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### **Degree projects or internships with focus on antibiotics as environmental pollutants**

Antibiotics are essential for us humans to save lives, and prevent the spread of diseases. We also use large amounts of antibiotics in both livestock and aquaculture around the world. However, use of antibiotics means not only that we save lives, but also excessive use leads to that more and more bacteria develop resistance and will survive antibiotic treatment. Anthropogenic antibiotics are present in surface waters, sediments, soils and aquatic environments. Such antibiotics in the environment can, apart from being a threat to our health through the development of resistant bacteria, threaten animals in aquatic environments around the world.

Therefore, the objective of the present project is to reveal possible effects of antibiotic-polluted environments on the intestinal microbiome, the innate immunity and susceptibility to diseases in aquatic animals using freshwater crayfish as a model. Freshwater ecosystems encounter a rapid loss of biodiversity and thus several species among which nearly one third of the worlds freshwater crayfish are threatened with extinction. The factors driving the high risk of extinction are diverse and the knowledge is far from comprehensive, but susceptibility to disease is one important factor. The main question to be answered in this project is: do environmental anthropogenic antibiotics affect the intestinal microbiota of aquatic animals, i.e. crayfish and thereby the susceptibility of freshwater crayfish to different diseases.

If you are interested in conducting a thesis work or an internship within this research, please feel free to contact:

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