



Dr. Philemon Kipkemoi Towett

Contact: Cell phone: 0722-798449

E-mail address: ptowett@uonbi.ac.ke or

philemontowett2017@gmail.com

Department of Veterinary Anatomy and Physiology, UON.

P.O. Box 30197 (00100), Nairobi, Kenya.

CURRICULUM VITAE

1. Personal details

Name: Philemon Kipkemoi Towett
Sex: Male
Date of birth: 24th December 1960
Marital status: Married

2. Schools /Colleges/Universities attended:

- Kitoben Primary school 1971 – 1975
- Tegat Primary school –1976 to 1977
- Sigor High school – 1978 to 1981
- Mang’u High school – 1982-1983
- National Youth Service 1985
- U.O.N – 1985-1989, 1989-1992

3. Academic Qualifications

- BVM (UON, 1989)
- Msc (UON, 1992)
- Ph.D. (UON, 2004)

4. Professional Qualifications

- Veterinary Surgeon
- Physiology senior lecturer (2012 to date)

- Neuroscientist/Neurophysiologist (area of research)

5. Working Experience

a). Worked in UON from 1989 to date

b). Teaching the following undergraduate courses; Physiology (BVM), Animal Physiology (Agriculture students), Mammalian Physiology (Biochemistry Students) and Wildlife courses such as ornithology, Herpetology, Ecophysiology, and Wildlife behavior. I also teach postgraduate courses in the department, School of Biological Sciences and in the Department of Animal production.

c). I have participated in a number of Msc and PhD oral examinations e.g.

- Dr. Edwin Willie Mwangi -PhD (06/02/2019)
- Dr. Waweru's PhD defense (3/11/2011)
- Dr. Githinji's PhD defense (27/10/2010),
- Dr. Nyongesa's PhD. defense.
- Dr. Beatrice Muia Mwendu –Msc defence (24/07/2019)
- Dr. Samuel Murigi Wanaina – Msc (27/03/2019)
- Dr. Jimale Abas Sheikh Ali - Msc (19/11/2018)
- Dr. Thuo Jesse K. Ndung'u – Msc (10/12/2014)
- Dr. Edwin Willie Mwangi –MSc (13/11/2013)
- Dr. Obiero Jael Apondi – Msc (25/09/2008)

d). I have examined Msc theses for:

- Ben Otieno Olela - Msc – February 2021
- Thuo Jesse K. Ndung'u – Msc - September 2014
- Samuel Murigi Wanaina –Msc - February 2019

e). I have participated in short listing activities in the department and in my college and other colleges e.g.

- School of public health –post of Doctorial Research associate
- CAVs short listing for various staff categories
- Departmental short listing for technical staff

6. Academic Positions held:

- Assistant lecturer from 1st August 1989 to Nov. 26th 1992
- Lecturer from 26th November 1992 to August 2012
- Senior lecturer from August 2012 to date

7. Appointments:

- Associate Dean, FVM, from February 6 2019 to date
- Chairman of CAVS mentorship committee –from April 5, 2019 to date
- Chairman of CAVs Gender and Disability Mainstreaming Committee- from April 5, 2019 to date.
- Member of Central Disability Mainstreaming Committee – from June 13, 2019 to date.
- Member of CAVS Corruption Prevention Committee – from May 2, 2019 to date.
- Member of Central mentorship Committee from July 10, 2019 to date.
- Chair, Vet farm Management Committee.

- Acting Dean, FVM.

7. Postgraduate Supervision

- Supervised Dr. Stanley N. Wambugu (MSc.- 2010)
- Supervised Dr. Daido Dulu Thomas (MSc -2011)
- Supervised Christopher Makau Musembi (MSc - 2012)
- Supervised Dr. John Muturi Kimani MSc –2013)
- Supervised Dr. Thuo Jesse Ndung’u (MSc. 2015).
- Currently supervising Makau C. Musembi for his PhD project).
- Currently supervising Dr. Thuo Jesse Ndung’u (PhD project).

8. Departmental Appointments

- Acting chairman- on many occasions (e.g. Feb. 2003, Sept. 2004, Nov. 2006; July, 2015).
- In charge of examinations – Physiology section (from 2013-2019)
- A member of faculty of postgraduate committee (From 2013-2019)
- Involved in curriculum development in the department
- Section head – Physiology section (2014- march 2019)

9. Conferences/workshops/ seminars attended

- Sensitization Training for members of senate (17th and 18th April 2019).
- Departmental seminars/workshops.
- Faculty of Veterinary Biennial conferences/workshops

- Performance Enhancement Strategies course (31st Jan 2009)
- CAVS Prepare- Ph.D. project (March 2010)
- DAAD workshop on Science and technology (Nov. 2004)
- Physiology teaching Workshop (July 2008).

10. Member of:

- Kenya Physiological Society
- IASP, Kenya Chapter
- Kenya Veterinary Board (No. 1310)
- Kenya veterinary Association (KVA) – No. 1684)

11. Funds attracted:

- NACOSTI/RCD/ST&I/7TH CALL/PHD/101 Ksh. 900,000

12. Community Service

- Planting of trees At Kanyariri Veterinary Farm November 2020
- Teaching initiates at Catholic initiation centres about the meaning of education and carrier choice (Nakuru Diocess)
- Participates in field training of livestock farmers on good animal husbandry and also treating their animals (organized by KVA)

13. Publications:

1. Towett, P.K. and Kanui, T.I. (1993). Effects of Pethidine, Acetylsalicylic acid and Indomethacin on pain and behaviour in the naked mole-rat. *Pharmacology Biochemistry and Behaviour*, 45, 153-159.
2. Kanui, T.I., Karim, F. and Towett, P.K. (1993). The formalin test in the naked mole-rat (*Heterocephalus glaber*): Analgesic effects of morphine, nefopam and paracetamol. *Brain Research*, 600, 123-126.
3. Towett, P.K. and Kanui, T.I. (1995). Hyperalgesia following administration of morphine and pethidine in the root-rat (*Tachyoryctes splendens*). *Journal of Veterinary Pharmacology and Therapeutics*, 18, 68-71.
4. Towett, P.K., Kanui, T.I. and Juma, F.D. (2006). Stimulation of mu and delta opioid receptors induces hyperalgesia while stimulation of kappa receptors induces antinociception in the hot-plate test in the naked mole-rat (*Heterocephalus glaber*). *Brain Research Bulletin*, 71, 60-68.
5. Maloiy, G.M.O., Kanui, T.I., Towett, P.K., Wambugu, S.N., Miaron J.O. and Wanyoike M.M. (2008). Effects dehydration and heat stress on food intake and dry matter digestibility in east African ruminants. *Comparative Biochemistry and Physiology – Part A: Molecular and Integrative Physiology*, 151, 185-190.
6. Towett, P.K., Kanui, T.I., Juma, F.D., Maloiy, G.O.M. and Miaron, J.O. (2009). Activation of mu, delta or kappa receptors by DAMGO, DPDPE, U-50488 or U-69593 respectively causes antinociception in the formalin test

- in the naked mole-rat (*Heterocephalus glaber*). *Pharmacology, Biochemistry and Behavior*, 91, 566-572.
7. Wambugu, S.N., Towett, P.K., Kiama, S.G., Abelson, K.S.P. and Kanui, T.I. (2010). Effects of Opioids in the Formalin Test in the Speke's Hinged Tortoise (*Kinixys spekii*). *Journal of Veterinary Pharmacology and Therapeutics*, 33, 347-351.
 8. Dulu, T.D., Kanui, T.I., Towett, P.K., Maloiy, G.M. and Abelson, K.S. (2014). The effects of oxotremorine, epibatidine, atropine, mecamylamine and naloxone in the tail flick, hot-plate, and formalin tests in the naked mole rat (*Heterocephalus glaber*). *In vivo*, 28,39-48.
 9. [Christopher M Makau](#), [Philemon K Towett](#), [Klas S P Abelson](#), and [Titus I Kanui](#) (2014). Intrathecal administration of clonidine or yohimbine decreases the nociceptive behavior caused by formalin injection in the marsh terrapin (*Pelomedusa subrufa* . *Brain Behav.* 4(6): 850–857.
 10. Makau C.M., Towett, P.K. and Kanui T.I. (2017). Modulation of formalin induced pain behavior by clonidine and yohimbine in the Speke's hinge tortoise (*Kinixys spekii*). [J Vet Pharmacol Ther.](#);40(5):439-446. doi: 10.1111/jvp.12374.
 11. [Christopher M. Makau](#), [Philemon K. Towett](#), [Klas S.P. Abelson](#) and [Titus I. Kanui](#) (2021). Modulation of nociception by amitriptyline hydrochloride in the Speke's hinge-back tortoise (*Kinixys spekii*). *Journal of Veterinary Medicine and Science*, early view. <https://doi.org/10.1002/vms3.444>

14. Presentations

1. Wambugu, S.N., Joakim, D., Towett, P.K., Kiama, S.G. and Kanui, T.I. Laboratory management of captive hingeback tortoises. Workshop on Reptile Care, Health and Welfare, 2007
2. Wambugu, S.N., Towett, P.K., Kiama, S.G., Abelson, K.S.P. and Kanui, T.I. Composition of nociceptive afferents in the trigeminal nerve in the Marsh Terrapin (*Pelomedusa subrufa*). Proceedings of the 6th Biennial Scientific Conference, 2008, 14P.
3. Wambugu, S.N., Kanui, T.I., Towett, P.K., Kiama, S.G., Abelson, K. Nociception in Tortoises: the formalin, hot-plate and acetic acid instillation tests. In the 5th International Congress of the African Association of Physiological Sciences (AAPS), 2008, 28P.
4. Wambugu, S.N., Kanui, T.I., Towett, P.K., Kiama, S.G., Abelson, K. The formalin test and capsaicin instillation in the Marsh Terrapin (*Pelomedusa subrufa*). In the 5th International Congress of the African Association of Physiological Sciences (AAPS), 2008, 30P.

15. Manuscripts in preparation

i). Towett, P.K., Kanui T.I., Makau C.M. Application of glacial acetic acid onto the lateral muzzle of the naked mole-rat induces pain which is sensitive to mu, delta and kappa opioids.

ii). Thuo J. K. N¹, Towett P. K¹ and Waweru P. K. Formalin-induced monophasic nociception and its modulation by opioidergic and cholinergic systems in the East African root rat mole-rat (*Tachyoryctes spenden*)

iii). Towett, P.K. Kanui, T.I. and Makau C.M.. Behavioral effects of receptor-selective mu (DAMGO), delta (DPDPE) and Kappa (U-50488 and U-69593) agonists in the naked mole-rat.

iv). Kimani, J., Kiama, S, Towett, P. K. and Seifert A. Morphological adaptations to subterranean life: comparative anatomy of the skin from the African mole rat (*Tachyoryctes ibeanus*).

v). Christopher M. Makau, Philemon K. Towett, KlasS. P. Abelson, Titus I. Kanui. Antinociceptive effects of nortriptyline hydrochloride in speke's hinge-back tortoise (*Kinixys spekii*).

16. Ongoing projects

i). The roles of sodium ion channels in nociception reptiles.

Participants: Christopher M. Makau

Philemon K.Towett

Klass Abelson

Titus I Kanui

ii). Management of chronic pain and effects of some pain relieving drugs on motility in the naked mol-rat

Participants: Thuo Jesse K Ndung'u

Philemon K.Towett

Klass Abelson

Titus I Kanui

17. Referees

1. Prof. T.I. Kanui, South Eastern Kenya University (SEKU)

tkanui@seku.ac.ke

2. Prof G.M.O. Maloiy gmaloiy@gmail.com

February 2021