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Abstracts

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hyperandrogenism and polycystic ovaries. Growth differentiation factor-9 (GDF9) is an ooctye-specific member of the TGFß superfamily and is expressed in human oocytes and plays a fundamental role in ovulation, oocyte maturation and embryo development. Similar to other TGF-ß family ligands, GDF-9 likely initiates signaling mediated by type I such as activin receptor-like kinase (ALK5). Blocking signaling from the ALK5 inhibits GDF9 activity.

Methods: In this study, 60 PCOS women and 60 healthy women as control were selected. After DNA extraction, PCR-SSCP was done and for final confirmation samples with mobility shift were sequenced.

Result: Sequence analysis results did not show any single nucleotide polymorphisms (SNP) or mutation in target region of ALK5 gene in the case or control groups, but 881G>A (rs254286) variation was found in exon 2 of GDF9 gene in 14 patients which was a significant difference (p

Conclusion: This finding indicates that genetic variation 881G>A of the GDF9 gene in Iranian population studied, may be associated with female infertility. Further studies on larger population samples need to be done to confirm this finding.

Keywords: ALK5 gene, Female infertility, GDF9 gene, PCOS

P308: Sheep oocyte expresses leptin receptor mRNA

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Background: Leptin, a product of Ob gene, is originally secreted by adipocytes and is involved in the regulation of food intake, energy metabolism and reproductive functions. There are various evidences regarding the direct effect of leptin on physiological activities of oocyte as well as ovarian function. The aim of this study was to investigate the expression of leptin receptor by reverse transcription - polymerase chain reaction (RT-PCR) analysis in ovine oocytes.

Methods: Ovine ovaries were collected from abattoir and cumulus-oocyte complexes (COCs) were aspirated. Then, COCs were denuded and oocytes immediately were used for total RNA extraction. The complementary DNA was synthesized from isolated RNA and was used for PCR amplification. PCR reaction was performed with cDNA and designed special primers. Ovine beta actin gene was chosen as an internal control and adipose tissue was selected as positive control.

Result: Gel electrophoresis for PCR product confirmed amplification of 121 bp fragment of leptin receptor. So, it was demonstrated that transcript of leptin receptor is expressed in ovine oocyte.

Conclusion: Our findings revealed that leptin might have a direct effect on ovine oocyte function through its receptor which should be investigated.

Keywords: Oocyte, RT-PCR, Sheep, Leptin receptor

P309: Review of the genetic origins of polycystic ovary syndrome

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Background: Infertility is defined as the inability to conceive after one year of regular unprotected intercourse. The polycystic ovary syndrome is one of the factors that causes infertility in women. This syndrome is a common endocrine disorder that is the main reason of anovulation in women. PCOS is a

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