



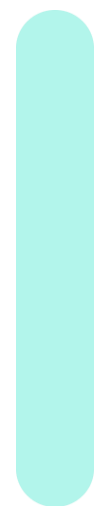
ElevateBio Life Edit

Opening New Frontiers in
Genomic Medicine

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SVP R&D



ELEVATE.BIO
//LIFE EDIT



A first-of-its-kind genetic medicine foundry with integrated manufacturing and technology stack to power transformative advanced therapies


POWERED BY



-  Unmatched Expertise
-  Technology Stack
-  cGMP & PD Capabilities
-  Turnkey Scale



Analytical Development
Assay Development
Automation
cGMP Manufacturing
Process Development
Quality Assurance

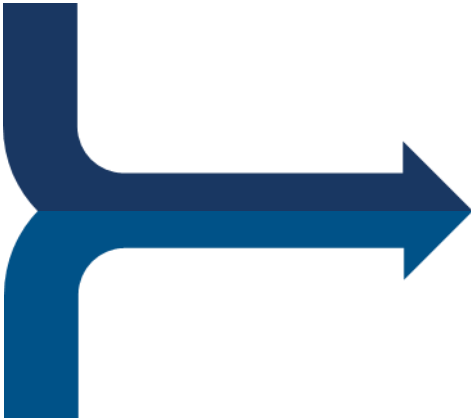


RNA Guided Nucleases
DNA Writing / RT Editors
Base Editors
Targeted large insertion editors
Epigenetic editors
Viral and LNP Delivery
AI Discovery & Engineering

MANUFACTURING

DEVELOPMENT

RESEARCH



Enabling the industry with platform technologies, manufacturing capabilities, and expertise to develop cell and gene therapies **faster** and **more efficiently**



We have the largest gene editing toolbox to make potent, highly targeted CRISPR therapies

We can **match the best editing modality** to the indication, combining **breadth of technology and depth of expertise** to expand treatment horizons

BREADTH OF TECHNOLOGY

- Nuclease editors
- Base editors
- Reverse transcriptase editors
- Targeted large insertion editors
- Epigenetic editors

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DEPTH OF EXPERTISE

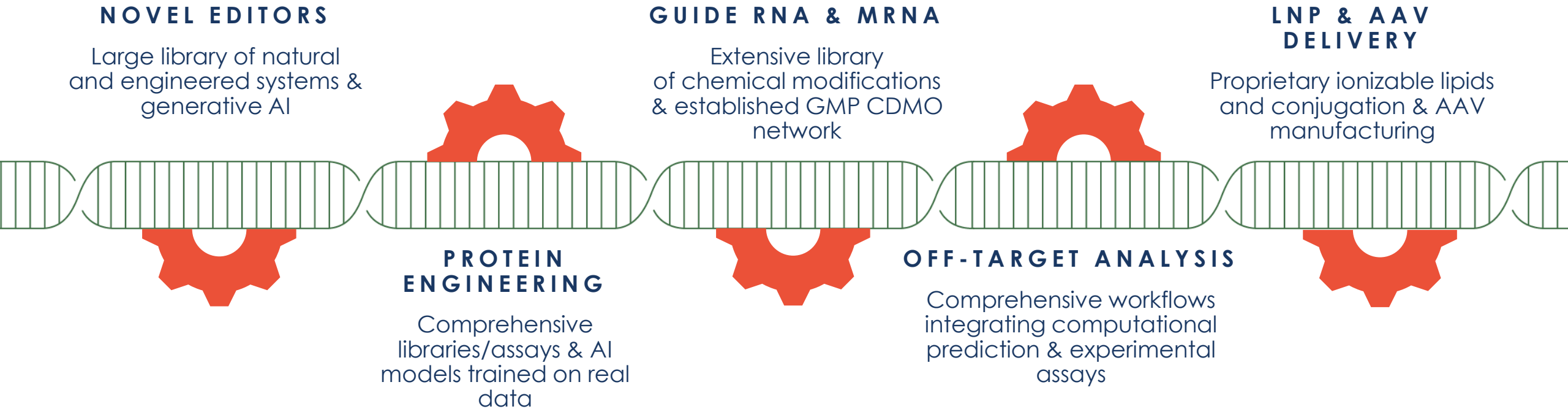
- Portfolio of validated CRISPR systems
- Large protein database
- Custom PAM recognition design
- Capability to enhance potency & specificity
- Extensive off-target characterization

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CRISPR-BASED MEDICINES

Higher potency and increased safety with greater disease access

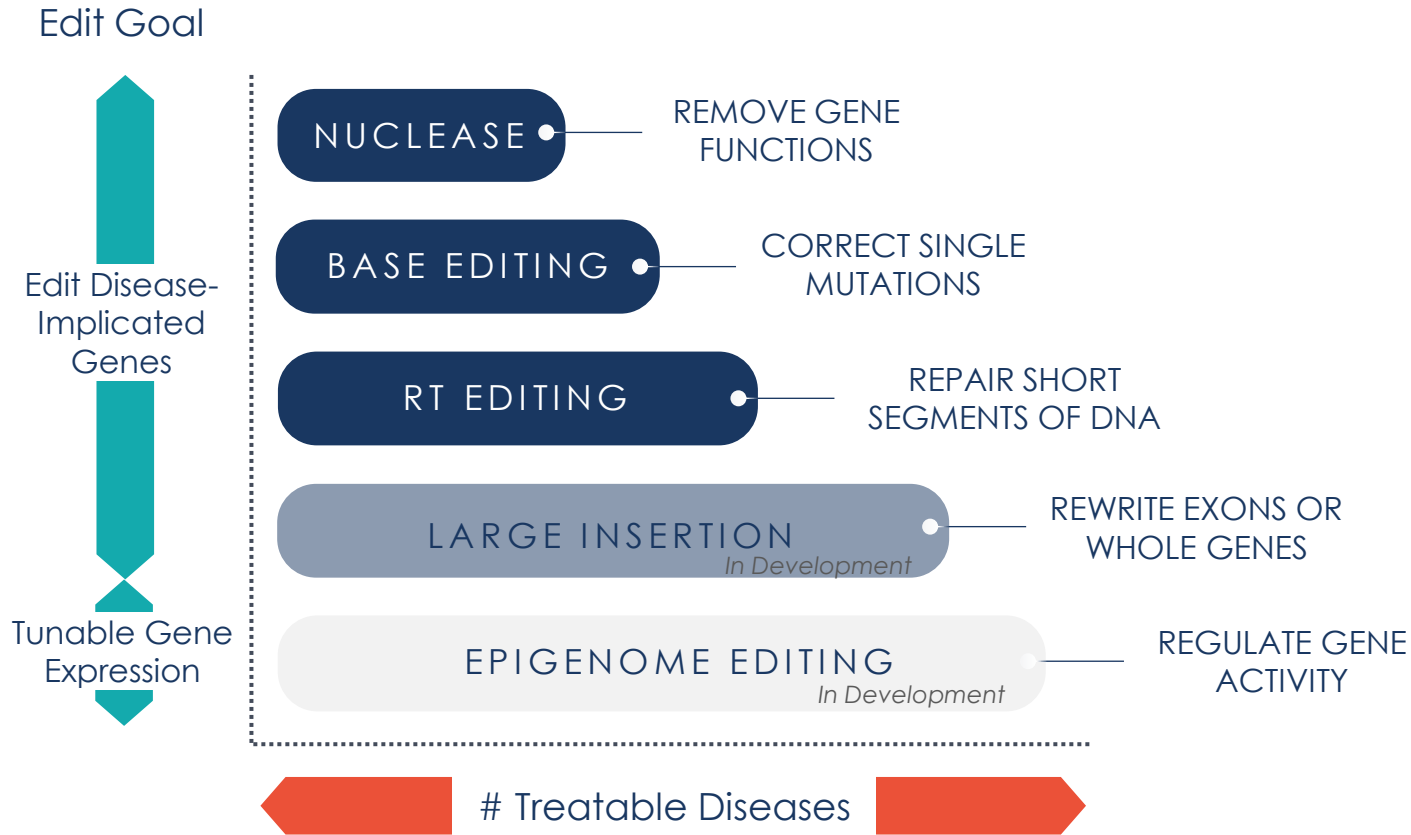
One integrated partner for *in vivo* gene editing, from editor discovery through delivery



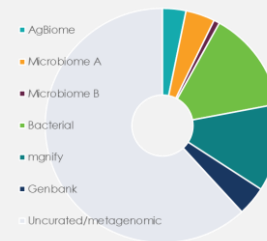
Bring us a target.

Leave with an optimized, deliverable candidate engineered to maximize the probability of clinical **SUCCESS.**

Life Edit's full-spectrum editing capabilities are positioned to develop targeted editing medicines for a range of diseases



- A variety of editing modalities are needed to expand CRISPR's impact to more prevalent diseases, including polygenic disorders that require functional gene replacement
- Life Edit's platform is underpinned by a portfolio of proprietary CRISPR systems that can be tailored to diseases of interest

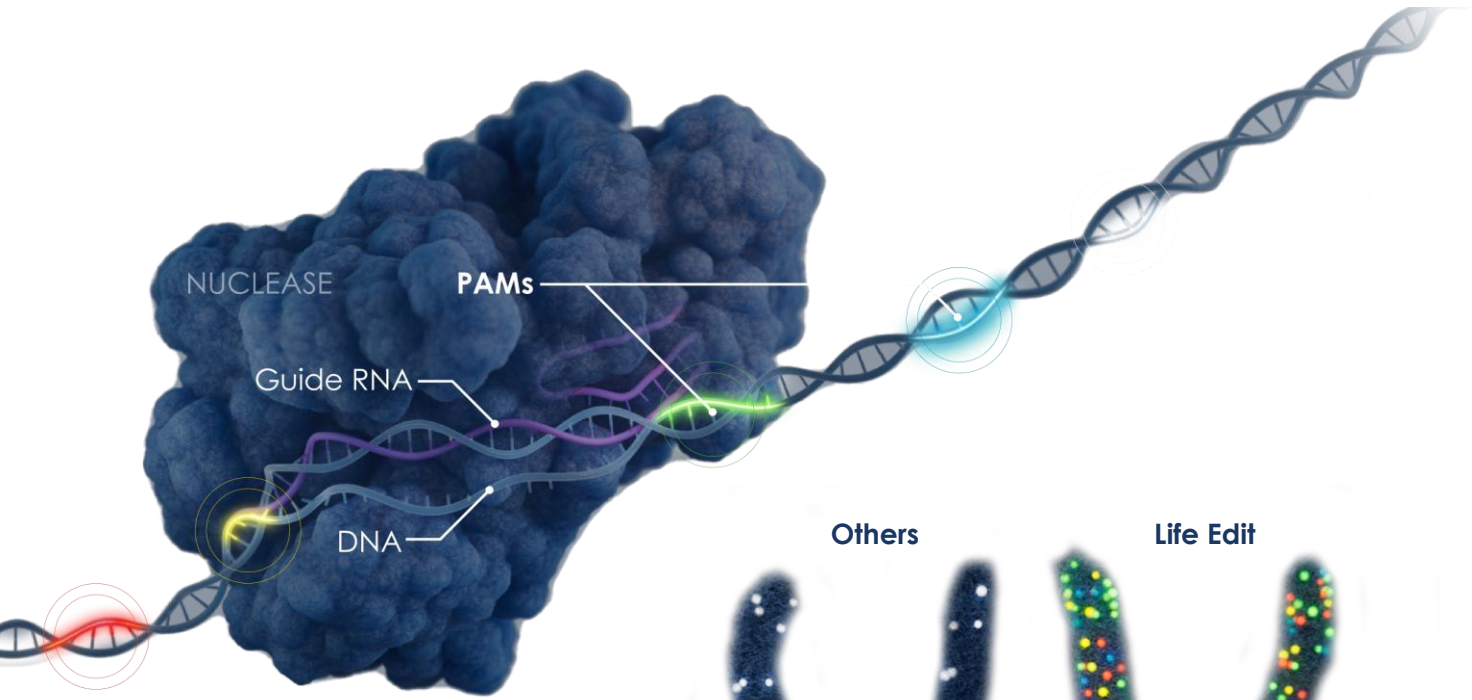


- Collection of over **2M CRISPR-Cas systems** and over **10+ billion proteins** (and counting) that can be mined to identify a variety of functional enzymes for genetic medicines

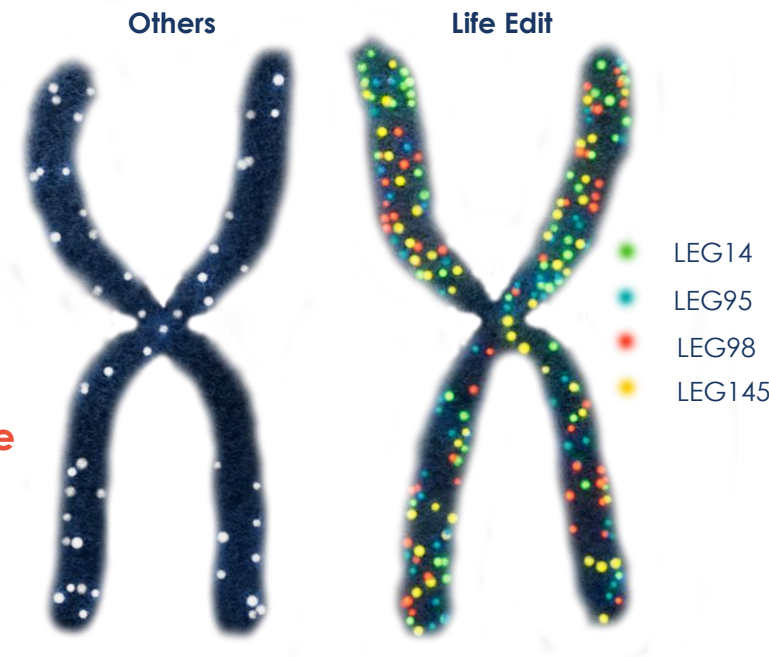
- Our protein engineering expertise enables optimization of potency and specificity



PAM diversity is key to making any edit, anywhere

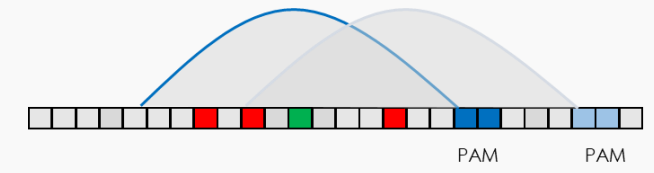


Our broad range of PAMs increase the number of specific sites where therapeutically meaningful edits can be made, granting our nucleases **access to virtually any region of the genome**

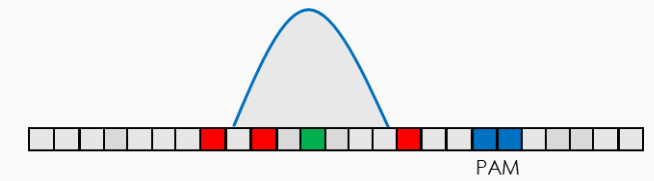


PAM DIVERSITY ENABLES OPTIMAL POSITIONING OF TARGET EDIT

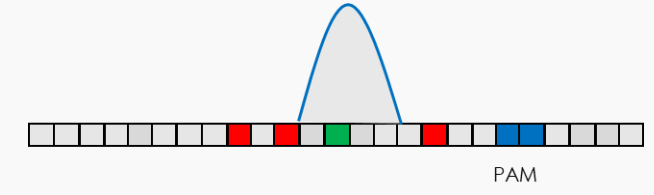
1 Leverage PAM diversity to find optimal editing window



2 Apply protein engineering to narrow the window



3 Engineer target specific recognition



- Non-optimal PAM
- Optimal PAM
- Target
- Bystander



Life Edit's robust protein discovery engine drives efficient therapeutic discovery

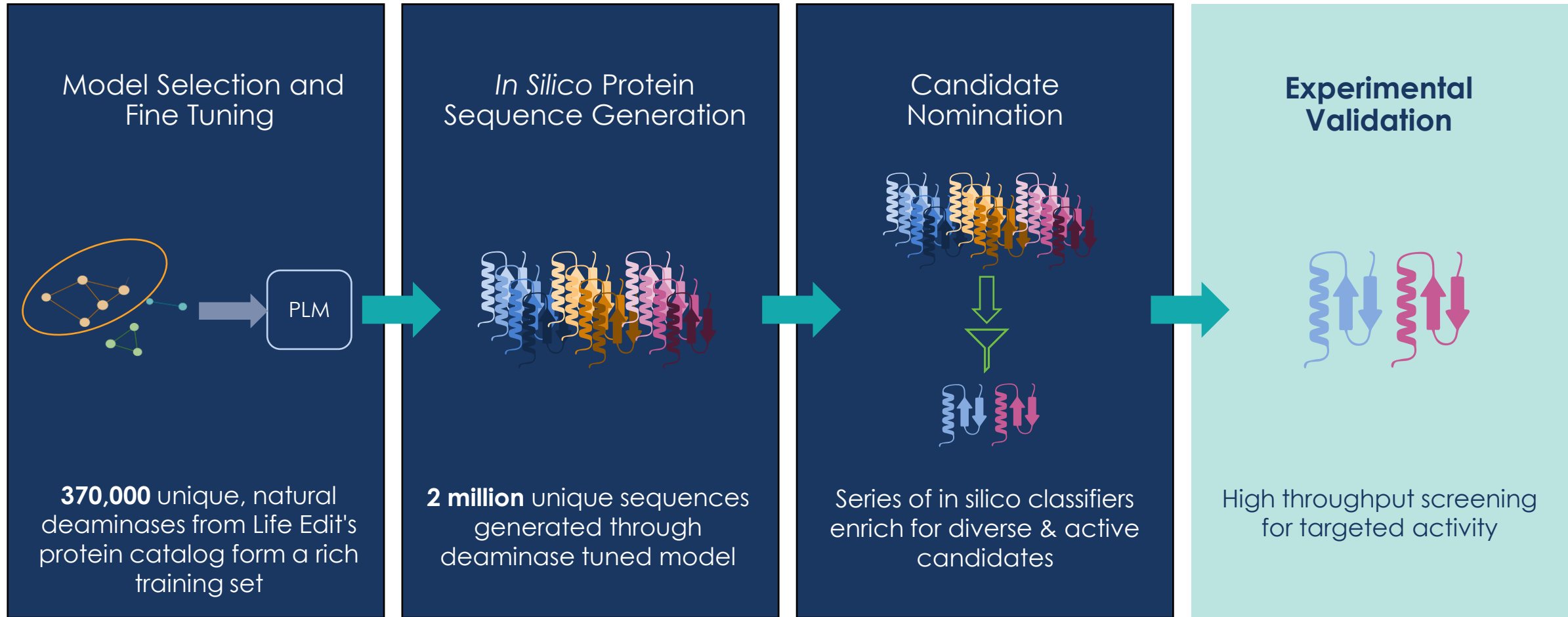


Our AI-enabled Discovery Engine powers us to:

Discover novel effectors	Search homologs	Annotate large-scale tracrRNA	Predict protein structures	Prioritize editor programs
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AI-designed, prioritized de novo enzymes for faster experimental validation



We accelerate and optimize therapeutic development with unmatched protein engineering expertise



THERAPEUTIC DEVELOPMENT POWERED BY AI COMPARED TO TRADITIONAL METHODS

- 3x** Faster timeline from target selection to lead identification
- 4x** Reachable positions in the editing window to expand applications
- 8x** Base editor systems designed and capable of editing the target site
- 20x** Unique guide RNA available to enable maximum potency

Protein language models trained on our protein databases can significantly increase our CRISPR diversity, resulting in **increased specificity and accelerated timelines**

Data based on analysis of internal lead identification timelines against optimized AI-driven protein engineering models



Therapeutic Applications of Our Platform



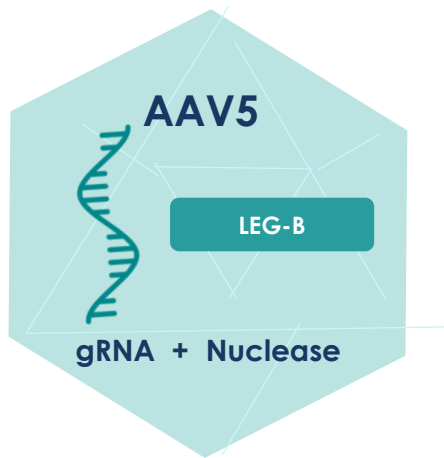


LETI-101: An allele-specific approach as potential one-time treatment for Huntington's disease

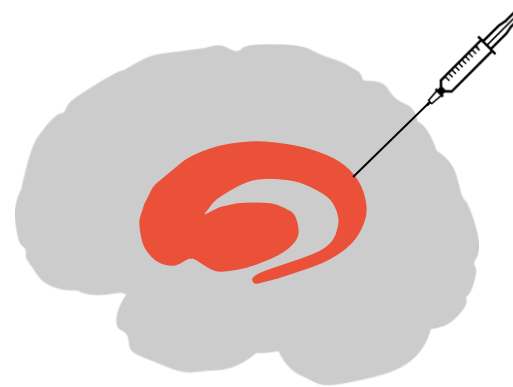
NOVEL CRISPR SYSTEM

TARGETED CNS DELIVERY

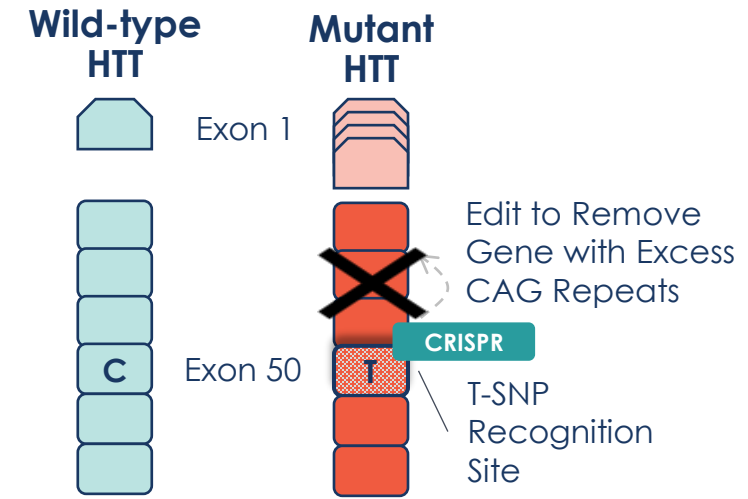
ALLELE-SELECTIVE EDITING



Proprietary, compact CRISPR system, packaged in AAV5 vector



One-time, bilateral intrastriatal administration



Potent and selective reduction in mutant while preserving wild-type; selective approach made possible by diverse genomic recognition sites

LETI-101 OFFERS POTENTIAL FOR A DURABLE, **ONE-TIME TREATMENT** WITH AN IMPROVED SAFETY PROFILE THROUGH SELECTIVE TARGETING

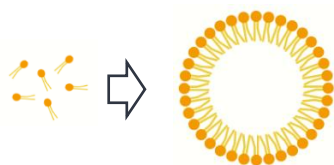
Nuclease editing *in vivo*: HAO1 as a gene target to test therapeutic LNP-RNA drug substances and formulations

- **HAO1** is a convenient target for liver LNP development with an easily assayed serum biomarker
 - Primary hyperoxaluria type 1 (PH1) → loss-of-function mutations in the AGXT gene
 - Knocking-out upstream enzyme HAO1 alleviates symptoms
- HAO1 knock-out → increase in serum glycolate

- LEG-B nuclease - single IV administration, WT C57BL/6 mice
- REF = comparator LNP included at 0.3 mg/kg



Formulation



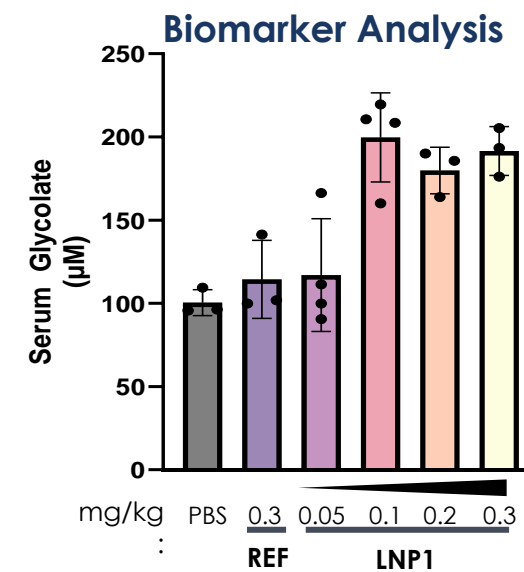
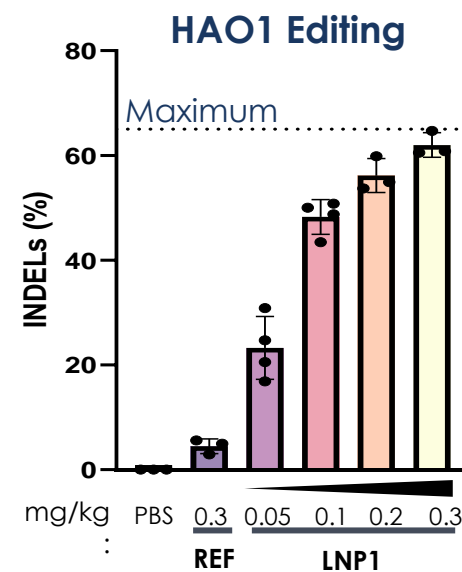
gRNA



mRNA



ACHIEVED HIGH EDITING IN THE MOUSE LIVER WITH OUR NUCLEASE AND LEAD LNP1 FORMULATION AT A LOW DOSE OF 0.3 MG/KG





Adenine base editing system delivered with LNP1 results in highly efficient editing at low RNA total dose

- Proprotein convertase subtilisin/kexin type 9 (PCSK9) is a key regulator of LDL-R expression - made in the liver
- PCSK9 inactivation / knock-out reduces serum LDL-C
- Potential therapeutic target to treat familial hypercholesterolemia and severe ASCVD

- First *in vivo* study utilizing proprietary lipid and ABE to target PCSK9
- LEG-A ABE - single IV administration, WT C57BL/6 mice

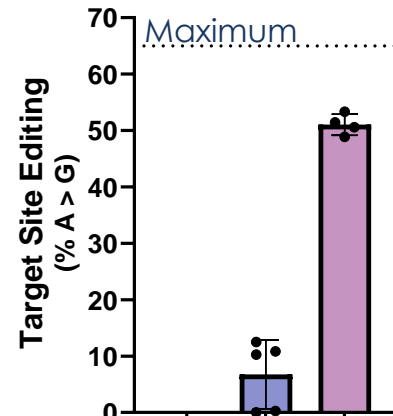


• TREATMENT WAS WELL-TOLERATED

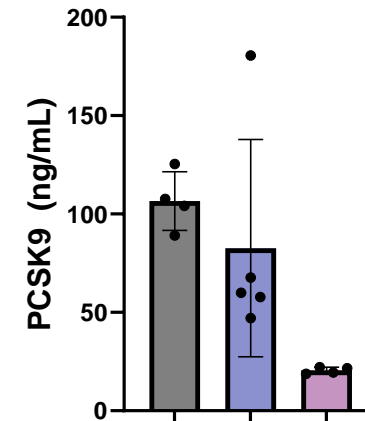
• HIGH POTENCY BASE EDITING AT 0.3 MG/KG WITH ROBUST REDUCTION IN SERUM PCSK9 AND LOWER TOTAL CHOLESTEROL

• RESULTS LEVERAGED FOR EDITING MODALITY USED IN NHP STUDY

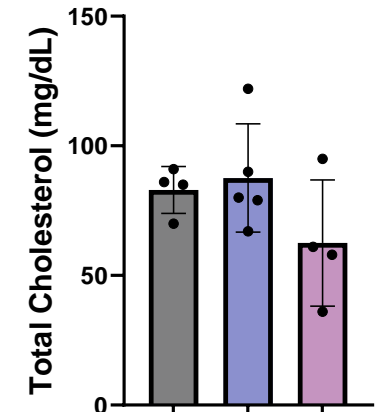
PCSK9 Liver Editing



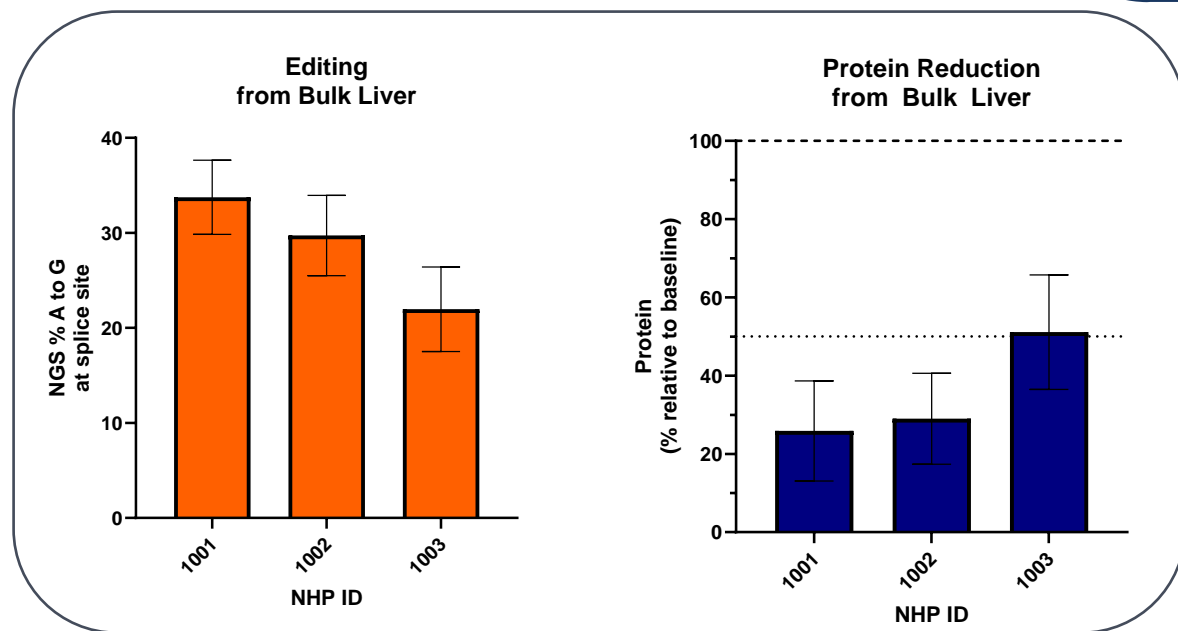
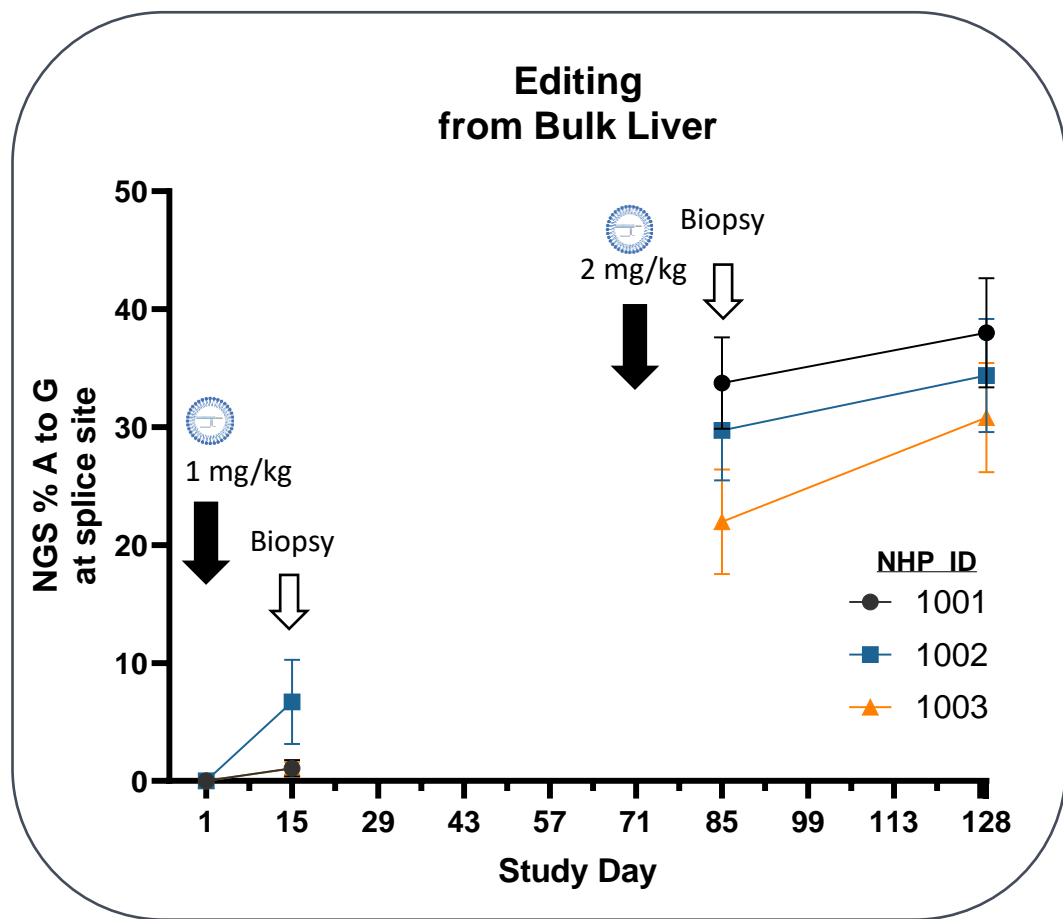
Serum PCSK9



Serum Total Cholesterol



Functional editing and reduction of target protein following LNP1 delivery at 2 mg/kg



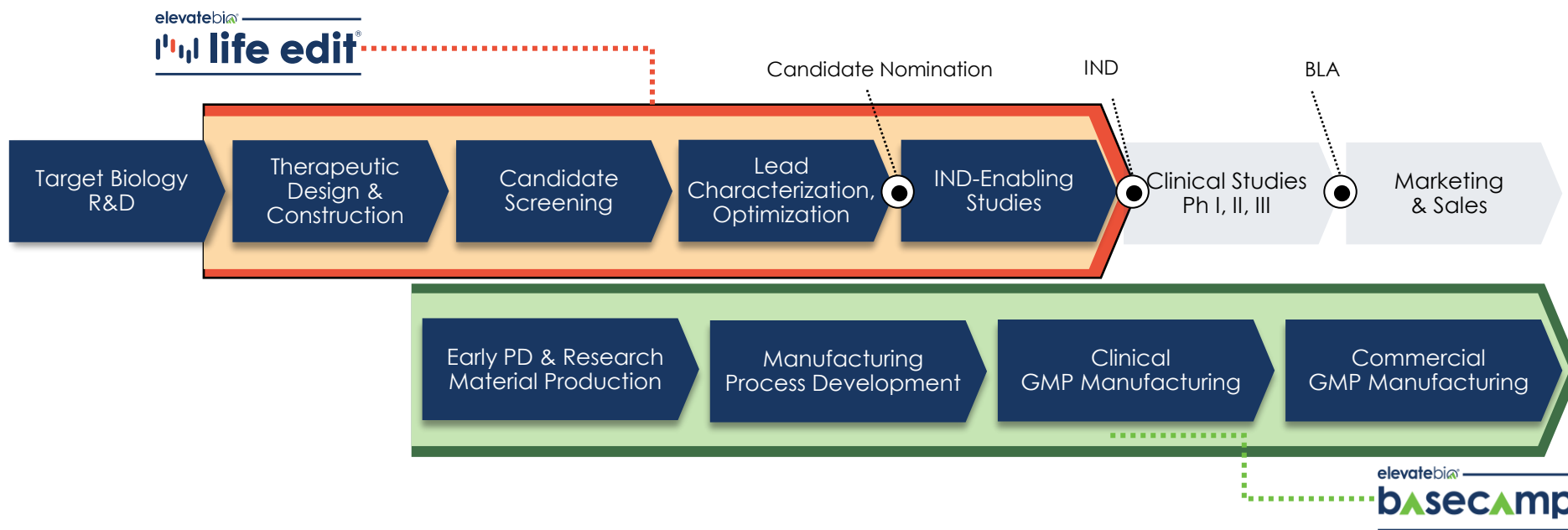
Editing correlates with potentially therapeutic reduction in protein (<50%)

Our integrated model enables pathways to bring programs bench to bedside faster

Streamline path to the clinic with integrated components, capabilities, and resources

De-risk development path by having the necessary technology systems and expertise at every step

Accelerate development timelines by having end-to-end capabilities under one roof



Partner with **ElevateBio** across the entire drug development lifecycle

ElevateBio Life Edit provides a one-stop-shop for discovery, development, and manufacturing of genetic medicines

EXPANDED TARGET ACCESS



Powered by AI & our proprietary library, our computational biology platform enables therapeutic approaches for previously inaccessible targets.

TAILORED EDITING WITH UNMATCHED FLEXIBILITY



We offer multiple editing modalities that can be precisely matched to your specific indication, rather than forcing a one-size-fits-all solution

ENHANCED SAFETY & SPECIFICITY PROFILE



Our high-fidelity editing tools and comprehensive computational approach to off-target analysis address critical challenges in gene therapy development

INTEGRATED ECOSYSTEM AND EXPERTISE



Our end-to-end capabilities within the ElevateBio platform streamline the path from discovery to development, reducing technical risks and handoff complexities.

Thank you

