



**UNIVERSITY OF NAIROBI
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SCHOOL OF NURSING SCIENCES**

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REPORT ON RESEARCH VISIT TO ANOTHER LABORATORY CATEGORY 1A.

I wish to sincerely thank ISN-the Committee for Aid and Education in Neurochemistry (CAEN) for the award which enabled me visit a Lab in USA, complete my PhD studies and publish some papers.

The Host Institution: Oregon Health and Science University (OHSU), Center for research on occupational and environmental Toxicology-CROET)

Host Supervisor: Dr Tshala-Katumbay Daniel

Award Period: 2010/2011

Awardee: Samuel T. Kimani

My first visit to OHSU was in July/August 2010 and a second one during early November 2010 to January 2011, thereafter, I have had annual visits to complete my doctoral studies. I have been able to conduct experiments on establishing biomarkers of cassava neurotoxicity in

rodents and non-human primates under sulfur Amino acid restricted diet. I acquired skills on proteomics, electron microscopy techniques and behavioral test batteries besides conducting high quality experimental studies. I also acquired further training on responsible and ethical conduct of research, humane handling of laboratory animals, scientific writing and data analyses.

The visit to Dr Tshala-Katumbay laboratory was fruitful and as such, we have been able to publish 3 peer reviewed articles in which ISN-CAEN has been acknowledged for the generous support as follows;

1. Kimani S, Sinei K, Bukachi F, Tshala-Katumbay D, Maitai C. Memory deficits associated with sublethal cyanide poisoning relative to cyanate toxicity in rodents. *Metabolic Brain Disease*. 2013 Dec 3. Doi:10.1007/s11011-013-9459-2 ;PMID: 24293006
2. Samuel Kimani, Victor Moterroso, Mike Lasarev, Sinei Kipruto, Fred Bukachi, Charles Maitai, Larry David and Desire Tshala-Katumbay (2013). Carbamoylation correlates of cyanate neuropathy and cyanide poisoning: relevance to the biomarkers of cassava cyanogenesis and motor system toxicity. *SpringerPlus*, 2013; 2:647 doi:10.1186/2193-1801-2-647.
3. Kimani S, Moterroso V, Morales P, Wagner J, Kipruto S, Bukachi F, Maitai C, Tshala-Katumbay D. Cross-species and tissue variations in cyanide detoxification rates in rodents and non-human primates on protein-restricted diet. *Food Chem Toxicol*. 2014 Feb 2. pii: S0278-6915(14)00061-1. doi: 10.1016/j.fct.2014.01.047. PMID:24500607

Once again on behalf of the research team, I record my gratitude to ISN-CAEN without which this achievement and others will not have been possible. The award has made me to have a very positive view to science not to mention myriads of opportunities to network and participate in global health agenda.(See attached photo)

Thank you and sincerely

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Photo of part of the Dr Tshala-Katumbay research Team during my 2010 visit; From Left, Dr Tshala-Katumbay, Mr Moris Kim (Research intern), Samuel Kimani (Right), in front of CROET building.