D111 The Effect of Oviductal Factor(s) on Expression of Interleukin-1β gene in Preimplantation Mouse Embryos

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To investigate the role of interleukin-1β gene in the mouse embryonic development, *in vivo* and *in vitro* expression pattern of the interleukin-1β mRNA in preimplantation embryos were monitored by RT-PCR, and the effects of explanted oviduct on the expression of interleukin-1β mRNA in preimplantation embryos were examined by coculture system. Interleukin-1β mRNA was detected since the 4-cell embryonic stage *in vivo* and since the morula stage *in vitro.* The difference of expression pattern between *in vivo* and *in vitro* suggested that the expression of interleukin-1β was influenced by oviductal secretions, and the result of coculture of embryos with the oviduct showed that the interleukin-1β might be regulated by the interaction with oviductal factor(s). From these results, it is concluded that the coculture with explanted oviduct advances the interleukin-1β mRNA expression of the embryos, and interleukin-1 mRNA plays an important role in preimplantation embryonic development. However, the exact role of interleukin-1β in the early development of mouse embryos was not clear, and so further experiments have being done to evaluate the effects of coculturing embryos together with uterine endometrial cells on the interleukin-1β expression of the embryos.

D112 Effects of N-cadherin on myoblast determination protein (MyoD) of chick embryonic myoblast *in vitro.*

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N-cadherin is a Ca^{2+}-dependent cell-cell adhesion molecule. It was identified in brain cells of mouse and chicken. Its expression is transient in skeletal muscles and many other tissues. Myoblasts grown in the presence of anti-cadherin antibodies (NCAD-2) exhibited an altered morphology compared to control cultures, coupled with decreased myoblast fusion. Treatment of NCAD-2 suppressed MyoD expression in muscle cell differentiation.
These results show that cadherin-mediated cell interactions play a critical role in the signaling events required for differentiation of muscle progenitor cells.