



Georgetown-Howard Universities  
Center for Clinical and Translational Science

# INVESTIGATIONAL DRUGS

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# Objectives

- Explain the requirements of the research pharmacy and roles of an investigational pharmacist
- List the procedures of receiving, handling and storing investigational drugs
- Compare the requirements of industry sponsored, cooperative groups, FDA and internal audits



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# Outline

Receipt  
Storage  
Dispensing/Accountability  
Study Drug Ordering  
Sponsor Visits  
Records  
Standard Operating Procedures



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# Goals and Objectives

Goal: To be familiarized with the products of handling investigational products (IPs)

## Objectives:

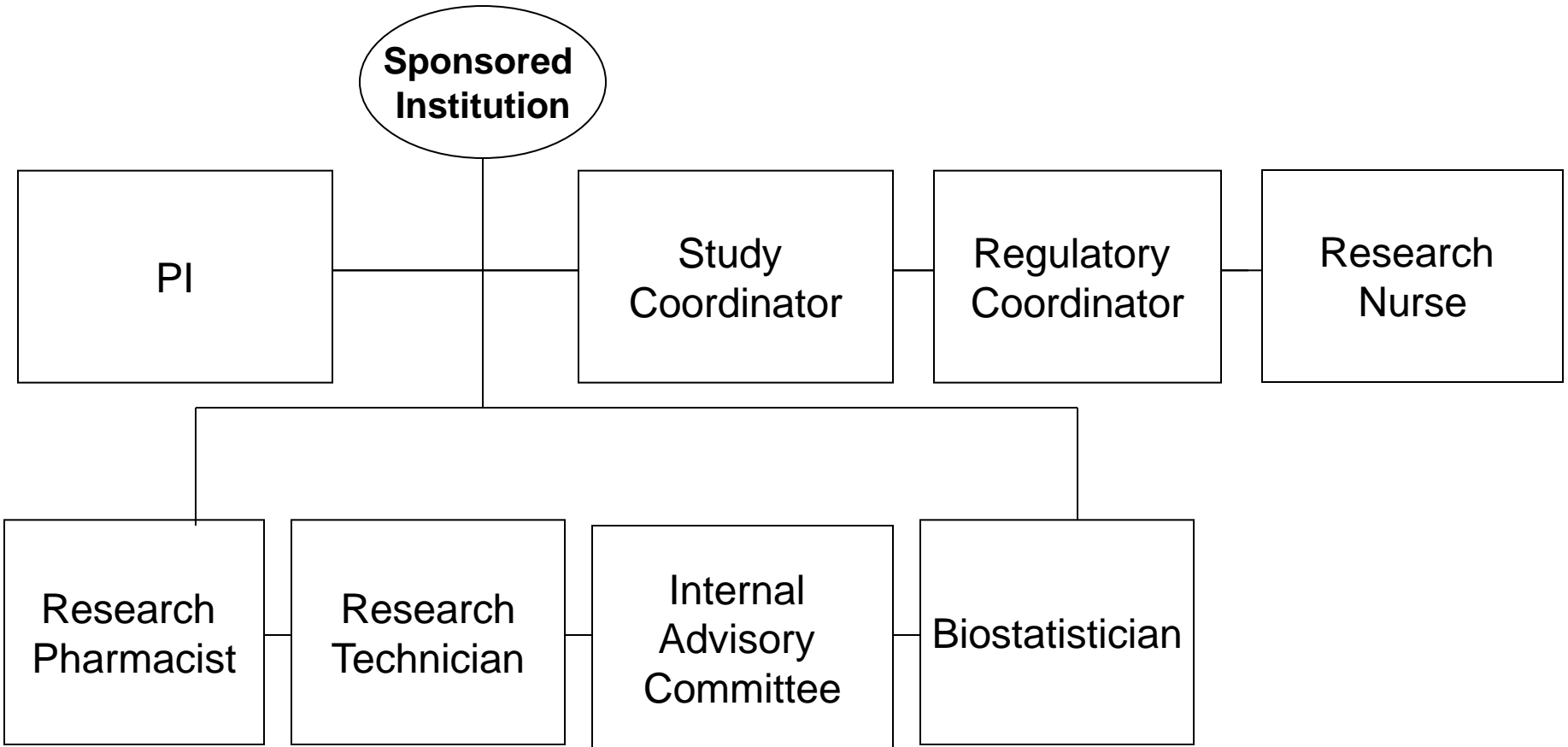
Understand the requirements of research pharmacy and the roles of an investigational pharmacist.

Procedures of receiving, handling, and storing investigational drugs.

Compare requirements of industry sponsored, cooperative groups, FDA and internal audits.



# General Research Team





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# General Background Information

- HUH Research Pharmacy
- Over 100 active protocols
- Over 50 active drug protocols
- Howard University Cancer Center, diabetes, sickle cell, prostate and breast cancer, melanoma, psychotic disorders, and PI initiated studies
- Two research pharmacist and one technician



# FDA General Provisions for Clinical Investigators



## CFR - Code of Federal Regulations Title 21

[FDA Home](#) [Medical Devices](#) [Databases](#)

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[Code of Federal Regulations]  
[Title 21, Volume 1]  
[Revised as of April 1, 2013]  
[CITE: 21CFR50]

TITLE 21--FOOD AND DRUGS  
CHAPTER I--FOOD AND DRUG ADMINISTRATION  
DEPARTMENT OF HEALTH AND HUMAN SERVICES  
SUBCHAPTER A--GENERAL  
PART 50 PROTECTION OF HUMAN SUBJECTS

### Subpart A--General Provisions

#### Sec. 50.1 Scope.

(a) This part applies to all clinical investigations regulated by the Food and Drug Administration under sections 505(i) and 520(g) of the Federal Food, Drug, and Cosmetic Act, as well as clinical investigations that support applications for research or marketing permits for products regulated by the Food and Drug Administration, including foods, including dietary supplements, that bear a nutrient content claim or a health claim, infant formulas, food and color additives, drugs for human use, medical devices for human use, biological products for human use, and electronic products. Additional specific obligations and commitments of, and standards of conduct for, persons who sponsor or monitor clinical investigations involving particular test articles may also be found in other parts (e.g., parts 312 and 812). Compliance with these parts is intended to protect the rights and safety of subjects involved in investigations filed with the Food and Drug Administration pursuant to sections 403, 406, 409, 412, 413, 502, 503, 505, 510, 513-516, 518-520, 721, and 801 of the Federal Food, Drug, and Cosmetic Act and sections 351 and 354-360F of the Public Health Service Act.

(b) References in this part to regulatory sections of the Code of Federal Regulations are to chapter I of title 21, unless otherwise noted.



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# FDA Regulations

- FDA Requirements
  - 21CFR205.50(c) (revised April 1, 2012)
- Cold Chain Management
  - “Uninterrupted flow of temp. controlled shipment from manufacturing through delivery to end user”





# FDA Requirements and Guidelines for Drug Storage

U.S. Food and Drug Administration  
Protecting and Promoting *Your* Health

Home | Food | Drugs | Medical Devices | Radiation-Emitting Products | Vaccines, Blood & Biologics | Animal & Veterinary | Cosmetics | Tobacco

## CFR - Code of Federal Regulations Title 21

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[Code of Federal Regulations]  
[Title 21, Volume 4]  
[Revised as of April 1, 2013]  
[CITE: 21CFR205.50]

TITLE 21--FOOD AND DRUGS  
CHAPTER I--FOOD AND DRUG ADMINISTRATION  
DEPARTMENT OF HEALTH AND HUMAN SERVICES  
SUBCHAPTER C--DRUGS: GENERAL

PART 205 -- GUIDELINES FOR STATE LICENSING OF WHOLESALE PRESCRIPTION DRUG DISTRIBUTORS

Sec. 205.50 Minimum requirements for the storage and handling of prescription drugs and for the establishment and maintenance of prescription drug distribution records.

The State licensing law shall include the following minimum requirements for the storage and handling of prescription drugs, and for the establishment and maintenance of prescription drug distribution records by wholesale drug distributors and their officers, agents, representatives, and employees:

(a) **Facilities.** All facilities at which prescription drugs are stored, warehoused, handled, held, offered, marketed, or displayed shall:

- (1) Be of suitable size and construction to facilitate cleaning, maintenance, and proper operations;
- (2) Have storage areas designed to provide adequate lighting, ventilation, temperature, sanitation, humidity, space, equipment, and security conditions;
- (3) Have a quarantine area for storage of prescription drugs that are outdated, damaged,



# Shipping/Receipt

Insulated Storage Containers  
TempTale, FreezeTag,  
Temperature Datalogger

Invoice / Shipping Form  
Confirmation/Acknowledgement





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# Storage

Security / Restricted Access

Equipment:

Subzero (-20°C) and UltraLow Freezers (-70°C)

Liquid Nitrogen Freezer (-180°C)

Refrigerator (2-8°C)

Controlled Room Temperature (15-30°C)

Temperature Monitoring Devices

Min. and Max.

Temp. Datalogger with Alarm System

# Drug Storage





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# Room Temperature Drug Storage-Example





# Temperature Monitoring Devices - Example







# Temperature Devices- Example




# Temp Monitor Log

- List Room Temperature
- Refrigerator Temperature
- Freezer Temperature
- Action Taken

3011 Georgia Avenue, N.W.  
Washington, D.C. 20007

301-284-4100  
202-743-1311 Ext.



**DAILY TEMPERATURE CHECK**  
(Indicate °C or °F)

MONTH OF: \_\_\_\_\_ YEAR: \_\_\_\_\_ LOCATION: \_\_\_\_\_

DATE	TEMP ROOM FROM (65 – 80°F)	TEMP REFRIG 2-8 DEGREES C (36-46 °F)	TEMP FREEZER -4 to 14°F	ACTION TAKEN	READ BY (INITIALS)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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21					
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31					

All abnormal temperatures must be reported to Supervisor and/or maintenance immediately  
EXTENSION 5-4359





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# Dispensing / Accountability

- Pre-Printed Study Drug Order Form
- Accountability Forms
  - NCI / CTEP
  - ACTG / DAIDS
  - Industry Provided
  - Own Form



# Study Drugs Ordering

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- NCI / CTEP / IAM
- ACTG / DAIDS
- Industry / Sponsor Specific Procedures
  - IVRS / IWRS
  - RAMOS
  - Email / Fax

National Cancer Institute  
U.S. National Institutes of Health | www.cancer.gov  
Ho, Khang B  
Password will expire in: 12 days  
Logout

OAOP ONLINE AGENT ORDER PROCESSING

\* Indicates Required Field Help

Create Order View Orders

Investigator and Protocol Information

\* NCI Investigator Number  
\* Investigator Name  
\* NCI Protocol Number

Protocol Title  
Order Type  
Order Created By: Ho, Khang B

Shipping Address

CTEP Site Code  
Institution  
C/O  
Internal Office  
Street  
Street (Continued)  
City  
State / Province  
Zip/Postal Code  
Country  
Office Phone  
Office Fax  
Email

Click here to contact PMR

Patient Information

Order Line Items

Courier Information

\* Date Needed (MM/DD/YYYY)  
Select Courier Profile  
Courier Name  
Courier Account Number  
Courier Reference Number

Save courier profile for future ordering

Comments



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# Accountability Forms

## NCI and DAIDS

**Study Product Accountability Record**  
Division of AIDS (DAIDS)  
National Institutes of Allergy and Infectious Diseases (NIAID)

PAGE \_\_\_\_ OF \_\_\_\_

Public reporting burden for this collection of information is estimated to average 8 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not collect or sponsor, and it generally is not required to respond to, a collection of information unless it displays a current valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to: *Washington Headquarters Office*, Paperwork Project Director, 4705 Riegels Drive, MSC-1019, Bethesda, MD 20892-1019. (PRA-1027-0140) This notice appears on each page of this collection of information.

OMB No. 0925-0240  
Expires: 02/28/2018  
N01-2564

National Institutes of Health National Cancer Institute	Division of Cancer Treatment and Diagnosis Cancer Therapy Evaluation Program	PAGE NO. CONTROL RECORD <input checked="" type="checkbox"/> SATELLITE RECORD <input type="checkbox"/>
<b>Investigational Agent Accountability Record</b>		
Name of Institution: The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins	NCI Protocol No.: J1124	
Agent Name: GSK2118436	Dose Form and Strength: 75mg capsule	
Protocol Title: A Phase II Study Of The Selective BRAF Kinase Inhibitor GSK2118436 In Subjects With Advanced Non-Small Cell Lung Cancer And BRAF Mutations	Dispensing Area: Weinberg Pharmacy	
Investigator Name: Charles Rudin, MD	NCI Investigator No.: N/A	

Clinical Research Site Name Georgetown University Hospital		Clinical Research Site Number 1008	
Investigator of Record Name Joseph Timpona, MD		Investigator Number 30743	
Protocol Number A5257	Study Product Name Emtricitabine / Tenofovir DF (FTC/TDF)	Strength and Dosage For 200mg/300mg	NSC Number 900158
Package Size 30 BH	Manufacturer GSI	Lot Number 02009254	Storage Temperature Room Temperature
			Expiration Date* 11-2014

\* Note: Expiration dates may not be available for all study products.

Line No.	Date	Patient's Initials	Patient's ID No.	Dose	Quantity Dispensed or Received	Balance Forward	Kit #	Lot/Batch#	Recorder's Initials
						Balance			
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									

	Rx Number	Date	SID	PID	Quantity Dispensed or Received	Balance Balance Forward	R.Ph. Initials	Comments
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
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31								
32								

All entries must be made in ink. Corrections may be made by drawing a line through the incorrect entry, then enter the correct entry and initial the correction. This is a standard form used for all DAIDS sponsored studies. Photocopying is authorized. Revised July 2008 F-1



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# Dispensing / Accountability Cont'

- Monthly Reconciliation
- Expiry Tracking
- Quarantine
- Dispensing of Standard of Care Meds
  - Lots
  - Expiration
  - Manufacturer



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# DRUG ACCOUNTABILITY RECORDS

- Accurate records of all study drug received at, dispensed from, returned to and disposed of by the study site should be recorded by using the Drug Inventory Log. The log can be provided to you if you do not have your own standard format.
- Inspections of the study drug supply for inventory purposes and assurance of proper storage should be conducted as necessary. Any significant discrepancy should be recorded and reported to the sponsors IDS or their designee and a plan for resolution should be documented.



# DRUG ACCOUNTABILITY RECORDS, cont'd.

- Temperature records for drug must be made available to the sponsored IDS or other Sponsor nominated monitoring teams for verification of proper study drug storage.
- Only completely unused study drug vials should be retained by the site until a representative from the main sponsors IDS or other sponsored IDS-designated personnel have completed an inventory.



# DRUG ACCOUNTABILITY RECORDS, cont'd.

- Partially used and completely used drug vials should be destroyed according to the site's guidelines, and their disposition should be recorded on the Investigational Drug Accountability Record Form.
- All returned medication is to be documented on the Drug Accountability Record Form per institutional policy.



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# Drug Destruction Policy, cont'd

- If the study site chooses to destroy study drug, the method of destruction must be documented and the sponsored IDS must evaluate and approve the study site's drug destruction standard operating procedure prior to the initiation of drug destruction by the study site.
- **WHAT IS YOUR SITE'S DRUG DESTRUCTION POLICY?** \_\_\_\_\_





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# Documentations / Records

- Shipping Documents / Invoices
- Accountability Logs
- Temperature Logs
- Correspondences
  - Emails, Faxes, Letters
- Memos To File (MTF)
- Destruction or Drug Return Forms



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# Standard Operating Procedures (SOPs)

- SOPs
  - Storage Procedures
  - Temperature Monitoring
  - Destruction of Study Drugs or Investigational Products
  - Storage of Records



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# Sponsor Visits / Audits

- Pre-Qualification / Site Selection Visit
- Site Initiation Visit
- Routine Monitoring Visit (RMV)
- Close Out Visit
- Audits
  - Internal
  - Sponsor
  - FDA



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# Questions?