DNA based test for HIV-2 diagnosis

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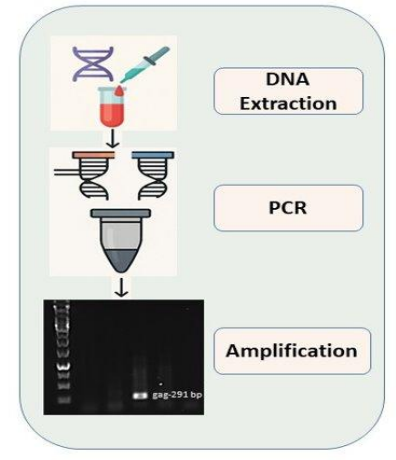
About the Technology: The DNA PCR test has been developed to diagnose HIV-2 infection. HIV-2 gag gene was selected for specific amplification of conserved region of 291 bp. Thermal cycling conditions were optimized. Select amplified samples were sequenced to confirm HIV-2 gag gene. Test was validated using HIV-2 positive samples (confirmed by Western Blot), HIV-1 positive samples(N=100 each). Additionally, HIV1+2 samples (N=14) were also included in the validation.

EoI Reference No.: PM-TT-IM-2026-Apr-42
Lead Inventor: Dr. Swarali Kurle
Institute: ICMR-National Institute of Translational Virology and AIDS Research
Technology Domain: Diagnostic
Disease Area (Broad): Sexually Transmitted Diseases (bacterial, viral) – HIV/AIDS.
EoI Publication Date: 4th Aug 2026
EoI Deadline: 25th Aug 2026

Need and utility of the Technology from Public health perspective: Accurate diagnosis of HIV-2 is essential for appropriate treatment and this DNA-based PCR test provides a sensitive, specific, and cost-effective molecular tool to strengthen national HIV control.

Technology Readiness level (TRL):

TRL-5 (Diagnostic) - Individual core components optimized for lab scale application as diagnostic test.



Validation Status and Study Outcome:

- Inhouse Validation –Complete
- Efficacy Outcome:
  - Sensitivity- 91%
  - Specificity- 100%

Market Potential: A cost-effective HIV-2 DNA PCR test has strong potential for adoption in national and reference laboratories to support accurate and timely HIV-2 diagnosis.

Publication: NA

IP Filing:

Indian Patent Application: 202611051908