

Michelle Lane

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136
papers

12,194
citations

61
h-index

110
g-index

137
ext. papers

13,442
ext. citations

3.9
avg, IF

6.4
L-index

#	Paper	IF	Citations
136	Blastocyst score affects implantation and pregnancy outcome: towards a single blastocyst transfer. <i>Fertility and Sterility</i> , 2000 , 73, 1155-8	1.2	1002
135	Oocyte-secreted factors: regulators of cumulus cell function and oocyte quality. <i>Human Reproduction Update</i> , 2008 , 14, 159-77	15.3	611
134	Culture and transfer of human blastocysts increases implantation rates and reduces the need for multiple embryo transfers. <i>Fertility and Sterility</i> , 1998 , 69, 84-8	1.2	497
133	Enhanced rates of cleavage and development for sheep zygotes cultured to the blastocyst stage in vitro in the absence of serum and somatic cells: amino acids, vitamins, and culturing embryos in groups stimulate development. <i>Biology of Reproduction</i> , 1994 , 50, 390-400	3.7	466
132	Paternal obesity initiates metabolic disturbances in two generations of mice with incomplete penetrance to the F2 generation and alters the transcriptional profile of testis and sperm microRNA content. <i>FASEB Journal</i> , 2013 , 27, 4226-43	0.9	387
131	Amino acids and ammonium regulate mouse embryo development in culture. <i>Biology of Reproduction</i> , 1993 , 48, 377-85	3.7	335
130	Environment of the preimplantation human embryo in vivo: metabolite analysis of oviduct and uterine fluids and metabolism of cumulus cells. <i>Fertility and Sterility</i> , 1996 , 65, 349-53	1.2	302
129	Vitrification of mouse and human blastocysts using a novel cryoloop container-less technique. <i>Fertility and Sterility</i> , 1999 , 72, 1073-8	1.2	271
128	Obese women exhibit differences in ovarian metabolites, hormones, and gene expression compared with moderate-weight women. <i>Journal of Clinical Endocrinology and Metabolism</i> , 2009 , 94, 1533-40	5.4	260
127	Noninvasive assessment of human embryo nutrient consumption as a measure of developmental potential. <i>Fertility and Sterility</i> , 2001 , 76, 1175-80	1.2	244
126	Effect of incubation volume and embryo density on the development and viability of mouse embryos in vitro. <i>Human Reproduction</i> , 1992 , 7, 558-62	5.5	235
125	High-fat diet causes lipotoxicity responses in cumulus-oocyte complexes and decreased fertilization rates. <i>Endocrinology</i> , 2010 , 151, 5438-45	4.7	229
124	Blastocyst culture and transfer: analysis of results and parameters affecting outcome in two in vitro fertilization programs. <i>Fertility and Sterility</i> , 1999 , 72, 604-9	1.2	216
123	Selection of viable mouse blastocysts prior to transfer using a metabolic criterion. <i>Human Reproduction</i> , 1996 , 11, 1975-8	5.5	216
122	Impact of obesity on male fertility, sperm function and molecular composition. <i>Spermatogenesis</i> , 2012 , 2, 253-263		209
121	Alleviation of the Q-cell block and development to the blastocyst of CF1 mouse embryos: role of amino acids, EDTA and physical parameters. <i>Human Reproduction</i> , 1996 , 11, 2703-12	5.5	206
120	Ammonium induces aberrant blastocyst differentiation, metabolism, pH regulation, gene expression and subsequently alters fetal development in the mouse. <i>Biology of Reproduction</i> , 2003 , 69, 1109-17	3.7	188

119	Containerless vitrification of mammalian oocytes and embryos. <i>Nature Biotechnology</i> , 1999 , 17, 1234-6	43.2	184
118	Parenting from before conception. <i>Science</i> , 2014 , 345, 756-60	32.2	185
117	Paternal obesity negatively affects male fertility and assisted reproduction outcomes: a systematic review and meta-analysis. <i>Reproductive BioMedicine Online</i> , 2015 , 31, 593-604	2.9	167
116	Paternal body mass index is associated with decreased blastocyst development and reduced live birth rates following assisted reproductive technology. <i>Fertility and Sterility</i> , 2011 , 95, 1700-4	1.2	165
115	Diet and exercise in an obese mouse fed a high-fat diet improve metabolic health and reverse perturbed sperm function. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2012 , 302, E768-80	5.7	146
114	Anti-Müllerian hormone as a predictor of IVF outcome. <i>Reproductive BioMedicine Online</i> , 2007 , 14, 602-10	2.9	135
113	Embryo culture medium: which is the best?. <i>Best Practice and Research in Clinical Obstetrics and Gynaecology</i> , 2007 , 21, 83-100	4.4	134
112	Glucose consumption of single post-compaction human embryos is predictive of embryo sex and live birth outcome. <i>Human Reproduction</i> , 2011 , 26, 1981-6	5.5	132
111	Vitrification of mouse oocytes using a nylon loop. <i>Molecular Reproduction and Development</i> , 2001 , 58, 342-7	2.5	128
110	Developmental competence and metabolism of bovine embryos cultured in semi-defined and defined culture media. <i>Biology of Reproduction</i> , 1999 , 60, 1345-52	3.7	124
109	Human cumulus cell gene expression as a biomarker of pregnancy outcome after single embryo transfer. <i>Fertility and Sterility</i> , 2011 , 96, 47-52.e2	1.2	126
108	Lactate regulates pyruvate uptake and metabolism in the preimplantation mouse embryo. <i>Biology of Reproduction</i> , 2000 , 62, 16-22	3.7	125
107	Towards a single embryo transfer. <i>Reproductive BioMedicine Online</i> , 2003 , 6, 470-81	2.9	123
106	Paternal diet-induced obesity impairs embryo development and implantation in the mouse. <i>Fertility and Sterility</i> , 2011 , 95, 1349-53	1.2	120
105	Preconception diet or exercise intervention in obese fathers normalizes sperm microRNA profile and metabolic syndrome in female offspring. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2015 , 308, E805-21	5.7	119
104	Understanding cellular disruptions during early embryo development that perturb viability and fetal development. <i>Reproduction, Fertility and Development</i> , 2005 , 17, 371-8	0.8	117
103	Embryo nutrition and energy metabolism and its relationship to embryo growth, differentiation, and viability. <i>Seminars in Reproductive Medicine</i> , 2000 , 18, 205-18	1.3	115
102	Fetal development after transfer is increased by replacing protein with the glycosaminoglycan hyaluronan for mouse embryo culture and transfer. <i>Human Reproduction</i> , 1999 , 14, 2575-80	5.5	115

101	Ex vivo early embryo development and effects on gene expression and imprinting. <i>Reproduction, Fertility and Development</i> , 2005 , 17, 361-70	0.8	115
100	Maternal supply of omega-3 polyunsaturated fatty acids alter mechanisms involved in oocyte and early embryo development in the mouse. <i>American Journal of Physiology - Endocrinology and Metabolism</i> , 2008 , 294, E425-34	5.7	111
99	Exogenous growth differentiation factor 9 in oocyte maturation media enhances subsequent embryo development and fetal viability in mice. <i>Human Reproduction</i> , 2008 , 23, 67-73	5.5	111
98	Exposure to lipid-rich follicular fluid is associated with endoplasmic reticulum stress and impaired oocyte maturation in cumulus-oocyte complexes. <i>Fertility and Sterility</i> , 2012 , 97, 1438-43	1.2	108
97	ADAMTS1 cleavage of versican mediates essential structural remodeling of the ovarian follicle and cumulus-oocyte matrix during ovulation in mice. <i>Biology of Reproduction</i> , 2010 , 83, 549-57	3.7	105
96	Quality control in human in vitro fertilization. <i>Seminars in Reproductive Medicine</i> , 2005 , 23, 319-24	1.3	97
95	Cryo-survival and development of bovine blastocysts are enhanced by culture with recombinant albumin and hyaluronan. <i>Molecular Reproduction and Development</i> , 2003 , 64, 70-8	2.5	95
94	Perturbations in mouse embryo development and viability caused by ammonium are more severe after exposure at the cleavage stages. <i>Biology of Reproduction</i> , 2006 , 74, 288-94	3.7	94
93	Sperm DNA damage is associated with assisted reproductive technology pregnancy. <i>Journal of Developmental and Physical Disabilities</i> , 2008 , 31, 518-26		84
92	Impaired mitochondrial function in the preimplantation embryo perturbs fetal and placental development in the mouse. <i>Biology of Reproduction</i> , 2011 , 84, 572-80	3.7	83
91	Mitochondrial malate-aspartate shuttle regulates mouse embryo nutrient consumption. <i>Journal of Biological Chemistry</i> , 2005 , 280, 18361-7	5	81
90	Altering intracellular pH disrupts development and cellular organization in preimplantation hamster embryos. <i>Biology of Reproduction</i> , 2001 , 64, 1845-54	3.7	81
89	Addition of ascorbate during cryopreservation stimulates subsequent embryo development. <i>Human Reproduction</i> , 2002 , 17, 2686-93	5.5	79
88	Nonessential amino acids and glutamine decrease the time of the first three cleavage divisions and increase compaction of mouse zygotes in vitro. <i>Journal of Assisted Reproduction and Genetics</i> , 1997 , 14, 398-403	3.3	79
87	SIRT6 in mouse spermatogenesis is modulated by diet-induced obesity. <i>Reproduction, Fertility and Development</i> , 2011 , 23, 929-39	0.8	75
86	Uptake and metabolism of pyruvate and glucose by individual sheep preattachment embryos developed in vivo. <i>Molecular Reproduction and Development</i> , 1993 , 36, 313-9	2.5	75
85	Metabolic and mitochondrial dysfunction in early mouse embryos following maternal dietary protein intervention. <i>Biology of Reproduction</i> , 2009 , 80, 622-30	3.7	72
84	Oxidative stress in mouse sperm impairs embryo development, fetal growth and alters adiposity and glucose regulation in female offspring. <i>PLoS ONE</i> , 2014 , 9, e100832	3.6	71

83	Physiology and culture of the human blastocyst. <i>Journal of Reproductive Immunology</i> , 2002 , 55, 85-100	4	72
82	Changing the start temperature and cooling rate in a slow-freezing protocol increases human blastocyst viability. <i>Fertility and Sterility</i> , 2003 , 79, 407-10	1.2	71
81	Peri-conception parental obesity, reproductive health, and transgenerational impacts. <i>Trends in Endocrinology and Metabolism</i> , 2015 , 26, 84-90	8.5	71
80	Effect of culturing mouse embryos under different oxygen concentrations on subsequent fetal and placental development. <i>Journal of Physiology</i> , 2006 , 572, 87-96	3.8	70
79	Women with reduced ovarian reserve or advanced maternal age have an altered follicular environment. <i>Fertility and Sterility</i> , 2012 , 98, 986-94.e1-2	1.2	68
78	Effect of essential amino acids on mouse embryo viability and ammonium production. <i>Journal of Assisted Reproduction and Genetics</i> , 2001 , 18, 519-25	3.3	64
77	Paternal obesity, interventions, and mechanistic pathways to impaired health in offspring. <i>Annals of Nutrition and Metabolism</i> , 2014 , 64, 231-8	4.3	60
76	Disruption of mitochondrial malate-aspartate shuttle activity in mouse blastocysts impairs viability and fetal growth. <i>Biology of Reproduction</i> , 2009 , 80, 295-301	3.7	61
75	Use of G1.2/G2.2 media for commercial bovine embryo culture: equivalent development and pregnancy rates compared to co-culture. <i>Theriogenology</i> , 2003 , 60, 407-19	2.7	57
74	To QC or not to QC: the key to a consistent laboratory?. <i>Reproduction, Fertility and Development</i> , 2008 , 20, 23-32	0.8	57
73	Cryopreservation reduces the ability of hamster 2-cell embryos to regulate intracellular pH. <i>Human Reproduction</i> , 2000 , 15, 389-94	5.5	57
72	Regulation of intracellular pH in hamster preimplantation embryos by the sodium hydrogen (Na ⁺ /H ⁺) antiporter. <i>Biology of Reproduction</i> , 1998 , 59, 1483-90	3.7	57
71	Increased gonadotrophin stimulation does not improve IVF outcomes in patients with predicted poor ovarian reserve. <i>Journal of Assisted Reproduction and Genetics</i> , 2008 , 25, 515-21	3.3	55
70	Na ⁺ /H ⁺ antiporter activity in hamster embryos is activated during fertilization. <i>Developmental Biology</i> , 1999 , 208, 244-52	3	56
69	Does obesity really matter? The impact of BMI on embryo quality and pregnancy outcomes after IVF in women aged 38 years. <i>Australian and New Zealand Journal of Obstetrics and Gynaecology</i> , 2012 , 52, 270-6	1.6	55
68	Altered composition of the cumulus-oocyte complex matrix during in vitro maturation of oocytes. <i>Human Reproduction</i> , 2007 , 22, 2842-50	5.5	53
67	Vitrification of human blastocysts using the cryoloop method: successful clinical application and birth of offspring. <i>Journal of Assisted Reproduction and Genetics</i> , 2002 , 19, 304-6	3.3	51
66	EDTA stimulates cleavage stage bovine embryo development in culture but inhibits blastocyst development and differentiation. <i>Molecular Reproduction and Development</i> , 2000 , 57, 256-61	2.5	53

65	Bicarbonate/chloride exchange regulates intracellular pH of embryos but not oocytes of the hamster. <i>Biology of Reproduction</i> , 1999 , 61, 452-7	3.7	50
64	Sperm microRNA Content Is Altered in a Mouse Model of Male Obesity, but the Same Suite of microRNAs Are Not Altered in Offspring's Sperm. <i>PLoS ONE</i> , 2016 , 11, e0166076	3.6	48
63	Improving metabolic health in obese male mice via diet and exercise restores embryo development and fetal growth. <i>PLoS ONE</i> , 2013 , 8, e71459	3.6	47
62	Obese father's metabolic state, adiposity, and reproductive capacity indicate son's reproductive health. <i>Fertility and Sterility</i> , 2014 , 101, 865-73	1.2	46
61	Day 4 embryo selection is equal to Day 5 using a new embryo scoring system validated in single embryo transfers. <i>Human Reproduction</i> , 2008 , 23, 1505-10	5.5	44
60	Regulation of ionic homeostasis by mammalian embryos. <i>Seminars in Reproductive Medicine</i> , 2000 , 18, 195-204	1.3	43
59	Regulation of intracellular pH in bovine oocytes and cleavage stage embryos. <i>Molecular Reproduction and Development</i> , 1999 , 54, 396-401	2.5	43
58	Disruption of bidirectional oocyte-cumulus paracrine signaling during in vitro maturation reduces subsequent mouse oocyte developmental competence. <i>Biology of Reproduction</i> , 2009 , 80, 1072-80	3.7	41
57	Removal of embryo-toxic ammonium from the culture medium by in situ enzymatic conversion to glutamate. <i>The Journal of Experimental Zoology</i> , 1995 , 271, 356-63		39
56	Calcium homeostasis in early hamster preimplantation embryos. <i>Biology of Reproduction</i> , 1998 , 59, 1000-7	3.7	37
55	The CryoLoop facilitates re-vitrification of embryos at four successive stages of development without impairing embryo growth. <i>Human Reproduction</i> , 2006 , 21, 2978-84	5.5	36
54	Paternal under-nutrition programs metabolic syndrome in offspring which can be reversed by antioxidant/vitamin food fortification in fathers. <i>Scientific Reports</i> , 2016 , 6, 27010	4.7	32
53	Granulocyte-macrophage colony-stimulating factor stimulates mouse blastocyst inner cell mass development only when media lack human serum albumin. <i>Reproductive BioMedicine Online</i> , 2005 , 10, 511-8	2.9	32
52	Intracellular divalent cation homeostasis and developmental competence in the hamster preimplantation embryo. <i>Molecular Reproduction and Development</i> , 1998 , 50, 443-50	2.5	33
51	Male obesity and subfertility, is it really about increased adiposity?. <i>Asian Journal of Andrology</i> , 2015 , 17, 450-8	2.7	32
50	Mammalian preimplantation embryo culture. <i>Methods in Molecular Biology</i> , 2014 , 1092, 167-82	1.4	31
49	Inhibiting 3-phosphoglycerate kinase by EDTA stimulates the development of the cleavage stage mouse embryo. <i>Molecular Reproduction and Development</i> , 2001 , 60, 233-40	2.5	31
48	Differential effect of hexoses on hamster embryo development in culture. <i>Biology of Reproduction</i> , 2001 , 64, 1366-74	3.7	30

47	An Exercise-Only Intervention in Obese Fathers Restores Glucose and Insulin Regulation in Conjunction with the Rescue of Pancreatic Islet Cell Morphology and MicroRNA Expression in Male Offspring. <i>Nutrients</i> , 2017 , 9,	6.4	26
46	The presence of 1 mM glycine in vitrification solutions protects oocyte mitochondrial homeostasis and improves blastocyst development. <i>Journal of Assisted Reproduction and Genetics</i> , 2013 , 30, 107-16	3.3	26
45	Differences in intracellular pH regulation by Na(+)/H(+) antiporter among two-cell mouse embryos derived from females of different strains. <i>Biology of Reproduction</i> , 2001 , 65, 14-22	3.7	25
44	Alterations in mouse embryo intracellular pH by DMO during culture impair implantation and fetal growth. <i>Reproductive BioMedicine Online</i> , 2010 , 21, 219-29	2.9	24
43	Blastocyst transfer. <i>Clinical Obstetrics and Gynecology</i> , 2003 , 46, 231-8	1.7	23
42	Inflammatory markers in human follicular fluid correlate with lipid levels and Body Mass Index. <i>Journal of Reproductive Immunology</i> , 2018 , 130, 25-29	4	22
41	The most common vices of men can damage fertility and the health of the next generation. <i>Journal of Endocrinology</i> , 2017 , 234, F1-F6	4.6	21
40	Metabolism, protein content, and in vitro embryonic development of goat cumulus-oocyte complexes matured with physiological concentrations of glucose and L-lactate. <i>Molecular Reproduction and Development</i> , 2006 , 73, 256-66	2.5	21
39	Single blastocyst embryo transfer maintains comparable pregnancy rates to double cleavage-stage embryo transfer but results in healthier pregnancy outcomes. <i>Australian and New Zealand Journal of Obstetrics and Gynaecology</i> , 2011 , 51, 406-10	1.6	20
38	Insulin increases epiblast cell number of in vitro cultured mouse embryos via the PI3K/GSK3/p53 pathway. <i>Stem Cells and Development</i> , 2012 , 21, 2430-41	4.2	19
37	Phosphate induced developmental arrest of hamster two-cell embryos is associated with disrupted ionic homeostasis. <i>Molecular Reproduction and Development</i> , 1999 , 54, 410-7	2.5	19
36	Female offspring sired by diet induced obese male mice display impaired blastocyst development with molecular alterations to their ovaries, oocytes and cumulus cells. <i>Journal of Assisted Reproduction and Genetics</i> , 2015 , 32, 725-35	3.3	17
35	Stimulation of mitochondrial embryo metabolism by dichloroacetic acid in an aged mouse model improves embryo development and viability. <i>Fertility and Sterility</i> , 2014 , 101, 1458-66	1.2	18
34	Mitochondrial SIRT5 is present in follicular cells and is altered by reduced ovarian reserve and advanced maternal age. <i>Reproduction, Fertility and Development</i> , 2014 , 26, 1072-83	0.8	16
33	Combined advanced parental age has an additive negative effect on live birth rates-data from 4057 first IVF/ICSI cycles. <i>Journal of Assisted Reproduction and Genetics</i> , 2018 , 35, 279-287	3.3	15
32	Gene expression and epigenetic aberrations in F1-placentas fathered by obese males. <i>Molecular Reproduction and Development</i> , 2017 , 84, 316-328	2.5	15
31	Dietary Micronutrient Supplementation for 12 Days in Obese Male Mice Restores Sperm Oxidative Stress. <i>Nutrients</i> , 2019 , 11,	6.4	10
30	Reduction of Mitochondrial Function by FCCP During Mouse Cleavage Stage Embryo Culture Reduces Birth Weight and Impairs the Metabolic Health of Offspring. <i>Biology of Reproduction</i> , 2015 , 92, 124	3.7	10

29	Slow freezing and vitrification of mouse morula and early blastocysts. <i>Journal of Assisted Reproduction and Genetics</i> , 2013 , 30, 1091-8	3.3	10
28	Mitochondrial inhibition during preimplantation embryogenesis shifts the transcriptional profile of fetal mouse brain. <i>Reproduction, Fertility and Development</i> , 2011 , 23, 691-701	0.8	8
27	Ongoing development of a human blastocyst culture system. <i>Fertility and Sterility</i> , 2002 , 78, S8	1.2	9
26	Development of Viable Mammalian Embryos In Vitro 2002 , 187-213		5
25	Metformin treatment of high-fat diet-fed obese male mice restores sperm function and fetal growth, without requiring weight loss. <i>Asian Journal of Andrology</i> , 2020 , 22, 560-568	2.7	6
24	Media composition: energy sources and metabolism. <i>Methods in Molecular Biology</i> , 2012 , 912, 81-96	1.4	5
23	Development of a mouse model for studying the effect of embryo culture on embryonic stem cell derivation. <i>Stem Cells and Development</i> , 2011 , 20, 1577-86	4.2	5
22	Adaptive Responses of Early Embryos to Their Microenvironment and Consequences for Post-Implantation Development 2006 , 58-69		5
21	Blastomere Homeostasis 2001 , 69-90		5
20	The Future of Human Embryo Culture Media [Dr Have We Reached the Ceiling? 2012 ,		4
19	Embryo Culture Systems 2017 , 205-244		2
18	Epiblast cell number and primary embryonic stem cell colony generation are increased by culture of cleavage stage embryos in insulin. <i>Journal of Reproduction and Development</i> , 2013 , 59, 131-8	2	4
17	Gamete cryopreservation of Australian Qld endemic Qodents [Spermatozoa from the plains mouse (<i>Pseudomys australis</i>) and spinifex hopping mouse (<i>Notomys alexis</i>). <i>Australian Mammalogy</i> , 2018 , 40, 76	1.1	3
16	Culture of Viable Mammalian Embryos In Vitro 2014 , 63-84		3
15	Use of a male antioxidant nutraceutical is associated with superior live birth rates during IVF treatment. <i>Asian Journal of Andrology</i> , 2021 , 23, 16-23	2.7	2
14	One-step versus two-step culture of mouse preimplantation embryos. <i>Human Reproduction</i> , 2006 , 21, 1935-6; author reply 1936-9	5.5	3
13	Sequential clomiphene/corifollitrophin alpha as a technique for mild controlled ovarian hyperstimulation in IVF: a proof of concept study. <i>Journal of Assisted Reproduction and Genetics</i> , 2018 , 35, 1047-1052	3.3	2
12	Sequential Media for Human Blastocyst Culture 2019 , 157-170		2

11	Use of insulin to increase epiblast cell number: towards a new approach for improving ESC isolation from human embryos. <i>BioMed Research International</i> , 2013 , 2013, 150901	2.9	2
10	Extended Culture in IVF 2012 , 141-150		3
9	Amino acids and ammonium 95-111		1
8	Cryosystem assessment by glucose uptake of murine blastocysts. <i>Reproductive BioMedicine Online</i> , 2005 , 11, 601-7	2.9	1
7	Culture systems for the human embryo 2012 , 218-239		1
6	Embryo Culture Systems 2006 , 221-282		1
5	Paternal Obesity and Programming of Offspring Health 2016 , 105-131		1
4	Extended Culture in IVF 2013 , 99-113		1
3	Culture Systems and Blastocyst Development 2001 , 118-143		
2	Culture systems for the human embryo 2008 , 219-240		
1	Carbohydrate Analysis and Embryo Viability 2013 , 259-265		