

CURRICULUM VITAE

CONTACT INFORMATION

Name: Agnes Nandutu Masawi

Postal Address: Department of Biochemistry and Sports Science, College of Natural Sciences, Makerere University, , P.O Box 7062, Kampala

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ACADEMIC QUALIFICATION

PHD., Food chemistry and Nutrition, University of Surrey, UK, 2005

M.Sc., Biochemistry, Makerere University, 1998.

B.Sc., Biochemistry and Chemistry, Makerere University, 1994

PROFESSIONAL WORK EXPERIENCE

1995-1997: Assistant lecturer, Biochemistry department, Makerere University, Kampala

2001-2004: Participated in demonstration of Food science and Nutrition practicals in First year group and supervised third year student projects in the University of Surrey, UK

2005 to 2015; Lecturer, Biochemistry department, Makerere University, Kampala

2016 to date: Senior Lecturer.

I am involved in teaching the following courses :

BCH 1102 Biomolecules (structures and their functions)

BCH 1202 Metabolism and regulation of metabolism

BCH 3101 Food Science and Nutrition

BCHV 122 : Biochemistry I (purine, Pyrimidines, porphyrins, structure, Function and metabolism, carbohydrate metabolism)

BCH 2101: Tissue structure and Function

BBT 1102: Molecular structure and functions of Biomolecules

AHN 7101: Nutritional Biochemistry (Postgraduate course)

MBC 7104: Advanced Metabolism (postgraduate Course)

Currently Head Department of Biochemistry & Sports Science, College of Natural Sciences Makerere University.

External Examiner

- (i) 2012 – 2015: External Examiner, Biochemistry KIU Medical School Busenyi campus Busenyi.
- (ii) 2016 – 2019: External Examiner, Biochemistry Medical School, Gulu.University
- (iii) 2017- 2019: External Examiner, Biochemistry, IUIU Medical School Kampala campus.
- (iv) 2021 -2024: External Examiner Biochemistry, Medical school, Soroti University

Graduate Thesis and Dissertations Examined

- (i) Nkundabombi M.Grace: “Development and Characterization of Flours from Iron – Biofortified beans”
- (ii) Eunice Achiro: “Effect of modification of Traditional processing methods on micronutrient content of green leafy vegetables in Northern Uganda”
- (iii) Joshua Ssemakula : A Critical path for developing millet-orange sweet potato enriched porridges to improve access to nutrient dense complementary foods in Kasambya- Mubende
- (iv) Mr. Tuhumuhimbise’s PhD thesis: Microstructure and β -carotene bioaccessibility of processed and orange fleshed sweet potatoes”
- (v) Mr. Oola Stephen MSc. Dissertation: Body composition, Physical activity, and blood pressure levels among public primary school children in Kampala District.
- (vi) Mr. Musisi Emmanuel, MSc. Dissertation: Biomarkers of Antioxidant and Oxidative Damage status in HIV Mono-Infected HIV-TB Co-Infected patients on Highly Active Antiretroviral Therapy

Reviewer of Journal Articles

- (i) [**European Journal of Medicinal Plants**](#): Evaluation of in vitro Antioxidant, Anti-bacterial, Cytotoxic and in vivo Analgesic and Neuropharmacological Investigation of *Alysicarpus vaginalis* Available in Bangladesh.
- (ii) [**European Journal of Medicinal Plants**](#): In silico analysis of phytochemicals from Coconut against 2-enoyl-CoA hydratase of Candidiasis.

- (iii) [European Journal of Medicinal Plants](#): Anti-diabetic effect of RoseMary and Salvia by using molecular docking
- (iv) [Journal of Pharmaceutical Research International](#) : *In vitro* antioxidant and antibacterial effect of *dodo naeaaviscosa* leaves.
- (v) [Asian Journal of Immunology](#): Effect of ethanol Extract of *Xylopia aethiopica* Fruit on Oxidative Stress Indices of Wistar Rats.
- (vi) [Journal of Complementary and Alternative Medical Research](#): Application of hydro-ethanol extract of *tithonia diversifolia* (hems) in the treatment of virulent candida albicans eksu 029 induced oral infection

Student supervision

Eryau Joseph: The effect of Maternal Nutritional status on Birth size, in Kaberamaido District (MSC AHN). Completed July 2013

Olol Daniel: Identification of Biochemical responses of Cassava (*Manihot esculenta Crantz*) to Drought Stress (MSc in Crop Science) did half way and deserted on getting a job.

Maseruka Richard: Msc BCH/0001/91/DU: Establishment of a micronutrient profile of commonly consumed foods in Bushenyi District Uganda. KIU western Campus. Completed April 2014.

Agwaya Moses: Anti-diabetic potential of the root bark extract of *Zanthoxylum chalybeum* in progress

Wanyama Ronald: MSc.AHN (2007/HD02/9086U. Micronutrient and Immunological status in HIV-infected adults at diagnosis in Northern Uganda. Completed in 2015

Sekulya Steven: MSc. student (Biochemistry): Phytochemical and antioxidant activity of greeny leafy vegetables commonly consumed in Uganda, completed in April 2019.

Biryomumaisho Justus Murokore: PhD student. Ameliorative effects of Ugandan tea on aflatoxin toxicity in rats in progress

Mary Namwanje: PhD student. Effectiveness of fish-enriched supplementary products for iron deficient vulnerable groups- Uganda in progress.

Akuyenze Paul PhD student: Profiling starch properties and their genetic markers in selected East African Highland cooking bananas.

Omondung Dan MSc. Student : The Effect of Seasons on Physico-chemical and Functional properties, Starch morphology and Consumer Acceptability of Boiled Cassava Varieties in progress

IDAROSSI Faida Khadidja MSc. Student: Phytochemical screening, antimicrobial and antioxidant activities of endemic medicinal plants used in the Comoros: *Euclea mayottensis* and *Tambourissa comorensis*. Defended on 12th January

Margret Nankya MSc. Student: Bioactive Components of Robusta Coffee with Potential antifungal Properties in progress

CONFERENCES, WORKSHOPS AND SEMINARS ATTENDED

5 JULY -7TH 2021 July: Reimagining Natural products industry in Africa conference
March 20, 2021 Endo diabetic Virtual conference

11th September, 2015: Regional Scientific conference on Natural products

28th July- 1st Aug. 2014 a short course on application of nuclear techniques (deuterium Dilution Tec) in assessment of body composition at Makerere university.

22nd – 25th June 2010: Short course in Effective supervision and Mentorship at
Makerere University

23rd-27th July 2007: Short course in Research management at Makerere
University

25th March to 2nd April,2006: Consumer protection by integrated process chains
in food production at Göttingen University,Germany

3rd – 8th March 2003: Modular training in Food safety and preservation

4th-9th December 2003: Modular training in Natural toxicants and risk assessment.

9-12th December, 2002: Modular training in Food Allergy

RESEARCH ACTIVITIES INVOLVED IN.

2007: Retention studies of processed products from orange fleshed sweet potato, a staple food for rural communities in Uganda. This is a collaborative study with HarvestPlus and is supported by IFPRI and CIAT

2008: Biochemical analysis of vitamin A, iron and infection status among women

and children in Uganda: a baseline survey. This is also a collaborative study with Harvest Plus supported by IFPRI and CIAT

2008: Targeting Gene-based Markers Associated with Drought Tolerance Mechanisms for cassava breeding Supported by MSI (World Bank) but **working on the biochemical aspects**

2013: Targeting Gene-based Markers Associated with Drought Tolerance Mechanisms for banana breeding: **working on the biochemical aspects**

2015: Postharvest quality of *solanum aethiopicum* leafy vegetable subjected to various handling and storage technologies

PUBLICATIONS

Nandutu A (2005). Biochemical, physico-chemical and Nutritional properties of sweet potato(*Ipomomea batatas Lam*) and its processing into an infant weaning food (PhD. Thesis)

Nandutu A.M, Clifford Mike, Nazlin Howell (2007) Analysis of phenolic compounds in Uganda sweet potato varieties (NSP, SPK,TZ) Published in the African Journal of Biochemistry Research (AJBR) Volume 1(3) pp 029-036.

Nandutu A.M and Nazlin Howell (2009) Nutritional and rheological properties of sweet potato based infant food and its preservation using antioxidants published in the African Journal of Food Agriculture, Nutrition and Development (AJFAND) Volume 9. No.4

Christine Hotz, Cornelia Loechl, Abdelrahman Lubowa, James K. Tumwine, Grace Ndeezi, **Agnes Nandutu Masawi** , Rhona Baingana, Alicia Carriquiry, Alan de Brauw, Jonnalagadda V. Meenakshi, and Daniel O. Gilligan (2012): Introduction of β -Carotene–Rich Orange Sweet Potato in Rural Uganda Resulted in Increased Vitamin A Intakes among Children and Women and Improved Vitamin A Status among Children1–3 published in the journal of Nutrition, Volume 142: 1871-1880.

Nandutu A, Carasco J. F. & Hagenimana Vital, (2000). Determination of starch in high carbohydrate foodstuff using sweet potato amylase extract published in the journal of food technology in Africa, Volume 5, pp 66-68.

Agwaya M.S, **Nandutu A.M*** and Vuzi P.C (2016). Protective Effects of *Zanthoxylum chalybeum* in Diabetes-induced Myocardial Dysfunction in

Rats published in the European Journal of medicinal plants, Volume 12(1).

Moses Solomon Agwaya, Peter California Vuzi, **and Agnes Masawi Nandutu *(2016)**. Hypoglycemic Activity of Aqueous Root Bark Extract *Zanthoxylum chalybeum* in Alloxan-Induced Diabetic Rats published in Journal of Diabetes Research volume 2016, article ID 8727590 5 pages, 2016.
doi:10.1155/2016/8727590.

Sekulya S.¹, **Nandutu** ^{1*}, Namutebi A.², Ssozi J.², Masanza M.³, Jagwe J. N.⁴, Kasharu A.⁵, Rees D.⁶ and Kizito E. B. Antioxidant potential of the farm r preferred selections of *Solanum aethiopicum* leafy vegetable consumed in central Uganda published in European Journal of Biological Research (2018); 8(1): 26-33

Sekulya S.¹, **Nandutu** ¹, Namutebi A.², Ssozi J.², Masanza M.³, Jagwe J. N.⁴, Kasharu A.⁵, Rees D.⁶ and Kizito E. B, Acham H.^{2*} Effect of post-harvest handling practices, storage technologies and packaging material on postharvest quality and antioxidant potential of Solanum Aethiopicum(Shum) leafy vegetable published in Journal of research in plant sciences (2018) volume 3.

Biryomumaisho Justus Murokore ,Peter Vuzi California, Raphael Wangalwa, Alex Paul Wacoo Clement Olusoji Ajayi , Hannington Gumisiriza ,Agnes Nandutu Masawi (2022): Effect of Spice form and Extraction Period on Total Phenolic Content of Selected Ugandan Spices. *E uropean Journal of Medicinal Plants*, Page 25-32 DOI: [10.9734/ejmp/2022/v33i330456](https://doi.org/10.9734/ejmp/2022/v33i330456)
Published: 8 April 2022.

Biryomumaisho Justus Murokore ,, Raphael Wangalwa, Alex Paul Wacoo Clement Olusoji Ajayi , Hannington Gumisiriza ,Agnes Nandutu Masawi Peter Vuzi California (2023.) "Aflatoxin Susceptible Food Consumption Frequency, Prevalence, and Levels in Household Foodstuffs in Southwestern Uganda," *Journal of Food Quality*, vol. 2023, Article ID 4769432, 7 pages,
<https://doi.org/10.1155/2023/4769432>.

OTHER ACADEMIC ACTIVITIES:

- MSc. I and II coordinator (2014-2018)

SERVICE TO THE UNIVERSITY AND COMMUNITY

- Member on the following departmental committees: Postgraduate and Research, Finance and appointment.
- Member of the sub contracts committee for the college of Natural Sciences (2011-2014)
- Patron of Christian Union in CONAS

- I am a woman leader in Luzira Chrisco Church.
- I have participated in Science café talks to some in Mityana district and Taibah International School students
- I am a teacher for the teenagers in Luzira Chrisco church

REFEREES

1. Professor Tugume, Makerere University, Dean of Bioscience College of Natural Sciences, P.O Box 7062, Kampala
Mobile telephone Number: 0772514841
2. Associate Professor Joseph Hawumba, Makerere University, Department of Biochemistry and Sports Science, P.O Box 7062, Kampala