

# Understanding the Placental Clock



Todd Rosen

Director of Maternal-Fetal Medicine, Department of Obstetrics and Gynecology

## CURRENT RESEARCH

### Solving how labor begins to develop better therapies to prevent preterm birth

Perhaps the biggest problems facing pregnant women is preterm labor and delivering their pregnancy too early, which is the leading cause of infant death and illness in the U.S. and many other nations. Despite a significant amount of research in this area, there are more preterm births in the U.S. than there were 25 years ago, and much remain unknown about the mechanisms of labor. Dr. Todd Rosen, Director of Maternal-Fetal Medicine, and his team at Robert Wood Johnson Medical School of Rutgers University, aim to elucidate the mechanisms that drive the clock that determines the length of normal labor. Understanding why women enter labor is not only a fundamental question of biology that is poorly understood, but decoding the clock that governs the length of pregnancy will give us additional therapeutic targets to prevent preterm birth and enable researchers to reduce the number of babies born prematurely and lower the incidence of death and disability in this vulnerable population.

Although there are interventions currently available that will help reduce the risk that preterm babies face, options to prevent preterm birth are limited. An obstetrician and Maternal-Fetal Medicine specialist with a unique engineering background, Dr. Rosen collaborates with Dr. Bingbing Wang and his translational lab to take a systematic approach to the clinical problem, studying placentas obtained after women deliver and exposing them to a variety of conditions to understand regulation of genes and proteins which have been identified to play a role in the timing of the onset of labor. Currently, Dr. Rosen and team believe to have figured out how the placenta controls the length of pregnancy -- now being recognized by the...

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## AFFILIATION



Rutgers University

## EDUCATION

- M.D. in 1992, New Jersey Medical School
- B.S. in College of Engineering 1985, Rutgers University

## AWARDS

- Excellence in Teaching Award for Education of Medical Students, 2015
- Chairman's Teaching Award for Education of Residents, 2010, 2011, 2012, 2014
- APGO Excellence in Teaching Award, 2008
- Diplomate of American Board of Obstetrics and Gynecology in Maternal-Fetal Medicine, 2001
- Gordon W. Douglas Faculty Teaching Award, 1998-1999
- and 1 more...

## RESEARCH AREAS

Life Science, Genomics / Congenital, Immunology / Inflammatory, Pediatric

## FUNDING REQUEST

Your contributions will support the continued research of Dr. Todd Rosen of Rutgers University as he studies the clock that governs the length of normal labor in hopes of preventing preterm labor. Donations will help support more than \$250K required to run additional experiments and genetic studies, as well as support personnel and other equipment. Help reduce risk for mothers and babies by partnering with Dr. Rosen!