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Hypoxia-inducible microRNA-218 inhibits trophoblast invasion by targeting LASP1: Implications for preeclampsia development

Min Fang^{1#}, Hechun Du^{1#}, Bing Han^{3#}, Guiyu Xia¹, Xiaoliang Shi¹, Feng Zhang¹, Qiqin Fu², Tao Zhang^{2*}.

¹ Obstetrical Department, Shaoxing Women and Children's Hospital, Shaoxing, Zhejiang, China.

² Genetic Laboratory, Shaoxing Women and Children's Hospital, Shaoxing, Zhejiang, China.

³ Department of Public Health, Zhejiang University School of Medicine, Hangzhou, China.

* To whom correspondence should be addressed: Tao Zhang, Ph.D. Tel: +86-575-85206779; Fax: +86-575-85132453; E-mail: epitach@126.com. Shaoxing Women and Children's Hospital, Shaoxing, Zhejiang 312000, China.

These authors contributed equally to the work.

Abstract

Preeclampsia (PE) is a major contributor to maternal morbidity and mortality. However, the molecular mechanisms underlying PE progression are not well characterized. Here, we investigated the role of miR-218 in PE development. The expression of miR-218 and its host genes SLIT2 and SLIT3 was up-regulated in preeclamptic placentae compared to normal placentae. miR-218 expression was induced by hypoxia and decreased after knockdown of HIF-1 α in an extravillous trophoblast cell line (HTR-8/SVneo). Chromatin immunoprecipitation assays showed direct binding of HIF-1 α to the promoters of SLIT2 and SLIT3. Bioinformatics analysis identified LASP1 as a direct target of miR-218. Overexpression of miR-218 repressed the

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