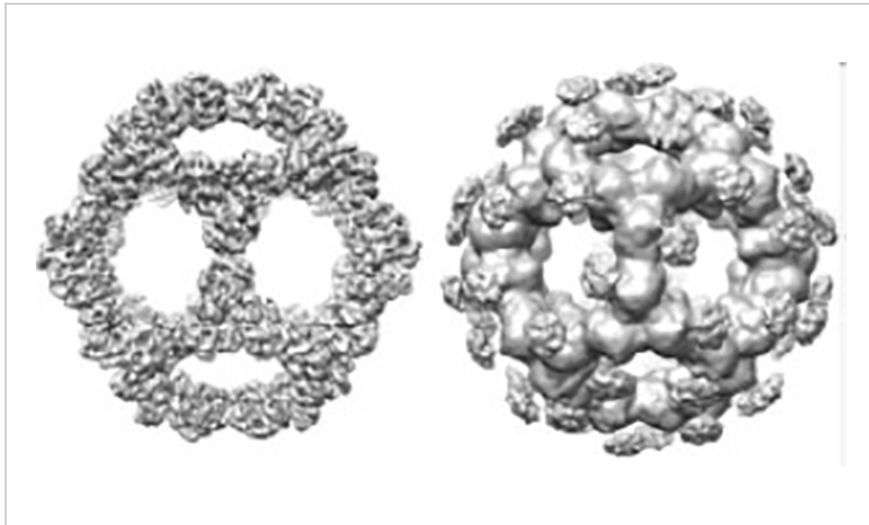


# Novel Scaffold for Labeling and Isolation of B- and T-Cells

ID# 2018-4808



Cage scaffold & SpyCage variant

## Technology Summary

A novel scaffold has been created composed of 60 self-assembling protein subunits, rigid, heat stable, and can be functionalized via modification to the N-and C- term of each subunit. The inventors generated two novel variations of the cage – SpyCage-Green/Red/Blue and AviCage-Green/Red/Blue. SpyCage includes a SpyCatcher capture domain at subunit N-term, allowing for capture of any target labelled with the widely used SpyTag. The N-term also includes a flexible linker to prevent any steric hinderance in binding. A fluorescent protein, either green, blue, or red, is fused to the C-term of the subunit.

## Application & Market Utility

This tetramer creates a fluorescent signal 10x brighter than the best tetramer currently available. The enhanced fluorescent signal is expected to facilitate efficient fluorescence-activated cell sorting (FACS). Initial results demonstrate that AviCage outperforms currently available tetramers in the specific isolation of B-cells reactive to an antigen of interest. Downstream use of isolated B-cells may include the sequencing of the heavy chain and light chain coding sequences for the production of recombinant antibodies and the creation of novel hybridoma lines.

## Next Steps

The inventors expect that T-cells may be similarly isolated using MCH-1 bound SpyCages/AviCages. Seeking research collaboration and licensing opportunities.

TECHNOLOGY READINESS LEVEL

1-3

### Seeking

Licensing | Research

### Keywords

- Immune Cell Isolation
- B-Cell Isolation
- Antibody Generation
- Hybridoma Generation
- T-Cell Isolation

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