As we leave 2013 in the rear view mirror, my excitement for 2014 is strong. Last year's efforts advanced the Department with increasing speed along its planned path to the future. We again experienced double-digit growth in clinical volume, recruited one of the academically most talented intern classes in memory, and expanded the Department's infrastructure and scope for future clinical and research activities. We also underwent our scheduled site visit by the OB-GYN Residency Review Committee (RRC). If you read no further, please join me in congratulating Drs. Carrie Wieneke, Program Director, and Madhuri Reddy, Associate Program Director, on achieving perfection - a 5-year approval, zero criticisms and only two comments: 1. Congratulations on your 100% Board pass rate; and 2. Consider expanding the number of residents (again!).

For the remainder of my letter, I will focus on three areas - first, the launch of a new clinical center of excellence (our 7th!); second, the exponential growth of an established center; and third, an exciting breakthrough improving perinatal outcomes through annual multidisciplinary simulation training.

In July 2013, we launched the **KU Center for Pelvic Pain and Sexual Health** at our Nall Avenue office in Overland Park, KS. This multidisciplinary unit deals with some of the most frustrating problems women face - chronic pelvic pain, chronic vulvovaginal disorders, life transitions such as menopause and cancer survivorship, genital disfigurement, other body image challenges, sexual dysfunction and gender identification. Center members with special sets of expertise have been organized at one location to offer women the needed comprehensive approach. The disciplines include gynecology, psychology, urology and physical therapy. The core staff are faculty from the KU Department of Obstetrics and Gynecology. Dr. Danielle Staecker is certified by the North American Menopause Society and provides support and therapy for vulvovaginal problems and hormone replacement. Both Drs. Kimberly Swan and Erin Carey are fellowship trained minimally invasive surgeons who share many skills for the performance of complex surgery. They also have subspecialty interests. Dr. Swan has a special interest in the medical and surgical management of endometriosis, while Dr. Carey contributes her experience in a multidisciplinary pain clinic learning the art of pelvic nerve blocks. Rhonda Johnson, PhD leads our counseling team. She is a certified sex therapist and has worked extensively to help women and their families meet the challenges of cancer survivorship. The Center core will grow by one more in April 2014 when Dr. Kevin Ault, a gynecologist recognized internationally for his work in complex and chronic genital tract infection, joins us. I am excited and proud of this unique unit - it is a national rarity and here in Kansas City.
2013 was a year of exponential growth for the KU Center for Advanced Reproductive Medicine. Now one of the largest (and the only multi provider) unit in the region, we welcomed Dr. Courtney Marsh who completed her fellowship at the University of Michigan before joining us. Dr. Marsh has a research focus on fertility problems associated with obesity. She provides the perfect complement to Dr. Sacha Krieg, who with her husband Adam Krieg, PhD, oversee the Program for Early Recurrent Pregnancy Loss, and Dr. Sam Kim, who directs the Program for Fertility Preservation. Dr. Colleen Milroy is one of our busiest clinicians and has a special interest in surgical causes of female infertility. Their combined efforts are supported by a team of 10 including our fulltime on-site Reproductive Laboratory Director, Dr. Mathew Goering PhD and two full time embryologists. This year they are on track to perform more than 350 IVF cycles, and if like last year, achieve results in the top tier nationally.

Lastly, 2013 was a breakout year for our efforts to improve obstetrical outcomes both in Kansas City and nationally. Some of you may previously have heard me speak about PROMPT (PRactical Obstetric Multidisciplinary Training). This true grass roots collaborative effort between Maternal Fetal Medicine, KU Hospital Obstetric Nursing and myself began as an outgrowth of a randomized controlled trial conducted in Great Britain. In 2007, we adapted PROMPT for North American practices, and in August 2008 initiated mandatory annual training for all personnel who work on the Labor Suite. Though we had high hopes, we were startled when in 2013 we looked back on our first 5-years. Despite the Department’s youth movement (our average faculty age has declined from 57 years in 2006 to 40 years in 2013), we documented progressive and sustained decreases in the rates low umbilical artery pH (<7.00) in healthy term newborns (which was associated with a halving of newborn hypoxic ischemic encephalopathy), brachial plexus injury after shoulder dystocia (zero in 2011 and 2012!!) and total cesarean delivery (down from 31.8% in 2008 to 21.6% in 2013). Morale and team functioning are at all time highs. The healthcare costs avoided as a result of these improved outcomes approached $20 million during the first 5-years. Our findings were a podium presentation at the February meeting of the Society for Maternal Fetal Medicine and at the April Zurich HealthCare Division Annual National Risk Symposium. Lastly, I agreed in 2013 to represent the UK based PROMPT-Maternity Foundation in North America, and as a result, our team started training other US hospitals - 8 in the last seven months.

As I complete my eighth year in the Department, I am incredibly proud of our growth and development. We remain committed to providing the finest clinical service and education possible. I welcome your comments.

Very best,

CARL P. WEINER M.D., M.B.A.

The K.E. Krantz Professor and Chair, Obstetrics and Gynecology | Professor, Molecular and Integrative Physiology
Director, Center for the Developmental Origins of Adult Health and Disease
University of Kansas School of Medicine | Kansas City, KS 66160
In April 2013 Dr. Carl Weiner became the North American representative for the Practical Obstetric Multi-Professional Training program (PROMPT). Dr. Weiner and his team have since hosted training sessions in Boston and Kansas City. The goal of this program is to improve training for multiprofessional teams and thus delivery outcomes. Birth is less safe than it could and should be. Simulation and improved training have been ubiquitously recommended to improve intrapartum safety; however the key ingredients of a successful program are unclear. Obstetrical simulation efforts in the past have improved provider knowledge and confidence but patient outcomes fared less well. The only obstetrical program interactively developed with information from a randomized controlled trail and demonstrated to improve obstetrical patient outcomes is PROMPT.

The first (PROMPT) course at the University of Kansas Hospital was held in August 2008. Participation was associated with significant improvements in multiple outcomes: decreased rates of umbilical artery academia at term, a reduction in the rate of brachial plexus injury as well as dramatic reductions in the cesarean section and episiotomy rates. There was also a favorable decline in the HIE. It is estimated the healthcare costs avoided by these improved outcomes saved approximately $20 million during this five year experience. All of these improvements occurred despite a growing delivery volume, and increasing numbers of young providers who worked on the Labor and Delivery Unit.

In conclusion, our experience demonstrates that PROMPT can be successfully adapted to the practice patterns of obstetrics in North America to achieve important improvement in patient outcomes. Combined with the international results, the first North America outcomes support recommendations that the annual training in a PROMPT like program be mandatory for all healthcare workers whose duties include Labor and Delivery. For additional information you can contact the Department directly.
Central and Western Kansas has had a shortage of high risk obstetrical services for many years. Patients in these rural areas drive great distances for these services and often times do not make their appointments due to lack of funds, inadequate transportation or fear of navigating the roads of the “big city”. In September of 2013 The Center for Advanced Fetal Care at KUMC addressed this need by opening a center in Topeka, KS.

Here, patients are afforded the same services they would receive at our academic home in Kansas City; albeit in a more proximal and easier to access location. This center is also conveniently located and greatly utilized by the families of the men and women of the armed services from nearby Fort Riley. Some of the many services provided at our Topeka office include:

- Management of pregnant patients with a variety of pre-existing medical conditions including diabetes mellitus
- Diagnostic ultrasounds for fetal anomalies with subsequent coordination of care and management
- Genetic counseling and genetic screening for a wide range of syndromes and diseases such as Down Syndrome or cystic fibrosis
- Diagnostic procedures such as amniocentesis

Our experienced staff includes a nurse, sonographer and perinatologist. Together they provide patients with a high level of care delivering up to date clinical information to obstetric providers in nearby communities that could have a positive impact on their patient’s outcomes. The center is open 4 days a week (Monday-Thursday). Additionally, advice and recommendations are available from one of our perinatologists to all providers at any time.
EDUCATIONAL OUTREACH

As part of the launch of the new “Center for Pelvic Pain and Sexual Health”, the Center’s faculty hosted an educational outreach event highlighting the causes and treatment options for Lichen Sclerosus (LS). Dr. Danielle Staecker, a leading expert in this area was the primary speaker. She gave an overview of the identification and treatment options for this devastating disease as well as potential research advancements in this area. The program included an international advocate from Great Britain, Fabia Brackenbury, who spoke about her personal journey in trying to deal with the effects of LS.

The audience also had the opportunity to meet the members of the new Center and get a full understanding of the breadth and depth of the services that will be provided such as:

- Treatment for complex pelvic pain
- Menopause management
- Fibroid care
- Psychological and sex therapy
- Diagnosis and therapy for chronic genital infection
- Comprehensive gynecologic services

The evening concluded with the audience having the opportunity to talk one on one with the Center’s healthcare providers to have their personal questions answered.

For more information regarding the services available at the Center, you can contact the clinic directly at 913-588-6200.

THE STAFF FOR THE CENTER INCLUDES:

Dr. Danielle Staecker
Dr. Kimberly Swan
Dr. Erin Carey
Rhonda Johnson, PhD
Jennifer Cumming, MSPT
Sarah Dominguez, MSPT
MULTIDISCIPLINARY APPROACH CREATES NEW CENTER

When Dr. Danielle Stacker led the establishment of the Center for Pelvic Pain and Sexual Wellness in July of 2013, it became the only center in the Midwest to take a multidisciplinary approach to pelvic pain. The Center combines specially-trained gynecologists, a clinical psychologist and physical therapists working together to provide answers and solutions to their patients. Located on the Department’s south campus, the Center provides treatment for complex pelvic pain, menopause management and fibroid care as well as comprehensive gynecologic services.

The scientific knowledge allows our Center to tailor treatment to each individual with a goal of improving their overall quality of life. In addition to Dr. Staecker, the staff includes Drs. Kimberly Swan and Erin Carey, psychologist and sex therapist Rhonda Johnson, PhD, and physical therapists Jennifer Cummings MSPT and Sarah Dominguez MSPT. Individually the teams have been providing comprehensive sexual healthcare for years but now they are able to provide services together under one roof.

One of the Center’s unique features is its Pelvic Board, where a team of doctors, nurses, and therapists meet regularly to discuss individual patients and create treatment plans. Most of the patients who come to the Center have already been to other providers looking for help. The goal at the Center is to evaluate the situation from all perspectives and make the patient whole again.
On Thursday October 17th the Department hosted Dr. Harvey Karp for an educational community outreach talk. Dr. Karp is a well know expert in the areas of child development from birth to age 4. He has taken his experience as a pediatrician and developed programs and techniques that work for parents and caregivers. He blends modern science and ancient wisdom to reveal why newborns are not fully ready for the world at birth and why your toddlers resemble cave people in their primitive non-verbal behavior.

Both of these areas were covered in the course of his talk. The first concept, “When infants are not ready to be born” is referred to as the 4th Trimester: “Babies are used to being held 24 hours a day. When they are born and a parent holds them for only 12 hours a day they feel ripped off”, said Dr. Karp. To help with this process Dr. Karp promotes the 5 S's; swaddling, side/stomach position, shushing, swinging and sucking. The highlight of the evening came when Dr. Karp asked two parents in the audience if he could try this method on their crying infant. Within minutes he had the child swaddled, silent and quickly off to sleep.

After this live demonstration and a series of video examples intermixed with the presentation, the audience left the event with a greater sense of what is normal behavior for infants and toddlers and how to best handle challenging situations that might occur in their child’s future. The Department looks forward to working with Dr. Karp in the future in collaborative research efforts.
FACULTY

Carl P. Weiner, MD, MBA, FACOG
K.E. Krantz Professor and Chair

Stefanie Kempke, MD
Instructor

Madhuri Reddy, MD, FACOG
Assistant Professor

Annie M. Reising, MD
Assistant Professor

Danielle E. Staecker, MD, NCMP
Assistant Professor

John Calkins, MD, FACOG
Professor

Erin Carey, MD, MSCR
Instructor

Linden Collins, MD
Instructor

Stefanie Kempke, MD
Instructor

Rhonda Johnson, PhD
Associate Professor

John Wiley, MD
Assistant Professor

Julia Chapman, MD, FACOG
Associate Professor

Gary A. Johnson, MD, FACOG
Professor

Evelyn Reynolds, MD
Assistant Professor

Kimberly Swan, MD
Assistant Professor

Carrie Wieneke, MD
Assistant Professor

Evelyn Reynolds, MD
Assistant Professor
OUR MISSION AT THE UNIVERSITY OF KANSAS MEDICAL CENTER IS TO PROVIDE EXCELLENCE IN THE AREAS OF ACADEMIA, RESEARCH AND PATIENT CARE FOR THE HEALTH CARE OF WOMEN AT ALL STAGES OF THEIR LIVES.
**WELCOME NEW FACULTY**

**Erin Carey, MD** received her medical training from the University of Missouri-Kansas City and completed a two-year fellowship in benign minimally invasive gynecologic surgery and pelvic pain sanctioned by the American Association of Gynecologic Laparoscopists (AAGL) at the University of North Carolina. Dr. Carey uses a unique multidisciplinary approach to the evaluation and treatment of gynecologic pain syndromes, including lifestyle modifications, medication management, surgical intervention, and neuromodulation techniques.

**Rhonda Johnson, PhD** received her doctorate degree in Counseling Psychology at Oklahoma State University and has internship and postdoctoral experience in Health Psychology from the University of Oklahoma. Dr. Johnson is also a Certified Sex Therapist and Sex Educator (American Association of Sex Educators, Counselors and Therapists). As a sex therapist, Dr. Johnson specializes in therapy that focuses on addressing the sexual concerns, function and sexual expression of men and women and to guide people in becoming more comfortable with communicating and understanding their intimacy concerns.

**Stefanie Kempke, MD** completed her Obstetrics and Gynecology residency at The University of Kansas in Wichita, Kansas. During her residency, Dr. Kempke trained in both laparoscopic and robotic procedures. Dr. Kempke has a special interest in obstetrics. She enjoys the unique relationship that develops during the care of a pregnancy and postpartum.

**Marc Parrish, DO** received his Doctorate of Osteopathy, from the University of Health Sciences-College of Osteopathic Medicine, Kansas City, Missouri and completed his residency at the University of Missouri-Kansas City in Obstetrics and Gynecology. Following his residency, he completed a three year fellowship in maternal-fetal medicine at the University of Mississippi, Jackson, MS. He also holds a Master’s of Science degree in Biomedical Sciences from the University of Mississippi Medical Center, Jackson, MS and is board certified from the Fellow of the American College of Obstetricians and Gynecologists.

**Courtney Marsh, MD, MPH** graduated from the University of Kansas School of Medicine and completed her Obstetrics and Gynecology residency at Emory University in Atlanta, Georgia. She returns to Kansas City after completing a fellowship in Reproductive Endocrinology and Infertility at the University of Michigan. In addition to research in hypothalamic feedback of estrogen as related to pubertal onset and menstrual cyclicity, she also completed research using neuroimaging techniques to better understand polycystic ovary syndrome which she will continue as a faculty member at the University of Kansas Medical Center. She has a number of publications in the scientific literature and is a member of many medical associations.

**Mary Holland, MD** completed her Obstetrics and Gynecology residency at Johns Hopkins Hospital in Baltimore, Maryland. She then went on to complete a Maternal Fetal Medicine fellowship at the University of Texas Health Science Center in Houston, Texas. Dr. Holland also holds a degree of Masters of Public Health and Tropical Medicine from Tulane University in New Orleans, Louisiana. She is board certified from the American Board of Obstetrics and Gynecology.

**Annie Reising, MD** completed her residency in Obstetrics and Gynecology at the David Geffen School of Medicine at UCLA. She received her B.S. in Cellular Biology from the University of Kansas. Dr. Reising has returned to the University of Kansas Medical Center as the nocturnist for the Department. She is board certified from the American Board of Obstetrics and Gynecology.
RESIDENT PROGRAM

The Obstetrics and Gynecology residency program experienced continued growth in 2013. Our program underwent a successful ACGME site visit and was awarded a 5-year accreditation cycle (the longest given) and received zero citations—almost unprecedented. The only comments made were recommendations to expand the number of residents and a commendation for our four-year 100% ABOG Written Board Pass rate.

Due to continued growth in the faculty, residents now receive training covering the tremendous breadth and depth of the specialty. The training program includes all the sub-specialties as well as comprehensive general training. This year new ambulatory rotations were added to the curriculum including time in our regionally unique Center for Pelvic Pain and Sexual Health.

Our residents were recognized with numerous awards this past year; Dr. Julie Vircks was nominated by the medical students for the Professionalism in Residency Award. Dr. Ellie Altaf was selected as a Resident Reporter to attend the 2013 ACOG Clinical Congress and was awarded a Ryan Resident Scholarship to attend the North American Family Planning Meeting. Dr. Erin McNulty was selected as a 2013 North American Menopause Society (NAMS) Resident Scholar.

In June we proudly saw the graduation of our chief residents: Drs. Alison Blevins, Jill Sampson, and Sohee Williams. Dr. Blevins joined Women’s Clinic of Johnson County and Dr. Sampson Northland Women’s Health Care. Meanwhile, Dr. Sohee Williams returned to Eugene, Oregon and joined the Pacific Women’s Center. Our current chief residents are Drs. Lindsay Nordwald, Sharman Russell, Anna Soendker, and Rachel Van Horn. In July we then welcomed four new residents: Drs. Jenny Schuchmann (University of Iowa College of Medicine), Dani Cothern (University of Arkansas School for Medical Sciences), Frances Grimstad (USC Keck School of Medicine) and Erin Hecker (University of Kansas School of Medicine).

As 2013 comes to an end, we are in the midst of recruitment season for the residency Class of 2018. We received over 300 applications from more than 60 allopathic schools. The quality of the applicants is among the best in a decade. We look forward to continued growth in the residency program in 2014 as we strive to provide a top-rate experience to educate tomorrow’s leaders in our field.
RESEARCH HIGHLIGHTS FOR 2013

ADAM KRIEG PhD
Dr. Kreig focuses on the transcriptional mechanisms activated in response to reduced cellular oxygen, or hypoxia. A significant proportion of hypoxic gene expression is mediated by the Hypoxia Inducible Factors (HIFs), transcription factors that stimulate the expression of genes important for anaerobic metabolism, blood vessel recruitment, cell motility, and stem cell maintenance. Of particular interest to the laboratory is the induction of several histone demethylase genes by various HIFs. Since histone demethylases alter gene expression by modifying the chromatin of target genes, hypoxic regulation of this phenomenon creates an intriguing link between cellular microenvironnement, HIF activation, and downstream cascades of gene expression that might prolong the initial cellular response to hypoxia. Dr. Krieg’s laboratory is currently studying the functional consequences of hypoxic histone demethylase expression in the context of normal cell biology and in disease states ranging from cancer to infertility. Additional projects focusing on the expression of other hypoxia regulated genes in cancer and developmental processes are also being pursued.

GENE LEE MD
Dr. Lee studies the molecular and genomic events culminating in labor dystocia in term pregnancies. Difficult labor leads to increased maternal morbidity in the form of increased infections, blood transfusions, and surgical procedures. Newborns are also affected due to birth trauma, acidosis, and difficult transitions to extrauterine life. Dr. Lee and his colleagues will present their work at the 2014 Society for Gynecologic Investigation. Dr. Lee’s other research interests include investigating the effectiveness of multiple oral medications in treatment of gestational diabetes, determining whether ultrasound indicated cerclage is beneficial in multiples, and how have obstetric and newborn outcomes changed since adaptation of the new HAPO based guidelines for gestational diabetes here at KUMC. An abstract investigating the association between isolated VSDs and aneuploidy will be presented at the 2014 Society for Maternal Fetal Medicine.

CLIFFORD MASON PhD
The placental transfer of drugs is critical for the pharmacological management of maternal and fetal conditions. Dr. Mason’s research targets the optimization of drug treatment during pregnancy through an enhanced understanding of placental drug transport, metabolism, and pharmacokinetics. Specifically, he is focused on the regulation of placental transporter proteins and the overall impact on drug distribution and drug efficacy during normal and abnormal pregnancies. His research is funded by an NICHD NIH Pathway to Independence Award (Parent K99/R00). Dr. Mason successfully completed the initial phase of the grant this year; referred to as the K99, and has now transitioned to the R00 phase. The Mason laboratory is also interested in the molecular mechanisms of myometrial contractility, specifically the changes in the functional expression of calmodulin binding proteins in myometrium during pregnancy and labor. His findings have been presented at multiple international and national scientific meetings.
YAFENG DONG PhD
Over 500,000 babies are born prematurely in the United States each year. Preterm birth (PTB) is associated with more than 70% of neonatal deaths and contributes to nearly half of all long-term neurologic disabilities. Numerous biomarkers have been investigated, but none have successfully predicted the clinical onset of PTB. Dr. Dong’s laboratory focuses on preterm birth biomarker discovery. Previously, members of this team identified a set of 31 labor effector genes and 49 preterm labor initiation genes using whole gene transcript microarray and high-throughput gene quantification techniques. However, the clinical utility of such an approach to discover clinically relevant markers of sPTB is low because the collection of amniotic fluid, myometrium and/or placenta are highly invasive and a potential danger to an ongoing pregnancy. Therefore, the team has chosen to focus on maternal plasma cell free RNAs, and in the process, discovered a superior approach for the discovery of markers of sPTB. In the process, they developed a novel technique to isolate high yields of intact circulating cell free plasma RNA, which includes both mRNA and microRNA.

Further, the team developed a series of normalization sequences specific for plasma that are necessary to standardize the Q-rt PCR studies. These gene sequences are unaltered by gestation or pregnancy complications such as inflammation, preeclampsia, smoking, diabetes, etc. More importantly, they developed a high throughput gene validation system with the ability to perform 384 different reactions in two hours on a single gene array card. These breakthroughs are the subjects of three US patents involving cell free plasma RNA/miRa PTB biomarker discovery. In 2013, the laboratory team was awarded three grants in PTB biomarker discovery: IAMI grant from the Institute for Advancing Medical Innovation; Spring Bridging Grant from the KUMC Research Institute; and a pilot grant from the KUMC Institute for Reproductive and Regenerative Medicine.

Figure 1: Cell Free Plasma RNA Evaluation By Agilent 2100 Bioanalyzer
DEVIKA MAULIK MD
Dr. Devika Maulik, who is enrolled in the WRHR program, focuses most of her research on the nutritional status of women and how this impacts their current and future pregnancies. She currently utilizes a database that she developed in fellowship with collaboration of both Saint Luke’s Hospital and Department of Clinical Pharmacology and Medical Toxicology at Children’s Mercy Hospital. This database organizes information regarding the nutritional status of women with normal pregnancies and includes pertinent clinical information such as parity, obstetric history, race, body mass index, weight gain, birthweight and pregnancy outcomes. The database includes both a cross-sectional and a longitudinal arm. Dr. Maulik presented the studies from this database last year at the Society of Gynecologic Investigation in Orlando, Florida, as well as this year’s conference in Florence, Italy. She is currently working on publishing her findings.

In addition, Dr. Maulik currently supervises an IRB-approved study (138-63) titled “Characterization of Racial Differences in the Folate Signature Among Non-Pregnant, Reproductive-Aged Females.” This study seeks to characterize nutritional differences both in consumption (through an extensive dietary questionnaire) and in metabolic status (via various blood studies), specifically focusing on methyl donors such as folate and folic acid. In implementing this study, she works closely with Dr. Susan Carlson of the Department of Dietetics and Nutrition, who assisted her in finalizing a dietary questionnaire that best suits the goals of this project. By examining the nutritional status of women prior to pregnancy, Dr. Maulik hopes to delineate subtleties in nutritional status that may affect future pregnancy outcomes.

HELEN ZHOU MD
Ovarian cancer ranks first as the most lethal gynecological malignancy in the United States. Dr. Zhou’s research focuses on the role of MicroRNAs in ovarian cancer, ovarian cancer biomarker discovery in early stage, and ovarian cancer drug resistance. MicroRNAs are small non-coding RNA molecules of 20-25 nucleotides that regulate gene expression by targeting one or more mRNAs for translational repression or cleavage. Abnormal expression of MicroRNAs has been found in various human malignancies. MicroRNAs have the potential to function as either tumor suppressors or oncogenes, and play a major role in cancer tumorigenesis and metastasis. Dr. Zhou’s laboratory is currently studying microRNA profiling in ovarian cancer tissue and plasma of ovarian cancer patients. The research performed in her laboratory employs multiple state-of-the-art techniques such as Whole Gene Transcript/microRNA Microarray, High-throughput Gene Quantification, Surface-enhanced Laser Desorption/ionization (SELDI), Circulating cell free mRNA/miRNA Quantification, Gene cloning, and Bioinformatics. Her research progress was recognized by the 2013 SGI Annual Scientific Meeting.

Functional analysis of an ovarian cancer microarray.
FACULTY PUBLICATIONS

The importance of oocyte biology for the future of fertility preservation, Kim, S Samuel, Advances in Experimental Medicine and Biology(2013)

Modulation of farnesoid X receptor results in post-translational modification of poly (ADP-ribose) polymerase 1 in the liver, Zhu, Yan; Li, Guodong; Dong, Yafeng; Zhou, Helen H; Kong, Bo; Aleksunes, Lauren M; Richardson, Jason R; Li, Fei; Guo, Grace L, Toxicology and Applied Pharmacology(2013)

Clinical guidelines for sperm cryopreservation in cancer patients, Nangia, Ajay K; Krieg, Sacha A; Kim, S Samuel, Fertility and Sterility(2013)

Cisplatin induces cell cycle arrest and senescence via upregulating PS3 and P21 expression in HepG2 cells, Qu, Kai; Lin, Ting; Wei, Jichao; Meng, Fandi; Wang, Zhixin; Huang, Zichao; Wan, Yong; Song, Sidong; Liu, Sinan; Chang, Hulin; Dong, Yafeng; Liu, Chang, Nanfang yiyuexuebao Journal of Southern Medical University(2013)


Short-term effects of salpingectomy during laparoscopic hysterectomy on ovarian reserve: a pilot randomized controlled trial, Findley, Austin D; Siedhoff, Matthew T; Hobbs, Kumari A; Steege, John F; Carey, Erin T; McCall, Christina A; Steiner, Anne Z., Fertility and Sterility(2013)

Biopsychosocial correlates of persistent postsurgical pain in women with endometriosis, Carey, Erin T; Martin, Caitlin E; Siedhoff, Matthew T; Bair, Eric D; As-Sanie, Sawasdan, International Journal of Gynecology and Obstetrics(2013)

Cross-talk between hypoxia and insulin signaling through Phd3 regulates hepatic glucose and lipid metabolism and ameliorates diabetes, Taniguchi, Cullen M; Finger, Elizabeth C; Krieg, Adam J; Wu, Colleen; Diep, Anh N; LaGory, Edward L; Wei, Kevin; McGinnis, Lisa M; Yuan, Jenny; Kuo, Calvin J; Giaccia, Amato J., Nature Medicine(2013)


Prevalence of pain syndromes, mood conditions, and asthma in adolescents and young women with endometriosis, Smorgick, Noam; Marsh, Courtney A; As-Sanie, Sawasdan; Smith, Yolanda R; Quint, Elisabeth H., Journal of Pediatric and Adolescent Gynecology(2013)


Functional neuroimaging of emotional processing in women with polycystic ovary syndrome: a case-control pilot study, Marsh, Courtney A; Berent-Spillson, Alison; Love, Tiffany; Persad, Carol C; Pop-Busui, Rodica; Zubieta, Jon-Kar; Smith, Yolanda R., Fertility and Sterility(2013)


Induction of xenobiotic receptors, transporters, and drug metabolizing enzymes by oxycodone, Hassan, Hazem E; Myers, Alan L; Lee, Insong J; Mason, Clifford W; Wang, Duan; Sinz, Michael W; Wang, Hongbing; Eddington, Natalie D., Drug Metabolism and Disposition: The Biological Fate of Chemicals(2013)

Control of soluble fms-like tyrosine-1 (sFlt-1) production response to placental ischemia/hypoxia: role of tumor necrosis factor-a, Murphy, Sydney R; LaMarca, B Babbette D; Parrish, Marc C; Cockrell, Kathy; Granger, Joey P., American Journal of Physiology. Regulatory, Integrative and Comparative Physiology(2013)

Postpartum thrombotic microangiopathic syndrome, Owens, Michelle Y; Martin, James N; Jr; Wallace, Kedra; Keiser, Sharon D; Parrish, Marc R; Tam Tam, Kiran B; Martin, Rick W., Transfusion and Apheresis Science(2013)

Sickle cell crisis and pregnancy, Parrish, Marc R; Morrison, John C., Seminars in Perinatology(2013)
A Phase II evaluation of ADXS11-001 (NSC 752718, BB-IND #13,712) in the treatment of persistent or recurrent squamous or non-squamous cell carcinoma of the cervix. 
**Principal Investigator:** Julia Chapman, M.D.

Randomized Maintenance Chemotherapy (Paclitaxel vs. Xyotax vs. No Treatment) for Women with Advanced Ovarian or Primary Peritoneal Cancer who have achieved a CR to Primary Platinum/Taxane Chemotherapy. 
**Principal Investigator:** Julia Chapman, M.D.

A Phase 3 Randomized, Double-blind, Placebo-controlled, Multicenter Study of AMG 386 With Paclitaxel and Carboplatin as First-line Treatment of Subjects With FIGO Stage III-IV Epithelial Ovarian, Primary Peritoneal or Fallopian Tube Cancers. 
**Principal Investigator:** Julia Chapman, M.D.

Effect of Early Intervention On Mood in Women in Gynecologic Oncology. 
**Principal Investigator:** Julia Chapman, M.D.

A Phase II, Multicenter, Randomized, Blinded, Placebo-Controlled Trial of Carboplatin and Gemcitabine Plus Bevacizumab in Patients with Platinum-Sensitive Recurrent Ovary, Primary Peritoneal, or Fallopian Tube Carcinoma. 
**Principal Investigator:** Julia Chapman, M.D.

A randomized Phase II trial of adjuvant chemotherapy as primary treatment for locally advance cervical cancer compared to chemoradiation alone: The Outback Trial. 
**Principal Investigator:** Julia Chapman, M.D.

A randomized, double-blind, placebo-controlled Phase II study of VTX 2337 in combination of pegylated liposomal Doxorubicin (PLD) in patients with recurrent or persistent epithelial ovarian, fallopian tube or primary peritoneal cancer. 
**Principal Investigator:** Julia Chapman, M.D.

Randomized Phase III clinical trial of adjuvant radiation versus chemoradiation in intermediate risk, stage I/IIA cervical cancer treated with initial radical hysterectomy and pelvic lymphadenectomy. 
**Principal Investigator:** Julia Chapman, M.D.

A randomized Phase III trial of weekly Cisplatin and Radiation versus Cisplatin and Tirapazamine (Ind #46525) and radiation in Stage IB2, IIA, IIB, IIIB and IVA cervical carcinoma limited to the pelvis. 
**Principal Investigator:** Julia Chapman, M.D.

A three arm randomized Phase II study of Paclitaxel/Carboplatin/Bevacizumab (NSC#704865, IND#7921), Paclitaxel/Carboplatin/Temsirolimus (NSC#683864, IND#61010) and Ixabepilone (NSC#710428, IND#59699)/Carboplatin/Bevacizumab as initial therapy for measurable Stage III or IVA, Stage IVB, or recurrent endometrial cancer. 
**Principal Investigator:** Julia Chapman, M.D.

Can Diet and Physical Activity Modulate Ovarian, Fallopian Tube and Primary Peritoneal Cancer Progression-Free Survival? 
**Principal Investigator:** Julia Chapman, M.D.

Quality of life and care needs in patients with persistent or recurrent platinum-resistant ovarian, fallopian tube, and peritoneal cancer. 
**Principal Investigator:** Julia Chapman, M.D.
Phase III trial of Carboplatin and Paclitaxel plus placebo vs. Carboplatin and Paclitaxel plus concurrent Bevacizumab (NSC#704865, IND#113912) followed by placebo vs. Carboplatin and Paclitaxel plus concurrent and extended Bevacizumab in women with newly diagnosed previously untreated suboptimal advanced stage epithelial and ovarian and primary peritoneal cancer.
Principal Investigator: Julia Chapman, M.D.

Randomized Phase III trial of Doxorubicin/Cisplatin/Paclitaxel and G-CSF versus Carboplatin/Paclitaxel in patients with Stage III & IV or recurrent endometrial cancer.
Principal Investigator: Julia Chapman, M.D.

A Phase III trial of pelvic radiation therapy versus vaginal cuff brachytherapy followed by Paclitaxel/Carboplatin chemotherapy in patients with high risk, early stage endometrial carcinoma.
Principal Investigator: Julia Chapman, M.D.

A Phase III clinical trial of Bevacizumab with IV versus IP chemotherapy in ovarian, fallopian tube and primary peritoneal carcinoma NCI-supplied agent(s): Bevacizumab (NSC#704865, IND#7921).
Principal Investigator: Julia Chapman, M.D.

A randomized Phase III trial of every-3-weeks Paclitaxel versus dose dense weekly Paclitaxel in combination with Carboplatin with or without concurrent and consolidation Bevacizumab (NSC #704865, IND #113912) in the treatment of primary Stage III or iv epithelial ovarian, peritoneal or fallopian tube cancer.
Principal Investigator: Julia Chapman, M.D.

A Phase I study of Intraperitoneal Nanoparticle Paclitaxel in Patients with Peritoneal Malignancies.
Principal Investigator: Gary Johnson, M.D.

A Registry of Caris Life Sciences Molecular Interagency Service (Biomarker Assessment Results) Intended for Correlation with Cancer Clinical Outcomes for Cancer.
Principal Investigator: Gary Johnson, M.D.

Adenocarcinoma In Situ and Micro Invasive Adenocarcinoma of the Uterine Cervix: Evaluation of Histopathology and Clinical Correlates.
Principal Investigator: Evelyn Reynolds, M.D.

A Retrospective Chart Review Identifying the VTE Incidence Among Postoperative Gynecologic Oncology Patients.
Principal Investigator: Evelyn Reynolds, M.D.

Antioxidants Effects On The Outcome Of Ovarian Cancer Treatment.
Principal Investigator: Jeanne Drisko, M.D.

Ovarian Cancer Biobank.
Co-Principal Investigators: Carl Weiner, M.D., Yafeng Dong, PhD

**REPRODUCTIVE ENDOCRINOLOGY AND INFERTILITY**

Epigenetic changes to oocyte development in polycystic ovarian syndrome.
Co-Principal Investigators: Adam Krieg, PhD, Sacha Kreig, M.D.

Uterine and Immune Contributions to Recurrent Pregnancy Loss (RPL).
Principal Investigator: Adam Krieg, PhD

Influence of Recurrent Pregnancy Loss on Uterine Decidua.
Principal Investigator: Sacha Krieg, M.D.

REI Biobank.
Principal Investigator: Adam Krieg, PhD

miRNA Expression in the Endometrium and Endometriotic Implants in Patients with Endometriosis.
Co-Investigator: Sacha Kreig, M.D.

Vitrification of Germinal Stage Oocytes and in Vitro Maturation.
Principal Investigator: Samuel Kim, M.D.

Human Ovarian Autotransplantation using Cryopreserved Ovarian Tissue in Women Treated for Cancer.
Principal Investigator: Samuel Kim, M.D.

Is Controlled Ovarian Hyperstimulation With Letrozole and Gonadotropin Safe in Women at High Risk For Breast Cancer?
Principal Investigator: Samuel Kim, M.D.
The Growth and Maturation of Primordial Follicles in Vitrified Human Ovarian Tissue Xeno-grafted Onto SCID Mice.

**Principal Investigator:** Samuel Kim, M.D.

Effects of Flaxseed Supplementation on Polycystic Ovarian Syndrome.

**Principal Investigator:** Samuel Kim, M.D.

**MATERNAL FETAL MEDICINE**

Twin-to-Twin Transfusion Syndrome.

**Principal Investigator:** Carl Weiner, M.D.

Quantification of forces during normal cephalic vaginal/cesarean delivery.

**Co-Principal Investigators:** Carl Weiner, M.D. and Sarah Kieweg Ph.D.

Squeezing Forces and Elastic Modulus of Human Vaginal Tissue.

**Co-Principal Investigators:** Carl Weiner, M.D. and Sarah Kieweg, Ph.D.

Clinical Evaluation of the AmniSure ROM Test.

**Principal Investigator:** Carl Weiner, M.D.

Pregnancy Biobank.

**Co-Principal Investigators:** Carl Weiner, M.D. and Yafeng Dong, PhD.

A Nested Case-Control Study Evaluating the Utility of Placental Protein 13 (PP13) In-vitro Diagnostic Kit as a Diagnostic Aiding Tool in Assessment of the Risk for Developing Preeclampsia Necessitating Delivery Before 37 Weeks (Early-preeclampsia) Based.

**Principal Investigator:** Carl Weiner, M.D.

Non-invasive Prenatal Diagnosis of Fetal Aneuploidy Using Cell Free Plasma RNA.

**Co-Principal Investigators:** Carl Weiner, M.D. and Yafeng Dong, PhD

A Clinical Study to Evaluate the Clinical Performance of the SEQureDx® Trisomy 21 Test in the Detection of Chromosome 21 in Circulating Cell-Free DNA Extracted from a Maternal Blood Sample Obtained from Pregnant Women with High Risk Indicators for Fetal Chromosome Aneuploidy.

**Principal Investigator:** Carl Weiner, M.D.

A Clinical Study to Evaluate the Relative Clinical Specificity Performance of the SEQureDx® Trisomy 21 Test in Pregnant Women at Low Risk for Fetal Chromosome 21 Aneuploidy.

**Principal Investigator:** Carl Weiner, M.D.

Functional Genomics and Proteomic Markers of Preterm Delivery and Their Variation Among Race.

**Co-Principal Investigators:** Carl Weiner, M.D. and Yafeng Dong, PhD

Characterization of Racial Differences in the Folate Signature Among Non-Pregnant Reproductive-Aged Females.

**Principal Investigator:** Devika Maulik, M.D.

A Randomized Trial Comparing Combination Therapy of Glyburide/Acarbose vs. Glyburide Alone for Glucose Control in Gestational Diabetes.

**Principal Investigator:** Gene Lee, M.D.

The Phenomena of Abnormal Uterine Contractility in the Arrest of the Active Phase of Labor: an Investigation into Normal and Abnormal Qualities of the Contractile Apparatus and Signaling Pathways.

**Principal Investigator:** Gene Lee, M.D.

Isolated Ventricular Septal Defects and Aneuploidy Risk.

**Principal Investigator:** Gene Lee, M.D.

A Retrospective Review of the Effectiveness of HAPO Based Screening Guidelines for Gestational Diabetes.

**Principal Investigator:** Gene Lee, M.D.

**GENERAL OBSTETRICS AND GYNECOLOGY**

Measuring Desire for Control: Perceived Control and Satisfaction With the Childbirth Experience.

**Principal Investigator:** Danielle Staecker, M.D.
KU Center for Sexual Health and Body Wellness Database.

Principal Investigator: Danielle Staecker, M.D.


Principal Investigator: Kimberly Swan, M.D.

Correlation Between LNG-IUD Placement as Determined by 3D Transvaginal Ultrasound and Patient Symptoms, I Prospective Trial.

Principal Investigator: Carrie Wieneke, M.D.

Body Image and Contraceptive Choices.

Principal Investigator: Madhuri Reddy, M.D.

Development and Evaluation of a Module for Resident Training on DaVinci Robotic System.

Principal Investigator: Madhuri Reddy, M.D.

Measuring Surgical Competency: Assessment of the Hopkins Assessment of Surgical Competency (HASC) as a Tool to Measure Surgical Competency.

Principal Investigator: Madhuri Reddy, M.D.

Survey to Outline Causes of Minimal Prenatal Care at the University of Kansas Medical Center.

Principal Investigator: Madhuri Reddy, M.D.

MOLECULAR BIOLOGY CORE FACILITY

Noninvasive Prenatal Diagnosis of Fetal Aneuploidy Using Cell Free Plasma RNA

Co-Principal Investigators: Carl Weiner, M.D. and Yafeng Dong, Ph.D.

Functional Genomics and Proteomic Markers of Preterm Delivery and Their Variation Among Race.

Co-Principal Investigators: Carl Weiner, M.D. and Yafeng Dong, Ph.D.


Co-Principal Investigators: Helen Zhou, M.D., Yafeng Dong Ph.D. and Carl Weiner, M.D.

Impact of pregnancy and disease on regulation of placental drug transport.

Principal Investigator: Cliff Mason, PhD

Molecular regulation of uterine contractility.

Principal Investigator: Cliff Mason, PhD

SECONDARY STUDIES WITHIN THE DEPARTMENT INCLUDE

Use of Intrathecal Hydromorphone in Elective Cesarean Deliveries.

Principal Investigator: Shih Grace, M.D., Department of Anesthesiology

Factors Affecting Growth Patterns and Body Composition of Infants

Principal Investigator: Holly Hull, Ph.D., Department of Dietetics and Nutrition

Maternal Cardiometabolic Health During Pregnancy: Exploring the Role of Vitamin D

Principal Investigator: Holly Hull, Ph.D., Department of Dietetics and Nutrition

Multiple Health Behavior in Pregnancy

Principal Investigator: Ann Davis, Ph.D., MPH, ABPP, Behavioral Pediatrics

Maternal Sleep and Social Environment

Principal Investigator: Teresa Lillis, MA, Doctoral Candidate, Psychology

Improved Cardiac Regeneration Post-Ischemia/Reperfusion Injury with Transplantation of Human Cord Blood Cells

Principal Investigator: Kashyap Choksi, Fellow, Department of Medicine, Division of Cardiovascular Diseases

Umbilical Cord Cells for Engineering Osteochondral Constructs

Principal Investigator: Michael Detamore, Ph.D., Department of Biomaterials and Tissue Engineering
In 2013 the Department continued its tradition of hosting international healthcare scholars from around the world. Many of these scholars were collaborators in our maternal fetal research facilities and others were collaborators in our clinics.

**RESEARCH SCHOLARS**
- Dr. Hongying Hou, The 3rd Affiliated Hospital, Sun Yat-sen University, China.
- Dr. Yuzhu Yin, The 3rd Affiliated Hospital, Sun Yat-sen University, China.
- Dr. Jun Zhang, The 3rd Affiliated Hospital, Sun Yat-sen University, China.
- Dr. Lahong Zhang, Hangzhou Normal University, China.
- Dr. Shuguang Zhu, Sun Yat-sen University, China.
- Dr. Minghui Tai, Xian Jiaotong University, China.
- Dr. Ying Tian, The 3rd Hospital of HeBei Medical University, China.
- Dr. Kaiyun Chen, Provincial People’s Hospital, China.

**VISITING CLINICAL SCHOLARS**
- Dr. Mansur Kamaci, Yuzuncu Yil University, Van-Turkey.
- Dr. Javiera Fuenzalida, Universidade de los Andes, Chile.
- Dr. JinGon Bae, Attending Physician, South Korea.

**VISITING CLINICAL GUEST**
- Dr. Gigi Chandy, Christian Medical Hospital, Vellore India.

![Image of scholars](image_url)
On September 28, 2013 Brad, Stephanie and Jaylie Moore hosted the second annual TTTS race in memory of Gaige and Wyatt Moore. The race was held at the Bartlett Grade School in Bartlett, Kansas. Over 100 runners participated in the event and raised over $2300 which will go directly to support research at the Center for Advanced Fetal Care and The University of Kansas Medical Center.

**RACE PARTICIPANTS AND DONORS**

- Tom Tongier
- Joan Tongier
- Bernie Bilderback
- John Bilderback
- Becky Bachman
- Chad Bachman
- Camden Bachman
- Kerragan Bachman
- Tonia Wilson
- Melissa Russell
- Jenna Russell
- Melinda Littrell
- Linda Carland
- Stephanie Moore
- Brad Moore
- Nancy Wyckoff
- Tony Swanwick
- Carl Weiner
- Barbara Bilderback
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- Madison Hayward
- Josie Hayward
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- Tammy Hayward
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- Amber Davis
- Trenton Davis
- Gary Carter
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- Lyndsey Brothers
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- Kristen Shaw
- Dena Terrell
- Samantha Terrell
- Cortney O'Brien
- Sarah Allison
- Jessica DeTar
- Ben DeTar
- Hope Seider
- Carmen Rathert
- Gracie Moore
- Ashley Moore
- Aubrie Sorrell
- Elsie Sorrell
- Dena Daniels
- Samantha Bohannon
- Britany Monroe
- Tara Foster
- Sydney Foster
- Connie Layton
- Courtney Wilhoft
- Tiffany Revell
- June Revell
- Bryce Gillespie
- Heidi Gillespie
- Judy Taylor
- Becky Wiley
- David Geren
- Jon Aldrete
- Tina Dodd
- Marlena Bohrer
- Ashli Grin
- Amy Waisner
- Zoe Waisner
- Bronte Waisner
- Melissa Murray
- Dana Denton
- Paula Reynolds
- Christy Albertson
- Christy Albertson
- Brooklyn Mae Albertson
- Torrie Albertson
- Bethany Moore
- Brenda Moore
- Bobby Moore
- LaFaye Noble
- Julie Martin
- Lindsey Smith
- Leigh Ann Phillips
- Carolyn Waugh
- Tanna Sprague
- Maxim Thompson
- Jayme Reedy
- Hannah Graybill
- Terri Graybill
- Flint Landrith
- Sherry Goforth
- Jessica Sorrell
- Riley Sorrell
- Jan Turner
- Zavier Phillips
- Maria Escobar
- Clint Rutten
- Teri Rutten
- Marlys Trower
- Cara Thomas
- Maggie Thompson
- Sharon Smith
- Bob & Kathleen Dunn
- Gail & Sarah Baird

**2013 DONORS**

**SUSTAINING DONORS:**
- The Family of Dr. L.A. Calkins
- The Family of Dr. Kermit Krantz
- The family of Russell Hilcomb Jr. MD
- Dr. Donald Johnson
- The Family of Danniel K. Roberts
- Dr. John Wiley

**CHAIRMAN’S CLUB:**
- $500 and above
  - Charles & Pamela Peffer
  - Dr. Randy & Mary Sheridan
  - Dr. Carl Weiner

**ANNUAL FUND:**
- $1—$499
  - Christine & Gary Adams
  - Dr. James K. Citty
  - Brian Darby (in honor of Dr. Toni Heit)

**LEGACY:**
- Dr. Misha Norris

**GENEROUSITY IN ACTION**

Dr. Yafeng Dong
- Robert E. Fast
- Judy Grant
- Dr. Tom & Sandra Olson
- Drs. Adam & Sacha Krieg
- Dr. Cliff Mason
- Dr. Eric & Susanna Peck
- Dr. Angela Casey Shaw
- Dr. Jeff Teply
- Dr. James & Margie Warren

**2013 Annual Report**

Brad, Stephanie and Jaylie Moore
IN MEMORIAM

Dr. William Jourden Cameron, Emeritus Professor of Obstetrics and Gynecology at The University of Kansas Medical School, died of congestive heart failure Oct. 5, 2013 in his home on Lake Charlevoix, Michigan. Dr. Cameron was born in Lansing, Michigan, to Verta and William Cameron. He was a graduate of Michigan State University and earned his Medical Degree from the University of Michigan in 1954. Following his internship at St. Anthony Hospital, in Denver, Dr. Cameron spent a year in General practice at the Burns Clinic in Petoskey, Michigan. He then served two years as Captain in the USAF. In 1958, Dr. Cameron began a four year residency in obstetrics and gynecology at the University of Kansas Medical Center.

Upon completion of his residency he joined the teaching staff and progressed to full professor, Vice chairman of the OBGYN department and Assistant Dean at the medical school. Dr. Cameron delivered thousands of babies during his career, but he was particularly recognized as an expert in treating infertility cases. He also was active in establishing the first in vitro fertilization program in the Midwest located here at the University of Kansas. Dr. Cameron was a popular public speaker and appeared on medical programs throughout the U.S. and internationally.

According to one of his residents Dr. John Calkins, who later became one of his colleagues, Dr. Cameron developed the requisite skills for reproductive endocrinology before a fellowship existed. In addition to his clinical skills Dr. Cameron, is also remembered as a passionate mentor to his residents. He was instrumental in getting the residents involved with the Central Association of Obstetricians and Gynecologist (CAOG) and the Kansas City Gynecological Society (KCGYN Society). He encouraged all of us to participate in these professional organizations. He was a perpetual mentor and educator said faculty member and former Chairman, Dr. John Calkins.

Dr. Cameron is survived by his wife Monsie and his three children, Bruce, Amy and Julie. He was a talented clinician, a leader in his field, and a lifelong friend to the Department. His talents will always be remembered and his passing will be heartfelt.

HE WAS A TALENTED CLINICIAN, A LEADER IN HIS FIELD, AND A LIFELONG FRIEND TO THE DEPARTMENT.

1929–2013