

Discovery of blood proteins that are red flags for ectopic pregnancy

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A long, urgent search for proteins in the blood of pregnant women that could be used in early diagnosis of ectopic pregnancy (EP) has resulted in discovery of biomarkers that seem to be specific enough to begin testing in clinical trials, scientists are reporting in a new study in ACS's *Journal of Proteome Research*.

David Speicher and colleagues explain that ectopic pregnancy happens when an embryo does not attach normally inside the mother's uterus, but instead attaches and begins growing elsewhere. Most occur inside one of the Fallopian tubes, which link the ovaries to the uterus. Left undiagnosed, EP can burst the Fallopian tube and result in bleeding that is the second most common cause of maternal death early in the first trimester of pregnancy. EP is difficult for doctors to diagnose, and scientists long have searched for substances present in the blood of women with EP that could be the basis for a test.

The scientists describe discovery of such proteins in blood analyzed from women with ectopic pregnancies and compared it to blood of women with normal pregnancies. They identified almost 70 proteins occurring in unusual levels in the blood in EPs. One of those proteins is called Adam12 and it might be a particularly good early warning sign for EP, since it appears at levels that are 20 times lower than in normal pregnancies. "The next step is clearly to test the candidate [biomarkers](#) on a larger, independent patient group, both individually and in multi-biomarker panels," the report states.

More information: "Systematic Discovery of Ectopic Pregnancy Serum Biomarkers Using 3-D Protein Profiling Coupled with Label-free Quantitation", *Journal of Proteome Research*.

Provided by American Chemical Society

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