IVF for tubal or male factor infertility were prospectively randomized cell (GC) gene expression differs between pure FSH and FSH/LH stimulation

M. Greenway, K. A. Hansen. OBGYN, Sanford School of Medicine of the University of South Dakota, Sioux Falls, SD; Sanford Research USD, Sioux Falls, SD.

CELLS FROM RECOMBINANT FSH VERSUS HUMAN MENOPAUSAL GONADOTROPIN: COMPARISON OF THE STEM CELL POTENTIALS IN BOTH DECREASES THE METABOLIC RATE AND THE CLONALITY OF THE RECOMBINATION FIGURE FOR GENE EXPRESSION IN GRANULOSA CELL. THE RESULTS ARE REPRODUCED WITHIN 24 HOURS OF THE COLLECTION OF FOLLICLES. THE GCs WERE IMMEDIATELY FROZEN IN LN AND STORED AT -80°C. GENE EXPRESSION WAS THEN MEASURED USING RT-PCR.

**OBJECTIVE:** The objective of this study was to investigate the effect of FSH/LH on gene expression in human granulosa cells.

**MATERIALS AND METHODS:** The study included 20 women undergoing IVF. The patients were randomized to receive either FSH alone or FSH/LH. Gene expression was assessed using RT-PCR.

**RESULTS:** The results showed that FSH/LH significantly increased the expression of several genes involved in cell proliferation and survival, while FSH alone did not have a significant effect.

**CONCLUSIONS:** FSH/LH may have a beneficial effect on gene expression in human granulosa cells, which could potentially improve IVF outcomes.

**Supported by:** This work was supported by NIH grant no. 1R01HD076479-01.

**Tuesday, October 20, 2009**

**P-22**

**ESTROGEN RECEPTOR-α GENE POLYMORPHISMS IN PATIENTS WITH IDIOPATHIC PREMATURITY OVARIAN FAILURE.** S. H. Yoon, S. Y. Ku, E. G. Min, B. M. Kang, S. T. Oh, Y. M. Choi. Department of Obstetrics and Gynecology, Dongguk University Ilsan Hospital, Goyang, Gyeonggi, Republic of Korea; Department of Obstetrics and Gynecology, College of Medicine, Seoul National University, Seoul, Republic of Korea; Department of Obstetrics and Gynecology, College of Medicine, University of Ulsan, Asan Medical Center, Seoul, Republic of Korea; Department of Ob-

**OBJECTIVE:** To investigate the association of estrogen receptor (ER)-α gene polymorphisms with idiopathic premature ovarian failure (POF).

**MATERIALS AND METHODS:** A case-control study was conducted with 126 patients diagnosed with POF and 221 healthy controls. The ER-α gene polymorphisms were genotyped using TaqMan assay.

**RESULTS:** The study found a significant association between the ER-α gene polymorphism and idiopathic POF, with a higher incidence of alleles with short TaqI repeats in the POF group compared to the control group.

**CONCLUSIONS:** The results suggest that the ER-α gene polymorphisms may be associated with idiopathic POF.

**Supported by:** This study was supported by the National Research Foundation of Korea (NRF) grant no. 2019R1F1A1053039.

**Tuesday, October 20, 2009**

**P-23**

**DIFFERENTIAL GENE EXPRESSION IN HUMAN GRANULOSA CELLS FROM RECOMBINANT FSH VERSUS HUMAN MENOPAUSAL GONADOTROPIN OVARIAN STIMULATION PROTOCOLS FOR IVF.** J. D. Brannian, K. M. Eyster, B. Anderson, M. Greenway, K. A. Hansen. OBGYN, Sanford School of Medicine of the University of South Dakota, Sioux Falls, SD; Sanford Research USD, Sioux Falls, SD.

**OBJECTIVE:** The study was designed to test the hypothesis that granulosa cell (GC) gene expression differs between pure FSH and FSH/LH stimulation regimens.

**MATERIALS AND METHODS:** The study included 30 women undergoing IVF. The patients were randomized to receive either FSH alone or FSH/LH. Gene expression was assessed using RT-PCR.

**RESULTS:** The results showed that FSH/LH significantly increased the expression of several genes involved in cell proliferation and survival, while FSH alone did not have a significant effect.

**CONCLUSIONS:** The results suggest that FSH/LH may have a beneficial effect on gene expression in human granulosa cells, which could potentially improve IVF outcomes.

**Supported by:** This work was supported by NIH grant no. 1R01HD076479-01.

**Tuesday, October 20, 2009**

**P-24**

**SELF INJECTED GONADOTROPINS – A SYSTEMATIC REVIEW OF HUMAN DERIVED VS. RECOMBINANT ONES.** H. G. Al-Inany, A. Abousetta. Cairo University, Cairo, Egypt.

**OBJECTIVE:** Recombinant gonadotrophins were marketed based on their purity and hence being self injected. Current purification processes allowed the production of human derived gonadotrophins of high purity and hence can be self injected. Still, there is still difference in cost of recombinant drugs being more expensive. The objective is to compare between human derived gonadotrophins and recombinant FSH in assisted conception programs.

**MATERIALS AND METHODS:** Meticulous computerized and hand searches were conducted to identify relevant trials. Primary outcome measures were the live-birth rate and rate of developing ovarian hyperstimulation syndrome. Pooling of studies was performed using the Mantel-Haenszel fixed effect model.

**RESULTS:** Search strategy located 13 trials (3984 women) that fit the inclusion/ exclusion criteria, and data was extracted to allow for an intention-to-treat analysis. For the primary outcomes, live-birth (O.R = 1.14, 95% CI = 0.98 to 1.32) and OHSS rates (O.R = 1.14, 95% CI = 0.77 to 1.71) were not significantly different between the two groups. In a subgroup analysis of highly purified human menopausal gonadotropin (hMG) versus recFSH, the live-birth (O.R = 1.10, 95% CI = 0.93 to 1.30) and OHSS rates (O.R = 1.14, 95% CI = 0.75 to 1.74) were also not significantly different. Similar results were demonstrated for HP-FSH versus recFSH (live-birth rate (O.R = 1.30, 95% CI = 0.92 to 1.84); OHSS rate (O.R = 1.14, 95% CI = 0.32 to 4.04).

**CONCLUSIONS:** Highly purified gonadotropins, collectively and individually, have been demonstrated to be non-inferior to recFSH with regards to the clinical outcomes and patient safety during assisted reproduction.

**Supported by:** This work was supported by NIH grant no. 1R01HD076479-01.

**Tuesday, October 20, 2009**

**P-25**

**ASSOCIATION OF SCAVENGER RECEPTOR CLASS B, TYPE 1 (SR-BI) SNPS WITH FERTILITY OUTCOMES IN INFERTILE WOMEN UNDERGOING IVF.** M. M. Yates, A. Kolmakov, S. Ibrahim, Y. Zhao, J. Garcia, A. Rodriguez. Gynecology and Obstetrics, The Johns Hopkins University School of Medicine, Baltimore, MD; Medicine, Johns Hopkins University School of Medicine, Baltimore, MD; The Johns Hopkins University School of Medicine, Lutherville, MD; Medicine, Johns Hopkins University School of Medicine, Baltimore, MD.

**OBJECTIVE:** It has been demonstrated that abnormalities with scavenger receptor class B, type 1 (SR-BI) are associated with infertility, hypercholesterolemia, and abnormalities of high density lipoproteins (HDL). We sought to further investigate specific genetic variants of SR-BI and their associations with IVF outcomes.

**MATERIALS AND METHODS:** From November 2007 to March 2009, granulosa cells were isolated from the follicular fluid of 135 women.