Review of: "Immunological Memory in a Teleost Fish: Common Carp IgM+ B Cells Differentiate Into Memory and Plasma Cells"

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Potential competing interests: No potential competing interests to declare.

The manuscript “Immunological Memory in a Teleost Fish: Common Carp IgM+ B Cells Differentiate Into Memory and Plasma Cells” is a nice piece of work on comparative immunology of vertebrates and describes putative pathways of differentiation of resting B cells into antibody-secreting cells and memory plasma cells upon infestation with a cnidarian parasite. The IgM-secreting cells have been investigated in controls and experimental groups by very refined flow cytometry analysis and transcription of immune-related genes. The conclusions on the results related to the presented experimental plan are convincing, and I don't have particular queries. However, a direct proof-of-the-concept related to the presence of memory IgM-secreting B cells is missing, and it's the opinion of this reviewer that the manuscript cannot be accepted in its present form.

By considering that the authors performed an ELISA assay, an ELISPOT/CellELISA should provide a direct confirmation of the presence of IgM-secreting cells long (8 weeks?) after immunization. These easy experiments must be added together with the already present ELISA assays before an eventual re-submission of the manuscript. No other modifications are requested.