Guidelines for Use and Safe Storage of Commonly Used Drugs and Controlled Substances

GENERAL GUIDELINES

Principal Investigators (PI) and their associates frequently need to maintain therapeutic, anesthetic, and analgesic drugs in the laboratory for use in animals.

Storage of drugs must be conducive to maintaining potency. Upon receipt, the PI or associate should read the bottle or manufacturer’s insert to determine optimal conditions for storage. Items that need to be refrigerated, such as penicillin or oxytocin, must be stored in a refrigerator. Light-sensitive drugs, such as yohimbine, must be stored in dark brown bottles or in bottles wrapped to exclude light. Room temperature is adequate for many drugs.

Container Labeling: Identifying labels must not be removed from the original containers. Labels on dispensed drugs minimally should include the name of the drug, the concentration of the drug, and the expiration date.

Injectable drugs must be aspirated from the bottle or vial aseptically. Wiping of the vial stopper with an alcohol swab prior to aspiration will decrease the possibility of bacterial contamination.

Regardless of the agent, substances to be administered to live animals cannot be used after the expiration date. A good practice is to check the expiration date on the bottle before withdrawing the drug.

Dilute or reconstituted drugs have a shorter shelf life and can lose efficacy prior to the expiration date. Dilute solutions of pentobarbital, as used for mouse anesthesia, or dilute solutions of buprenorphine for analgesia will have a shorter shelf life than the undiluted drug. Similarly, drugs such as thiopental and many antibiotics are efficacious for only a short time after reconstitution. Read the label to determine the shelf life after reconstitution.

GUIDELINES SPECIFIC TO CONTROLLED SUBSTANCES

Use of controlled substances in research and teaching activities is restricted to individuals who hold a valid US Drug Enforcement Administration (DEA) Controlled Substance Registration Certificate. However, the PI may contract with the Department of Comparative Medicine (DCM) through the licensed attending veterinarian or with a licensed faculty member to acquire controlled substances for use in research animals. Examples of DEA controlled drugs include but are not limited to: buprenorphine, ketamine, and pentobarbital.

Storage: Strict controls of inventory and storage are mandated by federal law. All controlled substances, including those requiring refrigeration, must be stored in a secure, substantially constructed cabinet, in a locked location with limited access (double-lock system). The keys must be kept at a separate location.

Work Practices: Controlled substances must never be left unattended at any time.

Container Labeling: Identifying labels must not be removed from the original containers. Labels on dispensed drugs minimally should include the name of the drug, the concentration of the drug, and the expiration date.

Inventory and Recordkeeping: Records of use of a controlled substance must be maintained. All material must be accounted for in written form in a record book or log sheet. It is recommended that the expiration date of the drug be included in the record book or log sheet. If the drug was dispensed, the PI must comply with the record keeping requirements of the DEA licensed source. Any loss/theft or diversion of controlled substances must be reported immediately to the source that dispensed the drug.

Disposal of Controlled Substances: Controlled substances must be disposed properly. If you have acquired the drug from someone with a DEA license, you must check with them about how they want the dispensed drug and container to be disposed or returned. All material must be properly accounted for.

Regardless of the agent, drugs must not be used in animals after the expiration date. A good practice is to check the expiration date on the bottle before withdrawing the drug.