

TDB-DST SUPPORTS BABYCUE PVT. LTD., CUTTACK (ODISHA) FOR DEVELOPMENT OF RAPID DIAGNOSTIC PLATFORM FOR CHILDHOOD DIARRHEA

Posted On: 09 MAR 2026 2:32PM by PIB Delhi

The Technology Development Board (TDB), Department of Science & Technology (DST), Government of India, has extended financial support to M/s BabyCue Private Limited, Cuttack (Odisha) for its project titled “A Disposable Paper Analytical Platform for Rapid Differentiation of Childhood Diarrhea.” The project focuses on the commercialization of an indigenous rapid diagnostic kit designed to enable timely and accurate differentiation between bacterial and non-bacterial diarrhea in children.

The proposed product, DiaCue Diagnostic Kit, represents a significant indigenous innovation integrating biotechnology and material science to address the widespread public health challenge of childhood diarrhea in India. The kit is designed as a rapid, non-invasive, and cost-effective point-of-care diagnostic solution that can be deployed even in resource-constrained environments such as rural health centers and field settings.

The DiaCue platform is based on Lateral Flow Assay (LFA) technology that utilizes disease-specific fecal biomarkers for rapid detection. The system employs gold nanoparticle-based colorimetric detection, allowing results to be interpreted visually without the need for specialized laboratory instruments. The use of proprietary biomarkers and custom-designed reagents ensures high sensitivity and specificity, enabling reliable differentiation between bacterial and non-bacterial infections.

The testing process is simple and suitable for point-of-care applications. A fresh stool sample is collected using a sample loop or swab and mixed with an extraction buffer. After settling, the clear supernatant is applied onto the LFA strip, where it migrates and interacts with immobilized reagents to produce a visible color change. The presence or absence of colored lines on the strip indicates whether the infection is bacterial or non-bacterial, enabling rapid clinical decision-making within minutes.

Key advantages of the DiaCue diagnostic platform include rapid differentiation of bacterial and non-bacterial diarrhea, reduction in unnecessary antibiotic usage and antimicrobial resistance, ease of use in both clinical and field environments, and minimal dependence on sophisticated laboratory infrastructure.

The technology has been developed in collaboration with National Institute of Pharmaceutical Education and Research Hyderabad and clinically validated at ESIC Hospital Hyderabad. The proprietary biomarker detection methodology is protected under an international patent filing, ensuring intellectual property protection and enabling scalable commercialization.

Speaking on the occasion, Shri Rajesh Kumar Pathak, Secretary, TDB, stated, “Indigenous innovations in rapid diagnostics are essential for strengthening primary healthcare delivery and improving clinical decision-making. By supporting the commercialization of the DiaCue diagnostic platform, TDB aims to

promote affordable, accessible, and technology-driven healthcare solutions that address critical public health challenges such as childhood diarrhea.”

Promoters of BabyCue Private Limited expressed gratitude for the support and noted that the assistance from TDB will enable the company to accelerate product development, scale manufacturing capabilities, and deploy the diagnostic solution widely to benefit healthcare providers and patients.



NKR/FK/NM

(Release ID: 2236903) Visitor Counter : 279

Read this release in: Urdu , हिन्दी