

DEPARTMENT OF CHEMISTRY AND BIOCHEMISTRY



Name of Faculty/Staff: Dr. Benard Aswani Ouna, PhD

Designation/Rank: Lecturer

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Educational Background:

- Doctorate degree (Dr. rer nat.) (Molecular Biology), University of Heidelberg, Germany (2012)
- Masters in (Biochemistry), Egerton University, Kenya (2007)
- Bachelors of Science (Chemistry and Biochemistry), Egerton University, Kenya (2001)

Brief Auto-biography of the Faculty/Staff

Over the years I have gained knowledge and skills in biochemistry, molecular biology and bioinformatics that enabled me to carry out proteomics, biodiversity and functional genomics research in different organisms. In addition, I have knowledge of various analytical chemistry tools and lately I gained some teaching and management experience as well.

I strive to be like an enzyme in everything I do, though I lately discovered that my actions are in themselves controlled by very many diverse enzymes and complicated signaling pathways that I have no control over.

Selected publications

Research papers:

1. **Ouna B. A.**, Nyambega B., Manful T., Helbig C., Males M., Fadda A. and Clayton C. (2012). Depletion of trypanosome CTR9 leads to gene expression defects. *PLoS ONE* 7(4): e34256.
2. **Ouna B. A.**, Stewart M., Helbig C. and Clayton C. (2012). The *Trypanosoma brucei* CCCH zinc finger proteins ZC3H12 and ZC3H13. *Molecular & biochemical parasitology* 183(2), 184-188.

3. Benz C., Mulindwa J., **Ouna B.** and Clayton C. (2011). The *Trypanosoma brucei* zinc finger protein ZC3H18 is involved in differentiation. *Molecular & biochemical parasitology*, 177(2), 148-151.

Conferences

Oral presentation

- **Ouna B. A.**, (July 24th, 2006). African sheep Y chromosome diversity. Egerton University, Research Week Conference, Njoro, Kenya.

Posters:

1. **Ouna B. A.**, Stewart M. and Clayton C. (2011). Functional characterization of *Trypanosoma brucei* ZC3H12 and ZC3H13 zinc finger proteins. HBIGS annual meeting, Heidelberg Germany.
2. **Ouna B. A.**, Stewart M. and Clayton C. (2010). Functional characterization of the *Trypanosoma brucei* CCCH zinc finger protein ZC3H12. 1st Cellular Networks Conference, Heidelberg Germany.
3. **Ouna B. A.**, Kijas J., Meadows J.I.S., Limo M., Hanotte O. and Mburu D. (2006). Analysis of genetic diversity and relationships of African male sheep using two Y chromosome specific markers. pp 25. ISBN; 85-85584-02-5 (site www.cbra.org.br).

Research Interest

I am interested in using latest biochemistry, molecular and bioinformatics tools in solving scientific, medical, agricultural and environmental problems facing human kind. I have a running project that is tracking circulation of heavy metals in the food chain via sugar cane products. This project is in its advanced stages and should lead to the award of a masters degree.

Together with other researchers in various institutions, we are looking for fund to run projects that will use molecular and biochemical tools to improve human and animal nutrition.

My long term wish is to collaborate with others and establish a functional lab that can effectively support metagenomic analyses, gene editing and organism improvement that will lead to production of commercial Biotech products.