Hiroaki Funahashi

List of Publications by Year
in descending order

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97	3,611	109321	138484
papers	citations	35 h-index	58 g-index

97	97	97	1858
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Synchronization of Meiosis in Porcine Oocytes by Exposure to Dibutyryl Cyclic Adenosine Monophosphate Improves Developmental Competence Following in Vitro Fertilization1. Biology of Reproduction, 1997, 57, 49-53.	2.7	340
2	Select antioxidants improve the function of extended boar semen stored at 10Â°C. Theriogenology, 2005, 63, 1605-1616.	2.1	145
3	Effects of the duration of exposure to hormone supplements on cytoplasmic maturation of pig oocytes in vitro. Reproduction, 1993, 98, 179-185.	2.6	131
4	Use of Low-Salt Culture Medium for in Vitro Maturation of Porcine Oocytes is Associated with Elevated Oocyte Glutathione Levels and Enhanced Male Pronuclear Formation after in Vitro Fertilization1. Biology of Reproduction, 1994, 51, 633-639.	2.7	130
5	In Vitro Development of in Vitro-Matured Porcine Oocytes Following Chemical Activation or in Vitro Fertilization1. Biology of Reproduction, 1994, 50, 1072-1077.	2.7	116
6	Microtubule and microfilament dynamics in porcine oocytes during meiotic maturation. Molecular Reproduction and Development, 1996, 43, 248-255.	2.0	112
7	Microtubule Organization in Porcine Oocytes during Fertilization and Parthenogenesis1. Biology of Reproduction, 1996, 54, 1397-1404.	2.7	107
8	Development of rat one-cell embryos in a chemically defined medium: effects of glucose, phosphate and osmolarity. Reproduction, 1994, 100, 21-26.	2.6	95
9	Rat Oocytes Fertilized in Modified Rat 1-Cell Embryo Culture Medium Containing a High Sodium Chloride Concentration and Bovine Serum Albumin Maintain Developmental Ability to the Blastocyst Stage. Biology of Reproduction, 1998, 59, 884-889.	2.7	93
10	Effects of follicular fluid at fertilization in vitro on sperm penetration in pig oocytes. Reproduction, 1993, 99, 97-103.	2.6	90
11	Developmental Changes in the Intracellular Ca 2+ Release Mechanisms in Porcine Oocytes1. Biology of Reproduction, 1997, 56, 921-930.	2.7	88
12	Up date of in vitro production of porcine embryos. Frontiers in Bioscience - Landmark, 2006, 11, 2565.	3.0	86
13	Different hormonal requirements of pig oocyte-cumulus complexes during maturation in vitro. Reproduction, 1994, 101, 159-165.	2.6	85
14	Presence of Organic Osmolytes in Maturation Medium Enhances Cytoplasmic Maturation of Porcine Oocytes1. Biology of Reproduction, 1996, 54, 1412-1419.	2.7	85
15	Effects of oviductal fluid on sperm penetration and cortical granule exocytosis during fertilization of pig oocytes in vitro. Reproduction, 1996, 107, 79-86.	2.6	84
16	Regulation of in vitro penetration of frozen-thawed boar spermatozoa by caffeine and adenosine. Molecular Reproduction and Development, 2001, 58, 424-431.	2.0	72
17	Polyspermic penetration in porcine IVM - IVF systems. Reproduction, Fertility and Development, 2003, 15, 167.	0.4	72
18	Glucose requirement at different developmental stages of in vitro fertilized bovine embryos cultured in semi-defined medium. Theriogenology, 1993, 39, 875-886.	2.1	69

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19	Zona Reaction in Porcine Oocytes Fertilized In Vivo and In Vitro as Seen with Scanning Electron Microscopy1. Biology of Reproduction, 2000, 63, 1437-1442.	2.7	67
20	Effects of different serum supplements in maturation medium on meiotic and cytoplasmic maturation of pig oocytes. Theriogenology, 1993, 39, 965-973.	2.1	64
21	Stage-Specific Requirement of Cysteine during in Vitro Maturation of Porcine Oocytes for Glutathione Synthesis Associated with Male Pronuclear Formation1. Biology of Reproduction, 1997, 57, 1-6.	2.7	63
22	Simple vitrification for small numbers of human spermatozoa. Reproductive BioMedicine Online, 2012, 24, 301-307.	2.4	59
23	Modulation of the Function of Boar Spermatozoa via Adenosine and Fertilization Promoting Peptide Receptors Reduce the Incidence of Polyspermic Penetration into Porcine Oocytes1. Biology of Reproduction, 2000, 63, 1157-1163.	2.7	56
24	Fertilization and early cleavage in vitro of ageing bovine oocytes after maturation in culture. Theriogenology, 1992, 37, 665-672.	2.1	53
25	InÂvitro fertilization in pigs: New molecules and protocols to consider in the forthcoming years. Theriogenology, 2016, 85, 125-134.	2.1	52
26	Advances in in vitro production of pig embryos. Journal of Reproduction and Fertility Supplement, 1997, 52, 271-83.	0.1	50
27	Effects of Injecting Calcium Chloride into in Vitro-Matured Porcine Oocytes1. Biology of Reproduction, 1996, 54, 316-322.	2.7	49
28	Successful Piglet Production in a Chemically Defined System for In-vitro Production of Porcine Embryos: Dibutyryl Cyclic AMP and Epidermal Growth Factor-family Peptides Support In-vitro Maturation of Oocytes in the Absence of Gonadotropins. Journal of Reproduction and Development, 2009, 55, 446-453.	1.4	49
29	Pronuclear formation and intracellular glutathione content ofin vitro-matured porcine oocytes followingin vitrofertilisation and/or electrical activation. Zygote, 1995, 3, 273-281.	1.1	41
30	Both fertilization promoting peptide and adenosine stimulate capacitation but inhibit spontaneous acrosome loss in ejaculated boar spermatozoa in vitro. Molecular Reproduction and Development, 2000, 55, 117-124.	2.0	41
31	Preincubation of cumulus-oocyte complexes before exposure to gonadotropins improves the developmental competence of porcine embryos matured and fertilized in vitro. Theriogenology, 1997, 47, 679-686.	2.1	40
32	Improved Fertility in Gilts and Sows after Artificial Insemination of Frozen-Thawed Boar Semen by Supplementation of Semen Extender with Caffeine and CaCl2. Journal of Reproduction and Development, 2009, 55, 645-649.	1.4	39
33	Application of a microfluidic sperm sorter to the in-vitro fertilization of porcine oocytes reduced the incidence of polyspermic penetration. Theriogenology, 2010, 74, 863-870.	2.1	39
34	Reduction of the incidence of polyspermic penetration into porcine oocytes by pretreatment of fresh spermatozoa with adenosine and a transient co-incubation of the gametes with caffeine. Reproduction, 2004, 128, 789-800.	2.6	37
35	Effect of glucose and pyruvate on nuclear and cytoplasmic maturation of porcine oocytes in a chemically defined medium. Theriogenology, 2008, 70, 1041-1047.	2.1	36
36	Induction of capacitation and the acrosome reaction of boar spermatozoa by L-arginine and nitric oxide synthesis associated with the anion transport system. Reproduction, 2002, 124, 857-864.	2.6	35

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37	Successful delivery derived from vitrified-warmed spermatozoa from a patient with nonobstructive azoospermia. Fertility and Sterility, 2012, 98, 1423-1427.	1.0	35
38	A microfluidic device to reduce treatment time of intracytoplasmic sperm injection. Fertility and Sterility, 2013, 99, 400-407.	1.0	35
39	Metal mesh vitrification (MMV) method for cryopreservation of porcine embryos. Theriogenology, 2008, 70, 809-817.	2.1	32
40	Transmission electron microscopy studies of the zona reaction in pig oocytes fertilized in vivo and in vitro. Reproduction, 2001, 122, 443-452.	2.6	30
41	Developmental capacity of bovine oocytes collected from ovaries of individual heifers and fertilized in vitro. Theriogenology, 1991, 36, 427-434.	2.1	29
42	Effect of beta-mercaptoethanol during in vitro fertilization procedures on sperm penetration into porcine oocytes and the early development in vitro. Reproduction, 2005, 130, 889-898.	2.6	29
43	Developmental ability of porcine oocytes matured and fertilized in vitro. Theriogenology, 1994, 41, 1425-1433.	2.1	26
44	Development competence and relative transcript abundance of oocytes derived from small and medium follicles of prepubertal gilts. Theriogenology, 2013, 80, 970-978.	2.1	26
45	Effects of caffeine on sperm characteristics after thawing and inflammatory response in the uterus after artificial insemination with frozen-thawed boar semen. Theriogenology, 2013, 79, 87-93.	2.1	26
46	Single Spermatozoon Freezing Using Cryotop. Journal of Mammalian Ova Research, 2011, 28, 47-52.	0.1	25
47	Effect of the addition of beta-mercaptoethanol to a thawing solution supplemented with caffeine on the function of frozen-thawed boar sperm and on the fertility of sows after artificial insemination. Theriogenology, 2012, 77, 926-932.	2.1	24
48	Production of Plasminogen Activators (PAs) in Bovine Cumulus-Oocyte Complexes during Maturation In Vitro: Effects of Epidermal Growth Factor on Production of PAs in Oocytes and Cumulus Cells1. Biology of Reproduction, 1999, 61, 298-304.	2.7	23
49	In-vitro Culture with a Tilting Device in Chemically Defined Media During Meiotic Maturation and Early Development Improves the Quality of Blastocysts Derived from In-vitro Matured and Fertilized Porcine Oocytes. Journal of Reproduction and Development, 2010, 56, 552-557.	1.4	22
50	Trehalose in glycerol-free freezing extender enhances post-thaw survival of boar spermatozoa. Journal of Reproduction and Development, 2015, 61, 205-210.	1.4	21
51	In vitro maturation and fertilization of porcine oocytes after a 48h culture in roscovitine, an inhibitor of p34cdc2/cyclin B kinase. Animal Reproduction Science, 2006, 92, 321-333.	1.5	20
52	A phosphodiesterase type-5 inhibitor, sildenafil, induces sperm capacitation and penetration into porcine oocytes in a chemically defined medium. Theriogenology, 2016, 85, 428-433.	2.1	20
53	Sperm Selection by a Climbing-over-a-Wall IVF Method Reduces the Incidence of Polyspermic Penetration of Porcine Oocytes.. Journal of Reproduction and Development, 2000, 46, 319-324.	1.4	19
54	Boar seminal plasma or hen's egg yolk decrease the in-vitro chemotactic and phagocytotic activities of neutrophils when co-incubated with boar or bull sperm. Theriogenology, 2012, 77, 73-80.	2.1	19

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55	DNA stability and thiol-disulphide status of rat sperm nuclei during epididymal maturation and penetration of oocytes. Zygote, 1999, 7, 249-254.	1.1	18
56	Effects of electrical stimulation before or after in vitro fertilization on sperm penetration and pronuclear formation of pig oocytes. Molecular Reproduction and Development, 1993, 36, 361-367.	2.0	17
57	Chlortetracycline fluorescence patterns and in vitro fertilisation of frozen-thawed boar spermatozoa incubated under various bicarbonate concentrations. Zygote, 1997, 5, 117-125.	1.1	17
58	Effect of blood serum, caffeine and heparin on in vitro phagocytosis of frozen-thawed bull sperm by neutrophils derived from the peripheral blood of cows. Theriogenology, 2010, 74, 691-698.	2.1	16
59	Application of a microfluidic sperm sorter to inÂvitro production of dairy cattle sex-sorted embryos. Theriogenology, 2016, 85, 1211-1218.	2.1	16
60	Caffeine, dibutyryl cyclic-AMP and heparin affect the chemotactic and phagocytotic activities of neutrophils for boar sperm in vitro. Theriogenology, 2011, 75, 1336-1345.	2.1	12
61	Rapid thawing and stabilizing procedure improve postthaw survival and inÂvitro penetrability of boar spermatozoa cryopreserved with a glycerol-free trehalose-based extender. Theriogenology, 2015, 84, 940-947.	2.1	12
62	Pronuclear visibility, development and transgene expression in IVM/IVF-derived porcine embryos. Theriogenology, 1995, 44, 391-401.	2.1	11
63	Exogenous Adenosine Reduces the Mitochondrial Membrane Potential of Murine Oocytes During the Latter Half of In Vitro Maturation and Pronuclear Formation Following Chemical Activation. Journal of Reproduction and Development, 2009, 55, 187-193.	1.4	11
64	Presence of vascular endothelial growth factor during the first half of IVM improves the meiotic and developmental competence of porcine oocytes from small follicles. Reproduction, Fertility and Development, 2017, 29, 1902.	0.4	11
65	Methods for Improving In Vitro and In Vivo Boar Sperm Fertility. Reproduction in Domestic Animals, 2015, 50, 40-47.	1.4	10
66	The Presence of Tissue Inhibitor of Matrix Metalloproteinase-1 (TIMP-1) During Meiosis Improves Porcine 'Oocyte Competence' as Determined by Early Embryonic Development After In-vitro Fertilization.. Journal of Reproduction and Development, 1999, 45, 265-271.	1.4	9
67	Hydrophobic Silicone Elastomer Chamber for Recording Trajectories of Motile Porcine Sperms without Adsorption. Journal of Reproduction and Development, 2011, 57, 163-167.	1.4	8
68	Effect of removing cumulus cells from porcine cumulus-oocyte complexes derived from small and medium follicles during IVM on the apoptotic status and meiotic progression of the oocytes. Theriogenology, 2016, 86, 1705-1710.	2.1	8
69	Levels of cyclic-AMP and cyclic-GMP in porcine oocyte-cumulus complexes and cumulus-free oocytes derived from small and middle follicles during the first 24-hour period of <i>in vitro</i> maturation. Journal of Reproduction and Development, 2017, 63, 191-197.	1.4	8
70	Nuclear Transfer of Blastomeres Expressing EGFP-Reporter Gene May Improve the Efficiency of Transgenic Cattle. Cloning and Stem Cells, 2001, 3, 183-190.	2.6	7
71	Î³-glutamyl transpeptidase of spermatozoa may decrease oocyte glutathione content at fertilization in pigs. Molecular Reproduction and Development, 1996, 45, 485-490.	2.0	6
72	In vitro development of non-enucleated rat oocytes following microinjection of a cumulus nucleus and chemical activation. Zygote, 2008, 16, 117-125.	1.1	6

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73	Milk supplements in a glycerol free trehalose freezing extender enhanced cryosurvival of boar spermatozoa. Asian Pacific Journal of Reproduction, 2016, 5, 58-62.	0.4	6
74	Supplementation with cumulus cell masses improves the in vitro meiotic competence of porcine cumulusâ€“oocytes complexes derived from small follicles. Reproduction in Domestic Animals, 2017, 52, 672-679.	1.4	6
75	The autophagic inducer and inhibitor display different activities on the meiotic and developmental competencies of porcine oocytes derived from small and medium follicles. Journal of Reproduction and Development, 2019, 65, 527-532.	1.4	6
76	Low Salt Maturation Medium Enhances the Histone H1 Kinase Activity of Porcine Oocytes at the End of In Vitro Maturation.. Journal of Reproduction and Development, 1996, 42, 109-115.	1.4	6
77	Factors Affecting Development In Vitro of Bovine and Rat 1-Cell Embryos.. Journal of Mammalian Ova Research, 1996, 13, 71-80.	0.1	6
78	Changes in intracellular content of glutathione and thiols associated with Î³-glutamyl cycle during sperm penetration and pronuclear formation in rat oocytes. Zygote, 1999, 7, 301-305.	1.1	5
79	Effects of Cysteine in Serum-Free Maturation Medium on Male Pronuclear Formation of Maturing Pig Oocytes Penetrated In Vitro.. Journal of Reproduction and Development, 1997, 43, 73-80.	1.4	5
80	Application of mechanical stimuli using a microfluidic air actuating system to cultured mammalian embryos. , 2010, , .		4
81	Glycosaminoglycans Improves Early Development of Zona-free 8-cell Rat Embryos to Blastocysts in a Chemically Defined Medium, but Not the Pregnancy Rate Following Transfer of the Blastocysts. Journal of Reproduction and Development, 2012, 58, 295-301.	1.4	4
82	Effect of Methyl-.BETA.-Cyclodextrin and Fertilization Promoting Peptide on Capacitation of Boar Spermatozoa in a Protein-Free Medium.. Journal of Reproduction and Development, 2002, 48, 57-63.	1.4	4
83	Development of rat eggs with pronuclei transplanted by electrofusion.. The Japanese Journal of Animal Reproduction, 1988, 34, 133-137.	0.2	4
84	Current Status of in vitro Production of Porcine Embryos. , 1996, , 491-502.		4
85	Removal of cumulus cells around 20 h after the start of <i>in vitro</i> maturation improves the meiotic competence of porcine oocytes via reduction in cAMP and cGMP levels. Journal of Reproduction and Development, 2019, 65, 177-182.	1.4	3
86	Co-culture of Cumulus-Enclosed Bovine Oocytes with Theca Cells Induces the Meiotic Arrest but does not Inhibit Germinal Vesicle Development.. Journal of Reproduction and Development, 1999, 45, 223-231.	1.4	2
87	Relative transcript abundance in porcine cumulus cells collected from different sized follicles. Reproduction in Domestic Animals, 2021, 56, 374-380.	1.4	2
88	The Thickness and Density of the Ovarian Tunica Albuginea Increases with Age in Transgender Patients. Reproductive Sciences, 2021, 28, 1339-1346.	2.5	2
89	First cleavage of enucleated rat eggs following transplantation of karyoplast removed from pronuclear eggs stored at 2 to 6Â°C for various durations. Theriogenology, 1991, 36, 411-417.	2.1	1
90	Comparative expression patterns of two transgenes in murine, porcine and bovine embryos. Theriogenology, 1995, 43, 262.	2.1	1

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91	What is the optimal condition for fertilization of IVM oocytes?. Reproductive Medicine and Biology, 2013, 12, 15-20.	2.4	1
92	Animal Biotechnology Roles in Livestock Production. IOP Conference Series: Earth and Environmental Science, 2020, 465, 012001.	0.3	1
93	Both fertilization promoting peptide and adenosine stimulate capacitation but inhibit spontaneous acrosome loss in ejaculated boar spermatozoa in vitro. Molecular Reproduction and Development, 2000, 55, 117-124.	2.0	1
94	194 IN VITRO MATURATION AND RNA CONTENT AND DISTRIBUTION OF PORCINE OOCYTES DERIVED FROM SMALL AND MEDIUM FOLLICLES AND CLASSIFIED BY BRILLIANT CRESYL BLUE ASSAY. Reproduction, Fertility and Development, 2012, 24, 209.	0.4	1
95	Effects of Cumulus Cells on the Ability of Pig Oocytes to Utilize Cysteine or Cystine During Maturation In Vitro.. Journal of Reproduction and Development, 1998, 44, 161-168.	1.4	1
96	Recent Development in Embryo Technology in Pigs - Review -. Asian-Australasian Journal of Animal Sciences, 1999, 12, 966-975.	2.4	1
97	In vitro Production of Porcine Embryos: On the Developmental Competence. Journal of Reproduction and Development, 1998, 44, j47-j52.	1.4	0