

Training program planned in the context of the requested project

This proposal focuses on advancing cutting-edge in vitro models to replicate the maternal microenvironment, aiming to enhance reproductive success and genetic efficiency in bovine. The research spans diverse biotechnologies, including assisted reproduction, developmental biology, molecular and cellular biology, and bioinformatics. The multifaceted approach provides comprehensive training for postgraduate students in advanced techniques and methodologies, preparing them for successful professional careers. The proposed four-year timeline allows for thorough exploration of research areas, making it suitable for the completion of a high-quality PhD. The student will enroll in the Doctoral School of the Universidad Complutense de Madrid, offering relevant courses for their academic development, covering topics such as thesis preparation, research methodology, publication strategies, research dissemination, and career opportunities, including personal well-being (<https://edotorado.ucm.es/area-de-formacion>). The student will enroll in the Doctoral Program in Veterinary Sciences and will actively engage in scientific seminars, complete relevant courses, contribute to national (AERA, ANEMBE) and international scientific congresses (AETE, IETS, SSR, ICAR), and deliver oral presentations related to the research project. Access to advanced scientific training from CSIC, other universities and scientific societies will be facilitated. Research activities will occur in the Department of Animal Reproduction, providing a dynamic environment with various research groups. The student will join the Assisted Reproductive Technologies and Preimplantational Embryology research group led by Dr. Rizos and will be part of dynamic groups collaborating with students, postdocs, and experienced technicians. International collaborations and research stays will further enrich the doctoral training, with opportunities in UCD-Ireland, University of Utrecht-The Netherlands and Colorado State University, participating in the current proposal. The goal is for the researcher to publish at least three first-author research papers (Q1), obtain international mention PhD, and contribute to other manuscripts. The supervisors will support the researcher in applying for postdoctoral positions or other professional opportunities.