

*Extended Abstract*

## **Serum concentration of matrix metalloproteinase-1 in patients with preterm labor compared to gestational age matched controls**

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Preterm labor (PTL) is a leading cause of preterm delivery, which overall accounts for approximately 10% of all deliveries in the United States and has been on the rise since 2014. PTL is multifactorial and often the etiology is unable to be diagnosed, making diagnosis, management and prevention difficult. Matrix metalloproteinase-1 (MMP-1) has been implicated in PTL and has been found in elevated concentrations in the placenta, decidua, and fetal membranes of women delivered preterm due to PTL. Studies assessing serum concentrations of MMP-1 in PTL, however, have been varied. The aim of this study is to assess serum concentrations of women delivered preterm due to PTL, both during labor and throughout pregnancy

in the second and third trimesters, compared to women delivered at term. Fifty-two samples obtained from women with PTL, and delivery were obtained from either labor or during the second and third trimesters prior to onset of labor; 52 gestational age matched controls were also obtained. ELIZAs were used to determine the concentration of the MMP-1 for the samples and controls. There was no significant difference when comparing MMP-1 serum concentrations between the samples and controls throughout pregnancy or during labor.

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