

# Robust heavy chain – light chain pairing solutions for generating clinical bi- and multispecific antibodies

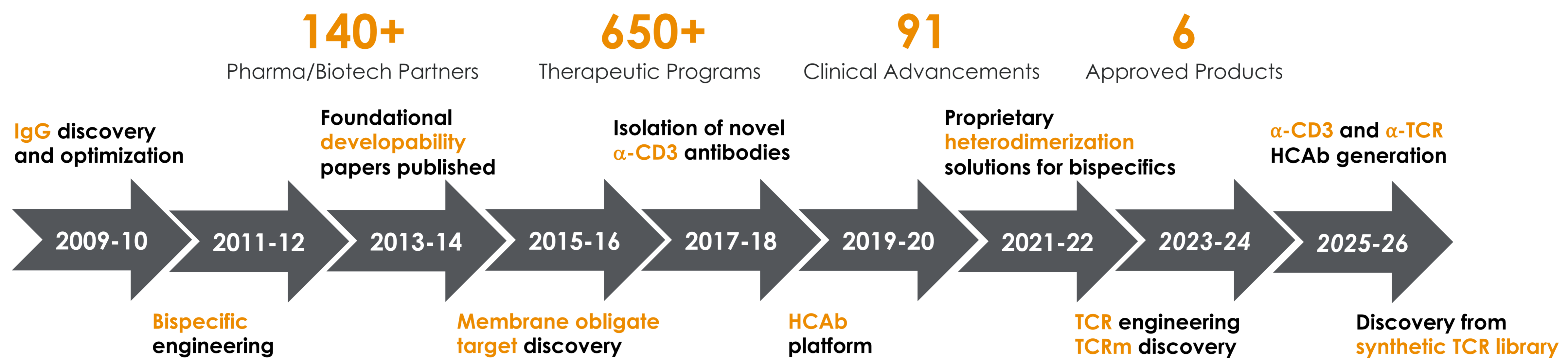
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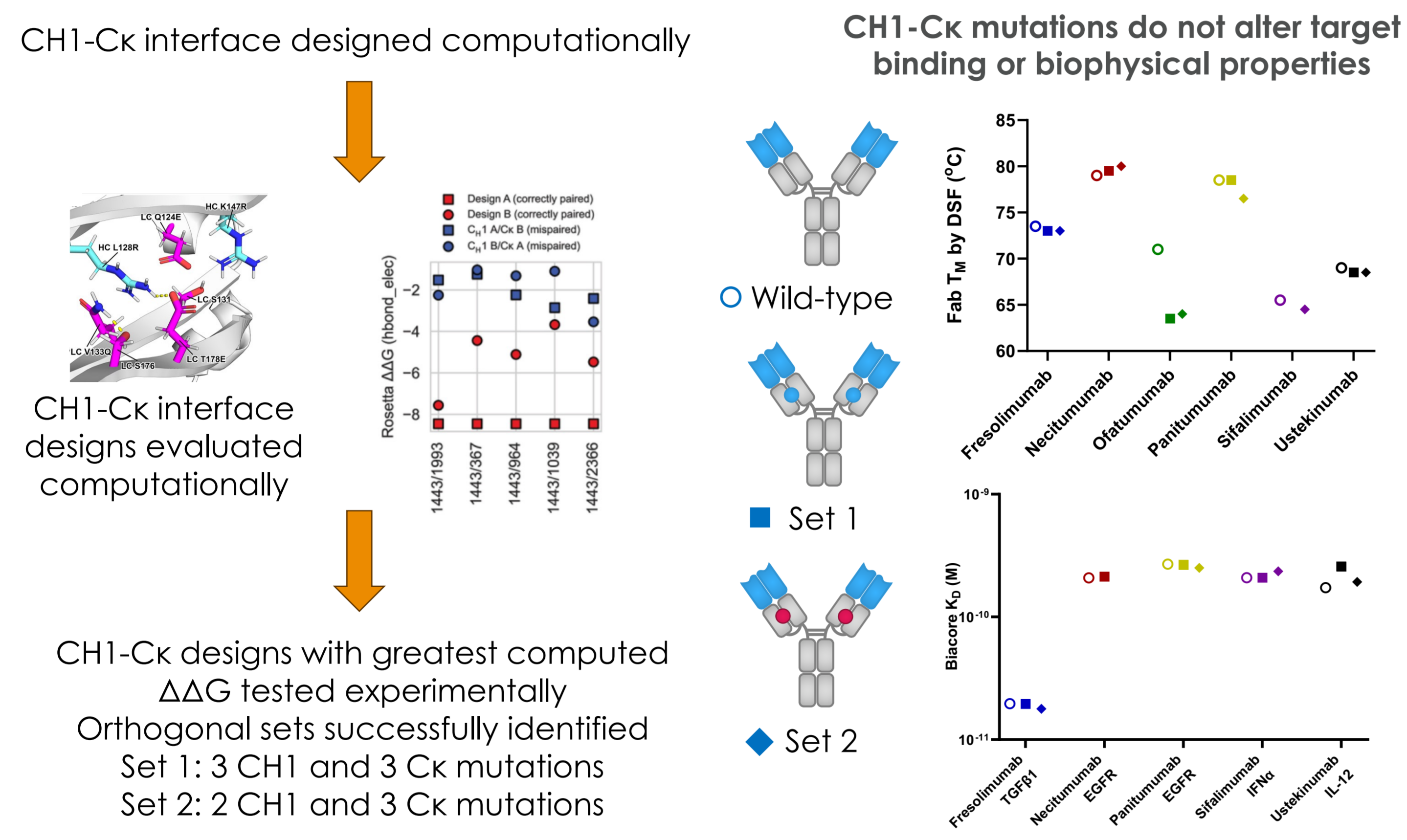
# ADIMAB

## BACKGROUND

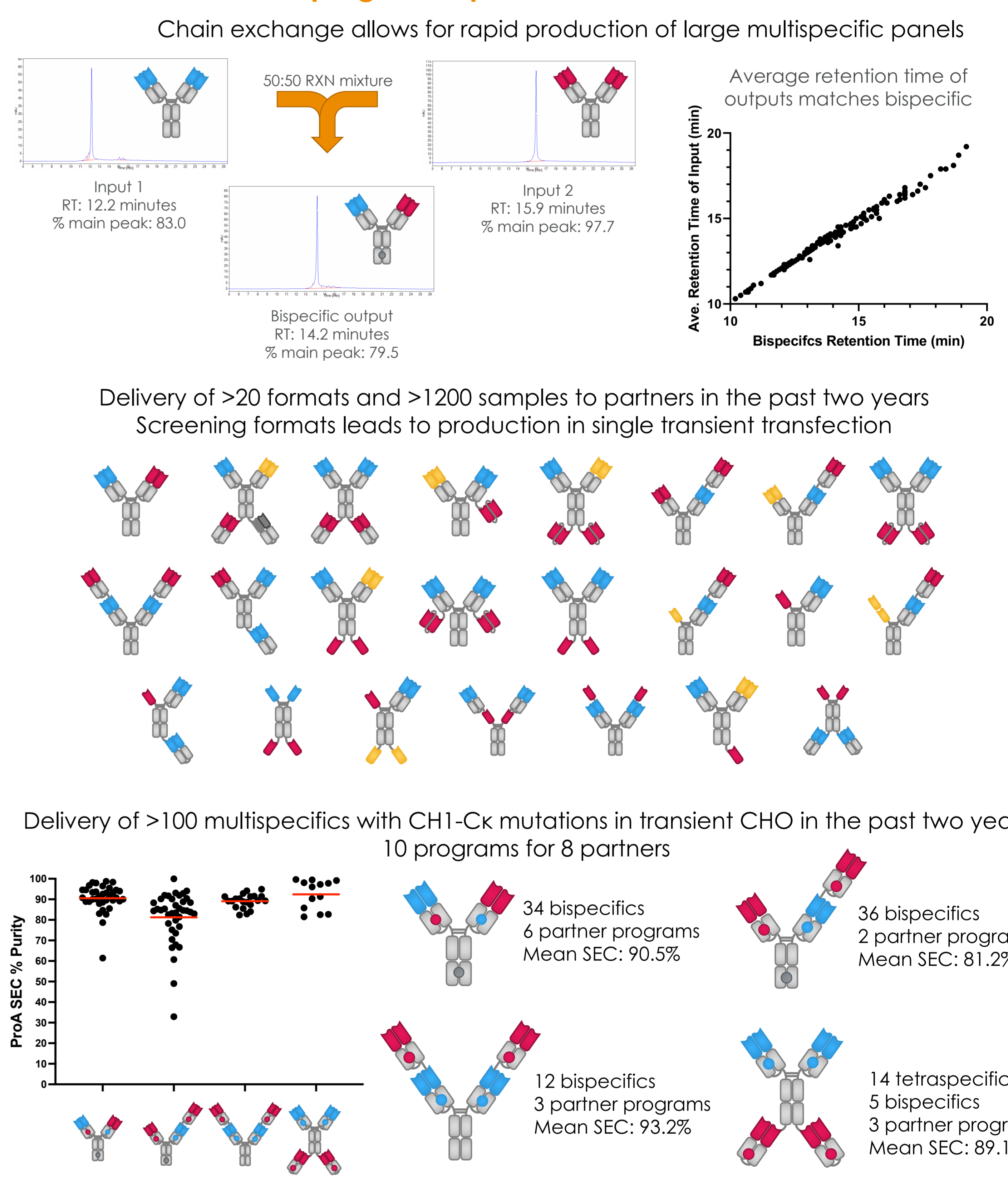
Adimab's discovery and optimization platform excels in identifying diverse, highly specific, and developable antibody panels. In addition to discovery, Adimab has developed technology for assembling multispecific antibodies, leading to clinical development. Here we present the design and validation of orthogonal CH1-Ck interfaces for correct heavy chain – light chain pairing.



### Designing CH1-Ck heterodimerization<sup>1</sup>



### Developing multispecific antibodies at Adimab



### Testing CH1-Ck heterodimerization

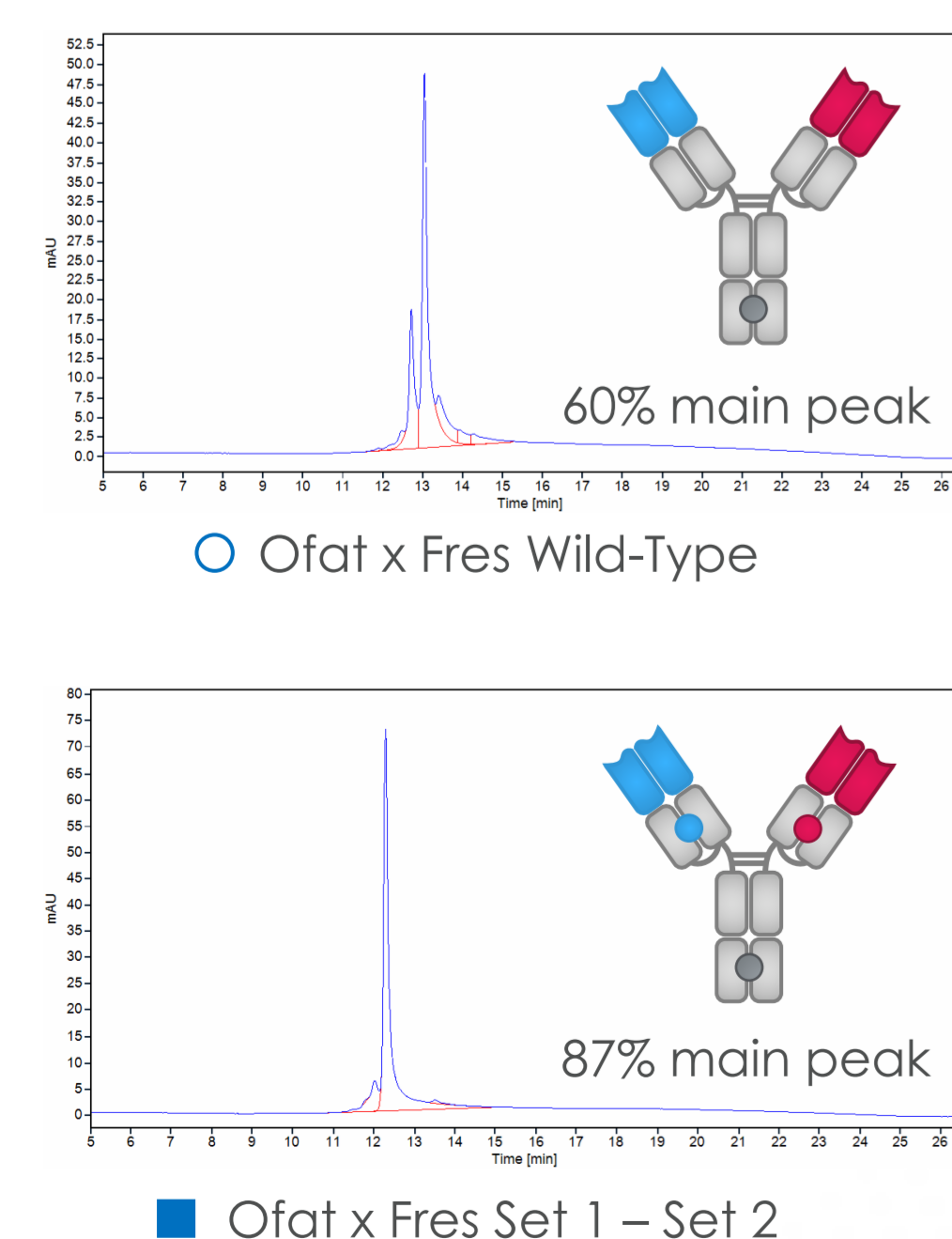
Heterodimerization mutations tested in five bispecific pairs

Index	Variable 1	Variable 2
◆	ofatumumab	fresolimumab
◆	necitumumab	fresolimumab
◆	necitumumab	sifalimumab
◆	ofatumumab	sifalimumab
◆	panitumumab	ustekinumab

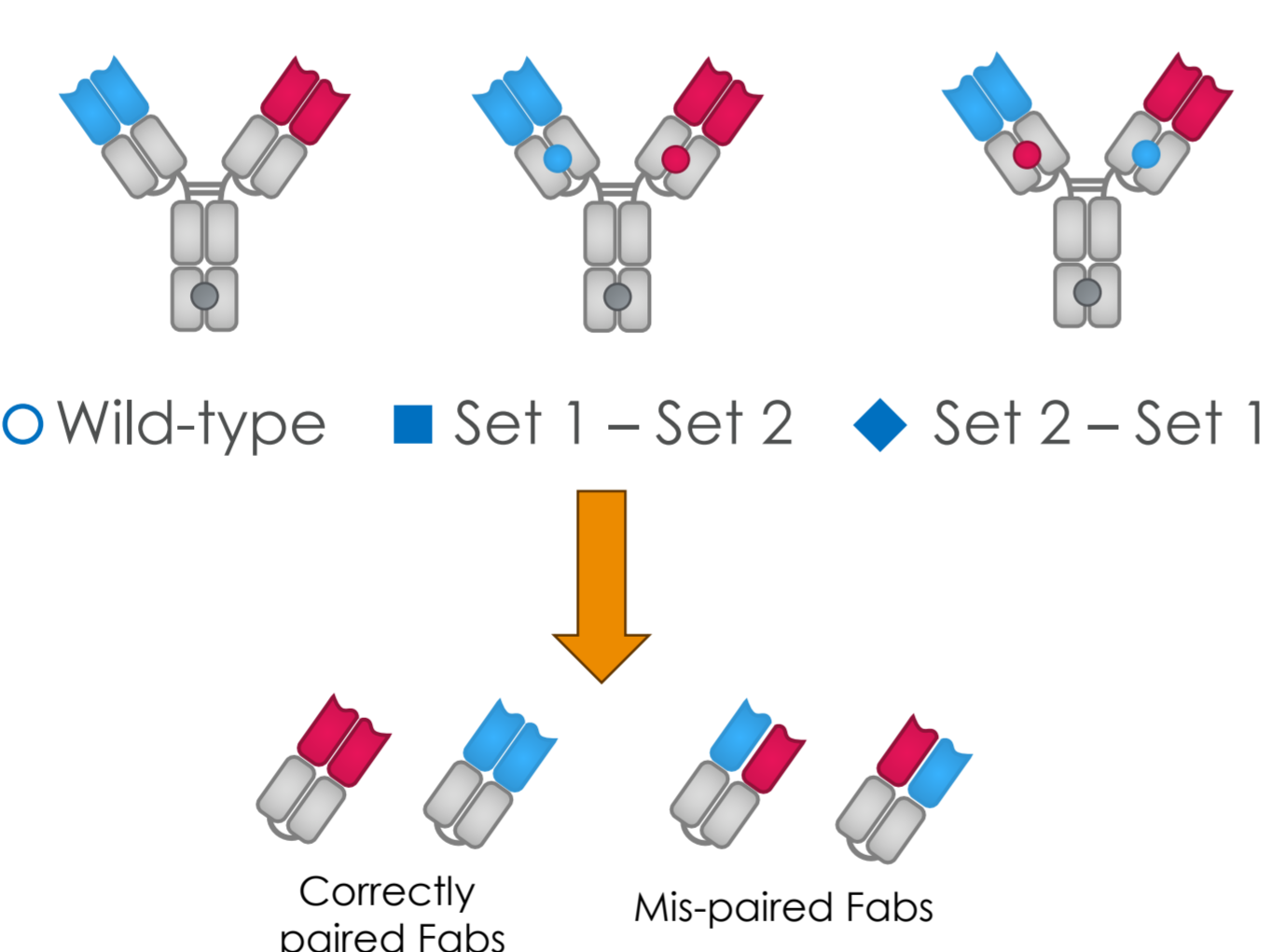
Antibody pairs picked based on:

- Good biophysical properties
- HC-LC promiscuity among pairs
- Human V-regions

ProA purified bispecific mixture run on analytical ion exchange



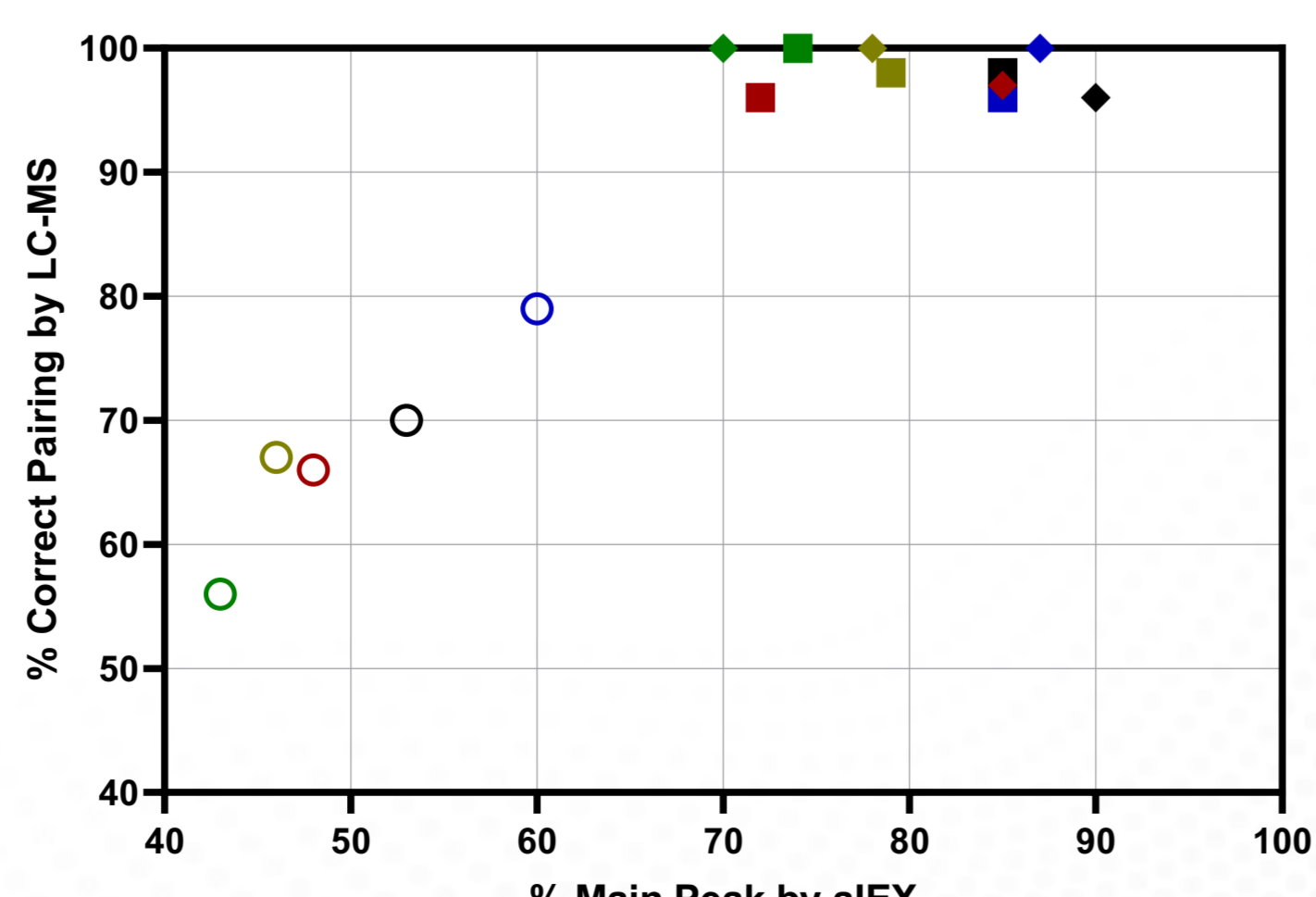
Each antibody pair tested in three constructs



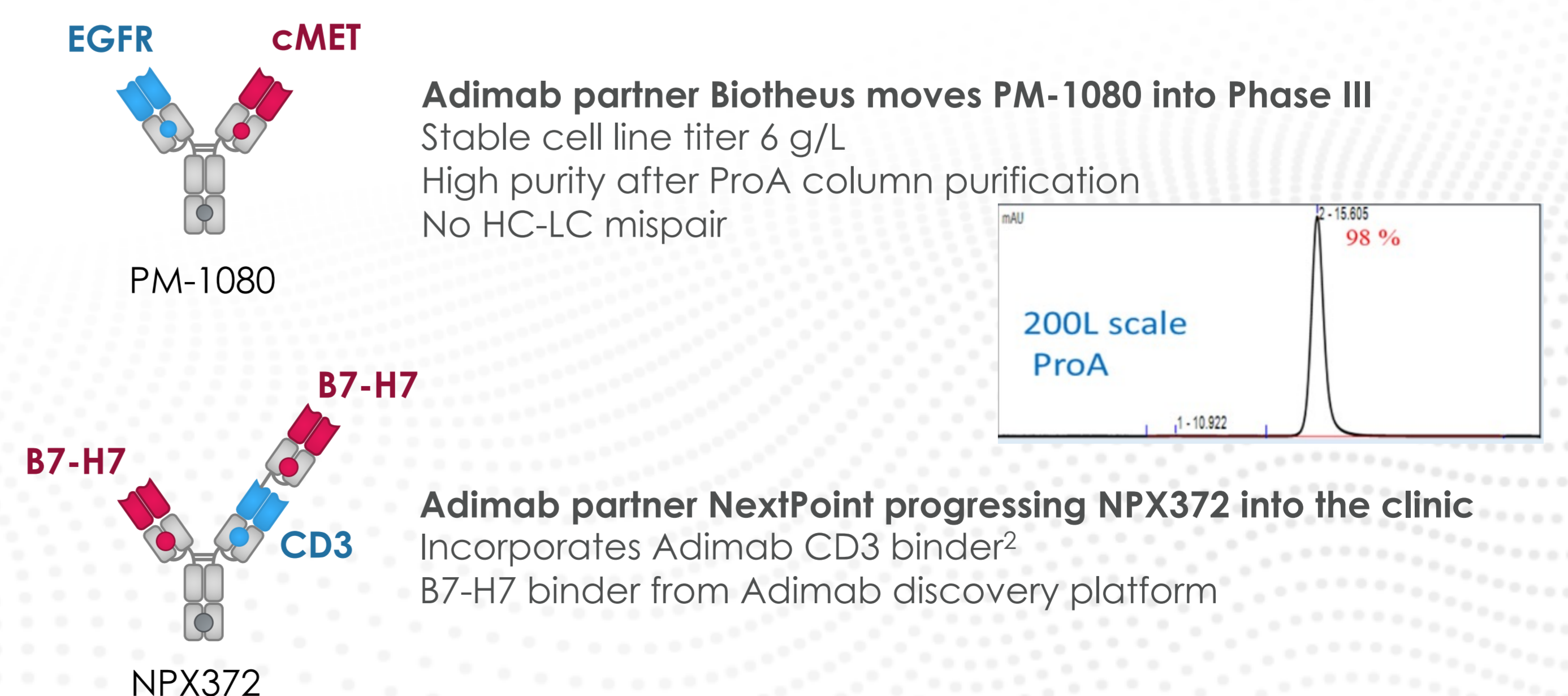
Mass spec bispecific quantitation:

- ProA purified samples digested to Fabs
- Fabs run on LC-MS
- Peaks integrated for quantitation

CH1-Ck mutations drive 100% correct pairing



### CH1-Ck heterodimerization in clinical bispecifics



### Acknowledgments and references:

We thank our partners at NextPoint and Biotheus. All members of the Adimab scientific and engineering teams contributed to this technology.

1. Barlow et al., *MAbs* 2025 Dec;17(1). 2. Liu et al., *MAbs* 2023 Jan-Dec; 15(1).

### Contact Adimab

If you are interested in partnering with Adimab, please reach out to our Business Development department at [bd@adimab.com](mailto:bd@adimab.com).

The QR code on the right links to Adimab posters and other resources.

