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Indiaâ??s first translational extracellular vesicles ecosystem opens at Apollo Hospitals, Hyderabad

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Strengthening Indiaâ??s capabilities in precision diagnostics and next-generation biotherapeutics

The Apollo Hospitals Educational and Research Foundation (AHERF) successfully launched India's first Translational EV Ecosystem at a landmark three-day event held March 5–7, 2026, at AIMSR Medical College Auditorium, Apollo Hospitals,

Jubilee Hills, Hyderabad.

The ecosystem integrates three platforms — the EV Biofoundry (ExoWorks), EV-Connect Clinical Consortia, and EV-Qual Reference Standards (RUO) — into a deployment-ready national infrastructure for EV-based diagnostics and therapeutics.

- **ExoWorks EV Biofoundry:** A national end-to-end platform for EV isolation, characterisation, functional cargo analysis, QC, and translational assay development for diagnostic and therapeutic applications.
- **EV-Connect Clinical Consortia:** Multi-institutional networks harmonising biospecimen protocols and enabling national-scale biomarker and therapeutic target validation across Ophthalmology (LVPEI), Neurology, and Oncology.
- **EV-Qual Reference Standards (RUO):** India's first traceable exosome reference materials, enabling inter-laboratory reproducibility for diagnostic assay certification and therapeutic EV batch characterisation.

The AHERF Translational EV Ecosystem is designed to close that gap — not for one institution, but nationally, and not for one stakeholder, but for all.

For diagnostic and therapeutic companies: validated reference standards (EV-Qual), clinically annotated cohorts, and advanced characterisation platforms — NTA, nano-flow cytometry, digital PCR, and multi-omics — compress the timeline from biomarker discovery to LDT deployment and IVD regulatory filing. For therapeutic developers, GCP-aligned EV isolation, cargo loading, potency and stability assay workflows, and IND-enabling benchmarks mean faster, credible paths to clinical trials.

For startups and early-stage innovators: EV-Connect's shared clinical infrastructure eliminates the need to independently build multi-site trial networks, dramatically lowering the cost and time of clinical validation — the single largest barrier to product development for emerging companies.

For academic researchers and students: harmonised, multi-site clinical data from EV-Connect enables sufficiently powered studies, strengthens grant applications, and generates IP in a domain where India can lead globally. The hands-on training delivered across the three-day workshop directly builds the next generation of translational EV scientists.

For clinicians and hospitals: participation in EV-Connect consortia provides early access to next-generation diagnostic tools while contributing to national biomarker validation — a reciprocal model that improves patient care and clinical evidence simultaneously.

For policymakers and funders: the ecosystem provides a replicable, standards-anchored national model directly aligned with Atmanirbhar Bharat, the BioE3 policy framework, and the National Biopharma Mission — demonstrating that India's patient diversity can be a strategic asset, not just a resource, in generating globally credible diagnostics and therapeutics.

Translational Roadmap

Diagnostics — Phase 1: LDT development: analytically validated EV biomarker assays deployable within AHERF and consortium hospitals. **Phase 2:** Certified IVD products integrating multimodal AI/ML models trained on harmonised EV multi-omics and clinical data from EV-Connect, enabling intelligent decision-support diagnostics at scale.

Therapeutics — Phase 1: Lab-scale proof-of-concept EV production, cargo loading, encapsulation, and characterisation. **Phase 2:** GMP-grade manufacturing for IND-enabling studies, clinical trials, and commercial scale-up. EV-Qual underpins both pathways as the traceable batch release benchmark.