

Malaria Policy Advisory Group (MPAG)

Declaration of Interests report for MPAG virtual meeting 13 to 15 April 2021. All 17 MPAG members attending the meeting submitted their declarations of interest, which were assessed by the WHO Secretariat. Twelve members reported interests, which are summarized below.

1. Professor Evelyn Ansah, University of Health & Allied Sciences, Ghana

Research Support – Ghana Co-Investigator on funding from PATH for the Health Utilization Study – a qualitative assessment of the pilot implementation of RTS,S. Financially significant, non-personal in nature and not relevant to the agenda for this meeting.

2. Professor Graham Brown, Professor Emeritus, University of Melbourne Division, Australia

- Consulting - United Nations Office of Project Services (UNOPS) to review the malaria program in Cambodia (2017). He was asked to review the programme, identify bottlenecks in implementation and make recommendations to overcome them. Financially significant, personal nature and not related to any of the sessions for decision.
- Consulting – WHO/Global Malaria Programme contract to write the interim draft of the Executive Summary of Strategic Advisory Group on malaria eradication (SAGme) report (2019). Financially significant interest, personal nature and not related to a topic for decision.
- Public Statements and Positions - Presentation at an Australian government enquiry into side-effects of 8-amino-quinilines such as primaquine and tafenoquine in Defense Force Personnel. Financially insignificant personal nature and is not related to any agenda item.
- Interest – Personally knows many researchers engaged in malaria research into drugs and vaccines (no commercial interest). And attended a Sanaria Vaccine Symposium in 2018. Financially insignificant, non-personal and not related to an agenda item for decision. We do not foresee that his participation in these decisions would provide him or his friends and colleagues with direct pecuniary benefit.

3. Professor Thomas Burkot, Australian Institute of Tropical Health and Medicine, James Cook University, Cairns, Queensland

- Consulting with Global Good Fund to provide technical advice on trials of a vector control product (improved housing) and developed a vector control strategy while on a (1 year) fellowship with them. This work was in 2018. This interest is considered a financially significant interest and of a personal nature, but not related to any agenda item for decision.
- Research support to the Global Good Fund for field trials of malaria diagnostics. The support spanned from 2016 to 2018. This is considered a financially significant interest, of a personal and academic nature, and related to the agenda item Clinical malaria – parasite density thresholds in different transmission settings and implications for use of RDTs. However, the decision is related to specifications of RDTs, not a specific product.
- Consulting work with PATH to provide technical advice on writing grants to support the design and evaluation of vector control product trials of Attractive Toxic Sugar Bait (ATSBs). This consultancy work began in 2017 and is current. This interest is considered financially significant and of a personal nature, but not related to any agenda item.

4. Professor Gabriel Carrasquilla, Director, ASIESALUD, Colombia

Professor Carrasquilla highlighted two previously declared and assessed interests related to two contracts between GSK and ASIESALUD where he acted as the principal investigator:

- 1) The assessment of the introduction of packed cell volume (PCV) in Colombia; and
- 2) The assessment of the introduction of Pertussis Vaccine for pregnant women in Bogota, Colombia.

Both contracts ended in December 2018. These are considered financially significant interests, of a non-personal nature and not related to topics discussed at MPAG.

5. Professor Umberto D'Alessandro, Director, Medical Research Council Unit, The Gambia

- Consulting – Professor D'Alessandro is a member of the external scientific advisory board of the Medicines for Malaria Venture (MMV) and participated in meetings in September 2017 and October 2018 in Geneva, Switzerland. Financially insignificant, personal not related to an item for decision on the agenda.
- Research support - Professor D'Alessandro declared his role as principal investigator in a clinical trial on the safety and efficacy of pyronaridine-artesunate (Pyramax) in asymptomatic malaria-infected individuals. His institution, Medical Research Council Unit (MRC), The Gambia, received GBP 540,320 from Medicines for Malaria Venture (MMV) for this work. Financially significant, non-personal nature, and not related to an item for decision on the agenda.
- Research support - declared the donation of dihydroartemisinin-piperaquine for a cluster randomized trial on mass drug administration by Guilin Pharma. Financially significant interests of a non-personal nature and not relevant to any topic for decision on the agenda.
- Research support - Travel and accommodation for a meeting on DHAPQ in September 2017 in Shanghai, China sponsored by Guilin Pharma. Financially insignificant interests of a personal nature not related to a topic for decision on the agenda.

6. Professor Abdoulaye Djimde, Head, Molecular Epidemiology Drug Resistance Unit, University of Mali, Mali

Research support – all research support is financially significant, non-personal in nature and not related to an agenda item for decision

- DELTAS Africa – Professor Djimde is the Principal Investigator for Developing Excellence in Leadership and Genetics Training for Malaria Elimination (DELGEME) with funding from the Wellcome Trust (2016 – 2021).
- PAMGEN study funded by the African Academy of Sciences looking at genetic interactions between human populations and malaria parasites in different environmental settings across Africa (2018 – 2022).
- WANECAMII – Professor Djimde is the Principal Investigator of the West African Network for Clinical Trials of Antimalarial Drugs with funding from EDCTP (2019 – 2024).
- Clinical evaluation of ASAQ+Atovaquone-Proguanil tri-therapy for malaria treatment in African children funded by EDCTP (2019-2023).
- Funding from the Medical Research Centre, UK for using single-cell RNAseq to deeply investigate human malaria parasite transmission dynamics (2020- 2021).
- MalariaGEN Resource Center - Software Development Support (2021-2022).
- Honoraria - speaking engagement at a Symposium organized by Shin Poong on *“Future & Perspective of Pyramax (pyronaridine-artesunate) in the fight against malaria”*.
- Honoraria - Speaking engagement at the Multilateral Initiative on Malaria Conference (MIM) from 15 to 20 April 2018 in Dakar, Senegal. He was invited by Novartis to speak about *“Responding to the emergence of multi-drug resistance”* at their Symposium. Both considered a financially insignificant interest, of a personal nature and not related to any agenda item.

7. Professor Azra Ghani, Infectious Diseases Epidemiology, Imperial College, UK

- Consultant – WHO European Office support related to COVID-19 vaccination introductions (current). Not financially significant, personal, not relevant to the agenda.
- Consultant – HSBC Panel discussion on the COVID-19 pandemic (current). Not financially significant, personal, not relevant to the agenda.

- Research support – Service contract to Imperial College from the Global Fund on different projects related to modelling impact estimates for malaria from 2016 to 2019 and in 2021. Financially significant, personal and related to malaria broadly not specific to an agenda item.
- Research support - Academic grant funding from multiple organizations for work on malaria and COVID-19 research including Bill & Melinda Gates Foundation (BMGF), MVI, MMV, IVCC, MRC, Wellcome Trust, NIH over three years (current). Financially significant, non-personal and related to malaria broadly, not to anything for decision.
- Charity trustee (non-monetary) - Malaria No More, UK (current). Financially insignificant, personal and related to malaria broadly, not to anything for decision.
- Advisory – Moderna Epidemiology Advisory Board related to COVID-19 vaccines (February 2021). No financial interest, personal in nature and not relevant to the agenda.

8. Professor Caroline Jones, Senior Social Scientist, KEMRI-Wellcome Trust Research, Kenya

- Research Grant - Senior social scientist on the project funded by UNITAID called the “Broad One Health Endectocide-based Malaria Intervention in Africa (BOHEMIA)”. This clinical trial of ivermectin mass drug administration (MDA), which runs from February 2019 to February 2023, is being conducted in Mozambique and Tanzania. Professor Jones is the lead social scientist and is investigating community and local stakeholder perceptions and responses to ivermectin MDA for malaria control. It aims to understand the local context and possible influences on uptake. Financially significant interest, personal nature, but not related to agenda items for decision.
- Research Grant - Senior social scientist on a household-randomized controlled trial which is multi-organization grant with Department for International Development (DFID) UK, MRC, Wellcome Trust Global Health trials grant on “*Can improved housing provide additional protection against clinical malaria over current best practice?*” from 2014 to 2019. Financially significant interest, personal nature, but not related to agenda items for decision.
- Research Grant - Senior social scientist on a Wellcome Trust Collaborative award on improving the efficacy of malaria prevention in Insecticide Resistant Africa from 2016 to 2019. Financially significant, personal in nature, not related to a topic for decision.
- Research Grant - Collaborator for the study conducted in collaboration with PATH entitled “*Dynamics of health care utilization strategies in the context of RTS,S/AS01 vaccine introduction: a qualitative longitudinal study in Kenya*” (2018-2021). No financial interest tied to this engagement, personal and not related to a topic for decision.

9. Professor S. Patrick Kachur, Columbia University Medical, Center Heilbrunn Department of Population and Family Health, Columbia University Mailman School of Public Health, USA

- Consultant - Consultancy with the Clinton Health Access Initiative (June 2020 – current) providing technical assistance for developing and completing malaria surveillance assessments in collaboration with WHO/GMP and national malaria control programs in multiple countries. Financially significant, personal in nature and related to the agenda item for guidance, but not decision, ‘Digital solutions for malaria elimination Surveillance’.
- Advisory - Advisory roles on the Zanzibar Malaria Elimination Advisory Committee and the Board of Directors of Medical Care Development, Inc. No financial compensation, these interests are of a personal nature and not related to the agenda.

10. Doctor Fedros Okumu, Director of Science, Ifakara Health Institute, Tanzania

- Consulting – for WHO Vector Control Product Prequalification as a consultant assessor for an amount of USD\$15,000 in ending in December 2020.
- Research support – grants received from the Bill & Melinda Gates Foundation; WHO-TDR programme; Wellcome Trust; Foundations of the National Institutes of Health, USA; Africa

Research Excellence Fund; UKRI/EPSRC, UK; Rudolf Geigy Foundation, Switzerland; Hanako Foundation, Singapore; The Royal Society, London; The British Academy, London, UNITAID, Medical Research Council, UK; Swiss National Science Foundation, USAID, Innovative Vector Control Consortium, Grand Challenges, Canada, Scottish Funding Council and Consortium for Advanced Research Training in Africa. All grants were awarded to Ifakara Health Institute

- Patent Applications
 - a) World Intellectual Property Organization. Patent number WO 2010/101462-A2: *Behavior modifying odorant mixture for malaria mosquitoes* (Joint patent by Ifakara Health Institute, TZ and Wageningen University, The Netherlands): <https://patents.google.com/patent/WO2010101462A2/en>
 - b) World Intellectual Property Organization. Patent number WO 13187690.6-1656: *A complex of structures for delivering pesticidal agents to arthropods*. (Joint patent by Ifakara Health Institute, TZ & In2Care Holding B.V, The Netherlands): <https://patents.google.com/patent/EP2859794A1/en?q=A&q=complex&q=structures&q=delivering&q=pesticidal+agents&q=arthropods&oq=A+complex+of+structures+for+delivering+pesticidal+agents+to+arthropods>
- Expert opinions: contributed to the following:
 - a) Currently serves as a member of the Malaria Strategic Advisory Panel for the Bill & Melinda Gates Foundation
 - b) Contributed in Research and Draft team for Africa Union on: African Union High Level Panel on Emerging Technologies (2018): Gene Drives for Malaria Control and Elimination in Africa. <https://www.nepad.org/publication/gene-drives-malaria-control-and-elimination-africa>
 - c) Contributed as a co-chair of malERA Refresh Consultative Panel on Tools for Malaria Elimination. (2017). malERA: An updated research agenda for diagnostics, drugs, vaccines, and vector control in malaria elimination and eradication. PLoS Med. 2017 Nov 30;14(11):e1002456.doi: 10.1371/journal.pmed.1002456. eCollection 2017 Nov. Review: <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002455>
 - d) Contributed as a member of this panel: James S, Collins FH, Welkhoff PA, Emerson C, Godfray HCJ, Gottlieb M, Greenwood B, Lindsay SW, Mbogo CM, **Okumu FO**, Quemada H, Savadogo M, Singh JA, Tountas KH, Touré YT (2018). Pathway to Deployment of Gene Drive Mosquitoes as a Potential Biocontrol Tool for Elimination of Malaria in Sub-Saharan Africa: Recommendations of a Scientific Working Group†. Am J Trop Med Hyg. **2018** Jun;98(6_Suppl):1-49. doi: 10.4269/ajtmh.18-0083. <https://pubmed.ncbi.nlm.nih.gov/29882508/>

The consulting work is considered financially significant and personal in nature, but is providing a service to WHO and is considered in line with the work of the MPAG. The Research support is considered financially significant, non-personal and academic in nature. The research topics are not related to agenda items for decision. Dr Okumu declared two joint patent applications on behalf of his institute, Ifakara Health Institute; these are considered financially insignificant, non-personal and academic in nature. There is no decision related to these tools. Dr Okumu has declared four areas where he has been part of a group asked to provide expert opinion. These are considered personal and financially insignificant.

11. Doctor Aranxta Roca Feltrer, Malaria Consortium

- Employment with the Malaria Consortium (non-profit organization)
- Research grants from the Bill & Melinda Gates Foundation of >USD 5000 on surveillance strengthening in Mozambique.

Both interests are considered financially significant. The first interest is related to the implementation of malaria programmes broadly and does not represent a bias for particular strategies or products. The second is not related to a topic of policy recommendation and represents the area of expertise that the expert was selected to provide on the Group. It was determined that these interests do not present a conflict with respect to joining the Group.

12. Professor Dyann Wirth, Richard Pearson Strong Professor and Chair, Harvard T.H. Chan School of Public Health, USA

Research grant support to Harvard University received from the following organizations (all current):

- National Institute of Health, USA – Principal Investigator or Co-PI on four grants on new drug discovery and drug resistance (DHODH/mitochondrial targets, PrRS and targeting parasites in mosquitoes, and ACT resistance).
- Bill & Melinda Gates Foundation – Genetic epidemiology of malaria
- PATH – RTS,S Mal095 genetic analysis
- Educational support to Harvard University for the Eradication of Malaria Leadership course provided by BMGF, Sumitomo Corporation and ExxonMobil.

All financially significant, non-personal in nature and not related to a topic for decision.

Advisory roles (All financially insignificant, personal in nature and not related to an agenda item for decision.):

- Medicines for Malaria Venture (MMV) Expert Scientific Advisory Committee (ESAC); honorarium and travel provided
- Board of Trustees of the Marine Biological Laboratories, Wood Hole, MA; no honorarium or travel expenses received.
- Warren Alpert Foundation Scientific Advisory Committee for the annual award; honorarium received.

Due diligence (internet search)

Nothing significant was found that was not already declared by MPAG members.