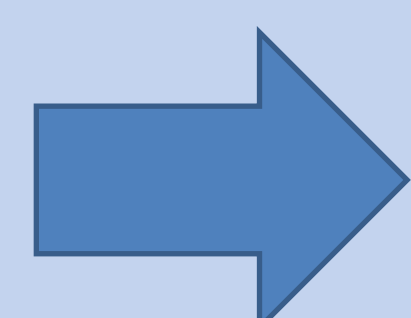


Sara Forés González
Curs 2015/2016

INTRODUCTION

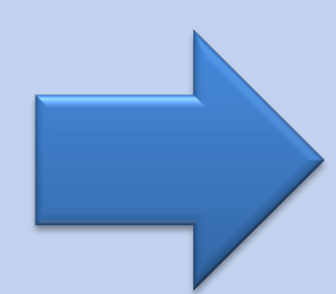
The rabbit sperm cells show bad results after cryopreservation and the viability decreases significantly



- ❖ The objective of this study is to assess the use of HHPs in rabbit sperm cells. Our hypothesis is that this technique could improve the cryopreservation results.
- ❖ The purpose is to know whether applying HHPs before freezing it can improve motility and viability parameters in cryopreserved rabbit sperm cells.

MATERIAL AND METHODS

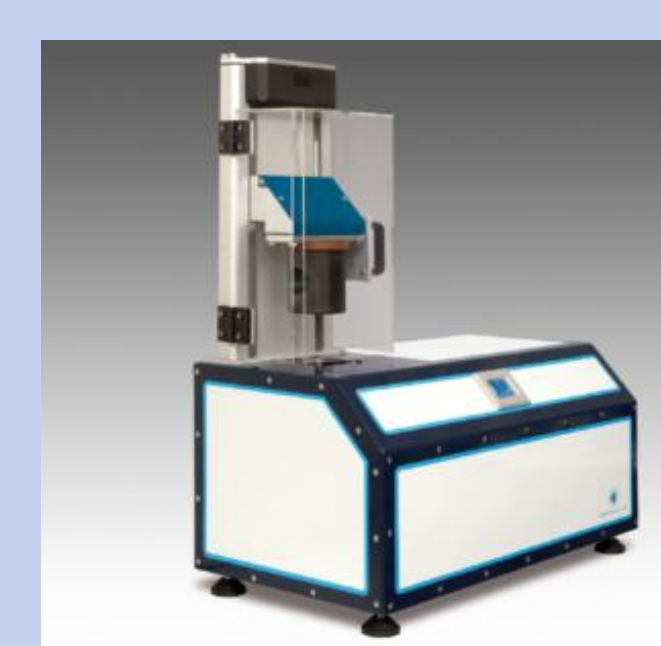
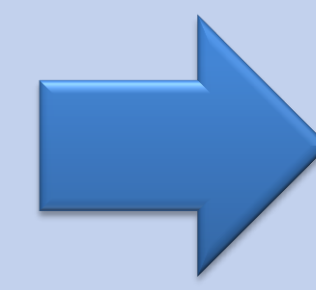
Sperm collection



Sperm concentration
(Neubauer chamber)



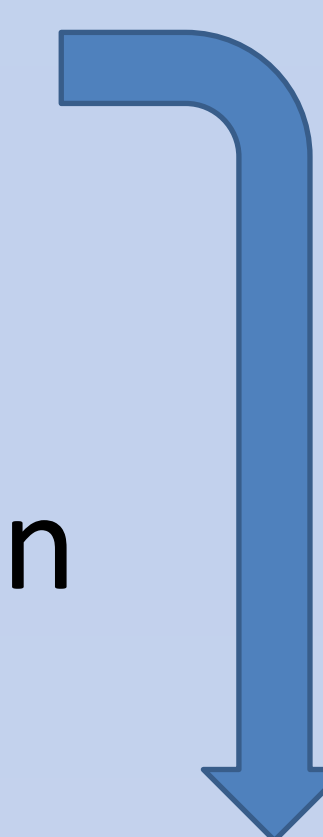
Sperm dilution
(different dilution media)



HHPs
(different values of pressure)



Cryopreservation



Assessment of viability (eosin-nigrosin staining) and motility (CASA) for each sample



Viability test (eosin-nigrosin staining)
Pink=Dead White=Viable

RESULTS:

Table 1. Exposure of rabbit sperm cells to different pressures (100MPa vs 50MPa) and different diluents.

GALAP and Gent A are a refrigerated diluent. GentB is a freezing diluent.

Sample	Viability (%)	SD	Total Motility (%)	
Control	GALAP	89,7	7,7	91,6
	GentA	92,5	8,4	86,0
	GentB	96,7	2,1	90,5
HHP + Refrigerated at 100MPa	GALAP	66,9	14,5	7,0
	GentB	62,0	5,6	14,2
HHP + Refrigerated at 50MPa	GentA	78,5	2,8	44,8
	GentB	80,3	5,1	2,1
HHP + Frozen at 100MPa	GALAP	0,0	0,0	0,7
	GentB	0,0	0,0	1,6
HHP + Frozen at 50MPa	GentA	42,9	80,4	0,4
	GentA 30'	71,5	14,9	3,7
	GentB	95,8	6,7	2,1
	GentB 30'	92,8	5,5	1,9
NO HHP + Frozen	GALAP	10,1	5,1	5,3
	GentA	8,2	6,3	22,2
	GentB	26,5	18,3	69,8
End Control t=6h	GALAP	85,9	6,8	83,2
	GentA	82,5	-	65,2
	GentB	19,5	-	65,2

CONCLUSIONS:

- GentA → It's a refrigeration diluent. The viability is better than other diluents (Gent A and B) for refrigerated samples
- In the End Control → GentB viability is the most negatively affected group because it is a freezing diluent.
- The mortality rate raises significantly under HHP.
- The motility is affected due to HHP.
- More experiments are necessary to confirm the results about the use of HHP in combination with rabbit semen cryopreservation.