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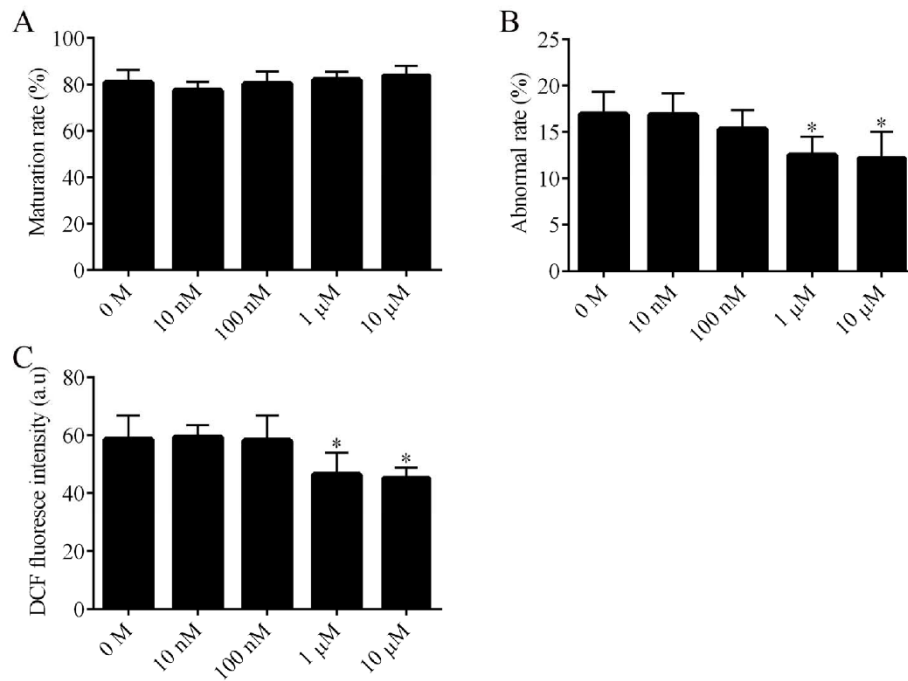
## Supplementary Material

### **Effect and possible mechanisms of melatonin treatment on the quality and developmental potential of aged bovine oocytes**

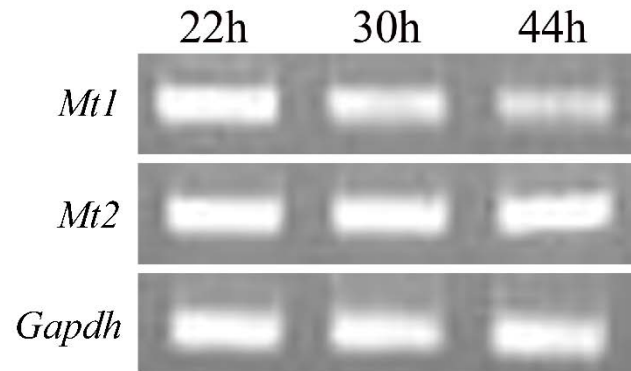
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**Fig. S1.** A dose response study was conducted to establish the most effective concentration. (A) Effect of treatment with melatonin at various concentrations on the maturation rate at 44 h. (B) Effect of treatment with melatonin at various concentrations on the abnormal rate at 44 h. (C) Effect of treatment with melatonin at various concentrations on the ROS levels at 44 h. The dramatic difference in data was represented using an asterisk (\* $p < 0.05$ ). Data are expressed as means  $\pm$  standard deviation from at least three separate experiments.



**Fig. S2.** RT-PCR analysis of *Mt1* (melatonin receptor 1) and *Mt2* (melatonin receptor 2) gene expression in bovine oocytes at different culture stages.