

**Chemical Feeding Ecology of Hg in Marine Mammals of
Central CA (USA) and Gulf of California (Mexico)**

DRAFT March 29 2020, Todd May 27 2020

PhD Student, CIBNOR,
Supervisors Dra. Tania Zenteno Savin and Dra. Daniela Murillo Cisneros
Committee members Dr. Todd O'Hara, Dr. Lorrie Rea (proposed), Dra. Claudia Hernández

An international collaboration seeks a motivated person to pursue a bilingual (Spanish and English) PhD degree studying the flow and pathways of total mercury (THg) in marine mammals (e.g., California sea lions, harbor seals, harbor porpoise) from Central California (e.g., San Francisco Bay region) and Gulf of California in Mexico. The student would matriculate at Centro de Investigaciones Biológicas del Noroeste, S.C. (CIBNOR, <https://www.cibnor.gob.mx/>) with research support (e.g., analytical chemistry, toxicology) provided by colleagues in the USA (mostly Texas A&M University, possibly University of Alaska Fairbanks). We emphasize the use of marine mammals as One Health sentinels to better understand how Hg moves through marine systems. The student would explore the use of C, N and/or S stable isotopes to make these important ecological linkages to these piscivores. The collaborations will include Centro Interdisciplinario de Ciencias Marinas (CICIMAR), The Marine Mammal Center (California), University of Alaska Fairbanks, and Texas A&M University (the newly formed Bilingual Laboratory of Toxicology). There is potential for the student to be involved with human subjects research as well. The student should have experience in marine biology, chemistry of elements, ecology or related fields. Comparing the two regions is an important component of this research that builds on previous research in these two regions.

Dr. Daniela Murillo Cisneros is supported via a Memorandum of Agreement (MOA) between CIBNOR and Texas A&M University. As part of this MOA, Texas A&M University will provide research funding for the student that matriculates at CIBNOR who will support the student via courses, stipend, etc. (normal process for supporting graduate students).

Interested students should contact Dr. Tania Zenteno Savin (tzenteno04@cibnor.mx) and/or Dr. Daniela Murillo Cisneros (hanny01@live.com.mx).