

CURRICULUM VITAE

NAME Justus Kiruki Munyua

PRESENT ADDRESS Department of Biochemistry
University of Nairobi
Chiromo Campus
P.O. Box 301 97
NAIROBI, KENYA

DATE AND PLACE OF BIRTH December 22nd 1 941 at Chogoria Meru Kenya.

MARITAL STATUS Wife - Caroline Larsson

Children - Three:-
1. Anna Wanja 12/75
2. Kent Njagi 9/77
3. Emily Rugum 12/79

CITIZENSHIP Kenyan

EDUCATION Ph.D (Biochemistry) University of Agricultural Sciences, Uppsala, Sweden, 1980

Postgraduate Diploma (Biochemistry). University of Uppsala, Uppsala, Sweden, 1976.

M.Sc (Biochemistry) Moscow State University, Moscow, U.S.S.R. 1970.

Agricultural Certificate, Embu Institute of Agriculture, Embu, Kenya, 1963.

EMPLOYMENT RECORD Associate Professor - University of Nairobi 200 - to-date.

Tutorial Fellow - University of Agricultural Sciences, Uppsala, Sweden, 1979 - 1980.

International Fellow - University of Uppsala, Uppsala, Sweden 1974 - 1976.

Research Officer - Kitale Grassland Research
Station, Kitale, Kenya 1970 - 1974

TEACHING EXPERIENCE

Chemistry of Biomolecules - University of Nairobi , 1980 - to-date

Bioenergetics and Metabolism - University of Nairobi 1982 - to-date

Molecular Transmission of Genetic Code - University of Nairobi, 1983 - to-date

Plant Biochemistry - University of Nairobi, 1984 - 1986.

Biochemistry of Erythrocyte - University of Nairobi 1981.

Nutritional Biochemistry - University of Nairobi, 1982 - 1987.

Introduction to Biochemistry - Swedish University of Agricultural Sciences,
Uppsala, Sweden, 1977 - 1980.

Biochemistry of milk proteins - Swedish University of Agricultural Sciences,
Uppsala, Sweden, 1977 - 1980.

Biochemistry of Plant hormones - Plant Breeding M.Sc., University of
Nairobi.

Biochemistry of Pituitary gland hormones, M.Sc. Animal Production -
University of Nairobi.

Biochemistry of Cereal Proteins, MSc. Crop Production, University of Nairobi

RESEARCH EXPERIENCE AND INTERESTS

Identification and Characterization of biological active compounds & (antibiotics and antimicrobial compounds).

The use of Lactoperoxidase - Thiocyanate-Hydroperoxide system in milk proteins preservation. University of Nairobi, 1980 - to-date.

Isolation and Characterization of Physicochemical properties of casein micelles. University of Nairobi and Swedish University of Agricultural Sciences 1975 - to-date.

Hydrogen Peroxide preservation of milk - Uppsala University 1975 - 1976.

Factors influencing excretion of enzyme by yeast-(*Ceromyces cereviceae*).
Moscow State University, 1968 - 1970.

In vitro digestibility of Kenya grasses and legumes. National Grassland Research, Kitale, Kenya, 1970 - 1973.

Identification of local plants possessing anti-parasite biological activity.
Chemotherapy of parasite with these plant, Extraction and characterization of active components.

Physical chemical characterization of oils from Kenya plants.

Environmental studies on industrial pollution with heavy metals.

Possible modes of HIV-1 transmission from mother to child in Kenya.

ACADEMIC COMMITTEES

Co-ordinator - Biochemistry Course, University of Nairobi, 1981 - to-date.

Secretary - Departmental Postgraduate Committee. University of Nairobi 1981 - 1985.

Currently serving Member of departmental postgraduate committee 1985 to date.

Workshops

(1) Workshop on Photosynthetic Electron Transport Chain Process. Uppsala Sweden, 1979.

(2) Workshop on Electron Microscopy. Solna Sweden, 1978.

Scientific Conferences

(1) Presented Posters and Abstract in the World Dairy Congress in Ayr Scotland, 1973.

(2) Co-Chairman World Diabetics Conference Nairobi Kenya, 1981.

ACADEMIC SUPERVISION

1. Leonard Arne - M.Sc. Thesis - **Stability of Casein Micelles during milk storage in presence of H₂O₂**. Uppsala University 1979.

2. K.N. Lerna - **M.Sc. Thesis *Glucose Metabolism in Schistosomiasis*** University of Nairobi 1994.
3. G.B.A Okech – M.Sc. Thesis – *In vitro* effects of leaf extracts and oil of *Ricinus communis* (Euphobiacea) on *Leishmania major* lesions on inbred BAL/c mice.
4. Wilfred Njoroge – M.Sc. Thesis – Studies on the dynamics of mother to child HIV-1 transmission during prenatal period in Kenya.
5. Jackie Obey – M.Sc. Thesis – *In vitro* and *In vivo* assays for Antileishmanial Activities of *Plumbago capensis* (Plumbaginaceae) Extracts against *Leishmania major* (Kinetoplastida Trypanomatidae).
6. S. C. Kazungu – M.Sc. Thesis – An assessment of the Efficacy of *Mundulea sercea* crude extract in control of *Anopheles gambiae* S.S and *Culex quinquefasciatus* (Diptera: Culicidae).

LIST OF PUBLICATIONS

1. J.K. Munyua – Effects of hydrogen peroxide on the electrophoretic mobility of Casein – Milk Science International Vo. 29 (12) 738; 1974.
2. J.K. Munyua – Hydrogen peroxide alteration of Whey proteins in Skim Milk and Whey Protein Solutions.
3. J.K. Munyua, E. Almlof, M. Larsson-Razinikiewicz and I. Lindqvist – Fractionation by size of Casein micelles on controlled pore size glass. Preparative Biochemistry Vol. 7(1) 1; 1977.
4. J.K. Munyua and M. Larsson-Razinikiewicz. Casein Micelle stability during skim-milk storage in presence of Hydrogen Peroxide. Milk Science International Vol. 34(3) 132; 1979.

5. J.K. Munyua and M. Larsson-Razinikiewicz. Chemical and physical effects of Hydrogen Peroxide on Skim-Milk and isolated Casein Micelles. *Milk Science International* Vol. 34(1) 672; 1979.
6. J.K. Munyua and M. Larsson-Razinikiewicz. The influence of Ca²⁺ on size and light scattering properties of the Casein Micelles. 1. Ca²⁺ Removal. *Milk Science International* Vol. 35(10) 672; 1980.
7. J.K. Munyua and M. Larsson-Razinikiewicz. The influence of Ca²⁺ on the size and light scattering properties of the Casein Micelles. 2. Ca²⁺ addition *Milk Science International* Vol. 35(12) 555 1980.
8. E.N.M. Njagi, K.N. Lerna, A.M. Kinyua and J.K. Munyua - *Schistosoma mansoni* - Effects on Glucose metabolism in mice. *International Journal of BioChemPhysics* Vol. 3 1994.
9. J.K. Munyua, E.N.M. Njagi, M.J. Mangara and A.M. Kinyua. Heavy metal analysis of Local - and Imported Pica Soils. *International Journal of BioChemPhysics* 1996.
10. J.K. Munyua and E.N.M. Njagi. Alkaline phosphatase test for detection of improper pasteurization of milk and dairy products. A review. *International Journal of BioChemPhysics* 1996.
11. J.K. Munyua, E.N.M. Njagi, A.G. Mark. Physicochemical characterization of oils from Kenyan plants. *International Journal of BioChemPhysics* Vol. 5 & 6 Nos (1 & 2), 1998.
12. J.K. Munyua, C.B.A. Okech, C.O. Anj & L.1rungi, E. Njagi, C. Rukunga. *In vivo* effects of the crude aqueous leaf extract and seed oil of ricinus communis L(Euphorbiaceae) on Leishmania major lesions on inbred BAL/c mice. 1998.
13. Lerna, K N., Njagi E.N.M. and Munyua J. K (1998). Effects of *Schistosoma mansoni* infection on Mammalian host glucose metabolism: Proceedings of Federation of African Societies of Biochemistry and Molecular Biology. pp.351-354.

LIST OF ABSTRACTS AND SHORT COMMUNICATIONS

1. M. Larsson-Raznikiewicz, J.K. Munyua and B. Ekstrand on the structure and stability of the Casein Micelles in Abstr. Proc. Inter. Dairy Fed. Symposium 1973 at Hannah Research Institute, Ayr. Scotland. Page 77 - 79.
2. E.N.M. Njagi, A.M. Kinyua and J.K. Munyua. Analysis of trace metals in serum of mice infected with schistosome mansoni. Abstracts of Radiation measurements and Applications.
3. J.K. Munyua, A.M. Kinyua and E.N.M. Njagi. EDRF Analysis of Trace Metals in serum from mice infected with schistosome Massoni.
4. J.K. Munyua, Mutura C.W., Njoroge, W.J., Mwangi W.A., Kinyanjui, W.E., Mukuria, J.C., Kageyama S., Rotich S.W., Ndiwa M., Kakimoto K., Makokha E.P., songok, E.M Karimura T., Tukei P.M., Githura I.J. and Koech D.K. Evaluation of locally developed particle agglutination Assay for detection of antibodies to HIV-1. Presented to 12th World Aids Conference Geneva Switzerland Abstract 41 105, 1998.
5. Njoroge W.J., Ichimura H., Songole, E.M., Kakirnoto K., Mukuria, J.C., Munyua, J.K, Makokha, E., Kageyama, S., Tukei Peter.M., and Kurimura, T., (1998) Sensitivity and Specificity of Nested PCR Primers in detection of HIV-1 in antenatal clinic attendees. 1 9th African Health Science Congress, Arusha Tanzania, Abstract. Ag 6.
6. Njoroge W.J., Kakirnoto K., Mukuria J.C., Songok, E., Munyua J.K. Rihana R.N., Kiptoo M.K., Akuku A., Adongo, N.I., Makokha, E.P., Aloo A.J.and Tukei Peter M. (1998). Early diagnosis of HIV -1 seropositive mothers in Western Kenya. 2nd National conference on AIDS/STDS, KCCT, Mbagathi, Kenya. Abstract AB 082-28.
7. Njoroge, W.J., Kakimoto, K., Songok, E.M., Ichimura, H., Mukuria, J.C., Munyua, J.K., Makokha, E.P., Genga, O., Aloo, J.A., Freda,A., Adongo, N.I., Tukei, P.M., (1 999). Influence of Maternal HIV-1 Maternal Viral load on

- Vertical transmission. A short course Zidovudine (ZDV) regimes in Kenya
20th African Health Sciences Congress Accra Ghana.
8. Lerna, K.N., Njagi, E.N.M and Munyua J.K., (1998). Effects of *S. mansoni* infection on mammalian host glucose metabolism. Book of Abstracts. Federation of African Societies of Biochemistry and Molecular Biology. F. 37.
 9. Njoroge, W.J., Kakimoto, K., Ichimura, H. Mukuria J.C., Munyua, J.K., Makhoka, E.P., Ngenga, O., Aloo, J.A., Freda, A., Adongo, N.I., Tukei P.M. (1999). Use of short course Zidovudine for Prevention of mother to child transmission of HIV in rural Western Kenya. The second conference on global strategies for the prevention of *HIV* Transmission from mother to infant. Montreal Canada.

REFEREES:

1. Prof. J. K. Immungi,
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P.O. Box 30197
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2. Prof. K. Waithaka,
Former Dean,
Faculty of Agriculture,
University of Nairobi,
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3. Prof. D.W. Mukunya,
Former Principal,
College of Agriculture and Veterinary Medicine,
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