

1. Institution

TechnoSperm (Biotechnology of Animal and Human Reproduction)
Department of Biology. Institute of Food and Agricultural Technology.
University of Girona.
Campus Montilvi, s/n
17071 Girona

2. Principal investigator and contact person

Professor Sergi Bonet (.bonet@udg.edu)
Tel: +34 972 418 366 / +34 972 183 216
Fax: +34 972 418 150

3. Key personnel

NAME	EMAIL	RESEARCH AREA DETAILS
Mailo Briz	.briz@udg.edu	Cell cultures
Eva Bussalleu	.busalleu@udg.edu	Improvement of sperm quality, molecular tools for pathogen diagnosis in semen
Isabel Casas	.casas@udg.edu	Sperm cryopreservation
Anna Fàbrega	.fabrega@udg.edu	Epididymal sperm maturation, flow cytometry
Elisabeth Pinart	.pinart@udg.edu	Sperm maturation, sperm function, fluorescence microscopy
Sílvia Sancho	.sancho@udg.edu	Sperm cryopreservation, sperm quality
Eva Torner	.torner@udg.edu	Molecular tools for pathogen diagnosis in semen and other specimens
Marc Yeste	.yeste@udg.edu	Spermatozoa-Oviductal cells interactions, Cell cultures, gene expression

4. Research profile

TechnoSperm (Biotechnology on Animal and Human Reproduction) is a research group basically focused on swine sector. This group also deals with other mammalian species and human, and collaborates with other national and European research groups and companies. The main research lines are sperm cryopreservation, improvement of sperm quality, determination of pathogenesis in semen samples, assisted reproduction techniques, sperm biology, sperm function, sperm-OEC interactions, improvement of reproductive performance and reproductive traceability.

5. Key technologies and tools

Sperm cryopreservation, semen bank, analysis of sperm quality, molecular diagnosis for bacterial and viral loads in semen and other specimens, epididymal and oviductal cell cultures, proteomics, flow cytometry.

6. Selected publications (max. 5)

Bussalleu, E.; Pinart, E.; Yeste, M.; Briz, M.; Sancho, S.; Garcia-Gil, N.; Badia, E.; Bassols, J.; Pruneda, A.; Casas, I.; Bonet, S. 2005. Development of a protocol for multiple staining with fluorochromes to assess the functional status of boar spermatozoa. *Microscopy Research and Technique*, 63: 277-283

Sancho, S.; Casas, I.; Rodríguez-Gil, J.E.; Ekwall, H.; Saravia, F.; Rodríguez-Martínez, H.; Flores, E.; Pinart, E.; Briz, M.; Garcia-Gil, N.; Bassols, J.; Pruneda, A.; Bussalleu, E.; Yeste, M.; Bonet, S. 2007. Effects of cryopreservation on semen quality and the expression of membrane hexose transporters in the spermatozoa of Iberian pigs. *Reproduction*, 134: 111-121.

Yeste, M.; Lloyd, R.E.; Badia, E.; Briz, M.; Bonet, S.; Holt W.V. 2009. Direct contact between boar spermatozoa and porcine oviductal epithelial cell (OEC) cultures is needed for optimal sperm survival in vitro. *Animal Reproduction Science*, 113: 263-278.

Casas, I.; Sancho, S.; Briz, M.; Pinart, E.; Bussalleu, E.; Yeste, M.; Bonet, S. 2009. Fertility after post-cervical artificial insemination with cryopreserved sperm from boar ejaculates of good and poor freezability. *Animal Reproduction Science*, doi: 10.1016/j.anireprosci.2009.06.003 (in press)

Casas, I.; Sancho, S.; Briz, M.; Pinart, E.; Bussalleu, E.; Yeste, M.; Bonet, S. 2009. Freezability prediction of boar ejaculates assessed by functional sperm parameters and sperm proteins. *Theriogenology* (in press)