Maternal-fetal HLA compatibility and trophoblast-immune interactions in healthy and preeclamptic pregnancy: elegance in complexity

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Stellingen

behorende bij het proefschrift getiteld

Maternal-fetal HLA compatibility and trophoblast-immune interactions
in healthy and preeclamptic pregnancy
Elegance in complexity

1. HLA dissimilarity is as important as HLA compatibility for pregnancy success. *(this thesis)*
2. Maternal-fetal HLA-C compatibility influences pregnancy outcome: higher HLA-C matching is associated with preeclampsia, supporting the pivotal role of KIR/HLA-C interactions in placental development. *(Modified from Hiby et al., JEM 2004 and this thesis)*
3. Maternal-fetal mismatches in HLA class II loci contribute to hypertensive complications during pregnancy, likely via indirect $CD4^+$ T-cell activation rather than direct trophoblast recognition. *(this thesis)*
4. In oocyte donation pregnancies, the increased maternal-fetal HLA dissimilarity is associated with enhanced placental co-inhibitory molecule expression, reflecting compensatory immune regulation. *(Modified from van Bentem, et al. Human Immunology 2022 and this thesis)*
5. Immunological success of pregnancy depends not only on the maternal-fetal genetic (HLA) compatibility, but also on the modulation of the maternal immune response to it. *(this thesis)*
6. The future of preeclampsia care lies in its subclassification; pathophysiological subtyping of preeclampsia will facilitate the identification of specific, targetable pathways, which opens the way to new therapies. *(Modified from Roberts, et al. Hypertension 2021)*
7. The apparent divide between vascular and immune perspectives in preeclampsia research reflects insufficient attention to spatial and temporal dynamics at the maternal-fetal interface. *(this thesis)*
8. Accurate modeling of the maternal-fetal interface requires physiologically relevant systems that replicate cellular complexity, bloodflow, and immune interactions beyond conventional in vitro co-cultures. *(Modified from Park, et al. eBioMedicine 2023)*
9. Advancement of reproductive immunology requires transparent reporting, replication of findings, and counteraction of both publication and confirmation bias. *(this thesis)*
10. A good researcher is their own greatest critic.
11. A PhD is not merely a testament to talent, but above all to perseverance.
12. The deep sea of research holds mysteries as profound as the ocean; only those who dare to dive discover its wonders. *(Adapted from Jacques-Yves Cousteau)*