

1. Institution

Division of Reproduction (Ex Dept of Obstetrics and Gynaecology), Dept of Clinical Sciences, Faculty of Veterinary Medicine and Animal Sciences, Swedish University of Agricultural Sciences (SLU), Box 7054, SE-750 07 Uppsala, Sweden. <<http://www.kv.slu.se/>>

2. Principal investigator and contact person

Heriberto Rodriguez-Martinez (DVM, MSc, PhD, Dipl ECAR, Professor)
Tel: 018/672172, FAX: 018/673545, e-mail: heriberto.rodriguez@kv.slu.se

3. Key personnel

Renee Båge	Renee.bage@kv.slu.se	Female reproductive physiology
Jane Morrell	Jane.Morrell@kv.slu.se	Andrology, sperm selection
Margareta Wallgren	Margareta.wallgren@kv.slu.se	Andrology, sperm function, cryobiology
Ann-Sofi Bergqvist	Ann-sofi.bergqvist@kv.slu.se	Oviduct function, proteomics, IHC
Fernando Saravia	Fernando.saravia@kv.slu.se	Cryobiology
Ylva Brandt	Ylva.brandt@kv.slu.se	Oviduct function, IVF
Anders Johannisson (assoc Dept of AFB)*	Anders.johannisson@afys.slu.se	Flow cytometry, cell analysis

*own inst profile

4. Research profile

The major research interests of the laboratory group are the interactions of gametes and embryos with the maternal environment. There is a particular interest in spermatology and sperm-tubal interactions in domestic animals as well as in the loss of fertilizing capacity of cryopreserved spermatozoa. Development of diagnostic tools and methods for sperm structure and function go along with the development of novel methods for sperm selection and cryopreservation for assisted reproductive techniques, particularly AI. As well, there is a long-lasting interest in the reasons behind reproductive wastage in dairy cattle and pigs in relation to environmental and production cues. The group is particularly keen in performing *in vivo*-studies (cattle, pigs) albeit proficiency has been demonstrated for *in vitro*-models (tissue culture and IVF).

5. Key technologies and tools

Tissue and cell analyses, including LM, IHC and EM - Flow cytometry - Computer-assisted sperm analysers – Cryobiology (incl x-ray microanalysis) - Tissue culture and oviduct epithelial and endometrium cell cultures – IVF/IVC – Proteomics - Facilities for animal research and IVF.

6. Selected publications

- Rodriguez-Martinez H (2007) Role of the oviduct in sperm capacitation. *Theriogenology* 68: 138-146.
- Ekwall H, Hernández M, Saravia F & H Rodríguez-Martínez (2007) Cryo-scanning electron microscopy (Cryo-SEM) of boar semen frozen in medium-straws and MiniFlatPacks. *Theriogenology* 67: 1463-1472.
- Saravia F, Hernández M, Wallgren MK, Johannisson A & H Rodríguez-Martínez (2007) Cooling during semen cryopreservation does not induce capacitation of boar spermatozoa. *Int J Androl* 30: 485-499.
- Caballero I, Vazquez JM, García EM, Roca J, Martínez EA, Calvete JJ, Sanz L, Ekwall H & H Rodríguez-Martínez (2006) Immunolocalization and possible functional role of PSP-I/PSP-II heterodimer in highly-extended boar spermatozoa. *J Androl* 27: 766-773.
- Bergqvist AS, Ballester J, Johannisson A, Hernández M, Lundeheim N & H Rodríguez-Martínez (2006) *In vitro* capacitation of bull spermatozoa by oviductal fluid and its components. *Zygote* 14: 259-273.
- Abe Y, Hara K, Matsumoto H, Kobayashi J, Sasada H, Ekwall H, H Rodriguez-Martinez & E Sato (2005) Feasibility of a nylon-mesh holder for vitrification of bovine germinal vesicle oocytes in subsequent production of viable blastocysts. *Biol Reprod* 72: 1416-1420.