

Special Issue

Livestock Reproduction: Sperm Capacitation and In Vitro Fertilization

Message from the Guest Editor

Mammalian sperm must undergo further maturation after ejaculation before they are capable of fertilization. This maturation process, referred to as capacitation, is essential for sperm to fertilize oocytes both in vitro or in vivo.

Much information on the mechanisms of capacitation has been gained in the last 20 years and the primary goal of this special issue is to address what is the status of that knowledge, new approaches, and how capacitation can be determined in vitro. The second goal of this special issue is to understand how best to promote in vitro fertilization, the success of subsequent embryo development, and how the capacitation status of sperm affects embryo development outcomes.

The information in the issue will enhance our understanding of molecular and physiological changes in sperm that promote fertilization, as well as how to successfully fertilize oocytes in vitro that lead to a viable embryo.

We look forward to your contributions.

Guest Editor

Prof. Dr. John Parrish

Department of Animal and Dairy Sciences, University of Wisconsin-Madison, 1675 Observatory Drive, Madison, WI 53706, USA

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Animals
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
animals@mdpi.com

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About the Journal

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 (2024, ranks 15/86 (Q1) in 'Agriculture, Dairy & Animal Science'; 21/170 (Q1) in 'Veterinary Sciences'), 5-Year Impact Factor: 3.2.

Editor-in-Chief

Prof. Dr. Clive J. C. Phillips

1. Curtin University Sustainable Policy (CUSP) Institute, Curtin University, Kent St., Bentley, Western Australia 6102, Australia
 2. Former Foundation Professor of Animal Welfare, University of Queensland and Foundation Director, Centre for Animal Welfare and Ethics, University of Queensland, Brisbane, Australia
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