less past drug usage (9%) than the general American population (38.9%). Also, the rate of current alcohol use in our patients (46.2%) is similar to the national rate (48.3%).

ASRM guidelines do not include urine toxicology screening. It may be desirable to screen potential oocyte donors with urine toxicology testing, as donors may not fully disclose details of drug use.

P-29

Highly purified subcutaneous human menopausal gonadotropin (hMG-HP; Menopur™) does not compromise assisted reproductive technology outcome. G.N. Allahbadia, G.N. Gandhi, R.M. Merchant, K.S. Kadam, J.A. Karani. Rotunda-The Center For Human Reproduction, Mumbai, India.

Objectives: To compare ovarian responses and outcomes with Highly Purified subcutaneous Human Menopausal Gonadotropin (hMG-HP) versus intramuscular (IM) Urinary Menopausal Gonadotropin (u-hMG) in down regulated women undergoing either IVF or ICSI.

Design: Retrospective, comparative study.

Materials and Methods: Pituitary down-regulated patients received subcutaneous hMG-HP ($n = 35$) or intramuscular u-hMG ($n = 19$), 3×75 IU ampoules (225 IU/day) for 6 days. Ovarian response was assessed by ultrasound on day 7, and the gonadotropin dose adjusted as necessary. Human Chorionic Gonadotropin (hCG), 10,000 IU, was administered intramuscularly when the leading follicles were between 16–18 mm. Oocyte Retrieval occurred 34–36 hours after hCG administration.

Results: No difference was seen when u-hMG and hMG-HP groups respectively, were compared for age, days of stimulation, number of ampoules used, mean endometrial thickness and Estradiol levels (E2) on day of hCG administration and the mean number of oocytes retrieved. However the Fertilization rate in the u-hMG group (75.42 +/− 17.73) was significantly higher than the hMG-HP group (60.66 +/− 28.3) ($p = 0.04$ with $p < 0.05$ considered statistically significant). The Cleavage rate and the number of Grade A embryos available for transfer were higher in the u-hMG group. Mean number of embryos transferred in the u-hMG group (5.47 +/− 3.50) were more than in the hMG-HP group (4.97 +/− 2.63); this being statistically not significant. An ongoing clinical pregnancy rate of 28.57% was reported in the hMG-HP group compared to a 26.32% ongoing clinical pregnancy rate in the u-hMG group. There was no significant difference in the incidence of multiple clinical pregnancy or ovarian hyperstimulation syndrome (OHSS) between the two groups.

Conclusions: Ovarian response was not compromised, nor was oocyte maturation or fertilization impaired with subcutaneous hMG-HP therapy. It is necessary to test new drugs for ART as they become available. Purer gonadotropin preparations that can be self-administered subcutaneously will be preferred for ART.

P-30

Menotropins: revisiting the future of controlled ovarian stimulation protocols in assisted reproductive techniques. G.N. Allahbadia,[1] Kulwinder Kaur,[2] S.P.S. Virk,[2] G.N. Gandhi,[1] R.M. Merchant,[1] K.S. Kadam.[1] [1]Rotunda-The Center For Human Reproduction, Mumbai, India; [2]Rotunda-Virk Center For Human Reproduction, Jallandhar, India.

Objectives: To compare the efficacy & safety of urinary Human Menopausal Gonadotropin (u-hMG; Menodac™; Zydus Biogen, India) versus Recombinant Human Follicle Stimulating Hormone (rec-FSH; Recagon™; Organon, India) for the induction of superovulation in women undergoing Assisted Reproductive Techniques.

Design: Retrospective, multicentre, comparative study.

Materials & Methods: Pituitary down-regulated patients received subcutaneous u-hMG ($n = 19$), 3×75 IU ampoules (225 IU / day) or subcutaneous rec-FSH ($n = 14$), 3×100 IU ampoules (300 IU / day) for 6 days. Ovarian response was assessed by ultrasound on day 7, and the gonadotropin dose adjusted as necessary. Human Chorionic Gonadotropin (hCG), 10,000 IU, was administered when the leading follicles were between 16–18 mm. Oocyte Retrieval occurred 34– 36 hours after hCG administration.

Results: The mean number of days required for stimulation were comparable in both the groups (10.53 +/− 1.07 versus 10.86 +/− 4.47). The difference in mean Endometrial thickness as measured on transvaginal sonography on the day of hCG administration was not statistically significant (9.14 +/− 1.70 versus 9.44 +/− 1.99; $p = 0.65$). The mean amount of IU of the gonadotropin consumed (3742.12 +/− 1763.15 versus 4260.71 +/− 1622.58 IU; $p = 0.39$) and the Estradiol levels (E2) on the day of hCG administration (2742.31 +/− 1364.43 versus 2846 +/− 1684.39 ;$p = 0.99$) were not statistically significant. The mean number of eggs retrieved in the u-hMG group was 10.21 +/− 6.65 compared to 10.93 +/− 6.87 in the rec-FSH group ($p = 0.89$). The fertilization rate was statistically significant in favor of the u-hMG group (75.42 +/− 17.73 versus 50.19 +/− 28.38; $p = 0.0037$) whereas there was no difference in the cleavage rate and the embryos available for transfer. The mean number of embryos transferred in the u-hMG group was 5.47 +/− 3.50 versus 4.79 +/− 3.96 ($p = 0.60$) in the rec-FSH group. An ongoing clinical pregnancy rate of 26.32% was reported in the u-hMG group compared to a 21.43% ongoing clinical pregnancy rate in the rec-FSH group. There was no significant difference in the incidence of multiple clinical pregnancy or ovarian hyperstimulation syndrome (OHSS) between the two groups.

Conclusions: Throughout their long history, the menotropins have been associated with an excellent safety record. Our data reinforce this profile and demonstrate at least comparable efficacy & tolerability versus the genetically engineered recombinant preparation. The cost economics especially in a developing country like India would also ensure that u-hMG will still remain the gold standard for Controlled Ovarian Stimulation Protocols in Assisted Reproductive Techniques till such time that the pricing of the genetically engineered preparations rationalize.

P-31

Prevalence of vaginal dryness in trying-to-conceive couples. J. Ellington, Daugherty, Short, Bio~OriGyn, Spokane, Washington.

Background: Dyspareunia, primarily due to vaginal dryness, has been reported to occur sometimes or more often, in at least 46% of all reproductive age women. However, it is currently not known if vaginal dryness is increased in trying-to-conceive (TTC) couples. Additionally, it has not been evaluated how TTC couples are managing symptoms of vaginal dryness given numerous reports on the sperm toxic nature of most personal lubricants and even saliva.

Objective: This study was done to determine the prevalence of vaginal dryness among TTC couples, and their level of understanding of appropriate interventions for such dryness.

Methods: An opt-in internet survey of 900 TTC couples was conducted over 5 months. Thirty questions regarding fertility and vaginal dryness were asked of each participant. Summary statistics for the group were compiled and analyzed.

Results: Average TTC time for the group was 7 months, with 33% TTC 1 year or more. Medical care for their fertility issues included: 23% no doctor, 13% PCP, 43% ObGyn, 16% Fertility Specialist, or 4% Urologist. Most couples (78%) had no definitive diagnosis for cause of fertility problems. Most (69%) routinely used some ovulation prediction method. Only 16% were currently taking "fertility medications".

While TTC, vaginal dryness negatively affected sexual intimacy for most couples.

11% always	35% often	42% sometimes	9% rarely	3% never

Vaginal dryness episodes also increased while TTC.

19% a lot	57% some	23% not at all

Although 30% knew not to use a lubricant while TTC, another 26% often or always used them. Use by this later group included mostly that of KY (40%) and Astroglide (19%).

Only 20% of couples had ever discussed their dryness problem with a doctor. Of those that had, 75% of the doctors reiterated sperm toxic effects of lubricants.

Conclusion: Rates of vaginal dryness in TTC couples appears to be as much as twice that seen in the general population. Patients are not discussing this problem with their care providers adequately. Fully one-quarter of TTC couples are utilizing personal lubricant products which reportedly are

as toxic to sperm as are contraceptive jellies (Kutteh et al., 1996). Products designed specifically to relieve vaginal dryness without harming sperm are needed for use by TTC couples.

P-32

Delivered twins from thawed blastocysts evaluated by day three preimplantation genetic testing. D. Hill, B. Su, G. Andrews. Reproductive Medicine and Surgery Associates, Beverly Hills, California.

Purpose: To provide further evidence that day three biopsied human embryos can survive cryopreservation at later stages of development and lead to healthy pregnancies.

Rationale: The performance of preimplantation genetic testing (PGT) of day 3 embryos often requires mailing fixed blastomeres or polar bodies to 60;specialty61; centers for evaluation. Reports on the genetic status of the biopsied embryos arrive back at the originating clinic about two days later via phone or fax. Under this arrangement, biopsied embryos are kept in extended culture until day 5–6. Once the report detailing the genetic status of the embryos is received, embryo transfer or cryopreservation of embryos deemed 60; normal61; can proceed. In this article we report a successful outcome (delivered twins) from thawed embryos biopsied at the 8–10 cell stage on culture day 3, then cryopreserved on culture day 6 as hatching blastocysts.

Methods: Standard techniques of ovulation induction, oocyte retrieval and in vitro fertilization and culture were employed on a 38-year-old, G3P1022 woman to produce several day 3 embryos suitable for embryo biopsy / screen for aneuploidy by fluorescent in situ hybridization (FISH). Due to clinically obvious hyperstimulation syndrome, three chromosomally balanced embryos were cryopreserved on day 6 using routine blastocyst freezing protocols, then thawed and transferred four months later.

Results: The patient delivered healthy, non-identical twin girls at term.

Conclusions: Biopsied human embryos can be successfully cryopreserved at later stages of development, and is a valid alternative to fresh embryo transfer under suboptimal or potentially dangerous conditions.

P-33

Pregnancy outcome may be associated with age and weight at time of conception. L. Mukul, S. Feigenbaum, N. Lovell, D.S. Wachs. The Permanente Medical Group, South San Francisco, California.

Objective: To evaluate the contribution of age and weight on pregnancy outcome in women undergoing infertility treatment.

Design: Prospective cohort study in a tertiary REI teaching center.

Materials and Methods: 230 consecutive infertility patients having a positive pregnancy test were prospectively enrolled. Patients had one or more diagnoses of unexplained infertility, ovulatory dysfunction (PCOS), mild male factor, pelvic factor or mildly diminished ovarian reserve. All patients had at least one open tube. Most patients were treated with HMG+IUI. Patients with total motile inseminates between 5 and 20 million/ml underwent washed intrauterine insemination following gradient separation. Pregnancy was diagnosed by a positive serum hCG 14 days following ovulation. Clinical viability was assessed at 6w 3d to 7w 2d by ovulation-adjusted LMP. Pregnancy outcome was determined by reviewing medical records. Data were analyzed using SAS. Fisher's exact test was used to analyze classification versus outcome status and t-test was used for continuous variables. To control for the effects of age, each delivered pregnancy patient was matched with the next consecutive early miscarriage patient of the same age. Significance for $p < 0.05$ was tested using two-tailed distributions.

Results: Pregnancy outcomes were available for all patients. Mean ages were: Delivery group = 34.9 years, miscarriage group = 37.1, ($p = 0.001$). Mean patient weight: Delivery group = 149.1 pounds, miscarriage group 160.5 pounds, ($p = 0.04$). Age-controlled mean difference in weight was 6.97 pounds, ($p = 0.09$).

Conclusions: This pilot study suggests that poor pregnancy outcome is independently associated with both advancing reproductive age and heavier weight at conception. Additionally, although these small numbers demonstrated no statistically significant adverse effect of weight on pregnancy outcome when controlled for age, this may become significant in an adequately powered study.

P-34

Effects of low-dose transdermal progesterone on cardiovascular predictors: CRP, IL-6, and Triglycerides. S. Chaikittisilpa*, L. Chang*, K. Burry**, R.G. Mishra***, K. Hermsmeyer***, F.Z. Stanczyk.* *Dept of OB/GYN, University of Southern California Keck School of Medicine, Los Angeles, CA **Dept of OB/GYN, Oregon Health & Sciences University, Portland, OR ***Dimera Incorporated, Portland, OR.

Background: Oral hormone replacement therapy in postmenopausal women has been shown to elevate several inflammatory markers, including C-reactive protein (CRP) and interleukin-6 (IL-6), which are predictive of increased risk for development of coronary heart disease. Triglycerides tend to be elevated by estrogen and decreased by progesterone. The progestin component has been suggested as the cause for CRP and IL-6 elevations. Transdermal progesterone cream is available without prescription and is commonly used for hormone replacement therapy.

Objective: To determine the effects of transdermal progesterone cream on CRP, IL-6 and triglycerides in healthy postmenopausal women also treated with transdermal estrogen

Materials and Methods: Six healthy normal non-smoker postmenopausal women who discontinued all steroid therapy for at least 4 weeks were treated transdermally with a 0.05 mg/day 17β-estradiol (Climara®) patch twice a week for 4 weeks, with measured serum E_2 levels of 40–60 pg/ml. Transdermal progesterone cream (Pro-Gest®) was first applied beginning 2 days after the first estrogen patch was applied. During the first 2 weeks of the study, the subjects applied 1g of pre-measured cream, containing 30 mg progesterone daily. During the last 2 weeks of the study, they applied 1g of the same premeasured cream twice a day. Serum levels of CRP, IL-6, and triglycerides were measured at baseline (before any treatment) and after 4 weeks of progesterone treatment.

Results: After 2 weeks of 60 mg/day of applied progesterone, of which about 2–3 mg/day was absorbed, serum levels of progesterone were 1.5–2.5 ng/ml. Compared to baseline levels, serum CRP levels tended to be reduced by progesterone treatment, although not significantly by paired t-test comparison with $p < 0.05$. In contrast, IL-6 and triglyceride levels were not altered. Mean levels ($\pm$ SE) are shown in the table.

	Baseline (after washout and before any treatment)	After 4 weeks of low-dose, transdermal E_2 + progesterone
CRP (n = 6) (mg/L)	54.0 ± 42.8	20.1 ± 2.85
IL-6 (n = 6) (pg/ml)	2.0 ± 0.68	2.6 ± 0.69
Triglyceride (n = 6) (mg/dl)	146.8 ± 31.0	124.3 ± 31.6

Conclusions: In this small 4-week study, low doses of transdermal progesterone cream tended to decrease serum CRP but not IL-6 or triglycerides in postmenopausal women also treated with transdermal estrogen. The tendency of transdermal progesterone to beneficially decrease serum levels of CRP is important and worthy of further investigation.

P-35

Glycogen synthase kinase-3B expression in the female embryonic mouse. J.P. Helliwell, W. Salameh, L.W. McPhaul, S.T. Ching, O. Khorram. Harbor-UCLA Medical Center Dept. OB/Gyn, Torrance, California.

Background: Glycogen Synthase Kinase-3β (GSK-3β) is a multifunctional serine/threonine kinase that inhibits glycogen synthesis, neuronal cytoskeletal integrity, and inhibits cell cycle progression and progesterone mediated oocyte maturation. Several lines of evidence indicate it has specific roles during embryogenesis. GSK-3β knockout mice die in utero because of fulminant hepatic failure and its *Drosophila* homologue *zw3* plays a role in cardiac development. Moreover GSK-3β in adult rodent seminiferous tubules is expressed in preleptotene spermatocytes at time of meiotic initiation and enhances thymidine incorporation in S Phase of meiosis I.

Objective: To investigate the distribution of GSK-3β in embryonic mouse tissues by immunohistochemistry (IHC) and test the hypothesis that it is expressed in preleptotene germ cells at day 12.5 p.c in the female genital ridge.

Materials and Methods: IHC using a primary anti-GSK-3β monoclonal antibody (Transduction Laboratories) was performed to identify the pres-