Approval Date: April 24, 2008

# FREEDOM OF INFORMATION SUMMARY

# SUPPLEMENTAL ABBREVIATED NEW ANIMAL DRUG APPLICATION

## ANADA 200-124

## Flunixin Meglumine Injection
**(flunixin meglumine)**

## Injectable Solution

**Effect of the Supplement: to allow for the addition of a new indication for the control of pyrexia associated with acute bovine mastitis**

**Sponsored by:**

**IVX Animal Health, Inc.**

# FREEDOM OF INFORMATION SUMMARY

## *1. GENERAL INFORMATION:*

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| a. File Number: | ANADA 200-124 |
| b. Sponsor: | IVX Animal Health, Inc.<br>3915 South 48th St. Terrace<br>St. Joseph, MO 64503<br><br>Drug Labeler Code 059130 |
| c. Established Name: | Flunixin meglumine |
| d. Proprietary Name: | Flunixin Meglumine Injection |
| e. Dosage Form: | Injectable solution |
| f. How Supplied: | 100 and 250 mL multiple dose vials |
| g. How Dispensed: | Rx |
| h. Amount of Active Ingredients: | Each mL contains flunixin meglumine equivalent to 50 mg of flunixin. |
| i. Route of Administration: | For intramuscular or intravenous use in horses and intravenous use in beef and dairy cattle |
| j. Species/Class: | Horses, not intended for human consumption; beef cattle; dairy cattle, lactating; dairy cattle, heifers not lactating; calves, excluding veal calves |
| k. Recommended Dosage: | Horses:<br>0.5 mg/lb (1 mL/100 lbs) body weight once daily and repeated for up to 5 days.<br>Cattle:<br>1.1 to 2.2 mg/kg (0.5 to 1 mg/lb; 1 to 2 mL per 100 lbs) body weight given by slow intravenous administration either once a day as a single dose or divided into two doses at 12 hour intervals for up to 3 days. The total daily dose should not exceed 2.2 mg/kg (1.0 mg/lb) of body weight. The dose for acute bovine mastitis is 2.2 mg/kg (1.0 mg/lb; 2 mL per 100 lbs). |
| l. Pharmacological Category: | Anti-inflammatory, anti-pyretic |

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| m. Indications: | Horses: Flunixin Meglumine Injection is recommended for the alleviation of inflammation and pain associated with musculoskeletal disorders in horses. It is also recommended for the alleviation of visceral pain associated with colic in the horse.<br>Cattle: Flunixin Meglumine Injection is indicated for the control of pyrexia associated with bovine respiratory disease, and endotoxemia. Flunixin Meglumine Injection is also indicated for control of inflammation in endotoxemia. |
| n. Pioneer Product: | BANAMINE Injectable Solution; flunixin meglumine; NADA 101-479; Schering Plough Animal Health Corp. |
| o. Effect of Supplement: | The effect of this supplement is to allow for the addition of a new indication, "for the control of pyrexia associated with acute bovine mastitis", that is no longer protected by marketing exclusivity. |

***2. TARGET ANIMAL SAFETY AND DRUG EFFECTIVENESS***:

Under the provisions of the Federal Food, Drug, and Cosmetic Act, as amended by the Generic Animal Drug and Patent Term Restoration Act (GADPTRA) of 1988, an Abbreviated New Animal Drug Application (ANADA) may be submitted for a generic version of an approved new animal drug (pioneer product). New target animal safety and effectiveness data and human food safety data (other than tissue residue data) are not required for approval of an ANADA.

Ordinarily, the ANADA sponsor is required to show that the generic product is bioequivalent to the pioneer, which has been shown to be safe and effective. If bioequivalence is demonstrated through a clinical endpoint study, then a tissue residue study to establish the withdrawal time for the generic product should also be conducted. For certain dosage forms, the agency will grant a waiver from the requirement of an in vivo bioequivalence study (55 FR 24645, June 18, 1990; Fifth GADPTRA Policy Letter; Bioequivalence Guideline, October 9, 2002).

Based on the formulation characteristics of the generic product, IVX Animal Health, Inc. was granted a waiver from the requirement of an *in vivo* bioequivalence study for the generic product flunixin meglumine injection. The generic product is administered as an injectable solution, contains the same active and inactive ingredients in the same concentration and dosage form as the pioneer product, and contains no inactive ingredients that may significantly affect the absorption of the active ingredient. The pioneer product, BANAMINE

(flunixin meglumine), the subject of Schering-Plough Animal Health Corp., NADA 140-479, was approved on August 2, 1977.

### *3. HUMAN SAFETY:*

The following are assigned to this product for cattle:

- **Tolerances for Residues:**
  The tolerance established for the pioneer product applies to the generic product. A tolerance of 125 parts per billion (ppb) is established for flunixin free acid residues (the marker residue) in the liver (the target tissue), 25 ppb in the muscle, and 2 ppb in milk under 21 CFR 556.286. The acceptable daily intake (ADI) for total residues of flunixin meglumine is 0.72 micrograms per kilogram of body weight per day (21 CFR 556.286).

- **Withdrawal Times:**
  Under the CVM Bioequivalence Guidelines, when a generic product is granted a waiver of the in vivo bioequivalence testing, the withdrawal period established for the pioneer product is also assigned to the generic product.

  For this reason, a withdrawal period of 4 days has been established for flunixin meglumine in cattle (21 CFR 522.970) and milk that has been taken during treatment and for 36 hours after the last treatment must not be used for food.

- **Regulatory Method for Residues:**
  The analytical method for the determination of flunixin meglumine in bovine liver is a high performance liquid chromatography (HPLC) method. The validated methods are on file at the Center for Veterinary Medicine, 7500 Standish Place, Rockville, MD 20855.

### *4. AGENCY CONCLUSIONS:*

This ANADA submitted under section 512(b)(2) of the Federal Food, Drug, and Cosmetic Act satisfies the requirements of section 512(n) of the act and demonstrates that Flunixin Meglumine Injection, when used under its proposed conditions of use, is safe and effective for its labeled indications.

### *5. ATTACHMENTS:*

Facsimile generic labeling and currently approved pioneer labeling are attached as follows:

<u>Generic Labeling for ANADA 200-124</u>
Flunixin Meglumine Injection- 100 mL and 250 mL container labels; package outsert; and 100 mL and 250 mL case labels

<u>Pioneer Labeling for NADA 101-479:</u>
BANAMINE Injectable Solution- 50 mL, 100 mL, and 250 mL container labels; package insert; and 50 mL, 100 mL, and 250 mL carton labels