

NVVI report

The Association for Research in Vision and Ophthalmology (ARVO)

May 1st – May 5th @ Fort Lauderdale

The ARVO convention is the biggest eye research related convention in the world. More than 1000 posters and 150 oral presentations are presented each day. Attending this convention gives people like me the opportunity to meet other people in the field, be informed on the newest findings and being allowed to present your own findings.

From January this year on I got to work on pathophysiological processes which are involved in proliferative vitreoretinopathy (PVR), which is an inflammatory/fibrotic disorder of the retina that can occur after a retinal re-attaching surgery. In PVR the retina detaches (again) from the underlying cell layer, the retinal pigment epithelial (RPE) cells, resulting in loss of vision. This is mainly caused by inflammation, proliferation and differentiation of the RPE cells, which migrate through the retinal breaks and form fibrous membranes (together with immune cells) on both sides of the retina. Due to traction of the fibrous membranes the retina can detach. This disorder can only be corrected by an additional surgery replacing the retina. That is why it is preferable to find a therapy which might help to prevent PVR from occurring.

Blood coagulants like thrombin and factor Xa can induce fibrotic processes in many organs like the lung, kidney and liver. We hypothesize that thrombin and factor Xa are involved in the inflammatory and fibrotic response in PVR by activating RPE cells. We found that both thrombin and factor Xa induce the production of several cytokines and growth factors that are well recognized for their contribution in fibroproliferative disorders.

With this data summarized on a poster I went to the ARVO convention and many people showed their interest herein. Lots of people were very interested in the quantitative cytokine antibody array we used for this study. Also people gave me tips to think about and explained me how to do certain assays which I might need in the future. The oral presentations I attended were very nice and generally from a high level. I met a lot of new interesting and helpful people, some also working on PVR.

Attending this convention was a great experience and therefore I would like to thank the board of the NVVI for granting me a travel budget. I would also like to thank my supervisors Wim Dik and Herbert Hooijkaas from the department of Immunology, Erasmus MC, for allowing me to go and the financial support which came along. Although I'm not officially employed by the Erasmus MC, their support makes me feel like I truly am part of the group.

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