

1. Institution

Department of Structural and Functional Biology, Laboratory of Biology of Reproduction, University of Naples "Federico II", Complesso Universitario di Monte S Angelo, Via Cinthia 80126, Naples, Italy
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2. Principal Investigator and contact person

Roberto Gualtieri roberto.gualtieri@unina.it

Riccardo Talevi riccardo.talevi@unina.it

Valentina Mollo	vale.mollo@libero.it	Cell culture, proteomics
Loredana Ricchiari	loredana.ricchiari@virgilio.it	Electron microscopy, fluorescence microscopy

4. Research profile

Main research interests are understanding sperm interaction in the female reproductive tract, presence and role of the endocannabinoid system in sperm and female reproductive tract, in vitro fertilization, cellular and molecular damages that reduce the developmental competence in cryopreserved human oocytes and refinement of new technologies able to preserve the oocyte quality, ovarian cryopreservation. Research is carried on human and animal models. We use technologies such as in vitro cell culture, cell-cell adhesion assays, in vivo and in vitro fluorescence labeling, electron microscopy, gel electrophoresis and western blotting, computer-assisted sperm analysis.

5. Key technologies and tools

Tissue culture and oviduct epithelial cell cultures - In vitro embryo production – In situ fluorescence labeling – Time lapse fluorescence microscopy - Ultrastructure - Proteomics – Computer- assisted sperm analysis.

6. Selected publications (max. 5)

Gualtieri R, Iaccarino M, Mollo V, Prisco M, Iaccarino S, Talevi R. Slow cooling of human oocytes: Ultrastructural injuries and apoptotic status. *Fertility and Sterility* IN PRESS

Boni R, Gualtieri R, Talevi R, Tosti E. Calcium and other ion dynamics during gamete maturation and fertilization. *Theriogenology*. 2007. 68 Suppl 1:S156-64.

Talevi R, Zagami M, Castaldo M, Gualtieri R. Redox regulation of sperm surface thiols modulates adhesion to the fallopian tube epithelium. *Biol Reprod*. 2007 76(4):728-35.

Gualtieri R, Boni R, Tosti E, Zagami M, Talevi R. Intracellular calcium and protein tyrosine phosphorylation during the release of bovine sperm adhering to the fallopian tube epithelium in vitro. *Reproduction*. 2005 129(1):51-60.

Gualtieri R, Talevi R. Selection of highly fertilization-competent bovine spermatozoa through adhesion to the Fallopian tube epithelium in vitro. *Reproduction*. 2003 125(2):251-8.