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(54) Title: PRODUCTION OF FERTILE XY FEMALE ANIMALS FROM XY ES CELLS

Fertility Analysis of Phenotypically Female F0 Generation Mice Derived from XY ES Cell Clones							
Clone	Genotype	F0s Set Up to Breed (#)	F0s with Litters (#)	F0s with Litters (%)	Litters (#)	Total Pups (#)	Pups Per Litter (#)
860a-H1	XY	2	1	50	3	11	3.7
829a-E2	XY	1	0	0	0	0	---
5339a-A5	XY	2	2	100	8	55	6.9
5315a-D1	XY	1	1	100	8	48	6
5311b-D1	XY	4	1	25	4	37	9.3
5310a-D4	XY	1	1	100	6	32	5.3
5310a-B1	XY	6	6	100	34	188	5.5
5310a-A5	XY	2	2	100	11	75	6.8
5137b-E1	XY	2	2	100	12	74	6.2
294d-A5	XY	1	0	0	0	0	---
1553a-A10	XY	2	0	0	0	0	---
1533b-A2	XY	2	1	50	2	16	8
13304a-D5	XY	1	1	100	2	15	7.5
1313h-F3	XY	2	1	50	1	2	2
12221b-B3	XY	1	1	100	1	10	10
11465d-G1	XY	1	1	100	6	49	8.2
884a-D1	XY	2	0	0	0	0	---
Summary		33 (Σ)	21 (Σ)	63%	98 (Σ)	592 (Σ)	6 (avg)

FIG. 1

(57) Abstract: Methods and compositions are described for making phenotypically female fertile animals from XY donor cells and suitable host embryos. Culture media and methods are provided for maintaining XY donor cells in culture that after introduction into a host embryo and gestation in a suitable host will result in fertile XY female animals. Methods and compositions are described for making fertile female animals in an FO generation from a donor XY cell and a host embryo, as are methods for making F1 progeny that are homozygous for a modification from a heterozygous FO fertile male and a heterozygous FO fertile female sibling.



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EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,

LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,

SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,

GW, ML, MR, NE, SN, TD, TG).

— *with international search report (Art. 21(3))*