



MARINE MAMMAL COMMISSION

10 May 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: Permit Application No. PRT048161A
(Milton Levin, Ph.D.,
University of Connecticut)

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. Dr. Levin is requesting authorization to obtain and conduct analyses on manatee and polar bear samples during a five-year period.

RECOMMENDATION

The Marine Mammal Commission recommends that the Fish and Wildlife Service issue the permit, as requested.

RATIONALE

Dr. Levin is requesting authorization to obtain and conduct analyses on various samples from manatees and polar bears. The purpose of the research is to (1) evaluate the immune system of manatees and polar bears following *in vitro* exposure to anthropogenic chemicals (i.e., polychlorinated biphenyls, brominated flame retardants, and perfluorooctanesulfonic acid) and algal biotoxins (i.e., brevetoxin, domoic acid, and saxitoxin) and (2) validate, optimize, and utilize associated functional immune assays.

Dr. Levin would conduct analyses on blood samples collected from up to two manatees and seven polar bears held in captivity in the United States. The manatees currently are held at Mote Marine Laboratory and the polar bears currently are held at the Central Park Zoo, Bronx Zoo, Detroit Zoo, and Pittsburgh Zoo. Dr. Levin would obtain 10 mL of whole blood from each individual up to six times per year. The blood samples would be collected during routine health examinations. Dr. Levin also would import up to 20 ml each of serum, plasma, and blood leukocytes and up to 100 ml each of splenocytes and lymphocytes from Denmark for additional assays. Those samples would be collected from up to 10 subadult or adult polar bears of either sex that are taken during subsistence hunting activities in Greenland. The hunters would not take cubs, females with cubs, or denning bears and only local permitted hunters would be involved in the hunts.

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Dr. Levin's Institutional Animal Care and Use Committee has determined that the research activities are exempt from its review. Therefore, its approval is not needed.

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