

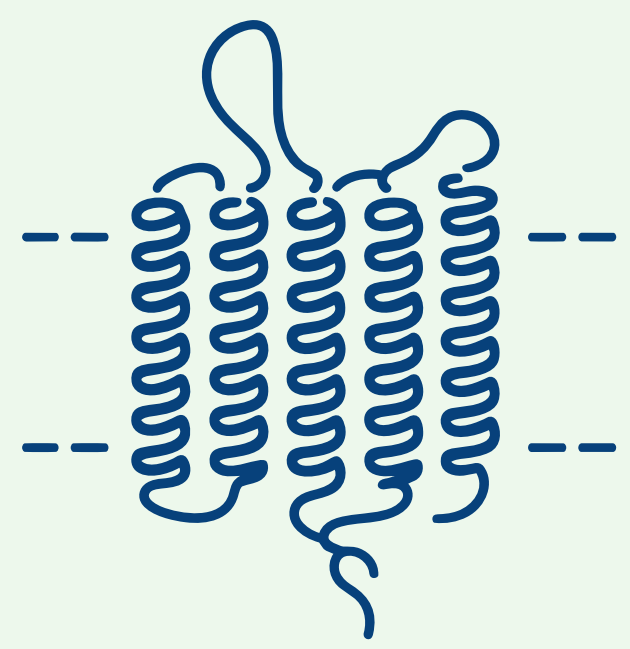
Antibodies Against 100+ Impossible Protein Targets

High-quality mAbs for previously intractable GPCRs, ion channels, & transporters

Ross Chambers, Kyle Guldner, Paige Revoir, Sarah Campbell, Meghan Pitts, Riley Payne, J. Tabb Sullivan, Joseph Rucker, Sharon H. Willis, and Benjamin J. Doranz

Cell Surface Bio, Philadelphia, PA

Difficult Protein Targets

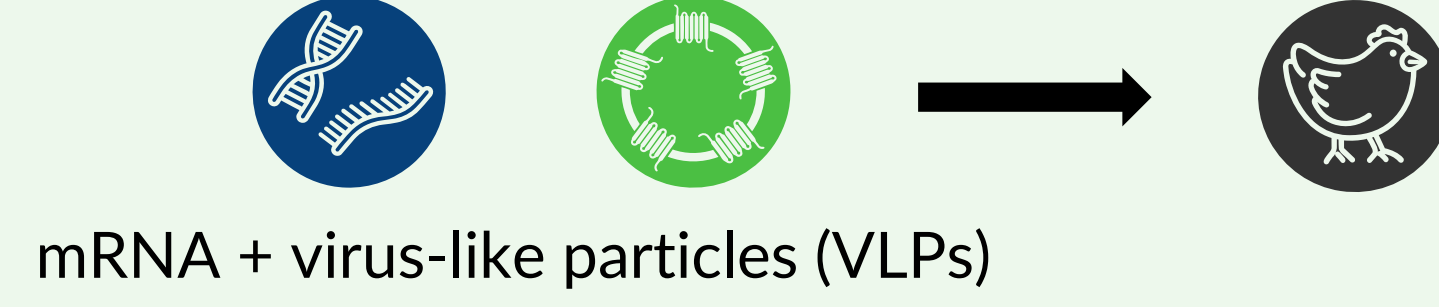


CSB specializes in membrane proteins

GPCRs, ion channels, and transporters

CSB Antibody Discovery

Immunizing chickens with antigen in native conformation



Selecting the best binding antibody



Antibodies that Always Work



Validated



Recombinant



Specific

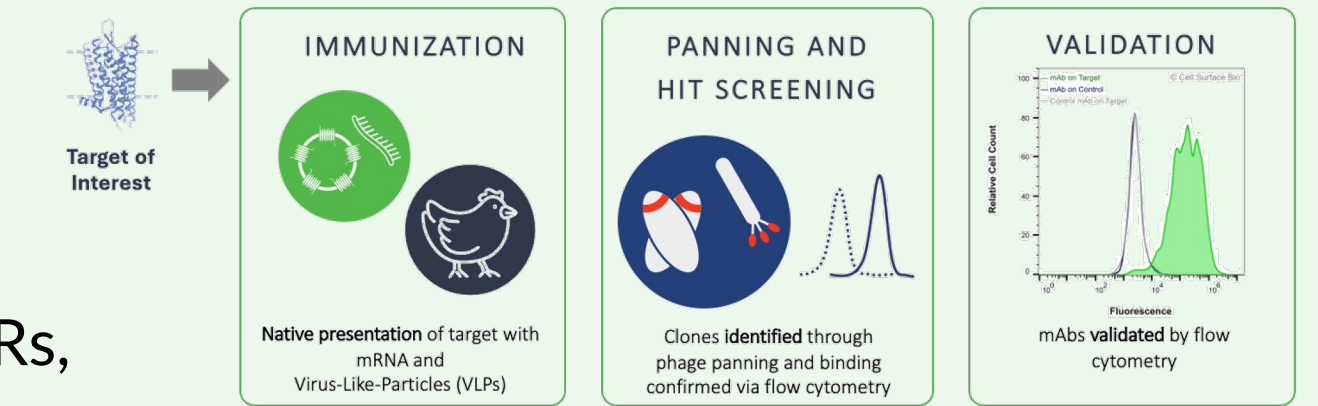
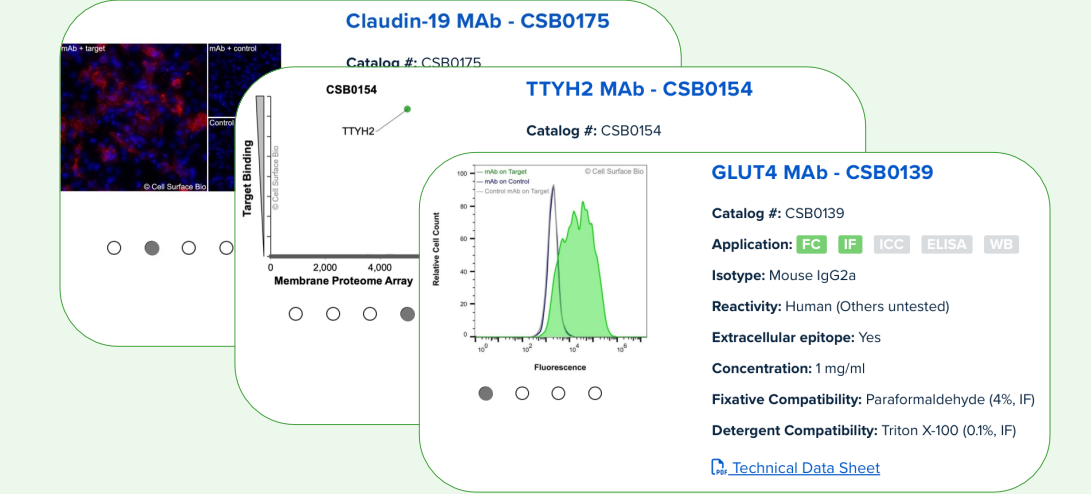
Trust your Antibody... Trust your Data

VerSaMAB Catalog

VerSaMAB catalog
Spans wide range of protein targets.
Pipeline of 100s of antibodies.

VerSa-Select

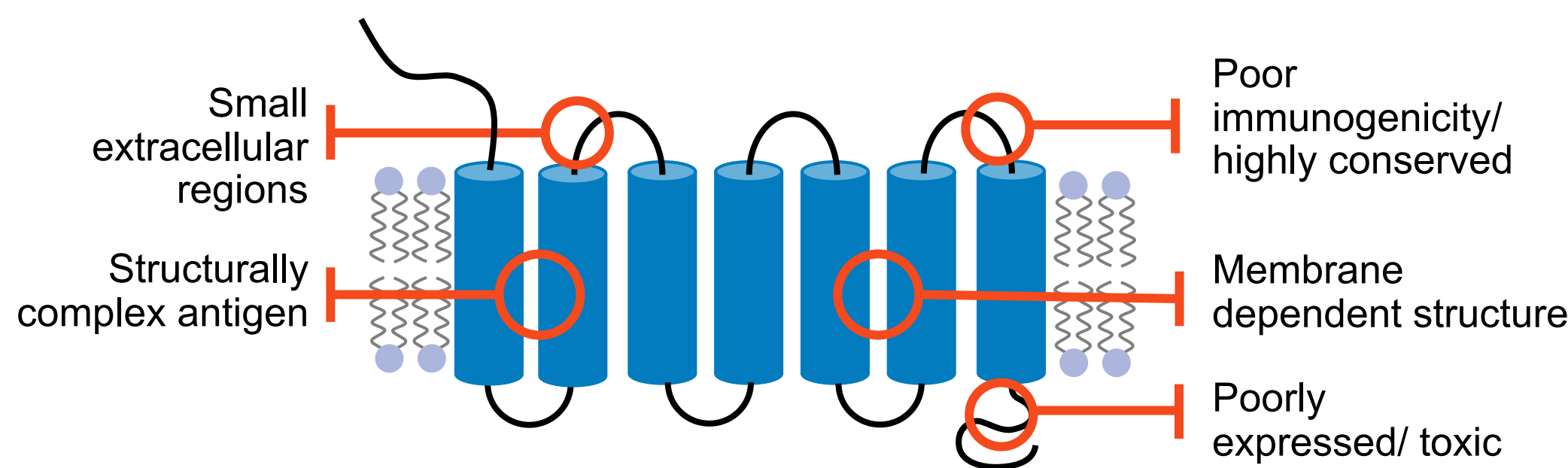
Custom Antibodies
Access any target.
High-quality antibodies for GPCRs, ion channels, transporters, and more.



Access Untapped Druggable Proteins

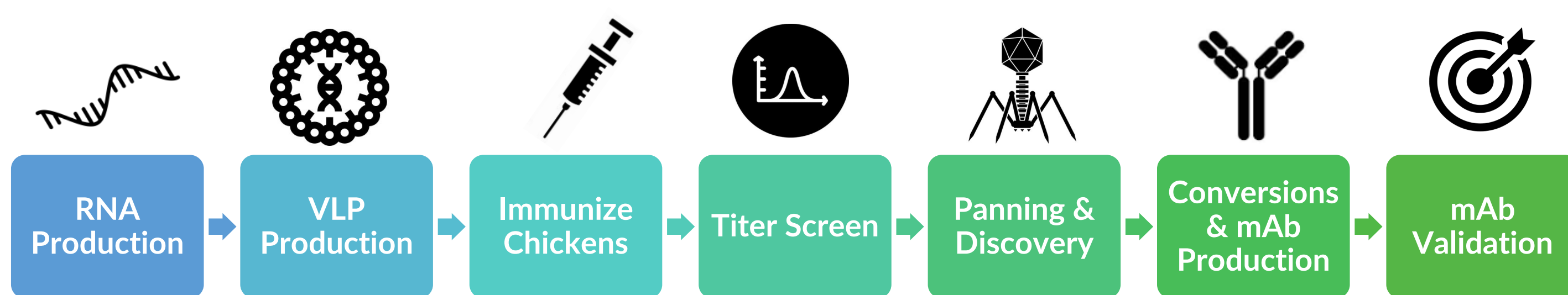
Membrane proteins are promising drug targets but are historically difficult for antibody discovery

Challenges of Antibody Discovery for Membrane Proteins



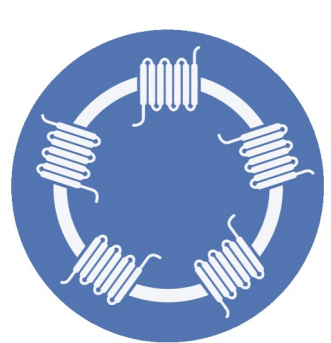
90% of NIH-identified, understudied druggable GPCRs (116) and ion channels (62) lack high-quality mAbs

CSB's pipeline is designed for membrane proteins



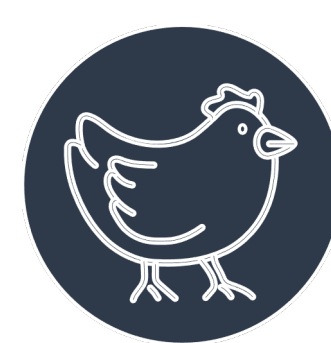
mRNA

- Pioneers in mRNA immunization for mAb discovery
- Express multipass membrane proteins in native environment
- Focused immune response against extracellular epitopes



Virus-like Particles (VLPs)

- Concentrated membrane proteins presented on VLPs
- Native conformation proteins
- Highly immunogenic
- Used for immunization and panning



Chickens

- Evolutionarily distant from mammals to access highly conserved epitopes
- Yields diverse panels of high affinity antibodies
- Generate human, cyno, and rodent cross-reactive mAbs



Validated

- Extensively validated for:
- Flow cytometry
 - Immunofluorescence
 - Western Blot



Recombinant

- Recombinantly cloned for:
- Reproducible results
 - Reduced background through Fc engineering
 - Guaranteed monoclonality

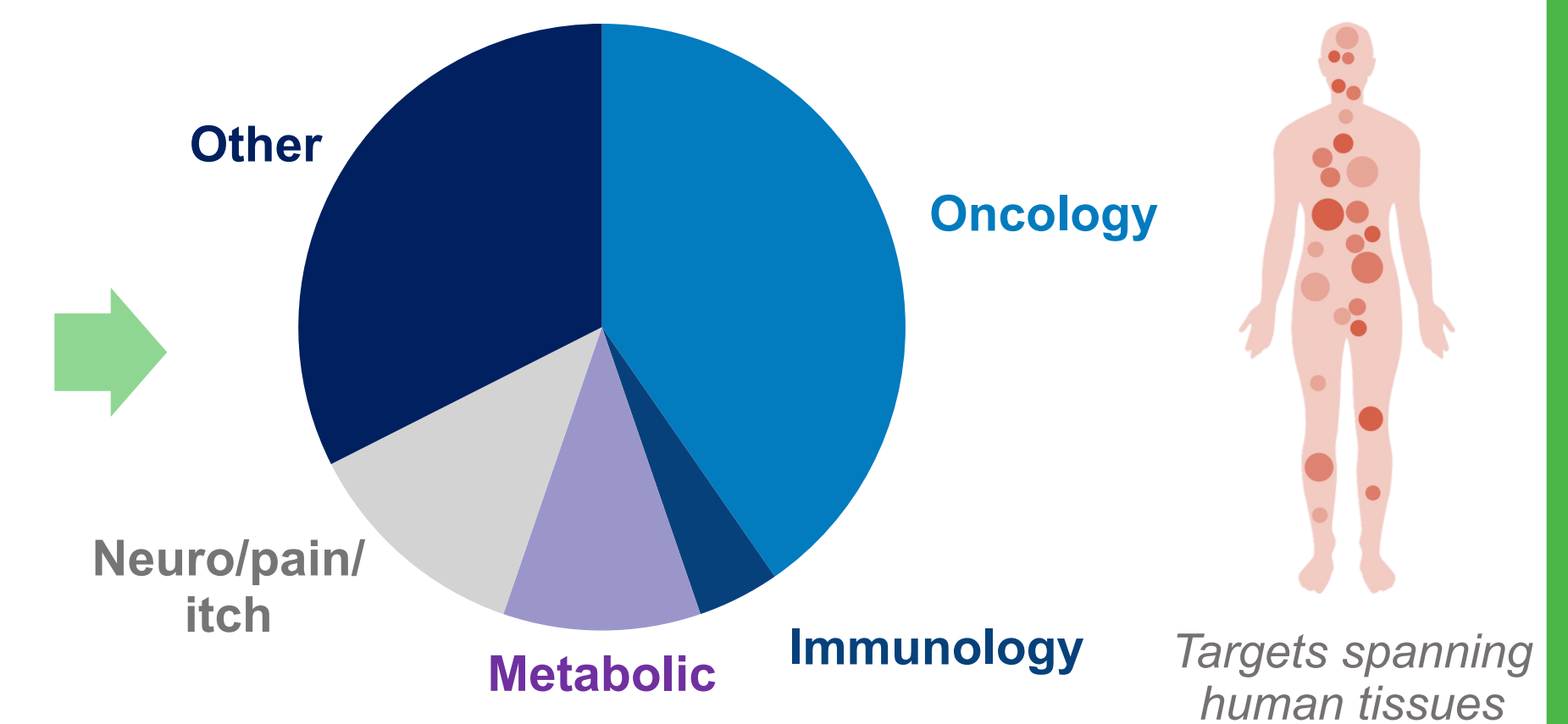


Specific

- Unbiased binding profiling for:
- High specificity to antigen
 - No off-target binding
 - Confirmed reactivity against multiple mammalian species

Growing Pipeline of Validated Antibodies

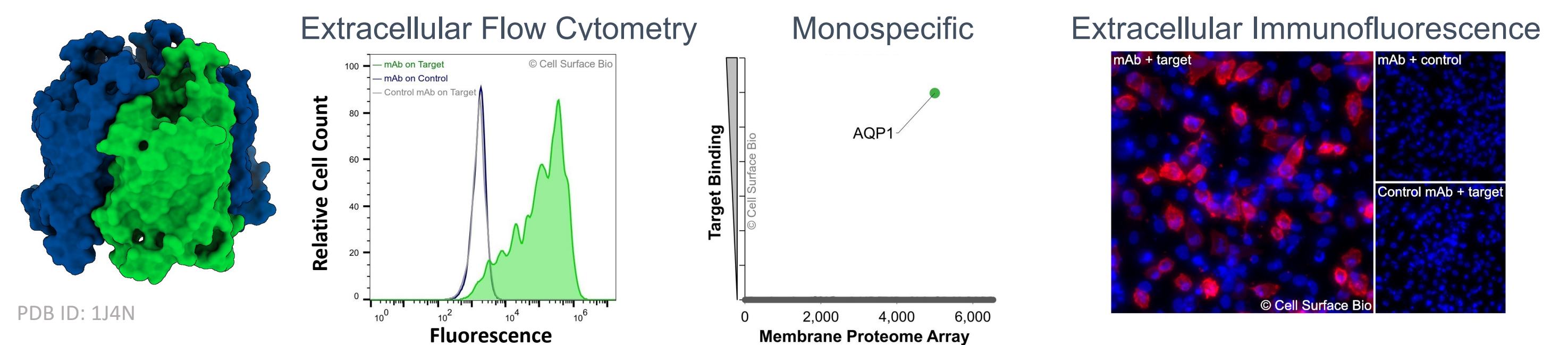
100+ Drug Targets
Selected for mAb
Discovery and
Engineering



Proven antibodies for hard-to-target proteins

AQP1 (Aquaporin1)

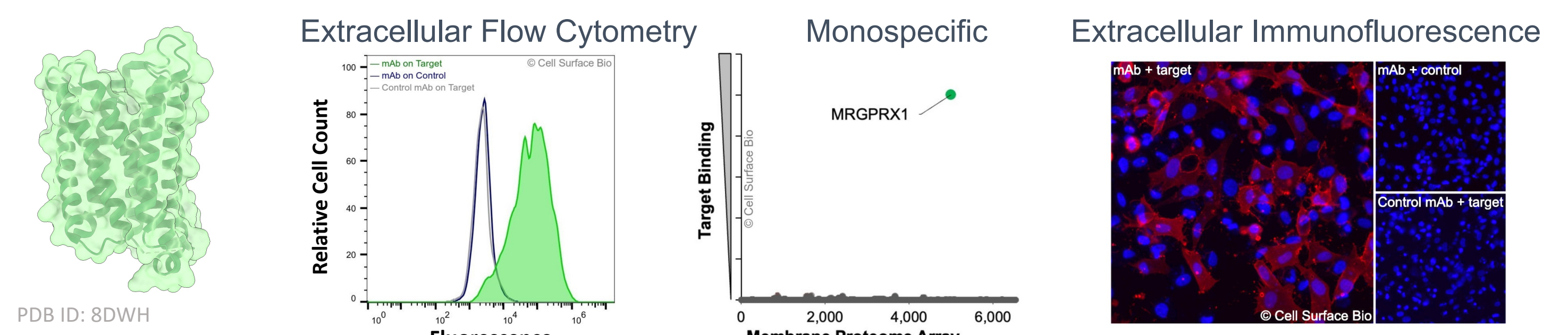
6-transmembrane protein that forms a homotetrameric channel



AQP1: target for cancer and disorders of fluid imbalance

MRGPRX1

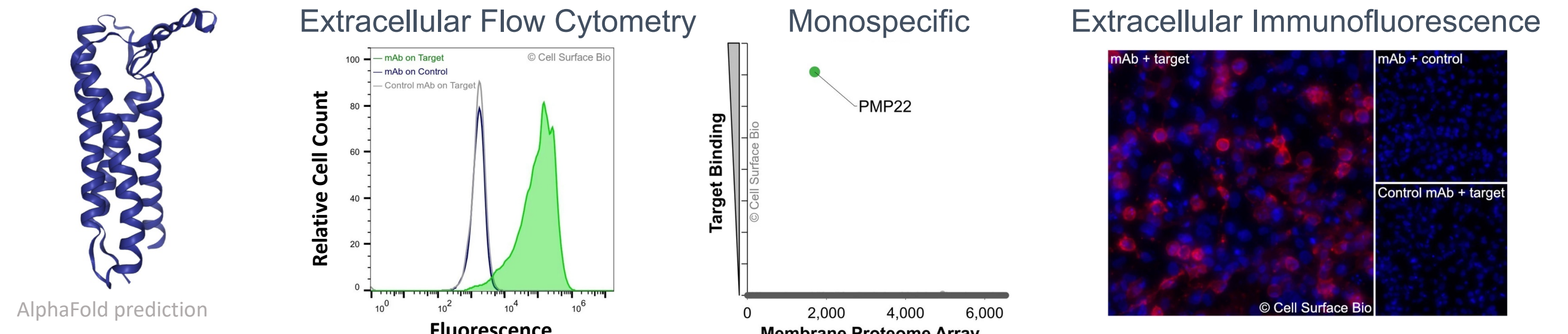
7-transmembrane GPCR



MRGPRX1: target for non-opioid pain treatment and for itch disorders

PMP22

4-transmembrane protein



PMP22: target for Charcot-Marie-Tooth disease

Cell Surface Bio's Pipeline Enabled by Membrane Protein Technologies and Antibody Engineering



Native antigen presentation using **VLPs** in conjunction with **DNA/RNA immunization**



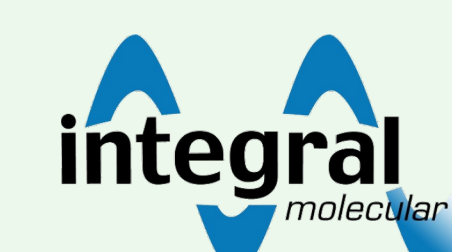
Divergent host species enables robust immune responses to complex targets



Membrane Proteome Array™ for specificity screening against ~6,000 native membrane proteins



Paratope-PLUS® CDR-Scanning for affinity maturation, species reactivity, and patent protection



CSB antibodies are built on the membrane protein expertise and technologies of its parent company, **Integral Molecular**

Ross Chambers, PhD
rchambers@cellsurfacebio.com

Cell Surface Bio's mission is to provide scientists only the highest quality antibodies, backed by 25 years of experience in antibody discovery & characterization

Contact us or visit us as cellsurfacebio.com

Download poster

