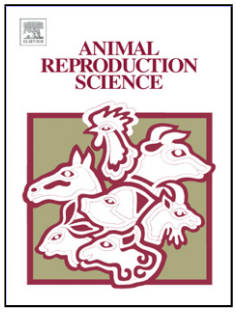

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Freeze-dried spermatozoa: an alternative biobanking option for endangered species

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ABSTRACT

In addition to the iconic wild species, such as the pandas and Siberian tigers, an ever-increasing number of domestic species are also threatened with extinction. Biobanking of spermatozoa could preserve genetic heritages of extinct species, and maintain biodiversity of existing species. Because lyophilized spermatozoa retain fertilizing capacity, the aim was to assess whether freeze-dried spermatozoa are an alternative option to save endangered sheep breeds. To achieve this objective, semen was collected from an Italian endangered sheep breed (Pagliarola), and a biobank of cryopreserved and freeze-dried spermatozoa was established, and evaluated using IVF (for frozen spermatozoa) and ICSI procedures (for frozen and freeze-