

---

**P-085.****Generation of tools for characterisation of adaptive immune response in carp**

Awatif Eltijani<sup>1, #</sup>, Carmen Embregts<sup>1</sup>, Sylvia Brugman<sup>1</sup>, Geert Wiegertjes<sup>2</sup>, Maria Forlenza<sup>1</sup>.

<sup>1</sup> Cell Biology and Immunology group, Wageningen University & Research, the Netherlands

<sup>2</sup> Aquaculture and Fishery group, Wageningen University & Research, the Netherlands

**Abstract**

Recently our group reported the development of an intramuscular DNA vaccine against Spring Viremia of Carp Virus (SVCV). This vaccine conferred up to 100% protection to carp even at a single dose of 0.1 µg DNA/g of fish. A further characterization of the adaptive immune response revealed the presence of serum neutralizing antibodies and of memory T

cells in vaccine-protected animals. Nevertheless, with the current tools, it was not possible to determine which specific type of immunoglobulin (IgM, IgD, IgT1, IgT2 or all) contributed to the serum neutralizing titres, nor which specific subtype of T cells (CD4+, CD8α+ or both) contributed to the memory response.

In this study, we report the preliminary characterization of tools against B and T cells of carp. For example, we have developed polyclonal antibodies recognizing IgT1+ positive B cells and are further characterizing a monoclonal antibody recognizing putative mucosal T cells. These tools, combined with those already available in our group against IgM+ B cells, CD4-1+ and CD8a+ T cells, provide a panel of markers that will allow the characterization of B and T cell adaptive immune response in carp in general and to vaccination in particular.

**Keywords:** IgT, IgM, mucosal T cells, B cells, common carp

# Corresponding author.

E-mail address: [eltijani.awatif@wur.nl](mailto:eltijani.awatif@wur.nl) (A. Eltijani).