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From the Biological Secretary and Vice-President Sir David Read FRS

28 January 2008
Our ref: as/dr/280108
Royal Society policy number: 05/08

Dear Professor Watson

Re: Consultation on the ban on sale of certain non-native species: *Xenopus Laevis*

We have concerns regarding the proposed ban on the sale of *Xenopus Laevis* (hereafter referred to as *Xenopus)* and are disappointed that the Royal Society was not consulted formally on this issue. The ability to move, sell and exchange *Xenopus* within the academic community is essential for the future of a significant proportion of biomedical research in the UK and worldwide, with consequences for human and animal health. We acknowledge concerns related to use of *Xenopus* in UK laboratories. However, rather than ban the sale of *Xenopus*, we encourage the Government to work with the biomedical research community in minimising the risks associated with use of this vital research tool.

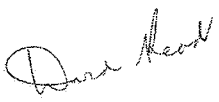
Xenopus has been one of the most productive model systems for studies of cell, molecular and developmental biology. Work on *Xenopus* has also yielded important insights into many areas including gene regulation, chromosome structure and regulation, cell cycle control and signal transduction. The first gene to be isolated came from *Xenopus*. In addition, *Xenopus* was the first vertebrate species to be cloned. Additional benefits of using *Xenopus* as a research tool include the relative simplicity with which transgenic versions can be made and that loss-of-function studies are possible.

Xenopus can carry the fungus *Batachochytrium dendrobatidis* (*Bd*) which is at least partially responsible for massed amphibian die-offs across the world. There is clear evidence for the existence of *Bd* in UK laboratory *Xenopus* colonies and there is concern that animals or infectious material from laboratories may escape and become endemic in the UK, thus leading

to declines in indigenous (native) amphibia. *Xenopus* can carry *Bd* with little or no effect and, under regulated laboratory conditions, it is highly unlikely that adult animals would escape. However, there are potential hazards which should be addressed. *Xenopus* embryos or tadpoles could be released into drains, from which they might escape and mature into adult animals. This can be prevented by good laboratory practice. There is also a risk of release of *Bd* spores from contaminated water in laboratory aquaria. The UK research community takes these concerns very seriously and is currently working to identify and treat *Xenopus* carriers of *Bd*, with the aim of total *Bd* eradication from UK laboratories. In the interim, we understand that a draft code of practice is being prepared to minimize the spread of *Bd* whilst using *Xenopus* for biomedical research within the UK.

We would be happy to provide further information, or to suggest scientific experts for additional consultation. Please contact Dr Anne Simpson (email: anne.simpson@royalsociety.org, tel: +44 (0)20 7451 2591) to discuss this issue further in the first instance.

Yours sincerely



David J Read

CC: Matt Ashton, defra