Dr. Padbury receives March Of Dimes prematurity research initiative grant

PROVIDENCE – With the help of funding from the March of Dimes, **JAMES F. PADBURY, MD**, pediatrician-in-chief and chief of Neonatal/Perinatal Medicine at Women & Infants Hospital, is one of five scientists whose work toward discovering the causes of and reducing the rates of prematurity will be supported by March of Dimes Prematurity Research Initiative (PRI) grants in 2014.

James F. Padbury, MD

With prior support from the March of Dimes, Dr. Padbury's laboratory at has been studying the genetic basis of preterm birth for the past five years. This new, $400,000, three-year Prematurity Research Initiative Program grant will enable Dr. Padbury and his colleagues to continue their work in bioinformatics and targeted sequencing in preterm birth.

"We are so grateful to the March of Dimes for supporting this important work," said Dr. Padbury. "We are using the resources of this grant to sequence the genes we identified in women who delivered preterm, who were preterm themselves, and who have a family history of preterm birth in their relatives. We are sequencing up to 300 women, including 150 we have identified with a strong family history of prematurity at Women & Infants Hospital."

Dr. Padbury and his team have used bioinformatics techniques and "big data" approaches to collect all of the genes known to be involved in preterm birth, reading more than 1,000 scientific articles and pulling data from hundreds of public genetic databases. Their database is now hosted on the Center for Disease Control and Prevention's Genomics in Health Impact website, the University of Florida's Library of Genetic Resources, and Stanford University's Great Placenta Disorders and Preeclampsia Single Nucleotide Resources.

Dr. Padbury continued, "The Human Genome Project revealed that each of us have minor genetic variations, which may, in part, cause preterm birth. In order to identify these minor genetic variations, we will use new DNA sequencing technologies. We will look for minor genetic variations in families with a strong family history of preterm birth and compare genetic sequence to patients of similar background but who delivered full-term children. We hope that, with insights into the cause of prematurity, we can begin to address possible treatment, prevention methods and prediction." ❖

Drs. Allen, Gottlieb publish research on prevalence of reproductive coercion

PROVIDENCE – Researchers from Women & Infants Hospital of Rhode Island were part of a team that published "Reproductive coercion and co-occurring intimate partner violence in obstetrics and gynecology patients" in a recent issue of the *American Journal of Obstetrics and Gynecology.*

"Reproductive coercion, co-occurring with intimate partner violence, is prevalent among women seeking general obstetrics and gynecology care," notes **REBECCA H. ALLEN, MD**, of Women & Infants. She and **AMY S. GOTTLIEB, MD**, of the hospital's Women's Primary Care Center, participated in the study of 641 women ages 18 to 44, along with **CHRIS RAKER, ScD**, a statistician in the hospital's Division of Research.

Study participants completed anonymous surveys. The survey defined reproductive coercion as:

Pregnancy coercion, such as a male partner threatening to harm the woman physically or psychologically (with infidelity or abandonment) if she did not become pregnant

Birth control sabotage, such as flushing oral contraceptive pills down the toilet, intentionally breaking or removing condoms, or inhibiting a woman's ability to obtain contraception

"This is a far too common problem in this country. A study of 9,000 women by the National Center for Injury Prevention and the Centers for Disease Control and Prevention indicated that at least 9% of adult females in the United States have experienced reproductive coercion," Dr. Gottlieb explains. "Such coercion could have tremendous impact on a woman's ability to plan pregnancies or control her own fertility."

In addition, reproductive coercion has been associated with intimate partner violence, including threats, physical injury, or sexual abuse. This study is the first to examine both measurements – reproductive coercion and intimate partner violence – in the same relationship.

"We wanted to investigate the co-occurrence of these two types of male behavior toward female intimate partners," Dr. Gottlieb says.

Among the women who reported reproductive coercion, 32% experienced intimate partner violence in the same relationship. Nearly half of the women who experienced birth control sabotage also reported intimate partner violence, as did more than one third of the women who experienced pregnancy coercion.

"This is helpful information for health care providers who should tailor the reproductive care they deliver to each patient's particular situation," Dr. Allen says. "Asking questions about reproductive coercion and intimate partner violence is key to giving a woman the family planning counseling she needs." ❖