Recent patents related to germline modification

Patent number	Description	Assignee	Inventor	Date
US 9657267	Methods for the ex host maturation of immature germline cells into haploid gametes for restoration of fertility in patients in need thereof.	PrimeGen Biotech (Irvine, CA, USA)	Izadyar F, Chow JY-C, Yuen C	5/23/2017
US 9434960 B2	Modified oocytes having a nuclear genome derived from a first oocyte and cytoplasm derived from a second oocyte from a different subject, and methods for making and using such modified oocytes; useful in a variety of settings including, but not limited to, in *in vitro* fertilization procedures.	New York Stem Cell Foundation (New York)	Egli DM	9/6/2016
CA 2970145 A1	Preparations and methods of producing a concentrated mitochondrial preparation using inverted phase centrifugation. The concentrated mitochondrial preparation can be used for various applications, including *in vitro* fertilization applications.	Ovascience (Waltham, MA, USA)	Burgess CM, Chappel S, Tzianabos AO	6/16/2016
WO 2016/044436 A2	Antibodies that specifically bind to the human VASA protein, methods of producing such antibodies, and diagnostic, therapeutic and clinical methods of using such antibodies. Also, methods of using anti-VASA antibodies to isolate and/or purify cells expressing VASA, including mammalian female germline stem cells or oogonial stem cells or egg precursor cells and their progenitor cells.	Ovascience (Waltham, MA, USA)	Weaver DT, Zhang B	3/24/2016
WO 2015/054315 A1	Methods for the directed differentiation of multipotent cells, female germline stem cells, or oogonial stem cells into oocytes, granulosa cells and/or granulosa precursor cells; i.e., "synthetic granulosa cells." The synthetic granulosa cells are useful in methods for growth and maturation of follicles or follicle-like structures and immature oocytes.	Northeastern University (Boston)	Tilly JL, Woods DC	4/16/2015
US 8445281 B2	Compositions and methods for enhancing the survival and promoting the maturation of mammalian oocytes, zygotes and preimplantation embryos by the administration of BDNF or BDNF agonists to an individual, or to cells *in vitro*, to enhance cellular maturation, embryo growth and fertilization.	Stanford University (Stanford, CA, USA), Kawamura K, Hsueh AJW, Mulders SM	Kawamura K, Hsueh AJW, Mulders SM	5/21/2013
US 2012/0282692 A1	A method for obtaining by *in vitro* fertilization an embryo that is genetically related to a human female who is not producing oocytes, by culturing ovarian germline-competent embryonic stem cells, either in the presence or absence of a compound having estrogenic activity.	Bukovsky A, Caudle MR, Ovacyte (Gladwyne, PA, USA)	Bukovsky A, Caudle MR	11/8/2012
WO 2011/111588 A1	A method of inducing the differentiation of germline stem cells possessing the capabilities of self-regeneration and spermiogenesis from pluripotent stem cells such as iPS cells, a method of maintaining and expanding the germline stem cells, and culture media therefor.	Kyoto University (Kyoto, Japan), Yamanaka S, Noce T, Imamura M	Yamanaka S, Noce T, Imamura M	9/15/2011
US 7955846	Female germline stem cells and their progenitors, methods of isolation thereof, and methods of use thereof.	The General Hospital Corporation (Boston)	Tilly JL, Johnson J	6/7/2011

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