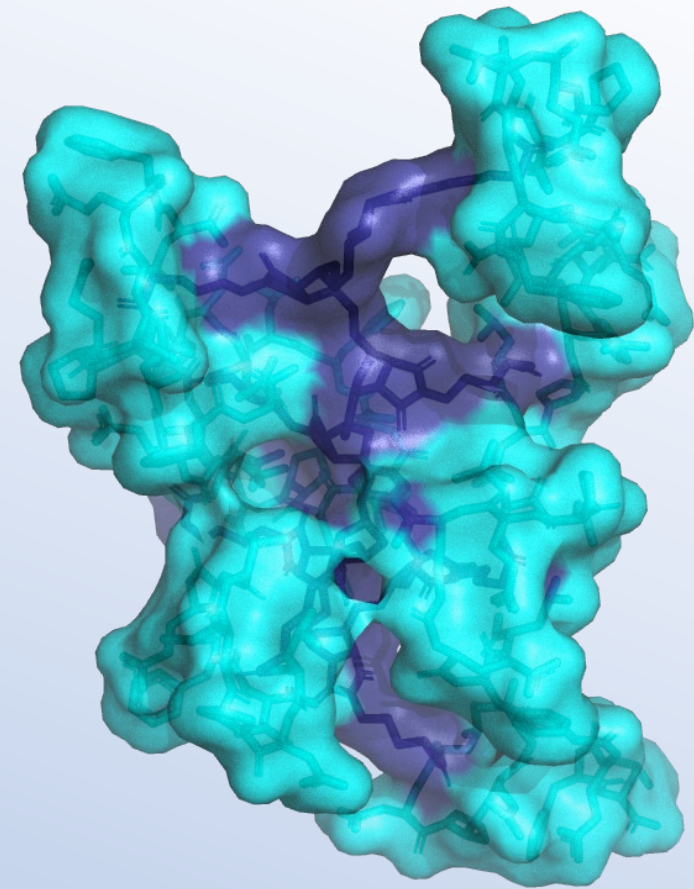




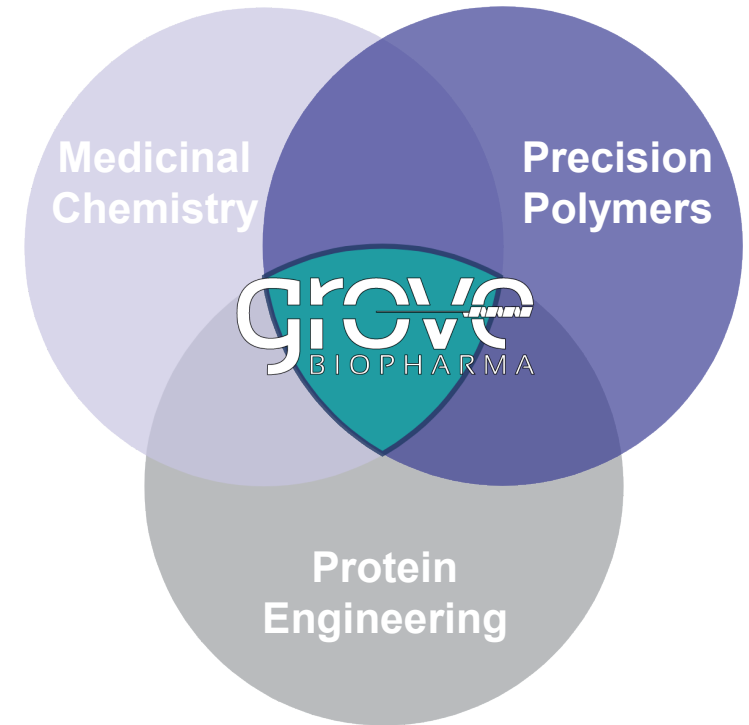
Pioneering Proteomimetic Therapeutics

Company Overview



Grove Biopharma, Inc. – Company Overview

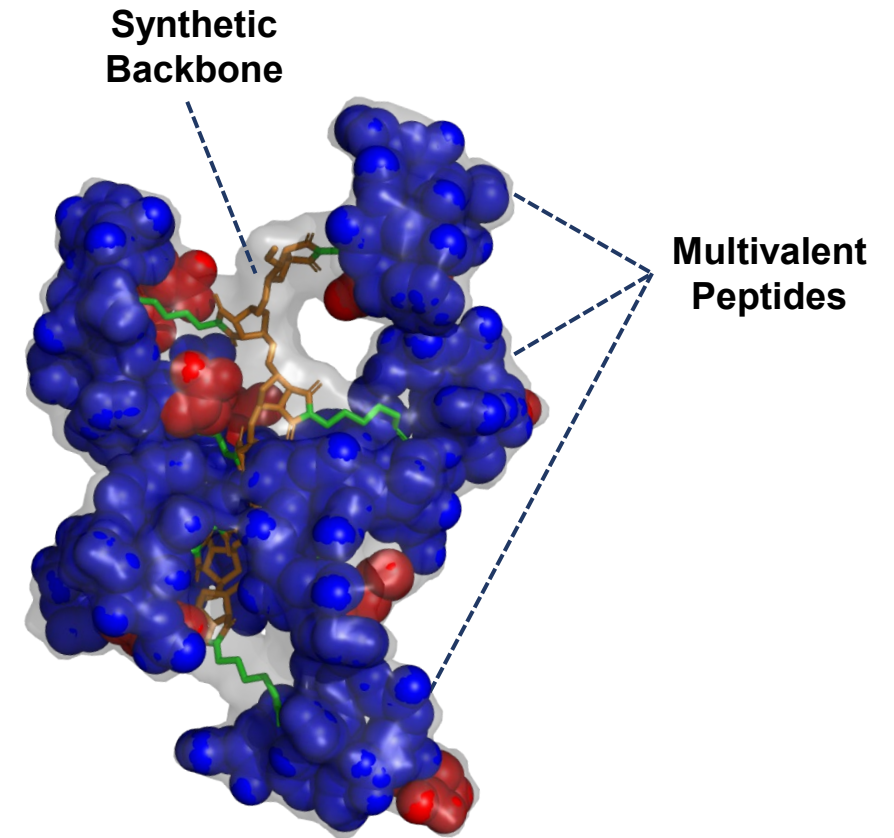
- **Proprietary platform technology:** Precision-Linked Proteomimetics™ (PLPs) are protein-scale, customizable, synthetic macromolecules with the selectivity, potency, permeability, and pharmacology needed to engage intracellular PPIs
- **Pipeline:** Lead program targeting MYC interaction network
- **Seed:** Raised \$6.5MM in convertible notes since Q2 2021; established early discovery laboratory with 6 FTEs to build the platform and develop a pipeline of therapeutic candidates
- **NIH SBIR Award:** Phase I (\$250K, July 2023)
- **Goal:** Raise Series A to accelerate platform development and advance the oncology program



Precision-Linked Proteomimetics™ (PLPs) :

A Novel Platform Targeting Intracellular Protein-Protein Interactions

- ✓ **Breakthrough Plug-and-Play Design**
enables customization for any target and parallel optimization of binding affinity and cell permeability
- ✓ **Dynamic Protein-Scale Architecture**
confers cell permeability, solubility and potency
- ✓ **Accelerated Drug Discovery** with potent, cell-active molecules “out of the box”

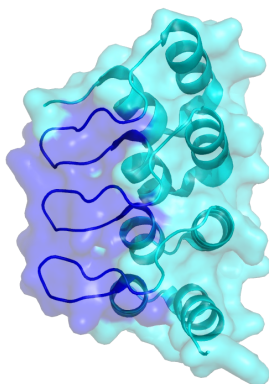
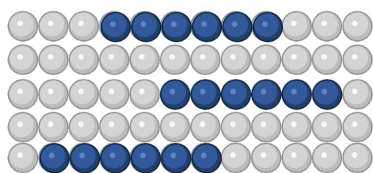


Precision-Linked Proteomimetic (PLP)

Designer Proteomimetics: Rethinking protein architecture to unlock unique function

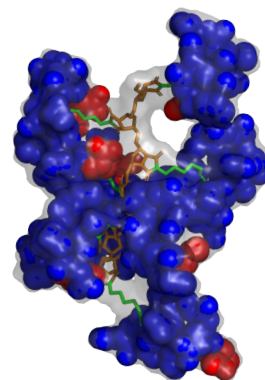
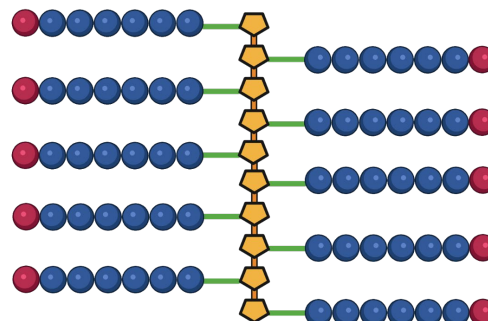
Protein:

Precision *linear chain* of amino acids¹

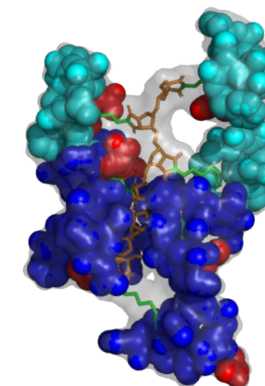
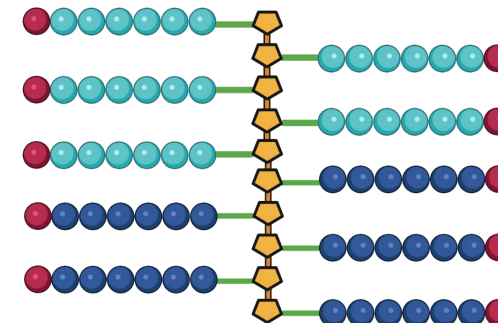


Precision-Linked Proteomimetic™ (PLP):

Precision *branched chain* of peptides²

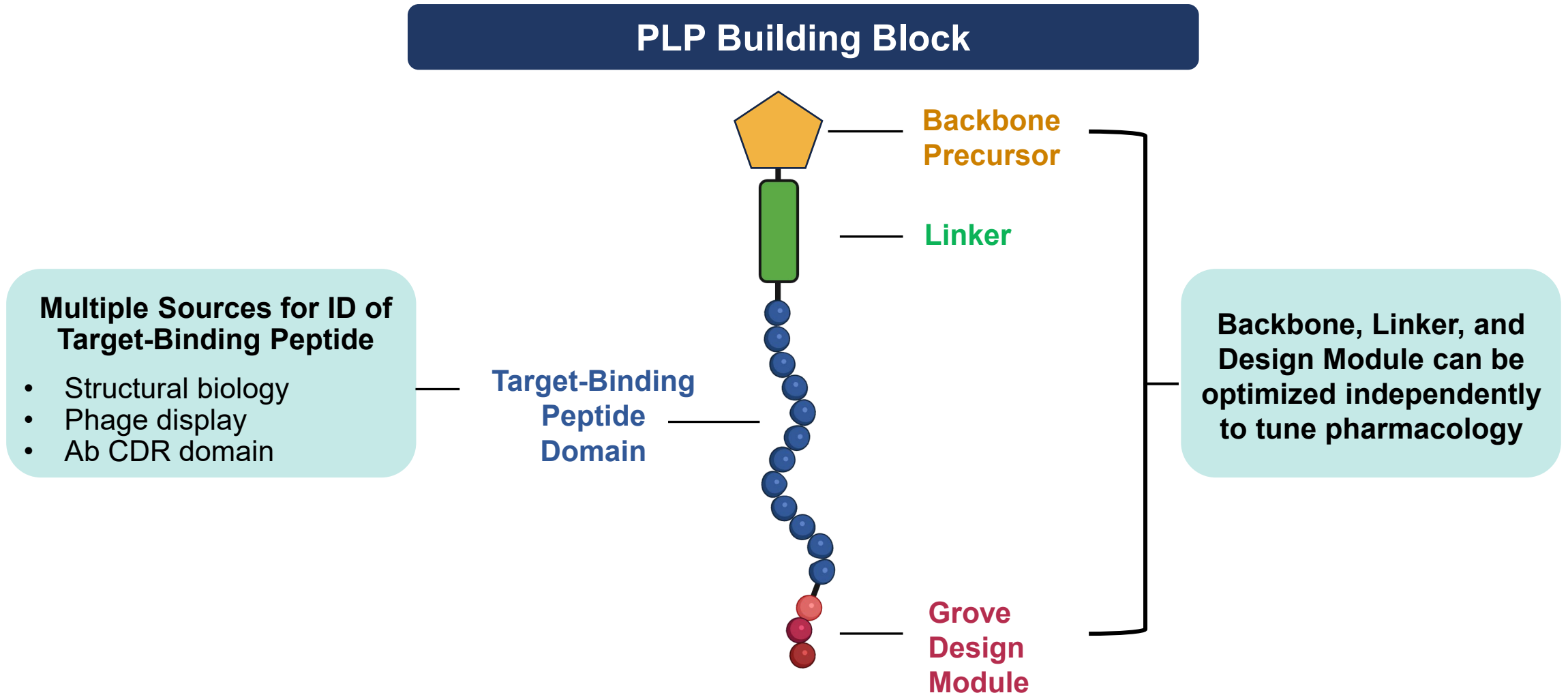


Monofunctional

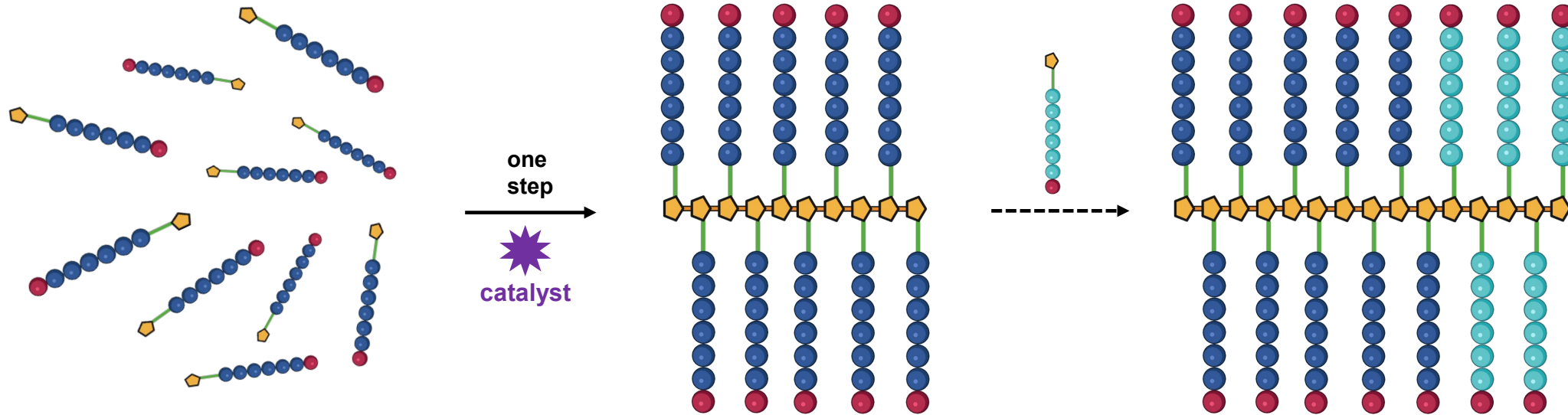


Bifunctional

Breakthrough Plug & Play Design: PLP building blocks can be readily customized with any target-binding peptide

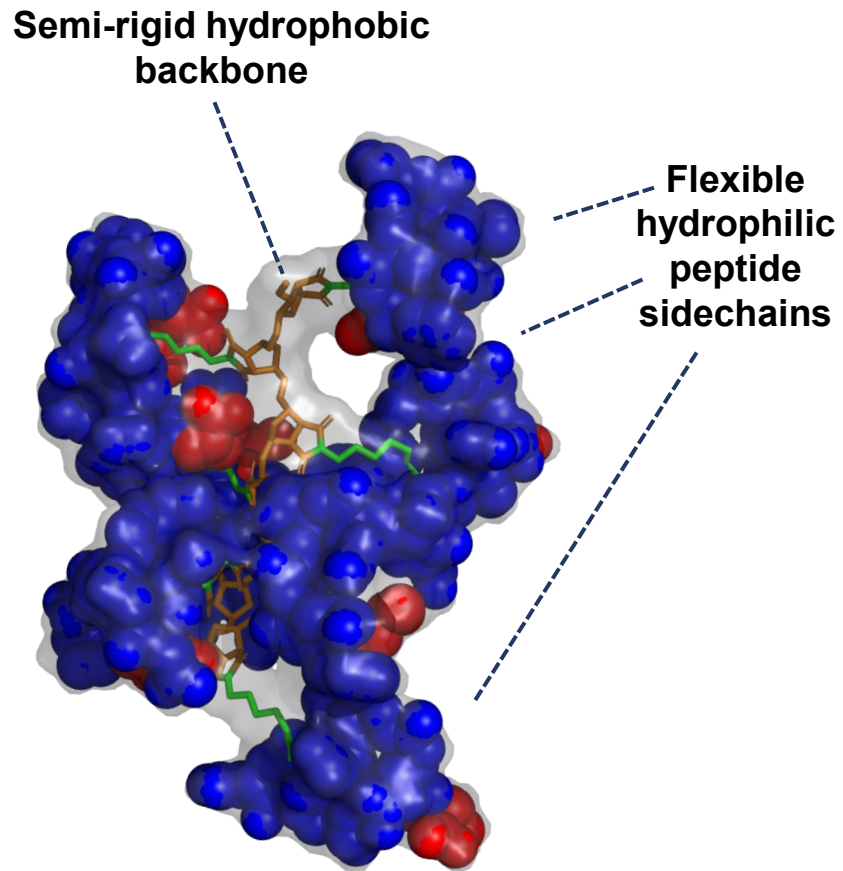


Modular Building Blocks: Enable precision synthesis of monofunctional or multifunctional PLPs

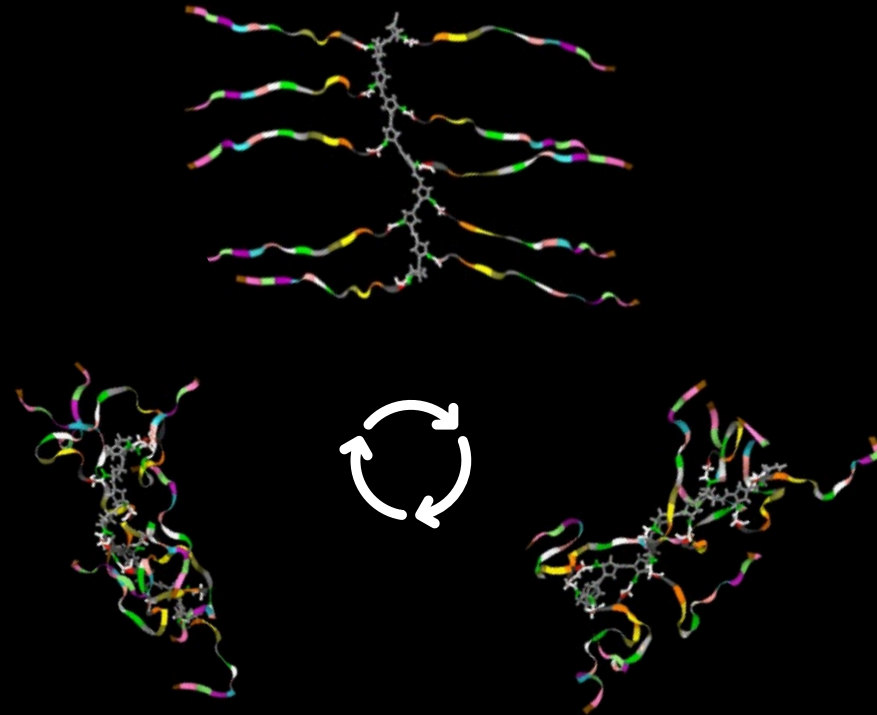


- **Controllable architecture** – precise control over valency and peptide domains
- **Discrete size and shape** – small globular protein scale with $M_n = 20 - 40$ kDa
- **Narrow polydispersity** – ($M_w/M_n < 1.1$) comparable to FDA-approved biologics

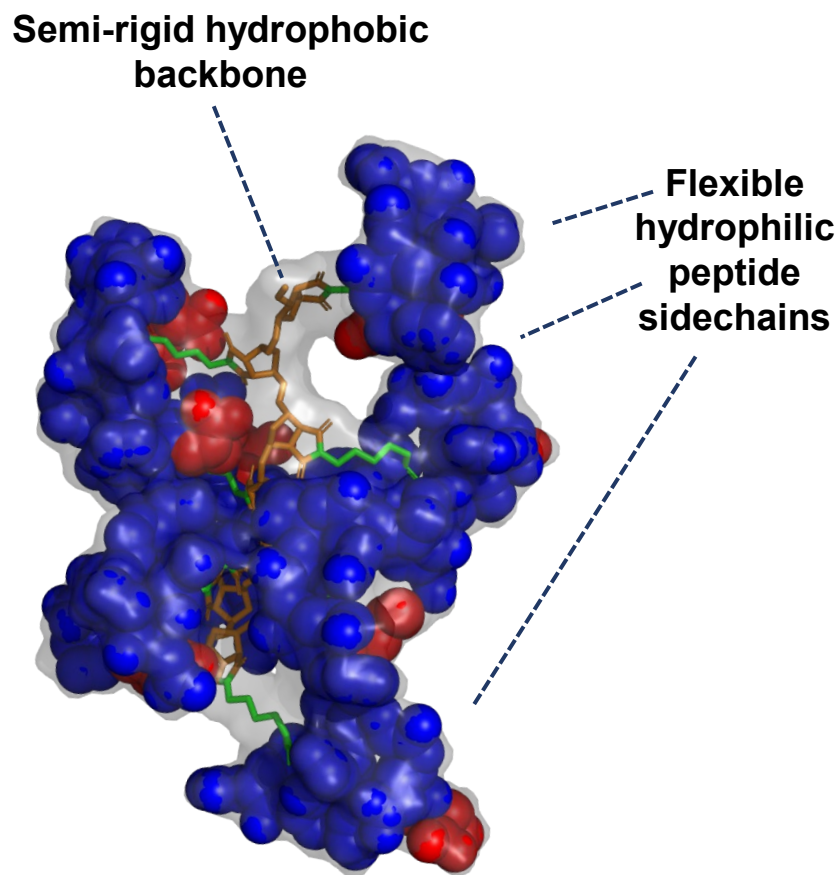
Dynamic Protein-Scale Architecture: PLPs are globular, yet flexible and undergo proximity-induced changes in conformation.



Molecular Dynamics Simulation (snapshots)¹



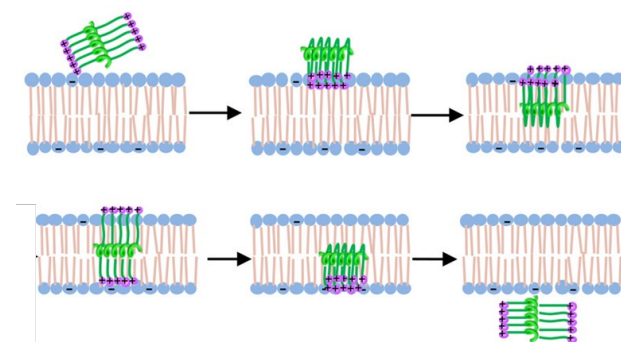
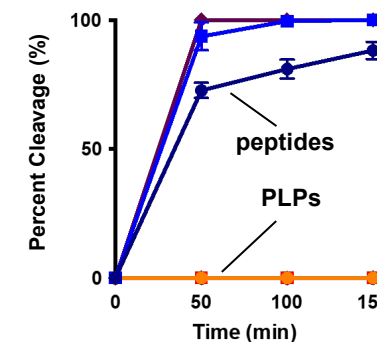
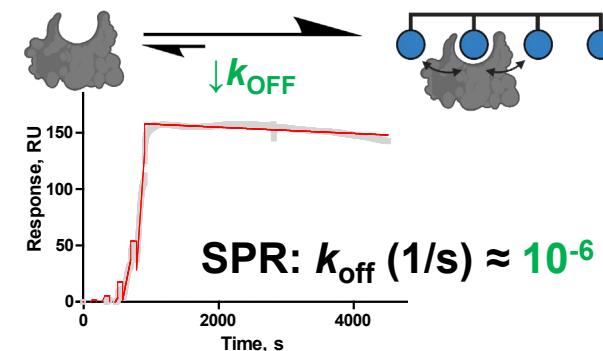
Dynamic Protein-Scale Architecture: Enhances potency, stability, and permeability



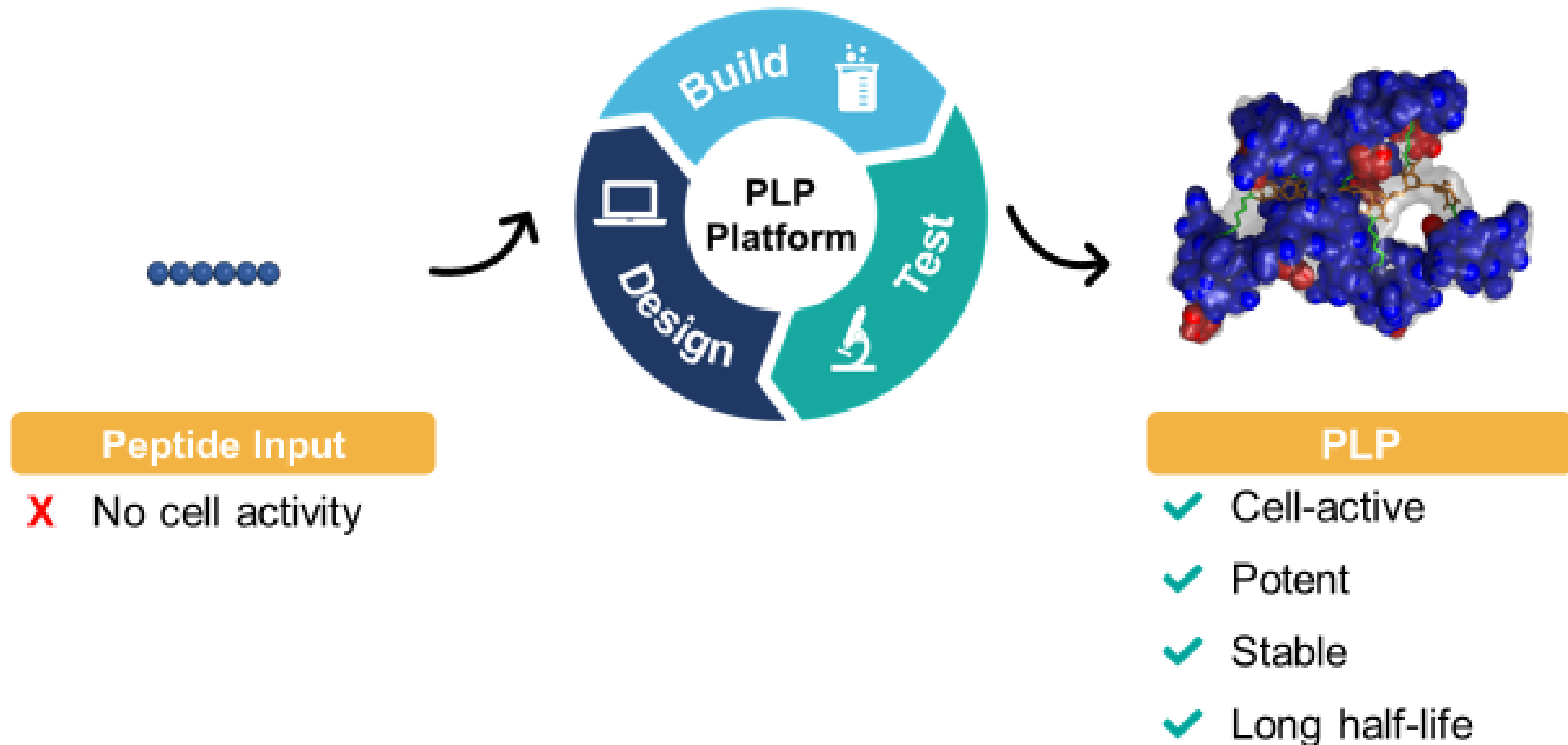
1) Enhanced potency due to avidity¹

2) Enhanced stability and resistance to proteolysis due to globularity²

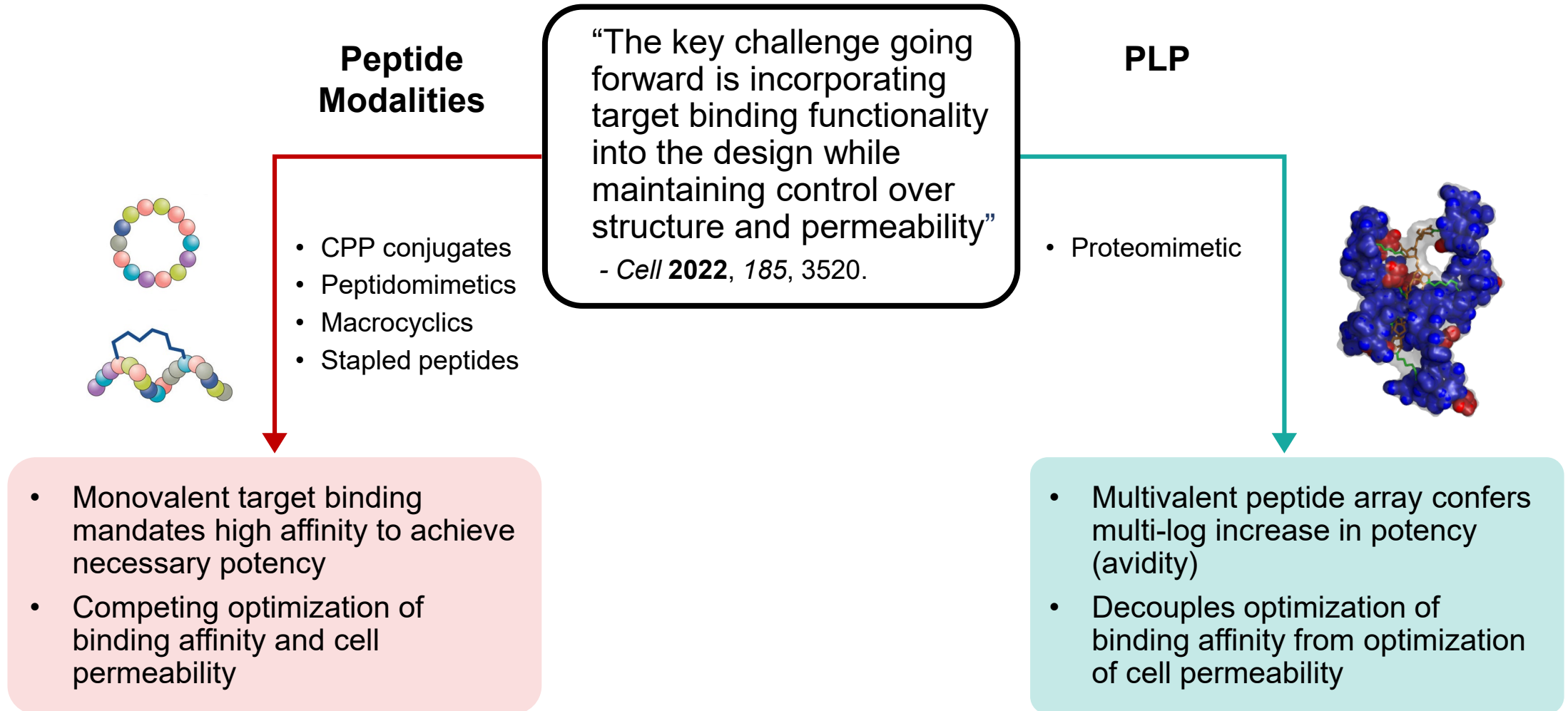
3) Enhanced cell permeability due to chameleonicity and metaphilicity³



Accelerated Drug Discovery: PLPs display cell permeability, potency and long half-life “out of the box”, enabling *in vitro* validation of on-target/on-mechanism activity within weeks to months



A Differentiated Approach for Intracellular PPIs: Grove PLP platform decouples optimization of target binding from optimization of cell permeability





Grove R&D Programs



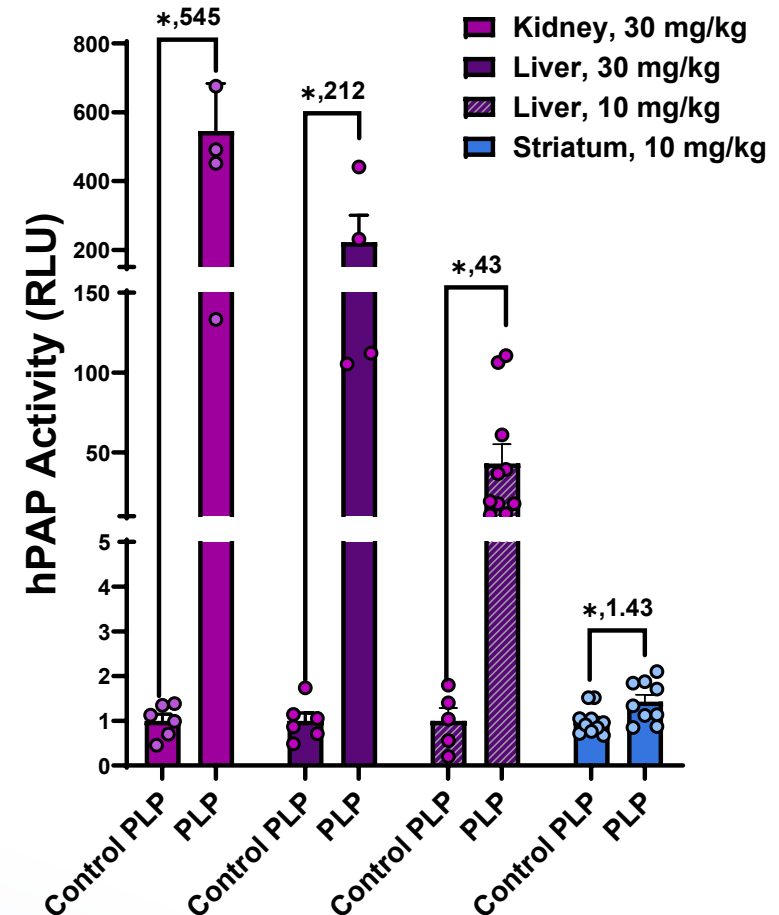
Pipeline Targeting MYC Interaction Network: Multiple cell-active compounds demonstrating on-target and on-mechanism activity generated in <6 months



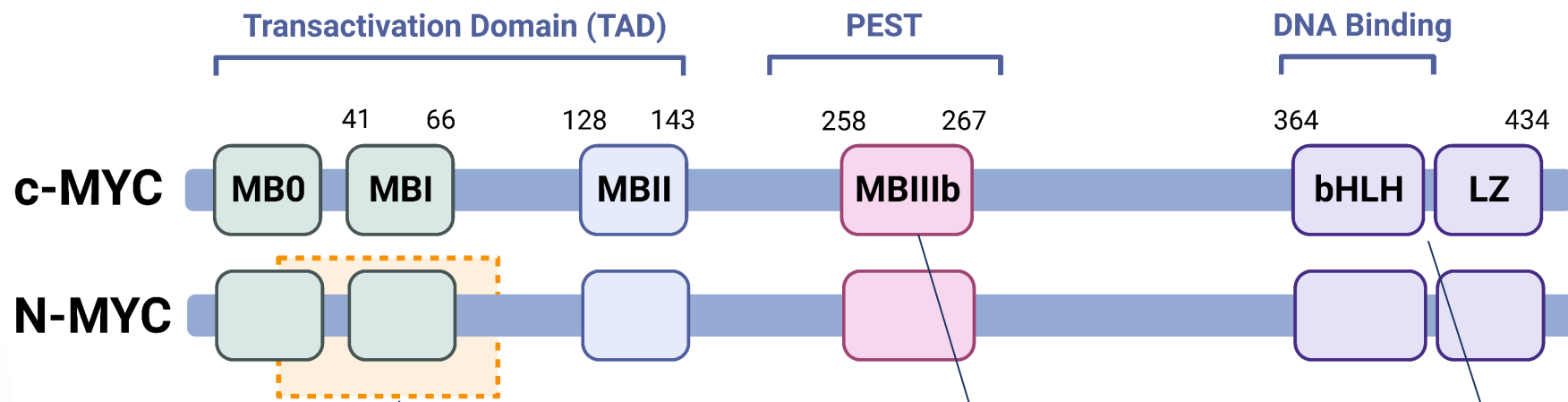
KEAP1/NRF2 program validates PLP platform technology

- ✓ Converted a peptide with no cell activity into PLPs with potent cell activity in primary cortical neuronal cultures ($EC_{50} = 3000 \text{ nM} \rightarrow EC_{50} = 170\text{nM}$)
- ✓ Early SAR has further improved cell potency ~2-3x, establishing preliminary design rules. Lead optimization is ongoing.
- ✓ *In vivo* PK/biodistribution study (N= 324 mice), $t_{1/2} = 95\text{h}$, $V_{ss} = 14.4 \text{ L/kg}$, $Cl_e = 0.13 \text{ L/h/kg}$
- ✓ NRF2-reporter PD model (N= 144 mice) shows on-target, on-mechanism activity
- ✓ No signals of acute toxicity or immunogenicity

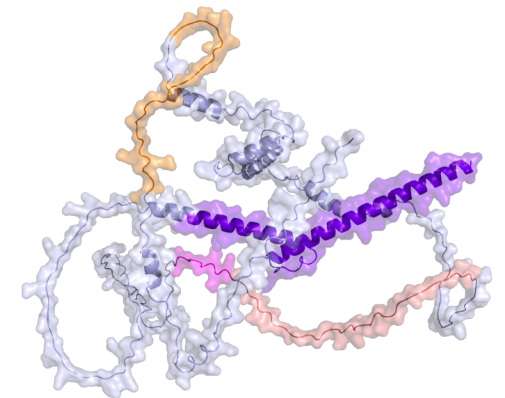
NRF2 activation *in vivo*



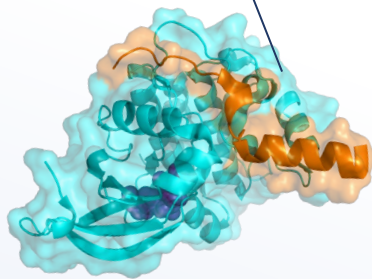
Research Focus: MYC Interaction Network (Oncology/Immuno-Oncology)



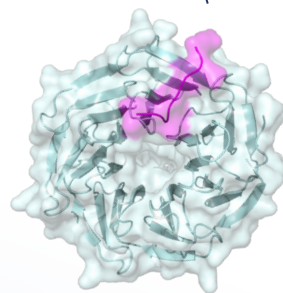
MYC AlphaFold Prediction:



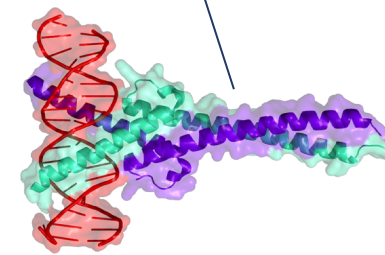
Jumper, J et al. *Nature* 2021.



N-MYC-AURA



MYC-WDR5

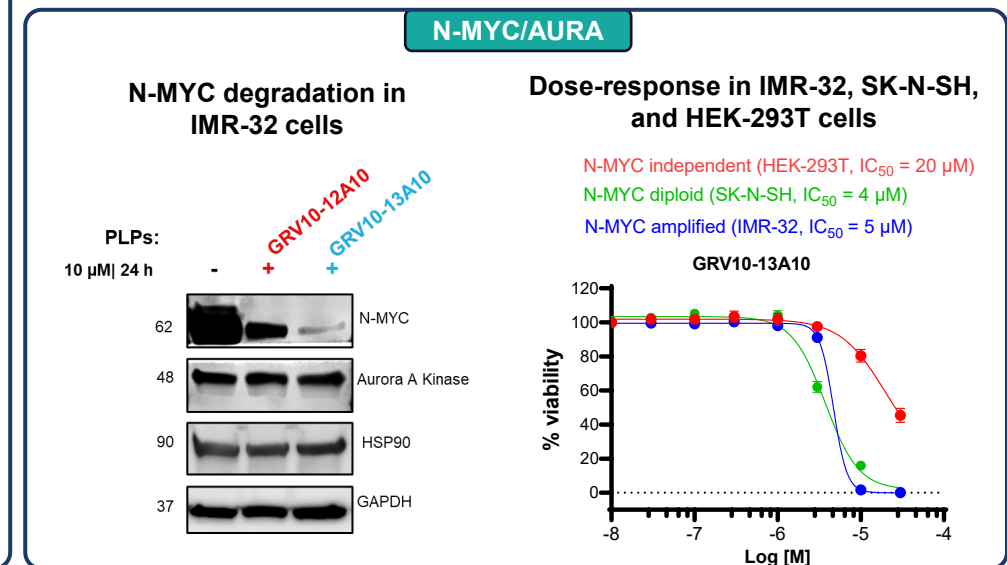
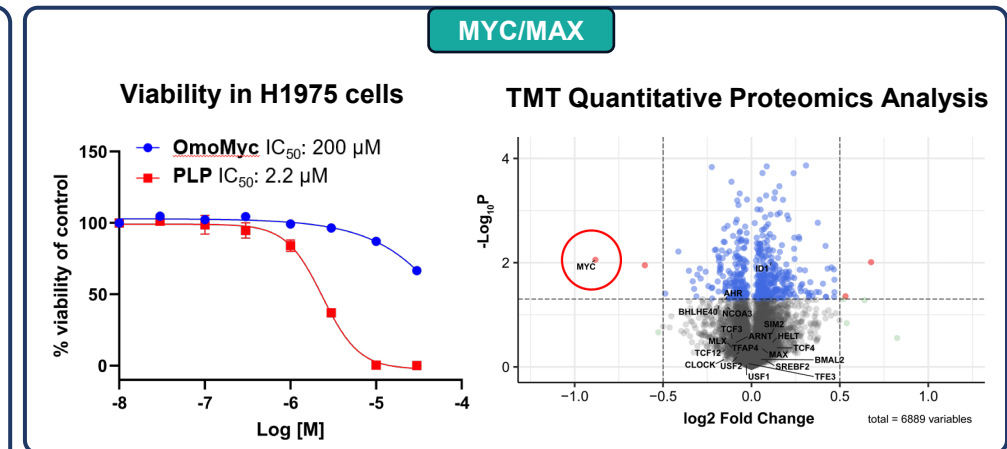
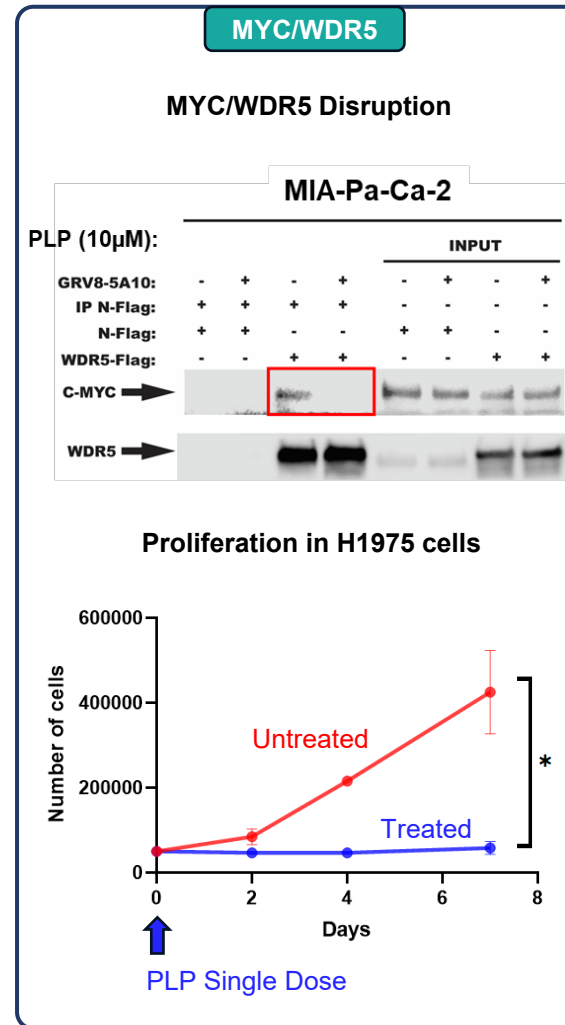


MYC-MAX

Grove is targeting the MYC interaction network, pursuing multiple PPI entry points in parallel

PLPs demonstrate on-target, on-mechanism engagement of three “undruggable” MYC targets

- ✓ MYC program initiated ~ 6 months ago
- ✓ MYC/WDR5: WDR5-targeting PLP disrupts the MYC/WDR5 interaction in multiple cell lines and inhibits cell proliferation in model of NSCLC (H1975 cells) and PDAC (MIA PaCa-2 cells)
- ✓ MYC/MAX: Bifunctional PLP achieves degradation of MYC in multiple cell lines, outperforming OmoMyc (currently in Phase I clinical trial); TMT quantitative proteomics analysis shows that MYC is uniquely degraded
- ✓ N-MYC/AURA: Novel peptide-binding domain derived from camelid Ab CDR domain; PLP induces N-MYC degradation in neuroblastoma model (IMR-32 cells) and demonstrates specificity towards N-MYC dependent cell lines



Interdisciplinary team and panel of advisors with a proven track record



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Co-Founder, President & CTO



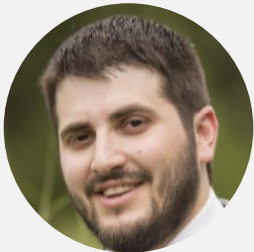

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