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OMB APPROVED  
0579-0036

This report is required by law (7 U.S.C. 2143). Failure to report according to the regulations can result in an order to cease and desist and to be subject to penalties as provided for in Section 2150.

Interagency Report Control  
No. 0180-DOA-AN

Fiscal Year: 2009

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

REGISTRATION NUMBER: 51-F-0026

Customer Number: 12782

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include ZIP Code)

Center For Veterinary Medicine  
7500 Standish Place  
Rockville, MD 20855

Telephone: (301) 827 8010

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ANNUAL REPORT OF RESEARCH FACILITY  
(TYPE OR PRINT)

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS (Sites) See Attached Listing

(b)(2)High, (b)(7)f

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A.)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress on these animals and the reasons such drugs were not used must be attached to this report.)	F. TOTAL NUMBER OF ANIMALS (Cols. C + D + E)
4. Dogs		24	8		32
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-human Primates					
10. Sheep					
11. Pigs			131	10	141
12. Other Farm Animals					
Fish		677			677
13. Other Animals					
poultry		102			102
cattle		19			19
goats		38			38

ASSURANCE STATEMENTS

- Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- Each principal investigator has considered alternatives to painful procedures.
- This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- The attending veterinarian for this research facility has appropriate authority to ensure the provisions of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer (C.E.O.) or Legally Responsible Institutional Official (L.O.))  
I certify that the above is true, correct, and complete (7 U.S.C. Section 2143).

(b)(6), (b)(7)c

DATE SIGNED  
10/30/09



February 19, 2010

Nicolette Petervary, VMD  
Regional Animal Care Specialist  
U.S. Department of Agriculture  
Marketing and Regulatory Programs  
Animal and Plant Health Inspection Service  
Animal Care  
920 Main Campus Drive  
Suite 200  
Raleigh, N.C. 27606

RE: Addendum to 2009 Annual Report  
Registration # 51-F-0026

Dear Dr. Petervary:

Please accept our apologies for our center's incomplete annual report. The following is the addendum to our 2009 annual report, which includes the missing information.

The ten pigs listed under Column E on Form 7023 were part of a larger study developing a validated model of systemic inflammation that can be used as part of the drug approval process to establish a claim for Non-Steroidal Anti-Inflammatory Drugs (NSAID) to control inflammation. There are currently no NSAID's approved to control inflammation in swine, due to the absence of validated models of inflammation. There is a critical need for NSAID's to treat inflammation in swine; however, the various pharmaceutical companies are reluctant to develop a model at their expense that could be used by competitors at no cost to those competitors. The Food and Drug Administration (FDA) needed to develop and validate this model so that all pharmaceutical companies could freely use it as part of the New Animal Drug Application process.

The study design consisted of two treatment groups; one receiving a single intravenous injection of purified E. coli lipopolysaccharide (LPS; 1 $\mu$ g/kg body weight) and a second group that received a single intravenous injection of LPS and two doses of flunixin meglumine (2.2 mg/kg, i.m.), an NSAID that in swine is only approved to control fever, but is approved to control fever and inflammation in cattle. Flunixin was administered twenty four hours prior to LPS and immediately prior to LPS administration. During the first twelve hours of the study, all animals were monitored for body temperature, blood glucose, respiration and other clinical signs. Criteria for removal from the study were established along with appropriate treatments to reverse the LPS-induced inflammation. Beginning at the twenty four hour post-LPS administration time point, the animals were monitored three times daily, with once daily assessments for temperature, blood glucose levels, and other clinical signs. The fever and changes in clinical signs and blood glucose levels induced in the LPS only treated pigs had abated by 8-12 hrs post LPS administration, with all animals returning to normal levels at that time.

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From a purely scientific perspective, a non-drug treated group is essential to demonstrate the anti-inflammatory efficacy of flunixin meglumine in swine. In order to demonstrate efficacy of a new animal NSAID to control inflammation, such a control group is of paramount importance. 21 U.S.C. Section 514.4 (Substantial Evidence) of the Federal Food Drug and Cosmetic Act (FFDCA) describes the characteristics and components of an "adequate and well controlled study," which is necessary to demonstrate the efficacy of any new animal drug. 21 U.S.C. section 514.117 (Adequate and Well Controlled Studies) further details what is necessary to conduct such a study. Sub section 4 (21 U.S.C. 514.117(a)(4)) specifically states that such a study "uses a design that permits a valid comparison with one or more controls to provide a quantitative evaluation of drug effects." This section of the FFDCA specifically addresses the issue of uncontrolled studies. 21 U.S.C. 514.117(e) {Uncontrolled Studies} states, "Uncontrolled studies or partially controlled studies are not acceptable as the sole basis for the approval of claims of effectiveness or target animal safety." How to implement these requirements for an Investigational New Animal Drug application are more thoroughly detailed in Guidance Document 85 "Good Clinical Practice" issued by the FDA's Center for Veterinary Medicine (CVM). Historically, CVM interpreted these sections to necessitate the use of an appropriate, non-drug treated control group in order to demonstrate the effectiveness of a new animal drug.

Please contact, [REDACTED] (b)(6), (b)(7)c to let us know if this information sufficiently covers the previously omitted information. In addition, please note that the address you have on file for us is incorrect.

Sincerely,

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[REDACTED]  
(b)(6), (b)(7)c

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