THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

DEPARTMENT OF PHARMACY
INVESTIGATIONAL DRUG SERVICE (IDS)
STANDARD OPERATING PROCEDURES (SOPs)

Authorized by:

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Chief Pharmacy Officer

POLICY:
The pharmacists and pharmacy technicians of the Investigational Drug Service (IDS) are responsible for coordinating investigational/clinical drug studies approved by the Biomedical Sciences Institutional Review Board (IRB), James Cancer Institutional Review Board, or an external IRB. Operational activities performed by IDS staff include drug acquisition, inventory management, investigational drug distribution and investigational drug accountability. Investigational drug supplies are handled and dispensed in accordance with applicable legal, institutional, professional and agreed upon sponsor requirements.

These procedures incorporate the standards established by the Alliance of Dedicated Cancer Centers (ADCC) Investigational Drug Service (IDS) Subcommittee.

ABBREVIATIONS:

ADCC	Alliance of Dedicated Cancer Centers
e/DARF	Electronic/Drug Accountability Record Form (used interchangeably)
C	Celsius
CFR	Code of Federal Regulations
CITI	Collaborative Institutional Training Initiative
CSTD	Closed System Transfer Device
DAIDS	Division of AIDS
DOA	Delegation of Authority
EDC	Electronic Data Capture
F	Fahrenheit
FDA	Food and Drug Administration

GCP	Good Clinical Practice
HIPAA	Health Insurance Portability and Accountability Act
IBC	Institutional Biosafety Committee
ICH	International Council of Harmonisation
IDS	Investigational Drug Service
IIT	Investigator Initiated Trial
IP	Investigational Product
IRB	Institutional Review Board
IRT	Interactive Response Technology
IT	Information Technology
IVRS	Interactive Voice Response System
IWRS	Interactive Web Response System
NCI	National Cancer Institute
NIH	National Institutes of Health
NIOSH	National Institute for Occupational Safety and Health
OAOP	Online Agent Order Processing
OSHA	Occupational Safety and Health Administration
OSU	The Ohio State University
OSUWMC	The Ohio State University Wexner Medical Center
PI	Principal Investigator
SIV	Site Initiation Visit
SOC	Standard of Care
SOP	Standard Operating Procedure
USEPA	United States Environmental Protection Agency
USP	United States Pharmacopeia

DEFINITIONS:

Ancillary Staff: All pharmacy staff other than the IDS pharmacists responsible for oversight of the investigational drug study as denoted on the delegation of authority. Ancillary staff includes all other pharmacists, pharmacy technicians, pharmacy residents and pharmacy interns. The pharmacy technicians and pharmacy interns shall work under the direct supervision of a licensed pharmacist.

Authorized Prescriber: An individual who is eligible to prescribe IP based on sponsor requirements and meets state and federal requirements for prescribing IP.

Co-Investigator: An individual who has appreciable involvement in the design, conduct and/or analysis of a research project.

Control Pharmacy (location): Refers to the IDS location where investigational drug is received, stored and central accountability is maintained. It is the pharmacy listed as the shipping designee on the FDA form 1572; the control pharmacy is therefore authorized by the study principal investigator to deliver (transport) investigational agents to the institution's satellite pharmacies.

Expiration Date: Date beyond which appropriately stored medication should not be used.

Expired Drug: Drug whose expiration date has passed.

Institutional Review Board: Committee comprised of scientists, physicians, clergy and consumers to protect subjects who take part in research studies. The IRB reviews protocols to ensure the study is well-designed, does not involve undue risks and includes safeguards for human subjects. Upon review, the IRB must approve all studies before protocols become open for accrual and investigational medication can be received.

Investigational Approval: Determination of the IRB that the clinical investigation has been reviewed and may be conducted at an institution within the constraints set forth by the IRB and by other institutional and Federal requirements.
Investigational Drug/Product: Pharmaceutical form of an active ingredient or placebo being tested or used as a reference in a clinical trial, including a product with a marketing authorization when used or assembled (formulated or packaged) in a way different from the approved form, or when used for an unapproved indication, or when used to gain further information about approved use.
Investigational Protocol: An action plan for a clinical trial. The plan states what will be done in the study and why. It outlines how many people will take part in the study, what types of subjects may take part, what tests they will receive and how often and the treatment plan.
Joint Commission: Accreditation body that certifies health care organizations and programs in the United States.
Principal Investigator: Scientist or scholar with primary responsibility for the design, conduct and analysis of a research project.
Production Label: Label printed with each dispense that is the pharmacy record of that dispense. The production label includes who prepared and checked the final product.
Satellite Pharmacy (location): Decentralized pharmacy dispensing location of investigational drug within The Ohio State University Department of Pharmacy. Each satellite pharmacy shall maintain their own DARFs, designated as “satellite DARFs”, which reconcile with the inventory of the control location.
Sponsor: A person or other entity that takes responsibility for and initiates a clinical investigational trial.
Standard of Care: Medications or other treatments regularly provided in non-investigational situations.
Supplier: A person or organization that provides IP or supplies to IDS.
Unused Drug: Drug remaining after all patients are off drug treatment.
United States Pharmacopeia: A scientific nonprofit organization that sets standards for the identity, strength, quality and purity of medicines, food ingredients and dietary supplements manufactured, distributed and consumed worldwide. Standards are enforceable in the US by the FDA.

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THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

IDS SOP-01 Inventory Management of IP

1. Objective

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This SOP describes the inventory management of IP for clinical research conducted at OSUWMC. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance.

2. Attachments

1. Sample Non-Oral IP Accountability Log
2. Sample Oral IP Accountability Log

3. Definitions

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional information can be found by referring to the GCP SOP Glossary document.[1]

4. Procedures

IDS will assure that the receipt, accountability, disposition and all record keeping concerning IP complies with FDA and institutional requirements as well as those of state and local guidelines. IDS will maintain drug accountability in compliance with 21 CFR §312.62 and the FDA's Compliance Guidance Manual for drug accountability requirements. No sponsor-provided forms will be utilized for drug accountability and only electronic versions of the pharmacy binder will be accepted.

A. Ordering of IP

IP is typically obtained via:

- National Cancer Institute (NCI)
- Pharmaceutical Industry
- Wholesaler (e.g., Cardinal)

Protocol inventory must be received in IDS before the pharmacy's study activation can occur. Exceptions include those protocols in which patient registration is required prior to shipment of inventory by the sponsor or supplier.

IP shipments are to be delivered directly to the IDS pharmacy control location at the following address:

Investigational Drug Service
Room C150N
460 West 10th Avenue
Columbus, OH 43210

If IP is inadvertently shipped directly to another location (e.g., a physician's office), it is the responsibility of the individual receiving the shipment to arrange delivery to IDS. IDS will request the sponsor update the shipping address for future IP shipments.

B. Ordering IP from NCI

Upon receiving full approval from both IRB and NCI, IDS can order IP provided by the NCI. IDS must verify the protocol has been approved and activated prior to ordering IP. Once a study is activated, an IDS member will place an order for IP through the NCI's Aurora system. The NCI may restrict ordering until a patient is in screening.

C. Ordering IP from the Pharmaceutical Industry

For IP from pharmaceutical companies, the ordering process will be discussed with the sponsor at the SIV or coordinated through the study monitor. Upon receiving full approval from the IRB and at the PI's or clinical trial management group's request to activate the study, the study will be activated. Once IDS is notified that inventory is to be ordered, pharmacy personnel will initiate the ordering process.

When able, an IDS member will place an order for IP through the sponsor's preferred mechanism. IDS will be responsible for securing and reordering drug supplies for all research protocols with inventory managed by IDS. This does not include inventory managed outside of IDS (e.g., sponsor uses an electronic system that automatically generates orders) or studies where a prescription must be generated and signed by a prescriber to be filled by an outside pharmacy.

D. Ordering Commercially Available IP from a Wholesaler This may occur in scenarios such as:

- IITs
- Sponsor will reimburse the wholesale acquisition cost

Purchases from a wholesaler are based on a package size. The study will be charged for the entire package size ordered at the time of purchase. An OSUWMC-generated invoice will be provided upon request. Inventory may be purchased at the time of study opening to ensure drug is on hand and available for dispensing. Please note that due to proprietary practices, OSUWMC is not permitted to provide/share an invoice from a third-party supplier (i.e., Cardinal invoice). Prior to the commercially available IP's expiration or at study closure, an attempt will be made to transfer remaining inventory to another area of the pharmacy department and the study reimbursed for the cost relative to the transferred inventory. However, there is no guarantee that this can occur.

E. Transferring of IP Between Studies

In a situation where IDS has insufficient IP on hand to treat a patient, an attempt to transfer drug from another study may occur. If the study with insufficient IP is an IIT, IDS will attempt to find

another IIT with the same drug to transfer from. Written permission from the PI of each study will be obtained prior to completing the transfer. For all other studies, IDS will attempt to transfer drug from another study with the same sponsor as the study with insufficient IP. Written permission from a sponsor representative will be obtained prior to completing the transfer. If the study is sponsored by the NCI, drug can be transferred from another NCI study if it is the same agent, strength and formulation. An NCI transfer request form will be submitted to the NCI within 72 hours of completing the transfer. If related to an urgent medical need, permission is not needed prior to the transfer for NCI studies.

When the drug needed can't be transferred from another study but is commercially available at our institution, written permission along with confirmation of reimbursement from the drug sponsor or PI (if study is an IIT) will be obtained prior to treating the patient. The drug will be received into our accountability system, Vestigo®, with a note that it was transferred from commercial supply.

All drug transfers will be accounted for in Vestigo® for any studies involved.

F. Standard of Care and Commercially Available Medications

If the sponsor is not providing SOC or commercially available medications, then these medications will be handled by the usual pharmacy department processes. Lot number, expiration date and drug accountability will not be tracked. Additionally, the product will not be labeled "for investigational use" as it is commercially supplied and is used for SOC purposes.

In cases where the sponsor is reimbursing for SOC or commercially available medications, but does not require a study-specific supply, IDS staff may determine that these medications will be handled by the usual pharmacy department processes. Lot number, expiration date and drug accountability will not be tracked by IDS. Additionally, the product will not be labeled "for investigational use" as it is commercially supplied and is used for SOC purposes.

G. Receipt

Upon receipt of a shipment of IP, an IDS staff member will verify the following items against the protocol and shipping invoice:

- Drug Name
- Strength
- Formulation
- Package Size
- Quantity
- Manufacturer Name and Address
- Lot or Batch Number
- Patient-Specific Information (if applicable)
- Expiration/Retest Date
- Storage Conditions

If any discrepancies are noted upon receipt, an IDS member will notify the study sponsor or sponsor's representative immediately and appropriate actions will be taken according to specific instructions provided by the sponsor or sponsor's representative and/or protocol in accordance with applicable regulations. Upon receipt of a shipment of IP, the IDS member must acknowledge shipment by following the steps outlined by the sponsor. Following the initial receipt process in the accountability system, the items listed above will be reviewed and verified by a second IDS staff member.

H. Dispensing

IP is dispensed through OSUWMC's electronic medical record, Epic©, upon pharmacist receipt and review of an authorized prescription, in compliance with applicable legal, institutional and professional standards.

For oral IP, if dispensing an intact bottle is required, the minimum sufficient quantity using intact bottles will be dispensed. If the quantity to be dispensed is not outlined in the protocol, the dispensing pharmacy staff will dispense the minimum sufficient quantity using intact bottles. Counting out the dose will only be done if required by the sponsor/protocol.

IP will be dispensed with child-resistant packaging. If a child-resistant packaging is not available with the provided IP, IDS will transfer the product to a medication container that can be affixed with a child-resistant cap. Patients choosing to opt-out of receiving their medication in containers with child-resistant caps will have to complete and sign a waiver on a yearly basis.

For studies where IDS prepares IP for off-campus clinics/infusion suite locations without an onsite pharmacy, IDS uses Best Courier©, an OSUWMC partnered local bonded courier company, for deliveries.

I. Electronic or Paper DARFs

IDS uses an electronic accountability system, Vestigo® (McCreadie Group), for the majority of studies. In rare cases, an OSUWMC developed paper DARF may be used instead. The default accountability format uses the NIH drug accountability record form (NIH-2564) for IP receipt, dispenses, transfers and disposal. No sponsor-provided forms will be utilized for drug accountability or preparation.

All OSUWMC accountability forms capture the essential elements as outlined in the IDS best practice standards.[2] Elements include:

- Institution Name
- PI Name
- Protocol Title and Number
- Agent Name, Strength and Formulation
- Dispensing Location • Recorder Initials and Date • Transactions including:
    - Drug Receipts (date, quantity, lot number and expiration)
    - Drug Dispensing (subject information, date, dose, quantity, lot number and expiration)
    - Patient Returns (if applicable)
    - Drug Transfers (date, quantity, lot number and location) ○ Disposition of Unused Drug Returns and/or Destruction
- Lot Number and Quantity on Hand

For Vestigo®, the initial risk assessment was conducted by the hospital's Data Security team. This risk analysis may be reviewed upon request. For version changes occurring after the initial risk assessment, these version changes are sent to the IDS team and reviewed by an IDS member and Pharmacy Informatics team member to determine if any change alters the risk assessment. If an alteration is noted, the institution's Data Security team is consulted and the risk assessment updated accordingly.

For all OSUWMC studies, the control location is IDS James. A satellite DARF will be maintained for each location where IP is stored or dispensed other than the control location. Additionally, separate DARFs will be maintained for each agent, strength and formulation. DARFs will be available to the study sponsor upon request and may be reviewed as part of site monitoring.

For some studies at OSUWMC, double accountability may be required. Double accountability prior to dispensing means that two IDS or pharmacy personnel sign off on the DARF. At OSUWMC, accountability is completed prior to dispensing and, as these two functions are separate, different pharmacy personnel may be involved in these different functions. OSUWMC does not dictate that both accountability checks must be completed by pharmacists or that the pharmacist must be the second check for accountability. This differs from dispensing where the IP check must be completed by pharmacists only, which aligns with institutional and state requirements.

Drug accountability will only be maintained for IP supplied by the sponsor or procured by IDS as study-supplied on behalf of the sponsor for use on the clinical research trial (these are agents provided at no cost to the patient). IDS will not provide accountability, lot numbers, or expiration dates to sponsors for non-study-supplied commercial agents or standard of care medications.

Drug accountability will not be maintained for ancillary supplies (e.g., standard syringes, infusion bags, tubing, etc.).

J. IRT

The primary function of IDS will be to provide verification in the IRT system of IP receipt. IDS will not utilize the IRT/EDC to document IP accountability/dispenses/returns/destruction, which is already documented in the DARF. Instead, if this is required by the sponsor, then the sponsor's representative must work with the study team to fulfill this sponsor requirement.

IDS must be provided with an adequate number of access codes, as determined by IDS, for IRT access prior to the initiation of a trial and, if required, will participate only in pharmacy-based training (note that pharmacy training logs will not be signed by the IDS team, see SOP-06). The sponsor must ensure IP assignments from IRT will be sent to IDS. A mechanism must be designed by the sponsor and/or study team to allow assignments to be relayed to IDS via a secured fax system or email.

K. Expiration/Re-test Dates

The sponsor is required to provide IDS with an expiration or re-test date for the IP at the time of shipment or upon request. This can be labeled on the container or equivalent documentation. Not receiving an expiration or re-test date in a timely manner could result in the IP being placed into quarantine and this may result in unavailability of the IP to patients.

In the event that the IP container needs to be re-labeled with updated re-test information, IDS will not assume the responsibility of the re-labeling. Instead, the sponsor will send a representative/study monitor to IDS for re-labeling purposes. This task will be completed in a timely manner before the expiration. Otherwise, the IP could be quarantined and may result in unavailability of the IP to patients.

In cases where it is determined that there is no other option but to use supply waiting to be relabeled, IDS may choose to dispense the IP labeled with a sticker that says, “Do not use after (new expiration or re-test date)”. This may be done at the discretion of the IDS personnel in an effort to prevent delays in therapy.

In cases where a multi-month dispense of intact bottles is required per protocol, IDS may dispense a supply of IP that will expire prior to the end of the patient’s treatment as long as all three of the following conditions are met:

- The patient is scheduled to return prior to the IP’s expiration date or alternative arrangements for pick-up have been made.
- The study team is aware of the upcoming expiration.
- A sticker that says, “Do not use after (expiration date)” is applied to the affected bottles.

L. Temperature Monitor Devices During Shipment (e.g., TempTale®)

IDS staff will follow sponsor instructions regarding reporting of in-transit temperature data. The temperature monitor product should enable the staff to retrieve the necessary information and submit as outlined on the shipping documentation. If a temperature monitoring device is noted to be out of range, the IP will be placed in quarantine until otherwise directed by the sponsor. A printed copy of the temperature report will be retained in the IDS study binder/folder. IDS will not retain any temperature monitors after shipment for review by study personnel at a later time. Should the sponsor require return of the temperature monitoring device, a prepaid shipping method must be provided at the time the IP is shipped.

M. Product Labeling

The supplier must deliver inventory with labels on the immediate container (individual bottle or vial). Unlabeled containers will not be accepted. The Alliance of Dedicated Cancer Centers proposed the following labeling requirements:

- It is recommended that a minimum size 8 font with name in bold be used.
- Mandatory Items:
    - Complete Name of Product (e.g., nab-paclitaxel, or salt form when more than one exists)
    - Dosage/Concentration ○ Formulation ○ Quantity ○ Lot/Batch Number ○ Storage Conditions
- Additional Items:
    - Name and Address of Manufacturer ○ Expiration Date (if available)
    - CFR Statement: Caution; new drug – limited by US or Federal law to investigational use.

Inventory that does not include labeling as described above will be reviewed by IDS and a decision will be rendered as to its acceptability. This may result in unavailability of the IP to patients. If bottles do not contain appropriate labeling, it will be the responsibility of the sponsor or sponsor’s representative to ensure the bottles are appropriately relabeled prior to use.

All IP administered or dispensed to an OSUWMC patient must contain an OSUWMC prescription label or similar prescription label that complies with labeling requirements dictated by the Ohio State Board of Pharmacy. For patient-specific IP dispensed by an outside pharmacy (e.g., Biologics), but sent to OSUWMC for patient pick up, IP will not be re-labeled with an OSUWMC

prescription label. OSUWMC-specific labeling will not obscure the study sponsor's labeling. OSUWMC-specific labeling, at minimum, includes:

- Patient Name or Initials ○ Medical Record Number ○ Date ○ Prescription/Order Number ○ Study Drug Name ○ Institutionally Assigned Study Number ○ Directions for Use ○ Quantity ○ Name of Prescriber (take home investigationals only) ○ Initials of Individual Preparing IP (if applicable)
- Initials of Dispensing Pharmacist(s)

If not already listed on the IP's label, a statement indicating investigational use will be added.

N. Maintaining Inventory of Drug Supplies

Under no circumstances will any IP bearing the label "Investigational Drug: Limited by Federal Law to Investigational Use" be used as regular pharmacy stock.

To initiate the trial in a timely manner, the sponsor should supply sufficient IP as designated by institutional target accrual. When a starter supply of IP cannot be shipped prior to the opening of the trial, the study team will be notified and confirm agreement to proceed.

If the sponsor is controlling IP re-supply, it is the sponsor's responsibility to ensure that the IDS pharmacy has adequate supply on hand for trial continuation and future enrollment.

For IP stored in the IDS control location, inventory is maintained perpetually. For IP stored in a satellite location a physical inventory will be conducted once every quarter.

For IITs where a drug manufacturer is providing commercially supplied medications for investigational use, IDS may use commercial stock of a medication only with approval from the PI and the drug manufacturer. Appropriate documentation and reporting to IRB may be required. This should only be used in urgent and emergent situations.

O. Study Supplied Tubing and Ancillary Supplies

It is preferred that OSUWMC-provided ancillary supplies are used as staff is already familiar with the correct use of these products. This also ensures that the ancillary supplies work with OSUWMC infusion pumps and devices. Appropriate exceptions to this practice include known compatibility issues. Lack of data from the sponsor is not a sufficient reason for requiring other supplies as these supplies may not work with OSUWMC devices. If sponsor ancillary supplies are required due to incompatibility, sample supplies must be provided in advance for testing and training. When the sponsor chooses to provide ancillary supplies that match OSUWMCprovided ancillary supplies, the sponsor-provided supplies will be placed in the general pharmacy supply and accountability of these materials will not be kept.

IDS is unable to perform material composition analysis and compatibility/comparison studies, hence, it is the responsibility of the sponsor to confirm that the materials available for preparation at OSU are approved for use (per ICH GCP E6 R2 *sponsor responsibility to guarantee proper overview of the trial*). Briefly, IDS will not complete sponsor materials questionnaires; IDS will provide the sponsor with a list of materials available at OSU for the sponsor to review and approve/disapprove. If necessary, it is the sponsor's responsibility to contact manufacturers in order to obtain material composition information that may not be readily available prior to determining approval status of specific items.

P. Laboratory Use of IP

When a laboratory needs to obtain IP for use in non-human studies, the laboratory will contact the appropriate supplier for that IP and request that the IP be shipped. IDS will not supply IP for clinical use to a laboratory unless the sponsor and/or the PI authorizes the release of that IP for non-clinical use. If verbal authorization is obtained from the sponsor, written documentation of such authorization should be made immediately and a copy will be retained by IDS.

Q. Storage and Security

In pharmacy locations where both IP and commercial drug are stored, IP will be stored separately from commercial supplies. IP will be stored as directed by the study protocol, the study sponsor, or package insert. IP yet to be dispensed will only be stored in pharmacy locations. Access is limited to pharmacy personnel via badge access or keys.

Investigational controlled substances will be handled in accordance with institutional policies, state and federal requirements.

R. Reporting of Adverse Drug Reactions to IP

It is the responsibility of the investigator to report to the study sponsor and the IRB any adverse effects that may reasonably be regarded as caused by, or probably caused by an IP.

5. References

1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.
2. Hematology/Oncology Pharmacy Association. HOPA Investigational Drug Service Best Practice Standards. http://www.hoparx.org/images/hopa/resource-library/professionaltools/HOPA16_IDS_Guidelines.pdf. Accessed March 6, 2017.

Attachment 1: Sample IP (Non-Oral) Accountability Record

National Institutes of Health
National Cancer Institute

Division of Cancer Treatment and Diagnosis
Cancer Therapy Evaluation Program

PAGE NO.

CONTROL RECORD ☐

SATELLITE RECORD ☐

Investigational Agent Accountability Record

Name of Institution:	NCI Protocol No.:
Agent Name:	Dose Form and Strength:
Protocol Title:	Dispensing Area:
Investigator Name:	CTEP Investigator ID:

Line No.	Date	Patient's Initials	Patient's ID No.	Dose	Quantity Dispensed or Received	Balance Forward / Balance	Manufacturer and Lot No.	Recorder's Initials
1.								
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9								

Attachment 2: Sample Oral IP Accountability Record

Collection of this information is authorized under 21 CFR 312.57. This information is collected to ensure compliance with Food and Drug Administration (FDA) requirements for NCI as an IND sponsor and that investigational agents are under the control and accounted for by competent authority. The information may be disclosed to researchers for investigational purposes, sponsors of clinical trials and their company collaborators, the applicable Institutional Review Board, NCI, FDA and Department of Health and Human Services. Submission of this information is voluntary, however, in order for you to conduct a study in accordance with relevant, current protocols, you must complete all fields.

Form Approved: OMB No. 0925-0613 Expires: 03/31/2019

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Investigational Agent Accountability Record
Oral agents ONLY

National Institutes of Health
National Cancer Institute
Division of Cancer Treatment and Diagnosis
Cancer Therapy Evaluation Program

PAGE NO.
CONTROL RECORD ☐
SATELLITE RECORD ☐

Name of Institution:	Investigator Name:		CTEP Investigator ID:
Protocol Title:	NCI Protocol No:	Local Protocol No:	Dispensing Area:
Agent Name:	Dose Form and Strength:		Bottle size (e.g., # tablets/bottle):

Line No.	Date	Patient's Initials	Patient's ID No.	Dose	Quantity Dispensed or Received	Balance Forward / Balance	Manufacturer and Lot No.	Recorder's Initials	Expiration Date (if available)	Date Patient Returned	Quantity Patient Returned	Recorder's Initials
1.												
2.												
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4.												
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THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

IDS SOP-02 Temperature Monitoring and Excursion Procedures

1. Objective

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This SOP describes temperature monitoring and excursion procedures of IP for clinical research conducted at OSUWMC. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance.

2. Attachments

1. Sample Temperature Log

3. Definitions

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional, information can be found by referring to the GCP SOP Glossary document.[1]

4. Procedures

IDS will assure that all IP is maintained at acceptable temperatures according to SOP-02 section B.

A. Temperature Monitoring

IDS uses a continuous temperature monitoring system, Centrak®. The system is calibrated according to manufacturer specifications. The expiration dates for the calibrations are listed on a certificate, which is available in our Vestigo® system, or by request. The primary source of truth for temperature readout is the calibrated Centrak device, not the readout on the cold storage device itself. Therefore, certificates are not issued for the cold storage devices themselves, only the temperature monitoring device.

Pharmacy staff is notified, as soon as possible, via telephone or paging system, if at any time the temperature varies from the acceptable range. If a refrigerator or freezer malfunctions and temperatures exceed or fall below the acceptable range, IP is transferred to an equivalent, monitored unit within the Pharmacy Department. The temperatures and condition of the initial unit are monitored prior to return of IP inventory to the unit.

In the case of a sustained Centrak® malfunction, a backup process may be put into place. This may involve utilizing an alternative temperature monitoring device (e.g., TempTale®, Datalogger®, or staff manually recording periodic temperatures based on the refrigerator, freezer, or room temperature reading.

Laboratory specimens and food are not permitted in IDS refrigerators or freezers.

All refrigerators or freezers used for storing to-be-dispensed IP are connected to emergency back-up power or have a battery backup.

Refrigerators on patient care units have temperature monitoring devices that meet Joint Commission Standards. These refrigerators are not connected to continuous monitors. Temperature reports will not be provided for these refrigerators.

A sponsor-provided temperature monitor will not be used in addition to or in place of OSUWMC's system.

B. Temperature Settings

OSUWMC has defined the following temperature ranges based on USP storage recommendations[2]:

- Controlled Room Temperature: 20˚ to 25° C (68° to 77° F), with excursions permitted from 15° to 30°C (59° to 86° F) as seen in pharmacies, hospitals and warehouses
- Standard Room Temperature: 15° to 30° C (59° to 86° F)
- Refrigerated Temperature: 2° to 8° C (36° to 46° F)
- Freezer Temperature: -25° to -15° C (-13° to 5° F)
- Currently, there are no established USP standards for Ultra Low Freezer Temperatures. As such, IDS will follow: Ultra Low Freezer Temperature: -80° to -70° C (-112° to -94° F)

C. Temperature Excursions

OSUWMC has adopted the temperature excursion reporting standards of the Alliance of Dedicated Cancer Centers IDS SOPs.

IDS will provide notification of reportable temperature excursions via the sponsor required process. In determining a reportable excursion, the temperature is rounded to the nearest degree (i.e., room temperature at 14.5° C will not be considered an excursion since it rounds to 15° C.).

In the event of a reportable temperature excursion, any IP inventory in question will be quarantined in the acceptable storage conditions. The quarantined IP inventory will be physically segregated from active IP inventory and clearly marked as not for patient use. IDS will complete appropriate forms as necessary and contact sponsor for further action. Once IP is approved for use, it will be returned to active IP inventory.

Controlled Room Temperature: Based on USP temperature standards, controlled room temperature reportable excursions are defined as a temperature deviation of more

than 5˚ C from the acceptable temperature range (as defined above) and sustained for a contiguous time period of 24 hours. In practice, we are applying this as follows: IDS will report:

- Any excursion more than 5˚ C from the acceptable temperature range AND for a sustained period of 24 hours (must meet both criteria)
- Any extreme temperature less than 2˚C or greater than 40˚C for any duration

IDS will NOT report

- Excursions more than 5˚ C from the acceptable temperature range lasting less than 24 hours, except for those that fall outside of the extreme limits as defined above
- Any temperature from 15° to 20° C or 25° to 30° C for any duration and no sponsor forms will be completed by IDS

Refrigerated and Frozen: For refrigerators and freezers, we define reportable excursions as a temperature deviation from the acceptable temperature range sustained for a contiguous time period of 30 minutes. In practice, we are applying this as follows:

IDS will report:

- Any excursion lasting 30 minutes or more

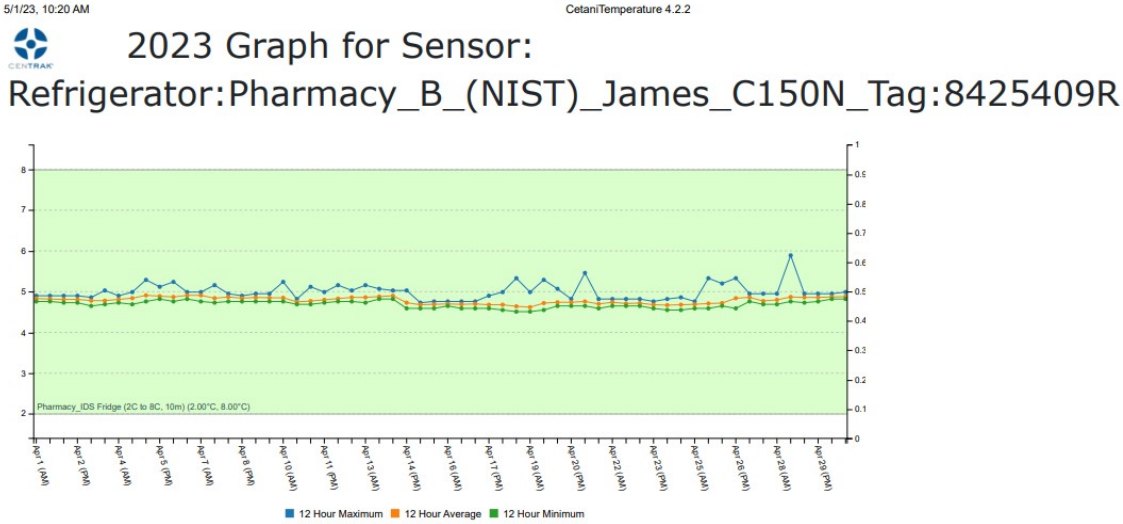
IDS will NOT report

- Any excursion lasting less than 30 minutes

5. References

1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.
2. USP Standard; USP 33-NF28, Sections 10.30.10, 10.30.40 and 10.30.60

Attachment 1: Sample Temperature Log



THE OHIO STATE UNIVERSITY
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IDS SOP-03 IP Returns and Destruction

1. Objective

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This SOP describes the procedures related to returns and destruction of IP for clinical research conducted at OSUWMC. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance.

2. Attachments

N/A

3. Definitions

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional, information can be found by referring to the GCP SOP Glossary document.[1]

4. Procedures

The Department of Pharmacy is required to comply with USP <800> standards.[2] These standards were created to minimize employees' exposure to hazardous medications. USP <800> also requires comprehensive training on hazardous drug handling. These standards apply to all employees, including visitors to the OSU pharmacy department that come into contact with drugs (e.g., monitors).

A. Hazardous Substance Determination

Prior to a study opening, an IDS pharmacist will review all of the available information about the IP and make a determination whether the IP should be considered a hazardous substance or not. This decision will follow the guidelines dictated by USP <800>, NIOSH and OSUWMC's Hazardous Substances List. When IDS is not able to determine clearly whether an IP is considered a hazardous substance or not, we will defer to classifying it as a hazardous substance as stipulated in USP <800>.[2] USP <800> requires specific considerations for the receipt, storage, handling, preparation and administration of all hazardous IP.

B. Empty and Partially Used IP Containers (Excluding Oral Patient Returns)

In order to mitigate unnecessary staff and sponsor personnel drug exposure, all empty and partially used containers of IP will be disposed of immediately after use into the appropriate

hazardous waste stream containers. This includes empty boxes and vials of non-oral IP following compounding. Containers originally storing oral IP where the remaining dosage units will be dispensed at a later time will be retained until empty, at which time the container will be disposed of into the appropriate waste stream container. To ensure appropriate accountability (without saving vials) the pharmacy may require double accountability (two signatures) for all accountability records. Since vials are destroyed at the time of preparation, the record of dispense will serve as the record of destruction for that IP. A separate record of destruction will not be maintained for used or partially used vials during IP preparation.

C. Used IV Bags, Injectable IP and Supplies

Once the IP is administered to the patient, it is considered hazardous waste and therefore will be immediately disposed of into the appropriate hazardous waste stream containers. IDS will not, under any circumstances, accept the return of used injectable agents such as syringes and IV bags.

D. Oral Patient Returns

Oral IP patient returns will be accounted for by both the study team and pharmacy. The study team will provide the first count followed by a second count performed by IDS staff. IDS staff will reconcile the count returned with the research coordinator. After reconciliation, the IP will be immediately documented and destroyed as part of the appropriate waste stream system. Note that the return date listed by pharmacy will be the date that the return is processed by IDS. This means that the return date listed by pharmacy may not match the return date listed by the study team (since the study team and pharmacy may process the same patient return on different dates). IDS reserves the right to refuse to process returns if deemed potentially hazardous to our staff, such as broken tablets, open capsule shells, or liquid solutions. In this scenario the return will be immediately discarded via the appropriate waste stream.

E. Tear-Off Labels

Due to double accountability performed by pharmacy, IDS does not retain any tear off labels. This includes oral, topical and injectable medications.

F. Samples

Samples derived from prepared doses or packaged products will not be retained for sponsor purposes (e.g., testing for bioavailability, stability, etc.).

G. Expired/Adulterated/Not Fit for Use Unused IP from NCI

For NCI provided IP, any unused expired IP will be returned to the NCI per institutional guidelines within 90 days following the expiration of the product. Any IP labeled a Dangerous Good (as noted on shipping documentation) will be destroyed locally per institutional guidelines in the appropriate waste stream container instead of being returned to the NCI.

H. IP following Study Closure from NCI

For NCI provided IP, any unused IP with good dating will be transferred to another appropriate NCI protocol or returned to the NCI within 90 days of study closure. Study closure is defined as the completion of research IP dosing by the last subject on the protocol and the study being closed to accrual. Any IP labeled a Dangerous Good (as noted on shipping documentation) will

be destroyed per institutional guidelines in the appropriate waste stream container instead of being returned to the NCI.

I. Patient-Specific IP from NCI

For NCI provided IP that is patient–specific, IP will be returned to the NCI within 90 days of the patient coming off trial. This is regardless of the dating of the IP or the status of the study. Any IP labeled a Dangerous Good (as noted on shipping documentation) will be destroyed per institutional guidelines in the appropriate waste stream container instead of being returned to the NCI.

J. Expired/Adulterated/Not Fit for Use Unused IP (Excluding NCI IP)

All expired unused IP will be quarantined upon expiration. Oral IP will be quarantined prior to the expiration date to ensure IP will not expire while in the patient's possession. Expired IP will then be returned to the sponsor or destroyed based on the sponsor's requirements. Expired IP will be retained on site for 30 days to allow the monitor to schedule a visit for reconciliation of expired product if needed. Thirty days following expiration, any expired IP remaining on site without a scheduled monitor visit will be documented and destroyed in the appropriate waste stream per institutional guidelines. Destruction will be recorded in Vestigo and a certificate of destruction available upon request. For IITs and compassionate use protocols, IDS will document and destroy any expired and unused IP.

K. IP Following Study Closure (Excluding NCI IP)

All unused IP, regardless of dating, will be quarantined following study closure. Study closure is defined as the completion of research IP dosing by the last subject on the protocol and the study being closed to accrual. IP remaining after a study is closed will be retained for 30 days to allow the monitor to schedule the close out visit. At the end of the 30 days, IP remaining on site without a scheduled visit will be documented and destroyed in the appropriate waste stream per institutional guidelines. Destruction will be recorded in Vestigo and a certificate of destruction available upon request. Depending on the IP storage conditions, IDS may not be able to store IP outside the 30-day window for transfer to a future study or for potential study re-opening.

L. Destruction

All empty containers/vials or partially used IP (non-oral), including any ancillary supplies used in their preparation, will be disposed of immediately after use into the appropriate waste stream containers. All potential patient identifiers on IP packaging will be removed, concealed, or destroyed per institutional guidelines. These containers are collected by Clean Harbors®, an OSUWMC contracted toxic waste company. Clean Harbors® is responsible for transport of disposed IP to an offsite location for final destruction by incineration. This is completed in accordance with institutional waste control policies, OSHA and USEPA regulations. Since IP is prepared in various dispensing pharmacy locations, it may be combined with the appropriate commercial supply waste. No certificate of destruction from Clean Harbors® will be provided.

M. IIT and Compassionate Use IP

IP used in IITs and compassionate use protocols will be handled in the same manner as IP used for industry protocols. Empty or partially used containers of IP will be destroyed immediately after use in the appropriate waste stream container. Oral IP patient returns will be counted and documented by the research coordinator and IDS staff. After reconciliation, the IP will be

immediately destroyed in the appropriate waste stream container. IP that is expired and unused IP remaining after all patients are off treatment (and the treatment portion of the study is closed) will be documented and destroyed in the appropriate waste stream container.

N. Supplies

Expired or unused supplies will be destroyed. Note that these items may not be tracked in our drug accountability system and therefore there may be no formal documentation of supply destruction.

5. References

1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.
2. U.S. Pharmacopeial Convention. USP General Chapter <800> Hazardous Drugs—Handling in Healthcare Settings. http://www.usp.org/usp-healthcareprofessionals/compounding/compounding-general-chapters/usp-general-chapter-hazardousdrugs-handling-healthcare-se. Accessed March 6, 2017.

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IDS SOP-04 Satellite Transfers

1. Objective

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This SOP describes the procedures related to satellite transfers of IP for clinical research conducted at OSUWMC. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance.

2. Attachments

1. Satellite Packing Slip

3. Definitions

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional, information can be found by referring to the GCP SOP Glossary document.[1]

4. Procedures

A. Control Location

For all OSUWMC studies, IDS James is considered the control location. This means that all IP shipments are initially received at this location and transferred to satellite locations as appropriate. All transfers are documented on the relevant drug accountability record form.

B. Internal Transfers

Transfers to satellites located within the walls of the medical center are considered “internal” transfers. This means that the transfer can occur without ever exiting the building and therefore preventing any exposure to external temperatures. All internal transfers occur quickly as all locations are within 5 minutes of each other and drug is directly transported from the control location to the satellite location by IDS pharmacy personnel. Each inventory transfer transaction is verified by a pharmacy ancillary staff member who reviews the transferred IP and verifies transfer matches the accountability log. Due to the limited time and exposure temperature monitoring is not conducted during transfer.

C. External Transfers

Transfers to satellites not located within the walls of the medical center are considered “external” transfers because IP cannot be moved from one location to another without exiting the walls of the medical center. The majority of external transfers occur within a five-mile radius, with most deliveries occurring within half an hour. OSUWMC has partnered with Best Courier©, a local bonded courier company, for external transfers. A routine courier is scheduled for the morning of each business day to conduct scheduled IP transfers to each external satellite location. In the event IP needs transferred outside of the routine courier schedule, these transfers are considered STAT and the courier is expected to pick up and deliver the IP within 1 hour of receiving a call to pick up. In rare cases, an OSUWMC pharmacy member will transport the product when urgency necessitates.

Any IP transfer is documented in Vestigo. The IP is stored at the required temperature in the control location until the transfer is occurring. For any external transfers, IDS pharmacy personnel utilize the Vestigo® inventory send out function. The IP to be transferred is checked against the Packing Slip (Attachment 1) and packaged appropriately. During transfer, room temperature items are transferred in a box or empty cooler. Refrigerated items are transferred in a cooler with refrigerated ice packs to maintain the appropriate temperature range. Frozen items are transferred in a cooler with frozen ice packs or dry ice to maintain the appropriate temperature range. Due to the short transit time, no temperature monitoring is conducted during transfer.

Upon receipt of an inventory transfer, a pharmacy ancillary staff member from the satellite location reviews the transferred IP. For external transfers, the contents are verified against the Packing Slip and the transfer is accepted in Vestigo® to indicate that the IP was received in satisfactory condition. Accepting the transfer completes the electronic record of the transfer from the control location to the satellite location in Vestigo®. Packing slips are created electronically in Vestigo® and the action of receiving the IP is recorded and viewable on the DAR, therefore the packing slip hard copy is not retained in IDS records.

D. External Transfers where Sponsor Requests Temperature Monitoring During Transfer via a Waiver

If the sponsor requires temperature monitoring for an external transfer, the sponsor will need to submit a waiver. This must occur during the start-up process. An additional charge will be assessed for each study in order to cover the costs of training staff and equipment. Refer to SOP-10.

For these studies, IDS pharmacy personnel will package the IP in a Greenbox©, a validated shipper, that is lab tested to hold a specific temperature range for a determined timeframe. OSUWMC has confirmed that the validated shippers work as specified when the manufacturer’s directions are followed. Since these shippers are validated, no additional temperature monitoring (e.g., TempTale®) will be used. IP will be packaged using the instructions provided for each specific Greenbox© shipper.

The Greenbox© shipper is a reusable product. Between each use, IDS pharmacy personnel will clean the inside and outside of the shipper as well as all materials used during transport. Prior to use, each shipper will be inspected to ensure product integrity and cleanliness. IDS pharmacy

personnel will prepare each shipment per OSUWMC instructions modeled after the manufacturer's user guide.

The manufacturer's specifications for Greenbox© may be provided as a reference upon request.

When a validated shipper is used for IP transfer, a comment will be added to the Packing Slip to indicate that a validated shipper was used along with the model of the shipper. At the time of receipt, a pharmacy ancillary staff member from the satellite location reviews the transferred IP, Packing Slip and accepts the transfer in Vestigo® to indicate the IP was received in satisfactory condition.

E. External Transfer Locations

Distance from OSUWMC was determined based on the shortest route using Google Maps.

NonOncology Locations:

Location	Address	Distance from OSUWMC
Outpatient Care East	543 Taylor Ave. Suite 3125 Columbus, OH 43203	4.8 miles
Outpatient Care Hilliard	3711 Ridge Mill Dr. Room 1023 Columbus, OH	7.5 miles
Outpatient Care Morehouse	2050 Kenny Rd. Suite 3100 Room 3199 Columbus, OH 43221	2.1 miles
Outpatient Care New Albany (ASU/Infusion)	6100 North Hamilton Rd Room 2530 Westerville, OH 43081	18.2 miles
East Hospital	181 Taylor Avenue, Room 135 Columbus, OH 43203	5.1 miles
Eye and Ear Institute	915 Olentangy River Rd Room 1025 Columbus, OH 43212	1.6 miles
Jameson Crane	2835 Fred Taylor Dr. Room 1051 Columbus, OH 43202	2.9 miles

Oncology Locations:

Location	Address	Distance from OSUWMC
Martha Morehouse Tower Pharmacy	2050 Kenny Road, Room 1103 Columbus, OH 43221	2.1 miles
Mill Run Pharmacy	3651 Ridge Mill Drive, Room 119 Hilliard, OH 43026	7.5 miles
Stefanie Spielman Comprehensive Breast Center Pharmacy	1145 Olentangy River Road, Room 4200 Columbus, OH 43212	1.6 miles

JamesCare East	181 Taylor Avenue, Room 1430 Columbus, OH 43205	5.1 miles
IDS James West Campus	2121 Kenny Rd Room 3065 Columbus, OH 43221	1.9 miles

5. References

1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.

Attachment 1: Example Satellite Packing Slip

The Ohio State University Wexner Medical Center - IDS James

Packing Slip

Date

Send Out ID:

Shipment Temperature Type: Refrigerator

From: IDS staff member

Address: IDS James
460 West 10th Avenue
Room C150N
Columbus, OH 43210 US

Attention To:

Ship To: James Mill Run
3651 Ridge Mill Drive
Room 9
Hilliard, OH 43026 US

Phone:

Fax:

Phone:

Fax:

Courier	Tracking Number	Temp Departure	Reference1	Reference2

Protocol Number	Drug Name	Lot Number	Expiration Date	Patient Study Number	Quantity	Units

Comments:

Receipt Instructions:

Received Signature: _____ Date: _____

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IDS SOP-05 Safe Handling and Compounding

1. Objective

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This SOP describes the procedures related to safe handling and compounding of IP for clinical research conducted at OSUWMC. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance. When referenced, OSUWMC policies are available upon request.

2. Attachments

N/A

3. Definitions

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional information can be found by referring to the GCP SOP Glossary document.[1]

4. Procedures

Per USP <800>, IP must be handled as hazardous unless adequate information becomes available to conclude that the IP is not hazardous.[2] Specific precautions, staff training, competency and other procedures are outlined below. For applicable studies, a copy of each policy will be made available upon request.

IDS will comply with institutional guidelines regarding hazardous drug management. OSUWMC requires the use of Closed System Transfer Devices (CSTDs) for all hazardous drug preparation and administration. At OSUWMC, we use PhaSeal™ products. In compliance with USP <800>, IDS will utilize PhaSeal™, unless the sponsor indicates that the IP is not hazardous or if the dosage form does not allow. IDS may request that a sponsor test their IP for compatibility with PhaSeal™. IDS may request data supporting a sponsor's request to not use PhaSeal™. A lack of data about compatibility with PhaSeal™ will not be considered a sufficient reason for a sponsor's waiver request regarding the use of CSTDs. Due to pharmacy and nursing unfamiliarity with other CSTD products, OSUWMC IDS will not use an alternative CSTD product if requested by the sponsor.

A. Hazardous Drugs
Reference OSUWMC's ***Hazardous Drug (HD) Classification and Handling Policy and Procedures.***

B. Sterile Compounding
Reference OSUWMC's ***Compounded Sterile Preparations (CSPs) Policies and* Procedures policy.**[4] Institutional practice does not allow for preparing overfill in IV bags due to the risk of potential overdose to the patient. It is standard practice for the IV infusion tubing from a bag to be cleared with an appropriate carrier fluid to ensure total dose is given. In unique scenarios, overfill may be allowed in the preparation of syringes to account for needle, hub and/or tubing volume. IDS staff will make the appropriate determination based on discussion with the sponsor.

C. Gene Therapy
Reference OSUWMC's ***Handling Recombinant DNA Agents (Gene Therapy) policy***.[5] IDS has created an Institutional Biosafety Committee (IBC) umbrella protocol that has been approved by OSU's Institutional Biosafety Committee. For studies where this requirement is applicable, a copy of the approval letter may be provided upon request.

D. Investigational Radiopharmaceuticals
Investigational radiopharmaceuticals are not handled by IDS. Such agents are handled by the OSUWMC Nuclear Pharmacy.

E. Investigational Cellular Therapies
Investigational cellular therapies may or may not be managed by IDS. This determination is made with input from the appropriate department (e.g., apheresis/therapeutic phlebotomy or blood bank) prior to study opening. IDS has created an Institutional Biosafety Committee (IBC) umbrella protocol that has been approved by OSU's Institutional Biosafety Committee. For studies where this requirement is applicable, a copy of the approval letter may be provided upon request.

5. References
1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.
2. U.S. Pharmacopeial Convention. USP General Chapter <800> Hazardous Drugs—Handling in Healthcare Settings. http://www.usp.org/usp-healthcareprofessionals/compounding/compounding-general-chapters/usp-general-chapter-hazardousdrugs-handling-healthcare-se. Accessed March 6, 2017.
3. The Ohio State University Wexner Medical Center Department of Pharmacy. Hazardous Drug (HD) Classification and Handling Policy and Procedures https://onesource.osumc.edu/departments/Pharmacy/Pages/HDList.aspx Accessed 26Apr2023
4. The Ohio State University Wexner Medical Center Department of Pharmacy. Compounded Sterile Preparations (CSPs) Policies and Procedures.

https://osumc.policytech.com/dotNet/documents/?docid=93983&anonymous=true Accessed 26Apr2023
5. The Ohio State University Wexner Medical Center Department of Pharmacy. Handling Recombinant DNA Agents (Gene Therapy). https://osumc.policytech.com/dotNet/documents/?docid=92412&anonymous=true Accessed 26Apr2023

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IDS SOP-06 Regulatory Items

1. Objective

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This SOP describes the procedures related to regulatory items regarding IP for clinical research conducted at OSUWMC. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance.

2. Attachments

1.Infusion Time Example

3. Definitions

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional, information can be found by referring to the GCP SOP Glossary document.[1]

4. Procedures

A. Delegation of Authority

Only IDS pharmacists complete study-required training and are listed on the DOA. These individuals assume responsibility for those items delegated to them by the PI and oversight of ancillary staff for completing study-related procedures.

B. Ancillary Staff

Pharmacy staff not listed on the DOA are considered “ancillary staff”. This may include all other pharmacists, pharmacy technicians, pharmacy residents and pharmacy interns. These individuals are deemed ancillary staff, as they perform the same role regardless of the patient’s status as research or SOC. IDS pharmacy technicians are not listed on the DOA. Per Ohio Revised Code (ORC) 4729.91, a registered/certified pharmacy technician, under the direct supervision of a pharmacist, may engage in specific activities called out by the Board of Pharmacy’s regulations. In Ohio, pharmacy technicians are not licensed health care professionals and, as such, all technician activities require general oversight by a pharmacist.

C. Training of Ancillary Staff

All OSUWMC pharmacists are trained by IDS on proper procedures for dispensing IP, how to complete accountability records and how to read investigational-related documents. To provide study-specific training to ancillary staff, IDS prepares an internal procedure summary that outlines the key parts of the protocol and pharmacy manual that a verifying or dispensing pharmacist must follow to successfully dispense the IP. There may be isolated studies where additional training is provided live or via a weekly departmental communication. Up-to-date versions of the procedure summary are maintained on the pharmacy's intranet. Updates and changes from previous versions are highlighted, as well as the new version date added to notify the reader that the study was recently updated. The step-by-step IP preparation instructions (from procedure summary) are also included on the production label (label that prints with each dispense) to instruct staff how to prepare the product. Ancillary staff are required to review the relevant pieces of the procedure summary and/or step-by-step drug preparation instructions on the production label prior to verifying/dispensing an IP. Documentation of training is captured by the following:

- Order Verification: Verifying pharmacist(s) captured in Epic©
- Accountability: Captured in DARF
- Compounding: Compounder initials the production label as applicable
- Final Check: Pharmacist(s) initials the production label

D. Study-Specific Time Points and Documentation Items

Often there are study-specific time points and documentation items requested (e.g., time removed from freezer, time of preparation, infusion start and stop times). Some of these time points may already be collected in Epic©. For example, the nursing staff documents infusion start and stop times in the medication administration record. This is considered source documentation and IDS will not duplicate this information elsewhere.

For other study-specific time points and documentation items requested not already collected in source documentation IDS will work with the sponsor to identify a place to document this information. In most cases, this information will be added to the OSUWMC accountability log or documented on the production label. In cases where multiple time points are requested, IDS staff may work with the sponsor to limit the number of time points to those time points that are clinically significant.

E. Medication Infusion Times

Infusion times are impacted by a number of variables. These variables can include, but are not limited to, pump flow accuracy, fluid volume in pre-filled commercial IV bags and tubing volume. Published literature supports this claim and it has been noted that even infusion systems operating without known issues still have physical/technical properties that can lead to flow and dosing rate variability.[2] Because the tubing fluid path length can vary even within the same type of tubing, pharmacy, nursing and our institution's medication safety stakeholders have standardized the flush volume to be 30 mL for all drug infusions to ensure the total dose of drug is administered. For most drugs, this means that the flush is 4-5 mL greater than the actual tubing fluid path length. Depending on the rate of drug administration, infusion times may appear longer than expected. See Attachment 1 for infusion example.

F. Preparation Worksheets

For all IP an electronic prescription is built in Epic©. The prescription build includes all of the necessary calculations. This process is automatic and void of human error that can occur during manual calculations. As such, IDS will not use sponsor-provided preparation worksheets. Instead, all calculations will occur within Epic©.

G. Documentation of IDS Staff Qualifications

All regulatory items will be maintained in the study team's regulatory binder. This includes:

- Pharmacist Curricula Vitae
- Pharmacist Proof of CITI Training
- Pharmacist Proof of GCP Training
- Pharmacist License (if requested)
- Pharmacy License (if requested)
- Proof of DOA-Listed Pharmacist Study-Required Training
- DOA
- Protocols, Amendments, Investigational Brochures, etc.

These items may be viewed by scheduling time with the study team to review the regulatory binder. The pharmacy will not retain duplicate copies of source documents maintained by regulatory or the study team. Study related IRB-approved documents, such as protocols are stored electronically via the relevant trial management office's clinical trials management system.

Pharmacy manuals are reference documents used in conjunction with standard pharmacy operations while preparing IP. To incorporate any study-specific steps, the lead IDS pharmacist reviews the pharmacy manual and creates and maintains an internal procedure summary which contains the lead IDS pharmacist's initials and the pharmacy manual version. Therefore, IDS does not sign or maintain any additional pharmacy training logs for these documents.

***H.* Record Requirements**

All study-related records will be maintained for two years after approval of the marketing application by FDA or two years after discontinuation or withdrawal of the application and FDA has been notified (21 CFR §312.62). Pharmacy records will be maintained within the IDS pharmacy while the treatment portion of the study is open. Upon closure or after the closeout visit, IDS may transfer all pharmacy study records to a secure off-site location that is readily retrievable. For abandoned studies, records may be immediately transferred to a secure off-site location. OSUWMC uses Vital Records for off-site record storage. Vital Records' address is 3827 Brookham Drive, Grove City, OH 43123.

I. Pharmacy Access to Protocols

For Oncology studies, all protocols are available via OnCore®, an electronic clinical trial management system managed by the OSUWMC Clinical Trials Office.

For all Non-Oncology studies, the pharmacy department maintains a shared folder, accessible only to pharmacy and IDS staff, housing all active protocols with IDS involvement. The initial and subsequent versions of the protocol are distributed to IDS via the Clinical Research Coordinator.

J. Authorized Prescribers

For Oncology studies, a list of authorized prescribers is included in the "Staff" tab of OnCore®, an electronic clinical trial management system managed by the OSUWMC Clinical Trials Office (CTO). The CTO's regulatory staff maintains this list and ensures that all providers meet the requirements for the study (e.g., CTEP-IAM).

This list of authorized prescribers can be found by logging in to OnCore®, finding the protocol and clicking on the "Staff" tab. If an ancillary pharmacist receives an order from a prescriber not listed in OnCore®, the ancillary pharmacist will do one of the following:

- If outside of IDS hours, the ancillary pharmacist will contact the study team or pharmacy specialist to have an authorized prescriber re-sign the orders.
- If during IDS hours, IDS will contact the regulatory coordinator or regulatory manager to see if the ordering prescriber has recently been authorized (not yet added to OnCore®).
    - If yes, the IDS pharmacist will let the ancillary pharmacist know that the prescriber has been confirmed as authorized to prescribe for the study.
    - If not, the IDS pharmacist will inform the ancillary pharmacist that the ordering physician is not authorized to prescribe the investigational medication. The ancillary pharmacist will contact the study team, clinic staff, or pharmacy specialist to have an authorized prescriber re-sign the orders.

For all Non-Oncology studies, the study team is responsible for ensuring that only authorized prescribers are writing for IP.

K. Other Record Storage

Receipts, invoices, packing slips and other related study documents will be kept with study specific paperwork in the IDS pharmacy. In an effort to go "green" and conserve storage space, IDS tries to store most records electronically rather than in printed form. In many cases, IDS has created an electronic study folder with relevant documents and records and/or has uploaded relevant documents into Vestigo®.

5. References

1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.
2. Snijder, R. Physical causes of dosing errors in patients receiving multi-infusion therapy. *UMC Repository*. https://dspace.library.uu.nl/bitstream/1874/341035/4/Snijder2.pdf. Accessed September 11, 2018.

Attachment 1: Infusion Time Example

John Smith's infusion is a total volume of 7 0mL (drug is 10 mL, pre-filled normal saline bag is 50 mL with 10 mL of pre-filled overfill). A tubing set that is approximately 26 mL is used and the tubing is primed with drug. The drug is to be infused over 30 minutes (rate = 140 mL/hour).

- Since 26 mL of drug is in the tubing at the beginning of infusion, there is only 44 mL of drug remaining in the bag.
- The infusion pump will alarm once the bag is empty. This will occur around 19 minutes (44 mL ÷ 140 mL/hour × 60 min/hour), at which time the medication infusion end time is documented.
- At this time, the flush would begin, which is necessary to clear the tubing of the drug remaining in the tubing's fluid path. The entire flush will infuse over approximately 13 minutes (30 mL ÷ 140 mL/hour × 60min/hour).
- The total medication infusion time is found by adding the documented duration of the medication and the documented duration of the flush.
- In this example, the total medication infusion time is 32 minutes (19 min + 13 min), although approximately the last 2 minutes of the infusion is related to the additional flush volume (30 mL flush – 26 mL tubing volume = 4 mL additional flush volume, 4 mL ÷ 140 mL/hour × 60 min/hour).
- The start and end time of the flush is documented on the MAR as a separate entry.

IDS SOP-07 Sponsor Personnel Expectations

1. Objective

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This SOP describes the procedures related to sponsor personnel expectations for clinical research conducted at OSUWMC. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance.

2. Attachments

1. Acknowledgement of Receipt of OSUWMC IDS SOPs

3. Definitions

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional, information can be found by referring to the GCP SOP Glossary document.[1]

4. Procedures

In order to balance patient care needs and ensure successful pharmacy operations, the following will be required of sponsor/CRO personnel.

A. Prior to Study Opening

The monitor and/or other sponsor personnel should be well versed with the protocol and have a thorough understanding of the study-related pharmacy requirements. If the monitor and/or sponsor personnel cannot readily address a question or issue, they are expected to acquire the needed information and respond to IDS in a timely manner before the initiation of the study. Failure to respond in a timely manner may result in IDS escalating the question or issue further. Contact information for an alternate responsible person, as well the immediate supervisor for the study monitor, should be available to IDS prior to study initiation and IDS will be informed in a timely manner regarding changes in responsible personnel.

IDS will provide the sponsor with the appropriate SOPs once at the time of initiation and later upon request. Sponsor personnel are expected to share these documents with the sponsor and any monitors that are assigned to OSUWMC. A sponsor representative will be asked to sign the *Acknowledgement Receipt of OSUWMC IDS SOPs* document acknowledging that a copy of the IDS SOP was provided. This signature does not mean that the sponsor accepts the SOPs but

confers that the SOPs were provided for review. For any procedures deemed unacceptable by the sponsor, *a Request for Waiver of OSUWMC IDS SOPs* form must be submitted in writing prior to the study opening date. These requests should only be made when patient safety, research, or IP integrity will be compromised by adherence to the OSUWMC IDS SOPs. Supporting documentation including sponsor SOPs, ICH, or GCP guidance may be requested by OSUWMC as justification for waiver requests. IDS personnel will review all waivers and work with the sponsor personnel to reach a mutually agreeable resolution. In some cases, waivers may be reviewed and approved/denied by pharmacy and/or hospital leadership. Waiver requests may incur additional fees not included in the original budget. Please allow 2 weeks for review and approval. In the event that no waiver of policies is requested prior to study opening then it will be assumed that all policies are acceptable to the sponsor for IP management. Reference SOP-12: Request for Waiver of OSUWMC IDS SOPs for more information.

B. Scheduling a Monitor Visit

Pharmacy monitoring visits are scheduled separately from the study team through an interactive calendar in Vestigo Verify. Due to the high volume of requests, it is strongly recommended to schedule 3-6 weeks in advance. All visits are subject to approval by IDS. In instances where the study requires an immediate visit after the first patient is enrolled, the monitor should reach out to IDS via email if an appointment is not available. The monitor is expected to let IDS know as soon as possible for these initial visits.

IDS staff spend a significant amount of time preparing for a monitor visit. Therefore, the monitor will respect the schedule of other study monitors and IDS staff and arrive on time for their visit. Cancelling or rescheduling a visit should be done with at least 48-hour notice of the visit. If a monitor is running more than 20 minutes late for a scheduled appointment, then the monitor should call or email IDS to let IDS know that they are running late. Should a monitor run late, their visit time may be limited to the time slot that was scheduled or may need to be rescheduled at a later time. Rescheduling of the visit or increase in time allowance is done at the discretion and availability of IDS staff.

If a monitor wishes to visit a pharmacy location off-site (off main campus) during his or her visit, then the monitor should note this in their meeting request with IDS. IDS staff will help coordinate this visit. Visits to the off-site pharmacy are limited to viewing drug currently supplied there. Pharmacy staff at these locations are providing patient care and interruptions must be minimal. Any study-related questions can be fielded by the IDS staff.

C. Remote Monitor Visits

Our use of Vestigo®, an electronic drug accountability system, provides us with the capacity to offer remote monitor visits. These requests should still be scheduled following the procedures outlined above in Section B, except the request should note that it is a remote monitor visit.

IDS staff will only provide information that is reviewable in our electronic drug accountability system. This means that the monitor will have access to drug accountability records (showing current IP quantities, locations, patient returns and quarantined IP), IP shipping receipts (from February 2020 to present) and temperature logs. Remote Vestigo® access is provided for the full day during IDS business hours (0800-1700 EST/EDT). If a monitor knows they need to speak to an IDS staff member, this should be requested during visit scheduling and will be limited to a 30-minute call/virtual meeting. IDS staff are otherwise available during IDS business

hours for assistance during visits via Vestigo Verify action items. Due to IDS workload demands, temperature logs are uploaded on a monthly basis at the beginning of the following month. Temperature deviations are reported in real time so no additional logs will be provided. Other documents will not be provided through our electronic drug accountability system or email and an on-site visit will be required to collect other documents. Pictures of inventory are available upon request which must be made during visit scheduling. Pictures of inventory stored at off-site locations are not practical and will not be available. All pictures requested will be uploaded to Vestigo®, viewable as PDFs and will not be emailed.

D. On-Site Monitor Visits

A monitor may request to visit the pharmacy on-site. These requests are limited to two-hour blocks based on availability of physical space, are subject to approval by the pharmacy manager and should be scheduled following the procedures outlined above in Section B, except the request should note that it is an on-site visit. The monitor is required to bring their own laptop as one will not be provided.

E. Close Out Visit

Upon notification of the last patient completing treatment or study closing, IDS will contact the monitor to schedule a pharmacy close out visit within 30 days of said notification. At this point IDS will notify a monitor to request drug destruction or return, if applicable. It is expected that the monitor will request all needed documents and information prior to or during the COV. Requests occurring after the COV for additional copies or data may be subject to additional charges.

All IP will be returned or destroyed based on the sponsor's requirements. Expired IP or IP remaining after a study is closed will be retained for 30 days to allow the monitor to schedule the pharmacy COV. At the end of the 30 days, IP will be destroyed if no visit has been scheduled, unless a prior agreement is reached with IDS. A monitor can follow up with IDS personnel to have IP destroyed if review of the product is not needed during a visit or a visit is not required. IP destruction will be documented in Vestigo®.

For a remote COV, IDS can provide photos of remaining IP if needed. If this is required for your COV, please let IDS know ahead of time so we are able to complete the request. Photos of IP will be available via PDF in Vestigo®.

IDS records after study closing will be stored off-site at:

Vital Records
3827 Brookham Dr
Grove City, Ohio 43123 614-299-2122
service-cmh@vrcofoh.com

F. During the Monitor Visit

Each on-site monitor visit is scheduled to last no more than two hours, though Vestigo® access will always be open for the duration of the business day. If more time is needed in the pharmacy, the monitor may request two-hour visits on two subsequent days. Extending the time allowance for a visit is left to the availability and discretion of IDS staff. IDS reserves the right to decrease onsite monitor visit durations to one hour in order to accommodate the large volume of studies

conducted at OSUWMC. It is recommended that monitors review electronic accountability records remotely prior to their onsite visit to allow for efficient use of their time. IDS personnel will set up a space for the monitor to work. The monitor is expected to bring a laptop to the visit to access the electronic accountability records during the visit. Paper copies of electronic accountability records will not be provided. Most documents are provided in a PDF format so the monitor can save the file, print at a later time and/or share with other sponsor personnel.

During the visit, monitors will be assisted by IDS technicians. An IDS pharmacist will be available for any questions or issues. If any significant issues are identified during the monitor visit, then a pharmacist must be notified prior to the monitor leaving the pharmacy. The monitor may not remove any documents from the study binder (if applicable) or study folder other than to make a photocopy. The monitor assumes responsibility for de-identifying any patient information (if needed). The study binder/folder and any of its documents may not be removed from the pharmacy. It is expected that the monitor make copies of any documents needed during their visit to provide to the sponsor if the document is not available electronically.

Depending on the dispensing location, IP may remain stored in its usual location. To view the IP the monitor may need to visit the dispensing pharmacy. If this is needed, the monitor will be accompanied by IDS personnel or satellite pharmacy staff. When entering sterile areas (e.g., IV rooms), the monitor will be required to garb appropriately. IDS personnel will be available to help with this. During the monitor visit, the monitor may be exposed to hazardous drug. In accordance with USP <800>[2], the monitor will be expected to comply with institutional policies around hazardous drug handling. IDS personnel will be responsible for notifying sponsor personnel of this requirement. Any non-compliance with this requirement may be reported to the monitor's manager or sponsor personnel. Continued failure to comply with these requirements may result in the monitor not being allowed to visit IDS in future visits.

Many regulatory items are maintained in the study team's regulatory binders. Copies of these items are not maintained in the pharmacy binder. SOP-6 contains more specific information about these items. The regulatory binder can be viewed by setting up time with the study team. IDS will not have the regulatory binder present during the pharmacy monitor visit. Every attempt should be made to rectify any issues prior to the end of the visit. The monitor is also expected to leave notation within the accountability records of what was reviewed.

G. After the Monitor Visit

The monitor is expected to provide IDS with a monitoring report that includes a summary of items reviewed and the monitor's statements concerning significant findings/facts, deviations and deficiencies, conclusions, actions taken or to be taken and/or actions recommended to secure compliance. IDS will address all pharmacy-related findings, deviations and deficiencies presented by the monitor within a specified timeline that is acceptable to the sponsor and IDS. Any corrective actions will be documented and filed appropriately.

H. Other Expectations

IDS should be notified when a change in monitor occurs. It is expected that all documents provided to the previous monitor will be passed to the new monitor. It is expected that the current monitor will file documents such that they will be available to future monitors. Requests for records previously provided may incur an extra charge. Documents requested after the COV is complete may incur an extra charge to the sponsor.

The monitor is expected to ensure that inventory on site is sufficient, inventory on hand is accurate and that all IP is stored appropriately. This is extremely important for automatically-supplied IP since IDS is not actively involved in managing this inventory. The monitor should ensure that IDS has the most up-to-date version of the pharmacy manual.

5. References

1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.
2. U.S. Pharmacopeial Convention. USP General Chapter <800> Hazardous Drugs—Handling in Healthcare Settings. http://www.usp.org/usp-healthcareprofessionals/compounding/compounding-general-chapters/usp-general-chapter-hazardousdrugs-handling-healthcare-se. Accessed March 6, 2017.

Attachment 1: Acknowledgment of Receipt of OSWUMC IDS SOPs

Investigational Drug Service
C150N, 460 West 10th Ave
Columbus, OH 43210
(P): 614-293-4560 (F): 614-685-5013

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

Acknowledgment of Receipt of OSUWMC IDS SOPs

This form is documentation that the sponsor's representative received a copy of the OSUWMC IDS SOPs. Completion of this form is required prior to study opening. It is the expectation of IDS that the sponsor's representative share the OSUWMC IDS SOPs with the sponsor.

For any procedures deemed unacceptable, there must be a completed *Request for Waiver of OSUWMC IDS SOPs* prior to the study opening date. These requests should only be made when patient safety, research or IP integrity will be compromised by adherence to the OSUWMC IDS SOPs. Supporting documentation, including sponsor SOPs, ICH, or GCP guidance, should be submitted along with the request as justification for waiver requests. IDS personnel will review all waivers and work with the sponsor personnel to reach a mutually agreeable resolution. In some cases waivers may be reviewed and approved/denied by pharmacy and/or hospital leadership. Waiver requests may incur additional fees not included in the original budget. Please submit all forms to pharmacy.ids@osumc.edu. Please allow 2 weeks for review and approval.

In the event that no waiver of policies is requested prior to study opening then it will be assumed that all policies are acceptable to the sponsor for IP management.

Sponsor Representative Section

_____	_____
Printed Name	Title
_____	_____
Signature	Date

IDS Representative Section

_____	_____
Printed Name	Title
_____	_____
Signature	Date

Revision Date of OSUWMC IDS SOPs Provided: _____

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IDS SOP-08 IP Protocol Review

1. Objective

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This SOP describes the procedures related to investigational drug protocol review for clinical research conducted at OSUWMC. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance.

2. Attachments

N/A

3. Definitions

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional, information can be found by referring to the GCP SOP Glossary document.[1]

4. Procedures

A. Initial Review

Proposed IP studies are reviewed by IDS pharmacists and relevant ancillary staff (e.g., specialty practice pharmacists) for feasibility and compliance with applicable institutional and professional standards. Some of these feasibility items include, but are not limited to:

- Pharmaceutical and Clinical Pharmacy Requirements
- Assessment of IP Handling Issues
- Implementation Requirements
- Development of Procedures for IP Preparation at each Dispensing Site
- Packaging, Labeling and Storage Requirements
- Inventory Records
- Electronic Prescription (ERx) Creation
- Pharmacy Reimbursement

To aide in this review, a feasibility review form will be sent to the sponsor to complete. Failure to respond may extend the time to study opening. IDS pharmacists and specialty practice pharmacists are responsible for reviewing proposed IP studies as members of, or consultants to, the Biomedical Sciences IRB, James Cancer IRB, Clinical Scientific Review Committee (CSRC of The James Cancer Hospital and Solove Research Institute) and other committees, as

applicable. A proposed IDS service fees summary (budget) will be provided to the relevant budget office. Budgets including IP acquisition costs are subject to change as IP pricing is not static. Budgets may be adjusted from the initial proposed budget to account for sponsor request

for a waiver of OSUWMC IDS policies or to reflect changes to the original protocol via amendments.

B. Study Opening

IDS creates a procedure summary that outlines important pieces of the protocol and pharmacy manual for ancillary staff. Included in the procedure summary are items such as IP location, preparation instructions, randomization/blinding information and any relevant pharmacy information. The procedure summary is uploaded to the pharmacy intranet, which is available to all pharmacy staff. IDS works with the pharmacy informatics team to complete electronic prescription (ERx) builds for each IP. An electronic prescription in Epic© is required for any dispense of a study with IDS participation. Paper order forms may be used for some NonOncology studies for locations where Epic© is not commonly used/unavailable. However, the order will be transcribed by a pharmacist into Epic© prior to dispensing.

IDS will work with the study team and sponsor representatives to resolve any outstanding items prior to study opening.

5. References

1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.

IDS SOP-09 Shipment of IP to Patients

1. OBJECTIVE

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This SOP describes the procedure for shipment of IP to patients intended for administration in their home for clinical research conducted at OSUWMC. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance.

2. ATTACHMENTS

N/A

3. DEFINITIONS

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional, information can be found by referring to the GCP SOP Glossary document.[1]

4. PROCEDURES

The patient's study team will contact IDS to request IP to be mailed. The study team is responsible for providing appropriate patient information related to the study visit and date IP is needed. The following approvals are required prior to mailing IP:

- Local Principal Investigator
- Sponsor
- State Board of Pharmacy (if applicable)

A. Packaging

All items should be packaged appropriately for IP size, security and convenience in appropriate packaging to ensure storage and stability. Based on manufacturer's recommendations, temperature-sensitive medications are to be shipped in approved insulated containers with sufficient artificial ice and expedited delivery (next day) to maintain product integrity. If next-day air is not available, items may be shipped by ground.

- All products are shipped in plain containers and nowhere on the finished shipping package is the term "pharmacy" or related terms indicated.
- Temperature monitoring is not performed, as it is not practical for delivery to patients who are not trained on how to use or read temperature monitoring equipment. In line

with industry standard on medication delivery to a patient's home, IDS will use a validated process for IP shipment.

- IDS will establish proper IP labeling for dispense per SOP-01 Section M.

B. Shipping

Patients, caregivers and/or provider teams are notified when equipment/supplies will be delivered/delayed. To ensure receipt, IDS will include contact information in shipment that allows patient confirmation of shipment receipt. In case of lost shipment, IDS will maintain tracking information via the shipping software once the product leaves the facility. Shipment will require signature by patient once received.

C. Documentation

At OSUWMC, the study team will document the reason and the need for IP shipment and any counseling provided in the study subject's medical record. Treatment administration (e.g., medication diaries) will be maintained and reviewed by the study team. IDS will maintain records of each IP shipment and the corresponding study information:

- Pending Shipments
- Completed Shipments
- Shipment Receipt Confirmations
- Approval to Ship per Sponsor and PI (kept in each study specific folder)

D. Exceptions

IDS will not ship any dangerous goods or any other medications at risk for breakage during shipment (e.g., hazardous liquids).

5. REFERENCES

1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.
2. FDA. (2023). *FDA takes additional steps to advance decentralized clinical trials*. U.S. Food and Drug Administration. https://www.fda.gov/news-events/press-announcements/fda-takesadditional-steps-advance-decentralized-clinical-trials

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IDS SOP-10 Request for Waiver of OSUWMC IDS SOPs

1. Objective

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This SOP describes the procedures related to requesting a waiver of OSUWMC IDS SOPs for clinical research at OSUWMC. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance.

2. Attachments

1. Request for Waiver of OSUWMC IDS SOPs

3. Definitions

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional information can be found by referring to the GCP SOP Glossary document.[1]

4. Procedures

A waiver process is in place for any OSUWMC IDS procedures deemed unacceptable by the sponsor. These requests should only be made when patient safety, research, or IP integrity will be compromised by adherence to the OSUWMC IDS policy. Supporting documentation, including sponsor SOPs, ICH, or GCP guidance, may be requested by OSUWMC as justification for waiver requests.

A. Waiver Process

Waivers must be submitted prior to study opening and may incur additional charges. Completing a waiver request does not guarantee approval. IDS personnel will review all waivers and work with the sponsor to reach a mutually agreeable resolution. In some cases, waivers may be reviewed and approved/denied by pharmacy and/or hospital leadership. The PI or study team may be consulted to aid in determining a resolution. Please allow 2 weeks for review.

All waivers and budget adjustments should be addressed and completed prior to the study opening. In the event that a waiver is not requested, it will be assumed that all policies are acceptable to the sponsor for IP management.

Amendments may require a waiver. In those cases, IDS personnel will assume responsibility for identifying that a waiver is required. Additional charges may be incurred.

5. References

1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.

Attachment 1: Request for Waiver of OSUWMC IDS SOPs

Investigational Drug Service
C150N, 460 West 10th Ave
Columbus, OH 43210
(P): 614-293-4560 (F): 614-685-5013

THE OHIO STATE UNIVERSITY
WEXNER MEDICAL CENTER

Attachment 1: Request for Waiver of OSUWMC IDS SOPs

A sponsor representative will sign the *Acknowledging Receipt of OSUWMC IDS SOPs* document acknowledging that a copy of the OSUWMC IDS SOPs was provided. For any procedures deemed unacceptable by the sponsor, there must be a waiver of policies requested in writing prior to the study opening date. These requests should only be made when patient safety, research or IP integrity will be compromised by adherence to the OSUWMC IDS SOPs. Supporting documentation, including sponsor SOPs, ICH, or GCP guidance, should be submitted along with this request as justification for waiver requests. IDS personnel will review all waivers and work with the sponsor personnel to reach a mutually agreeable resolution. In some cases waivers may be reviewed and approved/denied by pharmacy and/or hospital leadership. Waiver requests may incur additional fees not included in the original budget. Please submit all forms to pharmacy.ids@osumc.edu. Please allow 2 weeks for review and approval. In the event that no waiver of policies is requested prior to study opening then it will be assumed that all policies are acceptable to the sponsor for IP management.

Section 1: (To be completed by sponsor personnel)		
Sponsor Protocol #:	PI:	OSU Assigned #:
Submitted By:	Title/Role:	
Phone:	Email:	
Signature:		

Section 2: (To be completed by sponsor personnel)		
Specific SOP Section Affected (e.g. SOP-12 4A)	Reason for Request	Additional documentation provided**

Section 3: (To be completed by IDS, pharmacy, or hospital leadership)		
OSUWMC Decision	Additional Fees Required	Signature/Date

*Only 1 request per form
**Additional documentation (e.g. sponsor SOP, ICH, GCP guidance) should be sent with this request as an attachment.

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IDS SOP Addendum Division of Aids (DAIDS) Clinical Trial Network Pharmacy Procedures

1. Objective

To ensure that IDS and all pharmacy personnel involved in the conduct of clinical research are aware of their obligations and responsibilities as they pertain to GCP, the investigational plan and applicable regulations, guidance and institutional policies.

This purpose of this SOP Addendum is to fill any existing gaps in OSUWMC IDS SOPs in the conduct of DAIDS Clinical Trial Network research. These detailed, written instructions create consistency in conducting clinical research at OSUWMC to ensure compliance.

2. Attachments

1. Sample Electronic Daily Temperature Report
2. IDS Investigational Product Dispensing Log

3. Definitions

Please refer to the definitions provided at the beginning of the OSUWMC IDS SOPs. Additional information can be found by referring to the GCP SOP Glossary document.[1]

4. Procedures

All IDS SOPs will apply to DAIDS research unless otherwise specified in the addendum.

A. Temperature Quality Management System

Refer to SOP-02 for temperature monitoring and excursion reporting. To meet the DAIDS requirements, the following additional information is being provided:

- Backup System: A backup continuous temperature monitor is used which comes with a NIST traceable certificate. This device is independent from the primary Centrak system and does not rely on network connectivity to record temperatures. IDS only refers to this device when the primary device fails.
- Daily Monitoring and Temperature Log: Centrak is able to pull a report that shows the daily min, max and average temperatures, which is available upon request. An example of this report is in Attachment 1.
- Review and Analysis of the Temperature Data: An IDS pharmacist reviews the temperature logs for all devices once weekly and documents this in a site-specific Excel form.

B. Chain of Custody

For the treatment of patients enrolled in DAIDS/ACTG trials, IDS will document study team pick of IP using an Investigational Product Dispensing Log in place of a chain of custody document. An example of this log in in Attachment 2.

C. Quality Management Plan

IDS, as part of the licensed department of pharmacy at the OSUWMC, must abide by all rules and regulations set forth by the FDA, Ohio Board of Pharmacy, The Joint Commission and Centers for Medicare and Medicaid Services. All pharmacy areas, including the IDS, are routinely inspected by these bodies to ensure all aspects related to medication management and patient care are upheld to these high standards. All OSUWMC polices surrounding medication management, including measures for quality management and control, apply to IDS. These policies and procedures are maintained outside of IDS SOPs and are available upon request. A quarterly audit will be conducted to ensure accuracy of clinical trial documentation and may be completed by ancillary IDS staff under the supervision of the Pharmacist of Record.

5. References

1. International Conference on Harmonisation of technical requirements for registration of pharmaceuticals for human use. Glossary. http://ichgcp.net/1-glossary. Accessed March 6, 2017.

Attachment 1: Sample Temperature Report

Ambient:Temperature_(NIST)_James_C150N_Tag:8415829 **May 2023, Days 1-15**

Day of Month	1		2		3		4		5		6		7		8		9		10		11		12		13		14		15	
Staff Initials (uID)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exact Time	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm
Measurement	22.08	21.91	22.21	21.57	22.34	21.22	20.41	23.49	23.27	23.53	23.57	23.36	22.85	22.85	23.02	22.29	23.02	22.63	23.40	22.89	22.89	22.46	23.23	22.63	22.80	23.15	22.89	23.15	22.72	22.46
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Min/Max °C	21.74/22.34		21.52/22.63		20.71/22.55		20.32/23.92		23.23/24.13		22.72/23.74		22.55/23.27		22.21/23.15		22.46/23.45		22.55/23.74		22.42/23.40		22.16/23.27		22.63/23.32		22.68/23.40		22.38/23.32	
Average °C	22.08		22.14		21.87		22.08		23.57		23.37		22.94		22.67		22.94		23.07		22.91		22.66		22.99		23.01		22.85	

Measurement: ✓ OK ✗ No data ▲ Above limit ▼ Below limit

Ambient:Temperature_(NIST)_James_C150N_Tag:8415829 **May 2023, Days 16-31**

Day of Month	16		17		18		19		20		21		22		23		24		25		26		27		28		29		30		31	
Staff Initials (uID)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exact Time	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm	7am	7pm
Measurement	22.76	22.68	22.98	22.98	23.53	23.40	22.93	22.51	22.55	22.98	23.19	22.93	22.76	22.63	22.59	22.76	22.63	22.76	22.42	22.93	23.15	23.27	22.72	22.80	22.76	22.72	22.63	22.72	22.51	23.02	22.68	22.51
	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Min/Max °C	22.42/23.15		22.63/23.40		22.89/24.00		22.29/23.19		22.51/23.06		22.72/23.66		22.59/23.36		22.34/23.15		22.34/23.06		22.34/23.32		22.68/23.87		22.51/23.45		22.38/23.02		22.29/22.98		22.25/23.15		22.34/22.98	
Average °C	22.71		23.01		23.48		22.76		22.81		23.13		22.90		22.76		22.65		22.84		23.21		22.87		22.73		22.56		22.59		22.60	

Measurement: ✓ OK ✗ No data ▲ Above limit ▼ Below limit

Attachment 2. IDS Investigational Product Dispensing Log

IDS Investigational Product Dispensing Log	THE OHIO STATE UNIVERSITY WEXNER MEDICAL CENTER	**Counseling Statement:** Investigational product counseling is performed by a member of the study team according to the specifics outlines in the study protocol. The IDS pharmacist does not complete this counseling. Instead, at pickup, the patient is reminded to contact the study team for any questions.

Date/Time	Patient Initials	Birthdate (MM-DD)	Study number	Number of Bottles/syringes/infusion	Signature (personnel picking up IP)	IDS Staff Initials