

DR. PHILIP MASEGHE MWACHAKA

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1. ACADEMIC POSITIONS

2015-present: Lecturer, Department of Human Anatomy, University of Nairobi

2012-2015: Tutorial fellow, Department of Human Anatomy, University of Nairobi

2. EDUCATION

2016-Date: Doctor of Philosophy (Human Anatomy), University of Nairobi

2014-Date: Master of Medicine (Neurosurgery), University of Nairobi

2012-2014: Master of Science (Human Anatomy), University of Nairobi

2002-2010: Bachelor of Medicine & Surgery, University of Nairobi

2007-2008: Intercalated Bachelor of Science (Anatomy), University of Nairobi

2003-2004: Diploma Business Computing (IMIS), Strathmore University

1999-2002: Kenya Certificate of Secondary Education, Alliance High School, Kenya

1990-1998: Kenya Certificate of Primary Education, Iyale Primary School, Kenya

3. RESEARCH INTERESTS

Neuroanatomy, neuroscience, medical education, variant anatomy, clinical anatomy

4. PROFESSIONAL CERTIFICATIONS

Date	Course	Facilitator/Organizer
June 2018	Neurotrauma course	Global neuro course, Naples Italy
Mar 2016	Basic Surgical Skills (BSS)	<i>Nairobi Surgical Skills Center, Kenya</i>
Aug 2013	Statistics in medicine	<i>Stanford University OpenEdx</i>
July 2013	Statistical Modelling	<i>Applied Centre for Climate and Earth System Science</i>
Mar 2013	Advanced Cardiac Life Support	<i>Kenya Council of Emergency Medicine Technicians</i>
Nov 2011	European Pediatric Life Support	<i>Aga Khan University Hospital, Kenya</i>
Sep 2011	Advanced Life Support in Obstetrics	<i>Aga Khan University Hospital, Kenya</i>
May 2011	Advanced Trauma Life Support	<i>Aga Khan University Hospital, Kenya</i>
Apr 2011	Advanced Cardiac Life Support	<i>Aga Khan University Hospital, Kenya</i>
Mar 2011	Basic Surgical Skills (BSS)	<i>Aga Khan University Hospital, Kenya</i>
Sep 2010	HIV Skills Seminar	<i>Universities of Maryland (USA) & Nairobi</i>
Dec 2009	Pediatric Basic Life Support	<i>University of Oxford, United Kingdom</i>
Nov-Dec 2009	University of Oxford, UK	<i>Elective term in John Radcliffe Hospital</i>
Mar 2006	Basic Life Support	<i>St John's Ambulance, Kenya</i>
Aug 2004	Programming & Entrepreneurship	<i>Massachusetts Institute of Technology</i>
Oct 2004	Web design and desktop publishing	<i>Infotech Training Centre, Kenya</i>

5. WORK EXPERIENCE

July 2015-date: **Lecturer** - *University of Nairobi Dept. Human Anatomy*

Aug 2012-June 2015: **Tutorial Fellow** - *University of Nairobi Dept. Human Anatomy*

Jan 2012 - Aug 2015: **Senior House Officer** - *Aga Khan University Hospital, Nairobi*

Jan - Dec 2011: **Medical Officer Intern** - *Aga Khan University Hospital, Nairobi*

2006-2012: **Anatomy Demonstrator & Research assistant** – *UoN Dept. Human Anatomy*

6. RESEARCH & SCHOLARLY ACTIVITIES

6.1 PUBLICATIONS

1. Amuti, T., Ouko, I., Mukonjia, S., Cheruiyot, I., Munguti, J., **Mwachaka, P.**, Malek, A.. Role of heterogeneous astrocyte receptor expression in determining astrocytic response to neuronal disorders. *Anat. J. Afr.* 7, 2018; 1169-1174.
2. Cheruiyot, I., **Mwachaka, P.**, Saidi, H., 2018. Morphometry of Occipital condyles : Implications for transcondylar approach to craniovertebral junction lesions. *Anat. J. Afr.* 2018; 7, 1224-1231.
3. Ogeng'o, J. A.; **Mwachaka, P. M.**; Odhiambo, D. E.; Sinkeet, S. R.; Elbusaidy, H.; Olabu, B. & Inyimili, M. Geometric features of vertebrobasilar arterial system in adult black Kenyans. *Int. J. Morphol.*, 2018; 36(2):544-550.
4. Ogeng'o, J., Ominde, B.S., Ongeti, K.W., Olabu, B., Maseghe, P., Machira, J., Murunga, A.,. Histomorphological features of atherosclerosis in the left anterior descending coronary arteries among black Kenyans. *Anat. J. Afr.* 2017b; 6, 1033-1044.
5. Silvestri DM, Blevins M, Wallston KA, Afzal A, Alam N, Andrews B, Derbew M, Kaur S, Mipando M, Mkony C, **Mwachaka PM**, Ranjit N, Vermund SH. Nonacademic Attributes Predict Medical and Nursing Student Intentions to Emigrate or to Work Rurally: An Eight-Country Survey in Asia and Africa. *The American Journal of Tropical Medicine and Hygiene*, 2017; 96(6): 1512 – 1520.
6. Ogeng'o J, Ominde BS, Ongeti K, Olabu B, Obimbo M, **Mwachaka P.** Reappraisal of the structure of arterial Tunica adventitia and its involvement in atherosclerosis. *Anat J Africa*, 2017; Vol 6 (1): 824 – 833
7. Ogeng'o J, Olabu B, **Mwachaka P**, Ominde BS, Inyimili M. What is the origin of the labyrinthine artery among black Kenyans? *Anat J Africa*, 2017; Vol 6 (2): 982 - 986
8. Ogeng'o J., Ongeti K, **Mwachaka P.** Features of atherosclerosis of common carotid arteries among black Kenyans. *J. Morphol. Sci.* , 2017; 34(2):54-57
9. Aseta FB, **Mwachaka PM**, Mandela PI, Ogeng'o JA. Variant Anatomy of the Jugular Foramen: An Osteological Study. *Acad. Anat. Int.* 2016;2(2):38-43.
10. **Mwachaka P**, Saidi H, Mandela P. Is cadaveric dissection vital in anatomy education? Perceptions of 1st and 2nd year medical students. *J. Exp. Clin. Anat.*, 2016;15:14-8
11. Ogeng'o JA, Misiani M, Ogeng'o N, **Mwachaka PM**, Cheruiyot I, Waciuri J. Intima-Media Thickness of the Common Femoral Artery in a Black Kenyan Population: Correlation with Age, Gender and Geometric Factors. *Global J. Human Anatomy & Physiology Research*, 2016, 3, 1-7.
12. Aseta FB, **Mwachaka PM**, Odula PO, Malek AK. Histomorphological changes in the cornea of the rat following monocular eyelid closure. *Anatomy*, 2016; 10(2):87–93.
13. **Mwachaka P**, Mandela P., Saidi H. Repeated Exposure to Dissection Does Not Influence Students' Attitudes towards Human Body Donation for Anatomy Teaching. *Anatomy Research*

International, 2016; 2016: 5 pages.

14. Ogeng'o, J; **Mwachaka, P**; Olabu, B; Ogeng'o N, Ngimongo J. Hexafurcation of Basilar Artery In A Black Kenyan Population. *Austin J Anat.* 2016; 3(1): 1046.
15. **Mwachaka P**, Saidi H, Odula P, Mandela P. Effects of monocular deprivation on the thickness of neural retina. *Journal of Morphological Sciences*, 2015; 32(3):111-120
16. Ogeng'o, J; **Mwachaka, P**; Ongeti, K; Obimbo M; Olabu, B. Tunica Adventitia of the Aorta Is An Active Vascular Compartment. *Anatomy Journal of Africa.* 2015. Vol 4 (2): 617-623.
17. **Mwachaka PM**, Saidi H, Odula PO, Mandela PI. Effect of monocular deprivation on rabbit neural retinal cell densities. *J Ophthalmic Vis Res.*, 2015, 10 (2), 144
18. Gakonyo J, Butt F, **Mwachaka P**, Wagaiyu E. Arterial blood supply variation in the anterior midline mandible: Significance to dental implantology. *Int. J. Implant Dentistry*, 2015, 1(1), 1-5
19. Ogeng'o J, Elbusaidy H, Sinkeet S, Olabu B, **Mwachaka P**, Inyimili M. Variant origin of superior cerebellar artery in a black Kenyan population. *Eur. J. Anat.*, 2015, 19 (3), 287-290
20. Silvestri DM, Blevins M, Afzal AR, Andrews B, Derbew M, Kaur S, Mipando M, Mkony CA, **Mwachaka PM**, Ranjit N, and Vermund SH. Non-cognitive attributes predict medical and nursing students' intentions to migrate or work rurally: An eight-country cross-sectional survey in Asia and Africa. *Annals of Global Health*, 2015, Vol 81(1), 63.
21. **P Mwachaka**, H Saidi, P Odula, P Mandela. Effects of Monocular Deprivation on the Dendritic Features of Retinal Ganglion Cells. *Int. J. Morphol*, 2014; 32(4):1144-1151.
22. **Mwachaka P**, Kigera JWM. Clinical trials in Surgery. *Annals of Afric Surgery*, 2014;11(2):1-2.
23. Silvestri DM, Blevins M, Afzal AR, Andrews B, Derbew M, Kaur S, Mipando M, Mkony CA, **Mwachaka PM**, Ranjit N, and Vermund SH. Analysis of Medical and Nursing Students' Intentions to Work Abroad or in Rural Areas: an Eight-Country Survey from Asia and Africa. *Bulletin of the World Health Organization*, 2014, vol.92, 750-759.
24. **Mwachaka P**, Saidi H, Odula P, Mandela P. Structural changes in the rabbit neural retina following monocular deprivation. *Annals of Anatomy*, 2014, vol.196 (S1), 177-178.
25. **Mwachaka P**, El-busaidy H, Sinkeet S, Ogeng'o J. Variations in the Position and Length of the Vermiform Appendix in a Black Kenyan Population. *ISRN Anatomy*, 2014, vol. 2014, 871048.
26. Ogeng'o J, Ongeti K, Obimbo M, Olabu B, **Mwachaka P**. Features of atherosclerosis in the tunica adventitia of coronary and carotid arteries in a black Kenyan population. *Anat Res Int.* 2014, 2014; 456741.
27. Ogeng'o J, Malek AK, Ongeti K, **Mwachaka P**. Deviation of the tunica media of aorta of goat from conventional structural concept: Case for including collagen. *International Journal of Anatomy and Physiology.* 2014, 3(1), 042-047.
28. Parshuram PL, Mwango G, Wambugu M, Ong'ech J, **Mwachaka P**. The Cerebro-placental Ratio as a Prognostic Factor of Foetal Outcome in Patients with Third Trimester Hypertension. *East Cent. Afr. J. Surg.* 2014, 19(1); 41-51
29. J Ogeng'o, **PM Mwachaka**, KW Ongeti. Non Muscle Cells in the Tunica Media of the Aorta. *Anat J Africa.* 2014, 3(1);223-227
30. Ogeng'o, J; **Mwachaka, P**; Olabu, B; Ongeti, K. Age Changes in the Tunica Intima of the Aorta in Goat (capra Hircus). *Anat J Africa.* 2013, 2(2); 161-164.
31. Sinkeet, S., **Mwachaka, P.**, Muthoka, J., Saidi, H., 2013. Branching Pattern of Inferior Mesenteric Artery in a Black African Population: A Dissection Study. *ISRN Anatomy* 2013, 1-4.
32. **Mwachaka P**, Obonyo N, Mutiso B, Sinkeet S, Kiboi J. Spinal tuberculosis in HIV negative

- patients in a Kenyan tertiary hospital: Five year synopsis. *The Spine journal*, 2011; 11(4):265-9.
33. Ogeng'o, J. A.; **Mwachaka, P. M.** & Olabu, B. O. Vasa vasora in the tunica media of goat aorta. *Int. J. Morphol.*, 2011; **29(3)**:702-705.
 34. **Mwachaka P**, Mbugua E, Saidi HS. Who wants to be a surgeon? A survey of medical students at the University of Nairobi-Kenya. *Annals of African Surgery*, 2010; 6:26-31.
 35. Ogeng'o J, **Mwachaka P**, Bundi P. Factors influencing research activity among medical students in a Kenyan university *Annals of African Surgery*, 2010; 6:18-21.
 36. Ranketi S, Awori K, Odula P, Ogeng'o J, **Mwachaka P**. Suprascapular notch: morphology & distance from the glenoid cavity in a Kenyan population. *Folia Morphologica*, 2010;69(1):241-5.
 37. **Mwachaka P**, Mbugua E. Factors influencing choice of a pediatric career among medical students in a Kenyan university. *South African Journal of Child Health*, 2010; 4(3):70-72.
 38. **Mwachaka P**, Obonyo N, Mutiso B, Sinkeet S, Mwang'ombe N. Ventriculoperitoneal shunt complications: A Three retrospective study in a Kenyan Teaching & Referral hospital. *Pediatric Neurosurgery*, 2010; 46(1):1-5.
 39. **Mwachaka P**, Ranketi S, Elbusaidy H, Ogeng'o J. Variations in the anatomy Ansa cervicalis. *Folia Morphologica*, 2010; 69(3): 160-163.
 40. **Mwachaka P**, Mbugua E. Specialty preferences among medical students in a Kenyan university. *Pan African Medical Journal*, 2010; 5:18.
 41. **Mwachaka P**, Sinkeet S, Ogeng'o J. Superficial Temporal artery among Kenyans: Pattern of branching and its relation to pericranial structures. *Folia Morphologica*, 2010; 69(1):51-53
 42. **Mwachaka P**, Odula P, Saidi H, Awori K, Kaisha W. Location of arcuate line of Douglas: Is it of surgical relevance. *Clinical Anatomy*, 2010; 23:84-86
 43. **Mwachaka P**, Hassanali J, Odula P. Anatomic position of the asterion among adult Kenyans for lateral surgical approaches to cranial cavity. *Clinical Anatomy*, 2010; 23:30-33
 44. **Mwachaka P**, Odula P, Awori K, Kaisha W. Regional variations in the microscopic organization of the human rectus sheath. *Journal of Morphological Sciences*, 2009; 26(2):84-90
 45. **Mwachaka P**, Odula P, Saidi H, Awori K, Kaisha W. Variations in the pattern of formation of the human rectus sheath. *International Journal of Morphology*, 2009; 27(4):1025-1029.
 46. **Mwachaka P**, Hassanali J, Odula P. Sutural morphology of the pterion and asterion among adult Kenyans. *Journal of Morphological Sciences*, 2009; 26(1):4-8.
 47. **Mwachaka P**, Hassanali J, Odula P. Anatomic position of the pterion among adult Kenyans. *International Journal of Morphology*, 2008; 26(4):193-933.
 48. **Mwachaka P**. Is laughter the best medicine or any medicine at all? *Nairobi Journal Medicine*, 2008, 12-15.

6.2 BOOKS PUBLISHED

1. Saidi H, Ongei K, Mandela P, **Mwachaka PM**, Olabu B (eds). 2014 Kimani's HISTOLOGY Text and Manual, 1st Edition, Nairobi
2. **Mwachaka P**, Odula P, Awori K, Kaisha W. The Human Rectus Sheath: Formation and microscopic organization. *Lambert Academic Publishers, Saarbrucken, Germany*. ISBN 978-3-8383-7686-8.

6.3. DISSERTATIONS/THESIS

1. Structural changes in the rabbit neural retina following monocular deprivation. *MSc Anatomy.*
2. Human rectus sheath: Formation and microscopic organization. *BSc. Anatomy*
3. Schwann cell biology and role in peripheral nerve regeneration. *BSc. Anatomy*
4. Anatomic location and sutural morphology of asterion and pterion among Kenyans. *BSc. Anatomy*

6.4 CONFERENCE PRESENTATIONS

1. Surgical Anatomy of sphenoid sinus and sellar floor. **World Federation of Neurological Societies 15th Interim meeting.** *Rome-Italy (September 2015)*
2. Surgical Anatomy and biomechanics of the spine. **The East African Association Of Neurological Surgeons & The French Speaking Society Of Neurosurgery Comprehensive Clinical Neurosurgery Review Course.** *Nairobi-Kenya (May 2015).*
3. Surgical anatomy of the sphenoid sinus and sellar floor in a Kenyan population. **15th Annual Surgical Society of Kenya conference.** *Mombasa-Kenya (March 2015)*
4. Structural changes in the rabbit neural retina following monocular deprivation. **The 18th Congress of International Federation of Associations of Anatomists.** *Beijing-China (August 2014).*
5. Anatomy of the cranio-vertebral junction. **East African Association of Neurological Surgeons.** *Nairobi-Kenya (March 2014).*
6. Spinal tuberculosis in HIV negative patients in a Kenyan tertiary hospital: A five year synopsis. **Surgical Society of Kenya Conference.** *Naivasha-Kenya. (Apr 2011).*
7. Factors determining specialty choices among University of Nairobi medical students. **Association of Medical Students grand round.** *Nairobi-Kenya. (Jul 2010).*
8. Who wants to be a surgeon? A study of medical students in Kenya. **Surgical Society of Kenya Conference.** *Mombasa-Kenya. (Mar 2010).*
9. Anatomic position of the asterion for lateral skull approaches. **Students International Conference on Biomedical & Interdisciplinary Research.** *Tehran-Iran. (May 2009).*
10. Complications of cerebrospinal fluid shunts in Kenyatta National Hospital. **Kenyatta National Hospital Scientific Conference.** *Nairobi-Kenya. (Oct 2009).*
11. Ventriculoperitoneal shunt complications among children in Kenyatta National Hospital. **Kenya Paediatric Association Conference.** *Mombasa-Kenya. (Apr 2009).*
12. Locating the anatomic position of arcuate line of Douglas: is it of surgical relevance. **Surgical Society of Kenya Conference.** *Nakuru-Kenya. (Mar 2009).*
13. CSF shunts complications among children in Kenyatta National Hospital. **Surgical Society of Kenya Conference.** *Nakuru-Kenya. (Mar 2009).*
14. Knowledge, attitude and practices of diabetic patients on the prevention of complications related to the eye. **Kenya Diabetes Summit.** *Nairobi-Kenya. (Nov 2008).*
15. Hypertension in an anthropological and evolutionary paradigm. **Association of Medical Students of University of Nairobi 2nd International Conference.** *Nairobi-Kenya. (Jul 2008).*
16. Anatomic position of the asterion in relation to lateral skull approaches. **Association of Surgeons of East and Central Africa Conference.** *Mombasa-Kenya. (Dec 2007).*

6.5. SCIENTIFIC JOURNAL EDITORIAL & REVIEW EXPERIENCE

1. Assistant Editor, Annals of African Surgery Journal (March 2013-present)
2. Production Manager, Anatomy Journal of Africa (2012 to present)
3. Reviewer in several international journals

6.6 CONFERENCES/SEMINARS/TRAININGS ATTENDED

- 2018** ICRAN International conference on recent Advances in Neurotrauma. *Naples, Italy*
- 2017** Surgical Society of Kenya conference. *Kisumu-Kenya (April)*
- 2016** College of Surgeons of East Central & South Africa conference. *Mombasa-Kenya (Dec).*
- 2016** The East African Association of Neurological Surgeons (EAANS) Annual Scientific Conference & Residents Research Day. *Nairobi-Kenya (November).*
- 2016** Annals of African Surgery Scientific writing workshop. *Mombasa-Kenya (December).*
- 2015** World Federation of Neurological Societies 15th Interim meeting. *Rome-Italy (September)*
- 2015** XXIV International Symposium Morphological Sciences. *Istanbul-Turkey (September)*
- 2015** EAANS Comprehensive Clinical Neurosurgery Review Course. *Nairobi-Kenya (May).*
- 2015** 15th Annual Surgical Society of Kenya conference. *Mombasa-Kenya (March).*
- 2014** 18th Congress of International Federation of Associations of Anatomists. *Beijing-China (August).*
- 2014** East African Association of Neurological Surgeons. *Nairobi-Kenya (March).*
- 2013** E-learning seminar for pre-clinical faculty-College of Health Sciences. *Nairobi-Kenya (March).*
- 2012** Teachers Training on innovative Teaching Methods and Examinations Seminar. *Nairobi (Nov).*
- 2011** Surgical Society of Kenya Conference. *Naivasha-Kenya. (April).*
- 2010** Association of Medical Students grand round. *Nairobi-Kenya. (July).*
- 2010** Surgical Society of Kenya Conference. *Mombasa-Kenya. (March).*
- 2009** Students International Conference on Biomedical & Interdisciplinary Research. *Tehran-Iran (May).*
- 2009** Kenyatta National Hospital Scientific Conference. *Nairobi-Kenya (October).*
- 2009** Surgical Society of Kenya Conference. *Nakuru-Kenya (March).*
- 2007** SSK/COSECSA Scientific Conference. *Mombasa-Kenya (December).*

6.7. STUDENT PROJECT SUPERVISION

- 2018** Anatomical variations & extracranial landmarks of the torcular heteropholi in an adult Kenyan population. **Harry Elisha Otieno - BSc Anatomy (Completed).**
- 2018** Structural changes in the olfactory bulb of abino rats following prolonged ethanol exposure
Harry Elisha Otieno - BSc Anatomy (Completed).
- 2016** Morphometry of occipital condyles in an adult Kenyan population
Isaac Kiptum Cheruiyot - BSc Anatomy (Completed).
- 2016** Regulators of astrocytic response to nerve injury
Thomas Amuti - BSc Anatomy (Completed).
- 2015** Structural changes in the rat cornea following unilateral eyelid closure
Faith Aseta - BSc Anatomy (Completed).
- 2015** Variant anatomy of Jugular Foramen in adult skulls
Faith Aseta- BSc Anatomy (Completed).
- 2015** Current views on pathogenesis of multiple sclerosis.
Swafiya Salim - BSc Anatomy (Completed).
- 2014** Morphometry of the axis vertebrae. **Nelson Mpekethu - BSc Anatomy (Completed).**

7. RESPONSIBILITIES / LEADERSHIP POSITIONS

2016-date	Organizer, Ubongo Brain Campaign
2014-date	Neuroanatomy course coordinator, <i>MMed Psychiatry class</i>
2014-date	Anatomy Coordinator, <i>MSc Nursing class</i>
2013-date	Anatomy Coordinator, <i>BSc Medical Laboratory Sciences Technology class</i>
2013-date	Anatomy Coordinator, <i>BSc Food Nutrition and Dietetics class</i>
2009-2013	Organist, <i>University of Nairobi St Pauls Chapel student's choir</i>
2005-date	Facilitator, <i>International Brain Research Organisation-Ubongo Brain Campaign</i>
2009-10	Choir master, <i>Medical Students Catholic Community</i>
2002	Chairperson, <i>Alliance High School Young Christian Students</i>

8. ACHIEVEMENTS AND AWARDS

2015	World Federation of Neurological Societies <i>Educational grant</i>
2010	Nominated for Keith Moore Award for best student paper <i>Clinical Anatomy journal</i> .
2009	Awarded KEMRI <i>Wellcome</i> Trust scholarship for elective term at University of Oxford
2008	Best article published in <i>Nairobi Journal of Medicine</i>
2005	Among five students selected to pursue intercalated BSc. Anatomy
2003	Gold medalist Institute of Management of Information Systems (IMIS) exams
2002	European Union Scholarship to study IMIS diploma at Strathmore University
2002	Ranked among the top twenty students nationally in KCSE
1998	Best male student in Taita Taveta district in KCPE

9. REFEREES

1) Prof. Julius Ogeng'o,

Director, Center for self-sponsored programs, University of Nairobi,
P.O. Box 30197, Nairobi-Kenya.

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2) Prof Peter Gichangi,

Chairman, Department of Human Anatomy, University of Nairobi
P.O. Box 30197, Nairobi-Kenya.

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3) Prof Nimrod Mwang'ombe,

Thematic head, Neurosurgery Unit,
Department of surgery, University of Nairobi.
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