**Transcript Details**
This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/medical-industry-feature/research-uncovers-a-potential-biomarker-for-postpartum-depression-risk/29924/

**ReachMD**
www.reachmd.com
info@reachmd.com
(866) 423-7849

Research Uncovers a Potential Biomarker for Postpartum Depression Risk

**ReachMD Announcer:**
Welcome to ReachMD. This medical industry feature is titled “Research Uncovers a Potential Biomarker for Postpartum Depression Risk,” featuring Dr. Lauren Osborne, a Reproductive Psychiatrist at NewYork-Presbyterian and Weill Cornell Medicine. This video is a production of NewYork-Presbyterian with world-class doctors from Columbia and Weill Cornell Medicine.

**Dr. Osborne:**
What a lot of people don't realize is how common postpartum depression is. It's actually the number one complication of pregnancy and childbirth. There are a lot of challenges with identifying and treating postpartum depression. Only about 3% of women are actually treated to remission.

If we had a blood test, or a more accurate way to predict who is going to be at risk, we'd be able to identify those women early, and institute preventive treatment. We know from genetic evidence that the type of postpartum depression that arises in the first 6 to 8 weeks postpartum is very biologically driven.

The neuroactive steroids that we study in reproductive psychiatry are those derived from progesterone. A lot of the attention has gone to allopregnanolone, a positive allosteric modulator of the GABA-A receptor, but there are other molecules in that pathway, both positive and negative modulators. And it's really the interaction of all the molecules in that pathway, as well as their interaction with the receptor, that we think is involved in the pathophysiology of postpartum depression.

So we designed a study that allowed us to look not just at allopregnanolone, but at that entire progesterone metabolic pathway in women during pregnancy, to determine which parts of this pathway might be putting them at risk for future postpartum depression. And our study is actually the first one that has combined both positive and negative allosteric modulators of the GABA-A receptor, in a study of pregnant women.

We had women who were not depressed in pregnancy, and then became depressed shortly thereafter. We enrolled 136 women in this study, and of those, 33 developed postpartum depression.

So we measured progesterone, and the eight molecules that derive from it. What we found, was that the ratio of one of the negative modulators, isoallopregnanolone, to one of the positive modulators, pregnanolone was altered in those who went on to develop postpartum depression. Those women had a higher ratio of isoallopregnanolone to pregnanolone.

We also found that women who had a lower ratio of pregnanolone to progesterone, had increased odds of developing postpartum depression. So, in other words, the balance of the negative to positive modulators, and the balance of positive modulators to their predecessor molecules, was off in the women who developed postpartum depression.

This has the potential to be developed into some kind of a blood test that can predict postpartum depression. For example, the enzymes that are responsible for this metabolism, perhaps the defect is in one of those enzymes, and that would be a relatively easy and simple thing to measure.

The women who are at risk for biological causes, we may be able to have preventive medications that are based on molecules in this pathway that can help to prevent their illness.

There's a rich environment and rich support for this type of research at NewYork-Presbyterian and Weill Cornell Medicine. I have a real passion for continuing to discover in this area, and research is a way that I can take that discovery and apply it to an entire population,

not just to the women I treat every day in my office.

**ReachMD Announcer:**
If you missed any part of this discussion or to find other programs in this series, visit ReachMD.com/industryfeature. This is ReachMD. Be part of the knowledge.