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TITLE:

Leveraging Molecular and Clinical Data to Improve Women's Health in the Era of Precision Medicine

ABSTRACT:

Each year, 15 million babies (representing 10% of the world's births) are born preterm, defined as before the 37th week of gestation. Survival for most children born preterm has improved considerably, but surviving children remain at increased risk for a variety of serious complications, many of which contribute to lifelong challenges for individuals and their families, as well as to burdensome economic costs to society. The exact mechanism of spontaneous preterm birth is unknown, though a variety of social, environmental, and maternal factors have been implicated in its cause. We are in particular interested in applying computational integrative methods to investigate the role of the immune system in pregnancy (Cell Press Sneak Peak 2021) and elucidating genetic (Sci Rep 2018), transcriptomic (Front Immunol 2018), microbiome (Front Microbio 2020), environmental (Environ Health 2018), and clinical determinants of preterm birth. Moreover, through the March of Dimes (MOD) Database for Preterm Birth Research, we are leading efforts to organize scientific data and research across all MOD-funded Prematurity Research Centers with the goal of enhancing research collaboration and coordination to accelerate the overall pace of discovery in this field (Sci Data 2018). This work is funded by the National Library of Medicine at NIH, March of Dimes and The Burroughs Wellcome Fund.

SUGGESTED READING:
https://www.nature.com/articles/s41598-021-91625-1
https://doi.org/10.1186/s12916-022-02522-x

Zoom link:
https://stanford.zoom.us/j/92874055477pwd=aThzNmpmNEQ1L2Fj
V0E5ZXF5SDR1UT09&from=addon
Password: 705300