



Department of Obstetrics
and Gynecology
University of Colorado Anschutz
Medical Campus

RESEARCH RETREAT
2017



*Bench-to-bedside in
Obstetrics, Gynecology and Reproduction*



DENVER BOTANIC GARDENS

WEDNESDAY OCTOBER 4, 2017 | 8AM-5PM

FOLLOWED BY HAPPY HOUR AND DINNER

PROGRAM AGENDA

7:30–8:00 am Light Breakfast

8:00–8:10 am **Welcome and Introduction**
Thomas Jansson, MD, PhD

Session 1

MODERATORS: T. Rajendra Kumar, PhD and Lindsay Wheeler, MD

8:10–9:00 am

KEYNOTE SPEAKER

2017 Florence Crozier Cobb Keynote Lecture

Biology of Estrogen Receptor Beta

Jan-Åke Gustafsson, MD, PhD

Director, Center for Nuclear Receptors and Cell Signaling

Robert A. Welch Professor
University of Houston

9:00–9:15 am

JUNIOR INVESTIGATOR ORAL PRESENTATION 1

***Omega-3 Fatty Acid Supplementation
Improves Luteal Function in Obese but Not
Normal Weight Women***

Jessica Bauer, MD

9:15–9:30 am

JUNIOR INVESTIGATOR ORAL PRESENTATION 2

***LH / Testosterone-Regulated Transporters in
the Mouse Testis***

Zhenghui Liu, PhD

9:30–10:00 am

Refreshments

Session 2

MODERATORS: Kathleen Connell, MD and Damian Guerra, PhD

10:00–10:40 am

ESTABLISHED INVESTIGATOR ELEVATOR PRESENTATIONS

Be Fruitful and Multiply Like Fish: Can Omega-3 Fatty Acids Help Me Conceive?

Alex Polotsky, MD

Measuring Maternal and Fetal Marijuana Exposure

Torri Metz, MD

A Cluster Randomized Trial of a Home-Based Intervention to Increase Uptake of Postpartum Contraceptives and its Effect on Short-Interval Pregnancy Rates in a Postpartum Population of Rural Guatemalan Women

Margo Harrison, MD

Access to Reproductive Healthcare Services at Catholic-Affiliated Clinics

Maryam Guiahi, MD

Electronic Cigarette Use During Pregnancy—Safer Than Traditional Tobacco Cigarettes?

Beth Bailey, PhD

The Case for Postprandial Triglycerides Fueling Excess Baby Fat—Is it Time to Target Maternal Lipids?

Linda Barbour, MD

Identification of Therapeutic Targets in Ovarian Cancer

Kian Behbakht, MD

- 10:40–10:55 am **JUNIOR INVESTIGATOR
ORAL PRESENTATION 3**
*Epigenetic Mechanisms of PARP Inhibitor
Resistance in Epithelial Ovarian Cancer*
Zachary L. Watson, PhD
- 10:55–11:10 am **JUNIOR INVESTIGATOR ORAL
PRESENTATION 4**
*Anti-Tumor Effect of Adiponectin Receptor
Agonist in Serous Ovarian Cancer*
Amin Ramzan, MD
- 11:10 am–12:00 pm **POSTER SESSION**
*Poster session with Discussants for posters presented
by junior investigators, PRA's and administrators*
- 12:00–12:30 pm Lunch
- JUNIOR INVESTIGATOR**
Lunch date with invited speakers
- 12:30–1:00 pm **PHOTOGRAPHY**
- 1:00–1:45 pm Free time: Stroll in the Botanic Gardens

Session 3

MODERATORS: Emily Su, MD and Owen Vaughan, PhD

- 1:45–2:35 pm **KEYNOTE SPEAKER**
*Stillbirth Assessment, Management and
Prevention*
Uma Reddy, MD, MPH
NICHD Pregnancy and Perinatology Branch

2:35–2:50 pm

**JUNIOR INVESTIGATOR ORAL
PRESENTATION 5**

*Adverse Perinatal Outcomes Associated with
Marijuana Use in Young Mothers*

Christina E. Rodriguez, MD

2:50–3:05 pm

**JUNIOR INVESTIGATOR ORAL
PRESENTATION 6**

*Adiponectin Receptor Activation Mediates
Myometrial Tocolysis: A Repro-Metabolic
Signal for Uterine Quiescence in Preterm
Pregnancy*

Vibhuti Vyas

3:05–3:40 pm

**ESTABLISHED INVESTIGATOR ELEVATOR
PRESENTATIONS**

*Transdifferentiation of Granulosa Cells to
Sertoli Cells*

T. Rajendra Kumar, PhD

*Temporal Control of Primordial Follicle
Growth Activation*

Joshua Johnson, PhD

*PARP Inhibitor Maintenance Therapy for
Recurrent & Metastatic Endometrial Cancer*

Bradley Corr, MD

*Understanding the Multifactorial
Contributions to the Development of Pelvic
Organ Prolapse*

Kathleen Connell, MD

*Can Evolution Tell Us How To Prevent
Hypoxia-Associated Fetal Growth Restriction?*

Lorna Moore, PhD

The Powerful Potential of the Placenta

Emily Su, MD

3:40–4.00 pm

Refreshments

Session 4

MODERATORS: Andrew Bradford, PhD and Jessica Bauer, MD

4:00–4.15 pm

**JUNIOR INVESTIGATOR ORAL
PRESENTATION 7**

*Gut Microbes in Infants of Obese Mothers
Promote Hepatic Inflammation and
Pro-Inflammatory Liver Macrophage
Polarization in Germ Free Mice*

Taylor Soderborg

4:15–4:30 pm

**JUNIOR INVESTIGATOR ORAL
PRESENTATION 8**

*Loss of Perilipin-2 Alters Adipose Tissue and
Leads to Profound Beiging in Mice*

Andrew Libby

4:30–4.45 pm

**JUNIOR INVESTIGATOR ORAL
PRESENTATION 9**

*Placental Nutrient Transporter Protein
Expression Across the First Half of Pregnancy
and the Impact of Obesity*

Laura James-Allan, PhD

4:45–5:00 pm

**JUNIOR INVESTIGATOR ORAL
PRESENTATION 10**

*Human Embryonic Stem Cell-Derived
Trophoblasts Regulate Fetoplacental
Endothelial Cell Function*

Yingchun Li, MD, PhD

5:10–6:00 pm

HAPPY HOUR

**SCIENTIFIC AND CAREER DEVELOPMENT
SPEED DATING**

*Nine tables, each with a specific theme and hosted by
expert; junior investigators rotate*

6:15 pm

Dinner

KEYNOTE SPEAKER

A Journey to Ithaca

Christos Coutifaris, MD, PhD

*Department of Obstetrics and Gynecology
University of Pennsylvania*

Prizes to best poster presentations

Scientific and Career Development Speed Dating for Junior Investigators*

DISCUSSANT

THEME

Malgorzata Skaznik-Wikiel,
MD

Work/Life Balance

Maryam Guiahi, MD
Aaron Lazorwitz, MD

How to Be a Good Mentee

Jan-Åke Gustafsson,
MD, PhD

*How to Have More Great
Scientific Ideas*

Stephanie Teal, MD

Maximize Your CV

Theresa L. Powell, PhD

Scientific Networking 101

Uma M. Reddy, MD, MPH

*How to Get a NIH Grant:
the Untold Secrets*

Chanel Mansfield, CCRP

Developing Your IRB Application

Beth Bailey, PhD

*Designing a Clinical Research
Project: A-Z*

Nanette Santoro, MD

*Emergency Clinic: Get Your
Research Career on Track in
10 Minutes*

**Junior Investigators = 1. In-training investigators (residents, graduate students, clinical fellows, post doctoral fellows) and 2 Instructors. Others are welcome to participate if room is available.*

FORMAT:

- Introduction (2 min)
- Nine discussants are positioned at round tables with 5-6 empty chairs
- 5 x 10 minute sessions with one minute in between, participants must change table during that minute.

POSTERS

Handouts with abstracts will be provided to all registered attendees at the day of the Retreat.

POSTER DISCUSSANTS:

Andrew Bradford, PhD

Christos Coutifaris, MD, PhD

Jan-Åke Gustafsson, MD, PhD

Terry Harper, MD

Joseph K Hurt MD, PhD

Thomas Jansson, MD, PhD

Joshua Johnson, PhD

T. Rajendra Kumar, PhD

James McManaman, PhD

Lorna Moore, PhD

Theresa L. Powell, PhD

Uma M. Reddy, MD, MPH

Malgorzata Skaznik-Wikiel, MD

Emily Su, MD

1 *Morphometric Analysis Reveals Reduced Atresia in Ovaries of Pulsatile FSH-Expressing Mice*

Elizabeth Petesch

T. Rajendra Kumar

Division of Reproductive Sciences and Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology

2 *Cell Biology of Lactation: Docking and Stimulated Secretion of Milk Fat Globules*

Jenifer Monks

Elise S Bales | Andrew E Libby | David J. Orlicky

James L. McManaman

Division of Reproductive Sciences, Department of Obstetrics and Gynecology

3 *Activation of AMPK Reduces Contractile Response in Isolated Murine Uterine Artery*

Sydney L. Coates

Ramon A. Lorca | Colleen G. Julian | Lorna G. Moore

Division of Reproductive Sciences, Department of Obstetrics and Gynecology and Department of Medicine

4 *Enhanced Angiogenic Potential of the Human Placental Microvascular Niche*

Yingchun Li

Shuhan Ji | Emily J. Su

Division of Reproductive Sciences, Division of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology

5 *Decreased Expression of Atresia Marker Genes in Ovaries of Pulsatile FSH-Expressing Mice*

Qin Zhou

T. Rajendra Kumar

Division of Reproductive Sciences and Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology

6 *High Grade Serous Carcinoma Growth in Suspension Associated with Transcriptional Repression*

Lindsay J. Wheeler

Zachary L. Watson | Tomomi M. Yamamoto | Benjamin G Bitler

Division of Reproductive Sciences and Division of Gynecologic Oncology, Department of Obstetrics and Gynecology

7 *Effects of High Fat Diet on the Mouse Hypothalamic-Pituitary-Ovarian (HPO) Axis: A Systematic Review*

Sara Babcock Gilbert

T. Rajendra Kumar

Division of Reproductive Sciences and Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology

8 *The role of VEGFR-1 and VEGFR-2 in Mediating Human Fetoplacental Endothelial Cell Angiogenesis*

Shuhan Ji

Yingchun Li | Hong Xin | Emily J. Su

Division of Reproductive Sciences, Division of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology

POSTERS

9 *Identification of the FSH-Regulated Metabolomic Profiles in Serum*

Anushka Jayaraman

T. Rajendra Kumar

Division of Reproductive Sciences and Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology

10 *High-Altitude Increases AMPK Activity in Myometrial Arteries from Pregnant Women*

Ramón A. Lorca

Sydney Coates | Coleen G. Julian | Lorna G. Moore

Division of Reproductive Sciences, Department of Obstetrics and Gynecology and Department of Medicine

11 *Histological Analysis of Bone in FSHB Null Mice Expressing Distinct FSH Glycoforms*

Allyson Roof

David Orlicky | T. Rajendra Kumar

Division of Reproductive Sciences, Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology and Department of Pathology

12 *nNos Phosphorylatability Presages Nanc Inhibition: Investigation with a Novel Phosphorylation-Deficient nNos Mutant Mouse*

Damian Guerra

Rachael Bok | K. Joseph Hurt

Division of Reproductive Sciences, Division of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology

13 *Computational Analysis of CpG Island Methylation in Follicle-Stimulating Hormone Beta Subunit Gene*

Nandana Das

T. Rajendra Kumar

Division of Reproductive Sciences and Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology

14 *Glucocorticoid Regulation of System A Amino Acid Transport in Primary Human Trophoblast Cells*

Owen R. Vaughan

Theresa L. Powell | Thomas Jansson

Division of Reproductive Sciences, Department of Obstetrics and Gynecology and Section of Neonatology, Department of Pediatrics

15 *SMITTEN: Study Milk in Type Two Diabetes to Enhance Infant Nutrition*

Rachel Rodel

Bridget Young | Linda Barbour

Division of Maternal Fetal Medicine, Department of Obstetrics and Gynecology, Section of Nutrition, Department of Pediatrics and Division of Endocrinology, Diabetes, and Metabolism, Department of Medicine

16 *Gene-Environment Interactions Underlying Neurodevelopmental Disorders: Examining the Impact of Perinatal Hypoxia on Akt1, Brain Development and Function*

Kristy R. Howell

Amanda J. Law

Division of Reproductive Sciences, Department of Obstetrics and Gynecology and Department of Psychiatry

POSTERS

17 *Team Leadership Training for Medical Residents:
Results of a Pilot Study*

Kelsey Jones

Eva Aagaard | Meredith Alston | Kirsten Broadfoot | David Colarossi
Alison Heru | Elaine Landry | Rita Lee | Jane Limmer
Bart McCoy | John J. Reilly | Nanette Santoro

*Divisions of Reproductive Endocrinology and Infertility and General
Obstetrics and Gynecology, Department of Obstetrics and Gynecology,
Department of Medicine, Resnik Partners, Community and Behavioral
Health School of Public Health and Department of Psychiatry*

18 *mTOR Complex 1 Decreases in the Early Gestation and is
Not Impacted by Maternal Body Mass Index*

Elena Silva

Kate Erickson | Theresa L. Powell | Thomas Jansson

*Division of Reproductive Sciences, Department of Obstetrics and
Gynecology and Section of Neonatology, Department of Pediatrics*

19 *The Effect of Carbamazepine on Serum Estradiol and
Progesterone Concentrations in Etonogestrel Contraceptive
Implant Users*

Aaron Lazorwitz

Anne Davis | Maryke Swartz | Maryam Guiahi

*Division of Family Planning, Department of Obstetrics and Gynecology
and Columbia University Medical Center*

20 *Characterization of Insulin Sensitivity in Cultured Primary
Human Trophoblast Cells from Gestational Diabetic and
Healthy Mothers*

Marisol Castillo-Catrejon

Thomas Jansson | Theresa L. Powell

*Division of Reproductive Sciences, Department of Obstetrics and
Gynecology and Section of Neonatology, Department of Pediatrics*

21 *Late Pregnancy is Characterized by Poor Sleep Quality in Obese Women which may Affect Glucose Metabolism*

Sarah Farabi

Linda Barbour | Teri Hernandez

*Division of Endocrinology, Metabolism and Diabetes,
Department of Medicine*

22 *Impaired Trophoblast Nutrient Transport and Pancreatic β Cell Defects in Intra Uterine Growth Restriction (IUGR) is Alleviated by Activation of Trophoblast mTOR Signaling*

Fredrick J. Rosario

Theresa L. Powell | Thomas Jansson

*Division of Reproductive Sciences, Department of Obstetrics and
Gynecology and Section of Neonatology, Department of Pediatrics*

23 *Regulation of Amino Acid Transporter Trafficking by mTORC2 in Primary Human Trophoblast Cells is Mediated by the Rho Family of GTP Proteins Cdc42 and Rac1*

Fredrick J. Rosario

Theresa L. Powell | Thomas Jansson

*Division of Reproductive Sciences, Department of Obstetrics and
Gynecology and Section of Neonatology, Department of Pediatrics*

24 *High-Fat Diet Exposure is Associated with Significant Changes in Ovarian Transcriptome Irrespective of the Induction of Obesity*

Natalie M. Hohos

Kirstin J. Cho | Delaney C. Swindle | Malgorzata E. Skaznik-Wikiel

*Division of Reproductive Sciences and Division of Reproductive
Endocrinology and Infertility, Department of Obstetrics and Gynecology*

POSTERS

25 *Cortisol Responses to Stress are Blunted Among Infants Delivered by Cesarean Section*

Camille Driver

Leticia D. Martinez | Curt A. Sandman | Laura A. Glynn
Elysia P. Davis

Department of Obstetrics and Gynecology and Department of Psychology and Department of Psychiatry and Human Behavior, University of California Irvine, Orange, California

26 *The Obstetrics Research Team*

Jocelyn Phipers

Division of Maternal Fetal Medicine, Department of Obstetrics and Gynecology

27 *OB/GYN Administrative Research Core Team*

Chanel Mansfield

Theresa Woelk | Alexandra Mackie | Peter Hahn
Department of Obstetrics and Gynecology

28 *Reprometabolic Syndrome Mediates Subfertility in Obesity*

Anahit Malkhasyan

Sarah Black | Irene Schauer | Amanda Allshouse | Andrew Bradford
Katherine Kuhn | Nanette Santoro

Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology and Division of Endocrinology, Department of Medicine and Department of Biostatistics and Informatics, Colorado School of Public Health

29 ***Burning Fat for Peaks in Colorado, Not Just for 14ers:
Targeted Lipidomic Analysis Using GC-MS***

Stefan Haugen

*Division of Reproductive Sciences, Department of Obstetrics and
Gynecology and Section of Neonatology, Department of Pediatrics*

30 ***Evaluation of One or Both Umbilical Arteries in Fetal
Growth Restriction***

Diane Gumina

Teresa Harper | Brittany Driscoll | Allison Gillan | John Hobbins

*Division of Maternal-Fetal Medicine, Department of Obstetrics
and Gynecology*

31 ***Assessment of the Global Sphericity Index and Cardiac Area
as Indirect Indicators of Cardiac Dysfunction in Fetal Growth
Restriction***

Brittany Driscoll

Michael Zaretsky | Gregory DeVore | Diane Gumina | John Hobbins

*Division of Maternal-Fetal Medicine, Department of Obstetrics and
Gynecology and David Geffen School of Medicine, University of
California, Los Angeles*

32 ***Statistical Performance of Image Cytometry for Lipids, DNA,
CD45, and Cytokeratin a Model System for Circulating Tumor
Cell Identification***

Gregory L. Futia

Isabel R. Schlaepfer | Lubna Qamar | Kian Behbakht | Emily A. Gibson

*Department of Bioengineering and Department of Medicine and
Department of Obstetrics and Gynecology*



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