Mohamed Mutocheluh, PhD

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Fulbright Visiting Scholar (2024/25 academic year), Weill Cornell Medical College, New York City Belfer Research Building 413 East 69th Street, New York City, NY10065

Education	
2007-2011	PhD. Immunology and Infection
	Thesis title: Understanding Kaposi's sarcoma associated herpes virus <i>vIRF-</i> 2-Cell interactions. University of Birmingham, UK
2006-2007	MSc Immunology. University of Birmingham, UK
2002-2003 1991-1994	MSc Molecular Medical Microbiology, University of Nottingham, UK BSc Medical Laboratory Technology, IPS, Cienfuegos, Cuba
Appointments	
01/08/2024	Fulbright visiting scholar to Weill Cornell University, New York.
2021 -2022	Member of the advisory board on Ghana government's vaccine development and production R&D committee
2020-date	Visiting Professor, the West African Centre for Cell Biology of Infectious Pathogens (WACCBIP) of the University of Ghana, Legon.
01/08/2020	Associate Professor, Department of Clinical Microbiology, KNUST, Kumasi
	Head of Department of Clinical Microbiology
01/08/2020	Coordinator of COVID-19 Clinical Trial (KNC19 Study; FDA/CT/211)
04/05/2020	Senior lecturer, Kwame Nkrumah University of Science & Technology (KNUST)
01/08/2015	
07/02/2000	Medical Laboratory Technologist in the Department of Clinical Microbiology of the School of Medical Sciences, KNUST
1997-1999	Head of Clinical Microbiology Unit, Tamale Regional Hospital, Tamale, Ghana

My personal statement

2013-Ongoing I am a scientist driven by a simple but powerful mission — to turn research into impact. As a clinical virologist and immunologist, I've worked at the intersection of laboratory discovery and public health, from reducing HIV viral loads in patients to developing promising new drug candidates. My journey has taken me from Ghana through London to New York City, forging collaborations that cross borders and disciplines. Beyond the science, I'm committed to mentoring the next generation of African researchers and building the infrastructure that will make our continent a leader in global health innovation. Click on this link to learn more about my work. https://www.youtube.com/watch?v=cNdlvMiZtf4

My new promising anti-HIV drug candidate code named LT500MM was confirmed to inhibit HIV replication *in vitro* during my research visit to Weill Corneil Medical College, New York City. My team had previously shown that LT500MM reduced HIV load among people living with HIV in clinical case studies at the Wa Regional Hospital in Ghana.

Together with my American partners we plan to establish a sustainable, state-of-theart virology and stem cell research platform in Ghana that will (1) enable in vitro propagation of viruses including HIV, (2) integrate stem cell-derived models for studying viral pathogenesis and drug discovery, and (3) train the next generation of African scientists in advanced cell culture, molecular virology, and translational research.

Awarus & Hollours	Awards	&	honours
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2024/2025	Fulbright Africa Research Visiting Scholar Fellow (Weill Cornell Medicine)
2018	President of the Convention for Biomedical Research Ghana (CoBReG).
2017	Vice President of the Convention for Biomedical Research Ghana (CoBReG).
2013-2015	Board member of the Convention for Biomedical Research Ghana
2006-2011 2002-2003	KNUST Staff development award for a PhD degree programme in the UK KNUST Staff development award for a Master's degree programme in the UK

Professional service (Academic)

Professional s	service (Academic)
01/08/2024	Fulbright visiting scholar to Weill Cornell University, New York
2021-	Visiting Professor to the West African Centre for Cell Biology of Infectious Pathogens (WACCBIP) of the University of Ghana, Legon.
2021 -	External examiner in the Department of Biochemistry, Cell and Molecular Biology of the University of Ghana.
2020 -	External assessor of faculty promotions – C.K. TADEM University of Technology and Applied Sciences (CK-UTAS).
2018 -	External assessor of faculty promotions – University for Development Studies, Tamale (UDS).
2017-2020	Chief Invigilator of Examinations for School of Medicine and Dentistry, KNUST
2015	Host of external scientific seminar delivered by Professor David Blackbourn (University of Surrey, London) to KNUST community.
2013	External Referee for faculty appointments, Garden City University College, Kumasi and Member of the committee that reviewed the curricula of some courses of the Garden City University College, Kumasi.

Professional service (Research and Medical Diagnostics)

2013 – date	Head of the Virus Research and Molecular Biology Laboratory, SMS, KNUST.
2016-2020	Deputy head, KNUST CENTRAL LABORATORIES.
2013 - 16	Laboratory consultant to Beta Pleat Biotechnology. I led in the design, set-up and staff training of the Asafo-Boakye Specialist Hospital Diagnostic Laboratory.

Society membership

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2022 -	Member, American Society for Microbiology
2008 -	Member, Microbiology Society, UK
2012 -	Member of the Convention for Biomedical Research Ghana (CoBReG)
2020 -	Member, Immunology Society of Ghana
2005 -	Member of the University Teachers Association of Ghana (UTAG)
2013- 2018	The African Organization for Research and Training in Cancer (AORTIC)

Editorial responsibilities

- 2022 Associate editor, Ghana Journal of Health Sciences (currently under review).
- 2022 Reviewer, PLoS ONE Journal
- 2022 Reviewer, PLoS Neglected Tropical Diseases Journal
- 2022 Reviewer, BMC Infectious Diseases Journal
- 2022 Book Chapter contributor: "Aflatoxins: Immunomodulators and Cancer Agents".

	IntechOpen, London, UK
2020 -	Regular contributor to myjoyonline public education editorial on prevention and control of virus infections
2019	Chief Editor College of Health Sciences & CoBReG Science Conference Brochure
2018	Reviewer of Journal of Advances in Medicine and Medical Research
2018	Editorial board member of Annals of Microbiology and Immunology
2017	Editorial board member and reviewer of cancerscience@chroniclepublishers.org
2015	Reviewer for the Journal of Science & Technology, KNUST

Invitations to speak in international meetings

- 2022 Key note speaker, international conference on herbal Medicine practices in Africa, 2022.
- 2021 Key note speaker; Ghana Science Association Conference, 2021.
- 2019 Chair of plenary talk for the WACCBIP Research Conference (Plasmodia immune response session).
- 2016 Chair of plenary talk for Ghana Biomedical Convention 2016 (Genomics, Molecular Biology, and Cellular Pathology session).

PhD Students trained

- 1. Dr Patrick W Narkwa. Patrick is now a senior lecturer in my department.
- 2. Dr Elias Asuming-Brempong. Elias is now a researcher at the Water Research Division of the Council for Scientific and Industrial Research (CSIR) in Ghana.
- 3. Dr Seth Adjei Domfeh. Now a lecturer in the Department of Biochemistry in KNUST
- 4. Dr Kwabena Dankwa. A senior lecturer at the University of Cape Coast.

MPhil Students trained

2012 - date Over 15 students were trained in my laboratory.

Postdoctoral research training

2019 -2021 Dr. Patrick Williams Narkwa. Patrick's Post Doc was funded by the Leverhulme Royal Society of UK.

Research grants won

The Sterilizer Project Award

2020 – 2022 €150,000 funded by the Global Incentive fund and the Bavarian

Chancellor's Office. A collaborative work with the Technical University of Munich to develop cheaper sterilization techniques for district hospitals.

Leverhulme-Royal Society Post-Doctoral Award

2019 – 2021 **£40,000** Post Doc fellowship awarded to Dr Patrick Narkwa to train

in my laboratory

WACCBIP Doctoral training programme

2022 – 2025 **\$30,000** made available to train Mr Mubarik Yussif in my laboratory.

2016 – 2021 \$72,000 to train two PhD students (Mr Ahmed Rufai and Mr Seth Domfeh)

The Leverhulme-Royal Society Africa Award

2012-2016 The role of aflatoxins in modulating the type I interferon response.

£180,000 (jointly awarded to Professor David J Blackbourn, University of

Surrey, UK and I (Dr Mohamed Mutocheluh)

BSU/KNUST

To mentor Dr Abotsi Wonder in tissue culture and molecular techniques.

\$3000 was awarded to my research team by the Building Stronger Universities (BSU1 project). BSU is a Danish government funded project.

Publications

Selected peer-reviewed publications of original articles

- 1. MUTOCHELUH Mohamed, ANSAH Charles, BUABENG Kwame Ohene, TWUMASI-ANKRAH
- Sampson et al. A cryptolepis sanguinolenta-based preparation reduced hospital stay and mortality of covid-19 patients during the pandemic. African J Tradit Complement Altern Med., (2025) 21 (1): 1-11. https://doi.org/10.21010/AJTCAMv21i1.1
- Seth A. Domfeh, Patrick W. Narkwa, Osbourne Quaye, Kwadwo A. Kusi, Bright S. Addy, Sian Lant, Rebecca P. Sumner, Carlos Maluquer de Motes, Gordon A. Awandare, Charles Ansah, **Mohamed Mutocheluh**. The Pharmacologically Active Alkaloid Cryptolepine Activates a Type I Interferon Response That Is Independent of MAVS and STING Pathways. Journal of Immunology Research, vol. 2022, Article ID8873536, https://doi.org/10.1155/2022/8873536
- Oluwatomisin Deborah Afolayan, Caleb Kesse Firempong, Gustav Komlaga, Patrick Addo-Fordjour, Bright Addy, Seth Agyei Domfeh, Patrick Williams Narkwa, **Mohamed Mutocheluh**, Benjamin Obukowho Emikpe. In vitro cytotoxic activity of five Ghanaian plants on human cancer cell lines. Volume 26, December 2024, e02477; https://doi.org/10.1016/j.sciaf.2024.e02477
- Seth A. Domfeh, Patrick W. Narkwa, Osbourne Quaye, Kwadwo A. Kusi, Odalys Rivera, Martin M. Danaah, Baba A.N. Musah, Gordon A. Awandare, Kwesi B. Mensah, Mohamed Mutocheluh. Cryptolepine and Nibima inhibit hepatitis B virus replication. Scientific African 13 (2021) e00942. https://doi.org/10.1016/j.sciaf.2021.e00942
- Mohamed Mutocheluh and Patrick W. Narkwa. Aflatoxin B1: An Immunomodulator and Cancer Agent. Aflatoxins - Occurrence, Detection and Novel Detoxification Strategies. Edited by Jean Claude Assaf. https://www.intechopen.com/chapters/83715
- Jonathan Akwasi Adusei, Patrick Williams Narkwa, Michael Owusu, Seth Agyei Domfeh, Mahmood Alhassan, Emmanuel Appau, Alimatu Salam, **Mohamed Mutocheluh**. Evidence of chikungunya virus infections among febrile patients at three secondary health facilities in the Ashanti and the Bono Regions of Ghana. PLOS Neglected Tropical Diseases | https://doi.org/10.1371/journal.pntd.0009735
- 8. Seth A. Domfeh, Patrick W. Narkwa, Osbourne Quaye, Kwadwo A. Kusi, Gordon A. Awandare, Charles Ansah, Alimatu Salam and **Mohamed Mutocheluh**. Cryptolepine inhibits hepatocellular carcinoma growth through inhibiting interleukin-6/STAT3 signalling.BMC Complementary Medicine and Therapies (2021) 21:161. https://doi.org/10.1186/s12906-021-03326-x
- 9. Patrick W. Narkwa, Seth A. Domfeh, Gordon Awandare, and Mohamed Mutocheluh. Cryptolepine, a Plant-derived Alkaloid, Differentially Regulates Signal Transduction Pathways in Human Embryonic Kidney (HEK293) Cells. Journal of Science and Technology, Vol. 41, No.3 (2023), pp 38-51. https://dx.doi.org/10.4314/just.v41i3.4
- Flavia Kaduni Bawa, Mohamed Mutocheluh, Sylvester Donne Dassah, Patrick Ansah, Abraham Rexford Oduro. Genetic diversity of rotavirus infection among young children with diarrhoea in the Kassena-Nankana Districts of Northern Ghana: a seasonal cross-sectional survey. PAMJ - 44(148). 28 Mar 2023. https://www.panafrican-med-journal.com//content/article/44/148/full
- 11. Seth Agyei Domfeh, Samuel Asamoah Sakyi, Enoch Odame Anto, Patrick Williams Narkwa, **Mohamed Mutocheluh**, Margaret T Frempong. African Journal of Gastroenterology and Hepatology; Jan 2023. 10.21608/AJGH.2023.183024.1025, https://aigh.journals.ekb.eg/
- E Akowuah, G Acheampong, NK Ayisi-Boateng, A Amaniampong, FO Agyapong, J Senyo Kamasah, G Agyei, DO Owusu, B Nkrumah, M Mutocheluh et al. Comparable Detection of SARS-CoV-2 in Sputum and Oropharyngeal Swab Samples of Suspected COVID-19 Patients. COVID 2022, 2, 858–866. COVID 2022, 2, 858–866. https://doi.org/10.3390/covid2070062
- 13. Oliver Nangkuu Deberu, Godfred Acheampong, Bernard Nkrumah, Nana Kwame Ayisi-Boateng, Stephen Opoku Afriyie, Francis Opoku Agyapong, Dorcas Ohui Owusu, **Mohamed Mutocheluh**, Abass Abdul-Karim, Philip El-Duah, Augustina Angelina Sylverken, Michael Owusu. Microbial Organisms in the Lower Respiratory Tract Associated with SARS-CoV-2 Infection: A Cross-Sectional Study in Northern Ghana. COVID 2023, 3(4), 440-451; https://doi.org/10.3390/covid3040033
- 14. Seth A. Domfeh, Patrick W. Narkwa, Osbourne Quaye, Kwadwo A. Kusi, Bright S. Addy, Sian Lant, Rebecca P. Sumner, Carlos Maluquer de Motes, Gordon A. Awandare, Charles Ansah, **Mohamed Mutocheluh**. The Pharmacologically Active Alkaloid Cryptolepine Activates a Type I Interferon Response That Is Independent of MAVS and STING Pathways. Journal of Immunology Research, vol. 2022, Article ID8873536, https://doi.org/10.1155/2022/8873536

- Seth A. Domfeh, Patrick W. Narkwa, Osbourne Quaye, Kwadwo A. Kusi, Odalys Rivera, Martin M. Danaah, Baba A.N. Musah, Gordon A. Awandare, Kwesi B. Mensah, Mohamed Mutocheluh. Cryptolepine and Nibima inhibit hepatitis B virus replication. Scientific African 13 (2021) e00942. https://doi.org/10.1016/j.sciaf.2021.e00942
- 16. Jonathan Akwasi Adusei, Patrick Williams Narkwa, Michael Owusu, Seth Agyei Domfeh, Mahmood Alhassan, Emmanuel Appau, Alimatu Salam, **Mohamed Mutocheluh**. Evidence of chikungunya virus infections among febrile patients at three secondary health facilities in the Ashanti and the Bono Regions of Ghana. PLOS Neglected Tropical Diseases | https://doi.org/10.1371/journal.pntd.0009735
- 17. Seth A. Domfeh, Patrick W. Narkwa, Osbourne Quaye, Kwadwo A. Kusi, Gordon A. Awandare, Charles Ansah, Alimatu Salam and **Mohamed Mutocheluh**. Cryptolepine inhibits hepatocellular carcinoma growth through inhibiting interleukin-6/STAT3 signalling.BMC Complementary Medicine and Therapies (2021) 21:161. https://doi.org/10.1186/s12906-021-03326-x
- 18. Michael Owusu, Augustina Angelina Sylverken, Philip El-Duah, Nana Kwame Ayisi-Boateng, Richmond Yeboah, **Mohamed Mutocheluh** et al. Low risk of SARS-CoV-2 in blood transfusion. PLOS ONE | https://doi.org/10.1371/journal.pone.0249069
- Theophilus Quaye, Patrick Williams Narkwal, Seth A. Domfeh, Gloria Kattah, Mohamed Mutocheluh. Immunosurveillance and molecular detection of hepatitis B virus infection amongst vaccinated children in the West Gonja District in Savanna Region of Ghana. Sept 2021. PLOS ONE https://doi.org/10.1371/journal.pone.0257103
- Kwabena Dankwa, Samuel Victor Nuvor, Dorcas Obiri-Yeboah, Patrick Kwame Feglo and Mohamed Mutocheluh. Occurrence of Cryptosporidium Infection and Associated Risk Factors among HIV-Infected Patients Attending ART Clinics in the Central Region of Ghana. Trop. Med. Infect. Dis. 2021, 6, 210. https://doi.org/10.3390/tropicalmed6040210
- Kwabena Dankwa , Patrick K. Feglo, Samuel V. Nuvor, Michael Aggrey-Korsah, and Mohamed Mutocheluh. Cryptosporidium Infection and Associated Risk Factors among Cattle in the Central Region of Ghana. Journal of Parasitology Research. Vol 2021, Article ID 6625117, 8 pages. https://doi.org/10.1155/2021/6625117
- 22. Elizabeth Tabitha Botchway, Elizabeth Agyare, Letsa Seyram, Kwadwo Koduah Owusu, Mohamed Mutocheluh, Dorcas Obiri-Yeboah. Prevalence and attitude towards hepatitis B vaccination among healthcare workers in a tertiary. PAMJ 36(244);05 Aug 2020.
- 23. Kubi JA, **Mutocheluh M**, Bonney JHK, Ampofo WK, Odoom JK. Molecular detection of enterovirus D68 among children with acute respiratory tract infection in Ghana. Afr J Lab Med. 2019;8(1), a732. https://doi.org/10.4102/ajlm.v8i1.732
- 24. Boateng R, **Mutocheluh M,** Dompreh A, Obiri-Yeboah D, Odame Anto E, Owusu M, et al. Sero-prevalence of Hepatitis B and C viral coinfections among HIV-1 infected ART-naïve individuals in Kumasi, Ghana. (2019) PLoS ONE 14(4):e0215377.https://doi.org/10.1371/journal.pone.0215377
- 25. Dorcas Obiri-Yeboah, Patrick K. Akakpo, **Mohamed Mutocheluh**, Emmanuel Adjei-Danso, Gloria Allornuvor, Daniel Amoako-Sakyi et al,. Epidemiology of cervical human papillomavirus (HPV) infection and squamous intraepithelial lesions (SIL) among a cohort of HIV-infected and uninfected Ghanaian women. BMC Cancer (2017) 17:688. DOI 10.1186/s12885-017-3682-x
- 26. Benedict Osei-Tawiah, Theophilus B Kwofie, **Mohamed Mutocheluh,** Richard Ephaim and Emmanuel Awusah Blay. Prevalence of HIV, Hepatitis B, Hepatitis C and Syphilis Infections among Patients in a Psychiatric Hospital in Ghana. Int J Virol AIDS6:050. doi.org/10.23937/2469-567X/1510050.
- 27. **Mohamed Mutocheluh** and Patrick W Narkwa. Aflatoxin B1 Inhibits the Replication of Chandipura Virus in Human Hepatoma Cells. Annals of Microbiology and Immunology. 2018; 1(2):1008.
- 28. Gilbert Kotei Ashie, **Mohamed Mutocheluh**, Michael Owusu, Theophilus Benjamine Kwofie, Samuel Akonor, Patrick Williams Narkwa et al. Microbial pathogens associated with acute childhood diarrhoea in Kumasi, Ghana. BMC Research Notes (2017) 10:264. DOI 10.1186/s13104-017-2578-9
- 29. Elvis K. Tiburu, **Mohamed Mutocheluh**, Patrick K. Arthur, Patrick Williams Narkwa, Ali A. Salifu,, Michael Anim Agyei et al. Antifungal and Anti-Proliferative Effects of Zeolites A and X on Yeast Pathogenic and Cancer Cells In Vitro. Journal of Biomaterials and Tissue Engineering; vol. 7, 544-555 (2017).
- 30. Patrick W. Narkwa, David J. Blackbourn and **Mohamed Mutocheluh**. Aflatoxin B1 inhibits the type 1 interferon response pathway via STAT1 suggesting another mechanism of hepatocellular carcinoma. Narkwa et al. Infectious Agents and Cancer (2017) 12:17.

- 31. Bernice Ameyaw, **Mohamed Mutocheluh**, Michael Owusu, Alhassan Abiba Khalifah, Richard Vikpebah Duneeh and Patrick Williams Narkwa. Performance of First Response® and CareStart™ Malaria Rapid Diagnostic Tests for the Detection of Plasmodium falciparum in a Tertiary Hospital in Ghana. British Journal of Medicine & Medical Research19(8): 1-7, 2017; Article no. BJMMR.30892.
- 32. P. W. Narkwa, **M. Mutocheluh**, T. B. Kwofie, M. Owusu, A. Annan, I. Ali and J. K. Boamah. Dengue virus exposure among blood donors in Ghana. Journal of Medical and Biomedical Sciences (2016) 5(2): 30-35. doi: http://dx.doi.org/10.4314/jmbs.v5i2.5.
- 33. **M. Mutocheluh**, L. Hindle, C. Areste, S.A. Chanas, L.M. Butler, K.Lowry, K. Shah, D.J. Evans and David J. Blackbourn. Kaposi's Sarcoma-associated herpevirus viral interferon regulatory factor-2 inhibits type 1 interferon signalling by targeting interferon-stimulated gene factor-3. Journal of General Virology; 2011 October; 92 (Pt 10): 2394-8. Epub 2011 Jun 22.
- 34. Theophilus B. Kwofie, Michael Owusu, **Mohamed Mutocheluh**, Samuel Blay Nguah, Joseph Obeng-Baah, Charlotte Hanson and Albert Dompreh. Pattern and predictors of immunologic recovery in HIV infected patients. Biomed Central Research Article. BMC Research Notes (2015)8:413.
- 35. Cristina Aresté, **Mohamed Mutoche**luh and David J Blackbourn. Identification of caspase-mediated decay of interferon regulatory factor-3, exploited by a Kaposi's Sarcoma-associated herpesvirus immunoregulatory protein. Journal of Biological Chemistry; 2009 August 28;284(35):23272-85. Epub 2009 Jun 24.
- 36. Theophilus B. Kwofie, Frederick Ayensu, **Mohamed Mutocheluh**, Patrick Narkwa, Samuel B. Nguah, Cornelius A. Turpin, Michael Owusu. Seroprevalence of Rubella Virus, Cytomegalovirus and Herpes Simplex Virus—2 among Pregnant Women at the Komfo Anokye Teaching Hospital, Ghana. Journal of Public Health in Developing Countries; 2015 Nov. Vol. 1, No. 2, pp. 56-63.
- 37. Theophilus Benjamin Kwofie and **Mohamed Mutocheluh**. Behavioural Practices Associated with Occurrence of HIV among University Students in Ghana. British Journal of Medicine & Medical Research10(10): 1-11, 2015 Sept, Article no. BJMMR.18827.
- 38. **Mohamed Mutocheluh** & Kwaku Kwateng. Knowledge and Occupational hazards of barbers in the transmission of hepatitis B and C was low in Kumasi. The Pan African Medical Journal. 2015; 20:260.
- 39. **Mohamed Mutocheluh**, Michael Owusu, Theophilus B Kwofie, Tahiru Akadigo, Emmanuel Appau and Patrick W Narkwa. Risk factors associated with hepatitis B exposure and the reliability of five rapid kits commonly used for screening blood donors in Ghana. Biomed Central Research Article. BMC Research Notes 2014. 7:873.
- 40. Tanko Rufai, **Mohamed Mutocheluh**, Kwaku Kwarteng, Elliot Dogbe. The prevalence of hepatitis B virus E antigen among Ghanaian blood donors. PanAfrican Medical Journal (2014); 17:53.
- 41. E.M. Der, R.K. Gyasi, **M.Mutocheluh** and J.T. Anim. HIV co-infection and mortality pattern purulent meningitis: A 5 year retrospective autopsy study at the Korle-bu Teaching Hospital. Journal of Medical and Biomedical Sciences (2012)1(4):13-20.

BOOK CHAPTER

 Mohamed Mutocheluh and Patrick W. Narkwa. Aflatoxin B1: An Immunomodulator and Cancer Agent. Aflatoxins - Occurrence, Detection and Novel Detoxification Strategies. Edited by Jean Claude Assaf. https://www.intechopen.com/chapters/83715

REVIEW ARTICLES

- Y Mubarik, ST Boyetey, AR Aikins, M Mutocheluh. Effect of Ochratoxin A (OTA) on the Immune System: A Systematic Review - Toxins, 2025. Toxins 2025, 17(5), 256; https://doi.org/10.3390/toxins17050256
- 2. Daniel Ataanya Abera, Christopher Larbie, James Abugri, Mina Ofosu, **Mohamed Mutocheluh**, Julius Dongsogo. Prevalence and Predictors of Gestational Diabetes Mellitus in Sub-Saharan Africa: A 10-Year Systematic Review. https://doi.org/10.1002/edm2.478