

TECHNOLOGY OFFER

Development of a diagnostic Point-of-Care test for determining vaginal microbiome composition and risk of infection

This innovative test offers an accessible and efficient solution for evaluating vaginal microbiome health using a single swab. Results are presented through an intuitive colour-coded traffic light system, enabling quick and easy interpretation.

BACKGROUND

Vaginal infections are a common health issue, affecting approximately 70% of women worldwide at least once in their lifetime. Despite their prevalence, diagnosing these infections is often a lengthy process, with limited access to specialists causing further delays. These delays not only prolong discomfort but also increase the risk of chronic conditions and secondary health complications. Of particular significance is the role of untreated vaginal infections in premature births—the leading cause of neonatal mortality and morbidity. Current diagnostic pathways are insufficiently accessible, leaving a pressing need for a solution that is both effective and user-friendly.

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Sampling: A single swab will be sufficient for testing which can be performed at home or in a gynaecologist's office.

Analysis: The test will measure key microbial and biochemical indicators associated with vaginal health within a single, compact diagnostic cassette.

Categorisation of Results: An algorithm will interpret the data and categorise results according to a traffic light system:

- Green: Indicates a healthy vaginal microbiome.
- Yellow: Suggests an intermediate microbiome state, recommending medical consultation.
- Red: Identifies a vaginal infection requiring treatment.

Interpretation of Results: Results will be delivered through a software application designed to support informed decision-making.

Currently preliminary experiments for the development of a prototype are underway validating biochemical and microbial parameters and analysis methods.

BENEFITS

- Faster diagnosis allowing for earlier treatment and prevention of chronic conditions
- Avoidance of incorrect self-treatment
- Prevention of vaginal infection-related premature births improving neonatal and public health
- Empowered patients by enhancing autonomy and proactive health management

CALL FOR COLLABORATIONS

We are seeking industrial partners with expertise in diagnostics and point-of-care device development to advance prototype development. Collaborating with our multidisciplinary team—which includes clinicians and biotechnologists—will ensure that the technology is both scientifically robust and clinically effective. This partnership represents an opportunity to contribute to the advancement of women's health technology while making a meaningful impact on women's and neonatal health.

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