

Non-Pharmaceutical-Grade Compounds

Our IACUC receives protocols that require use of drugs or other chemicals not formulated for clinical use, which we understand to be characterized as non-pharmaceutical-grade compounds. We would appreciate AAALAC's guidance on the distinction between pharmaceutical- and non-pharmaceutical- grade compounds and how to evaluate this aspect of these protocols.

A pharmaceutical-grade compound is defined as any active or inactive drug, biologic or reagent, for which a chemical purity standard has been established by a recognized national or regional pharmacopeia (e.g., the U.S. Pharmacopeia (USP), British Pharmacopeia (BP), National Formulary (NF), European Pharmacopoeia (EP), Japanese Pharmacopeia (JP), etc.). These standards are used by manufacturers to help ensure the products are of the appropriate chemical purity and quality, in the appropriate solution or compound, to ensure stability, safety, and efficacy.

AAALAC International acknowledges that in an animal care and use program non-pharmaceutical-grade compounds often are necessary for scientific research. Where the use of non-pharmaceutical-grade substances may be essential for the conduct of science, the goal of the IACUC (or comparable oversight body (OB)) should be to consider the health and well-being of the animals while aiding the researcher in minimizing potentially confounding experimental variables and maximizing reproducibility of the research. The Council on Accreditation will apply a performance approach to its assessment of the use of non-pharmaceutical-grade compounds, and will expect that the IACUC/OB has established acceptable criteria for use of such compounds within the institution and for review and approval of their use.

AAALAC distinguishes between two scenarios when considering the use of non-pharmaceutical-grade compounds:

Clinical Use - compounds used for the clinical treatment of animals and to prevent or reduce/eliminate animal pain or distress. Whenever possible, pharmaceutical-grade compounds must be used.

Research Use - compounds used to accomplish the scientific aims of the study. If available, and suitable, pharmaceutical-grade compounds are preferred.

In all cases when non-pharmaceutical-grade preparations are used, AAALAC International expects investigators and the IACUC/OB to consider the following factors:

- Use must be compliant with applicable national or regional regulatory guidelines and requirements and the requirements of relevant funding agencies;
- A scientific justification is provided;
- The pharmaceutical-grade compound is not available in the appropriate concentration or formulation or the appropriate vehicle control is unavailable
- The compound is required to generate data that are part of an ongoing study or that are comparable to previous work;

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- The chemical properties of the compound are appropriate for the study and the route of administration (e.g., the purity, grade, stability in and out of solution, solution vehicle properties, pH, osmolality, and compatibility of the solvent and other components of final preparation). In some cases the reagent-grade of the compound may be as or more pure than the pharmaceutical-grade; and
- The method of preparation, labeling (i.e., preparation and use-by dates), administration and storage of formulations should be appropriately considered with the aim of maintaining their stability and quality (i.e., to prevent inadvertent co-administration of infectious agents or contaminants).