Stem Cell Reports, Volume *8*

Supplemental Information

Genome Transfer Prevents Fragmentation and Restores Developmental Potential of Developmentally Compromised Postovulatory Aged Mouse Oocytes

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A

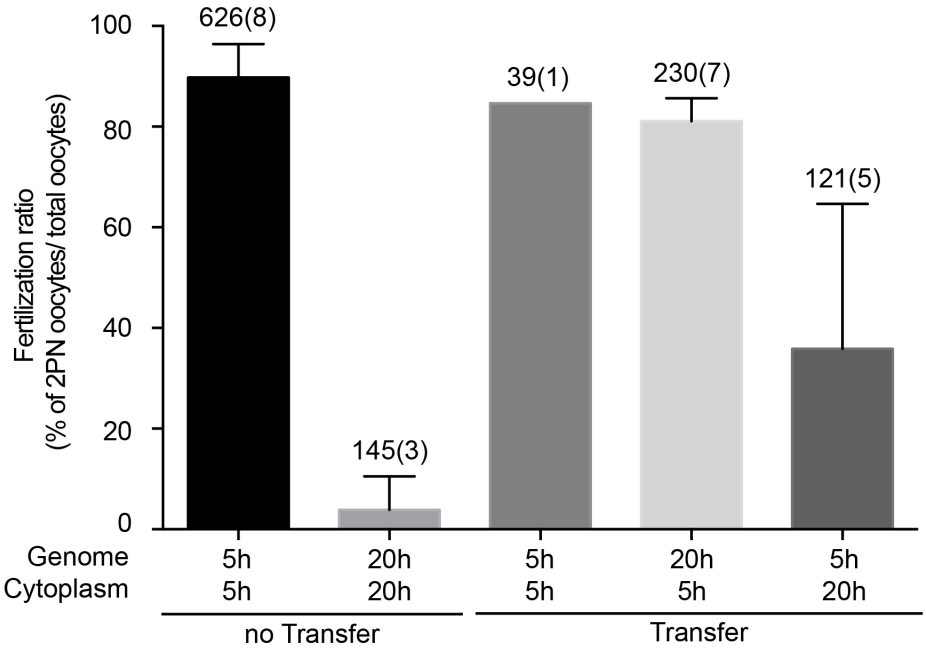
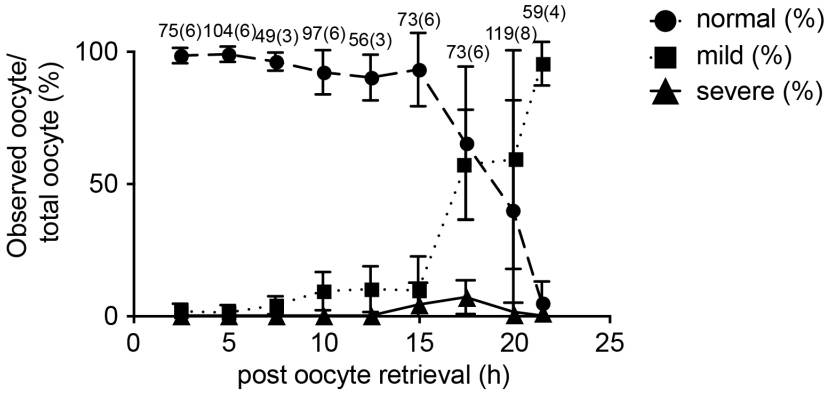

626(8)
145(3)
39(1)
230(7)
121(5)
100
80
60
40
20
0
Fertilization ratio
(% of 2PN oocytes/ total oocytes)
Genome
Cytoplasm
5h
5h
20h
20h
5h
5h
20h
5h
5h
20h
no Transfer
Transfer

Fig. S1

A


75(6)
104(6)
49(3)
97(6)
56(3)
73(6)
73(6)
119(8)
59(4)
100
50
0
Observed oocyte/
total oocyte (%)
0
5
10
15
20
25
post oocyte retrieval (h)
normal (%)
mild (%)
severe (%)

B

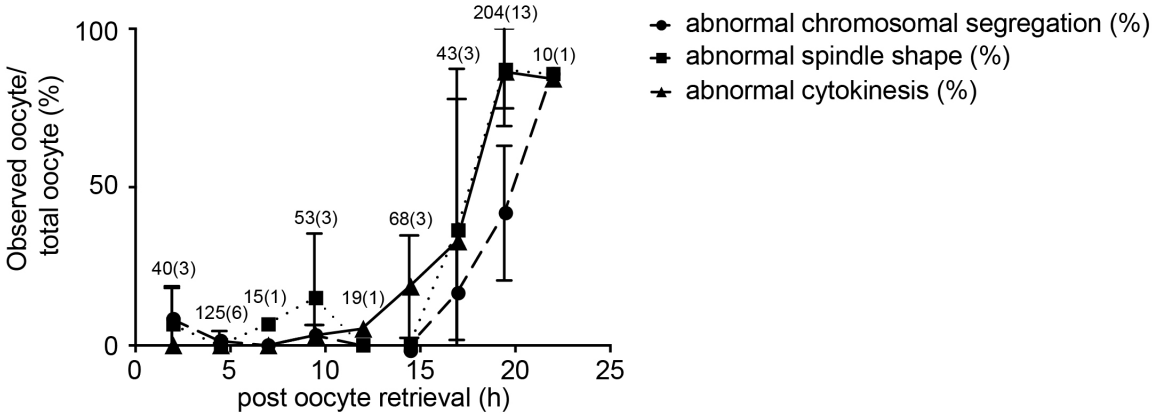

204(13)
43(3)
10(1)
53(3)
68(3)
40(3)
125(6)
15(1)
19(1)
100
50
0
Observed oocyte/
total oocyte (%)
0
5
10
15
20
25
post oocyte retrieval (h)
abnormal chromosomal segregation (%)
abnormal spindle shape (%)
abnormal cytokinesis (%)

Fig.S2

Supplemental Legends

Figure S1 (Related to Figure 2). Fertilization ratio after IVF using unmanipulated or manipulated oocytes

Fertilization ratio of unmanipulated oocytes (5 hours and 20 hours post oocyte retrieval oocytes) and manipulated oocytes (nuclear genomes between 5 hours post oocyte retrieval oocytes (5G5C oocytes), genome from 20 hours post retrieval oocytes transferred into 5 hours post oocyte retrieval oocytes (20G5C oocytes) and genomes from 5 hours post retrieval oocytes transferred into 20 hours post oocyte retrieval oocytes (5G20C)). The error bars show mean ± SEM.

Figure S2 (Related to Figure 4.). Chromosomal defects and cytokinesis during postovulatory aging

(A) Frequency of chromosomal alignment defects in MII oocytes aged for up to 21.5h. The total number of oocytes and the number of experiments (in parenthesis) is indicated above each column.

(B) Frequency of chromosomal defects and abnormal cytokinesis in oocytes aged for up to 22.0h, scored for misalignment at anaphase of the second meiosis. The error bars show mean ± SEM.