



NEXT GENERATION GENE THERAPY

Innovation in gene synthesis & delivery

January 2021

Disclaimer

This document is intended for shareholders, prospective investors, partners and media audiences and no statements made here should be considered as claims for the success of our products, which are currently in the development phase.

This document also may contain projections and/or estimates about and descriptions of plans and objectives relating to our future operations, products, or services; future financial results; or assumptions underlying or relating to any such statements. These statements are forward-looking and are subject to risks and uncertainties, many of which are beyond our control and are not to be regarded as guarantees of future events.

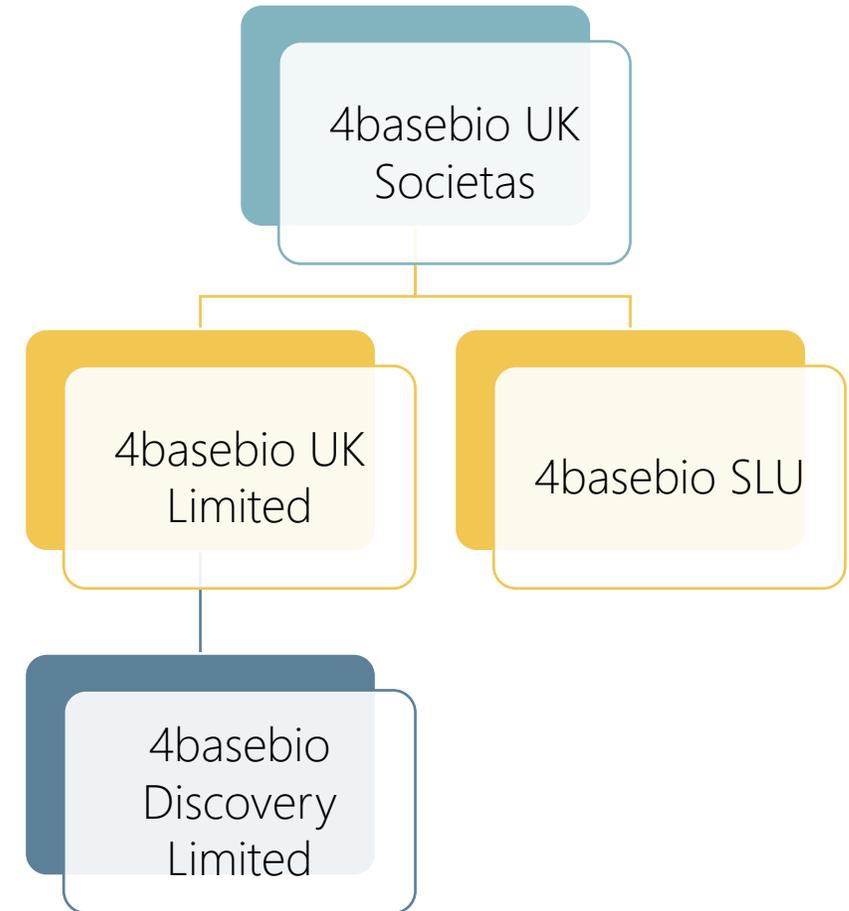
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There can be no guarantee regarding the results of the product tests or other on going studies with our products. There can be no guarantee that our products in development will be approved for marketing in a timely manner, if at all.

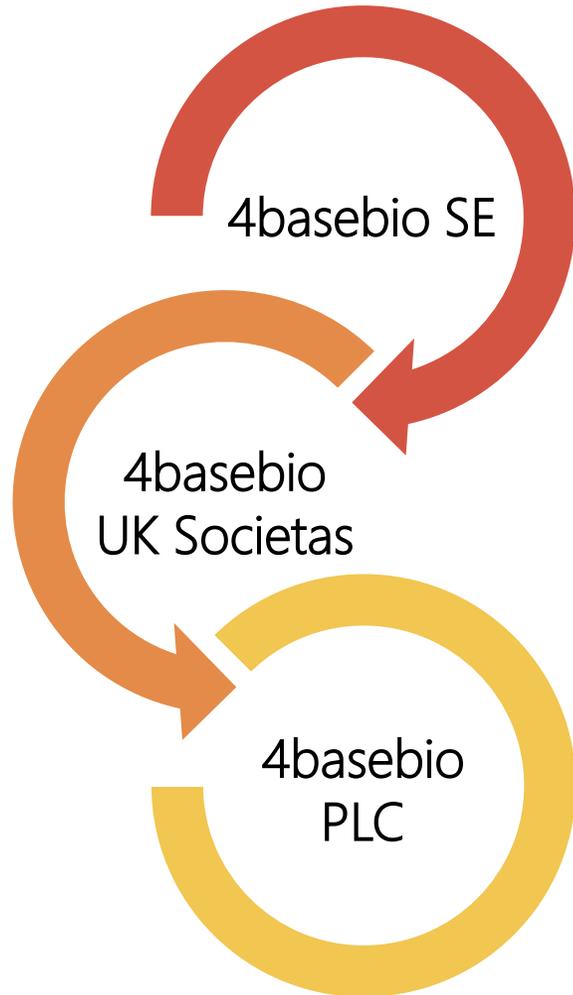
The Company disclaims any intent or obligation to update these forward-looking statements or the factors that may affect the Company's future results, performance or achievements, even if new information becomes available in the future.

4basebio UK Societas (4basebio)

- Headquartered near Cambridge, UK
- Spin out from 4basebio AG (listed on the Frankfurt Stock Market)
- Focussed on development of **next generation synthetic DNA** and the development of **non-viral delivery systems**, with applications in gene therapy

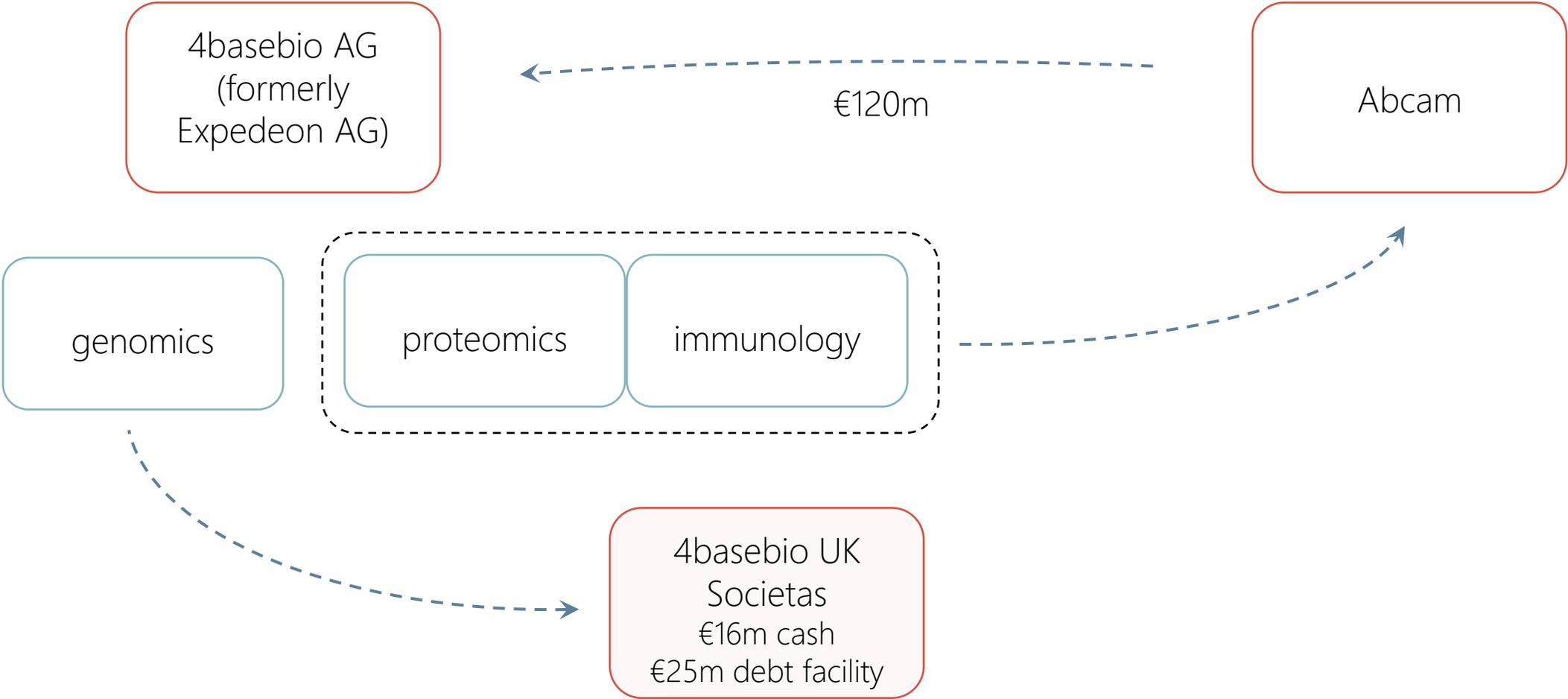


Origins of 4basebio UK Societas (4basebio)



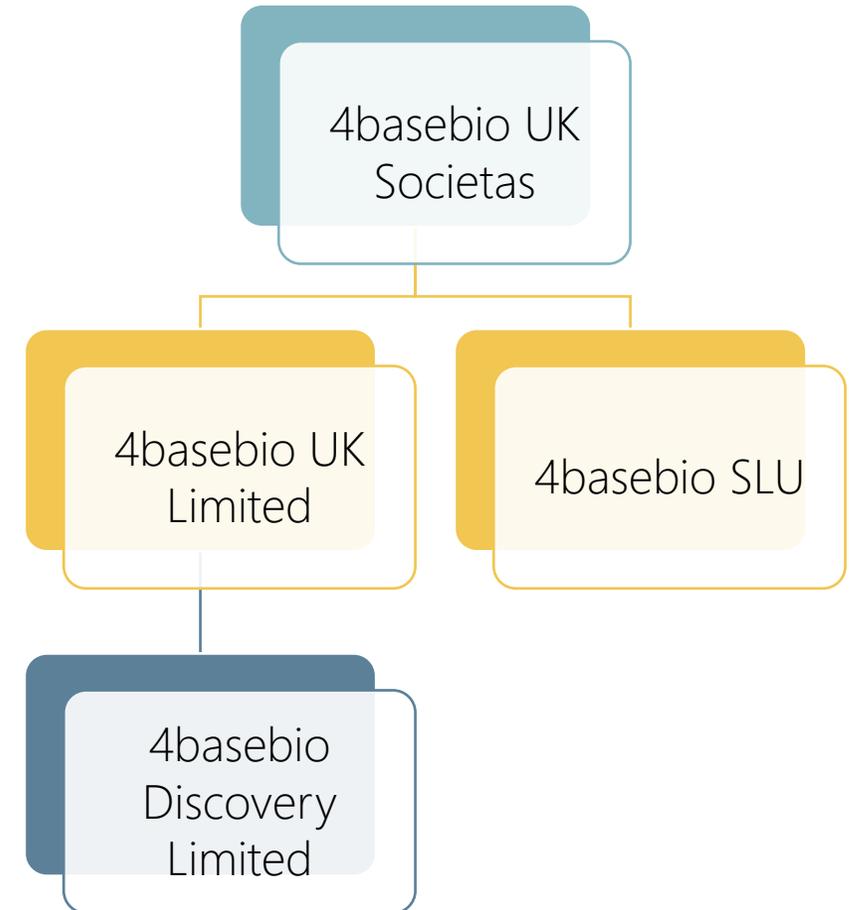
- Originally a 2019 incorporated German European stock corporation which changed its registered office to the UK in December 2020
- Became UK Societas following Brexit
- Plan to convert to 4basebio PLC following shareholder approval at the next AGM

Background to spin out



4basebio UK Societas (4basebio)

- Admission to AIM
- 4basebio is a UK / Spanish company:
 - 12 staff in Cambridge; 12 staff in Madrid
 - including **18 scientists**
 - **Spain:** Early stage R&D and enzyme manufacture
 - **UK:** DNA commercialisation and nanoparticle product discovery
- 12,000 square feet freehold building in Over near Cambridge



Business Focus

Developing –

1. next generation synthetic DNA
2. non-viral delivery systems

4basebio SLU

- Expertise in DNA enzymology
- Intellectual property in DNA synthesis
- Developed next-gen. synthetic DNA

Synthetic DNA

- Extremely suitable for gene therapies
- Gene therapies require a lot of DNA
- Solves many of the production challenges facing current DNA production methods

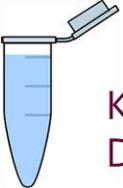
Synthetic DNA

Proprietary Trueprime® technology;
enables production of large quantities of synthetic hpDNA™

- 1. quick
- 2. cost effective
- 3. safe

} 4basebio DNA

In vitro: hpDNA™
Enzymatically produced



Key step: enzymatic DNA amplification

↓
Easy and scalable DNA purification



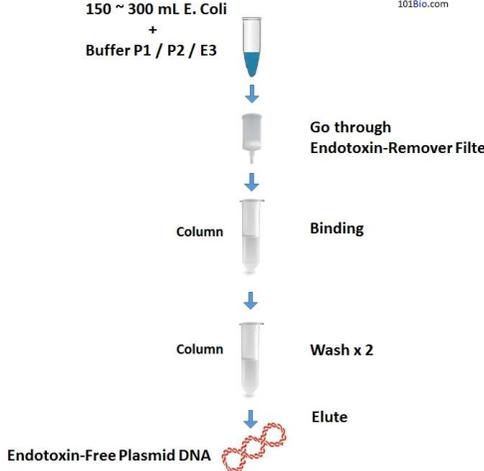
Current market practice – Biofermentation: plasmid DNA



large scale bioreactors

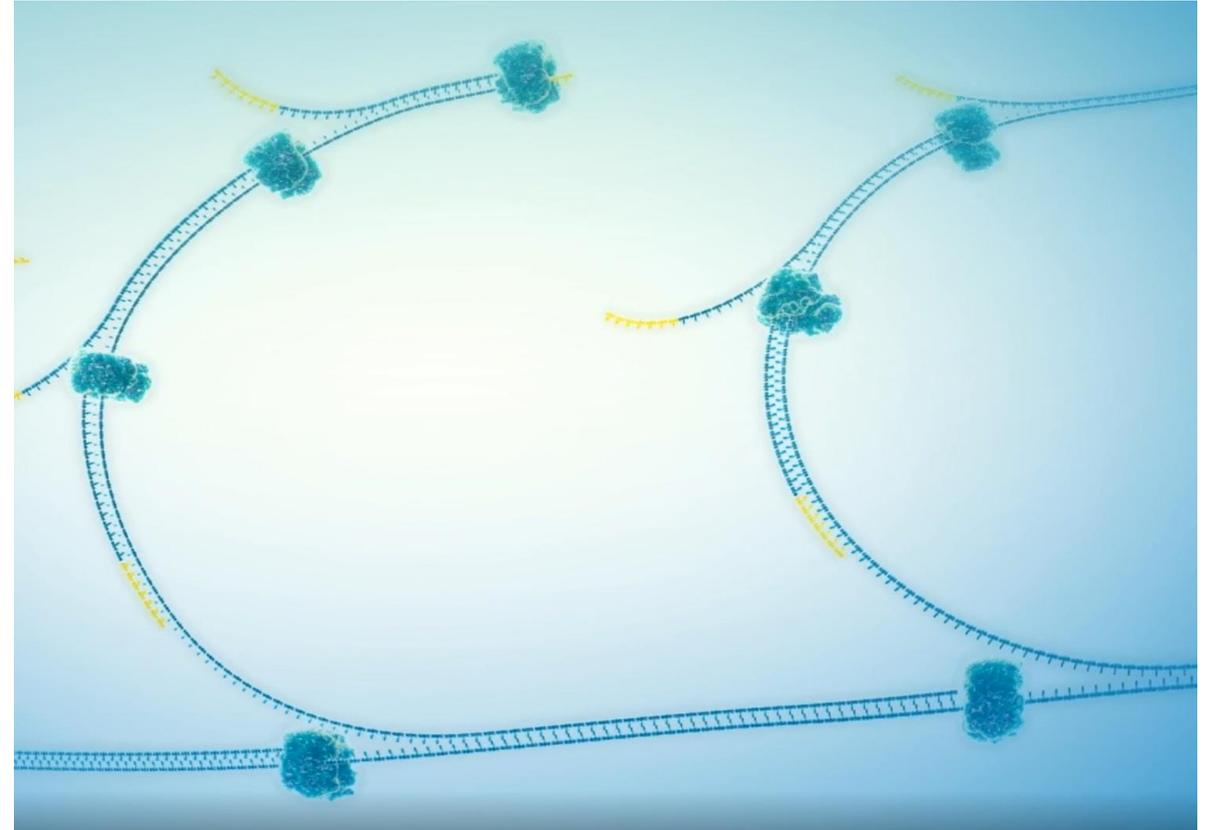


complex DNA purification



hpDNA™ near term objectives

- Development milestones
 1. Scale manufacturing to commercial levels
 2. Demonstrate DNA comparable with plasmid DNA
 3. Produce GMP grade DNA
- Validation through combination of:
 1. In house development
 2. External partnering arrangements



Market opportunity

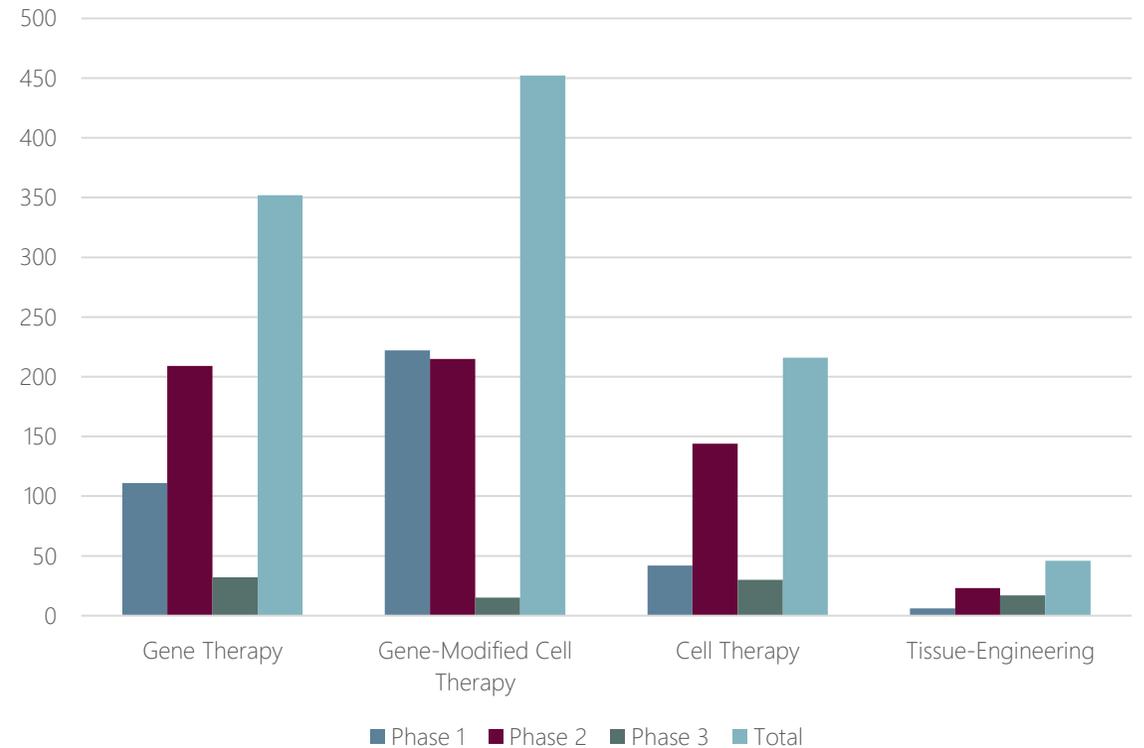
The regenerative medicine sector is rapidly growing

- In 2019, nearly a hundred Phase 3 trials have been active
- Several late-stage products are awaiting approval and following commercialization.
- Officials from the US FDA^[1] and European Medicines Agency (EMA)^[2] expect to be approving 10–20 cell and gene therapy products each year by 2025

4basebio will profit from the growing demand for pharmaceutical grade DNA

- Demand is constrained
- 4basebio aims to offer a safer, high performant and cost effective alternative to plasmid DNA

1066 clinical trials in the field of regenerative medicine/advanced therapies



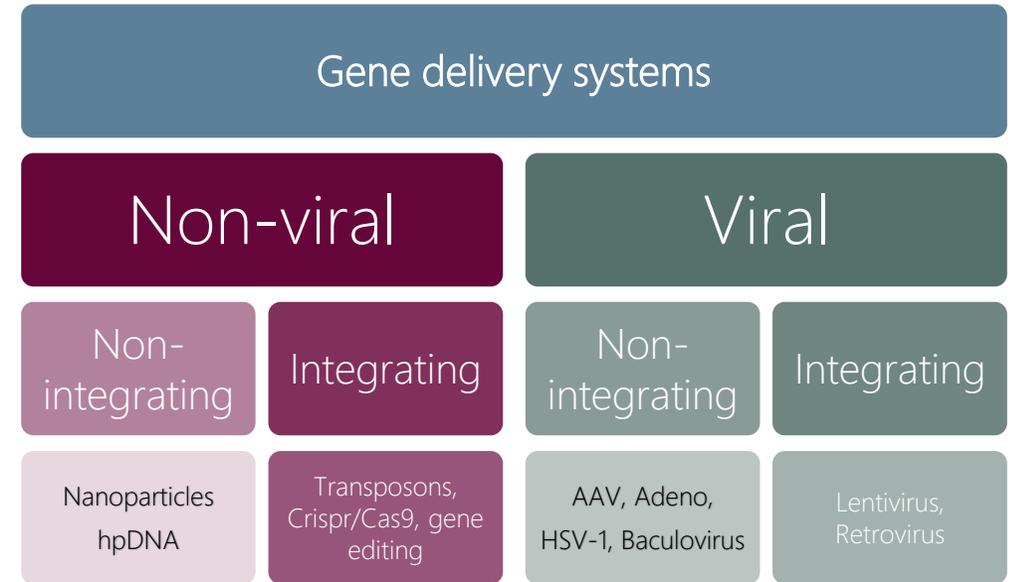
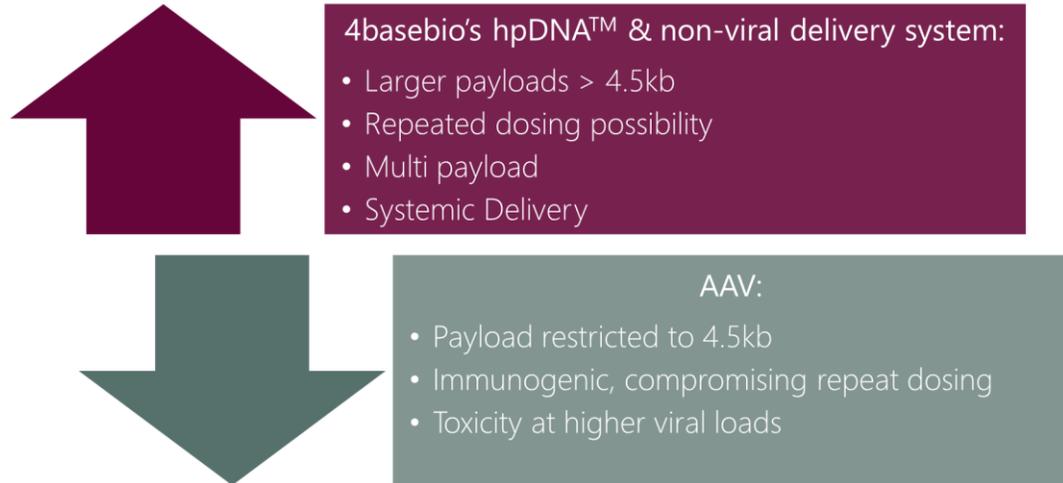
[1] Statement from FDA Commissioner Scott Gottlieb, M.D. and Peter Marks, M.D., Ph.D., Director of the Center for Biologics Evaluation and Research on new policies to advance development of safe and effective cell and gene therapies <http://bit.ly/2tH1DLX> (January 2019)
[2] Remarks from Guido Rasi, MD, Director General of the EMA, at ARM's Meeting on the Mediterranean <http://bit.ly/2vvgBcj> (April 2019)
Source for chart: Alliance for Regenerative Medicine, <https://alliancerm.org/sector-data/2019-annual-report/>

Business Focus

Developing –

1. next generation synthetic DNA

2. non-viral delivery systems



- Established a team and laboratory in UK focussed on non-viral delivery technology, Hermes™ nanoparticles
- Partnership agreements signed with academic groups working on non-viral delivery solutions

Commercial summary

1. **Manufacture synthetic DNA**, i.e. hpDNA™, for sale to third parties
2. **Develop and manufacture non-viral delivery systems**, i.e. Hermes™ nanoparticles, for sale or licensing to third parties
3. **Identify** a number of indications for which we can progress **potential gene therapies through early-stage pre-clinical validation**; at which point we would expect to either licence or sell the gene therapy candidate to interested parties



4basebio technology focus - summary

synthetic DNA

- Next generation technology covered by IP
- Very clear advantages over plasmid DNA:
 - Safety: no endotoxins, no bacterial DNA
 - Speed: rapid, accurate synthesis
 - Manufacturing: 1/1000th scale, no fermenting
 - Efficient: 2X target DNA versus plasmid DNA
- Integration into viral and non-viral delivery systems
- Market opportunity and growth far greater than competitive pressure

non-viral nanoparticles

- Developing non-viral delivery systems
- Addressing therapies outside the scope and capabilities of market leading Adeno Associated Virus (AAV) delivery systems:
 - Larger payload size: no gene size limits
 - Repeat dosing: no immunogenicity
 - Multiple payloads
- Can be combined with proprietary DNA into payload solution

Shareholder value

1. Develop a valuable technology portfolio
2. Build a strongly profitable life sciences company

Recent transactions in this space:

Thermo Fisher to acquire Brammer Bio in \$1.7 billion deal

Catalent to Acquire Paragon Bioservices for \$1.2B, Expanding Gene Therapy Capabilities

Bayer Acquires AskBio to Broaden Innovation Base in Cell and Gene Therapy

Roche to buy Spark Therapeutics in \$4.8bn deal

Novartis enters agreement to acquire AveXis Inc. for USD 8.7 bn to transform care in SMA and expand position as a gene therapy and Neuroscience leader

Management of 4basebio UK Societas

Non-Executive Directors



Pilar de la Huerta



Tim McCarthy
Chairman



Joseph Fernandez



Hansjörg Plaggemars

Executive Directors



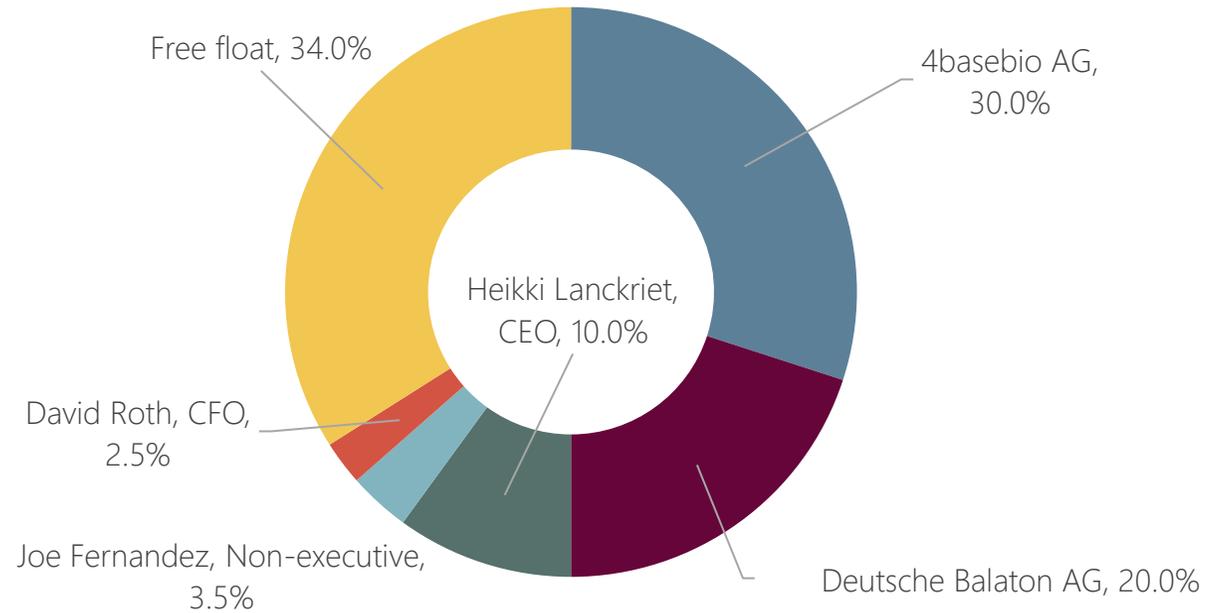
Heikki Lanckriet
CEO, CSO



David Roth
CFO

Shareholder Structure

1. Company free float is about 34%
2. A 30% stake is retained by the former parent 4basebio AG
3. Deutsche Balaton, a significant investor in 4basebio AG has a stake of 20% through the spin out
4. Management have an approximate 16% holding



Financial expectations and near term objectives

4basebio is well financed

- ~€16m/£14.4m day one cash; €25m/£22m loan facility with 4basebio AG
- Cash on hand sufficient for business plan

hpDNA™ Path to GMP

- Increase enzyme capacity in Spain
- Scale and optimise production processes in UK
- Likely to outsource GMP process

Nanoparticles – Create delivery system IP; identify gene therapy candidates

- Partnering with research groups, gene therapy and DNA vaccine developers to develop new technologies which may lead to gene therapy and vaccine candidates
- Established in house group to focus on the development of non-viral delivery systems for own use and by external customers

Summary

4basebio is:

well funded to take advantage of the growing gene therapy market :

- Next generation synthetic DNA
- Non-viral nanoparticle delivery systems

potential to create significant shareholder value through:

- Manufacture and sale of hpDNA
- Licensing and sale of Hermes nanoparticles
- Progression of gene therapy indications through proof of concept

Website: 4basebio.com