Conclusion

In the adult mouse, testis contained higher amounts of mRNA encoding the mMAN2B2 than the epididymis, though porcine MAN2B2 was mainly expressed in the narrow region between the caput and corpus epididymis. The mMAN2B2 cDNA was cloned from the mouse testis cDNA library. It was found that 1018 amino acids were coded in its open reading frame, and 62% of the amino acid sequence was identical to that of the porcine MAN2B2. The mMAN2B2 gene was cloned from the 129SVJ mouse genomic library. The mMAN2B2 gene was consisted of 19 exons and 18 introns. The mMAN2B2 gene was assigned to Chr5. The mMAN2B2 mRNA was localized exclusiveiy in spermatogonia in the testis. It was specifically expressed in type A spermatogonia at stages Ⅸ~Ⅺ of spermatogenesis and was detected there until the cell developed into type B spermatogonia. The signals of mMAN2B2 protein were observed in the acrosome whose shape gradually changed along with the progress of spermiogenesis. The signals of mMAN2B2 on the mature sperm prepared from the cauda epididymis were also studied. The signals of mMAN2B2 were still observed in the acrosomal region. But it was found that the signal of mMAN2B2 in the acrosome was not detected after the acrosome

reaction. The anti mMAN2B2 antibody reduced the fertilization rate about 24 % from that in the absence of the antibody. This indicates that mMAN2B2 plays an important role on fertilization in mouse as well as in boar.