

EZRA KOMBO OSORO, PHD

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BIOCHEMIST AND MOLECULAR BIOLOGY SCIENTIST

I am a skilled research scientist with a focus on biochemistry and molecular biology. I bring a comprehensive skill set and a pragmatic research approach. My expertise spans cell culture, immunoassays, Western blot, electrophoresis, PCR, bioinformatics, and gene-editing technologies like SiRNA and CRISPR/Cas9. I am an expert in using animal models and histology, and I work well both independently and in teams to complete projects on time. My strong leadership and communication abilities have allowed me to train young scientists and share scientific knowledge, considerably advancing the profession and its future.

EDUCATION, TRAINING AND EXPERIENCE

Xi'an Jiao Tong University,

China, Xi'an (2021)

PHD, BIOCHEMISTRY AND MOLECULAR BIOLOGY

Thesis: *Induction of PDCD4 by albumin in proximal tubule epithelial cells potentiates proteinuria-induced dysfunctional autophagy by negatively targeting Atg5*. Supervisor- Prof. Shemin Lu -

<https://orcid.org/0000-0001-8250-850X>

Project: An investigation into the role of genes in metabolic syndrome

In the study, we identified the critical part PDCD4/Pdcd4 plays in the progression of NASH and diabetes and showed that miR-188-5p suppression lessens liver scarring in NASH. Additionally, we discovered a Toll-like Receptor 2 antibody that reduces the symptoms of metabolic syndrome and found that LNC-HC suppresses the proliferation of liver cancer cells by trapping on microRNA hsa-miR-183-5p.

Skills: Cell Culture, Molecular cloning, Protein expression, SDS-PAGE/ western blot, PCR, Flow cytometry, Promoter assays, Apoptosis assays, Autophagy assays, Chromatin immunoprecipitation assays, Cytochemistry assays, Histochemistry, Cell viability assays.

Bharathiar University,

(2011)

MSc, BIOCHEMISTRY AND MOLECULAR BIOLOGY:

Thesis: Isolation and Identification of plasmid mediated multidrug resistant in *E.coli* causing urinary tract infection by Multiplex PCR'.

Skills: Electrophoresis, Cloning, DNA microarray, PCR.

Bharathiar University,

Tamil Nādu, Coimbatore (2011)

MSc, BIOINFORMATICS:

Skills: Genomics, Proteomics, Perl, Visual basic, Computer aided drug design, Python. C/C+

Periyar University

Tamil Nādu, Salem (2011)

BSC, BIOCHEMISTRY AND MOLECULAR BIOLOGY:

LEADERSHIP EXPERIENCE

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- Head of Department, Medical Biochemistry, School of Medicine, Masinde Muliro University of Science and Technology (Dec 2021 – May 2022)

- Faculty Examination and Timetabling Coordinator, School of Medicine, Masinde Muliro University of Science and Technology (Jan 2022 – to date)
- Member of University Publication Committee – Masinde Muliro University of Science and Technology (2022 – to date)
- Member of University Science Technology and Innovation (STI) Committee – Masinde Muliro University of Science & Technology (2022 – to date)

SELECTED PUBLICATIONS

ORCID: <https://orcid.org/0000-0001-6565-5911>

- Assemblages and Sub-Assemblages of *Giardia intestinalis* in Rural Western, Kenya: Association with Sources, Signs and Symptoms Erick Barasa¹, Briston R. Indieka², Nathan Shaviya¹, **Ezra Kombo Osoro**³, et al. **Journal of Parasitology Research**
- Xiaojuan Du; **Ezra Kombo Osoro**; et al. Pcd4 promotes lipid deposition by attenuating PPAR α mediated fatty acid oxidation in hepatocytes. *Molecular and Cellular Endocrinology*. 2022 Jan 23. Doi: DOI: [10.1016/j.mce.2022.111562](https://doi.org/10.1016/j.mce.2022.111562)
- **Ezra Kombo Osoro**, et al. Induction of PDCD4 by albumin in proximal tubule epithelial cells potentiates proteinuria-induced dysfunctional autophagy by negatively targeting Atg5. *Biochemistry and cell biology*. 2021 Oct;99(5):617-628. DOI: [10.1139/bcb-2021-0028](https://doi.org/10.1139/bcb-2021-0028) Epub 2021 Apr 8. PMID: 33831322.
- **Dong Liang***, **Ezra Kombo Osoro***, et al. “Effects and Mechanisms of Autophagy Induced by Solubilized-Cholesterol in Hepatocytes: A Comparative Study Among Solvents.” *Cell Biochemistry and Biophysics*. DOI: [10.1007/s12013-020-00917-2](https://doi.org/10.1007/s12013-020-00917-2)
- Riaz, Farooq, Qian Chen, Kaikai Lu, **Ezra Kombo Osoro**, et al. 2021. “Inhibition of MiR-188-5p Alleviates Hepatic Fibrosis by Significantly Reducing the Activation and Proliferation of HSCs through PTEN/PI3K/AKT Pathway.” *Journal of Cellular and Molecular Medicine* doi: <https://doi.org/10.1111/jcmm.16376>
- Wu, Litao, Juan Sun, Li Liu, Xiaojuan Du, Yan Liu, Xiaofei Yan, **Ezra Kombo Osoro**, et al. 2020. “Anti-Toll-like Receptor 2 Antibody Ameliorates Hepatic Injury, Inflammation, Fibrosis and Steatosis in Obesity-Related Metabolic Disorder Rats via Regulating MAPK and NF-KB Pathways.” *International Immunopharmacology* 82(February):106368. DOI: [10.1016/j.intimp.2020.106368](https://doi.org/10.1016/j.intimp.2020.106368)
- Lan, Xi, Nan Wu, Litao Wu, Kai Qu, **Ezra Kombo Osoro**, et al. 2020. The Human Novel Gene LNC-HC Inhibits Hepatocellular Carcinoma Cell Proliferation by Sequestering Hsa-MiR-183-5p. *Molecular Therapy - Nucleic Acids* 20: 468-479. DOI: [10.1016/j.omtn.2020.03.008](https://doi.org/10.1016/j.omtn.2020.03.008)