A microcontroller-based device for artificial diet/blood feeding for mosquito rearing in the laboratory

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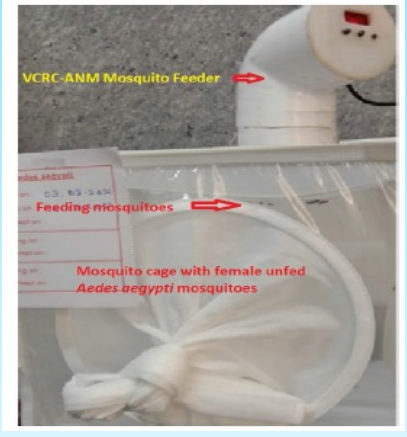
About the Technology: A compact laboratory mosquito feeding device designed for blood or artificial diet feeding of Aedes aegypti and other vectors, featuring a heated feed chamber with precise temperature control via an 8-bit microcontroller. It includes a detachable reservoir for feed placement and is structured for stable installation in laboratory rearing setups.

Technology ID: ICMR/EoI/PM/25/Mosquito Feeder/2026
Lead Inventor: Dr. Smrutidhara Dash
Institute: ICMR - National Institute for Vector Control Research, Puducherry
Technology Domain: Medical Device
Disease Area (Broad): Vector Borne disease - Dengue, Malaria, Zika.
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-4: Validated at in house laboratory



Validation Status and Study Outcome:

- Inhouse Validation –Complete
- Efficacy Outcome: Mosquito feeding achieved at 37 °C, enabling successful blood meals and normal egg laying in laboratory-reared mosquitoes.

Market Potential: An affordable and easy-to-use mosquito feeding system is needed to support large-scale vector research and control programs.

Unmet need: A simple & ethical mosquito feeding solution remains lacking for scalable vector research & control programs.

Publication: NA

IP Filing: Yes. Indian Patent Application No 202211016261