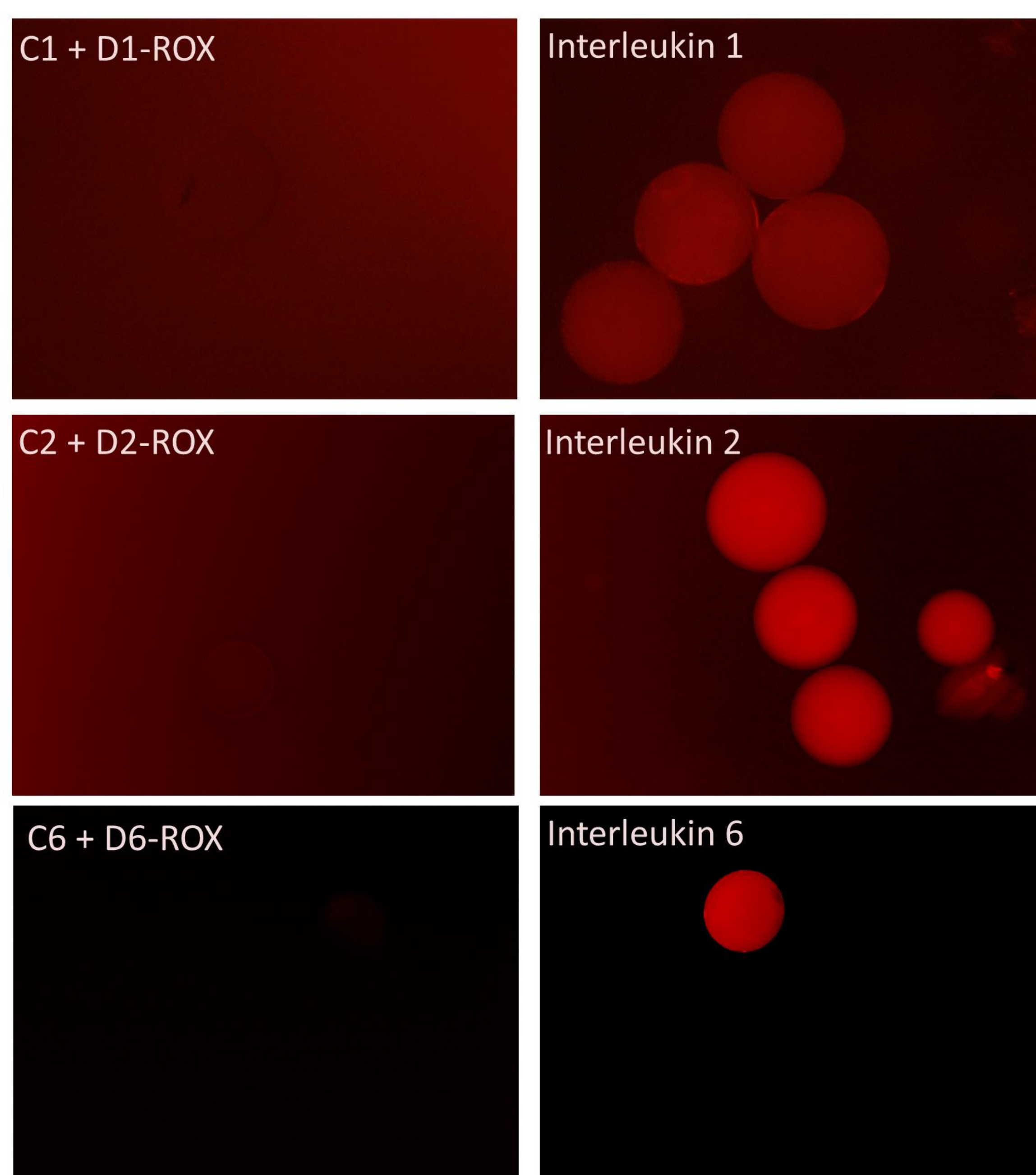
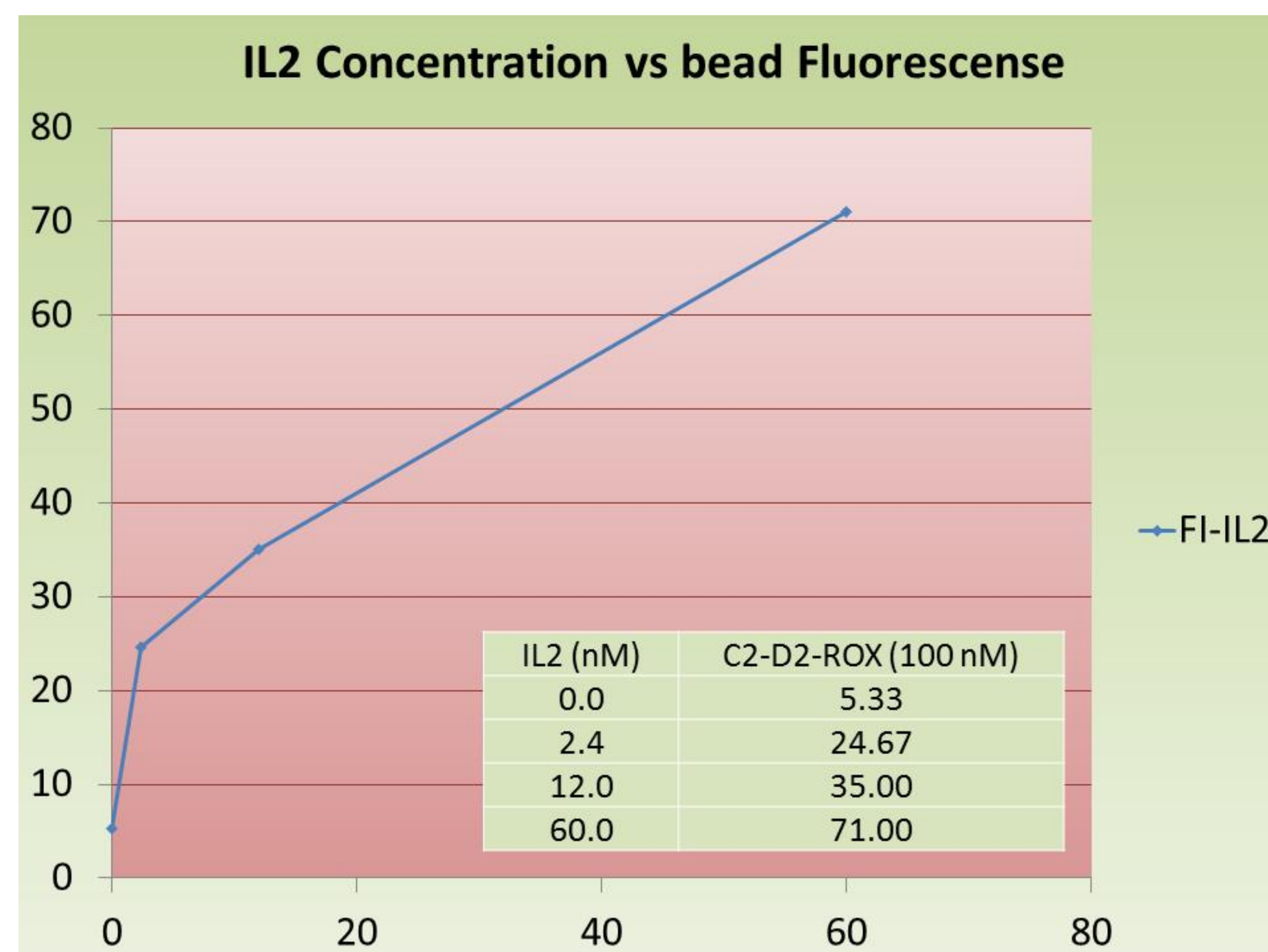
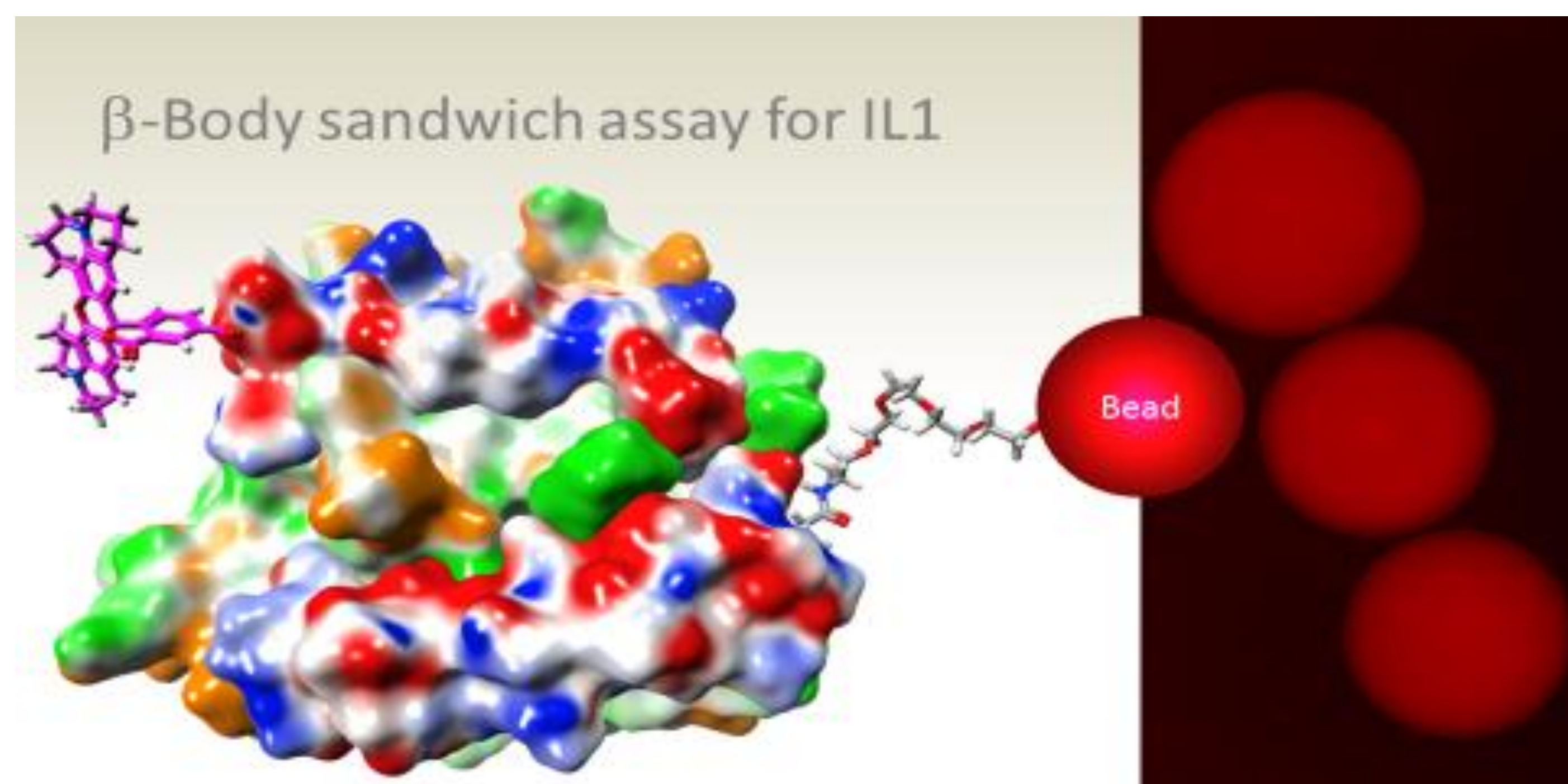


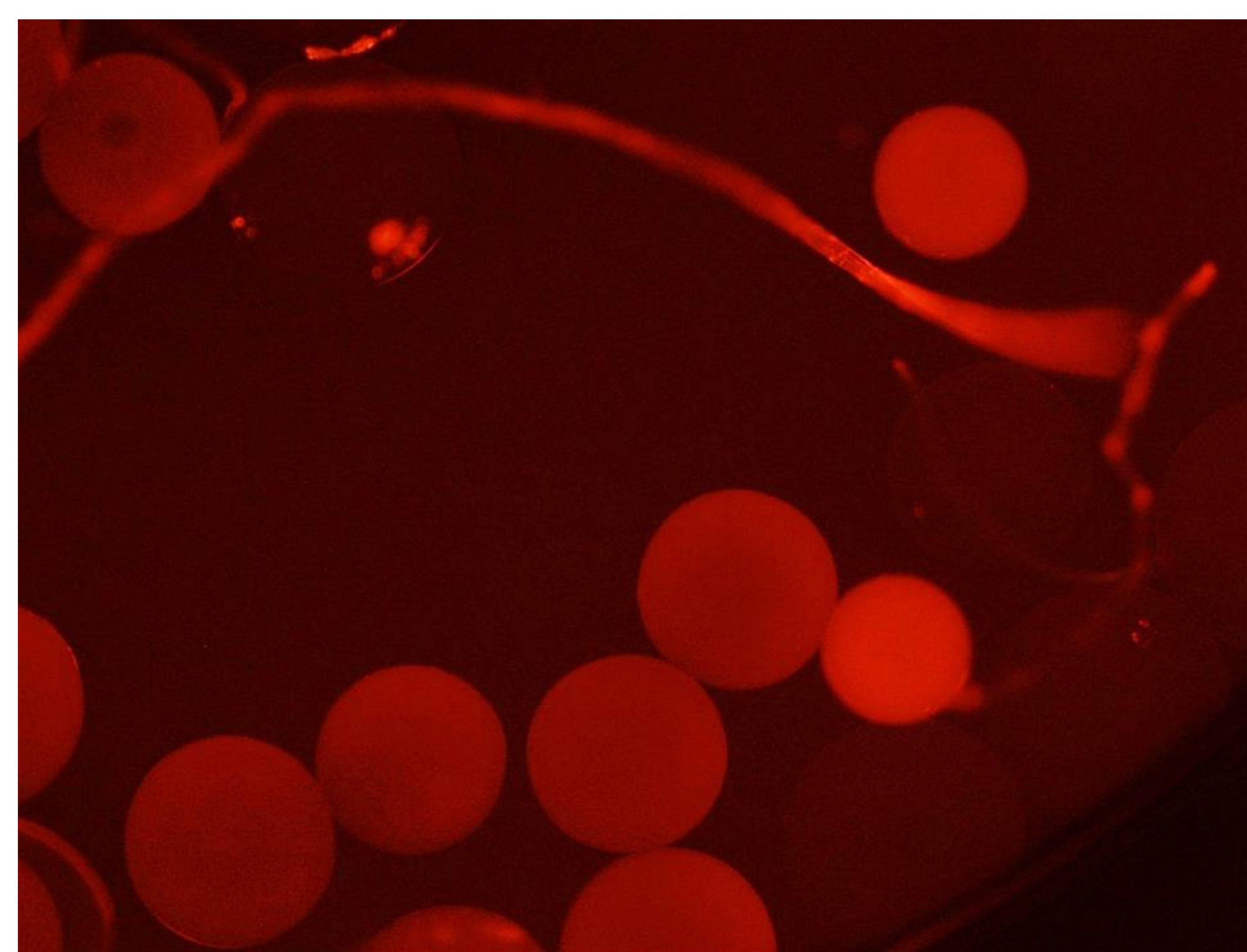
β-Bodies

- antibody mimetics with ultrahigh affinity and specificity

Biotech and Health Care



Sandwich assay for IL1 (50 nM), IL2 (50 nM) and IL6 (20 nM) using capture peptides, C1, C2 and C6 on beads and ROX-labeled detection peptides, D1, D2 and D3 in solution (100 nM)



A mixture of beads with either capture peptides C1b or C2b and ROX-labelled IL1 showing the complete selectivity of C1b for binding IL1. The image was enhanced to show unlabeled beads.

Value proposition/USP

The technology will enable a licensee to provide customized antibody equivalents designed to recognize almost any surface of a protein.

Business Opportunity/Objective/Commercial perspectives

- Small peptides which can be synthesized using standard peptide chemical methods
- Simple and fast generation, selection and synthesis
- The peptide sequence of the antibody mimetic can be generated by computer-based methods for target proteins with a known 3D structure

Technology description/Technology summary

- Typically, the antibody mimetic is a peptide of up to 26 amino acids equal to less than 3 kDa.
- The unique peptide sequence gives the antibody mimetic a very stable 3D structure.
- The antibody mimetic can bind to its target compound with a K_d of down to 10^{-9} - 10^{-10} .
- Applications include therapeutic or neutralizing β-bodies and *in vivo* use for control of cellular function.
- For detecting the presence of a target compound in a sample, the β-body may be linked to a detectable label or it may be used in a sandwich assay.

Development phase/current state

β-bodies have been designed and tested for a number of interleukins, enzymes and receptors by computer-based methods. Work on selectivity and on other target proteins is on-going. The technology is ready for any target protein with a known 3D structure. It is also feasible to use combinatorial selection of these antibody mimetics towards proteins for which the structure is unknown.

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