

## Seminal plasma and extracellular vesicles: their composition and role in sperm function and fertility in animals

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### **DESCRIPTION**

Seminal plasma, a complex fluid composed mainly of secretions from accessory sex glands, is now recognized for its critical role in modulating sperm function and influencing male fertility. The bioactive components of seminal plasma, mainly proteins, have been demonstrated to modulate sperm physiological processes, such as motility or capacitation, and the immune environment in female reproductive tract, considered crucial for successful early embryo development. Seminal plasma is particularly enriched in extracellular vesicles (EVs), defined as membranous nanoparticles (30-1000 nm) released by cells and involved in cell-to-cell communication. Extracellular vesicles (EVs) present in seminal plasma have emerged as important carriers of seminal biomolecules, being involved in reproductive processes.

The objective of this workshop is to present the latest research on the composition and function of seminal plasma and seminal EVs in relation to sperm function and fertility, with special focus on porcine species. In addition, attendees will gain practical knowledge on the isolation and characterization of seminal EVs.

### **STRUCTURE OF THE WORKSHOP** (maximum 4 hours)

**Session 1:** Seminal plasma composition and its role in sperm function and fertility (30 min).



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**Session 2:** Seminal EVs: Isolation, characterization and composition (*30 min*).

**Session 3:** Role of seminal EVs in sperm function and fertility (*30 min*).

**Discussion** (*15 min*).

**DATE AND TIME:** 25 th March 2025, at 12:00 pm

**PRICE:** 5€ for ISEAS members

**PLATFORM:** ZOOM (link and password will be sent to participants' email before the workshop)

