JRD Vol. 71 (1) の発刊のお知らせ
SRD 会員の皆様へ

平素から The Journal of Reproduction and Development (JRD) の刊行にご協力を頂き有難うございます。Vol. 71 (1) が発刊となりました。ご一読いただき，また論文執筆の際にはご活用いただけますようお願いいたします。

本号では，若山 清香 先生，若山 照彦 先生に招待総説論文「Can Humanity Thrive Beyond the Galaxy?」を，2024 年に SRD 奨励賞を受賞された坂口 謙一郎 先生に招待総説論文「Optimization of ovum pick-up-*in vitro* fertilization and *in vitro* growth of immature oocytes in ruminants」を寄稿していただきました。是非お読みいただけましたら幸いです。

JRD 編集委員長 原山 洋

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https://www.jstage.jst.go.jp/browse/jrd/71/1/_contents/-char/en

SRD Young Investigator Award 2024; Invited review article

Optimization of ovum pick-up-*in vitro* fertilization and *in vitro* growth of immature oocytes in ruminants
Kenichiro SAKAGUCHI
Volume 71, Issue 1, Pages 1-9
DOI https://doi.org/10.1262/jrd.2024-091

Invited review article

Can Humanity Thrive Beyond the Galaxy?
Sayaka WAKAYAMA, Teruhiko WAKAYAMA
Volume 71, Issue 1, Pages 10-16
DOI https://doi.org/10.1262/jrd.2024-099
Cover Story:
The expansion of humanity into space is inevitable. However, human reproduction within space habitats or on extraterrestrial planets poses profound challenges including harmful mutations caused by cosmic radiation and abnormal development of embryos and fetuses in non-terrestrial gravitational environments. Moreover, colonizing other star systems necessitates the transportation of thousands of individuals from each animal species to the target planet to prevent inbreeding-related degeneration. Looking further ahead, as humans disperse throughout the galaxy, the imperative to preserve all genetic resources from Earth permanently and securely becomes paramount. This review examines the issues that must be addressed to ensure human prosperity in space, as well as the challenges that need to be resolved for the transport and long-term preservation of vast genetic resources.

Original Article

Comparison of vaginal examination methods to evaluate urovagina and purulent vaginal discharge in periestrous dairy cows

Dai ISHIYAMA, Fumie MAGATA, Fuko MATSUDA
Volume 71, Issue 1, Pages 17-23
DOI https://doi.org/10.1262/jrd.2924-071

Semen extender triggers a mild physiological inflammatory response in the uterus without disrupting sperm-uterine immune crosstalk *in vitro* in cattle
Malinda HULUGALLA, Alireza MANSOURI, Elham WAEHAMA, Ihshan AKTHAR, Akio MIYAMOTO
Volume 71, Issue 1, Pages 24-34
DOI https://doi.org/10.1262/jrd.2024-093

Spermatic RXFP2 expression levels and seminal INSL3 concentrations among beef bull ejaculates with different levels of sperm morphological normality
Hewage Dilhan Anuradha WIMALARATHNE, Kenta ARASHI, Fumiyuki IWAKI, Mitsuhiro SAKASE, DURITAHALA, Hiroshi HARAYAMA, Noritoshi KAWATE
Volume 71, Issue 1, Pages 35-40
DOI https://doi.org/10.1262/jrd.2024-072

The imprinted *Igf2-Igf2r* axis is critical for exosome biogenesis during the early development of bovine placenta
Kunhua ZHENG, Longfei XIAO, Naihan YUAN, Xihui SHENG, Xiaolong QI, Yingqiu WANG, Chang CHEN, Kaijun GUO, Lin YANG, Bingying LIU, Xiangguo WANG
Volume 71, Issue 1, Pages 41-48
DOI https://doi.org/10.1262/jrd.2024-081

Chloroquine inhibits artificial oocyte activation induced by ethanol or Sr^{2+} but not by sperm in mice
Tadashi YAMAZAKI, Md Wasim BARI, Satoshi KISHIGAMI
Volume 71, Issue 1, Pages 49-54
DOI https://doi.org/10.1262/jrd.2024-089

Supplementation with serine-enriched non-essential amino acids from minimum essential medium promotes blastocyst development of *in vitro*-fertilized bovine embryos
Nobuhiko ITAMI, Yuji HIRAO
Volume 71, Issue 1, Pages 55-61
DOI https://doi.org/10.1262/jrd.2024-090

Technology Report

Artificial insemination of bottlenose dolphins (*Tursiops truncatus*): A trial with simple instruments based on criteria for estrous behaviors linked to changes in estradiol levels and follicle development
Shusaku SAWA, Narumi KAWAHIRO, Minami W. OKUYAMA

Volume 71, Issue 1, Pages 62-67
DOI https://doi.org/10.1262/jrd.2024-065