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Supplementary Material

Seasonal variation in sperm freezability associated with changes in testicular germinal epithelium in domestic (*Ovis aries*) and wild (*Ovis musimon*) sheep

Lucía Martínez-Fresneda[A,B,C], *Emma O'Brien*[A], *Rosario Velázquez*[A], *Adolfo Toledano-Díaz*[A], *Carlos M. Martínez-Cáceres*[D], *Dawit Tesfaye*[B], *Karl Schellander*[B], *Francisco A. García-Vázquez*[C,E] *and Julian Santiago-Moreno*[A,F]

[A]Department of Animal Reproduction, Spanish National Institute for Agricultural and Food Research and Technology (INIA), Avda. Puerta de Hierro km 5.9, 28040 Madrid, Spain.

[B]Department of Animal Breeding and Husbandry, Institute of Animal Science, University of Bonn, Endenicher Allee 15, 53115 Bonn, Germany.

[C]Department of Physiology, Faculty of Veterinary Science, International Excellence Campus for Higher Education and Research 'Campus Mare Nostrum', University of Murcia, Campus de Espinardo, 30100 Murcia, Spain.

[D]Pathology Unit, Biomedical Research Institute of Murcia (IMIB-Arrixaca), Crta. Buenavista s/n, El Palmar 30120 Murcia, Spain.

[E]Reproductive Physiology and Assisted Reproduction Unit, Biomedical Research Institute of Murcia (IMIB-Arrixaca), Crta. Buenavista s/n, El Palmar 30120 Murcia, Spain.

[F]Corresponding author. Email: moreno@inia.es

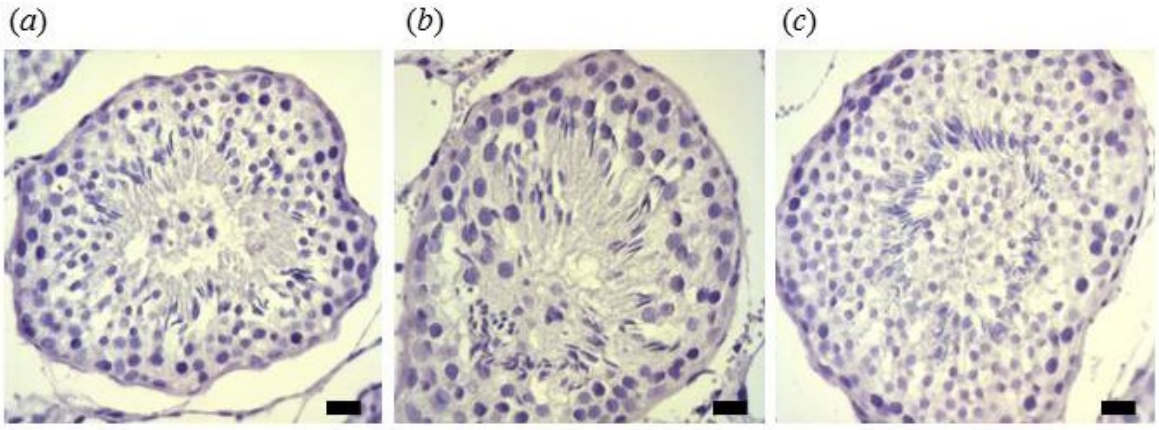

Fig. S1. Negative controls of PCNA (*a*), Ki67 (*b*) and GATA-4 (*c*) in seminiferous tubules of testicular biopsies at 400× magnification. Scale bar = 20 μm.

Table S1. Cryoresistance ratio (CR = Post-thaw value/ Fresh value × 100) to compare freezability between the middle and the end of the rutting season (Middle-RS and End-RS) in Merino (*n* = 9 and *n* = 8) and Mouflon rams (*n* = 11 and *n* = 25)

Asterisks indicate statistically significant differences between groups of the same species (*$P<0.05$)

	Cryoresistance ratio			
	Merino ram		Mouflon ram	
Group	**Middle-RS**	**End-RS**	**Middle-RS**	**End-RS**
Month of collection	**July**	**December**	**November**	**January**
Levels of testosterone	**High**	**Low**	**High**	**Low**
Sperm viability and acrosomal status:				
Total viability (%)	49.7±9.3*	81.2±5.0*	46.0±7.8*	65.0±4.0*
Acrosome integrity (%)	68.0±9.7*	92.4±3.9*	65.9±10.6*	85.5±3.7*
Motility variables:				
Total motility (%)	45.0±4.5	53.5±12.1	38.6±7.5*	61.7±5.1*
PM (%)	69.1±15.0	46.2±13.4	68.1±21.5	106.3±18.5
VCL (μm s^{-1})	67.6±3.9	51.8±8.7	88.7±17.7*	125.1±6.1*
VSL (μm s^{-1})	94.8±12.1*	51.3±9.6*	111.3±38.7	155.7±15.5
VAP (μm s^{-1})	80.9±6.8*	50.5±9.0*	106.5±33.8	145.2±11.2
LIN (%)	138.0±12.0*	87.2±15.7*	116.7±15.1	123.6±10.0
STR (%)	115.0±6.5	88.4±13.3	102.2±4.1	105.8±4.6
WOB (%)	118.6±4.6*	85.4±13.9*	113.3±11.2	114.2±5.1
ALH (μm)	47.7±2.6	69.9±12.5	77.9±6.1*	117.4±6.7*
BCF (Hz)	112.1±9.7*	68.5±10.9*	91.9±7.1	112.3±9.6
Morpho-abnormalities (%)	571.0±229.3	167.4±37.0	96.7±13.6	154.1±27.2