IIHMR UNIVERSITY

Management Development Programme

on

Blockchain-Enabled Clinical Trial Data Management: Ensuring Integrity, Transparency, and Efficiency

March 1 - 3, 2027



Background

Clinical trials generate extensive volumes of data throughout their lifecycle, including informed consent records, electronic case report forms (eCRFs), safety reports, laboratory results, investigational product records, monitoring reports, and clinical study reports. Maintaining the integrity, authenticity, traceability, confidentiality, and reliability of this data is essential for participant safety, scientific credibility, and regulatory compliance.

Conventional clinical trial data management systems may encounter challenges involving data manipulation, fragmented databases, delayed data reconciliation, inconsistent audit trails, limited interoperability, and difficulties in establishing trust among sponsors, Contract Research Organisations (CROs), investigators, clinical sites, laboratories, and ethics committees.

Blockchain technology offers a promising approach to addressing selected challenges through distributed ledgers, cryptographic hashing, time-stamped transactions, consensus mechanisms, and tamper-evident records. Its potential applications include informed consent verification, protocol version control, data provenance, audit trail enhancement, investigational product traceability, and secure collaboration among clinical research stakeholders.

Integration of blockchain with electronic data capture (EDC), electronic trial master files (eTMF), clinical data management systems (CDMS), electronic health records (EHRs), and decentralised clinical trial (DCT) platforms may further enhance transparency, accountability, and operational efficiency.
Nevertheless, blockchain adoption requires careful consideration of scalability, interoperability, cybersecurity, data privacy, system validation, and applicable regulatory requirements. Identifiable patient data should not ordinarily be stored directly on an immutable blockchain; privacy-preserving designs using permissioned networks and secure off-chain data storage are important considerations.
This three-day, face-to-face training programme at IIHMR University, Jaipur, is designed to provide participants with a comprehensive understanding of blockchain applications in clinical trial data management. Through expert lectures, interactive discussions, practical demonstrations, and case-based exercises, participants will learn how to evaluate blockchain solutions and develop implementation approaches that support data integrity, transparency, efficiency, and regulatory compliance.

Objectives

- Explain blockchain fundamentals, distributed ledger technology, consensus mechanisms, cryptographic hashing, digital signatures, and smart contracts.
- Identify major data integrity and data governance challenges in clinical trial management.
- Evaluate blockchain applications in informed consent, protocol management, audit trails, source-data verification, safety reporting, and investigational product traceability.
- Understand the integration of blockchain with EDC, CDMS, eTMF, EHR, and decentralised clinical trial systems.

Contents

- Introduction to Clinical Trial Data Management and Blockchain Fundamentals
- Core Blockchain Technologies, Use Cases in Clinical Trials
- Cryptographic Techniques, Trust and Transparency in Clinical Research
- Blockchain Architecture for Clinical Trials: Public, Private, and Consortium Blockchain Models

Pedagogy

The programme offers a multifaceted learning experience through lectures, group discussions, case studies, and hands-on experiential learning. Participants are immersed in a dynamic learning environment designed to foster theoretical understanding and actionable real-world insights.

Who Should Attend?

The programme is intended for professionals, academics, researchers, and technology specialists involved in clinical research, clinical data management, regulatory compliance, digital health, and healthcare innovation.

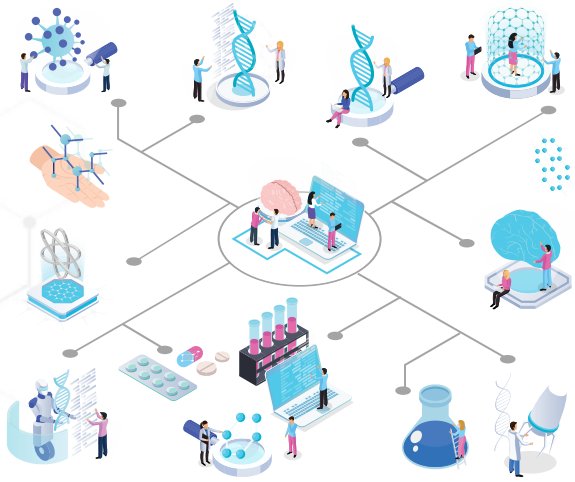
Pharmaceutical and biotechnology professionals, CRO professionals, Hospital and research centre personnel, Clinical data management professionals, IT and digital technology professionals, Academicians and students, Regulatory and quality professionals

Programme Coordinator



Dr. Ashok Peepliwal
Professor
IIHMR University, Jaipur

The programme will be offered by a team of national and international subject experts.



Nominations/Registration

Please send your nominations/registrations to the following address:

Management Development Programme Office

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1, Prabhu Dayal Marg, Sanganer Airport
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Mobile: +91 9116006536
E-mail: training@iihmr.edu.in

Duration and Venue

The programme will start on Monday, March 1, 2027, and will conclude on Wednesday, March 3, 2027. The programme will be held at IIHMR University, 1, Prabhu Dayal Marg, Sanganer Airport, Jaipur – 302029. The University campus provides a conducive learning environment for participants, who are welcome to use the library and recreational facilities available on campus.

Programme fee

The programme fee for Indian participants is Rs. 30,000 plus GST (18% as applicable), and for international participants it is USD 315 plus GST (18% as applicable). The programme fee covers tuition, background reading material, lodging, and boarding.

Certificate

A certificate of participation on completion of the programme will be issued by IIHMR University, Jaipur.

Discounts on Fee

- **Early Bird Discount:** Nominations received with payment before four weeks of the commencement of the programme will be entitled to a 10% early bird discount.
- **Group Discount:** Any organization sponsoring four or more participants to the programme will be entitled to a 20% discount on the total fee payable, provided that at least four participants attend the programme.
- **Maximum Discount:** Organizations can avail themselves of both discounts, subject to a maximum discount of 20%.





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