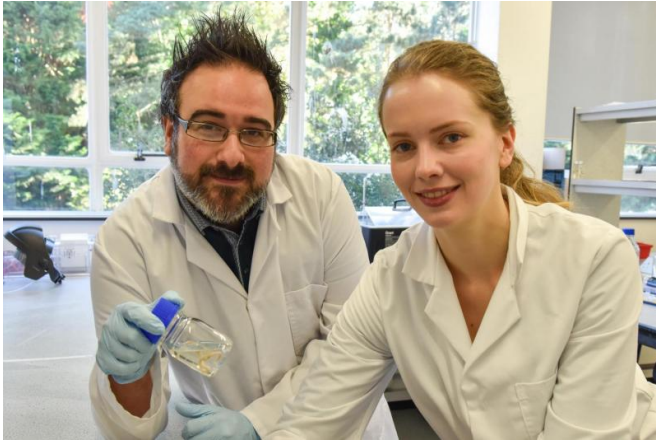


# Scientists embark on giant panda research

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AU8216 IBERS scientists embark on giant panda research

Scientists at Aberystwyth University's IBERS are well known for their research into agricultural animals and plants, but now a team of young researchers at the Institute are embarking on a new project to evaluate how a parasite which can affect giant pandas responds to anti-parasitic drugs.

Dr Russ Morphew and PhD student Cat Pye are working with Iain Valentine of the Royal Zoological Society of Scotland (RZSS), the conservation charity that owns and manages RZSS Edinburgh Zoo, with links to Chinese research centres, on a three year project to identify how the parasite responds to anti-parasitic drugs and, more specifically, whether drug resistance is the cause of repeat infections in captive giant panda populations.

Dr Morphew said: "We hope that our findings will not only help to inform conservation strategies in captivity and across China's giant panda reserves, but also that they could lead to improved control strategies to deal with infection in the future."

The project has been awarded CASE studentship

funding by the BBSRC (Biotechnology and Biological Sciences Research Council). This is a collaborative training grant that will provide Cat with a first-rate, challenging research training experience, allowing her (as a top quality bioscience graduate) to undertake research, leading to a PhD, that is of benefit to her and the partner organisations involved.

Giant pandas, the international symbol of conservation, are one of the most loved species in the world. In a similar way to domestic dogs and cats, [giant pandas](#) can be affected by a panda-specific parasitic roundworm called *Baylisascaris schroederi*. If left unchecked in the wild the roundworm can be fatal, as infection from the parasite can cause damage to the intestines and ultimately reach the brain and eyes.

Iain Valentine, Director of Giant Pandas for RZSS, said: "Like most animals - from dogs and cats to farm and zoo animals – giant pandas can catch roundworms specific to their species and, as part of good zoological husbandry practices, all animals including giant pandas are regularly wormed. However, evidence suggests that over time worms become resistant to some of the drugs currently being used."

"Nearly all giant pandas are infected with worms from their mother when they are cubs and it is then nearly impossible to eradicate them permanently. When animals are treated regularly the worms go into a dormant state in their body, but when females are pregnant, hormones allow the encysted larvae to hatch, hence the reason why nearly all puppies and kittens have worms as they are passed through their mother's milk."

"Although Yang Guang our male is extremely rare in having never shown any signs of worms or their eggs, Tian Tian has shed three worms in the last three years. Although this is only a few worms which has had no impact on Tian Tian's health, it does allow scientists to use her faeces to try to develop new and improved drugs to help pandas

who are affected more seriously by this condition."

"RZSS is sharing expertise, funding and contacts to assist scientists at Aberystwyth University's IBERS in undertaking this important research. Our colleagues in China are particularly excited by the results that may be achieved and the potential that exists to improve panda care."

Provided by Aberystwyth University

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