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**The Salivary Scavenger and Agglutinin (SALSA) in Healthy and Complicated Pregnancy.**

[Reichhardt MP](http://www.ncbi.nlm.nih.gov/pubmed/?term=Reichhardt%20MP%5BAuthor%5D&cauthor=true&cauthor_uid=26828433)1, [Jarva H](http://www.ncbi.nlm.nih.gov/pubmed/?term=Jarva%20H%5BAuthor%5D&cauthor=true&cauthor_uid=26828433)1,2, [Lokki AI](http://www.ncbi.nlm.nih.gov/pubmed/?term=Lokki%20AI%5BAuthor%5D&cauthor=true&cauthor_uid=26828433)1,3, [Laivuori H](http://www.ncbi.nlm.nih.gov/pubmed/?term=Laivuori%20H%5BAuthor%5D&cauthor=true&cauthor_uid=26828433)3,4,5; [FINNPEC study group](http://www.ncbi.nlm.nih.gov/pubmed/?term=FINNPEC%20study%20group%5BCorporate%20Author%5D), [Vuorela P](http://www.ncbi.nlm.nih.gov/pubmed/?term=Vuorela%20P%5BAuthor%5D&cauthor=true&cauthor_uid=26828433)4,6, [Loimaranta V](http://www.ncbi.nlm.nih.gov/pubmed/?term=Loimaranta%20V%5BAuthor%5D&cauthor=true&cauthor_uid=26828433)7, [Glasner A](http://www.ncbi.nlm.nih.gov/pubmed/?term=Glasner%20A%5BAuthor%5D&cauthor=true&cauthor_uid=26828433)8, [Siwetz M](http://www.ncbi.nlm.nih.gov/pubmed/?term=Siwetz%20M%5BAuthor%5D&cauthor=true&cauthor_uid=26828433)9, [Huppertz B](http://www.ncbi.nlm.nih.gov/pubmed/?term=Huppertz%20B%5BAuthor%5D&cauthor=true&cauthor_uid=26828433)9,10, [Meri S](http://www.ncbi.nlm.nih.gov/pubmed/?term=Meri%20S%5BAuthor%5D&cauthor=true&cauthor_uid=26828433)1,2.

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**Abstract**

Pre-eclampsia is a leading cause of maternal and perinatal morbidity and mortality worldwide. The etiology is not clear, but an immune attack towards components of placenta or fetus has been indicated. This involves activation of the complement system in the placenta. We have previously described the presence of the complement-regulating protein salivary scavenger and agglutinin (SALSA) in amniotic fluid. In this study we investigated the potential role of SALSA in pregnancy by analyzing its presence in amniotic fluid and placental tissue during healthy and complicated pregnancies. SALSA levels in amniotic fluid increased during pregnancy. Before 20 weeks of gestation the levels were slightly higher in patients who later developed pre-eclampsia than in gestation age-matched controls. In the placenta of pre-eclamptic patients syncytial damage is often followed by the formation of fibrinoid structures. SALSA was found clustered into these fibrinoid structures in partial co-localization with complement C1q and fibronectin. In vitro analysis showed direct protein binding of SALSA to fibronectin. SALSA binds also to fibrin/fibrinogen but did not interfere with the blood clotting process in vitro. Thus, in addition to antimicrobial defense and epithelial differentiation, the data presented here suggest that SALSA, together with fibronectin and C1q, may be involved in the containment of injured placental structures into fibrinoids.

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