

The Reproductive Aging Conference
Sunday, June 5, 2022 – Thursday, June 9, 2022
Omni Rancho Las Palmas Resort, Palm Springs, CA

TENTATIVE AGENDA – SUBJECT TO
CHANGE

SUNDAY, JUNE 5, 2022

- 4:00 - 9:00 PM REGISTRATION
- 5:00 - 6:00 PM WELCOME RECEPTION & DINNER – Salon E
- 6:00 - 6:10 PM OPENING REMARKS
- 6:10 - 7:00 PM SESSION 1: INFERTILITY, AGING, AND HEALTH
Chairs: Zhongwei Huang, National University of Singapore; Hannah Anvari, Northwestern University
- 6:10 - 6:35 PM Zhongwei Huang, National University of Singapore
Manipulating the downstream targets of mTORC reveals molecular keys to fertility and longevity
- 6:35 – 7:00 PM Emily Jacobs, University of California, Santa Barbara
The role of sex hormones and gonadotropins in the aging brain
- 7:00 - 8:00 PM KEYNOTE LECTURE 1: Marcelle Cedars, University of California, San Francisco
Effect of reproductive aging on infertility and health

MONDAY, JUNE 6, 2022

- 7:30 AM - 12:00 PM REGISTRATION
- 8:00 - 9:00 AM BREAKFAST
- 9:00 - 9:10 AM WELCOME REMARKS & INFORMATION
- 9:10 - 10:40 AM SESSION 2: MICRO- AND MACRO-ENVIRONMENTS OF OVARIAN AGING
Chairs: Francesca Duncan, Northwestern University; Julia Balough, Buck Institute
- 9:10 – 9:35 AM Francesca Duncan, Northwestern University
The aging ovarian environment – from the gamete and beyond
- 9:35 – 10:00 AM Sharon Stack, University of Notre Dame
Aging and the ovarian tumor microenvironment
- 10:00 – 10:25 AM Ulrike Luderer, University of California, Irvine
Impacts of in utero exposure to benzo[a]pyrene on female compared to male reproduction
- Short Talk
- 10:25 – 10:40 AM Miguel Brieno-Enriquez, Magee-Womens Research Institute
Forever Young: lessons from the naked mole rat ovary
- 10:40 - 11:00 AM COFFEE BREAK
- 11:00 AM - 12:15 PM SESSION 3: CELL BIOLOGY OF OOCYTE AGING
Chairs: Iain Cheeseman, Massachusetts Institute of Technology; Jose Isola, Oklahoma Medical Research Foundation

- 11:00 – 11:25 AM Iain Cheeseman, Massachusetts Institute of Technology
Rewiring cell division to safeguard oocyte fitness during reproductive aging
- 11:25 – 11:50 AM Marco Conti, University of California, San Francisco
Maternal aging compromises the oocyte program of mRNA translation
- 11:50 AM – 12:15 PM Mary Herbert, Newcastle University
Human oocyte meiosis - what does normal look like?
- 12:15 - 1:00 PM BIOTECH PANEL DISCUSSION: Biomarkers and Interventions on the Horizon
Moderator: Jennifer Garrison, Buck Institute for Research on Aging
Panelists:
Nikolina Lauc, *GlycanAge*
Dina Radenkovic, *Gameto*
Daisy Robinton, *Oviva Therapeutics*
Matt Krisiloff, *Conception*
- 1:00 - 2:00 PM LUNCH (and Meet the Experts 1)
- 2:00 – 3:00 PM FREE TIME
- 3:00 - 4:00 PM GRANTS WORKSHOP WITH Q & A (Optional)
Moderator: Stephanie Pangas, Baylor College of Medicine
- Bitu Nakhai, Chief, Basic and Translational Sciences Section (BTSS) Scientific Review Branch, National Institute on Aging (NIA/NIH)
- Susan Taymans, Chief, Fertility and Infertility Branch (FIB), National Institute of Child Health and Human Development (NICHD/NIH)
- 4:00 - 5:30 PM SESSION 4: METABOLIC CONTROL AND BEYOND
Chairs: Carlos Ribeiro, Champalimaud Foundation; Zita Santos, Champalimaud Foundation
- 4:00 – 4:25 PM Carlos Ribeiro, Champalimaud Foundation
How nutrients, neuronal circuits, and the microbiome shape nutritional decisions and reproduction
- 4:25 – 4:50 PM Lindsay Wu, University of New South Wales
Rejuvenating oocyte quality and embryo development through supporting cell metabolism: role of NAD+ and the pentose phosphate pathway
- 4:50 – 5:15 PM Chen Lesnik, Princeton University
Enhanced BCAA metabolism improves age-related reproductive function
- Short Talk
- 5:15 – 5:30 PM Karthikeyani Chellappa, University of Pennsylvania
Isotope tracing at the crossroads of targeting NAD metabolism to treat diseases
- 5:30 - 5:45 PM LIGHTNING POSTER PITCHES – Odd numbered Posters
- 6:00 - 7:00 PM GROUP DINNER – Starlight Terrace
- 7:00 - 9:00 PM POSTER SESSION 1 – Odd numbered Posters
- 8:00 - 11:00 PM NETWORKING SOCIAL – Starlight Terrace

TUESDAY, JUNE 7, 2022

- 8:00 - 9:00 AM BREAKFAST
- 9:00 - 10:30 AM SESSION 5: GENETICS OF REPRODUCTIVE AGING
Chairs: Yousin Suh, Columbia University; Cosmo Hahn, Buck Institute for Research on Aging
- 9:00 – 9:25 AM Yousin Suh, Columbia University
The regulatory landscapes of human ovarian aging
- 9:25 – 9:50 AM Aleksandar Rajkovic, University of California, San Francisco
Developmental origins of reproductive aging
- 9:50 – 10:15 AM Karen Schindler, Rutgers University
Identifying genetic variants that accelerate age-related egg quality decline
- Short Talk
- 10:15 – 10:30 AM Seungsoo Kim, Columbia University
A comprehensive integrated post-GWAS analysis of reproductive lifespan reveals enhancer-based BRCA1/NBR2 dysregulation
- 10:30 – 10:40 AM OFFICIAL GROUP CONFERENCE PHOTO – location TBD
- 10:40 - 11:00 AM COFFEE BREAK
- 11:00 AM - 12:40 PM SESSION 6: ORIGINS OF OVARIAN RESERVE
Chairs: Satoshi Namekawa, University of California, Davis; Bikem Soygur, University of California, San Francisco
- 11:00 – 11:25 AM Satoshi Namekawa, University of California, Davis
Ovarian reserve formation and maintenance
- 11:25 – 11:50 AM Humphrey Yao, National Institute of Environmental Health Sciences (NIEHS/NIH)
New insights into the establishment of the ovarian reserve
- 11:50 AM – 12:15 PM Stephanie Pangas, Baylor College of Medicine
Mouse models for discovery of novel players regulating development of the ovarian reserve
- 12:15 – 12:40 PM Christian Kramme, Gameto
Multimodal investigation of transcription factor function via in vitro recapitulation of human oogenesis
- 12:40 - 1:40 PM LUNCH (and Meet the Experts 2)
- 1:40 - 3:00 PM FREE TIME
- 3:00 - 4:00 PM EDITORIAL ROUNDTABLE DISCUSSION: REPRODUCTIVE & AGING-FOCUSED JOURNALS
Moderator: Francesca Duncan, Northwestern University
Marcelle Cedars, Editorial Editor; *Fertility and Sterility*
Francesca Duncan, Deputy Editor-in-Chief; *Molecular Human Reproduction*
Matt Kaerberlein, Editor-in-Chief; *Translational Medicine of Aging*
Senior Editor; *eLife*
Anna Kriebs, Senior Editor; *Nature Aging*
Karen Schindler, Co-Editor-in-Chief; *Reproduction*
Yousin Suh, Associate Editor; *Aging Cell*
Associate Editor; *PLoS Genetics*
Mary Zelinski, Co-Editor-in-Chief; *Biology of Reproduction*

4:00 – 4:15 PM	COFFEE BREAK
4:15 - 5:55 PM	SESSION 7: NEW FRONTIERS IN REPRODUCTIVE AGING Chairs: Judith Campisi, Buck Institute for Research on Aging; Jingxun Chen, Stanford University
4:15 – 4:40 PM	Judith Campisi, Buck Institute for Research on Aging <i>Evolutionary trade-offs during somatic and reproductive aging</i>
4:40 – 5:05 PM	Amanda Kallen, Yale University <i>Cellular senescence as a novel driver of female reproductive aging</i>
5:05 – 5:30 PM	B�er�enice Benayoun, University of Southern California <i>Age-relevant mouse models of menopause</i>
5:30 – 5:55 PM	Ingrid Fetter-Pruneda, National Autonomous University of Mexico <i>Ants as a new model for extended fertility</i>
5:55 – 6:05 PM	LIGHTNING POSTER PITCHES – Even numbered Posters
6:10 - 7:00 PM	GROUP DINNER – Starlight Terrace
7:00 - 9:00 PM	POSTER SESSION 2 – Even numbered Posters
8:00 - 11:00 PM	NETWORKING SOCIAL – Starlight Terrace

WEDNESDAY, JUNE 8, 2022

8:00 - 9:00 AM	BREAKFAST
9:00 - 10:30 AM	SESSION 8: CROSS-TISSUE & ENDOCRINE SIGNALING Chairs: Jennifer Garrison, Buck Institute for Research on Aging; Katelyn Adams, Buck Institute for Research on Aging
9:00 – 9:25 AM	Jennifer Garrison, Buck Institute for Research on Aging <i>Deciphering the conversation between the brain and ovary during aging</i>
9:25 – 9:50 AM	T. Rajendra Kumar, University of Colorado <i>FSH glycoforms in female reproductive aging</i>
9:50 – 10:15 AM	Polina Lishko, University of California, Berkeley <i>Bioactive lipid signaling, bioelectricity and aging</i>
	<u>Short Talk</u>
10:15 – 10:30 AM	Julia Balough, Buck Institute for Research on Aging <i>The impact of advanced male, female, and combined parental age on reproductive outcomes</i>
10:30 - 11:00 AM	COFFEE BREAK
11:00 AM - 12:00 PM	BRAINSTORMING SESSION: MAPPING THE FUTURE OF REPRODUCTIVE LONGEVITY We invite ALL attendees to join an in-depth discussion about where we want this field to go and lay the foundations for a sustainable, global community for years to come.

- What does progress look like in the short and long term?

- What are the key resources needed to support sustainable growth?
- How do we incentivize collaboration and dialogue between academic scientists, clinicians, and industry/biotech leaders that go beyond traditional models?
- How can we increase public engagement in supporting the science and scientists to bring much needed attention to this area of research?
- As we make advances in reproductive aging science, how can we insure that innovations and interventions are available to disadvantaged populations?

12:00 - 1:00 PM	LUNCH
1:00 - 4:00 PM	FREE TIME AND NETWORKING
4:00 - 5:05 PM	SESSION 9: GEROSCIENCE & INTERVENTION STRATEGIES Chairs: Kara Goldman, Northwestern University; Sarah Ocanas, Oklahoma Medical Research Foundation
4:00 – 4:25 PM	Kara Goldman, Northwestern University <i>Targeting mTOR signaling in reproductive aging</i>
4:25 – 4:50 PM	Matt Kaeberlein, University of Washington <i>Toward clinical evaluation of rapamycin to target biological aging</i>
	<u>Short Talks</u>
4:50 – 5:05 PM	Mary Zelinski, Oregon Health and Science University <i>Impact of Rapamycin on ovarian function in young and old macaques</i>
5:05 – 5:20 PM	Michael Klutstein, The Hebrew University of Jerusalem <i>Loss of heterochromatin and retrotransposon silencing as determinants in oocyte aging</i>
5:20 - 6:30 PM	KEYNOTE LECTURE 2: Juan Carlos Izpisua-Belmonte, Altos Labs <i>Cell programming strategies for aging</i>
6:30 - 10:00 PM	CELEBRATION DINNER & RECEPTION – Starlight Terrace POSTER & TALK AWARDS

THURSDAY, JUNE 9, 2022

8:00 - 9:00 AM	BREAKFAST
9:00 - 10:30 AM	SESSION 10: MITOCHONDRIAL FUNCTION AND REPRODUCTIVE AGING Chairs: Lynae M. Brayboy, Charité – Universitätsmedizin Berlin; Karthikeyani Chellappa, University of Pennsylvania
9:00 – 9:25 AM	Lynae M. Brayboy, Charité – Universitätsmedizin Berlin <i>Dysfunctional MDR-1 disrupts mitochondrial homeostasis in the oocyte – a model for poor oocyte quality associated with diminished ovarian reserve</i>
9:25 – 9:50 AM	Keshav Singh, University of Alabama at Birmingham <i>Mitochondria as regulator of ovarian aging</i>
9:50 – 10:15 AM	Rebecca Robker, University of Adelaide <i>Targeting mitochondrial function to combat ovarian fibrosis, improve embryo development and extend fertility</i>

Short Talk

- 10:15 – 10:30 AM Vanessa Cota, Princeton University
Oocyte mitophagy is critical for extended reproductive longevity
- 10:30 - 11:00 AM COFFEE BREAK
- 11:00 - 12:30 PM CONFERENCE ROUNDUP / DEBRIEF & WORKING LUNCH in SALON D – Buffet in Salon E
- Trainee-focused working lunch to review concepts covered in the conference. All are welcome to join.
- Matt Kaeberlein, University of Washington
Rebecca Robker, University of Adelaide
Bérénice Benayoun, University of Southern California

END OF CONFERENCE

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