NanoSyrinx

a novel platform technology
for **targeted intracellular**
drug delivery

ANGLO NORDIC | LIFE SCIENCE CONFERENCE

AngloNordic Life Science Conference
April 20th 2023, County Hall, London

Leadership Team

NanoSyrinx today

Joe Healey
Founder & CEO/CTO

James Lapworth
CBO/COO

Steve Taylor
Non-exec Chair

Marie McAvoy
CSO

Nick Waterfield
Co-Founder & SAB

Jane Dancer
NED

A seasoned leadership team including industry veterans from GSK, FujiFilm Diosynth, F-Star & MedImmune and experts in synthetic/molecular biology guiding our technical and strategic development.

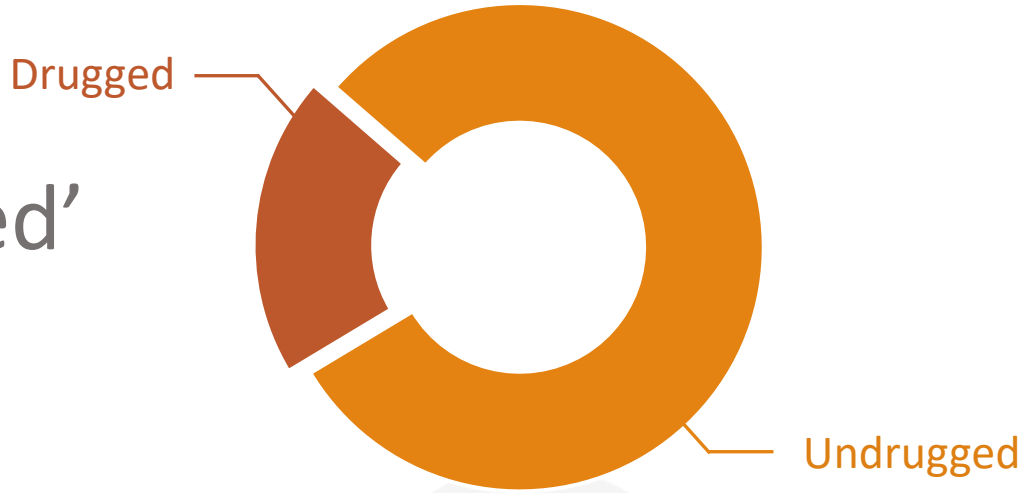
- Discovery stage company established 2020
- Spinout from Waterfield Lab at Warwick Medical School
- Closed a £6.2M Seed+ round in July 2021

NanoSyrinx is thrilled to be backed by

The **un-druggable cell**

< 20% Human proteins 'drugged'

(mostly cell surface)



"Delivering [biologics] into cells is the Holy Grail…"

-- morphosys

"Delivering functional proteins to the interiors of cells would open up an entirely new range of targets for drug development…"

-- MedImmune

"Intracellular delivery is a strategic priority for us. We have already tried a number of solutions, including some quite 'out there' ideas, but nothing really works."

-- novo nordisk

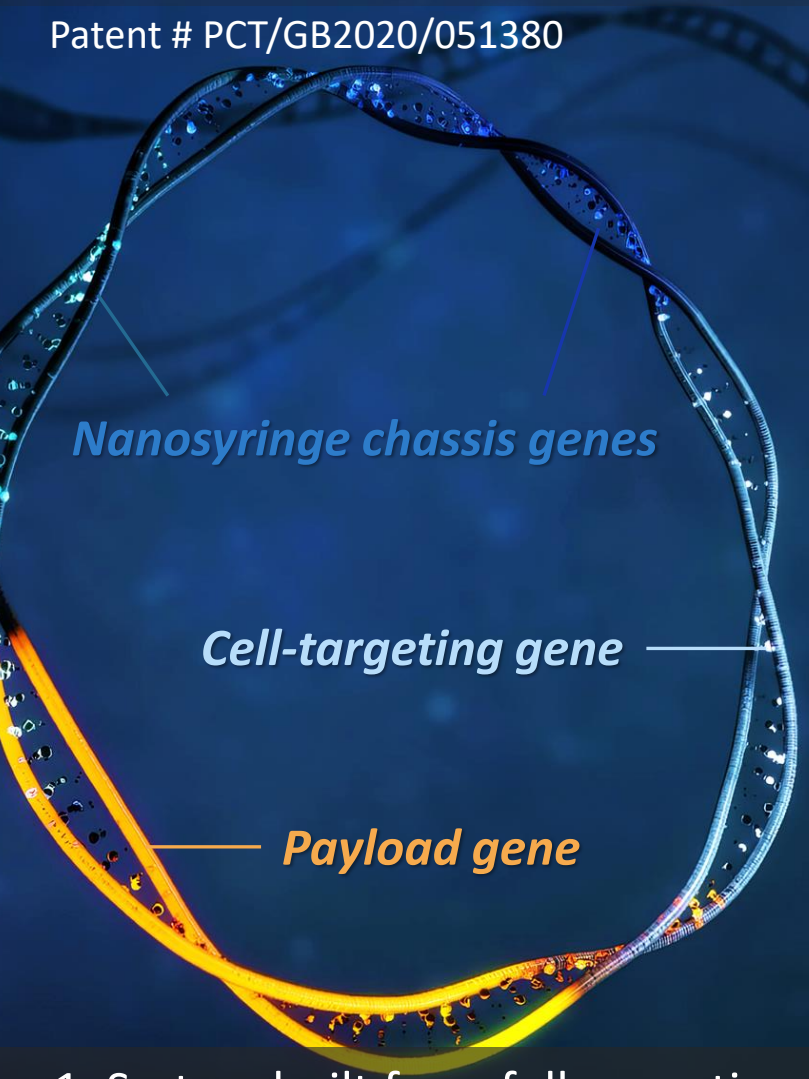
Analogous technologies demonstrate **market value** in **intracellular platform plays**

	ERA THERAPEUTICS (Boston, MA)	evox THERAPEUTICS (Oxford, UK)	entrada THERAPEUTICS (Boston, MA)	Dyne THERAPEUTICS (Waltham, MA)
Technology	Protein nanoparticles	Exosomes	CPPs	Antibody-nucleotide conjugates
Application areas	Delivery of "compact" gene editing enzymes	Lysosomal storage disease, DMD and rare metabolic diseases	Enzyme replacement therapy, PPI inhibitors	RNA delivery for rare muscle disease (DM1)
A Round Stage Current Stage	Discovery stage	-Discovery stage → -Preclinical (partnered)	-Discovery stage → -IND enabling	-Discovery stage → -Phase I for DMD
Funding	Feb 2023: $193m (A&B)	Apr 2016: £10m Sep 2018: £35.5m Feb 2021: £69m	Oct 2016: $0.6m Dec 2018: $59m Mar 2021: $116m Oct 2021: $181m (IPO)	Apr 2019: $50m Aug 2020: $115m Sep 2020: $268m (IPO)
Major investors	ARCH Venture Partners, GV, LUX+	COWEN, GV	MSD, Roche, MPM	ATLAS VENTURE, MPM

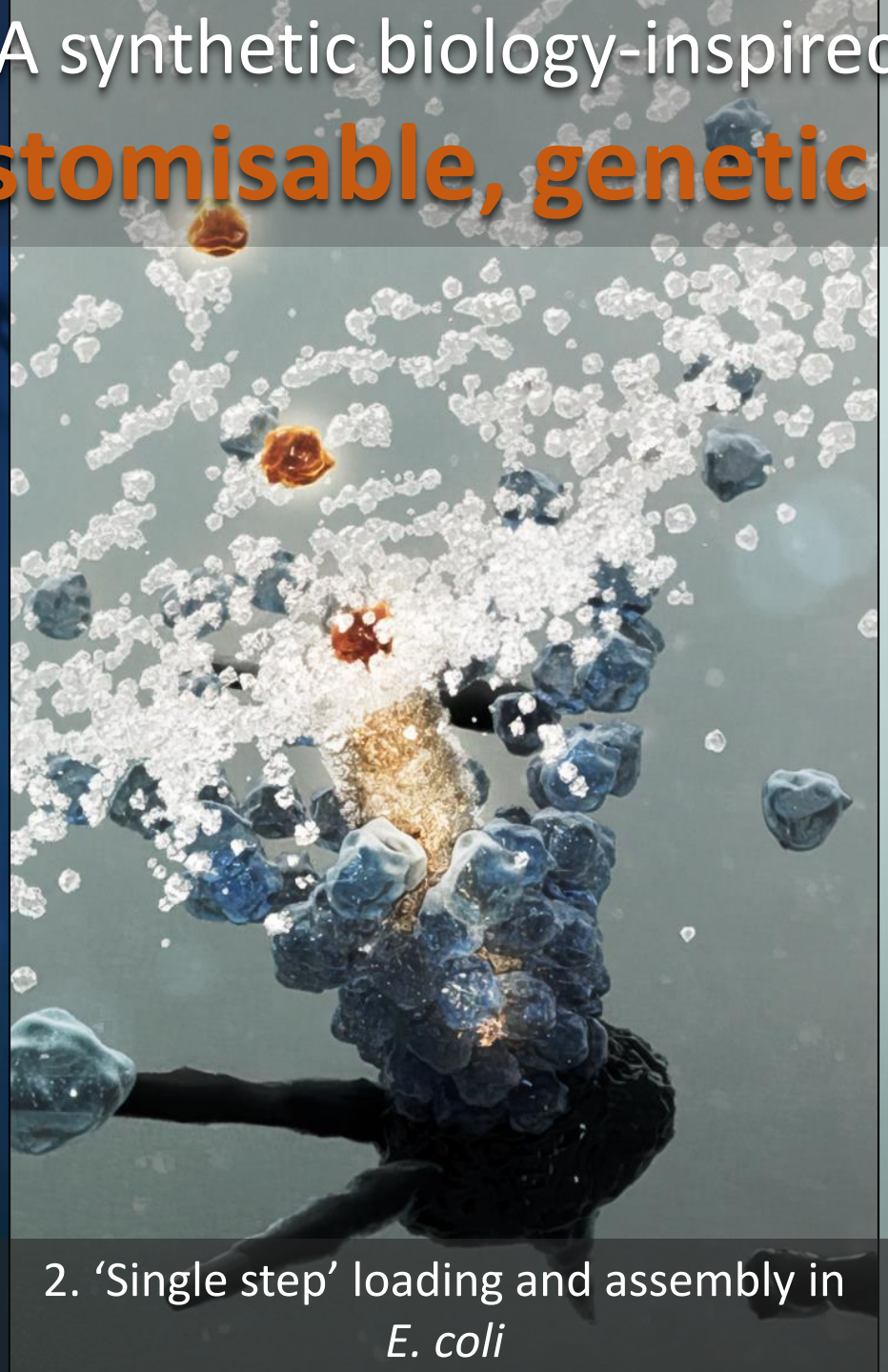
A synthetic biology-inspired,

fully customisable, genetic platform

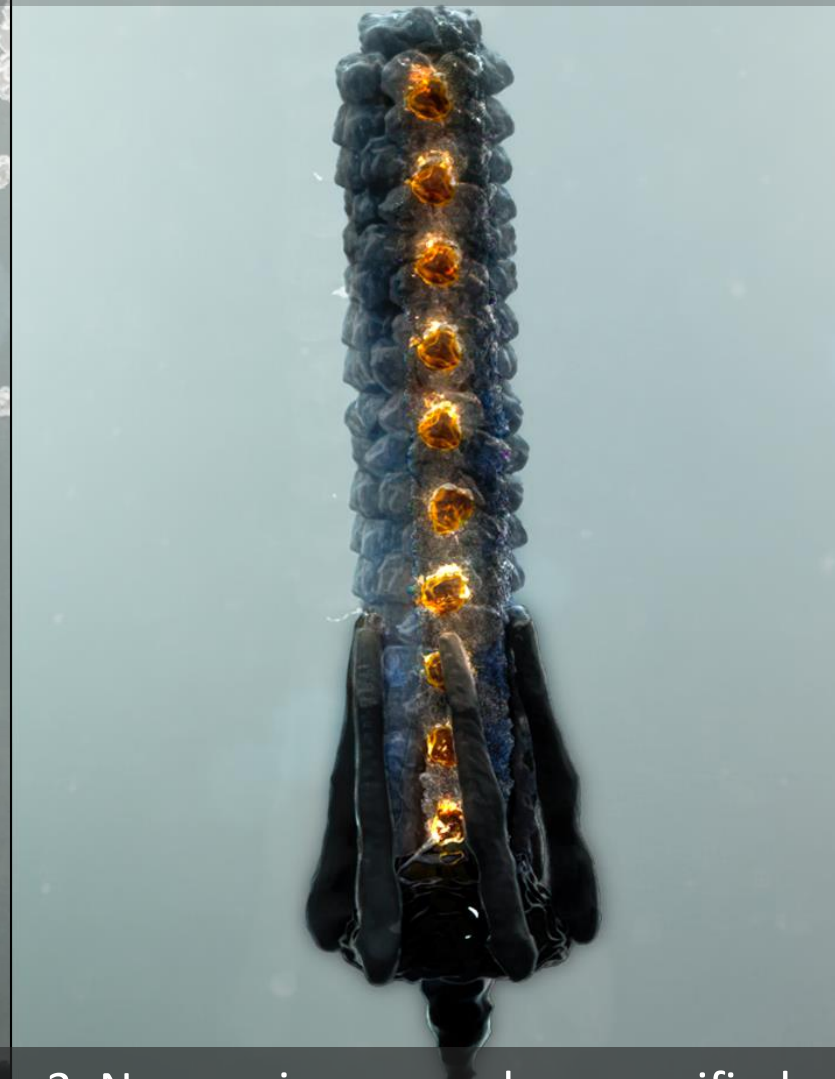
Patent # PCT/GB2020/051380



1. System built from fully genetic construct.



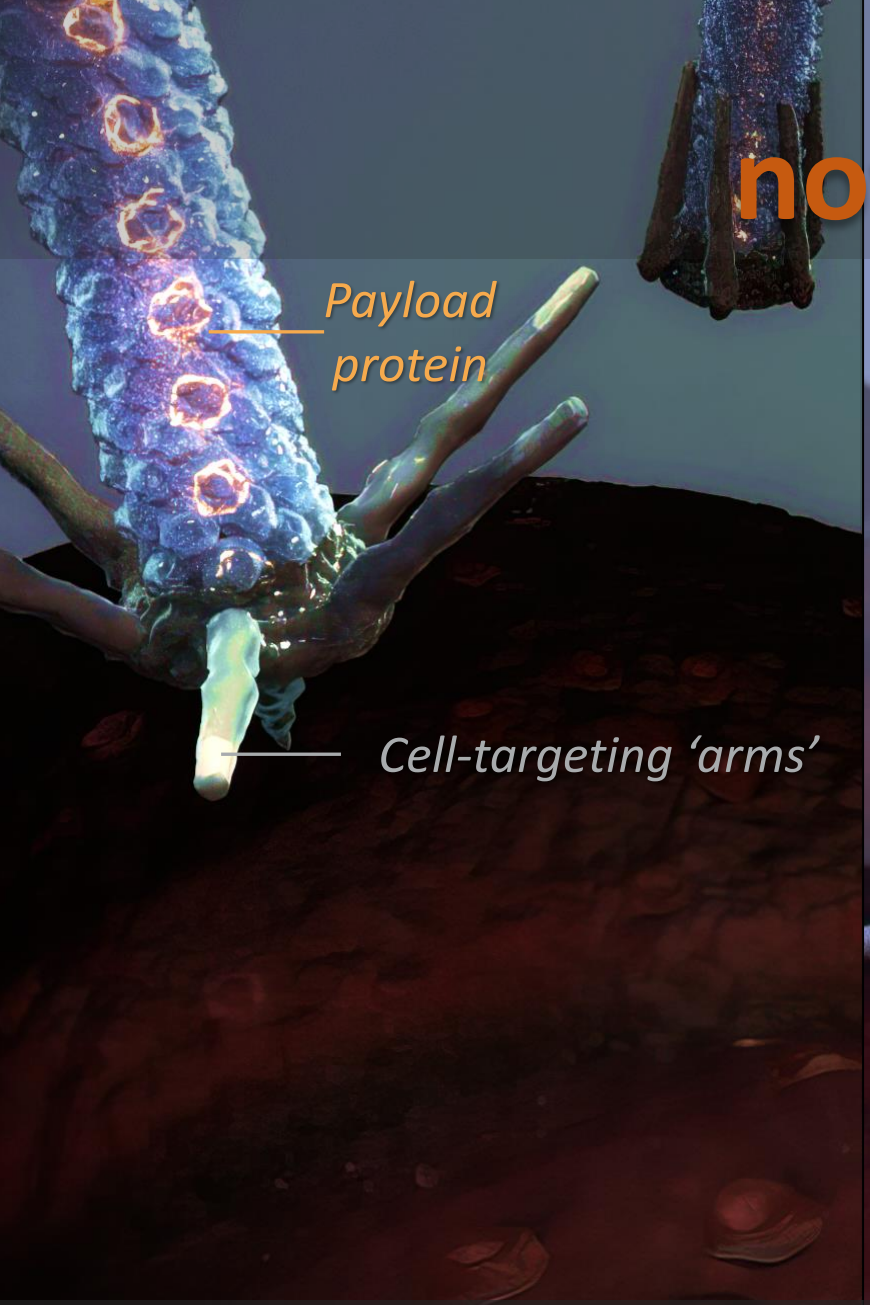
2. ‘Single step’ loading and assembly in *E. coli*

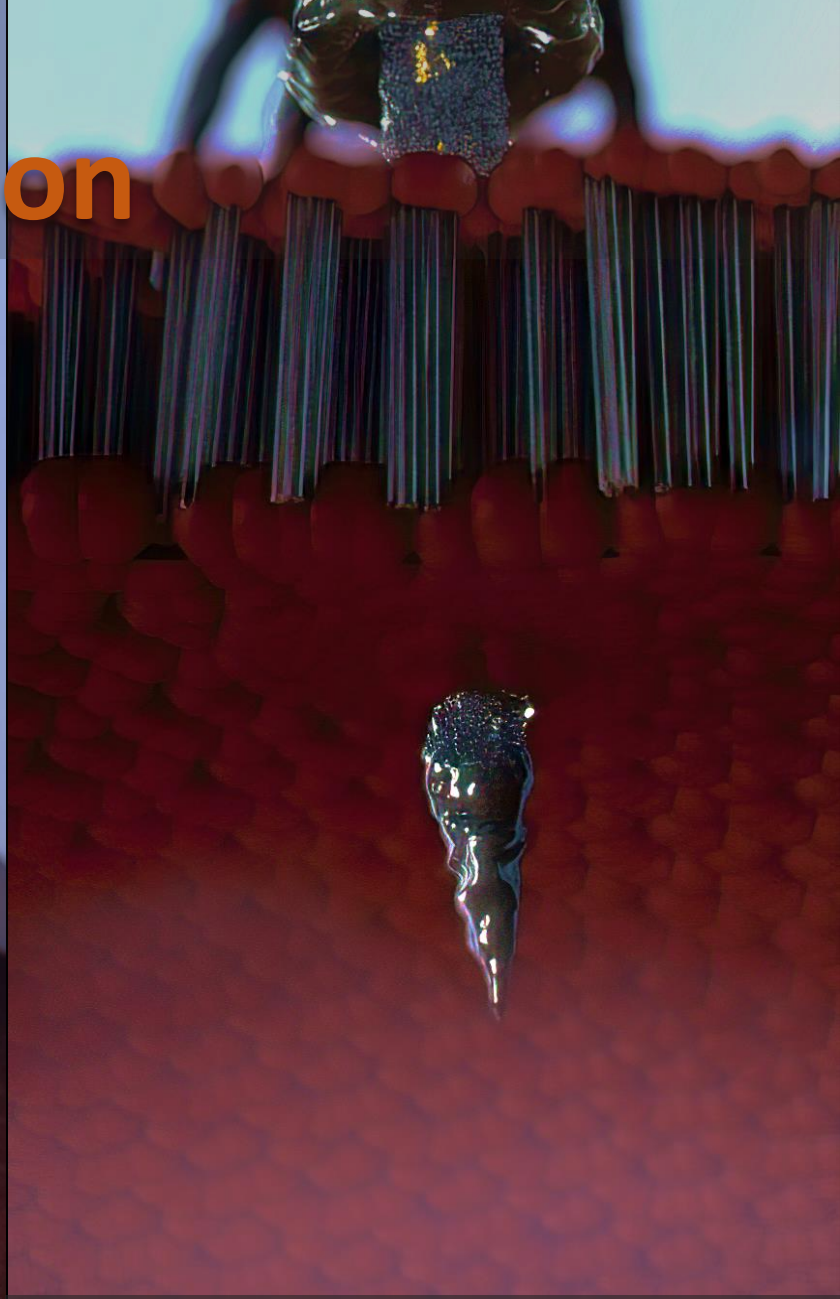


3. Nanosyringe complexes purified, loaded, ready for use

A completely

novel mode of action





1. Loaded nanosyringes produced by out bacterial expression system

2. Cell-targeting ‘arms’ selectively bind nanosyringe to cell surface

3. Nanosyringes actively pierce the membrane to deliver the ‘API’

The **competing** technologies

No other technology in the marketplace offers this unique combination of features.

Value Point	Nanosyringes	Viral Vectors	Cell Penetrating Peptides	Exosomes/ Liposomes	Antibody-Drug Conjugates
Inherently Targeted	✓	Partially		Partially	✓
Modifiable cargo	✓	✓	Varies	✓	✓
Stable	✓	Varies	Varies	Varies	Varies
Simple manufacture	✓		Often		
Platform Tech	✓	✓		✓	✓
‘Active’ delivery	✓				
Fully genetically controllable	✓	✓	Potentially		

NanoSyrinx **technology development**

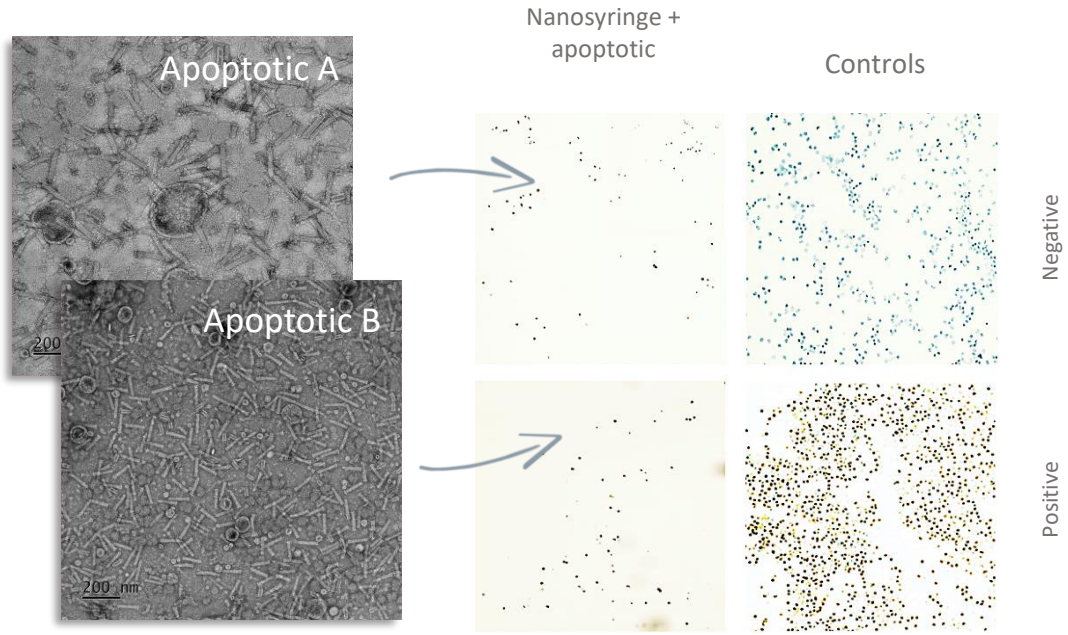
Key platform validation in hand or in progress:

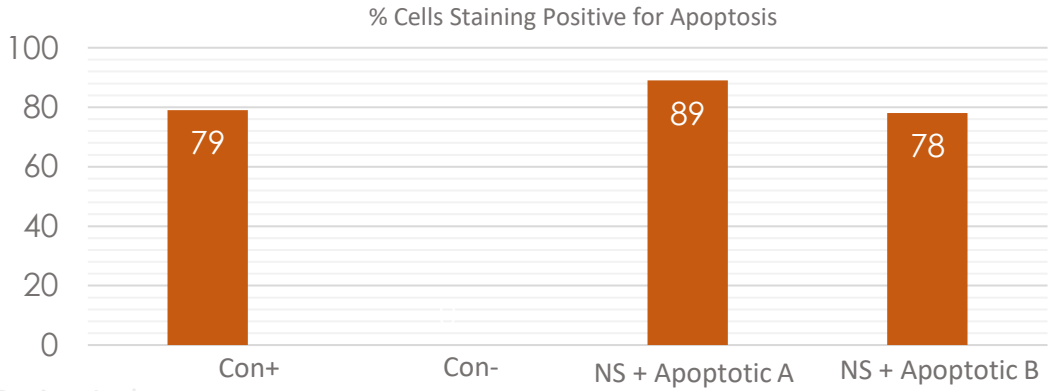
- Control of payload loading ✓
- Delivery of diverse payloads ✓
- Feasible scalability ✓
- Ability to selectively target ✓

Patented core IP, with further IP under development.

Feasibility study in progress with a large pharma, yielding promising positive data.

Example Data: NanoSyringes are capable of delivering the small, human-derived pro-apoptotic peptides to **primary human cells**.





NanoSyrinx has a versatile platform with many application areas

In vivo Therapeutics

Utilising a suite of cytolethal/manipulatory payload options (e.g.):

- (Nano/Anti)bodies
- PROTACs
- Toxins/apoptotics

Reward £££

Risk 

Ex vivo Cell & Gene Therapies

Delivery of cell modulating and genetic engineering payloads (e.g.):

- Nucleases
- Cellular differentiation factors
- Antigens

££ 

In vitro Biotechnology Tools

Utilising a suite of useful probes and engineering tools (e.g.):

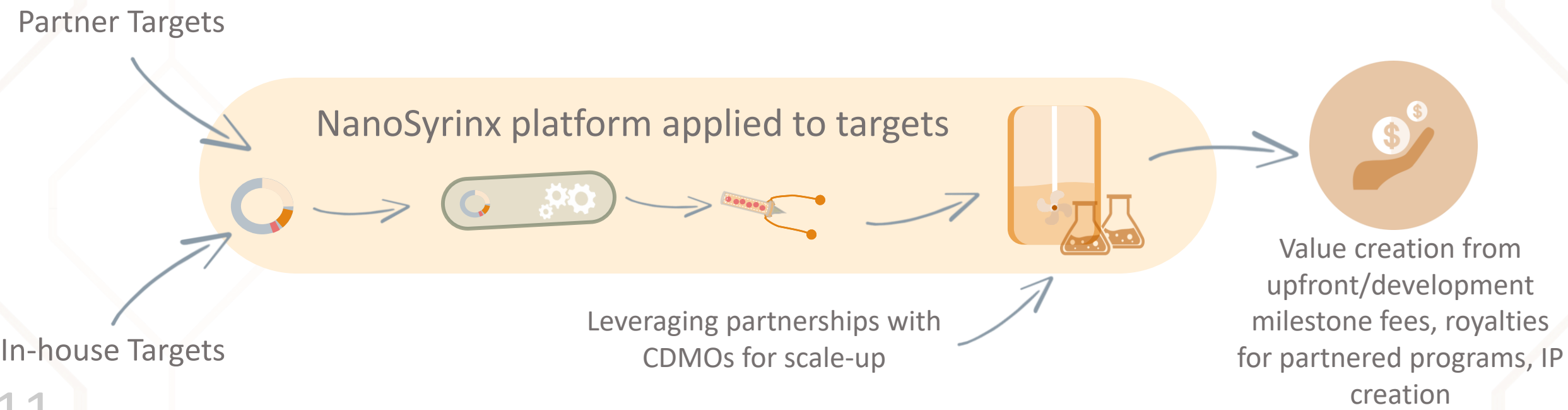
- Reporter proteins
- Probes
- Enzyme delivery (e.g. Cas9)

£ 

Multiple avenues for value creation

NanoSyrinx proposes a hybrid model:

- develop in-house programs for currently undruggable targets and tools
- collaborative development and discovery on partner targets

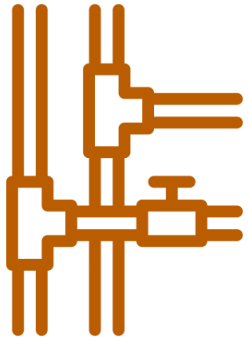


Co-development partnership deal precedents in the space

Announced	Jan 2023	Feb 2023	Mar 2020	June 2020
Scope	Development of AAV capsids for IV delivery of gene therapies to the CNS Preclinical and later development to be led by Lilly (& Prevail subsidiary)	Development of AAV capsids for ocular delivery of up to 3 gene therapies AbbVie will lead on payloads, clinical development & commercialisation	Development of delivery candidates for up to 5 rare disease targets All clinical development to be done by Takeda	Development of delivery candidates for up to 5 CNS targets All in vivo and clinical development to be done by Lilly
Terms	$55m upfront + equity $685m in R&D & commercial milestones	$70m upfront $595m in option fees and R&D milestones Undisclosed commercial milestones	$44m upfront and near-term milestones $840m in development milestones	$20m upfront $10m investment $1.2Bn development milestones
Source	https://www.fiercebiotech.com/biotech/lilly-seeking-better-cns-gene-therapies-pays-55m-join-abbvie-aav-specialists-list-partners	https://www.fiercebiotech.com/biotech/capsida-reels-another-big-pharma-deal-time-diving-eye-disease-abbvie	https://www.evoxtherapeutics.com/News/March-2020/Evox-Therapeutics-and-Takeda-collaboration	https://www.evoxtherapeutics.com/News/Jun-2020/Evox-Therapeutics-Enters-Into-Lilly-Collaboration

NanoSyrinx **in 2023**

Raising **£30M Series A**
(targeting close Nov ’23)



3 Year program delivering **a therapeutic pipeline**

Positioning to unlock multiple **high value co-development partnerships**

NanoSyrinx

www.nanosyrinx.com

Want to learn more?

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