Quality Assurance and Planning Unit of University of Energy and Natural Resources

Associations

2021-Present: Member of the American Chemical Society (ACS).

2019-Present: Member of the Ghana Science Association (GSA).

Publications

Sakyi, P.O., Broni E., Amewu, R.K., Miller W. A., Wilson M. D., Kwofie S. K. Homology Modeling, de Novo Design of Ligands, and Molecular Docking Identify Potential Inhibitors of *Leishmania donovani* 24-Sterol Methyltransferase. *Front. Cell. Infect. Microbiol.* 12, 859981/1-859981/19 (2022). [https://doi: 10.3389/fcimb.2022.859981](https://doi.org/10.3389/fcimb.2022.859981)

Amewu, R.K., Sakyi, P.O., Osei-Safo, D., Addae-Mensah, I., **Synthetic and Naturally Occurring Heterocyclic Anticancer Compounds with Multiple Biological Targets.** *Molecules*, 26(3), 7134. <https://doi.org/10.3390/molecules26237134>

Sakyi, P.O., Amewu, R.K., Devine, R.N.O.A., Bienibuor A. K., Miller W. A., Kwofie S. K. Unravelling the myth surrounding sterol biosynthesis as plausible target for drug design against leishmaniasis. *J Parasit Dis* 45, 1152–1171 (2021). <https://doi.org/10.1007/s12639-021-01390-1>

Sakyi, P.O., Amewu, R.K., Devine, R.N.O.A., Ismaila E., Miller W. A., Kwofie S. K. The Search for Putative Hits in Combating Leishmaniasis: The Contributions of Natural Products Over the Last Decade. *Nat. Prod. Bioprospect.* 11, 489–544 (2021). <https://doi.org/10.1007/s13659-021-00311-2>

Saah S. A., Emahi I., and **Sakyi P. O.** (2020). **Bioassay of Some Plants with Potential Activities Against HIV/AIDS and Other Opportunistic Infections.** *Current Science Perspectives* 6(3): 50-56

Ismaila Emahi, **Patrick O. Sakyi**, Haider M. Hamzah. (2020). **Removal of Toxic Metals from Water using Cabbage, Carrots and Lettuce as Biofilters.** *ASRIC Journal on Agricultural Sciences* 1, 35-42

Emahi, I., **Sakyi, P. O.**, Bruce-Vanderpuije, P., & Issifu, A. R. (2019) **Effectiveness of Raw versus Activated Coconut Shells for Removing Arsenic and Mercury from Water.** *Environment and Natural Resources Research*; 9(3). <https://doi.org/10.5539/enrr.v9n3p127>

Sakyi P. O., Bienebuor A. K., Akamoah R. K., Ismaila E., Brimah A. K. (2019) **The Photolytic Cleavage of Methylpyridinecobaloxime as a Mimetic of Vitamin B12**: Vol. 5, Issue 4.

<http://doi.org/10.31695/IJASRE.2019.33134>

Sakyi P. O., Bienebor A. K., Akamoah R. K., (2018) **Assessing the Physicochemical Parameters of Water Sources in the Fiapre Vicinity a Suburb of Sunyani in the Brong Ahafo Region of Ghana**: Vol. 4, Issue 9. <http://doi.org/10.31695/IJASRE.2018.32890>

Ayine-Tora D. M., Kingsfod-Adaboh R., Asomaning W. A., Harrison J. J. E. K., Mills-Robertson F., Bukari Y., **Sakyi P. O.**, Kaminta S., Reynisson J. (2016) **Coumarin Antifungal Lead Compounds from *Millettia thonningii* and Their Predicted Mechanism of Action**: *Molecules* 21(10): 1369. <https://www.ncbi.nlm.nih.gov/m/pubmed/27754464/>

Research Interest

- Molecular Modelling and Drug Design
- Isolation and Characterization of Bioactive Compounds
- Synthesis of Bioactive Compounds
- Water Quality Analysis
- Soil Analysis

References

1. Dr. Samuel K. Kwofie
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2. Dr. Richard K. Amewu
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3. Dr. David Adu-Poku

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