Division of AIDS (DAIDS) Site Clinical Operations and Research Essentials (SCORE) Manual: Laboratory Requirements

Table of Contents

Laboratory Requirements

DAIDS' objectives in clinical trials are to:

- Ensure participant safety with optimal management.
- Obtain reliable, laboratory-based data that is critical for the meaningful interpretation of trial findings.
- Ensure the safety of those who perform laboratory testing.
- Accurately reconstruct a clinical trial, enabling its data to be submitted to regulatory entities/authorities such as the United States (U.S.) Food and Drug Administration (FDA) and the European Medicines Agency (EMA).
- Pool data considered comparable from CRSs, irrespective of origin.

To meet these goals, DAIDS has developed Good Clinical Laboratory Practice (GCLP) Guidelines. The Division has also established policies for laboratories that process/test biospecimens of participants. The guidelines encompass the following:

- Applicable portions of the U.S. Code of Federal Regulations (CFR) for Good Laboratory Practice (GLP) (21 CFR Part 58)
- The Clinical Laboratory Improvement Amendments (CLIA) regulations (42 CFR Part 493)
- Guidance from other organizations and accrediting bodies, like the College of American Pathologists (CAP) and the International Organization for Standardization (ISO)

DAIDS policies also detail DAIDS requirements for:

- General laboratory operations
- Quality assurance and quality control procedures
- Biospecimen management
- Laboratory data management

The procedure for destroying clinical trial specimens owned by the National Institute of Allergy and Infectious Diseases (NIAID) is also available later in this section.

The Principal Investigator (PI)/Investigator of Record (IoR) and the Clinical Trial Unit (CTU) PI (if applicable) are responsible for ensuring that laboratories that process and test biospecimens from participants enrolled in clinical trials:

- Adhere to DAIDS policies.
- Follow specific guidance described in individual clinical trial protocols, as well as all applicable regulations and institutional policies.

Note: The DAIDS Clinical Laboratory Oversight Team (DCLOT) responds to queries from investigators about the policies in this section and how to implement specific requirements. Contact them here: NIAIDDCLOT@niaid.nih.gov.

Policies for Laboratory and Biospecimen Management

Policies for Laboratory and Biospecimen Management are on the landing page of NIAID's website: Division of AIDS (DAIDS) Clinical Research Laboratory and Specimens Management.

Requirements for Laboratories Performing Testing for DAIDS Clinical Trials

The *Requirements for Laboratories Performing Testing for DAIDS-Supported and/or Sponsored Clinical Trials policy (POL-A-OD-002)* is in place to:

- Ensure the reliability and validity of all laboratory measurements taken to determine eligibility, identify, and manage adverse events (AEs).
- Assess outcomes during the course of the clinical trial.
- Safeguard both the participants and the laboratory personnel doing the testing.

Requirements for U.S. laboratories and non-U.S. laboratories are described in Appendix 1 and Appendix 2 of policy *POL-A-OD-002*:

- Appendix 1 – *Guidance to Investigators Participating in DAIDS-Sponsored Clinical Trials Requirements for U.S. Laboratories (APP-A-OD-001)*

- Appendix 2 – *Guidance to Investigators Participating in DAIDS-Sponsored Clinical Trials Requirements for Non-U.S. Laboratories (APP-A-OD-002)*
  Note: Endpoint tests are performed for investigational or research purposes only; they are not used for the diagnosis, treatment, or management of trial participants. For pivotal studies that require regulatory action for approval or labeling (including tests for pharmacokinetics and/or pharmacodynamics), primary endpoint tests should be standardized/optimized/validated according to FDA Guidelines on Bioanalytical Method Validation and should be performed in laboratories that conduct operations in accordance with GCLP.

- Appendix 3 – *DCLOT Algorithm for Determining Level of Validation Required for Endpoints Assays (APP-A-OD-003)* is applicable to endpoint testing laboratories performing tests not approved by the FDA.

DAIDS Good Clinical Laboratory Practices (GCLP) Standards

The DAIDS Guidelines for Good Clinical Laboratory Practice (GCLP) Standards embrace research aspects and the pre-clinical or nonclinical aspects of GLP, as applied in a clinical laboratory setting. Compliance with GCLP is an ongoing process that is central to optimal clinical research laboratory operations. Compliance with GCLP ensures:

- That consistent, reproducible, auditable, and reliable laboratory results supporting clinical trials will be produced in an environment conducive to study reconstruction
- The safety of clinical trial participants and of those who perform the laboratory testing

Note: DAIDS and/or DAIDS representatives may monitor the progress towards GCLP compliance through audits and/or site visits.

The following sections are included in *DAIDS GCLP Guidelines*:

- Organization and Personnel
- Equipment
- Testing Facilities Operation
- Test and Control
- Test Method Validation and Verification
- Records and Reports
- Physical Facilities
- Specimen Transport Management
- Personnel Safety
- Laboratory Information Systems
- Quality Management.

Frequently Asked Questions (FAQs) are accessible from the NIAID website: *Guidelines for Good Clinical Laboratory Practice Standards - Frequently Asked Questions*.

Destruction of Clinical Trial Biospecimens

Laboratories/repositories that participate in DAIDS clinical trials regularly receive and store samples for research that is conducted domestically and internationally. DAIDS has a process for determining which of the NIAID-owned laboratory samples are eligible for destruction and a procedure that outlines steps for sample destruction. For more information, refer to *Destruction of Clinical Trial Specimens Owned by NIAID (DWD-SOP-LB-010)*, especially Appendix 1 - *List of Samples from DAIDS funded and/or sponsored clinical trials destined for destruction (DWD SOP-LB-010)*. Refer also to *Procedure for the Destruction of Clinical Trial Specimens: Frequently Asked Questions*.

GCLP Training

An interactive GCLP training, which is sponsored by DAIDS and delivered online (or occasionally in person), introduces trainees to GCLP and how the policies relate to clinical trials. The topics presented are most appropriate for the Laboratory Managers/Supervisors, Quality Assurance/Quality Control Coordinators, and training supervisors or other laboratory staff working, or planning to work, in a GCLP environment. The online, self-guided GCLP training modules are available from the NIAID DAIDS Learning Portal (DLP).

References

1. U.S. Code of Federal Regulations, Title 21, Parts 11, 50, 54, 56, and 312
2. U.S. Code of Federal Regulations, Title 45, Part 46 and Subparts
3. U.S. Code of Federal Regulations, Title 42, Part 493 (CLIA)
4. International Council for Harmonisation Good Clinical Practice (ICH E6)
5. FDA Guidance: Investigator Responsibilities - Protecting the Rights, Safety, and Welfare of Study Subjects [Oct 2009]
6. Office for Human Research Protections
7. DAIDS Good Clinical Laboratory Practices (GCLP) Standards
8. Guidelines for Good Clinical Laboratory Practice Standards: Frequently Asked Questions
9. Procedure for the Destruction of Clinical Trial Specimens: Frequently Asked Questions
10. DAIDS Policies and Standard Procedures - Clinical Research Laboratory and Specimens Management
11. FDA Guidelines on Bioanalytical Method Validation for Industry

Version History

V1.0	1/19/2021	Original Version
V2.0	6/30/2021	Updated link to DAIDS GCLP standards on pg 3 and 6