



INAD 010697 P 0027

David A. Erdahl
National INAD Coordinator
USFWS, National INAD Office
Bozeman Fish Technology Center
4050 Bridger Canyon Rd.
Bozeman, MT 59715

JUN 10 2003

Dear Dr. Erdahl:

We refer to your submission dated January 7, 2003, to the Investigational New Animal Drug (INAD) file for the use of florfenicol (Aquaflor™) as an oral antibacterial in fish. You requested our review of a study completed to demonstrate the effectiveness of florfenicol to control mortality in Westslope cutthroat trout fry, *Oncorhynchus clarki lewisi*, due to coldwater disease caused by *Flavobacterium psychrophilum*.

We have completed our review and have the following comments. The results of this study, combined with previously submitted data, demonstrate the effectiveness of florfenicol-medicated feed administered at a dose of 10 mg/kg of fish/day for 10 consecutive days to control mortality in freshwater-raised salmonids due to coldwater disease caused by *F. psychrophilum*.

You used the t-test to test the cumulative percent mortality difference between the treated (75%) and control (94%) groups during the study Days 1 to 25 after using arc-sine square root transformation. The treated group had statistically significant less mortality than the control group ($P < 0.0001$). We analyzed the daily mortality data using the mixed model with treatment group, day, and the interaction between treatment group and day as fixed effects and the tanks within treatment as a random effect by using a modified Satterthwaite degree of freedom for the pre-treatment period, for the post-treatment period, and for the total study period. The following p-values are two-tailed p-values. There was a statistically significant difference in mortality between the treatment groups during the treatment period ($P < 0.0001$), the post-treatment period ($P = 0.0105$), and the total study period ($P < 0.0001$). The results showed statistically significantly less daily mortality and cumulative mortality in the treated group as compared to the control group.

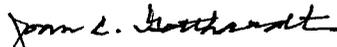
Page 2 -Dr. D. Erdahl

This study should be included in the Freedom of Information Summary. A final decision on the effectiveness technical section for this claim will be made following our review of the study submitted to us on February 5, 2003.

Future correspondence regarding your submission to the Investigational New Animal Drug file should include the date of this letter and our file number, INAD 010697 P 0027, and should be addressed to the Document Control Unit, HFV-199. Please include only one request per submission, and clearly state the request in the first paragraph of the submission.

If you need further information regarding this letter, please contact Dr. Donald Prater, Leader, Aquaculture Drugs Team, at 301-827-7567.

Sincerely yours,



Joan C. Gotthardt, D.V.M.
Director, Division of Therapeutic
Drugs for Food Animals
Office of New Animal Drug Evaluation
Center for Veterinary Medicine



United States Department of the Interior



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4050 BRIDGER CANYON ROAD
BOZEMAN, MONTANA 59715
(406) 587-9265/FTS 585-4900

January 7, 2003

Dr. Joan Gotthardt
Aquaculture Drugs Team - TeamLeader, HFV-131
(thru Document Control Unit, HFV-199)
Center for Veterinary Medicine
7500 Standish Place, MPN-2
Rockville, MD 20855

Dear Dr. Gotthardt:

The purpose of this submission is to request a formal review of the enclosed Final Study Report (FSR) titled "The efficacy of florfenicol-medicated feed to control mortality of cutthroat trout *Oncorhynchus clarki lewisi* fry caused by cold water disease, causative agent *Flavobacterium psychrophilum*". The FSR is identified by Study Number FLOR-01-EFF-12. Please note that we also request that the FSR be included in the florfenicol medicated feed efficacy technical section in support of a New Animal Drug Approval for florfenicol, and that the FSR be filed in the U. S. Fish and Wildlife Service's Investigational New Animal Drug (INAD) file #10-697. We refer to your file number INAD 10-697 E-0015, dated July 12, 2002.

The enclosed FSR demonstrates the efficacy of florfenicol-medicated feed to control mortality in cutthroat trout fry caused by cold water disease when administered at a dosage of 10 mg florfenicol/kg of fish/day for 10 consecutive days. This florfenicol-medicated feed study was conducted under research study protocol FLOR-01-EFF (2nd revision, submitted to CVM on April 1, 2002) at the Montana Fish, Wildlife, and Parks Washoe Park Trout Hatchery, Anaconda, MT. A copy of the study protocol including standard operating procedures not contained within the FSR is also enclosed.

The current sponsor of INAD #10-697 is William Knapp, Deputy Assistant Director - Fisheries and Habitat Conservation, U. S. Fish and Wildlife Service, 4401 N. Fairfax Dr., Arlington, VA 22203. We would like to thank you in advance for your time and consideration with respect to the above-described request. If you have questions, please contact Dr. David Erdahl, National INAD Office, Bozeman, MT at (406) 587-9265 x 125.

Sincerely,

Dr. David Erdahl
National INAD Coordinator

enclosures