Anopheles stephensi Landscaping Review

MESA

RBM Partnership to End Malaria - Vector Control Working Group
18th Annual Meeting

MESA

ISGlobal
Barcelona Institute for Global Health

Sharing knowledge and catalyzing research towards a malaria-free world

M E S A

MESA gathers and shares knowledge to catalyze research and inform decisions responding to the needs of malaria-endemic countries.

Mapping the landscape of active malaria projects with the MESA Track tool

Creating effective avenues for stakeholders to use emerging data for policies and strategies

Supporting evidence generation to bridge the gap between malaria research and impact

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Hosted by the
Barcelona Institute for Global Health (ISGLobal)

and supported by a grant from the
Bill & Melinda Gates Foundation

MESA TRACK

The Malaria Projects Database

MESA Track is a living database of global malaria projects with updated information on institutions, project sites, and funding.

All Projects (as of 31 January 2023)

TOTAL PROJECTS	TOTAL FUNDING	PROJECT SITES	PRINCIPAL INSTITUTIONS
2178	$4.80B	144	587
335 active	$1.49B active	105 active	200 active

Relevant
Accessible
Visible
Shareable
"Referenceable"

Relevant
Accesible?
Visible?
Shareable?
"Referenceable"?

How to use MESA Track?

Researchers & Institutions
- Highlight your work
- Illustrate your research strategy

NMCPs
- Track malaria research in your country
- Identify innovative strategies being tested

Policy-makers
Request for review evidence to revise policies

Funders
Identify issues to solve

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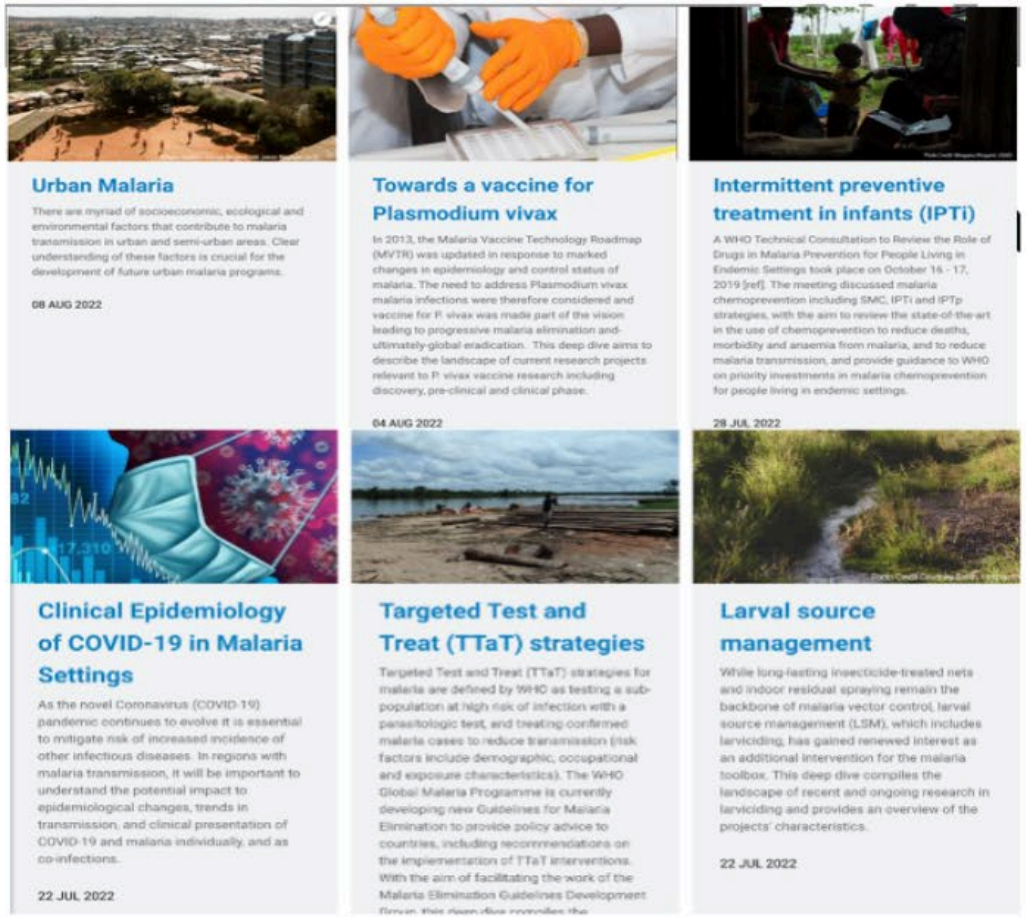
MESA TRACK

Deep Dives

In-depth profiling of critical topics

Useful for planning for and informing policy-making processes

Tool to analyze the research landscape and identify evidence gaps



Urban Malaria

There are myriad of socioeconomic, ecological and environmental factors that contribute to malaria transmission in urban and semi-urban areas. Clear understanding of these factors is crucial for the development of future urban malaria programs.

08 AUG 2022

Towards a vaccine for Plasmodium vivax

In 2013, the Malaria Vaccine Technology Roadmap (MVTR) was updated in response to marked changes in epidemiology and control status of malaria. The need to address Plasmodium vivax malaria infections were therefore considered and vaccine for P. vivax was made part of the vision leading to progressive malaria elimination and ultimately global eradication. This deep dive aims to describe the landscape of current research projects relevant to P. vivax vaccine research including discovery, pre-clinical and clinical phase.

04 AUG 2022

Intermittent preventive treatment in infants (IPTi)

A WHO Technical Consultation to Review the Role of Drugs in Malaria Prevention for People Living in Endemic Settings took place on October 16 - 17, 2019 [ref]. The meeting discussed malaria chemoprevention including SMC, IPTi and IPTp strategies, with the aim to review the state-of-the-art in the use of chemoprevention to reduce deaths, morbidity and anaemia from malaria, and to reduce malaria transmission, and provide guidance to WHO on priority investments in malaria chemoprevention for people living in endemic settings.

28 JUL 2022

Clinical Epidemiology of COVID-19 in Malaria Settings

As the novel Coronavirus (COVID-19) pandemic continues to evolve it is essential to mitigate risk of increased incidence of other infectious diseases. In regions with malaria transmission, it will be important to understand the potential impact to epidemiological changes, trends in transmission, and clinical presentation of COVID-19 and malaria individually, and as co-infections.

22 JUL 2022

Targeted Test and Treat (TTaT) strategies

Targeted Test and Treat (TTaT) strategies for malaria are defined by WHO as testing a sub-population at high risk of infection with a parasitologic test, and treating confirmed malaria cases to reduce transmission (risk factors include demographic, occupational and exposure characteristics). The WHO Global Malaria Programme is currently developing new Guidelines for Malaria Elimination to provide policy advice to countries, including recommendations on the implementation of TTaT interventions. With the aim of facilitating the work of the Malaria Elimination Guidelines Development Group, this deep-dive compiles the

Larval source management

While long-lasting insecticide-treated nets and indoor residual spraying remain the backbone of malaria vector control, larval source management (LSM), which includes larviciding, has gained renewed interest as an additional intervention for the malaria toolbox. This deep dive compiles the landscape of recent and ongoing research in larviciding and provides an overview of the projects' characteristics.

22 JUL 2022

Anopheles stephensi

Anopheles stephensi, an invasive and efficient urban vector, was historically considered an Asian malaria vector. However in 2012, it was detected for the first time in the city of Djibouti in the Horn of Africa. In 2019, WHO released a vector report warning of the invasion and spread of Anopheles stephensi mosquitoes to parts of Eastern Africa and Sri Lanka, and outlined steps to take in-country to combat this. This urban vector has now been detected in West Africa and Yemen. In September, 2022, a new WHO Initiative to stop the spread of An. stephensi in Africa was published. There is still much to be understood about the factors propagating its expansion, composition, dynamics, distribution and behaviour in its new environments. A clear understanding of these factors is vital to elucidating which type of interventions to develop and where such interventions should be targeted.

13 DEC 2022

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Anopheles stephensi Landscaping review (Deep Dive)

Objectives

1.Describe the geographic scale and scope of ongoing *An. stephensi* research and other projects.

2. Overview of the distribution of active *An. stephensi* surveillance or monitoring programmes.

3. Describe the funding sources for projects.

4. Document the list of questions under evaluation.

5. Identify or draw on any overlaps between the urban malaria Deep Dive and the *An. stephensi* Deep Dive.

TOTAL PROJECTS	TOTAL FUNDING	PROJECT SITES
60	$66.1M	13
12 active	$9.57M active	6 active

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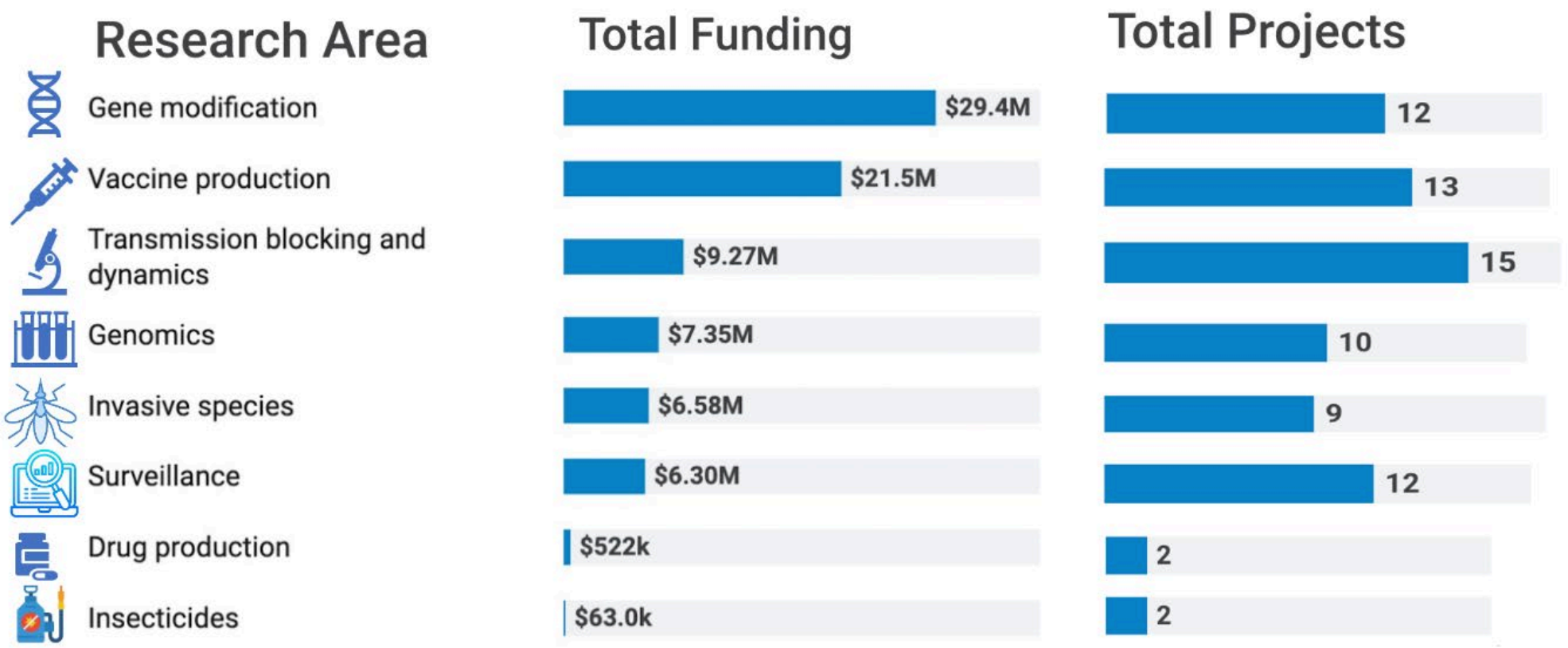
Anopheles stephensi Landscaping review (Deep Dive)



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Anopheles stephensi Landscaping review (Deep Dive)

24 Funding sources

- 15 Government institutions
- 8 Private institutions
- 1 Self-funded

Top 3 Funding Sources

Funding per Project site

USA – $53.4
Sudan – $6.5
Ethiopia – $6.4M
Burkina Faso – $2.7
Japan – $1.54M
Mauritius – $916K
India – $903K
Italy – 660K
Indonesia – 161K
China – 32K

* Australia, Sri Lanka and Yemen - Amount not captured

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Anopheles stephensi Landscaping review (Deep Dive)

Lead Institutions

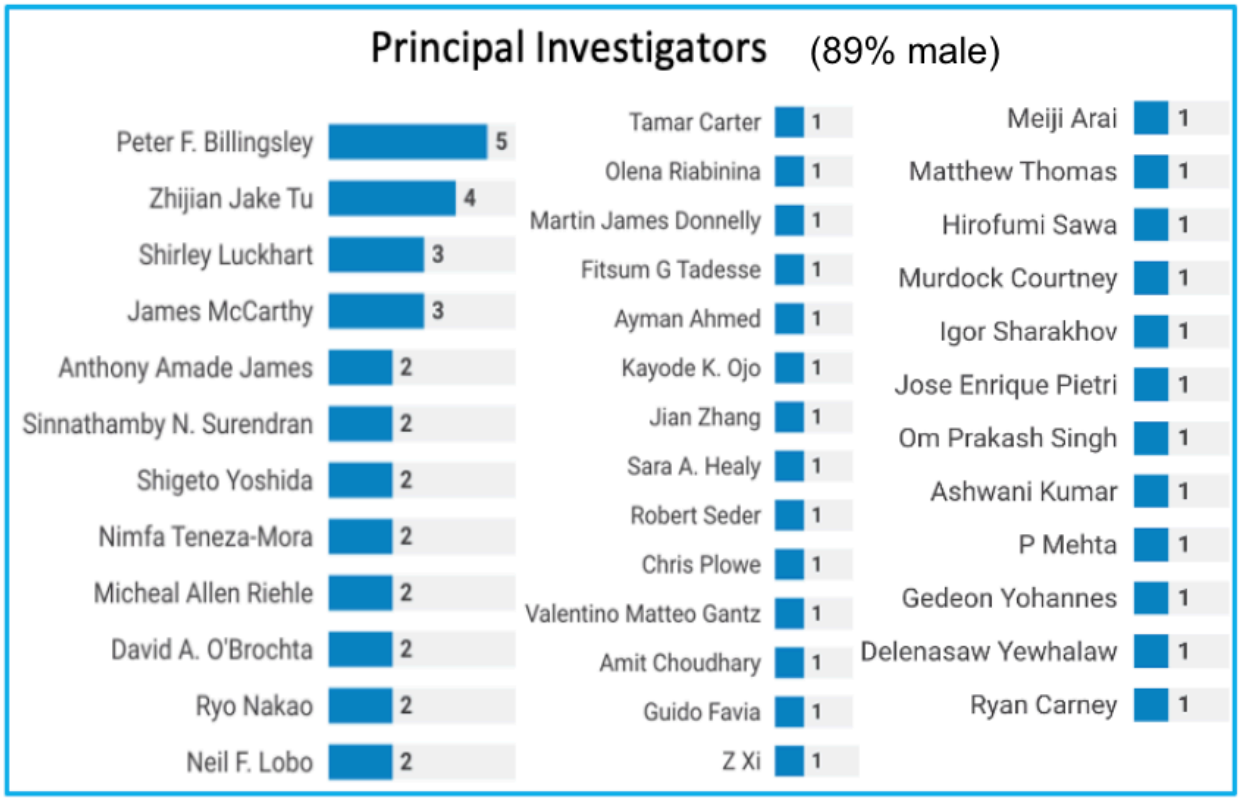
Research / Academic

- Liverpool School of Tropical Medicine, UK
- QIMR Berghofer Medical Research, Australia
- University of Jaffna, Sri Lanka
- Armauer Hansen Research Institute, Ethiopia
- University of Notre Dame, USA
- National Institute of Malaria Research, India
- Etc…

National

- Ethiopia NMEP
- Yemen NMCP

Others



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Anopheles stephensi Landscaping review (Deep Dive)

Main highlights

- 60 total projects (12 of them active)
- $66.1 M total funding with $9.57M active.
- 74% of total funding contributed by the NIH.
- Ethiopian NMEP and Yemen NMCP only national programmes captured.
- 89% of the project leads are men and perhaps suggests an opportunity to identify strategies for accelerating involvement of women in sustained support for vector control interventions.

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It is necessary to track ongoing projects to improve exchange of information, know when new results will be obtained, boost partnership, aid research prioritisation, and work collectively across sectors in an integrated manner.

Anopheles stephensi Landscaping review (Deep Dive)

Send us your *Anopheles stephensi* research and activities via mesa@isglobal.org or use the 'Submit a Project form' on our website **www.mesamalaria.org**

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MESA FORUM | VIRTUAL

RESPONDING TO THE THREAT OF ANOPHELES STEPHENSI INVASION IN AFRICA

Photo: Lauren Holden

21 February, 2023

2-3:30 PM CET

Simultaneous translations available in French & Arabic

#MESAForum

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Link can be found on the **MESA website**, Opportunities section.

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