

## **Supplementary information:**

The overlaying oil type influences in vitro embryo production: differences in composition and compound transfer into incubation medium between oils

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## This part contains Supplementary Tables S1 and S2

|       | Lot # | Oocytes<br>(N) | Oocytes (%)             |                 | Efficiency&    |
|-------|-------|----------------|-------------------------|-----------------|----------------|
| Group |       |                | Penetrated <sup>#</sup> | Monospermic*    | (%)            |
| S-MO  | 1     | 245            | $72.3 \pm 11.2$         | $44.3 \pm 6.0$  | 31.8 ± 1.8     |
|       | 2     | 186            | $65.0\pm8.0$            | $55.0 \pm 5.0$  | 35.6 ± 3.9     |
|       | 3     | 198            | $73.3 \pm 10.4$         | $53.3 \pm 6.5$  | $38.7 \pm 1.4$ |
| N-PO  | 1     | 215            | 65.0 ± 9.6              | 57.7 ± 7.5      | $37.4 \pm 6.7$ |
|       | 2     | 205            | $70.3 \pm 11.9$         | $51.8 \pm 10.4$ | $36.8 \pm 3.3$ |
|       | 3     | 211            | $69.0 \pm 10.8$         | $52.0 \pm 7.1$  | 35.5 ±4.6      |

**Supplementary Table S1.** In vitro fertilization parameters of porcine oocytes cultured in medium overlaid with different lots of Sigma mineral oil (S-MO) and Nidoil paraffin oil (N-PO).

<sup>#</sup>Number of oocytes penetrated/total inseminated oocytes. <sup>\*</sup>Number of oocytes containing only one male pronucleus/total of oocytes penetrated. <sup>&</sup>Number of monospermic oocytes/total of oocytes inseminated. Data are presented as the mean ± SD (four replicates).

|       |       |                | Embryo development (%) |                                   |  |
|-------|-------|----------------|------------------------|-----------------------------------|--|
| Group | Lot # | Oocytes<br>(N) | Cleavage <sup>#</sup>  | Blastocyst formation <sup>*</sup> | Blastocyst<br>efficiency <sup>&amp;</sup><br>(%) |
| S-MO  | 1     | 325            | $56.8 \pm 6.2^{a}$     | $49.8 \pm 5.0^a$                  | $31.8 \pm 1.8^{a}$                               |
|       | 2     | 356            | $52.0 \pm 5.2^{a}$     | $51.7\pm7.4^{a}$                  | $35.6 \pm 3.9^{a}$                               |
|       | 3     | 321            | $55.3\pm4.7^a$         | $49.7\pm5.9^{a}$                  | $38.7 \pm 1.4^{a}$                               |
| N-PO  | 1     | 331            | $69.5 \pm 4.4^{b}$     | $69.5 \pm 5.8^{b}$                | $48.4\pm6.4^b$                                   |
|       | 2     | 339            | $65.7 \pm 4.2^{b}$     | $72.2 \pm 7.6^{b}$                | $47.6 \pm 7.6^{b}$                               |
|       | 3     | 319            | $69.5 \pm 4.1^{b}$     | $70.5\pm8.4^{b}$                  | $49.2\pm8.2^{b}$                                 |

**Supplementary Table S2.** In vitro fertilization parameters of porcine oocytes cultured in medium overlaid with different lots of Sigma mineral oil (S-MO) and Nidoil paraffin oil (N-PO).

<sup>#</sup>Number of blastocysts/ total of 2,4-cells embryos. \*Number of blastocyst/total of oocytes cultivated. Data are presented as the mean  $\pm$  SD (four replicates). <sup>a,b</sup> Different letters in the same column indicate differences (P < 0.05).