



PETER JUMA OCHIENG

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Personal details

Surname : Juma

First name : Peter

Middle name : Ochieng

Occupation : Medical Forensic and Computational Science

Position : Research Scientist and Forensic analyst

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Nationality (birth) : Kenyan

Health status : Good

Languages (proficiency): English (v. good), Kiswahili (good), Bahasa Indonesia (good) Bahasa Malaysia (good).

Educational Background

Dates	Institution	Field of study	Degree
2014-to date	IPB-University, Indonesia	Bioinformatics	M. Sc
2010 - 2011	University of Cape Town, South Africa	Forensic pathology	H.N.D
2008- 201 3	Kenyatta University, Nairobi, Kenya	Forensic Science	BSc.FM

Positions held

2015 10th December-Date: Mycologist consultant **ANRI** Indonesia

3rd March 2014 - Date: Contact person, International Institute of Certified Forensic Investigation Professionals (**IICFIP**)

2nd June 2013 – Date: Consultant Forensic pathologist

17th March 2013-Date: Forensic Radiologist Thika CT-scan center Thika, Kenya

7th Nov 2012 – 2 8th Feb. 2013: Intern DNA analyst Government Chemist Kenya

1st July 2012-28thSept. 2012: Intern analyst (Biochemistry and Organic labs) Kenya bureau of standards

Short Course and Conferences Attended

2016 May 27th -28th 2nd **International conference on Health and wellbeing (ICHWB)**, Solo, Indonesia, role: oral presenter –Author

2016 3rd May **International seminar on Synthetic Biology from simplicity to complexity**, Bogor Indonesia; role oral presenter-Author

2015 10th December **Industrial Training on Fungal Identification, Control and Management**, National Archive of Indonesia (ANRI) role: Facilitator

2015 1st -2nd December 2nd **Asian Conference on Safety and Education in Laboratory (ACSEL)** University of Indonesia, role: Trainee

2015 9th November Received fellowship award by **South East Asian Nutrition Leadership Program (SEANLP)** Role: Trainee

2015 (27th -30th) **10th CRISU-CUPT International Conference 2015**: Enhancing management and leadership of Indonesian and Thai University towards implementation of Bandung message 2015 to strength south-south cooperation. Role: Delegate to represent international students IPB-University.

2015 (21st -22nd Oct) 3rd **International Conference of Forestry Research 2015**: Forest research to support sustainable timber production and self-sufficiency in Food, Energy and Water Ministry of Environment and Forestry & Research, Development and Innovation Agency. Role: Oral presenter

2015 (12th - Oct13th) 2nd **International Conference on Tropical Biology**: Ecological Restoration in South East Asia: Challenges, Gains, and Future Directions. **SEAMEO-BIOTROP**

2015(10th -11th) 7th **International Conference on Advance Computer Science and Information Systems (ICACSIS 2015)**, UNIVERSITAS INDONESIA Role: Author and Oral presenter/Author.

2015 (5th -7th Oct) **PRAGMA International Workshop & Training on Biodiversity and Informatics** University of Indonesia and IPB-University: GIS Monitoring and Remote Sensing using Life Mappers , Data Carpentry and APN applications in computational Biology.

2015(1st Oct) **PACIFIC-ASIA ALLIANCE & INDONESIAN GOVERNMENT**; Disaster management and Modalities to address Food Security on draught stricken areas a case study in REAO North Sumatra region, Indonesia.

2015 (25th Sept) 3rd **QUARTER INTERNATIONAL SEMINAR SEAMEO-BIOTROP**; Epidemiological control of Invasive pest as way forward to enhance food security, Bogor, Indonesia

2015 (9th Sept) **INTERNATIONAL WORKSHOP ON PLANT DISEASE RESEARCH IN AVRDC** (Asian Vegetation Research and Development Center) IPB-University Bogor, INDONESIA Role: Participant

2015 (24th -27th August) **INTERNATIONAL TRAINING INTERGRATED PEST MANAGEMENT SYSTEMS (IPMS)** for South East Asian Countries **SEAMEO-BIOTROP**, Bogor Indonesia

2015 (13th August) **4th INTERNATIONAL PRIMISTER CUP (PAMB) PIDATO:** Antarabangsa Bahasa Melayu (MALYSIA) Role: Kenya delegate

2015 (5th -8th August) **INTERNATINAL CONFERENCE ON BIOSCIENCES (ICOBios)**, IPB International Convention Center Bogor Indonesia Role: Author and Oral Presenter-Author

2015(30th April - 1st May) **ASIAN-AFRICAN STUDENT CONFERENCE:** Reinvigorating the Bandung Sprit, working towards the Asian-African Youth Leadership Role: Kenyan delegate

2014 (22nd –24th April): **IICFIP** Global Forensic Conference held at Kenya Institute of Curriculum Development on Fraud Taxonomy, Standards and best Practice Guideline on Forensic Investigation. Nairobi, Kenya. Role: Member.

2013 (23rd August) International Journal of Public Health- British Journal of Cancer **Public Health Strategies for Preventing Aflatoxin Exposure role:** oral presenter/ author

2010 (27th Sept – 8th Oct): **3rd Biosafety Training Course for Africa Related to the Potential Release of Genetically Modified Disease vectors**, Bamako, Mali. Role: Participant.

Professional Experience

28th September– Date Consultant Microbiologist Laboratory Analyst Arsip Nasional Republik Indonesia (**ANRI**)

Tasks

- Fungal identification
- Clinical observation of workers exposure levels to fungal infection
- Laboratory analysis of various stains of mycotoxin and bacteria.
- Building/ chambers surveillance and preparation investigation reports

4 June 2013 – date: City Morgue Nairobi Kenya medical corona (Private Forensic consultant on contract)

Tasks

- Performing autopsy on human remains
- Establish the causation and mechanism of death.
- Establish postmortem intervals (PI) of the deceased.
- Toxicological test on the biopsy of the deceased.
- Wound pattern analysis and resemblance of dismembered body parts.

1st Mar 2012-15th Sept 2013: Research on Toxicology and Histopathology of Aflatoxin B1 at

Kenyatta University and Kenya Bureau of Standards (KEBS)

Task

- To establish the mechanism of death as result of Aflatoxin B1 intoxication
- Perform liver functional test using enzyme kits and spectrophotometer.
- To find out the effect of Aflatoxin B1 on blood clotting factor using phlimogram to measure PT.
- To established a pathological and morphological effect of Aflatoxin B1 on liver biopsy.

Accomplishments

- Developed a toxicity data profile guided by biological effect of Aflatoxin B1
- Developed a method of estimating a postmortem interval using Newton's law of cooling.
- Developed a method of understanding biochemical effect of Aflatoxin B1 on both human and animals.

07th Nov 2010 – 28th Feb. 2013: Intern DNA analyst Government Chemist Kenya.

Task

- Collection of DNA evidence from the scene of crime
- Extraction of DNA from the suspect and victims or deceased tissues.
- PCR amplification of DNA evidence from scene of crime and suspect.
- Genetic fingerprinting of the DNA evidence using Human DNA Identifier (HDI).
- DNA sequencing using Sanger sequencer and Next Generation Sequencer technology (NGS).

1st July 2012- 28th Sept .2012: Intern Quality test analyst (Biochemistry and Organic labs) at Kenya bureau of standards

Task

- Analysis of protein levels in various product using, High Performance Liquid chromatography (HPLC) Becker-auto sampler.
- Quantification of alcohol in various liquors using liquid-gas chromatography (L/G-chromatography)
- Aflatoxin detection and quantification in various products using T L C, Colum Chromatography, Rotary-evaporator, UV, Densitometer and LC/MS (liquid chromatography-mass spectrometer).
- Determination of inert sugar using saccharimeter.

Other relevant qualifications / skills

1. *Molecular biology techniques*

DNA extraction: By alcohol precipitation and Isoquick® Nucleic acid extraction kit.

DNA amplification: By the polymerase chain reaction.

Electrophoresis: On submarine agarose, Polyacryl amide and cellulose acetate gels.

DNA visualization: UV illumination of Ethidium bromide stained gels, silver staining.

DNA Sequencing: Illumina Technology; Next Generation Sequencer GA (NGS); Sanger Sequencer

Forensics: DNA fingerprinting/profiling.

Tissue culture (Microbiology) and Mycology

2. *Experienced use of the following computer software*

Algorithms: python; Netbean; MATLAB; R-STUDIO; WEKA; bio-PERL

Word processing: WordPerfect; MS Word.

Data Mining: Association rules, classification, collaborative filtering DBASE IV; FoxPro; MS Excel

Graphics : Freelance graphics; PowerPoint

Statistics : SPSS; Genstat®; SASS; Biosys 1.7; PopGen.

General : Endnote 4; Windows 95/98/00; Windows XP; MS Office 97; MSOffice 98 (Mac): MSOffice 2000(IBM).

3. Driving Motor vehicles Holds a valid Kenyan driving license (class BCE) – obtained in 2013

Membership

- South East Asia Nutrition Leadership Program (**SEANLP**) Alumina Member
- Registered member of International Conference Advance Computer Science and Information system (**ICACISIS**)
- Registered member of International Project Management (**IPM**)
- Registered member of American Academy of Forensic Sciences (**AAFS**)-membership ID no.**148789**
- Registered member of International Institute of Certified Forensic Investigation Professional INC (**IICFIP**) in 2014
- Member of Forensic Science Association -Kenyatta University (**FOSA**)
- Member Kenya Medical Board (**KMD**)
- Member Kenya Food, Drugs and Poison Board (**KFDPD**)

Awards

2015: Received fellowship award by **South East Asian Nutrition Leadership Program (SEANLP)**

2010: Received 1 year sandwich Mandela-Rhodes Scholarship: executive board and Research center University of Cape Town, South Africa.

Publication:

- Deciphering Action Mechanism of *Jamu* Decoction Using a Pharmacology Approach(2016 **HBSTEM-IJPPT**)
- Tandem Repeat Analysis of DNA Sequences Based on Improved Burrow Wheelers' Transform Algorithm (**ICASIS-IEE Proceedings**)
- In vivo toxicological and Histopathological effect of Aflatoxin B1 and related risks (**ICHWB proceedings**)
- An Integrate semi-supervised model for clustering time course gene expression data (2nd **IC-STAR-IJAR**)

Referees

1. Dr. Daniel Okun senior lecture, School of Pure and Applied sciences, Kenyatta University P.O. Box 43844 – 00100 GPO, Nairobi, Kenya. Contact Information: Telephone (mobile) + 254 725991515; E-mail: danieokun@gmail.com
2. Dr. Joseph J.N Ngeranwa Dean, School of Pure and Applied sciences, Kenyatta University P.O. Box 43844 – 00100 GPO, Nairobi, Kenya. Contact Information: Telephone (mobile) + 254 714831049; E-mail: kuvc@nbnnet.co.ke
3. Mr. Isac Mugenya ,senior mycotoxic researcher ,Kenya Bureau of Standard, P.O. BOX 54974-00200 Nairobi, Kenya contact information: Telephone(mobile)+254722416867; Email:mugenya@kebs.org
4. Dr. Wisnu Ananta Kusuma, Senior Lecturer, Department of Computer Science, IPB-University, Indonesia. Dramaga IPB Campus, Jl. Meranti Wing 20 Level V, Bogor 16680, Indonesia. Contact Information: Telephone (mobile) +62 81280983486; E-mail: ananta@ipb.ac.id