

Ambitious Burnet Institute-led women's health research project wins MRFF Frontier funding in collaboration with Institute for Genome Sciences scientists

A bold and innovative collaborative research project into women's sexual and reproductive health has won a major competitive funding grant to fast track its development from concept to outcome.

The ambitious idea of creating a novel device with the potential to regulate the vaginal microbiota over a woman's lifetime, help prevent the transmission of sexually transmitted infections STIs and HIV, and also provide contraception, has attracted Medical Research Future Fund (MRFF) Frontier Health and Medical Research Program funding of AUD\$895,000.

The EVE-M (Enhancing the Vaginal Environment and Microbiome) project brings together a multidisciplinary team from Burnet Institute, Swinburne University of Technology, Melbourne Sexual Health Centre (The Alfred and Monash University), Deakin University, Family Planning NSW, Eudaemon Technologies and Dr. Ravel from the Institute for Genomes Sciences (IGS), University of Maryland School of Medicine, who is an expert in the role of the vaginal microbiome in health and diseases.

In summary:

- The EVE-M initiative is a bold, transformative approach to improving women's sexual and reproductive health
- The funding boost will fast track the creation of a novel device to regulate the vaginal microbiota over a woman's lifetime
- The innovative technology will help prevent STIs and HIV, and reduce unplanned pregnancies
- It's one of only 10 projects awarded the MRFF Frontier Stage One funding, and the only one of these projects focused on women's health
- Stage one funding opens the door to potential millions of dollars of support to advance EVE-M to stage 2

Burnet Institute's Head of Life Sciences, and Principal Investigator, Professor Gilda Tachedjian said: "This is a tremendous opportunity to advance our concept of improving women's sexual reproductive health through innovative technologies that target the vaginal microbiota. What this funding support does is take our high-impact ideas and gives us the resources to progress these as part of a multidisciplinary team."

"We will leverage our extensive understanding of the role of the vaginal microbiome in women's health and diseases, including sexually transmitted infection and pregnancy outcomes, in particular preterm birth, that we have developed at IGS to drive the development of new technologies to restore and maintain protective vaginal microbiomes," said Dr. Jacques Ravel, Associate Director Genomics and Professor of Microbiology and Immunology at IGS, University of Maryland School of Medicine.

One of these technologies is an intravaginal ring that could release a molecule to help enhance the mucosal environment and 'optimise' microbiota in the vaginal tract to prevent STIs and HIV, as well as adverse reproductive health outcomes. The ring will also contain a contraception to prevent unplanned pregnancies.

Contraception for women hasn't really improved in 50 years and women's health is often not prioritised. This device can improve the vaginal microbiota, help prevent STIs, help prevent HIV, as well as reduce unplanned pregnancies, it will have a dramatic impact on women's health, and also the global economy.

The global burden, the health and economic cost of STIs, bacterial vaginosis and unplanned pregnancies are estimated to cost over 70 billion dollars a year.

Burnet Institute Director and CEO, Professor Brendan Crabb AC congratulated Professor Tachedjian and her collaborators on securing the unique funding.

"It's an extraordinary outcome for the team who have a bold vision of transforming the antiquated current sexual and reproductive health toolkit, and it provides an opportunity for a paradigm shift in women's sexual and reproductive health," Professor Crabb said.

"This new source of funding is supporting cutting-edge research that has the potential to have a transformative impact on human health and immediate global impact. This underscores what Burnet's about, translating our discoveries into practical health outcomes."

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About the Institute for Genome Sciences

The Institute for Genome Sciences, founded in 2007, is an international research center within the University of Maryland School of Medicine. Comprised of an interdisciplinary, multidepartment team of investigators, the Institute uses the powerful tools of genomics and bioinformatics to understand genome function in health and disease, to study molecular and cellular networks in a variety of model systems, and to generate data and bioinformatics resources of value to the international scientific community.

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