matozoa, through a series of mitosis, meiosis, and cellular differentiation. The myb gene family consists of three members, A-, B- and C-myb. The proteins encoded by these genes bind DNA in a sequence-specific manner and regulate transcription of target genes. This study was conducted to examine the male germ cell-specific expression of A-myb in mouse and human.

Mouse tissues were collected from adult ICR male and female mice. Human tissues were stored in liquid nitrogen. Western blot analysis was performed using antiserum (generous gift from M. Introna, Italy) raised against human A-myb protein. To study cell-specific expression pattern of A-myb protein in the testis, immunohistochemistry was performed using the same antibody. Immunohistochemical staining in mouse testis was performed using the kit, using an avidin-biotin immunoperoxidase technique. RT-PCR for A-myb mRNA was performed in testes with normal spermatogenesis and Sertoli cell- only syndrome (SCO).

Western blot analysis of adult mouse tissue revealed a predominant A-myb expression in the testis, with very low expressions in the ovaries, spleen, liver, muscle, kidney, lung, stomach, uterus, and brain. In human, significant A-myb protein expression was also observed in testis, whereas a small amount of A-myb was detected in breast, stomach, prostate, colon, liver, ovary, epididymis, and testis with SCO. Immunohistochemical analysis of adult mouse testis shows that this gene is expressed at high levels in spermatogonia, and preleptotene and pachytene spermatocytes, with concomitant down-regulation during terminal differentiation of these cells into mature spermatozoa. On RT-PCR, A-myb mRNA was expressed in the testis with normal spermatogenesis, but not detected in testis with SCO.

These results demonstrate that the A-myb is highly expressed in male specific germ cells, suggesting that A-myb might play a specific role during the early process of spermatogenesis, i.e. proliferation and/or differentiation, in mouse and human. Further studies to determine the functions of A-myb in the testis should improve understanding of the molecular events associated with spermatogenesis.

O-19 Stage- and Cell-specific Expression of Pituitary Adenylate Cyclase-Activating Polypeptide Type I Receptor Gene During Rat Ovarian Follicle Development

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Pituitary adenylate cyclase-activating polypeptide (PACAP), a neuropeptide with considerable homology to vasoactive intestinal peptide, has been shown to be stimulated by gonadotropins in the ovary. The present studies further evaluated the cell-type specific expression and gonadotropin regulation of PACAP type I receptor (PACAPR) in immature rat ovaries by Northern blotting, *in situ* hybridization and RNase protection assay. Northern blot analysis of ovaries obtained from immature rats revealed the increased expression of PACAPR during prepubertal development. The major cell types expressing PACAPR messenger RNA (mRNA) were granulosa cells of large preantral follicles. Treatment with equine chorionic gonadotropin (eCG) to immature

rats caused a decrease in ovarian PACAPR expression. In contrast, treatment with human chorionic gonadotropin (hCG) at 2 days after eCG treatment stimulated ovarian PACAPR mRNA within 6~9 h in granulosa cells of preovulatory follicles. Treatment with luteinizing hormone (LH) in cultured preovulatory follicles *in vitro* further confirmed the time- and dose-dependent stimulation of PACAPR by LH/hCG in granulosa cells of preovulatory follicles. Furthermore, RNase protection assay revealed that the short variant of ovarian PACAPR is the predominant form stimulated during prepubertal development and by gonadotropins. These results demonstrate the expression of PACAPR mRNA in granulosa cells of large preantral follicles and of preovulatory follicle stimulated by gonadotropins, and suggest that PACAP may play a role in the growth of developing follicles and in ovulation as paracrine/autocrine factor.

O-20 Comparison of Tubal Patency and Pregnancy Rate in Microsurgical Reanastonosis

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Purpose: To determine the use of the laser technique possible in microsurgical tubal reanastomosis, the authors compared methods using Infrared laser beam and suture, conditioned with or without splint insertion.

Material and Methods: Total 60 rabbits were used in experimental tuboplasty. To compare tubal patency, pregnancy rate, and histologic difference in anastomosis sites, the authors performed three kinds of anastomosis in rabbits; Group I: 1 or 2 layer anastomosis with splint, Group II: 1 or 2 layer anastomosis without splint, Group III: use of laser without splint (a) and use of laser with splint (b).

Results are as Follows: 1. Infiltration of inflammatory cell appeared in three group by optical microscopic examination. More fibrosis and inflammatory cell infiltration appeared in group II without a significant statistical difference, and there was no significant difference between left and right tubes in each group. 2. In the incidence of tubal patency, group II was significantly higher (75%) than group I (50%), especially, group III using laser and splint was the highest (90%) compared with other groups ($p<0.05$). 3. In the pregnancy rates, each group not using splint was lower than groups using splint ($p<0.05$), especially, laser using group with splint (group III-b) was the highest (80%) ($p<0.05$).

Conclusion: From the above results, it is considered that the tubal reanastomosis using splint and Nd-YAG laser will improve the pregnancy rate, and its usefulness could be increased along development of laser technique.