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Follicular Components Determining the Developmental Competence of Oocytes and Embryos in Vitro

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Deadline for manuscript submissions:
closed (30 November 2021)

Message from the Guest Editors

Dear Colleagues,

Domestic animals have been extensively studied in terms of reproduction and development of efficient in vitro fertilization techniques. One of the main goals was to decipher the mechanisms of early embryo development and describe the factors which shape developmental competence. Today, the environment has been shown to play a pivotal role in shaping the developmental competence of oocytes and embryos. This concerns follicular fluid composition as well as metabolism and bidirectional crosstalk of the oocyte and cumulus cells. Proteomic and transcriptomic profiles, extracellular vesicles, microRNA regulation, energy, and lipid metabolism are just a few examples of extrinsic factors influencing the in vitro embryo culture efficiency. Developmental programming and embryo plasticity support the growth, cleavage, and cell divisions; however, the question arises about the true predictive potential of examined factors in terms of fertilization rate, embryo yield or pregnancy outcomes. In this Special Issue, we welcome all high-quality research-based manuscripts describing the fundamental role of external factors which may serve as a marker of oocyte and embryo quality.

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Message from the Editor-in-Chief

Animals is an on-line open access journal that was first published in 2011. *Animals* adheres to rigorous peerreview and editorial processes and publishes only high quality manuscripts that address important issues in the many varied disciplines that involve animals, with a focus on animal science, animal welfare and animal ethics. *Animals* is covered in the Science Citation Index Expanded (SCIE) in Web of Science, with the latest Impact Factor: 2.7 (2023, ranks 10/80 (Q1) in 'Agriculture, Dairy & Animal Science'; 16/167 (Q1) in 'Veterinary Sciences'), 5-Year Impact Factor: 3.0.

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