

EPIDEMIOLOGY AND MOLECULAR CHARACTERIZATION OF SEA OTTER *CRYPTOSPORIDIUM* AND *GIARDIA* INFECTIONS

HYPOTHESES AND OBJECTIVES:

Hypotheses: Prevalence of *Cryptosporidium* and *Giardia* infections is higher in dead southern sea otters, as compared with live southern sea otters inhabiting the same areas. Molecular characterization of these sea otter parasites will reveal the same genotypes as those recognized as pathogens of terrestrial animals and humans.

Objectives:

1. Screen fecal samples obtained from live and dead southern sea otters for *Cryptosporidium* and *Giardia* parasites using parasite specific immunomagnetic bead separation.
2. Molecularly genotype *Cryptosporidium* and *Giardia* isolates to ascertain whether human genotypes, animal genotypes, or both are present in southern sea otters.
3. Statistically assess risk factors for *Cryptosporidium* and *Giardia* infections, including sea otter age, sex, live versus dead status, and sea otter sampling location.