

Wednesday, October 30 | 1:25 – 2:05 PM

Achieving Financial Sustainability

PRESENTER

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Founder, Chairman of the Board and CEO, n-Lorem



Nano-rare
Patient
Colloquium
2024



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Why Select a Non-profit Model Initially?

- The most rapid way to treat nano-rare patients
- Galvanic mission
- Simplified messaging
- Speaks to the heart of our industry
- Provides great opportunity for vendors to help by discounting the price of services
 - 40% reduction of cost per patient
 - Provide direct tangible motivation to employees

Why Select a Non-profit Model Initially?

- Facilitates access to
 - Individual donors
 - Charitable foundations
 - State and Federal grants
- Avoids competition with for-profit companies
- Facilitates partnering with biotech and pharma
 - Ionis
 - Biogen
 - Alexion
 - Ultragenyx
 - Takeda
 - Alnylam
- Facilitates rapid creation of value
- Does not preclude a mixed non-profit/profit model

Unexpected Challenges

- Exponentially greater demand than anticipated
- Many more patients in **URGENT** need of intervention
- Building and equipping a laboratory, then outgrowing it and having to build and equip a new larger laboratory
 - All while maintaining momentum
- Recruiting a team capable of filing **20-50** INDs per year
 - Implementing systems to assure optimal treatment
 - Managing multiple clinical trials involving very complex patients
 - Collecting, analyzing and publishing high-quality data

Strategic Principles

- Provide compelling proof-of-value
- Provide compelling proof that industrialization and scaling to meet the demand are possible
- Take advantage of strengths
 - Deep antisense knowledge and experience
 - Automated AI-informed world-class ASO discovery
 - Deep, successful experience in the biotech and pharma world
- Turn every dollar into >3x value
- Be flexible and respond to market interest

Incredible Progress to Date

- >20 INDs covering >28 patients
- 100% success in achieving significant clinical benefit
- Pristine safety and tolerability profile
- Industrialization accomplished
- Outstanding senior team constructed
- Outstanding ASO discovery and research team
- Significant value created
- Patient community created and broadened

Incredible Progress to Date

(2)

- Sufficient cash and in-kind contributions to grow exponentially
- Broadened donor base
 - High-net-worth individuals
 - New charitable foundations
 - Added vendor partners
- Multiple directed research programs funded
- Federal and State grants obtained
 - Multiple applications for additional grants submitted
- Multiple types of value created
- Initial interest in assets from potential commercial partners

Leading Companies Supporting Nano-rare

Cash Donors

IONIS

 **Biogen.**

ALEXION[®]
AstraZeneca Rare Disease

Takeda

 **cytiva**

Nitto  **Avecia**

 **Alnylam**[®]
PHARMACEUTICALS

ultragenyx

 **Hongene
Biotech**

 **CHEMGENES**
CORPORATION

 **danaher.**

STIFEL

Cooley

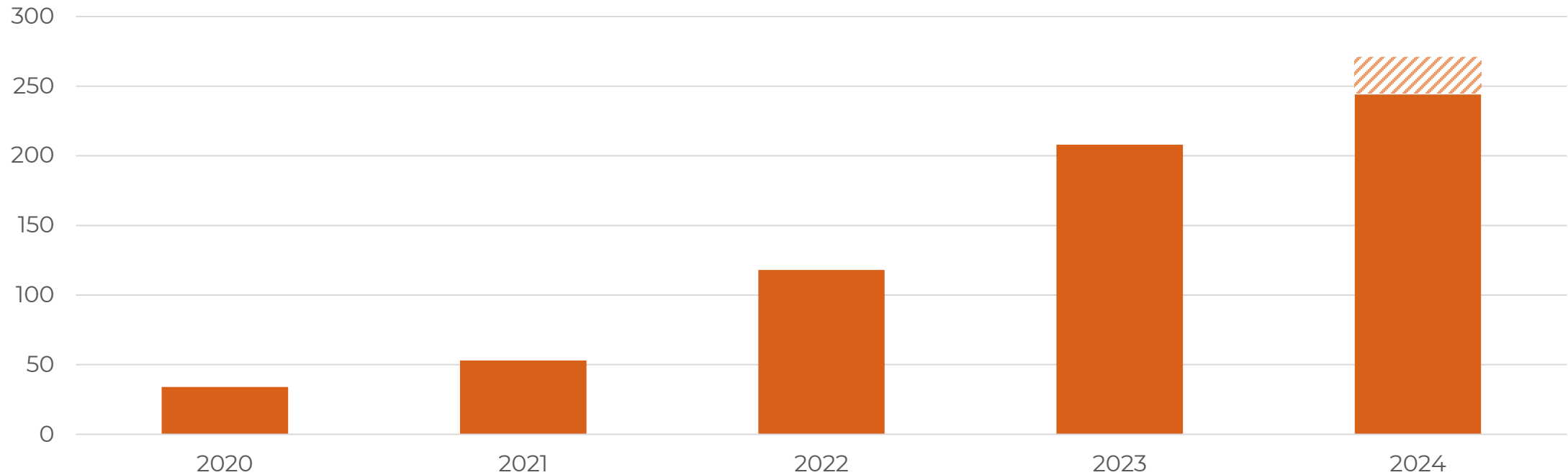
COWEN

J. WOOD CAPITAL ADVISORS

Year Over Year Growth in Individual Donors

Increasing Support

Individual Donors



Funded Directed Research Programs

Provide Funds add Resources to Lab

- ALS – SILENCE ALS Initiative with Columbia Medical
- ASXL3 – Neurodevelopment target
- DYRK1A - Neurodevelopment target
- FSHD2 – Muscular dystrophy program
- KIF1A – Neurodegenerative target
- MAPK8IP3 - Neurodevelopment target

n-Lorem's CMO/CRO Network: 40% Savings per IND

ASO Plate Synthesis



Amidites



Small Scale Synthesis (0.025g)



2g Synthesis



GLP Toxicology



GMP Synthesis (20g)



Rodent Tolerability



Sterile Fill/Finish



Charitable Organization Support

Funded (General Support)

- Conrad Prebys
- Lampert Byrd Foundation
- San Diego Foundation
- Cure DRPLA
- Cure DYRK1A
- CZI
- Target ALS

Submitted

- 100 & Change (general)
- Million Dollar Bike Ride
 - 6 disease focus submissions
- Target ALS
- Audacious Project

Funded Grants

Federal/State

- NIH URGenT (ALS)
- CIRM (UCSD)

Disease Focused

- Target ALS (2 grants)
- DYRK1A Association

Submitted

- URGenT (ion channelopathies)
- NIH R01 Clinical Study Support

Nano-rare Patient Colloquium Sponsors

2023 Sponsors



2024 Sponsors





And We Continue to Gain Momentum



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Commercial Transactions: Strategic Principles

- Upfront cash must be sufficient to support both work for the partner and broadened investment for nano-rare patients
- Transactions must support broadened infrastructure
- Transactions should support advancing antisense technology so we can do more for more nano-rare patients
- Transactions must include opportunities for sustainable revenues
 - Milestones
 - Royalties

We are Now Pursuing Business Opportunities at Least 2 years Ahead of Schedule

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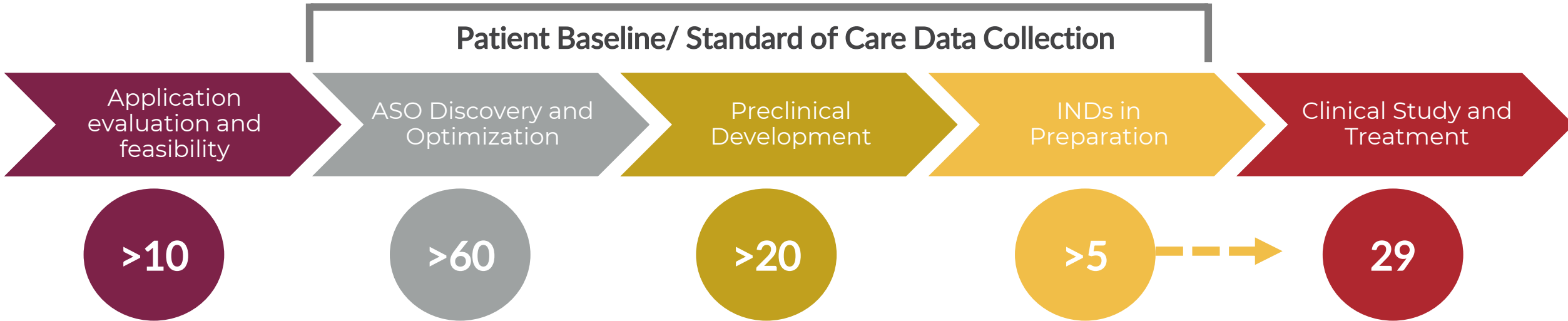


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Created a Number of Sellable Assets

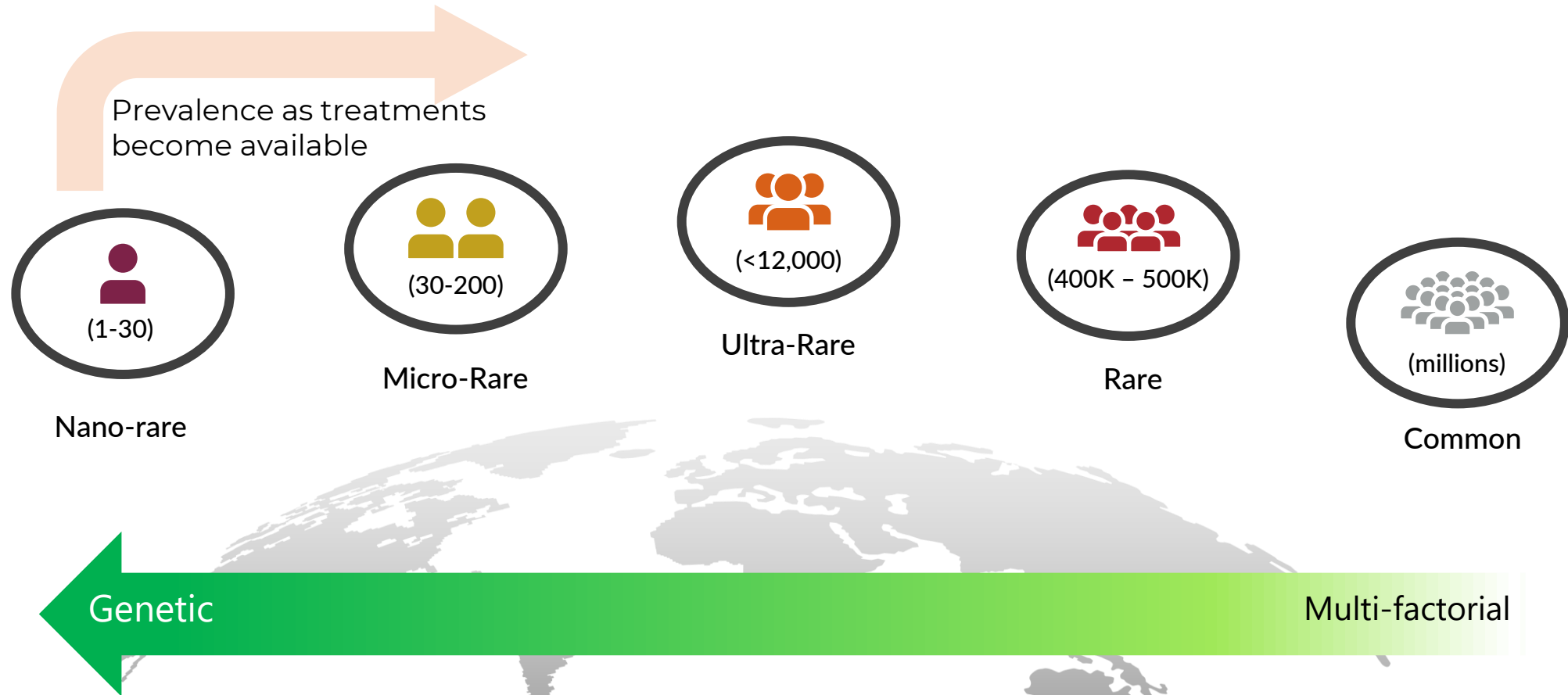
- Clinically validated micro-rare commercially attractive ASOs
- Contract ASO discovery
- Basic advances that enhance the performance of ASO technology
- Patents of multiple basic inventions

Incredible Progress to Date

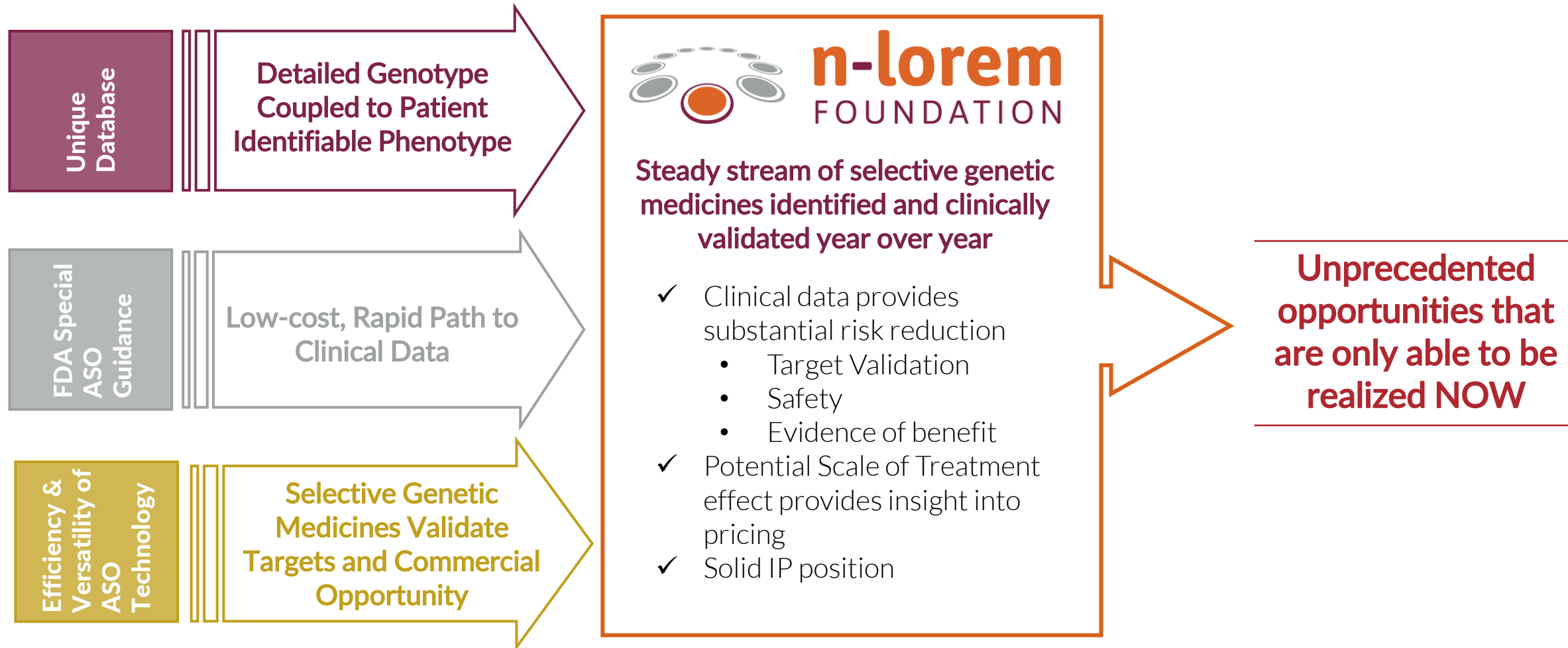


~300 Applications Submitted to Date
>140 Patient-directed Drug Discovery Programs to Date
>20 INDs Submitted
4 Divisions of the FDA Supportive

Nano-rare: 1 to 30 Patients Worldwide



A Unique Stream of Commercial Opportunities Only from n-Lorem



Commercial Transactions Yield Larger Dollars and Potential for Sustainable Revenue

- License fees
 - Immediate cash to do more
 - Enhanced and expanded infrastructure
 - Broadened reach
- Milestones and royalties
 - SUSTAINABLE ANNUAL INCOME
- Committed partners

Wide Range of Opportunities From Multiple Clinical Programs

Target	Est WW #s**	Therapeutic Areas
ATN1	1000	Ataxias, Motor Disorder, Seizure Disorder
FLVCRI*	200	Retinal Disease
KIFIA*	1600	Ataxia, Motor Disorder, Neurodegenerative, Peripheral Neuropathy, Seizure Disorder
SAA	160	Amyloid kidney disease, severe and progressive
SCN2A*	1500	Ataxia, Autism Spectrum, Moto Disorder, Seizure Disorder
SERPINI1*	300	Motor Disorder, Seizure Disorder
TDP43*	3000	Motor Disorder, Neurodegenerative

* allele-selective programs

**Estimates include multipliers (x) to largest patient estimates from established disease foundations (5x) or literature attributions for smaller, less established diseases (10x)

Near-term Opportunities Across Many Therapeutic Areas

Gene Target	Est. WW Prevalence**	Therapeutic Area
ASXL3	1,500	Autism Spectrum
CHCHD10	400	Motor Disorder, Neurodegenerative
CLCN7	30	Liver and Kidney target and disease, Motor disorder, Neurodegenerative
GARS1*	1,600	Liver target and disease, Motor Disorder
H3F3A	100	Motor Disorder, Seizure Disorder
hnRNPH2	330	Motor Disorder
IKBKAP*	4,500	Motor Disorder, Retinal Disease
LMNB1	330	Motor Disorder
MAPK8IP3	100	Motor Disorder, Neurodevelopmental
PACS1	1,000	Autism Spectrum, Seizure Disorder
SCN8A*	2,500	Seizure Disorder
TUBB4A	1,000	Ataxia, Motor Disorder
UBTF*	110	Motor Disorder

* allele-selective programs

**Estimates include multipliers (x) to largest patient estimates from established disease foundations (5x) or literature attributions for smaller, less established diseases (10x)

Advancing in ASO Technology

- ASO technology is still advancing
 - I have led much of the research on basic advances in mechanisms
 - Advances in technology mean better, more rapid treatment of patients treatable today and expansion to many more patients tomorrow
- Multiple opportunities to improve antisense performance currently being pursued at n-Lorem
 - Somewhat limited investment today
 - But, we are seeking partners and grants that will greatly expand our investment
- Scores of companies pursuing antisense technology today who are potential customers
- Multiple opportunities to establish new companies

Patent Novel Inventions

- Our research has already led to important novel observations that are patentable
- We are judiciously filing patents and initiating licensing discussions

Initial Interest is Encouraging

- Potential partners encompass a wide range of collaborative opportunities
 - Venture capitalists focused on the biotechnology and therapeutics
 - Private and public companies focused on advancing clinical drugs
- Since July 2024:
 - ~80 target VC/companies
 - >40 meetings and >100 engagements
 - >20 potential partners with substantial interest to continue discussions
- Several transactions progressing

Progress in Achieving Sustainability

- n-Lorem is well ahead of plan
- Much more rapid growth
 - Greater fundraising success
 - More rapid creation of valuable sellable assets
 - Earlier interest in sellable assets
- Initial interest and success suggest sustainability can be achieved
- However, we MUST bridge to sustainability
 - Approximately 3 years

The Bridging Challenge

- Sustainability can be achieved in perhaps 3 years
- We can file >30 INDs next year
 - And increase the number of INDs every year thereafter
 - If we can raise the funds
- Optimal 2025 budget: >\$30 Million
- Even with all our success, this is a real funding challenge

Sustainability Will Mean A Much Brighter Future for Thousands of Patients

- We can continue to expand to meet the demand
- We can broaden our clinical institutional network
- We can expand to needy patients in other countries
- We can advance the technology
 - More effectively and efficiently treat accessible patients today
 - Open new patient populations to whom we must say ‘no’ to today

We Are Well Ahead of Schedule and Achieving Financial Sustainability

But we need everyone's support to bridge to sustainability

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