

School of Medicine

Department of Obstetrics and Gynecology's

GRAND ROUNDS LECTURE SERIES



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April 9, 2024 8:00 AM "Stress from the Embryo's Point-of-View"

Learning objectives:

- <u>What is stress</u>? Is a maternal stress hormone in the internal milieu equivalent to environmental stresses entering from the external milieu? What are the stimuli in the environment that activate stress responses, and do these acts alone or in combination? Stress exposure = duration and magnitude, how do we sort out the contributions of these to health of the conceptus?
- 2. <u>Are there common stress response mechanisms</u> early embryos and their stem cells use to adapt to stress to enable cellular survival, like stem cells and somatic cells in the adult? Are there separate or shared mechanisms for stem cells to mediate organismal survival for the developing conceptus? What are protein kinases, and are there stress-specific kinases as a subset of the kinases in the kinome? A pan-stress kinase response is proposed.
- 3. <u>Recent advances in our understanding of the flexibility of stress responses of the embryo and its stem cells</u> are to adapt to stress and then. Possible surprises in how we think about the ways stresses combine to diminish the embryo's health or push the embryo past the point of survival.

Please read a 7-minute invited blog at the Birth Defects Research and Prevention Society: It will prepare the listener for this Grand Rounds: "Miscarriage: Data from scientists that may change what you know about it"

Microsoft Teams Meeting

Meeting ID: 288 082 894 812 Passcode: 6U5m2e

Commercial Relationship Disclosure: None

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The Wayne State University School of Medicine designates this live activity for a maximum of **1** AMA PRA Category **1** Credit(s)[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Target Audience: Obstetricians and Gynecologist; Fellows, Residents, and Senior Staff of our affiliated hospitals, and physicians practicing in the community.

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David R. Bryant, M.D., Program Director has no commercial relationships to disclose.



