A novel immunoassay for screening infective and infected stages of Lymphatic Filariasis

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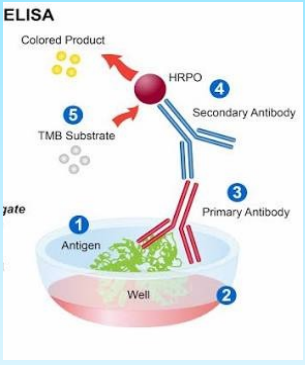
About the Technology: This technology is a highly sensitive antibody-based indirect ELISA for diagnosis of Lymphatic Filariasis, developed at ICMR-NIVCR, Puducherry. It is based on a cloned and expressed antigen biomarker of Wuchereria bancrofti, the causative agent of ~90% of global filarial infections. The assay enables early detection of filariasis-specific antibodies, including in low-prevalence and elimination settings. Independently validated by two national institutes. It is envisaged for surveillance, mapping, and timely intervention under the GPELF framework.

EoI ref. ID: ICMR/EoI/PM/17/Lymphatic Filariasis Immunoassay/2026
Lead Inventor: Dr. Dinesh Raja J
Institute: ICMR - National Institute for Vector Control Research, Puducherry
Technology Domain: Diagnostics
Disease Area (Broad): Vector Borne disease
Date of EOI Publication: May 12, 2026
EoI Deadline: May 21, 2026

Need and utility of the Technology from Public health perspective: The technology supports ethical, safe, and cost-effective mosquito rearing, enabling stronger public health research and improved vector control for mosquito-borne diseases.

Technology Readiness level (TRL):

TRL-5: Validated in 3rd Party set-up (IGMC&RI and JIPMER)



Validation Status and Study Outcome:

- 3rd Party Validation Complete
- Multi-site validation completed (internal + 2 external labs)
- Sensitivity range: 90–95%
- Specificity range: ~ 100%
- High reproducibility across laboratories.

Market Potential: With over 800 million people at risk of lymphatic filariasis across endemic countries, there is a sustained global demand to support elimination and surveillance programs.

Unmet need: Existing LF surveillance tools lack sensitivity for detecting low-level or recrudescent infections creating a clear need for IgG4-based assays

Publication: NA

IP Filing: Indian Patent Application No 202411079951