Natural and Assisted Reproduction: Science and Outcomes Symposium
Luigi Mastroianni Jr., M.D. Memorial Lecture
and James M. Cuozzo Memorial Lecture
June 12, 2019
BRB II/III Auditorium and Lobby

8:00 – 9:00   Registration, Poster Assignments, Continental Breakfast

9:00 am     Welcoming Remarks - BRB II/III Auditorium
Deborah Driscoll, MD
Luigi Mastroianni Professor and Chair, Department of Obstetrics and Gynecology; Director, Center for Research on Reproduction and Women’s Health

Morning Session – Moderator: Monica Mainigi, MD

9:15 am     Dmitry Kissin, MD, MPH
Team Lead, Assisted Reproductive Technology Team, Maternal and Infant Health Branch, Division of Reproductive Health, Centers for Disease Control and Prevention

Child health outcomes after in vitro fertilization
(25 min + 5 min for questions)

9:45 am     Mastroianni Memorial Lecture

Introduced by Christos Coutifaris, M.D., Ph.D., Celso-Ramon Garcia Professor, Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology

Paolo Rinaudo, MD, PhD
Professor of Obstetrics Gynecology & Reproductive Sciences, University of California San Francisco, Reproductive Endocrinology and Fertility Specialist, UCSF Center for Reproductive Health

Health from the beginning of life: The Developmental Origin of Health and Disease hypothesis and the preimplantation embryo

10:45 am    Coffee Break

11:00 am    Interactive Poster Session - BRB II/III Lobby
CRRWH Affiliated Posters
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12:00 pm  **Luncheon - Invited Speakers and Registrants** - BRB II/III Lobby - Seating for lunch is available in the BRB lobby, 252 BRB, 1301 BRB, and the 14th Fl Faculty Lounge

**Afternoon Session - Moderator: Dr. Marisa Bartolomei, PhD**

1:00 pm  **Jacquetta Trasler, MD, PhD**
James McGill Professor of Pediatrics, Human Genetics, and Pharmacology and Therapeutics McGill University Senior Scientist, Montreal Children’s Hospital and Research Institute McGill University Health Centre

*Inducing and correcting epigenetic defects associated with infertility and ART: Are folic acid supplements the answer?*
(25 min + 5 min for questions)

**Trainee Talks**  (10 min + 5 min for questions)

1:30 pm  Laren Reische
*Altered metabolic outcomes in IVF-conceived offspring and abnormal placental epigenetic profiles*

1:45 pm  Hayley Richardson
*Impact of Mode of Conception on Early Pregnancy Human Chorionic Gonadotropin Rise and Birthweight*

2:00 pm  Yongjuan Guan
*The SCF ubiquitin E3 ligase drives the meiotic G2 to MI phase transition*

2:15 pm  Paul Kroeger
*Evaluating the potential to repurpose statins for ovarian cancer therapy*

2:30 pm  Emma Lewis
*Regulatory T cell dysfunction in a mouse model of pregnancy loss*

2:45 pm  Lacey Luense
*Gcn5-mediated histone acetylation governs nucleosome dynamics in spermiogenesis*
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3:00 pm  Kotaro Sasaki, MD, PhD
Assistant Professor, Department of Biomedical Sciences, University of Pennsylvania School of Veterinary Medicine

**Germline specification in primates and its reconstitution in vitro**
(25 min + 5 min for questions)

3:30 pm  Awards

3:45 pm  Snack Break

4:00 pm  Cuozzo Memorial Lecture
Introduced by Dr. George Gerton, Executive Committee Member, Center for Research on Reproduction and Women’s Health, University of Pennsylvania Perelman School of Medicine

**Patricia Hunt, PhD**
Meyer Distinguished Professor, School of Molecular Biosciences Center for Reproductive Biology, Washington State University

**The germline and the environment**

5:00 pm  Cocktail Hour
Poster Session 11:00 AM – 12:00 PM

**Group 1 IUE: Moderator Becky Simmons – 6 Posters**

11:00 Apoorva Joshi IUE/placenta
In utero exposure to gestational diabetes alters the transcriptome and methylome of human fetal stem cells revealing an enrichment of interferon pathways

11:10 Apoorva Joshi IUE/placenta
Maternal obesity and perfluorooctanoic acid synergize to alter lipid metabolism in human fetal hepatocytes predisposing the offspring to NAFLD

11:20 Yu-Chin Lien IUE
Altered Transcription Factor Binding and Gene Bivalency May Contribute to Long-term Gene Dysregulation in Intrauterine Growth Retarded Rat Islets

11:30 Thea Golden IUE
IUGR Causes Pancreatic Inflammation in the Neonatal Rat

11:40 Tammy Ying IUE
Neonatal IL-4 administration decreases body fat content and weight and also improves glucose tolerance in adulthood.

11:50 Mani,Sneha IUE/placenta
Maternal Decidual Cells Regulate Trophoblast Invasion: Studies from a Novel Organ-on-a-Chip Device

**Group 2 Male Reproduction: Moderator George Gerton – 5 Posters**

11:00 Herford, Jacob, D., Male Reproduction
Non-steroidal anti-inflammatory drugs reduce vas deferens epithelial MRP4 expression and prostaglandin export

11:10 Cetewayo Rashid Male Reproduction
Paternal bisphenol A exposure alters offspring glucose tolerance in a time and sex specific manner
Group 2 Male Reproduction: Moderator George Gerton – 5 Posters (cont.)

11:20 Yang, Fang Male Reproduction
TEX15 is required for epigenetic silencing of transposable elements in the germline

11:30 Guo, Rui Male Reproduction
MORC2A is essential for male fertility and epigenetic silencing of transposable elements

11:40 Zhang, Lei, Male Reproduction
Pilot screening of male contraceptive drugs by targeting the meiosis specific proteins MEIOB and SPATA22

Group 3 Reproduction: Moderator Monica Mainigi – 4 Posters

11:00 Arunika Das Reproduction
Mechanisms of epigenetic centromere inheritance through the mammalian germline

11:10 Chotiner, Jessica, Y. Embryo
Cyclin B3 is a maternal factor essential for embryogenesis

11:20 Rexxi Prasasya Epigenetics
TET1 is required for maternal imprint erasure during primordial germ cell development

11:30 PARS Alumni Poster
Fueling the pipeline: Educating Young Women in the Reproductive Sciences

Group 4 ART: Moderator Christos Coutifaris – 5 Posters

11:00 Eric A. Rhon-Calderon ART
Altered reproductive epigenetic profiles in mature IVF-conceived offspring

11:10 Jayashri Ghosh ART
Effect of fresh vs frozen embryo transfer technology on the placental epigenome

11:20 Kelly A. Duffy ART
Clinical Phenotype of Beckwith-Wiedemann Syndrome in Natural versus Assisted Reproductive Technology Conceived Pregnancies
Group 4 ART: Moderator Christos Coutifaris – 5 Posters (cont.)

11:30 Marissa S. Weiss ART
Stress and Success: Data from a Prospective Cohort Study Investigating the Impact of Early Life Stress on IVF Outcomes

11:40 Vrooman, Lisa A. ART
Compromised fetal growth and abnormal placental development in a mouse model of Assisted Reproductive Technologies (ART)

Group 5 Cancer: Moderator Lin Zhang – 4 Posters

11:00 Haineng Xu Cancer
Combination inhibition of WEE1 and ATR causes tumor regression in a Cyclin E level dependent manner

11:10 Yasuto Kinose Cancer
Comprehensive molecular and experimental characterization of ovarian clear cell carcinoma cell lines for in vivo drug development

11:20 Guannan Zhang Cancer
Elucidating the roles of estrogens in the development and prognosis of malignant pleural mesothelioma

11:30 Jiao Yuan Cancer
Integrated Analysis of Genetic Ancestry and Genomic Alteration Across Cancers