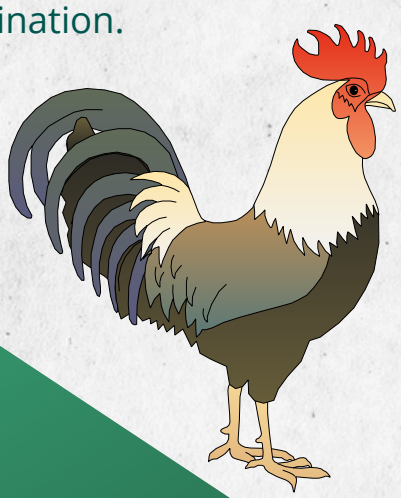
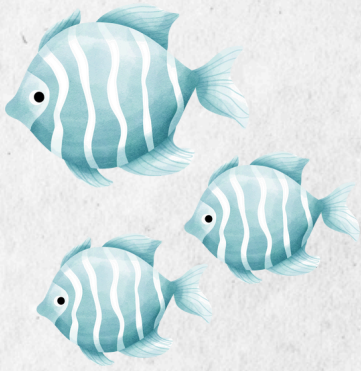
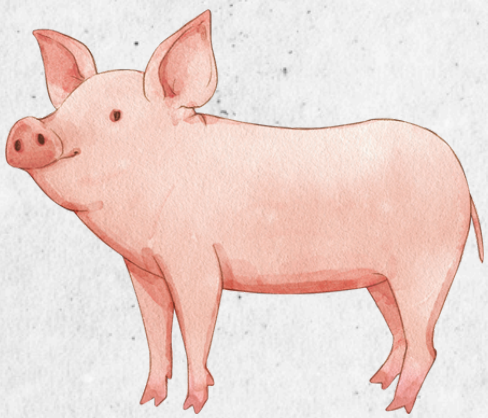
Innovative approaches to semen storage: Assessing the viability and stability of antimicrobial formulations

Spermatozoa are sensitive cells with a complex response to their environment. Semen extenders are formulated with great care to maintain their structure and functions to achieve good fertility after storage. Therefore, the design of formulations must consider that spermatozoa are free-swimming cells in direct contact with the antimicrobial extracts, contrary to other applications (for instance, through diet or topical).

As a first step through designing effective antibiotic-free semen extenders, NeoGiANT is testing the potential formulations on spermatozoa from fish, poultry, pig, and bull, determining the useful ranges. Any effects on sperm motility or functionality are evaluated to determine if the polyphenols present in the extracts could influence the suitability of the extenders for maintaining sperm fertility. Since the extenders must maintain their physical and chemical characteristics to meet the market requirements, the study includes measuring diverse parameters and evaluating if the extracts modify them significantly. This task produces a range of antibiotic free formulations ready for testing in production scenarios for refrigerated or cryopreserved sperm storage and eventually for application in artificial insemination.







NeoGiANT

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