

STM US ANNUAL
CONFERENCE 2019

ASHLEY FARLEY,
ASSOCIATE OFFICER
OF KNOWLEDGE &
RESEARCH SERVICES

BILL & MELINDA
GATES FOUNDATION

“FORCING THE FLIP?”

MAKING KNOWLEDGE A PUBLIC GOOD

Why Open Access is important to the Foundation

Barrier-free access to foundation-funded research advances innovation and helps create a world where everyone has the opportunity to lead a healthy and productive life.



■ **SHARING
INFORMATION
ACCELERATES
OUR IMPACT**

What Open Access means to the Foundation



Open Access terms

CC-BY license

Immediately available – no embargo

Underlying data is open

- As a Plan S adopting funder our policy will adopt these principles in the next year

Challenges with the Existing Publishing System

- Much research is not accessible — behind paywalls
- Long delays in sharing new findings
- Biases and conflicts in anonymous editorial decisions
- Lack of data supporting the findings → hard to verify & reuse
- Much good research never published → skews our understanding
- Significant research waste

Gates Open Research aims to: *increase research quality, boost collaboration, speed up the research process, make the assessment of research more transparent, and promote public access to scientific results*

Immediate & Transparent Publishing

Gates Open Research is a platform for rapid author-led publication and open peer review of research funded by the Bill & Melinda Gates Foundation

SUBMIT YOUR RESEARCH

OR

BROWSE ARTICLES

BILL & MELINDA
GATES foundation



Powered by
F1000

Recent Articles | [Browse all →](#)

28 JANUARY 2019

Prelacteal feeding practice and maintenance of exclusive breast feedin...

23 JANUARY 2019

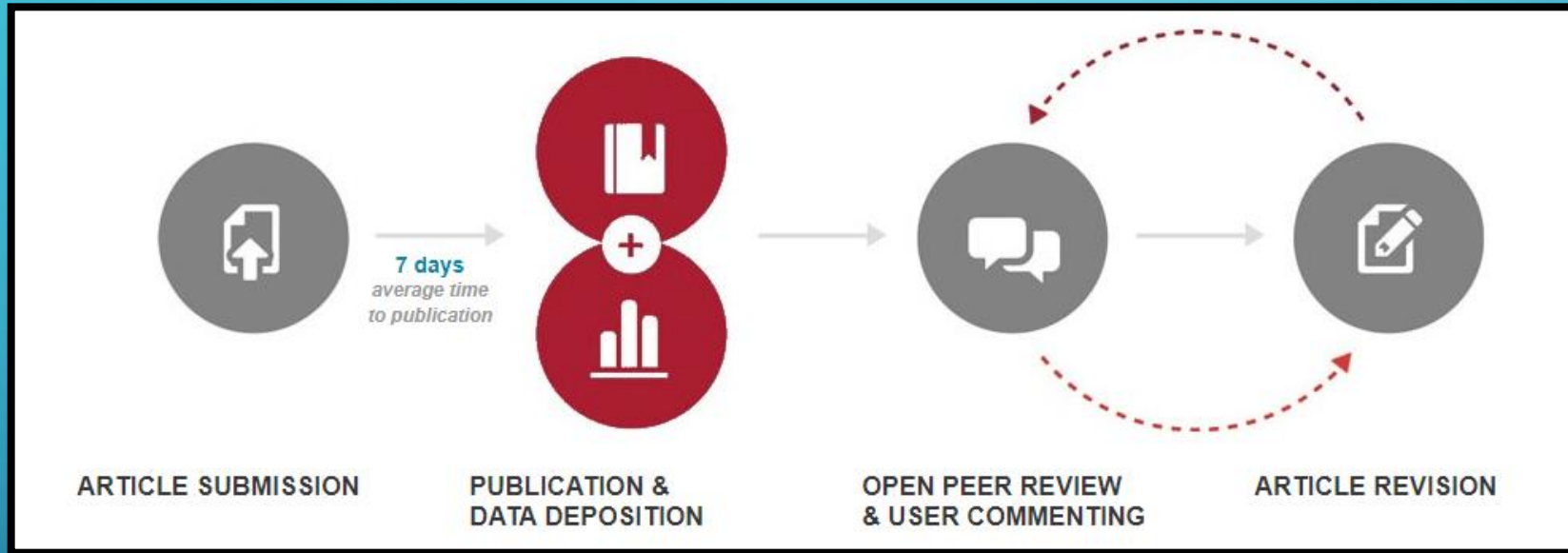
Improving energy efficiency of electrochemical blackwater disinfectio...

23 JANUARY 2019

Automated verbal autopsy classification: using one-against-all ensemble method...

HOW DOES IT WORK?

Post-publication peer review:



- **Peer review *after* publication** (no 'Editor', in-house pre-pub checks)
- Fully transparent peer review (referee names, report and rating)
- Access to source data
- **Versioning** (also in PubMed) for revisions, corrections, updates

PUBLICATION WITHOUT DELAY

Version and peer review status

Usage data

Gates Open Research [SUBMIT YOUR RESEARCH](#)

[BROWSE](#) [HOW TO PUBLISH](#) [ABOUT](#) [MY ACCOUNT](#) [SIGN IN](#)

[Check for updates](#)

DATA NOTE

The Network for Analysing Longitudinal Population-based HIV/AIDS data on Africa (ALPHA): Data on mortality, by HIV status and stage on the HIV care continuum, among the general population in seven longitudinal studies between 1989 and 2014 [version 1; referees: awaiting peer review]

[✉](#) Emma Slaymaker [ip](#)¹, Estelle McLean^{2,3}, Alison Wringe¹, Clara Calvert¹, Milly Marston¹, Georges Reniers^{1,4}, Chodziwadziwa Whiteson Kabudula⁵, Amelia Crampin^{2,3}, Alison Price^{2,3}, Denna Michael⁶, Mark Urassa⁶, Daniel Kwaro⁷, Maquins Sewe⁷, Jeffrey W. Eaton [ip](#)⁸, Rebecca Rhead⁸, Jessica Nakiyingi-Miir⁹, Tom Lutalo¹⁰, Doreen Nabukalu¹⁰, Kobus Herbst [ip](#)¹¹, Victoria Hosegood [ip](#)^{11,12}, Basia Zaba [ip](#)¹

[Author details](#)
[Grant information](#)

Abstract

Timely progression of people living with HIV (PLHIV) from the point of infection through the pathway from diagnosis to treatment is important in ensuring effective care and treatment of HIV and preventing HIV-related deaths and onwards transmission of infection. Reliable, population-based estimates of new infections are difficult to obtain for the generalised epidemics in sub-Saharan Africa. Mortality data indicate disease burden and, if disaggregated along the continuum from diagnosis to treatment, can also reflect the coverage and quality of different HIV services. Neither routine statistics nor observational clinical studies can estimate mortality prior to linkage to care nor following disengagement from care. For this, population-based data are required. The Network for Analysing Longitudinal Population-based HIV/AIDS data on Africa brings together studies in Kenya, Malawi, South Africa, Tanzania, Uganda, and Zimbabwe. Eight studies have the necessary data to estimate mortality by HIV status, and seven can estimate mortality at different stages of the HIV care continuum. This data note describes a harmonised dataset containing anonymised individual-level information on survival by HIV status for adults aged 15 and above. Among PLHIV, the dataset provides information on survival during different periods: prior to diagnosis of infection; following diagnosis but before linkage to care; in pre-antiretroviral treatment (ART) care; in the first six months after ART initiation; among people continuously on ART for 6+ months; and among people who have ever interrupted ART.

METRICS

73
VIEWS

25
DOWNLOADS

[Get PDF](#)
[Get XML](#)
[Cite](#)
[Export](#)
[Track](#)
[Email](#)
[Share](#)

Open Peer Review

Referee Status: *AWAITING PEER REVIEW*

Comments on this article

All comments (0)
[Add a Comment](#)

Subscribe to Table of Content Alert

[SUBSCRIBE](#)

Article immediately citable

INNOVATION & SPEED EXAMPLE

Gates Open Research

[SUBMIT YOUR RESEARCH](#)

[BROWSE](#) [GATEWAYS](#) [HOW TO PUBLISH](#) [ABOUT](#) [MY ACCOUNT](#) [SIGN IN](#)

Check for updates

RESEARCH ARTICLE

REVISED Scaled deployment of *Wolbachia* to protect the community from dengue and other *Aedes* transmitted arboviruses [version 2; peer review: 2 approved]

Previously titled: Scaled deployment of *Wolbachia* to protect the community from *Aedes* transmitted arboviruses

✉ Scott L. O'Neill ¹, Peter A. Ryan¹, Andrew P. Turley¹, Geoff Wilson¹, Kate Retzki¹, Inaki Iturbe-Ormaetxe¹, Yi Dong¹, Nichola Kenny¹, Christopher J. Paton², Scott A. Ritchie², Jack Brown-Kenyon¹, Darren Stanford¹, Natalie Wittmeier¹, Katherine L. Anders ¹, Cameron P. Simmons¹

[Author details](#)

Abstract

Background: A number of new technologies are under development for the control of mosquito transmitted viruses, such as dengue, chikungunya and Zika that all require the release of modified mosquitoes into the environment. None of these technologies has been able to demonstrate evidence that they can be implemented at a scale beyond small pilots. Here we report the first successful citywide scaled deployment of *Wolbachia* in the northern Australian city of Townsville.

Methods: The wMel strain of *Wolbachia* was backcrossed into a local *Aedes aegypti* genotype and mass reared mosquitoes were deployed as eggs using mosquito release containers (MRCs). In initial stages these releases were undertaken by program staff but in later stages this was replaced by direct community release including the development of a school program that saw children undertake releases. Mosquito monitoring was undertaken with Biogenics Sentinel (BGS) traps and individual mosquitoes were screened for the presence of *Wolbachia* with a Taqman qPCR or LAMP diagnostic assay. Dengue case notifications from Queensland Health Communicable Disease Branch were used to track dengue cases in the city before and after release.

Results: *Wolbachia* was successfully established into local *Ae. aegypti* mosquitoes across 66 km² in four stages over 28 months with full community support. A feature of the program was the development of a scaled approach to community engagement. *Wolbachia* frequencies have remained stable since deployment and to date no local dengue transmission has been confirmed in any area of Townsville after *Wolbachia* has established, despite local transmission events every year for

METRICS

5151

VIEWS

565

DOWNLOADS

Get PDF

Get XML

Cite

Export

Track

Email

Share

Open Peer Review

Reviewer Status  

Reviewer Reports

	Invited Reviewers	
	1	2
Version 2 01 Nov 18		 read
Version 1 01 Aug 18	 read	 read

- Gregor J. Devine**, QIMR Berghofer Medical Research Institute, Australia
- Horacio M. Frydman** , Boston University, USA
- Heverton Leandro Carneiro Dutra** , Boston University, USA

Comments on this article

All Comments (0)

Add a comment



271

?

About this Attention Score

In the top 5% of all research outputs scored by Altmetric

- Mentioned by
- 18 news outlets
 - 7 blogs
 - 112 tweeters
 - 4 Facebook pages
 - 1 Google+ user

Citations

- 4 Dimensions

Readers on

- 35 Mendeley

What is this page?

The Conversation, 20 Aug 2018

Mosquitoes are some of the most deadly creatures on the planet. They carry viruses, bacteria and parasites, which they transmit...



Australia Research Fighting Dengue Offers Promise Elsewhere, Expert Says

Yahoo!, 06 Aug 2018

Work by Australian researchers to eliminate the viral disease dengue fever from an entire city -- a first for scientists -- has...



Australia Research Fighting Dengue Offers Promise Elsewhere, Expert Says

USNews.com, 06 Aug 2018

Work by Australian researchers to eliminate the viral disease dengue fever from an entire city -- a first for scientists -- has...



An Australian city beats dengue fever using special mosquitoes

News.am, 04 Aug 2018

[embedded content] Globally, dengue fever is on the rise. Just last year, cases of the mosquito-borne disease reached an all-time...



To Fight Mosquito-Borne Dengue, Scientists Are Re-Modified Insects

Newsweek, 03 Aug 2018

Australian researchers from Monash University in Melbourne embrace a counterintuitive approach when they set out to...



Mosquito Wars - A Big Win In Australia Brings Hopeful News For Southern U.S.

Forbes, 03 Aug 2018

07:00am Judy Stone Contributor i Healthcare Share to facebook Share to twitter Share to linkedin Wolbachia in cell...



An Australian City Beats Dengue Fever Using Special Mosquitoes | Smart News

Smithsonian Magazine, 02 Aug 2018

SmartNews Keeping you current There has not been a case of the disease in Townsville for four years after the release of...



This scientist convinced an Australian city to become a haven for mosquitoes | Science

Science/AAAS, 01 Aug 2018

In the northeastern Australian city of Townsville, about 7000 families recently became nannies—for mosquitoes.



Dengue fever outbreak stopped by special mosquitoes

BBC News, 01 Aug 2018

Image copyright Peter Illiciev/Fiocruz Australian researchers say for the first time an entire city has been protected from...



Dengue fever outbreak stopped by special mosquitoes

BBC News, 01 Aug 2018

Image copyright Peter Illiciev/Fiocruz Australian researchers say for the first time an entire city has been protected from...

Scaled deployment of Wolbachia to protect the community from dengue and other Aedes transmitted...

☐ [Search within citing articles](#)

Wolbachia and the near cessation of dengue outbreaks in Northern Australia despite continued dengue importations via travellers

[SA Ritchie](#) - [Journal of travel medicine](#), 2018 - [academic.oup.com](#)

North Queensland Australia, home of the Great Barrier Reef and the acclaimed Daintree rainforest, has also been the home of annual dengue outbreaks since 1995. 1 These outbreaks were the result of importation of dengue via travellers. Most of these outbreaks were small, usually ...

☆ [🔗](#) Cited by 2 All 4 versions

Cross-Generational Effects of Heat Stress on Fitness and Wolbachia Density in *Aedes aegypti* Mosquitoes

[IJH Foo](#), [AA Hoffmann](#), [PA Ross](#) - [Tropical medicine and infectious ...](#), 2019 - [mdpi.com](#)

Aedes aegypti mosquitoes infected with Wolbachia symbionts are now being released into the field to control the spread of pathogenic human arboviruses. Wolbachia can spread throughout vector populations by inducing cytoplasmic incompatibility and can reduce ...

☆ [🔗](#) All 3 versions [🔗](#)

[\[PDF\] mdpi.com](#)

Predicting The Spatial Dynamics Of Wolbachia Infections In *Aedes aegypti* Arbovirus Vector Populations In Heterogeneous Landscapes

[PA Hancock](#), [SA Ritchie](#), [CJM Koenraadt](#), [TW Scott...](#) - [bioRxiv](#), 2018 - [biorxiv.org](#)

A promising strategy for reducing the transmission of dengue and other arboviral human diseases by *Aedes aegypti* mosquito vector populations involves field introductions of the endosymbiotic bacteria Wolbachia. Wolbachia infections inhibit viral transmission by the ...

☆ [🔗](#) All 3 versions [🔗](#)

[\[PDF\] biorxiv.org](#)

Global Vector Control Guidelines—The Need For Co-Creation

[GJ Devine](#), [HJ Overgaard](#), [RE Paul](#) - [Trends in parasitology](#), 2019 - [Elsevier](#)

In response to the global expansion and re-emergence of vector-borne diseases, WHO launched the Global Vector Control Response program in 2017. The aim is to strengthen vector control through increased capacity, innovation, improved surveillance, better ...

☆ [🔗](#) All 4 versions

Is *Anopheles gambiae* a natural host of Wolbachia?

[E Chrostek](#), [M Gerth](#) - [bioRxiv](#), 2018 - [biorxiv.org](#)

Wolbachia (Alphaproteobacteria, Rickettsiales) is an intraovarially-transmitted symbiont of insects able to exert striking phenotypes, including reproductive manipulations and pathogen blocking. These phenotypes make Wolbachia a promising tool to combat ...

☆ [🔗](#) All 4 versions [🔗](#)

[\[PDF\] biorxiv.org](#)

Scaled deployment of Wolbachia to protect the community from dengue and other Aedes transmitted...

☐ [Search within citing articles](#)

Wolbachia and the near cessation of dengue outbreaks in Northern Australia despite continued dengue importations via travellers

[SA Ritchie](#) - [Journal of travel medicine](#), 2018 - [academic.oup.com](#)

North Queensland Australia, home of the Great Barrier Reef and the acclaimed Daintree rainforest, has also been the home of annual dengue outbreaks since 1995. 1 These outbreaks were the result of importation of dengue via travellers. Most of these outbreaks were small, usually ...

☆ [🔗](#) Cited by 2 [All 4 versions](#)

Cross-Generational Effects of Heat Stress on Fitness and Wolbachia Density in *Aedes aegypti* Mosquitoes

[IJH Foo](#), [AA Hoffmann](#), [PA Ross](#) - [Tropical medicine and infectious ...](#), 2019 - [mdpi.com](#)

Aedes aegypti mosquitoes infected with Wolbachia symbionts are now being released into the field to control the spread of pathogenic human arboviruses. Wolbachia can spread throughout vector populations by inducing cytoplasmic incompatibility and can reduce ...

☆ [🔗](#) [All 3 versions](#) [🔗](#)

[\[PDF\] mdpi.com](#)

Predicting The Spatial Dynamics Of Wolbachia Infections In *Aedes aegypti* Arbovirus Vector Populations In Heterogeneous Landscapes

[PA Hancock](#), [SA Ritchie](#), [CJM Koenraadt](#), [TW Scott...](#) - [bioRxiv](#), 2018 - [biorxiv.org](#)

A promising strategy for reducing the transmission of dengue and other arboviral human diseases by *Aedes aegypti* mosquito vector populations involves field introductions of the endosymbiotic bacteria Wolbachia. Wolbachia infections inhibit viral transmission by the ...

☆ [🔗](#) [All 3 versions](#) [🔗](#)

[\[PDF\] biorxiv.org](#)

Global Vector Control Guidelines—The Need For Co-Creation

[GJ Devine](#), [HJ Overgaard](#), [RE Paul](#) - [Trends in parasitology](#), 2019 - [Elsevier](#)

In response to the global expansion and re-emergence of vector-borne diseases, WHO launched the Global Vector Control Response program in 2017. The aim is to strengthen vector control through increased capacity, innovation, improved surveillance, better ...

☆ [🔗](#) [All 4 versions](#)

Is *Anopheles gambiae* a natural host of Wolbachia?

[E Chrostek](#), [M Gerth](#) - [bioRxiv](#), 2018 - [biorxiv.org](#)

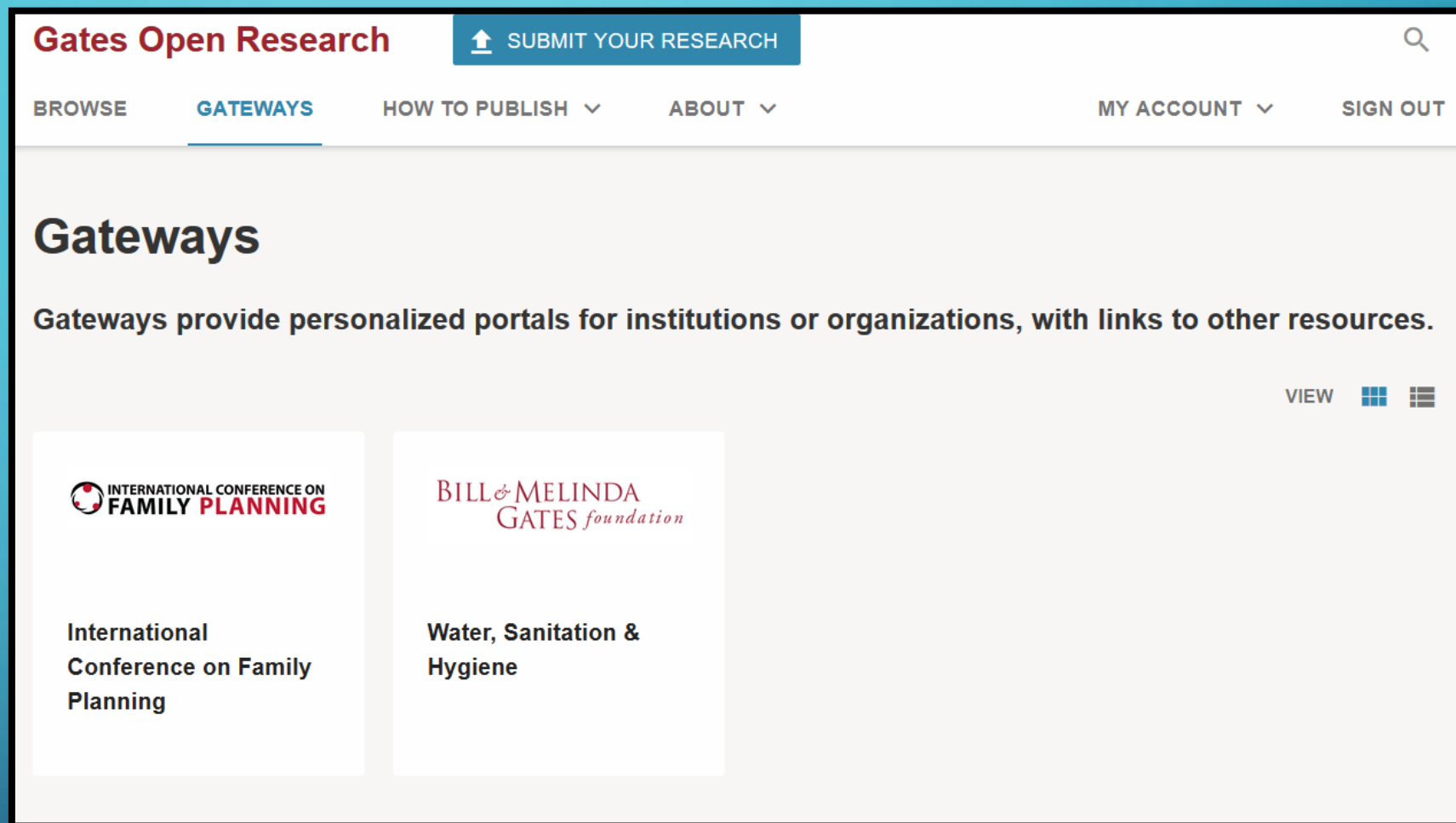
Wolbachia (Alphaproteobacteria, Rickettsiales) is an intraovarially-transmitted symbiont of insects able to exert striking phenotypes, including reproductive manipulations and pathogen blocking. These phenotypes make Wolbachia a promising tool to combat ...

☆ [🔗](#) [All 4 versions](#) [🔗](#)

[\[PDF\] biorxiv.org](#)

WELCOME TO GATEWAYS

- What they are
- Customizable
- Currently soft-launched



WELCOME TO GATEWAYS

- Provides detailed information about the research
- Links to recent articles
- Potential to link to more


Gates Open Research / Gateways

MY ACCOUNT ▾SIGN OUT

BILL & MELINDA
GATES foundation

[↑ SUBMIT TO THIS GATEWAY](#)[BROWSE CONTENT](#)

Q



WATER, SANITATION & HYGIENE

This gateway promotes results and developments related to WSH investments, archived at the Bill & Melinda Gates Foundation

BMGF-WSH investment materials, approved for Open Access publication

The Water, Sanitation & Hygiene gateway provides a place for researchers funded through the Gates Foundation's WSH program to promote the impact of their work, and publish their results rapidly, in a transparent manner.

The WSH program aims to enable widespread use of safely managed, sustainable sanitation services, thereby contributing to positive health, economic, and gender equality outcomes for the world's poorest. The Gates Foundation's efforts in this program currently focus on four complementary areas:

- developing and commercializing transformative sanitation technologies;
- transforming how cities can provide sanitation as a reliable, inclusive service;
- policy and advocacy;
- and measurement, evidence, and dissemination, for scale.

A key objective of the gateway is to provide a comprehensive picture of the outputs of the WSH program, through the publication of grant reports, posters and slides, as well as formally and openly peer-reviewed articles.

[About this gateway →](#)

LATEST ARTICLES

Improving energy efficiency of electrochemical blackwater disinfection through sequential reduction of suspended solids and chemical oxygen demand

Brian T. Hawkins *et al*

Characterization of fecal sludge as biomass feedstock in the southern Indian state of Tamil Nadu

Viswa Barani *et al*

Microwave disinfection as a treatment for blackwater from dewatered sludge

Katelyn L Sellgren *et al*

WHAT DO DOCUMENTS LOOK LIKE?

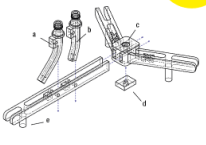
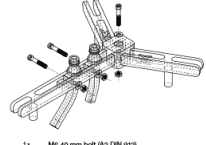
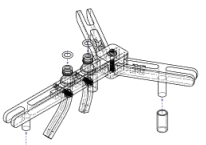
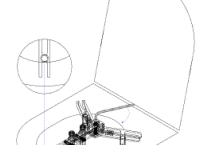
- Not peer-reviewed
- Usage Metrics
- Associated Metadata
- Assigned a DOI
- Connected to Gates grant/contract number

Gates Open Research [SUBMIT YOUR RESEARCH](#)


[BROWSE](#) [GATEWAYS](#) [HOW TO PUBLISH](#) [ABOUT](#) [MY ACCOUNT](#) [SIGN OUT](#)

DOCUMENT NOT PEER REVIEWED Metrics | 71 Views | 1 Downloads


Urinator
by: EOOS

1  **2**  **3**  **4** 

GRANT REPORT
Urinator
Lena Kriwanek¹, Michael Bryla¹, Fabian Stern¹, [Harald Gründl¹](#), [Lotte Kristoferitsch¹](#)
PUBLISHED 09 OCT 2018 (<https://doi.org/10.21955/gatesopenres.1114890.1>)

Author Affiliations
¹ Social Design, EOOS Design, Vienna, Austria
 Copyright © 2018 Kriwanek L. et al. This is an open access work distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract
The Urinator is a tool for the development of urine separation toilets. The current version of the Urinator is designed to test, compare, and ultimately improve sitting separation toilets by simulating male and female urine streams.

PART OF THE GATEWAY
 **Water, Sanitation & Hygiene**

DOWNLOAD
5.27 MB
[SHARE](#) [CITE](#)

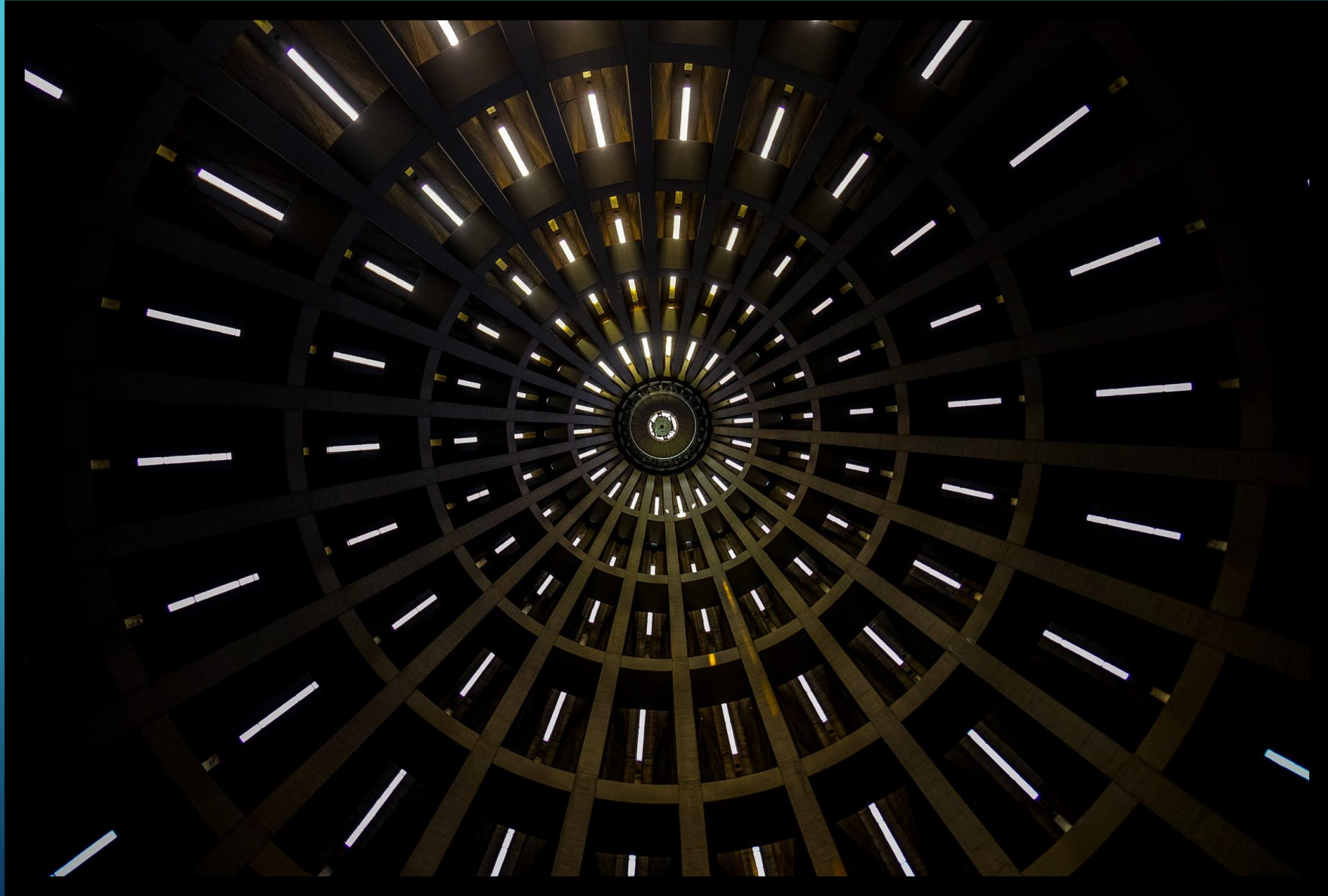
Trust



TomVMorris

Twitter: @ashleydfarley

The Future



A black and white photograph of a protest sign. The sign is made of a folded piece of paper and is held up by a person's hand, visible at the bottom left. The sign has two lines of bold, black, sans-serif text. The background is a blurred outdoor scene with trees and other people. The entire image is framed by a teal border with white circuit-like patterns.

**SORRY FOR
THE INCONVENIENCE**

**WE ARE TRYING
TO CHANGE THE WORLD**