



**World Health
Organization**

WHO Monkeypox research

**What are the knowledge gaps and
priority research questions?**

2 & 3 June 2022

13:00 – 17:00 Central European Time CET

DRAFT Agenda



R&D Blueprint

Powering research
to prevent epidemics

OBJECTIVES

During this forthcoming consultation global experts will review the available evidence in terms of:

- Our understanding the dynamics of monkeypox transmission and epidemiology and the clinical characteristics of the disease.
- Available evidence regarding therapeutics, diagnostics and vaccines licensed and under development.
- Novel approaches for evaluation of monkeypox therapeutics and vaccines.
- Countries perspectives in terms of research priorities and opportunities.

EXPECTED OUTCOMES

Baseline document to inform a research Roadmap enumerating knowledge gaps, and outlining priority research

A defined list of next steps to address the above

Chairperson: Helen Rees (University of Witwatersrand, South Africa)

Day 1: Thursday 2 June 2022

Time	Topic	Speakers
13:00 – 13:10	Welcome address	WHO
13:10 – 13:20	Objectives of the meeting	Dr Ibrahima Soce Fall (ADG Health Emergencies Operations, WHO)
Session 1. Understanding the dynamics and epidemiology and the clinical characteristics of monkeypox		
13:20 – 13:30	Historical overview of monkeypox	Paul Fine (LSHTM, UK)
13:30 – 13:40	Global overview of current monkeypox epidemiology	Maria van Kerkhove (WHO)
13:40 – 13:50	Current knowledge on monkeypox transmission dynamics	Olumnuyiwa James Peter (Univ. Medical Sciences Ondo City, Nigeria)
13:50 – 14:20	Monkeypox epidemiology, surveillance, and laboratory capacity in affected countries, what else is needed? (8-10 mins each)	Jean-Jacques Muyembe-Tamfum (Institut National de Recherche Biomédicale, DRC) Emmanuel Nakoune (Institut Pasteur de Bangui, Central African Republic) Dayo Adetifa (NCDC, Nigeria)
14:20 – 14:35	Monkeypox virus in wildlife	William Karesh (Health and Policy of Ecohealth Alliance and the World Animal Health Organization)
14:35 – 14:45	A ONEHEALTH study of monkeypox human infection	Arnaud Fontanet (Institut Pasteur, France)
14:45 – 15:15	Investigation of recent imported cases	Gianfranco Spiteri (ECDC) María Paz Sánchez-Seco Fariñas (National Inst. of Health, Spain) Isabel Oliver (UKHSA)
15:15 – 15:25	Social dimensions of monkeypox: gaps and priorities	Hayley MacGregor (Inst. Development Studies, UK)
15:25 – 15:55	<u>Panel discussion</u> - What are the priority questions in terms of disease transmission and diagnostics? - What are the limitations of current disease surveillance data and how can it be improved?	Panel Discussion moderated by Andrea McCollum (CDC, US) Gianfranco Spiteri (ECDC) Jean-Jacques Muyembe-Tamfum (Institut National de Recherche Biomédicale, DRC) Emmanuel Nakoune (Institut Pasteur de Bangui, Central African Republic) Arnaud Fontanet (Institut Pasteur, France) Dimie Ogoina (Niger Delta University, Nigeria) Isabel Oliver (UKHSA)
15:55 – 16:05	Overview of available diagnostics and those in the pipeline	Dan Bausch (FIND)
16:05 – 16:25	The challenge of seroepidemiology for monkeypox	Sathesh Panayampalli (US CDC) Isabel Oliver (UKHSA)
16:25 – 16:35	Animal models of monkeypox infections	Judith Hewitt (NIH, US)
16:35 – 17:15	<u>Panel Discussion</u> - What are the laboratory research priorities for responding to monkeypox?	Moderated by Gustavo Palacios (Icahn School of Medicine, US) Dan Bausch (FIND) Sathesh Panayampalli (US CDC) Isabel Oliver (UKHSA) Judith Hewitt (NIH, UC) Nancy Sullivan (NIAID, US)

Time	Topic	Speakers
		Priya Abraham (National Institute of Virology, India) María Paz Sánchez-Seco Fariñas (National Inst. of Health, Spain) Sarah Viehbeck (Public Health Agency Canada)

Day 2: Friday 3 June 2022

Time	Topic	Speakers
Session 2. Innovative approaches for evaluation of therapeutics		
13:00 – 13:10	Clinical characteristics of monkeypox – DRC experience	Placide Mbala (INRB, DRC)
13:10 – 13:20	Overview of available therapeutics, those in the pipeline, and approaches to evaluate their efficacy	Marco Cavaleri (EMA)
13:20 – 13:30	On the evidenced-based criteria for the inclusion of experimental therapeutics in an RCT	Marie - Pierre Preziosi (WHO)
13:30 – 13:40	Design options for the evaluation of efficacy: advantages and disadvantages	Thomas Fleming (Univ. of Washington, USA)
13:40 – 13:50	A cohort study of treatment outcomes in selected European countries	Piero Olliaro (University of Oxford)
13:50 – 14:00	Clinical trial to evaluate monkeypox treatments	Veronique Nussenblatt (NIAID, US)
14:00 – 14:10	A clinician's perspective on what additional data should be collected on the available therapeutics	Lindsey Baden (Harvard, US)
14:10 – 14:20	Overview of clinical management and infection control research priorities	Tochi Okwor (Nigeria CDC)
14:20 – 15:05	<u>Panel discussion</u> <ul style="list-style-type: none"> - What are current plans for further evaluation of available therapeutics? - What are the critical elements of target product profile (TPP) for monkeypox therapeutics? - What other research should be done? 	Panel Discussion moderated by Yazdan Yazdanpanah (ANRS MIE/Inserm, France) Adam Sherwat (FDA, US) Marco Cavaleri (EMA) Laurens Liesenborghs (Inst. Trop. Medicine, Antwerp) Placide Mbala (INRB, DRC) Thierry Kalonji (DRC) Adesola Yinka-Ogunleye (CDC, Nigeria) Jake Dunning (Royal Free Hospital, UK) Luciana Borio (Council on Foreign Relations, US) Onome Abiri (Sierra Leone) TBC <u>Developers</u> Chris Sinclair (Emergent) Dennis Hruby (SIGA)
Session 3. Innovative approaches for evaluation of vaccines		
15:05 – 15:15	Overview of available vaccines, those in the pipeline, and approaches to evaluate their efficacy	Marion Gruber (IAVI)
15:15 – 15:25	Planned/proposed study 1	Ira Longini (Univ. of Florida, US)
15:25 – 15:35	Planned/proposed study 2	Brett Petersen (CDC, US)

15:35 – 15:45	Design options for the evaluation of efficacy: advantages and disadvantages	Phil Krause (Adviser to WHO)
15:45 – 16:30	<p><u>Panel discussion</u></p> <ul style="list-style-type: none"> - What are current plans for further evaluation of available vaccines? - What are the critical elements of target product profile (TPP) for monkeypox vaccine? - What are the considerations for the design of delivery strategies? - What other research should be done? 	<p>Panel Discussion moderated by Phil Krause (Adviser to WHO)</p> <p>Richard Njouom (Centre Pasteur of Cameroon) Dimie Ogoina (Niger Delta University, Nigeria) Mary Ramsay (UKHSA) TBC Chad Irwin (Health Canada) Jonathan Uviase (NAFDAC, Nigeria) Jakob Cramer (CEPI)</p> <p><u>Developers</u> Mahmudul Hasan (Sylhet Agricultural University, Bangladesh) Chris Sinclair (Emergent) Florian Lienert (Bavarian Nordic) Seth Lederman (Tonix Pharmaceuticals) Genoveffa Franchini (NIH)</p>
Session 4. Meeting Conclusions		
16:30 – 17:15	<p><u>Panel discussion</u></p> <p>What are the key messages from each session?</p> <ul style="list-style-type: none"> - What are the knowledge gaps? - What are the research priorities? - What should be WHO's next steps to facilitate this research agenda? <p>Any other important research related matters that have not been highlighted?</p> <p>Of the items discussed so far, what are the top 3 priorities?</p>	<p>Panel Discussion moderated by Helen Rees (University of Witwatersrand, South Africa)</p> <p>Andrea McCollum (CDC, US) Gustavo Palacios (Icahn School of Medicine, US) Marco Cavaleri (EMA) Phil Krause (Special Adviser to WHO)</p> <p>Gary Disbrow (BARDA, US) Peter Figueroa (Univ. West Indies, Jamaica) Gianfranco Spiteri (ECDC) María Paz Sánchez-Seco Fariñas (National Inst. of Health, Spain) Jean-Jacques Muyembe-Tamfum (Institut National de Recherche Biomédicale, DRC) Emmanuel Nakoune (Institut Pasteur de Bangui, Central African Republic) Placide Mbala (INRB, DRC) Laurens Liesenborghs (Inst. Trop. Medicine, Antwerp) Thierry Kalonji (DRC) Adesola Yinka-Ogunleye (CDC, Nigeria) Jake Dunning (Royal Free Hospital, UK) Dimie Ogoina (Niger Delta University, Nigeria) Richard Njouom (Centre Pasteur of Cameroon) Dayo Adetifa (NCDC, Nigeria) Isabel Oliver (UKHSA)</p>
17:15 – 17:30	Next steps	WHO
17:30	END OF MEETING	