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Report from post doc research position in Cape Town, South Africa

During 2016-2017, I spent a year in Cape Town together with my family for clinical rotations in Surgery and Obs/Gynae at Tygerberg University Hospital, Stellenbosch University. I also had some time to prepare for my public defense that took place in October 2017, titled "Cerebral biomarkers in women with preeclampsia". During my year in Cape Town I realized that there are so many complications to preeclampsia that they see and treat here that we rarely see in Europe. I also realized that this population was my population of interest regarding biomarkers for adverse outcome in preeclampsia.

At Tygerberg University Hospital there is a High care unit for obstetric patients and they care for several patients with severe organ complications to preeclampsia such as pulmonary edema, renal failure and eclampsia each week. I started to discuss my ideas with the department and together with a South African MFM-specialist and researcher Catherine Cluver, we developed a protocol for a biobank for women with severe preeclampsia. I went back to Sweden in July 2017 only to return to Cape Town again with my family the 1st of February 2018 for 2.5 months' research visit. This was enabled through a 50% postdoc position that I was accepted for at my hospital together with a travel grant from NFOG. During my stay here we have now got ethical approval after 10 months of application process, hospital approval and we also managed to set up all the practical issues around the biobank. We have also developed a new collaboration with Baylor College of Medicine in Houston, Texas, who has brought a machine to investigate the cerebral circulation and dynamic cerebral autoregulation in preeclampsia. Together with MRI brain investigations and cognitive function assessments we will hopefully be able to answer questions like what the actual cause to cerebral edema in women with eclampsia is, how we can prognosticate the recovery after eclampsia and if there is a role of cerebral biomarkers in eclampsia. After recruiting women with cerebral complication we aim to recruit also women with other organ complications such as uncontrolled hypertension, pulmonary edema and renal failure to better understand the underlying pathophysiology. The recruitments will start during the second week of April 2018. I am the principal investigator of the biobank together with Catherine Cluver. Except for Baylor College of Medicine we also collaborate with Stephen Tong's group in Melbourne, Australia and a research group in Universidad Bio Bio, Chile, both interested in in vitro research where the team in Australia is more directed to placental pathophysiology and the team in Chile towards endothelial dysfunction in vitro including the blood brain barrier.

I am very grateful that I have been able to realize my research project in South Africa, a dream that I've had since a few years back. I hope that we will get a lot of valuable information out of this biobank that can be of use of the women in most need of new knowledge within the field of severe preeclampsia. I will continue to spend time in Cape Town to monitor the biobank and inclusions and I hope that the first analyses of data will be out during 2020.

Lina Bergman