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Tranalab: Targeting Macrophages to Develop Next-Generation Therapies

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Bengaluru-based Tranalab Private Limited is developing a drug-delivery platform designed to target macrophagesâ??immune cells that play a central role in several infectious diseases and other conditions. Its proprietary Macrophage Targeting Molecules (MTM) technology aims to improve drug delivery, enhance therapeutic efficacy and reduce off-target effects, with applications spanning rare diseases, antimicrobial resistance (AMR), dengue and cancer imaging.

Problem

Macrophages can harbour pathogens and are involved in diseases such as dengue, tuberculosis and other bacterial infections. However, conventional drugs may not reach these cells efficiently. Tranalab is addressing this drug-delivery gap through targeted molecules designed to transport therapeutic agents into macrophages.

Product

Its MTM platform uses small molecules, typically 1.5–4 kDa, that can be conjugated with therapeutic cargo. The company is developing an improved glucocerebrosidase biotherapeutic for Gaucher disease, antiviral conjugates for dengue, antibiotic conjugates against AMR pathogens and radiopharmaceutical applications for breast cancer imaging.

Proof

Tranalab's pipeline spans hit identification to preclinical development across its application areas. Its work on Gaucher disease has demonstrated improved enzyme uptake in in-vitro experiments, according to a BIRAC exhibitor directory. The company was also named a winner of C-CAMP AMR Quest 2023 and recognised in NASSCOM's Emerge 50 Awards 2024 in the Biotech and Nanotech category.

In July 2026, Tranalab was selected for Wellcome Leap's Focused Antibiotics programme, through which it plans to extend its macrophage-targeted delivery platform towards lower respiratory tract bacterial infections.

People

The company was co-founded by Dr Nitin S. Deshpande, Co-founder and CEO, and Dr Chandramowli Ganesh, Co-founder and CSO. Deshpande brings experience in process engineering, intellectual property and open innovation, while Ganesh specialises in peptide chemistry, protein chemistry and molecular biology. Prof. P. Balaram, former Director of IISc and Padma Bhushan awardee, serves as scientific advisor.

Purse

Tranalab has received support from national and international organisations, including BIRAC, C-CAMP, the Government of Karnataka, the National Biopharma Mission, LifeArc UK and Wellcome Leap. Its funding page records a LifeArc grant in June 2024 to advance its targeted drug-delivery platform for dengue. Specific total funding raised and valuation have not been publicly disclosed on the company's website.

Plan

The company is advancing its macrophage-targeting platform across rare diseases and infectious conditions, with a focus on developing more effective and accessible therapies. Its participation in Wellcome Leap's Focused Antibiotics programme is expected to support further development for lower respiratory tract bacterial infections.

Why it matters

By focusing on the delivery of drugs into macrophages, Tranalab is pursuing a platform-based approach to therapeutic development. If successfully translated into clinical and commercial applications, the technology could help improve treatment outcomes, reduce drug exposure outside target cells and address unmet needs in rare diseases and antimicrobial resistance.

FAST FACTS

Particular	Details
Company	Tranalab Private Limited
Founded	2017
Headquarters	Bengaluru, Karnataka
Domain	Biotechnology, drug discovery and targeted drug delivery
Core Technology	Macrophage Targeting Molecules (MTM)
Founders	Dr Nitin S. Deshpande and Dr Chandramowli Ganesh
Key Applications	Gaucher disease, dengue, AMR and breast cancer imaging
Key Support	BIRAC, C-CAMP, LifeArc, Wellcome Leap and Government of Karnataka
Website	www.tranalab.com

Disclaimer - The profile draws on the company's website and publicly available institutional and programme records.10