



# THE TECHNICAL UNIVERSITY OF KENYA

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NAME: DR PATRICK WAFULA SIMIYU OKANYA

|                      |                                                                  |
|----------------------|------------------------------------------------------------------|
| Faculty:             | Applied Sciences and Technology                                  |
| School:              | Biological and Life Sciences                                     |
| Department:          | Biochemistry and Biotechnology                                   |
| Current Designation: | Senior Lecturer, BIOCHEMISTRY AND BIOTECHNOLOGY (DBB)            |
| Office Telephone:    | +254(020) 2219929, 3341639, 3343672                              |
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| Consultation Hours:  | 8AM-5PM MON - FRI                                                |



## EDUCATION

| LEVEL                      | QUALIFICATION NAME                       | INSTITUTION                     | YEAR |
|----------------------------|------------------------------------------|---------------------------------|------|
| Doctor of Philosophy (PhD) | BIOCHEMISTRY                             | UNIVERSITY OF SAARLAND(Germany) | 2012 |
| Masters of Science (M.Sc.) | BIOCHEMISTRY                             | University of Nairobi(Kenya)    | 2006 |
| Bachelor of Science (BSc)  | BIOCHEMISTRY AND CHEMISTRY               | University of Nairobi(Kenya)    | 2000 |
| Diploma                    | COMPUTER SYSTEM DESIGN                   | COMPUTER TRAINING CENTRE(Kenya) | 1996 |
| O level/Equivalent         | Kenya Certificate of Secondary Education | KOELEL SEC. SCHOOL(Kenya)       | 1994 |

## WORK EXPERIENCE

| PERIOD                  | INSTITUTION                                                           | POSITION                                                      |
|-------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------|
| 11/10/2018 - to date    | Technical University of Kenya                                         | Senior Lecturer, Department of Biochemistry and Biotechnology |
| 12/05/2020 - to date    | Ministry of Education, Jeremiah Nyagah Technical Training Institute   | Member, Board of Governors                                    |
| 21/07/2019 - to date    | Biochemistry and Biotechnology Professional Society of Kenya          | Vice Chairman                                                 |
| 08/07/2016 - to date    | National Biosafety Authority                                          | Biosafety Expert                                              |
| 03/10/2016 - to date    | Technical University of Kenya                                         | Postgraduate Departmental Examination Officer                 |
| 01/10/2015 - to date    | Technical University of Kenya                                         | Club Patron, STSA                                             |
| 30/01/2016 - to date    | Pharmaceutical Journal of Kenya                                       | Reviewer                                                      |
| 17/02/2020 - to date    | DAAD, Regional Office for Africa                                      | DAAD External Reviewer                                        |
| 10/07/2018 - to date    | Biorisk Management Association of Kenya (BMAK)                        | Secretary General                                             |
| 03/10/2019 - to date    | IBR, JKUAT                                                            | External Examiner                                             |
| 16/09/2019 - to date    | Department of Zoology, JKUAT                                          | External Examiner                                             |
| 07/12/2020 - to date    | CEBIB, University of Nairobi                                          | External Examiner                                             |
| 12/05/2020 - to date    | Ministry of Education, Heroes Technical and Vocational College (TVET) | Member, Board of Governors                                    |
| 01/04/2021 - to date    | Department of Chemistry and Biochemistry, University of Namibia       | External Moderator                                            |
| 01/01/2006 - 31/07/2008 | UNIVERSITY OF NAIROBI                                                 | RESEARCH ASSISTANT                                            |
| 29/12/2014 - 23/01/2015 | School of Biological and Life Sciences, TUK                           | Acting Director                                               |
| 9/12/2013 - 15/05/2015  | Technical University of Kenya                                         | Acting Chairman                                               |
| 13/06/2013 - 10/08/2018 | Technical University of Kenya                                         | Lecturer, Department of Biochemistry and Biotechnology        |

#### SELECTED PUBLICATIONS

| TITLE                                                                                                                                                            | LINK TO PUBLICATION         | YEAR |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------|
| Marinoquinolines A - F, Pyrroloquinolines from Ohtaekwangia kribbensis (Bacteroidetes)                                                                           | <a href="#">View online</a> |      |
| Isolation and Structure Elucidation of Secondary Metabolites from the Gliding Bacteria Ohtaekwangia kribbensis and Hyalangium minutum                            | <a href="#">View online</a> |      |
| Hyaladione, an S-Methyl Cyclohexadiene-dione from Hyalangium minutum                                                                                             | <a href="#">View online</a> |      |
| Hyafurones, Hyapyrrolines and Hyapyrones: Polyketides from Hyalangium minutum                                                                                    | <a href="#">View online</a> |      |
| Screening and characterization of hydrocarbonoclastic bacteria obtained from oil contaminated soils                                                              | <a href="#">View online</a> |      |
| Protease,- pectinase- and amylase- producing bacteria from a Kenyan soda lake                                                                                    | <a href="#">View online</a> |      |
| Lanyamycin, a macrolide antibiotic from Sorangium cellulosum , strain Soce 481 (Myxobacteria                                                                     | <a href="#">View online</a> |      |
| Rotavirus prevalence and seasonal distribution post vaccine introduction in Nairobi county Kenya                                                                 | <a href="#">View online</a> |      |
| Development and evaluation of a loop- mediated isothermal amplification (LAMP) diagnostic test for detection of whipworm, Trichuris trichiura, in faecal samples | <a href="#">View online</a> |      |
| Coenzyme Q10 nullified Khat- induced hepatotoxicity, nephrotoxicity and inflammation in a mouse model                                                            | <a href="#">View online</a> |      |
| Post- vaccine rotavirus genotype distribution in Nairobi County, Kenya                                                                                           | <a href="#">View online</a> |      |
| Manganese exacerbated chronic khat-induced neurological deficits, inflammation and organ toxicity in a mouse model                                               | <a href="#">View online</a> |      |
| Coenzyme Q10 ameliorates potassium cyanide-induced toxicosis in a mouse model                                                                                    | <a href="#">View online</a> |      |
| Kenya Laboratory Biorisk Management Curriculum” (2019)                                                                                                           | <a href="#">View online</a> |      |

#### POSTGRADUATE STUDENTS SUPERVISION

| NAME                  | PROJECT TITLE                                                                                                                                  | PERIOD        |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| Joshua Gikonyo        | The Prevalence of Rotavirus Infection and Genotype Distribution in Children Below Five Years Post-Vaccine Introduction in Nairobi County Kenya | 2017-2021     |
| Agnes N. Mwaura       | Screening and characterization of hydrocarbonoloistic bacteria isolated from oil contaminated soils                                            | 2016-2018     |
| Biwott Kipchumba      | Behavioural and toxico-histopathological studies of non- benzodiazepine spiked drinks intoxication on murine model                             | 2017-2019     |
| Kennedy Chepukosi     | The effect of chronic khat use on vulnerability of neurons and neurotoxins                                                                     | 2016- to date |
| Francis Gitonga       | Histopathological analysis of potassium cyanide induced toxicosis in rat brain and liver tissues                                               | 2017-2019     |
| Michael Gichuki Ngari | 1. Development of a loop mediated isothermal amplification markers for trichuris trichiura detection in faecal samples                         | 2017 -to date |
| Peter Mwangi Maina,   | Isolation and characterization of myxobacteria in environmental samples from Lake Magadi                                                       | 2020-to date  |

PROFESSIONAL AFFILIATIONS AND SOCIETIES

| TITLE  | INSTITUTION                        |
|--------|------------------------------------|
| MEMBER | BIOINFORMATICS RSG - AFRICA        |
| MEMBER | BIOCHEMICAL SOCIETY OF KENYA (BSK) |