

International Conference and Exhibition on **Tissue Preservation & Bio-banking**

July 20-22, 2015 Barcelona, Spain

Evaluation of tris-citric acid, skim milk and sodium citrate extenders for liquid storage of Punjab urial (*Ovis vignei punjabiensis*) spermatozoa

Bushra A Rakha

Pir Mehr Ali Shah Arid Agriculture University Rawalpindi, Pakistan

The Punjab urial (*Ovis vignei punjabiensis*) is an endangered sub-species of ovidae, distributed as small scattered populations in the forest belt of the Himalayan foothills of Pakistan and in the areas enclosed by the Indus and the Jhelum rivers. The present study was conducted to evaluate the liquid storage of Punjab urial spermatozoa in different extenders for use in future in situ conservation activities. Semen was collected by electro-ejaculation from three captive Punjab urial rams. Suitable ejaculates of individual animals were pooled and divided into three aliquots for dilution with the experimental extenders (Tris-citric acid, skim milk and sodium citrate) at 37°C. Extended semen was cooled from 37°C to 5°C in 2 hours and stored for three days at 5°C. Sperm motility (%), viability (%; live/dead), acrosome integrity (%) and plasma membrane integrity (%) were assessed on days 1, 2 and 3 of storage. On day 1, sperm motility, viability as well as acrosome and plasma membrane integrity were similar ($P>0.05$) in all three experimental extenders. On day 2, sperm motility, viability, acrosome and plasma membrane integrity were higher ($P<0.05$) in Tris-citric acid extender compared to sodium citrate based extender. On day 3 of storage, the values of motility, viability and acrosome integrity were higher ($P<0.05$) in Tris-citric acid extender than in skim milk and sodium citrate based extenders. In conclusion, Tris-citric acid extender appears to be a better option compared with skim milk and sodium citrate extenders for liquid storage of Punjab urial semen.

arbushra@uaar.edu.pk

Biobanking and translational medicine: The academic perspective

David T Harris

University of Arizona, USA

The University of Arizona Biorepository is responsible for collecting, storing, tracking, processing, and distributing human tissue, blood, and other bio-specimens. The Biorepository's mission is to provide high-quality, clinically annotated specimens to the research community at this and other institutions as well as to industry involved in biomedical research. Researchers can use the stored materials for future research studies to learn more about cancer, diabetes, and other health problems. The bank will provide a ready supply of samples, so researchers do not have to look for donors for each new study. The biorepository provides consistent collection, processing, banking and clinical correlative procedures and operates in conjunction with departments of Surgery, Ophthalmology, Pulmonology, Aging, Neurology, Neurosurgery, Biomedical Engineering, OB-GYN, Cardiology and others. Currently the bio-repository has in its possession 1.5 million patient samples obtained through Pathology. The bio-repository utilizes universal electronic consents providing annotated clinical data on each patient through an Honest Broker arrangement. All samples are linked to patient medical identifiers allowing for access to the electronic health record now and at all times in the future in a de-identified fashion. Fresh frozen paraffin blocks, blood, plasma, sera, urine and other biological fluids; as well as biopsies and other tissues/bio-samples are stored. In addition, DNA/RNA/proteins are also banked for all samples. Significantly, we have now developed methodology allowing for genomic and phenotypic sample characterization for approx. \$2/patient sample. As all samples are stored according to industry best practices, in temperature-controlled, monitored, and alarmed environments (in LN2 or other freezers as appropriate) to maximize resource integrity utilizing cGTP practices whenever possible, the biorepository also serves as a source of cells and tissues for projects involving translational and regenerative medicine. To facilitate investigator interactions the biorepository utilizes Tissue Metrix2 as the central database for information on all banked bio-samples. The software has a web-based front-end with an Oracle database which permits access from web browsers across multiple platforms. It employs role based security to permit control over user access to information stored in the database. The i2b2 open source exploration tool is used as a storefront for investigator sample requests in a text based format.

davidh@email.arizona.edu