

## Master project: AMB – NFH

“Spatial patterns in the seroprevalence of pathogens in by-caught Norwegian harbor porpoises”

### Supervisors:

Dr Marie-Anne Blanchet

Dr Ingebjørg H. Nymo

Professor Jacques Godfroid

### Project description:

Coastal areas act as sinks for a variety of pollutants and pathogens that humans and domestic animals produce. These pathogens may have a zoonotic potential besides their importance for wildlife populations and marine production animals. Marine mammals such as harbor porpoises (*Phocoena phocoena*) can be used as sentinel organisms to evaluate the health of marine ecosystems. They are long lived coastal residents and feed at high trophic levels on a diversity of taxons, some of which are also consumed by humans. Cases of contamination of marine life by terrestrial parasites have already been documented but few studies link exposure to pathogen to anthropogenic activities in a spatial context.

We propose to explore the association of three pathogens (*Toxoplasma gondii*, *Brucella* spp. and *Coxiella burnetii*) found in harbor porpoises to a variety of human activities such as aquaculture, fishery, settlements and coastal farming, marine outfall. We will test (mainly by serology) 130 harbor porpoises by caught along the Norwegian coast in 2016-2017. These results will be put in relation with coastal spatial parameters that may influence the likelihood of porpoises to be exposed to pollutants and pathogens.

We are looking for a student who could start on this project from August 2018. The candidate should be motivated, independent and have a good proficiency in statistics. Some basics in spatial analysis and GIS would be a plus.

The laboratory analysis will be conducted in Brussels, Belgium between September and November 2018 for ca 3-4 weeks. The candidate should be ready to travel to Belgium during this period to perform the lab work under the supervision of Prof. Godfroid.

If you are interested, please take contact with:

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