



MARINE MAMMAL COMMISSION

30 August 2012

Mr. Timothy J. Van Norman
Chief, Branch of Permits
Division of Management Authority
U.S. Fish and Wildlife Service
4401 North Fairfax Drive
Arlington, VA 22203

Re: Request for Amendment, Permit No. MA186914
(Monterey Bay Aquarium)

Dear Mr. Van Norman:

The Marine Mammal Commission, in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the above-referenced permit application with regard to the goals, policies, and requirements of the Marine Mammal Protection Act. Permit MA186914 authorizes the Monterey Bay Aquarium to conduct research on sea otters that have been rescued from the wild, are undergoing rehabilitation, and could be returned to the wild under the Monterey Bay Aquarium's Sea Otter and Conservation Program. The Aquarium is requesting permission to add the use of cefovecin and serial blood sampling to the current permit, which expires in July 2013.

RECOMMENDATION

The Marine Mammal Commission recommends that the Fish and Wildlife Service issue the permit amendment, provided that the conditions in the current permit remain in effect.

RATIONALE

The purpose of the the Aquarium's research is to study sea otter (1) health, disease, and basic biology, (2) stress, (3) auditory adaptations, (4) reproductive parameters and contraceptives, and (5) genetics and cell lines, as well as the survival, behavior, movement, and reproductive success of otters released back into the wild. The studies covered under the existing permit involve harassing, observing, restraining, sedating, sampling, marking, and instrumenting sea otters. With this application, the Aquarium is requesting permission to add a controlled pharmacokinetics study of cefovecin, an extended-duration antibiotic. The study would enable the Aquarium to (1) determine the pharmacokinetic parameters of cefovecin, (2) determine whether cefovecin concentrations exceed minimum inhibitory concentrations for bacterial organisms isolated from sea otters, and (3) validate a high-performance liquid chromatography method for measuring cefovecin concentrations in sea otter plasma.

The Aquarium's proposed study would involve up to 16 adult or subadult sea otters of either sex and would occur for the duration of the permit. The subject animals would weigh at least 15 kg, would be considered healthy or clinically stable, and would be on no other medications. Sampling of any animal would be at the discretion of the attending veterinarian. Researchers would bring sea

Mr. Timothy Van Norman
30 August 2012
Page 2

otters to the Aquarium's veterinary lab and sedate them with fentanyl and midazolam for up to two hours. They would administer cefovecin subcutaneously and collect nine blood samples during the next 24 hours. They would use naltrexone to reverse the sedation effects and return the otters to their holding tanks after each sampling period. During the next 45 days, they would collect nine additional blood samples using manual or physical restraint. Researchers would limit the total blood volume drawn from each individual to no more than 0.5 percent of its body weight every 7 days. They would send the plasma samples to the University of California Davis for analysis.

The Aquarium's Institutional Animal Care and Use Committee reviewed and approved the proposed amendments to the research protocols. The Marine Mammal Commission believes the proposed study is reasonable and recommends that the Fish and Wildlife Service issue the permit amendment, provided that the conditions in the current permit remain in effect.

The Commission believes that the activities for which it has recommended approval are consistent with the purposes and policies of the Marine Mammal Protection Act.

Please contact me if you have any questions concerning the Commission's recommendation.

Sincerely,

A handwritten signature in blue ink that reads "Timothy J. Ragen". The signature is written in a cursive style with a long horizontal stroke at the beginning.

Timothy J. Ragen, Ph.D.
Executive Director