



## PhD Program between the Freie Universität Berlin (FUB) and the China Scholarship Council (CSC)

### Open PhD position at FUB for CSC scholarship candidates 2018

*Please note: the PhD position is only offered to Chinese PhD candidates for application in the framework of the FUB-CSC PhD Program.*

<b><u>Department/Institute:</u></b>	Leibniz Institute of Freshwater Ecology and Inland Fisheries, IGB
<b><u>Subject area:</u></b>	experimental evolution, ecology, genomics
<b><u>Name of Supervisor:</u></b>	Prof. Dr. Justyna Wolinska
<b><u>Number of open PhD positions:</u></b>	2
<b><u>Type of the PhD Study:</u></b>	Full-time
<b><u>Project title:</u></b>	Rapid evolutionary adaptations increase parasite infections under global warming

#### **PhD Project description:**

Little is known about the impact of climate warming on infections. Elevated temperatures have been shown to increase parasite multiplication rates, infectivity and/or virulence, but these short-term laboratory experiments did not allow rapid evolutionary adaptations of hosts or parasites. Recent studies have documented that organisms can adapt to warming, but this concept has been rarely applied for host-parasite interactions. This is surprising given the potential for rapid evolution during ecologically relevant time spans in parasites and in particular in planktonic hosts. We will perform long-term experiments to assess the effects of warming on parasites, their hosts and trophic interactions between (infected) phyto- and zooplankton (experimental systems: Daphnia infected with various microparasites, and cyanobacteria infected with chytrid fungi). Long-term exposure (several months, spanning several dozens of parasites and/or host generations) will allow testing for potential rapid evolutionary adaptations to warming (with reciprocal cross-infection experiments). Evolutionary adaptations will be assessed on phenotypic, transcriptional and genomic levels.

#### **Language requirements:**

IELTS: 6.5 or TOEFL: 95 ibt.

#### **Academic requirements:**

Master degree in biology or bioinformatics. Solid background in ecology, evolution and/or molecular biology, genomics. Excellent analytical skills and very good knowledge in statistics. Experience in experimental work and/or molecular/genomic research would be an advantage.

#### **Information of the professor or research group leader:**

Website of Prof. Justyna Wolinska: <http://www.igb-berlin.de/en/profile/justyna-wolinska>

Website of Disease Evolutionary Ecology group:

<http://www.igb-berlin.de/en/disease-evolutionary-ecology>

**Please note:** In a first step the complete application should be submitted to the Beijing Office for evaluation by January 4<sup>th</sup>, 2018. Please don't contact the professor before. He/She will get in contact with you after having received the complete application via the Beijing Office in January.