**The main achievements in the research in the pathophysiology of neutrophil extracellular traps (NETs) in preeclampsia**

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| **Author [reference]** | **Publication year** | **Country** | **Results** |
| S. Hahn et al. [54] | 2014 | Switzerland | Discovered NETs in preeclampsia, identified their association with thrombosis and the risk of placental infarction |
| K. Egan et al. [55] | 2015 | Ireland | Described basic mechanisms of pro-thrombotic phenotype in preeclampsia with contribution of NETs |
| W. Marder et al. [56] | 2016 | USA | Performed histopathological studies in preeclampsia and quantitative measurement of neutrophils and NETs in the intervillous space. Showed that the aberrant formation of NETs exerts a toxic “pro-apoptotic” effect on trophoblasts, disrupts the structure of the spiral arteries and the process of placentation |
| C. Sur Chowdhury et al. [57] | 2016 | Switzerland | Confirmed that the non-cellular DNA/myeloperoxidase NET complexes are gradually increasing throughout gestation and are most prominent in preeclampsia |
| B. Konečná et al. [58] | 2018 | Slovakia | Showed that NETs trigger increased production of proinflammatory cytokines that may result in abnormal cellular and humoral immune responses and pregnancy complications, including preeclampsia |
| L. Vokalova et al. [59] | 2018 | Switzerland, Slovakia, Hungary | Found that the factors promoting abnormal regulation of neutrophil activities and increased NETs production include hyperglycemia and interplay between increased TNFα levels and associated decrease of its potential regulator A1AT |
| M. Moodley et al. [60, 61] | 2020 | South Africa | Demonstrated excess amount of NETs in the intervillous space around the exchange and conduction villi of the placental tissue. Assumed that NETs may be early biomarkers of the placental syncytiotrophoblast abnormalities in preeclampsia |
| M.M. Islam, N. Takeyama [62] | 2023 | Japan, Bangladesh | Described the IL8-dependent mechanism of increased NETs formation in preeclampsia. The NETs components in the placental intervillous space were detected by immunofluorescence staining. Demonstrated that NETosis results in damage of placental tissue |
| F. Guillotin et al. [31] | 2023 | France | Described various metabolic pathways of increased NETs formation associated with normal pregnancy and preeclampsia. Proved that the suicidal NETosis is the main mechanism in preeclampsia |