

How can WHO's pathogen Family strategy inform equitable R&D approaches at national, regional and global levels?

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A representative pathogen selected to serve as a model for basic and translational research to develop MCMs that can be applied to other viruses of the family.

development of MCMs

PRIORITY pathogens

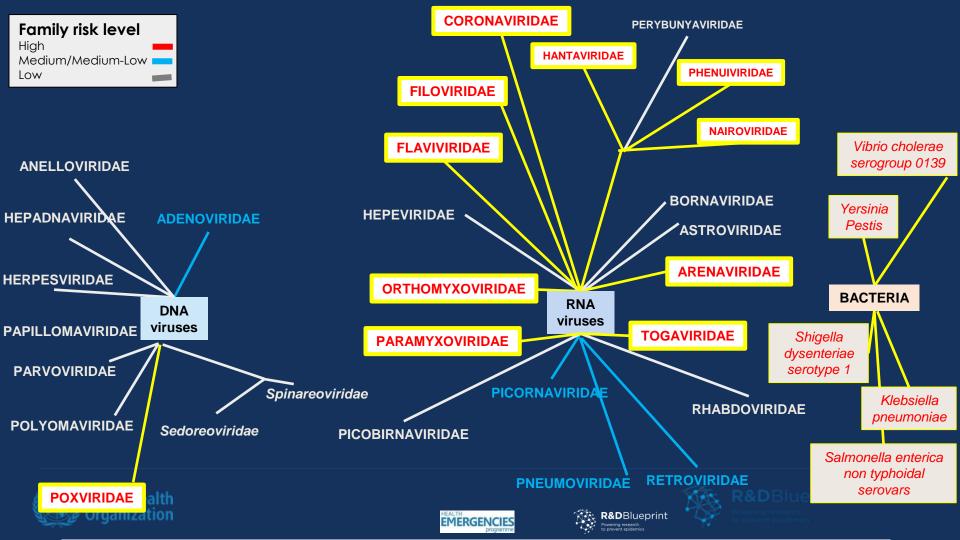
Recognised pathogens anticipated to pose a significant public health threat

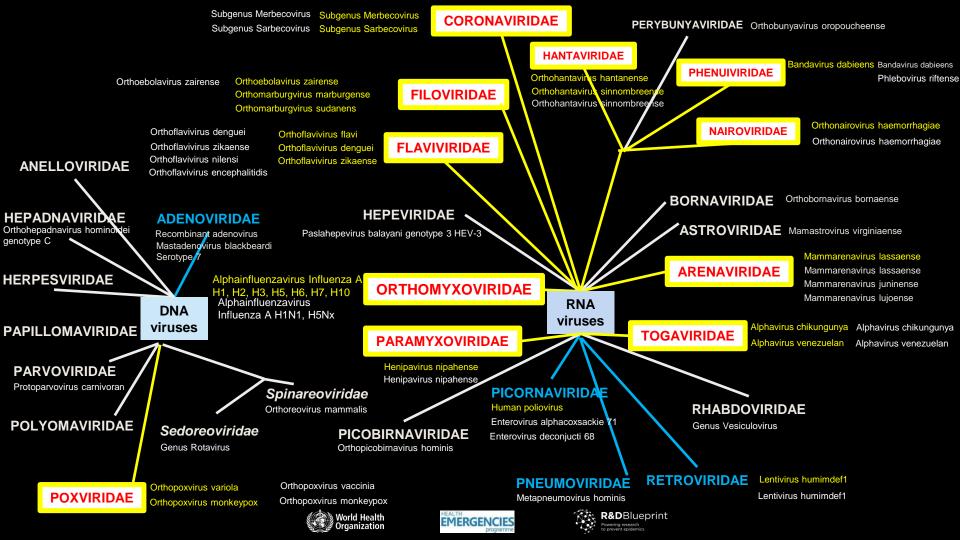
R&D for the inevitable PATHOGEN X

There is evidence to suggest that this pathogen is <u>not</u> currently a PHEIC threat. However, given significant but plausible changes in biology and current patterns of transmission and/or virulence it could become a Pathogen X threat in the future.

R research across ALL FAMILIES

regardless of perceived PHEIC/pandemic potential





A scientific approach for pandemic research preparedness

Proactive pathogen discovery & surveillance

Basic research

Pathogen biology Pathogenesis Immunology

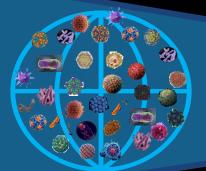
"Smart surveillance"



Research on viral structures, infection mechanisms, immune responses, and host interactions

Translational research

Antigen design Vaccinology Development of reagents & tools Assays & Animal models Advanced manufacturing



Family TPPS & MCMs development

MCMs with a broader spectrum addressing multiple or evolving pathogens:

- Priority Pathogens
- O Prototype pathogens

Research infrastructure

Establishing robust clinical trial capabilities and research deployment strategies

R&D During epidemics

The prompt initiation of clinical trials is essential for the prompt evaluation and distribution of new medical countermeasures during an outbreak.

Diverse vaccines and platforms Broad-spectrum therapeutics antivirals, small molecules Monoclonal antibodies; and point-of-care diagnostics.

MOHs and researchers in at-risk countries in the driving seat

Pathogen X causing Pandemic

All Families

Priority & Prototype Pathogens

Pathogen X

https://cdn.who.int/media/docs/default-source/consultation-rdb/who-report-scientific-approach-pandemic-preparedness.pdf?sfvrsn=1f209cb3_4







Collaborative OPEN Research Consortium (CORC) for each Priority Family



PLOS PATHOGENS

An introduction to the Marburg virus vaccine consortium, MARVAC

Robert W. Cross¹*, Ira M. Longini², Stephan Becker³, Karin Bok⁴, David Boucher⁵, Miles W. Carroll⁶, Janet V. Díaz⁷, William E. Dowling⁸, Ruxandra Draghia-Akli⁹, James T. Duworko¹⁰, John M. Dye¹¹, Michael A. Egan¹², Patricia Fast¹³, Amy Finan¹⁴, Courtney Finch¹⁴, Thomas R. Fleming¹⁵, Joan Fusco¹⁶, Thomas W. Geisbert¹, Anthony Griffiths¹⁷, Stephan Günther¹⁸, Lisa E. Hensley¹⁹, Anna Honko¹⁷, Ruth Hunegnaw²⁰, Jocelyn Jakubik¹⁴, Julie Ledgerwood⁴, Kerstin Luhn²¹, Demetrius Matassov¹², Jeffrey Meshulam¹², Emily V, Nelson¹⁸, Christopher L, Parks¹³, Roxana Rustomiee14, David Safronetz22, Lauren M. Schwartz7, Dean Smith23 Paul Smock14, Ydrissa Sow24, Christina F, Spiropoulou25, Nancy J, Sullivan4, Kelly L. Warfield²⁶, Daniel Wolfe²³, Courtney Woolsey¹, Roland Zahn²¹, Ana María Henao-Restrepo7, César Muñoz-Fontela18, Andrea Marzio27 *



OPEN ACCESS

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MARVAC

Initially for Marburg vaccines, later extended to the **FILOVIRIDAE** Family and to all MCMs



WHO R&D Blueprint

Filoviruses research meeting

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30 March 2022, virtual consultation Geneva Switzerland





United in solidarity against filovirus threats





WHO R&D Blueprint

A WHO-Strategic Research Agenda for

Research and Monitoring (WHO-AFIRM) WHO-AFIRM Strategy Roadmap 2021-203

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R&DBlueprint



SOLIDARITY PARTNERS

Platform Adaptive Randomised Trial for NEw and Repurposed Filovirus treatmentS

CORE Trial Protocol

Version 4.0 August 24, 2023

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WHO R&D Blueprint - Ad-hoc...

Note for the record: Consultation on.

Diagnostic TPP

WHO R&D Blueprint - Ad-hoc Expert...

Target Product Profile for Zaire..

World Health

SOLIDARITY VACCINE TRIALS

CORE Protocol

A phase 1/2/3 study to evaluate the safety, tolerability, immunogenicity, and efficacy of vaccine candidates against (Filoviruses) disease in healthy individuals at risk of (Filoviruses) disease.

July 2, 2023







A concerted parallel effort to advance R&D in ALL Priority Families Collaborative OPEN Research Consortia (CORC)

Family	Future CORCs
	Proposed WHO Collaborating Centers
Arenaviridae	Science and Research, UK Health Security Agency, UK
	and partner research institutions
Bacteria	The Aga Khan University, Pakistan and LSHTM
Coronaviridae	Programme in Emerging Infectious Disease, Duke-NUS Medical
	School, Singapore
Filoviridae	ANRS Emerging Infectious Diseases Agency, France and and
	partner research institutions
Flaviviridae	Fundação Oswaldo Cruz FIOCRUZ, Brazil
Hantaviridae	Science and Research, UK Health Security Agency, UK and partner research institutions
Nairoviridae	
Phenuiviridae	
Orthomyxoviridae	
Paramyxoviridae	Indian Council of Medica Research, India
Poxviridae	Institute Nationale pour la Recherche Biomedicale, DRC
	Wits Reproductive Health and HIV Institute, South Africa
Scientific support and WHO CC: National Institute of Alleray and Infectious	

Scientific support and WHO CC: National Institute of Allergy and Infectious Diseases, USA

Strategy implementation support: Al institutions leading the CORCs, CEPI, International Development Research Centre, Canada (Filoviridae) and EU- HERA

(Filoviridae)

Access to candidate MCMs support during outbreaks: US BARDA and the MCMs developers

Science and knowledge: Thousands of generous experts and researchers!!!

The CORCs will use an OPEN decentralized structure that promotes equitable participation from scientists, researchers and developers globally, particularly those where pathogens are known to circulate.







In summary

By expanding research efforts for all viral and bacterial Families' using the CORCs'...

...research advances in a decentralized & collaborative way.

By developing Global R&D Roadmaps for each Family using an open and transparent approach...

... knowledge gaps are addressed in a way that contributes to equity in access to knowledge and innovations

By continuing to collaborate in evaluation of MCMs integrated in outbreak response, led by Ministries of Health and national research teams,....

... equity in access to MCMs, and trust from communities are strengthened.

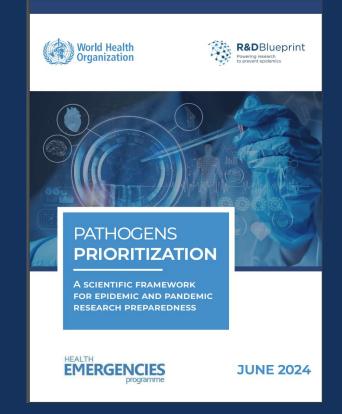












https://www.who.int/news/item/01-08-2024-cepi-and-who-urge-broader-research-strategy-for-countries-to-prepare-for-the-next-pandemic/

