

# Nanoform Management Presentation

Q4 and FY2024 report

February 27<sup>th</sup>, 2025



# Disclaimer

## Forward-Looking Statements

This presentation contains forward-looking statements, including, without limitation, statements regarding Nanoform’s strategy, business plans and focus. The words “may,” “will,” “could,” “would,” “should,” “expect,” “plan,” “anticipate,” “intend,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “target” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Any forward-looking statements in this presentation are based on management’s current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this presentation, including, without limitation, any related to Nanoform’s business, operations, clinical trials, supply chain, strategy, goals and anticipated timelines, competition from other companies, and other risks described in the Report of the Board of Directors and Financial Statements for the year ended December 31, 2024 as well as our other past disclosures. Nanoform cautions you not to place undue reliance on any forward-looking statements, which speak only as of the date they are made. Nanoform disclaims any obligation to publicly update or revise any such statements to reflect any change in expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements. Any forward-looking statements contained in this presentation represent Nanoform’s views only as of the date hereof and should not be relied upon as representing its views as of any subsequent date.



# Introduction & Key Business Highlights

CEO Edward Hæggström

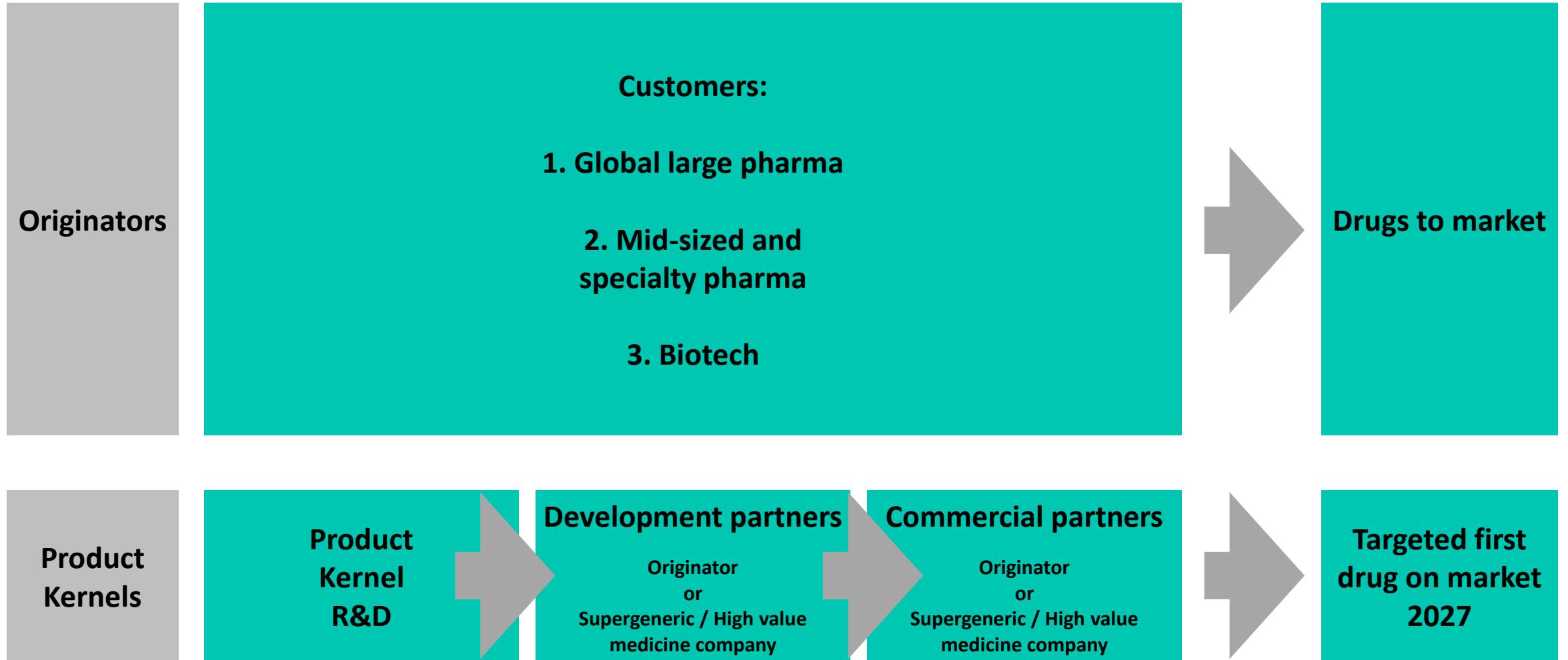
# Key strategy

**All  
active pharmaceutical  
ingredients (API's)  
should be Starmapped (AI)**

**Nanoform work with  
customers/partners to  
enable novel & existing  
molecules to become new  
and improved medicines**

**In parallel, to show a  
conservative industry the  
power of nanoforming, we  
create up to a dozen  
'product kernels'**

# Nanoform Technology – route to market



# Proprietary technology platforms

## Small molecules

Proven CESS®\* nanotechnology enables new medicines through *improved bioavailability, higher drug load & novel formulations*

[www.nanoform.com/en/technologies-and-services/small-molecules/](http://www.nanoform.com/en/technologies-and-services/small-molecules/)

## Large molecules

Unique BIO nanoparticles enable improved routes of administration with *high drug load* and *long-acting delivery*

[www.nanoform.com/en/technologies-and-services/biologics/](http://www.nanoform.com/en/technologies-and-services/biologics/)

## Formulation

Highly differentiated *novel formulations* and *unique drug delivery opportunities* drive optimized therapeutic potential & patient convenience

<http://www.nanoform.com/en/technologies-and-services/formulation/>

## AI

STARMAP® 2.0 online *picks best candidates* and *accelerates development* by integrating deep expertise with sparse data AI

<http://www.nanoform.com/en/technologies-and-services/starmap/>

# Nanoform key business highlights

I

2024 showed a record number of new customer projects signed.

II

The dealmaking discussions around our product kernels intensified, we expect to sign deals on our first three product kernels in the coming weeks and months (Nanoenzalutamide, Nanoapalutamide, Nanoencorafenib).

III

Manufacturing of GMP material for pivotal studies and registration batches in Project Nanoenzalutamide continued in a 3-shift pattern, pivotal studies start early Q2 2025, with first read-out in the same quarter.

IV

We expect Nanoenzalutamide to be the first nanoformed medicine to reach the market – with a planned launch in 2027/28 in the US/EU – and to be a income driver for Nanoform already in the upcoming years.

V

We expect some of our ongoing customer projects to enter the clinic in the upcoming quarters and years.

VI

Growth will be fuelled by a growing number of projects, from development, exclusivity and milestone payments, and later on from commercialization fees and royalties.

VII

Company mid-term business targets 2030 to be announced during 2025 in conjunction with Capital Markets Day.

# Nanoenzalutamide batches shipped for tableting



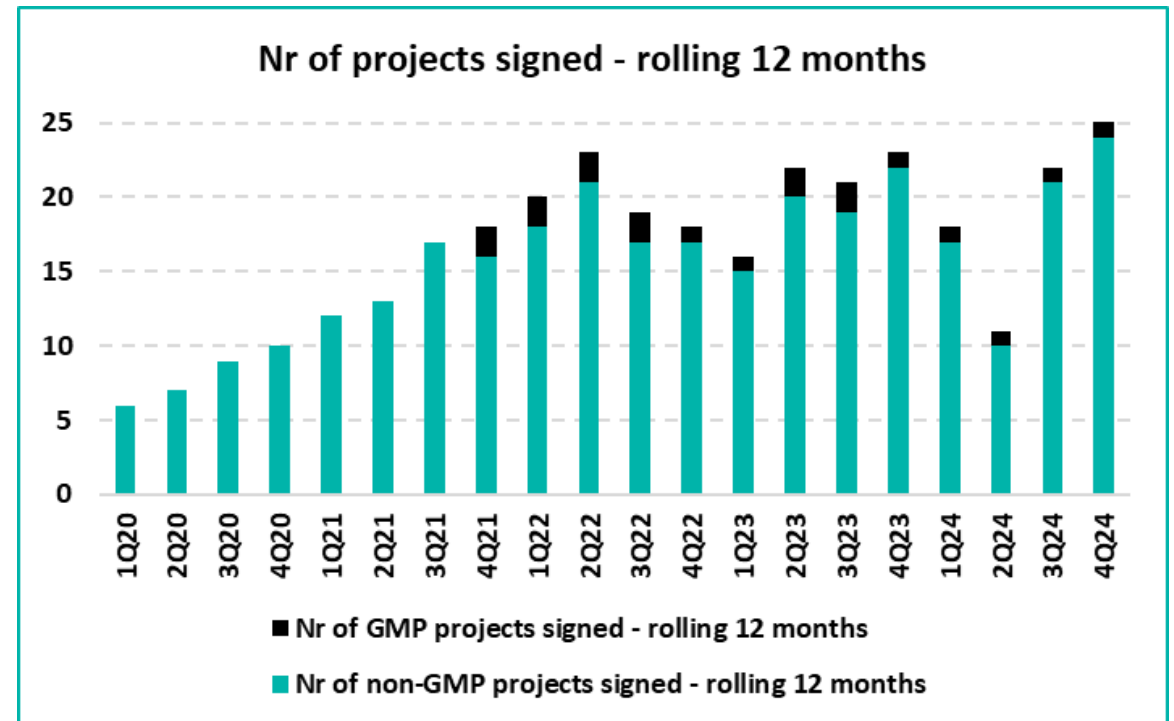
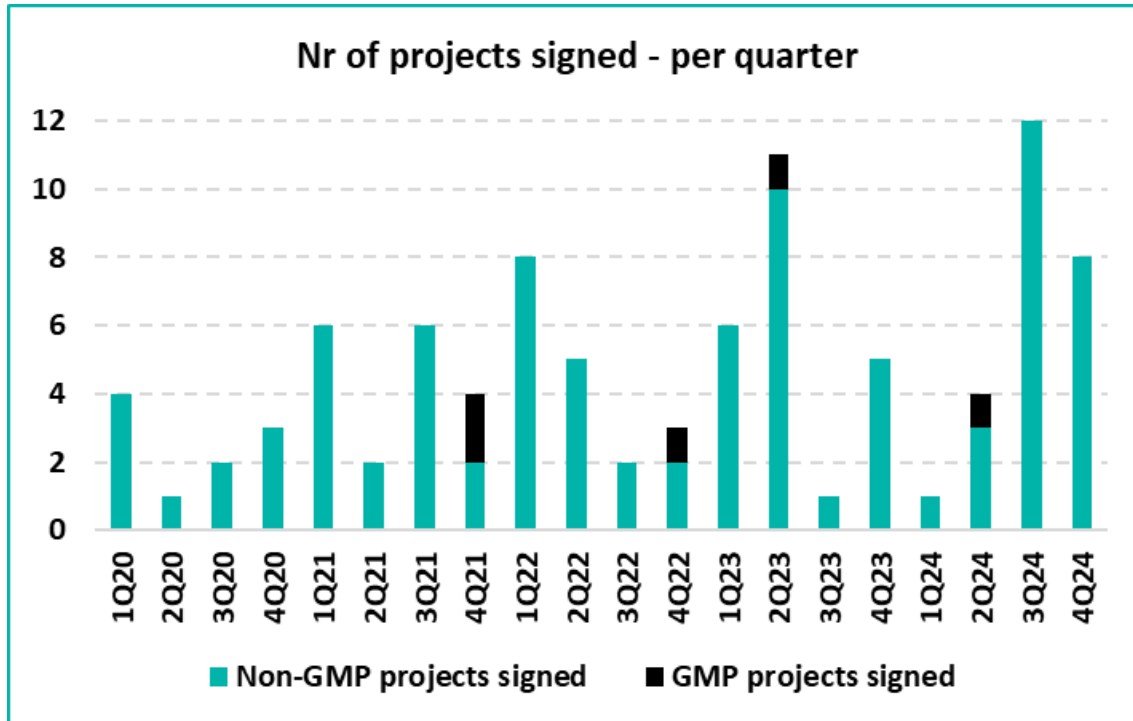




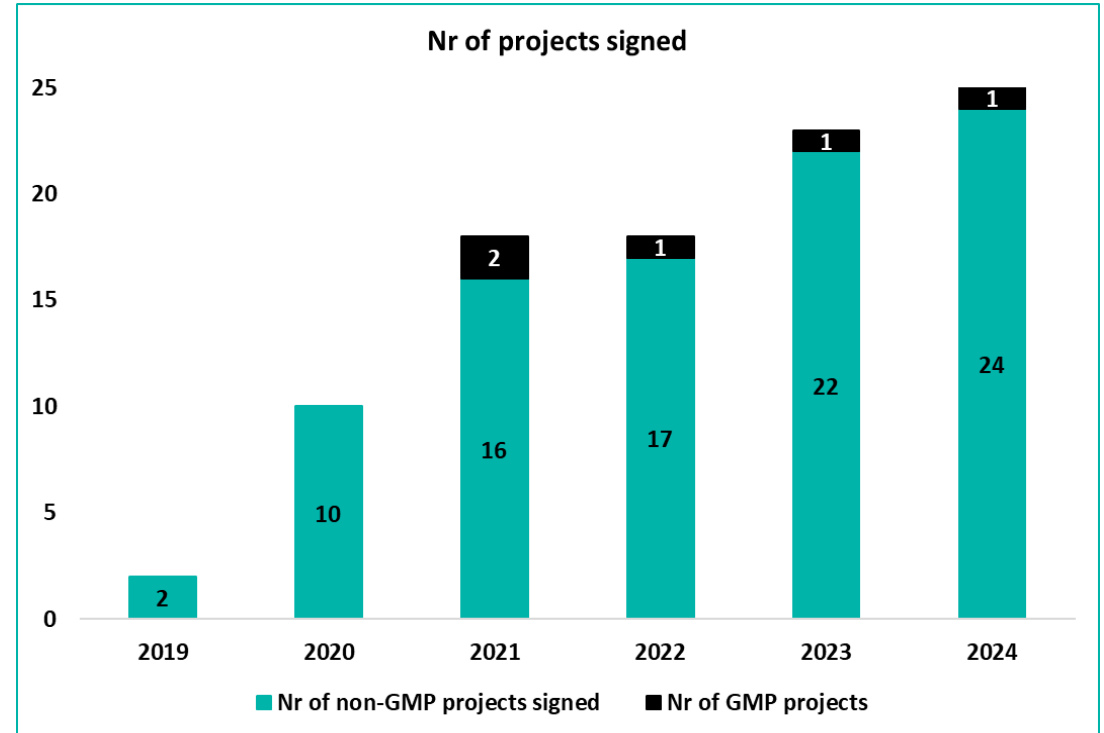
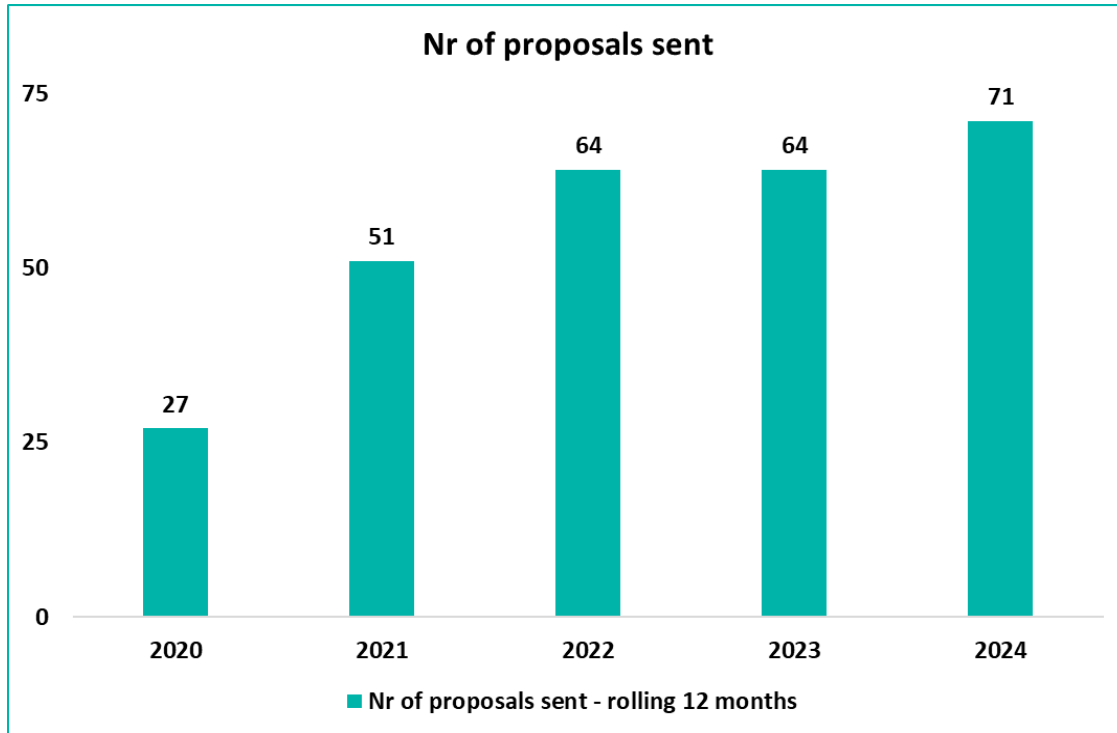
# Financials

CFO Albert Hægström

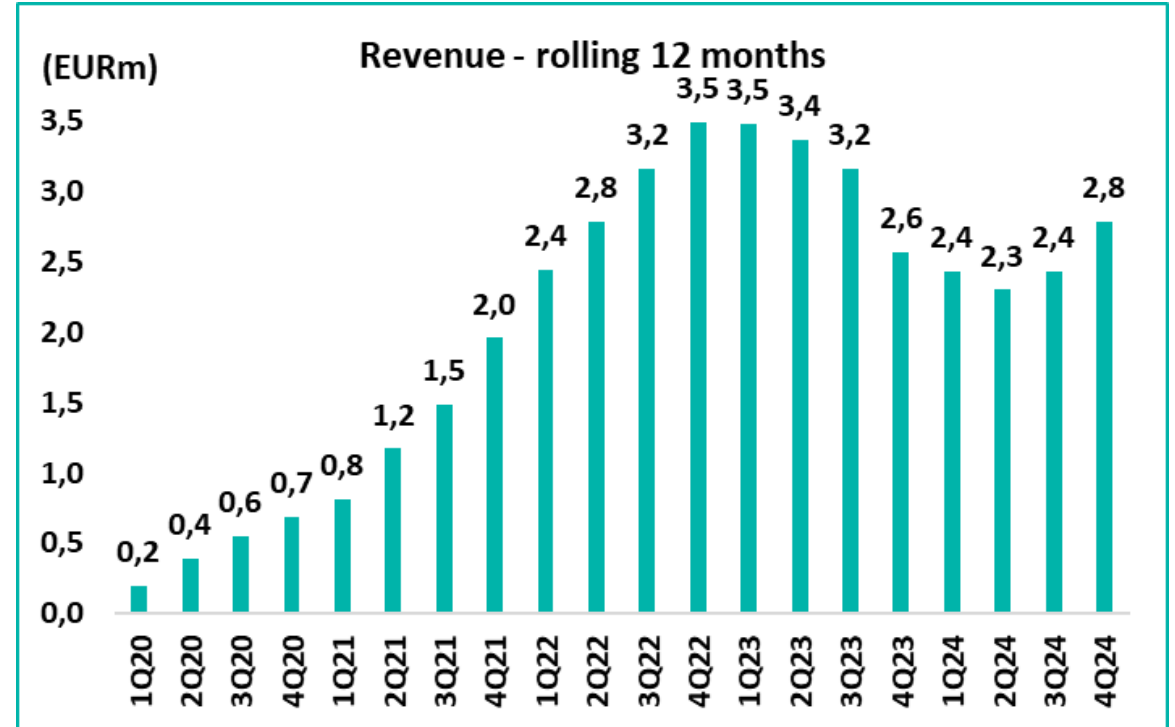
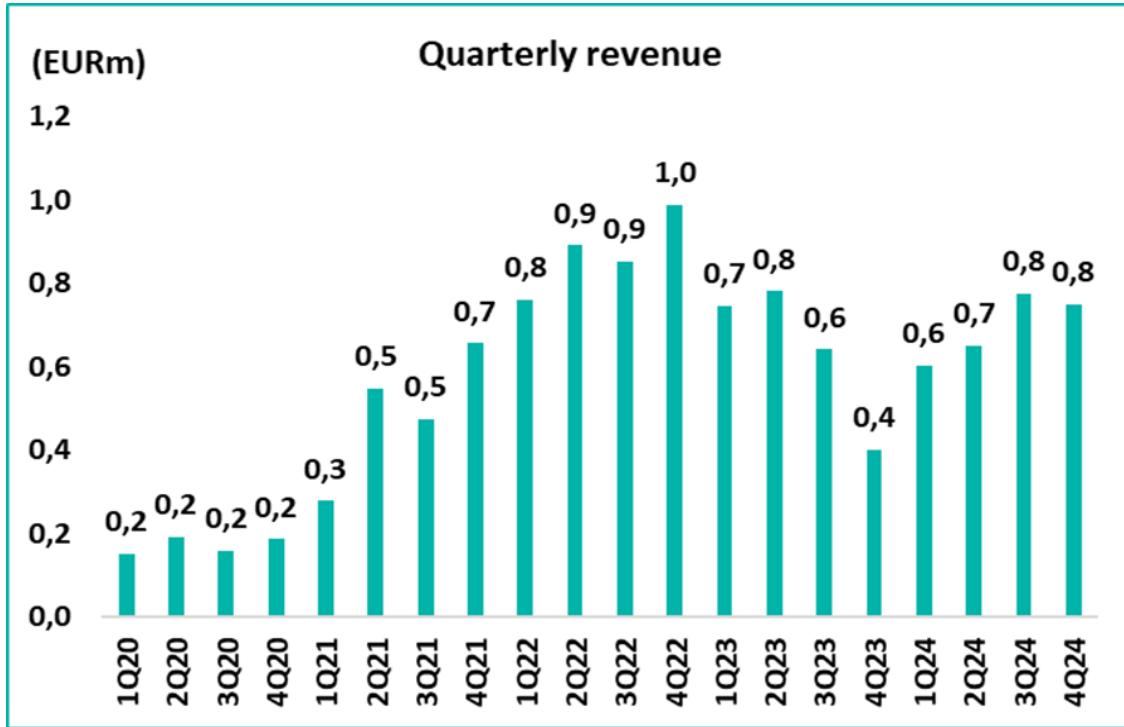
# Nr of projects signed – strong 2H24 led to record 2024



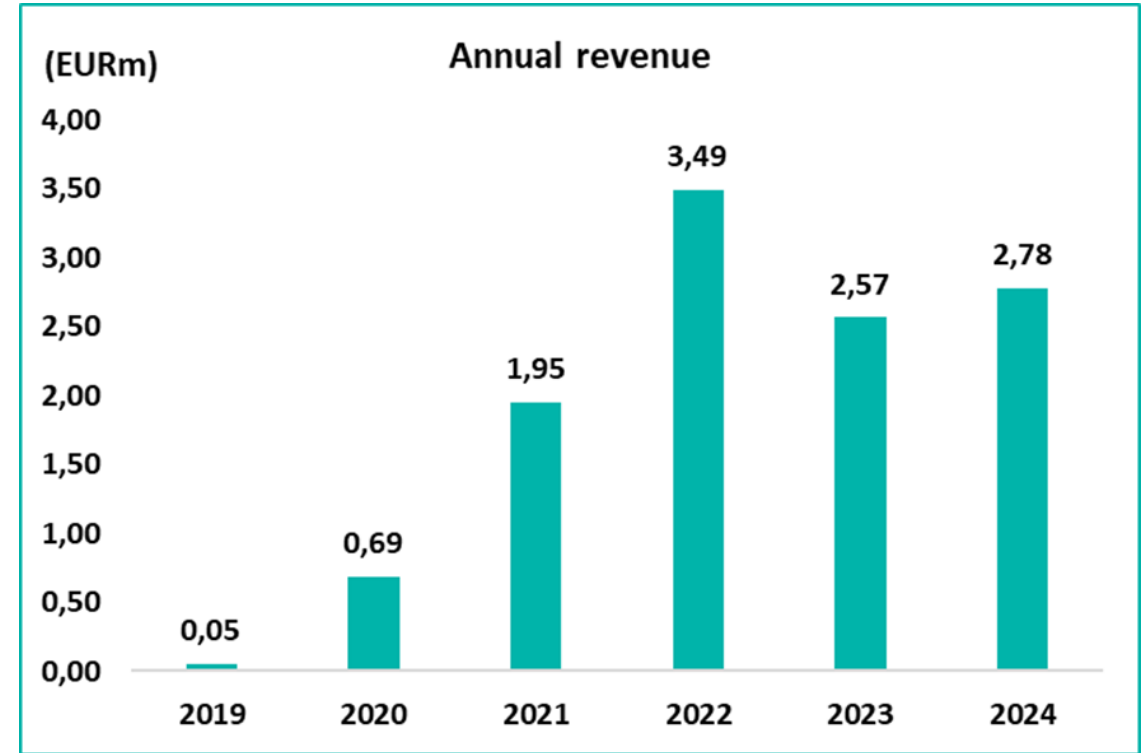
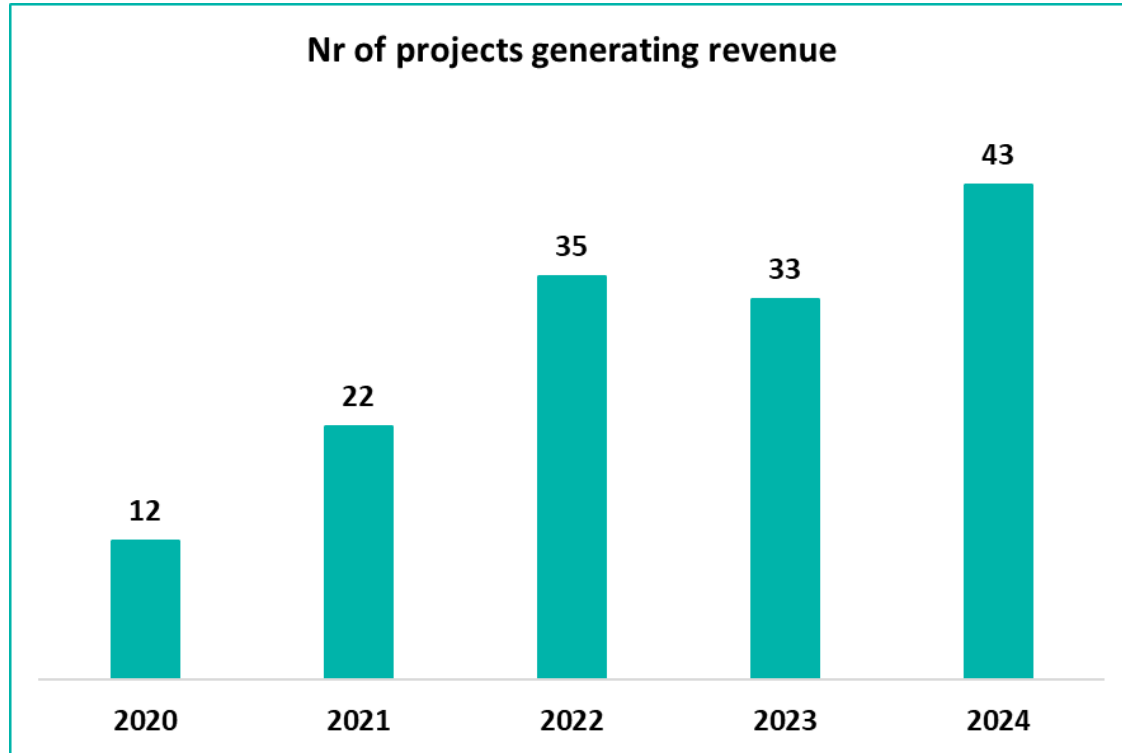
# Another record year both in proposals sent and signed



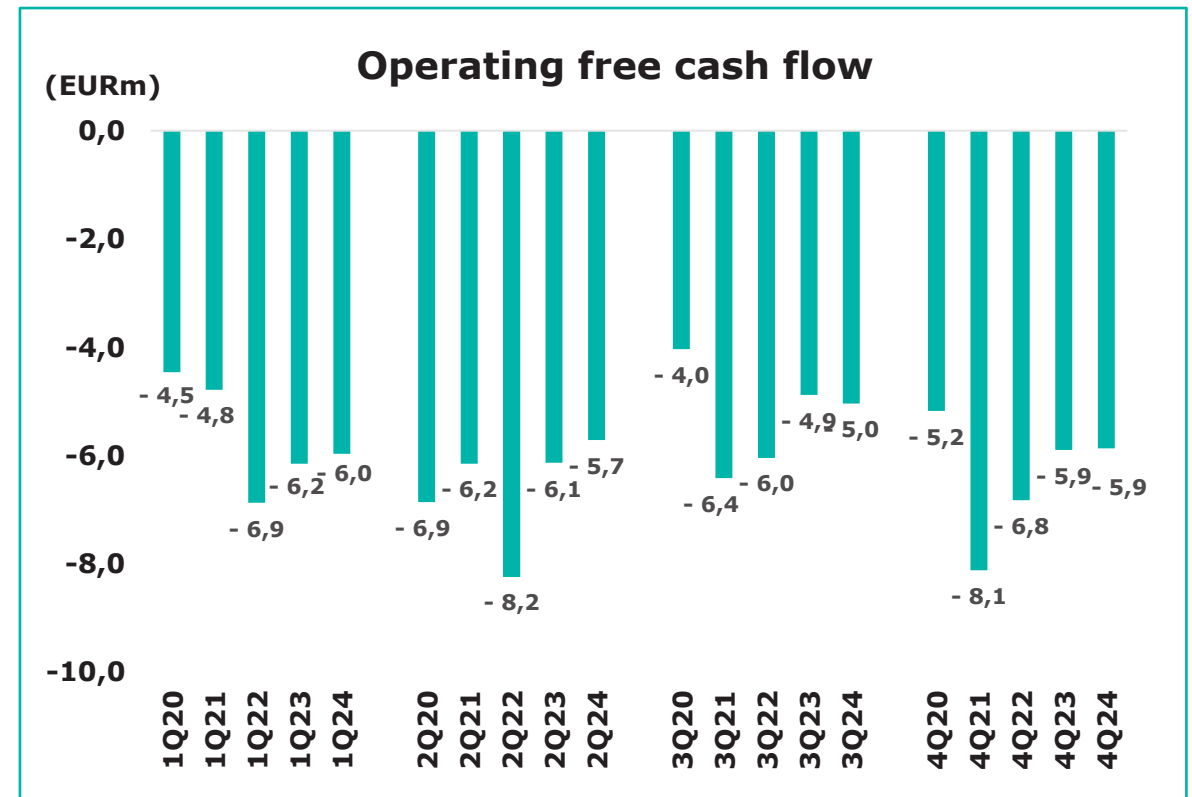
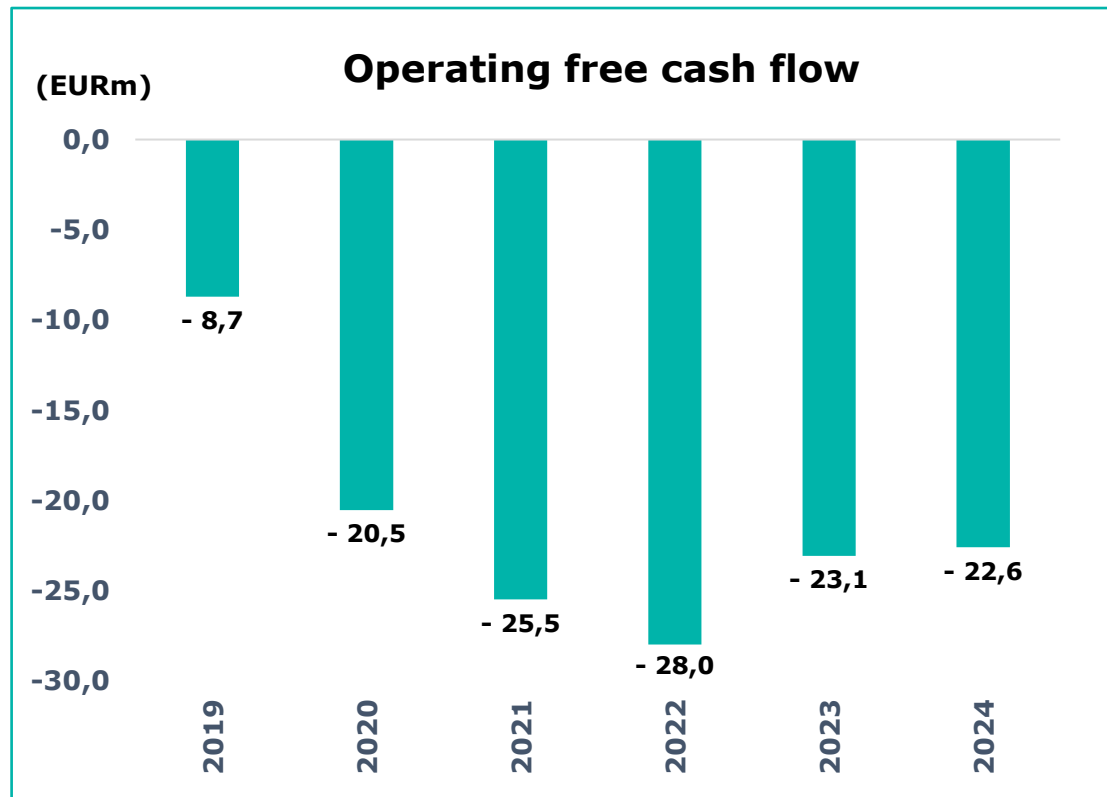
# Revenue +87% y/y in 4Q, +8% in 2024



# Project amount growth strong in 2H, revenue expected to follow



# Operating free cash flow



# Nanoform near-term business targets 2024

| Topic                   | Target   | Outcome  |
|-------------------------|--|--|
| Customer Projects       | <i>Increased number of non-GMP and GMP projects signed in 2024 vs 2023</i>       | <i>25 in 2024 (24 non-GMP and 1 GMP)<br/>vs<br/>23 in 2023 (22 non-GMP and 1 GMP)</i>                          |
| Operating Free Cashflow | <i>Improved operating free cashflow in 2024 vs 2023</i>                          | <i>EUR -22.6m 2024<br/>vs<br/>EUR -23.1m in 2023</i>   |
| Commercialization       | <i>To sign one or several license / commercial supply agreements during 2024</i> | <i>Feb 27, 2025: we expect to sign deals on our first three product kernels in the coming weeks and months</i> |

# Nanoform near-term business targets 2025

**I**

**To sign several license/commercial supply agreements on several product kernels during 2025**

**II**

**First pivotal bioequivalence clinical study with a nanoformed medicine**

**III**

**Increased number of non-GMP and GMP projects signed in 2025 vs 2024**

**IV**

**Improved free cash flow in 2025 vs 2024**



# Nanoform mid-term business targets 2030

*To be announced during 2025 in  
conjunction with Capital Markets Day*



# Commercial

CCO Christian Jones

&

CDO Peter Hänninen

# Nanoform commercial highlights 2024

- ✓ **New annual record in customer project intake**
- ✓ **10 new customers including 1 new major pharma, now 11 out of top 20 pharma**
- ✓ **Record number of customers returning with new projects**
- ✓ **Significant traction with originators on Nanoform's Product Kernels**
- ✓ **Strong interest in biologics – significant market demand and several exclusivity discussions initiated**
- ✓ **Expanded market presence into Japan with strong momentum established through sales partnership with CBC Japan (Distributor)**
- ✓ **Significant investment in commercial including C-level approaches**
- ✓ **2 new members in the commercial team and several C-level consultants added**
- ✓ **Multiple customers/partners visits to Nanoform manufacturing facility, Helsinki, including AstraZeneca, ex-chairman of Janssen, ex-senior executive of Pfizer, PolPharma, CBC Japan etc.**
- ✓ **Momentum building in pipeline as seen with new record in CPhI meetings 100+**

# Nanoform Product Kernels

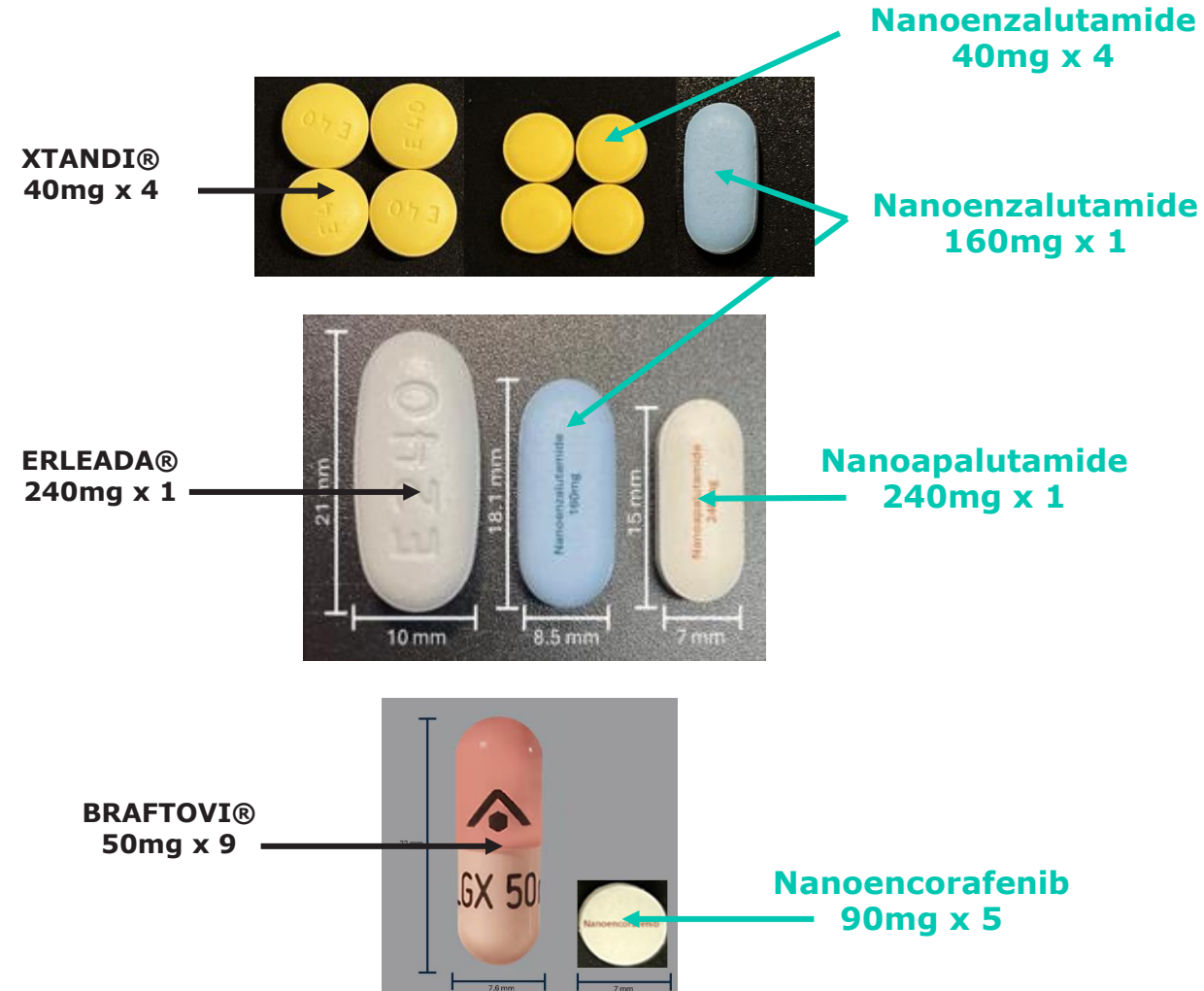
| <b>Nanoform internal<br/>Product Kernel work</b>                          | <b>Development partners</b>  | <b>Commercial partners</b>   |
|---|--|--|
| 1. Value proposition around a medicine candidate, called 'Product Kernel' | Originator<br>or<br>Supergeneric / High value medicine company                                       | Originator<br>or<br>Supergeneric / High value medicine company   |
| 2. New IP that Nanoform owns in an R&D phase                              | 1. Upfront payments<br>2. Milestones<br>3. Revenue from Nanoforming the medicine for clinical trials | 1. Upfront payments<br>2. Milestones<br>3. Revenue from Nanoforming the medicine for clinical trials and commercial phase<br>4. Royalties/profit share |

# Nanoform Product Kernel overview\*

| Originator          | Indication                               | Expected originator peak sales | Nanoform Product Kernels |                              |                          |                               |                                | Nanoform Pre-Clinical (non-GMP) |                            |                                   |                                | Nanoform Clinical (GMP) |                                | Nanoform at Market (GMP) |                   |
|---------------------|--|--------------------------------|--------------------------|------------------------------|--------------------------|-------------------------------|--------------------------------|---------------------------------|----------------------------|-----------------------------------|--------------------------------|-------------------------|--------------------------------|--------------------------|-------------------|
|                     |  |                                | Nanoformed API           | Delivery route / dosage form | Nanoform ownership today | Development partnering status | Targeted commercial partnering | PoC*                            | Pre-formulation + in-vitro | Dosage form development + in vivo | PoP* / Dosage form development | Phase 1 / Pilot         | Pivotal (final clinical trial) | Targeted market launch   |                   |
| Astellas/<br>Pfizer | XTANDI®/Prostate cancer                  | ~\$5bln                        | Nanoenzalutamide         | Oral / Tablet                | 25 %                     | OnConcept Consortium          | 2025                           |                                 |                            |                                   |                                |                         |                                |                          | 2027 US & 2028 EU |
| Johnson & Johnson   | ERLEADA®/Prostate cancer                 | ~\$5bln                        | Nanoapalutamide          | Oral / Tablet                | 100 %                    | 2025                          | 2025                           |                                 |                            |                                   |                                |                         |                                |                          | 2032 US & EU      |
| Pfizer              | BRAFTOVI®/Melanoma and colorectal cancer | ~\$800mln                      | Nanoencorafenib          | Oral / Tablet                | 100 %                    | 2025                          | 2025                           |                                 |                            |                                   |                                |                         |                                |                          | 2030 US & 2033 EU |
| Undisclosed         | Inflammation                             |                                | Undisclosed              | Oral / Tablet                | 100 %                    | Partnered                     | 2025                           |                                 |                            |                                   |                                |                         |                                |                          |                   |
| Undisclosed         | Oncology                                 |                                | Undisclosed              | Oral / Tablet                | 100 %                    | 2025                          | 2025-26                        |                                 |                            |                                   |                                |                         |                                |                          |                   |
| Undisclosed         | Prostate cancer                          |                                | Undisclosed              | Long Acting                  | 100 %                    | 2025                          | 2026                           |                                 |                            |                                   |                                |                         |                                |                          |                   |
| Undisclosed         | Oncology                                 |                                | Undisclosed              | Long Acting                  | 100 %                    | Partnered                     | 2026                           |                                 |                            |                                   |                                |                         |                                |                          |                   |
| Undisclosed         | Oncology                                 |                                | Undisclosed              | High Conc. Sub.Cut. Bio      | 100 %                    | 2025                          | 2026 - 27                      |                                 |                            |                                   |                                |                         |                                |                          |                   |

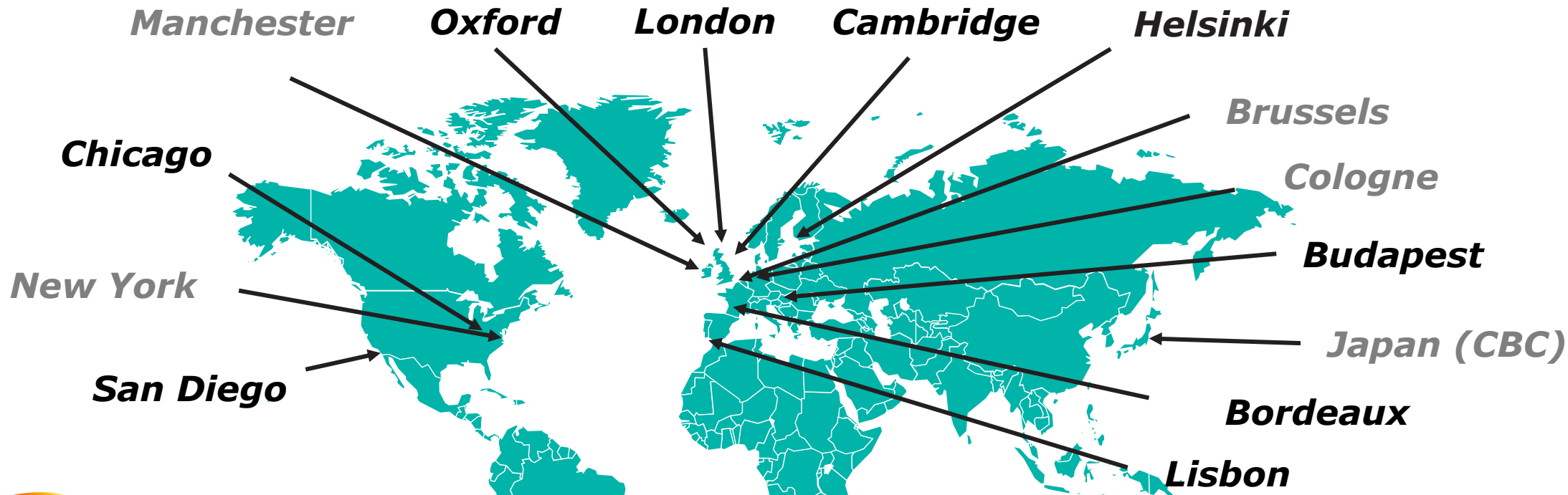
# Leading Product Kernels

|                             | <u>Existing drug</u> | <u>Nanoformed version</u>       |
|-----------------------------|----------------------|---------------------------------|
|                             | <b>XTANDI®</b>       | <b>Nanoenzalutamide</b>         |
| <b>Formulation</b>          | <b>ASD</b>           | <b>Crystalline Nanoparticle</b> |
| <b>Drug load 160mg (x1)</b> | -                    | 40 %                            |
| <b>Drug load 40mg (x4)</b>  | 12 %                 | 40 %                            |
| <b>Size 160mg (x1)</b>      | -                    | 18.1 x 8.6 mm                   |
| <b>Size 40mg (x4)</b>       | 10.1 mm              | 8.0 mm                          |
|                             | <b>ERLEADA®</b>      | <b>Nanoapalutamide</b>          |
| <b>Formulation</b>          | <b>ASD</b>           | <b>Crystalline Nanoparticle</b> |
| <b>Drug load 240mg (x1)</b> | 21 %                 | 42 %                            |
| <b>Drug load 60mg (x4)</b>  | 7 %                  | 42 %                            |
| <b>Size 240mg (x1)</b>      | 21 x 10 mm           | 15 x 7 mm                       |
| <b>Size 60mg (x4)</b>       | 17 x 9 mm            | 8 mm                            |
|                             | <b>BRAFTOVI®</b>     | <b>Nanoencorafenib</b>          |
| <b>Formulation</b>          | <b>ASD</b>           | <b>Crystalline Nanoparticle</b> |
| <b>Drug load 90mg (x5)</b>  | -                    |                                 |
| <b>Drug load 75mg (x6)</b>  | 12 %                 |                                 |
| <b>Drug load 50mg (x9)</b>  | 12 %                 |                                 |
| <b>Drug load 45mg (x10)</b> | -                    |                                 |
| <b>Size 90mg (x5)</b>       | -                    |                                 |
| <b>Size 75mg (x6)</b>       | 23 x 8.5 mm          |                                 |
| <b>Size 50mg (x9)</b>       | 22 x 7.6 mm          |                                 |
| <b>Size 45mg (x10)</b>      | -                    |                                 |



# Experienced global sales team driving commercialization

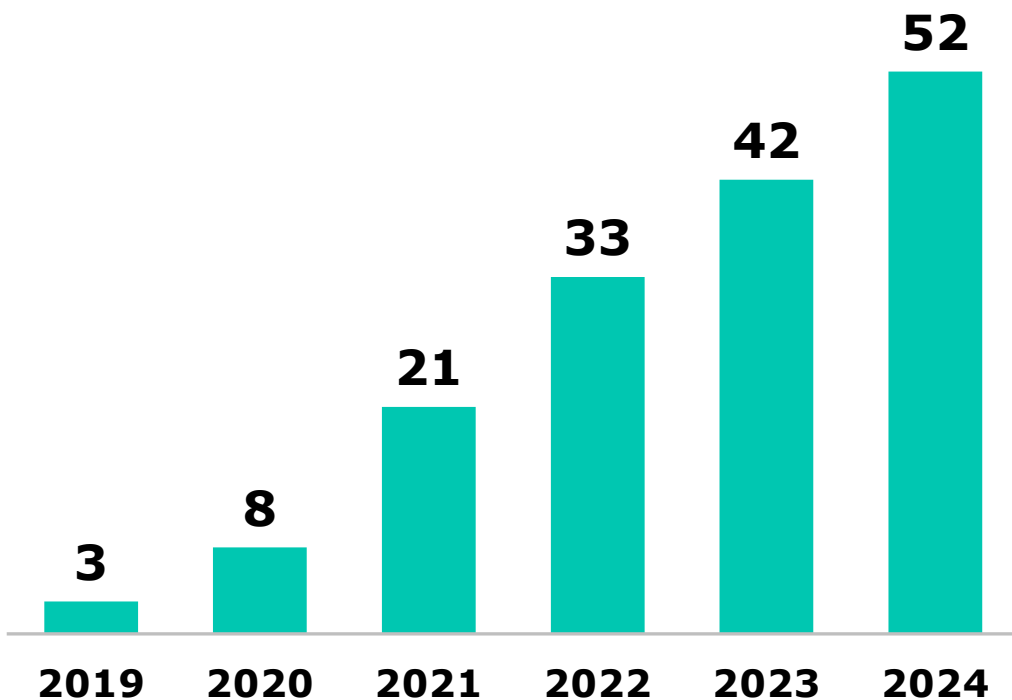
– Locations and previous experiences



# Cumulative number of customers and customer projects signed

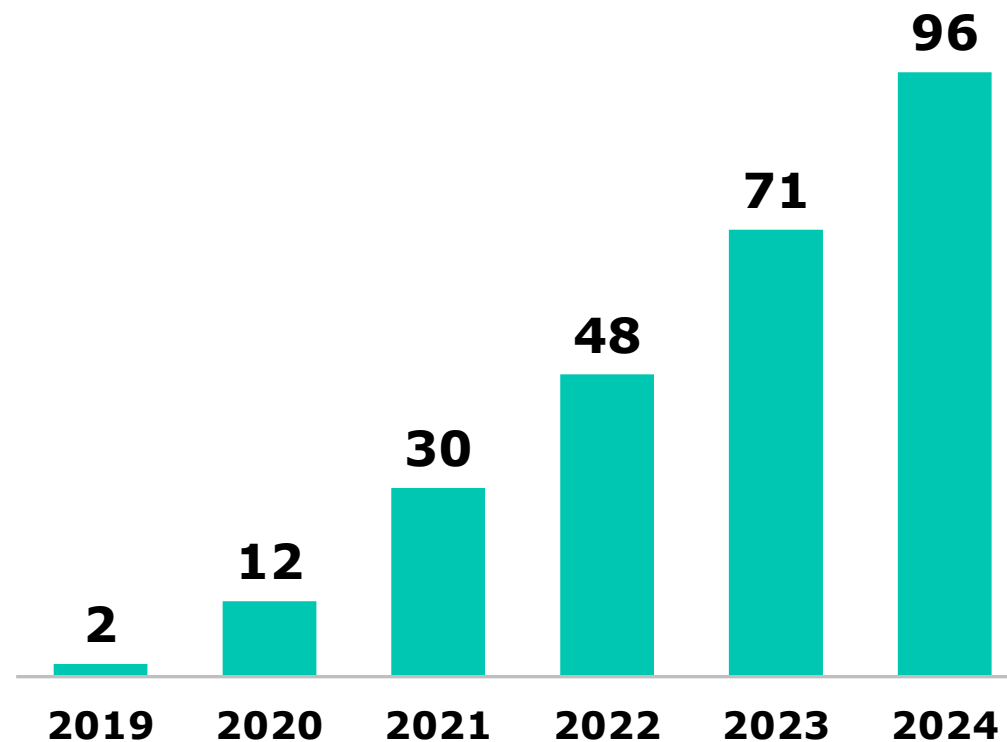
## Customers

3 new  
in Q4



## Customer Projects

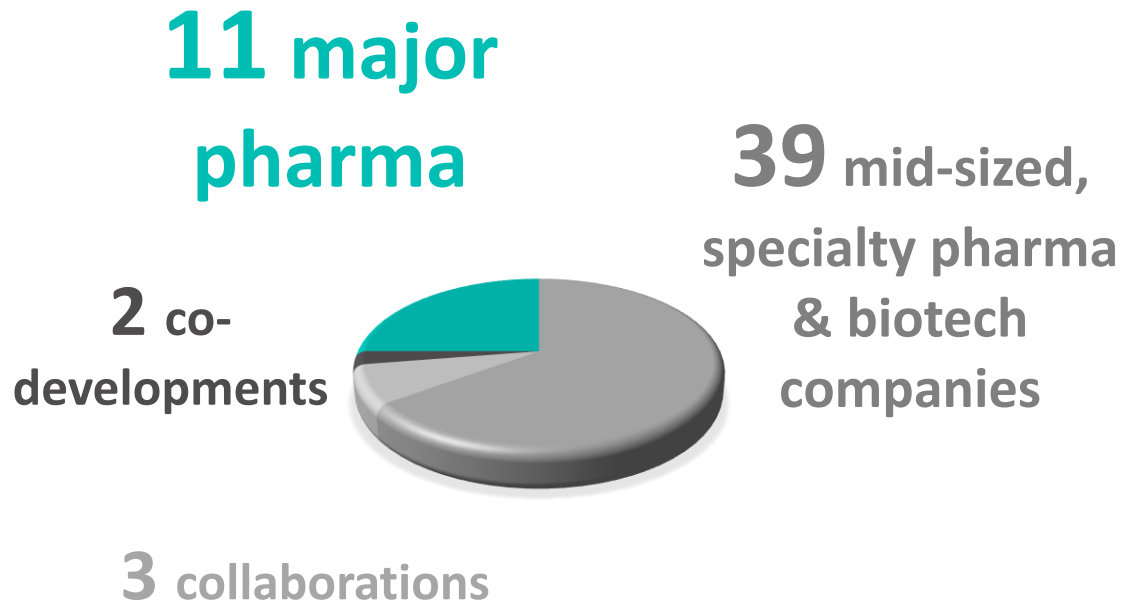
8 new  
in Q4





# Commercial Relationships 2019-2024

## Customer mix



## Selection of partners

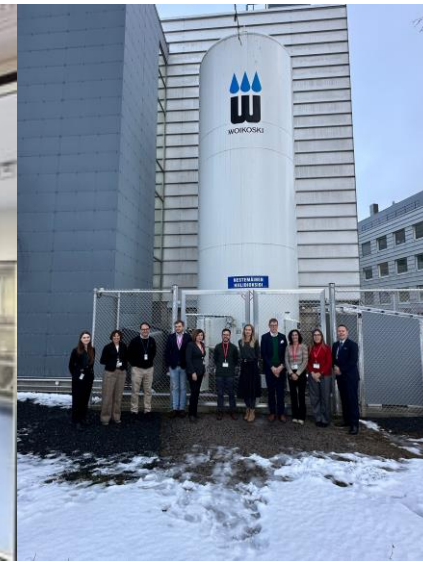


# Leading world congresses and customer factory tours at HQ in Helsinki



Nanoform are front and centre at the worlds leading conferences around drug delivery – CCO Christian Jones and VP Christopher Worrall leading the discussions with major pharma around high concentration dosage forms for small and large molecules.

PolPharma visiting Nanoform headquarters in Helsinki, just 15min from the airport. Head of Manufacturing Dr David Rowe showing Nanoform GMP manufacturing capabilities. Further to the right the guests and hosts at Nanoform’s liquid CO2 tank, which is providing the ‘blood’ to the CESS supercritical nanoforming manufacturing process.



Dr Ajit Shetty, former Chairman of Janssen, and Dr Makarand Jawadekar, former Pfizer global R&D executive, visit Nanoform HQ in Helsinki.



Director Sophie Janbon and Director Geof Wolfenden, AstraZeneca Plc, visit Nanoform HQ in Helsinki.

Nanoform CCO Christian Jones at the centre of BioAsia 2025 panel “Innovations Shaping the Future of the Global Life Sciences Landscape”, with Novartis, Johnson & Johnson, Sun Pharma and CSR – the panel was hosted by Deloitte.



# Selection of upcoming events

|                        |  |
|------------------------|--|
| <b>March 11</b>        | <b>Danske Bank Small &amp; Mid Cap Seminar, Stockholm</b>                                  |
| <b>March 12-13</b>     | <b>Swiss Nordic BIO, Zürich</b>  |
| <b>March 16-20</b>     | <b>DCAT, New York</b>  |
| <b>March 17-19</b>     | <b>BIO-Europe Spring, Milan</b>  |
| <b>March 26-27</b>     | <b>DNB/Back Bay Nordic-American Healthcare Conference, New York</b>                        |
| <b>March 26-29</b>     | <b>The 145<sup>th</sup> Annual Meeting of the Pharmaceutical Society of Japan, Fukuoka</b> |
| <b>April 15</b>        | <b>Annual General Meeting, Helsinki</b>  |
| <b>April 28-30</b>     | <b>LSX World Congress, London</b>  |
| <b>May 6-9</b>         | <b>RDD Europe, Estoril, Portugal</b>   |
| <b>May 12-14</b>       | <b>Bioequity, Bruges</b>   |
| <b>May 20</b>          | <b>Nanoform Q1 2025 report</b>   |
| <b>May 20-22</b>       | <b>CPHI North America, Philadelphia</b>  |
| <b>June 2-4</b>        | <b>16<sup>th</sup> Global DDF, Berlin</b>  |
| <b>June 12</b>         | <b>Danske Bank Healthcare Seminar, Helsinki</b>  |
| <b>June 16-19</b>      | <b>BIO International, Boston</b>   |
| <b>August 21</b>       | <b>Nanoform Q2 2025 report</b>   |
| <b>September 15-16</b> | <b>DDF American Summit, Boston</b>   |
| <b>October 27-28</b>   | <b>PODD, Boston</b>  |
| <b>October 28-30</b>   | <b>CPHI, Frankfurt</b>   |
| <b>November 3-5</b>    | <b>Bio Europe, Autumn, Vienna</b>  |
| <b>November 9-12</b>   | <b>AAPS PharmaSci 360, Texas</b>   |
| <b>November 20</b>     | <b>Nanoform Q3 2025 report</b>   |
| <b>December 10-12</b>  | <b>DDL, Edinburgh</b>  |



Q & A

*Nanoform headquarters in Helsinki, Finland*

[www.nanoform.com](http://www.nanoform.com)

*San Diego - Chicago - New York - Lisbon - Manchester - Oxford - London - Cambridge - Bordeaux - Cologne - Stockholm - Budapest - Helsinki - Tokyo*

A scenic landscape featuring a calm lake in the foreground, reflecting the surrounding trees. The shoreline is lined with trees in vibrant autumn colors, including bright yellows and oranges. In the background, a dense forest of tall, dark evergreen trees rises against a clear, light blue sky. A small wooden dock is visible on the shore near the water's edge.

# APPENDIX

# Interesting short videos:

Nanoform high dose subcutaneous delivery of biologics:

<https://nanoform.com/en/nanoform-high-dose-subcutaneous-delivery-of-biologics/>

Discover how Nanoformed API outperform traditional solid dispersions:

<https://nanoform.com/en/nanoform-cphi-milan-2024-tamas-solymosi/>

Nanoform's best-in-class nanodevelopment capabilities:

<https://nanoform.com/en/nanoform-development-capabilities/>

Nanoform's advanced nanoformulation, nanoanalytical, and best-in-class capabilities:

<https://nanoform.com/en/nanoform-formulation-and-analytical-tour/>

Nanoform's state-of-the-art manufacturing capabilities:

<https://nanoform.com/en/nanoform-dr-david-rowe-manufacturing-with-drone/>

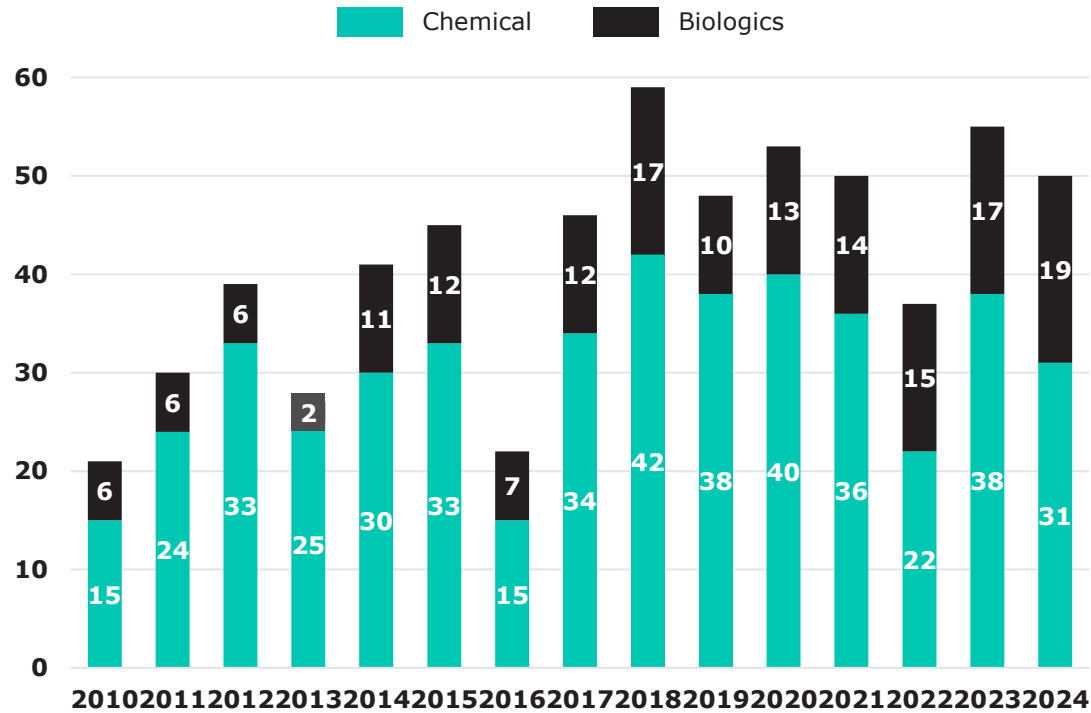


# The structural pharma R&D problem in the pharma industry

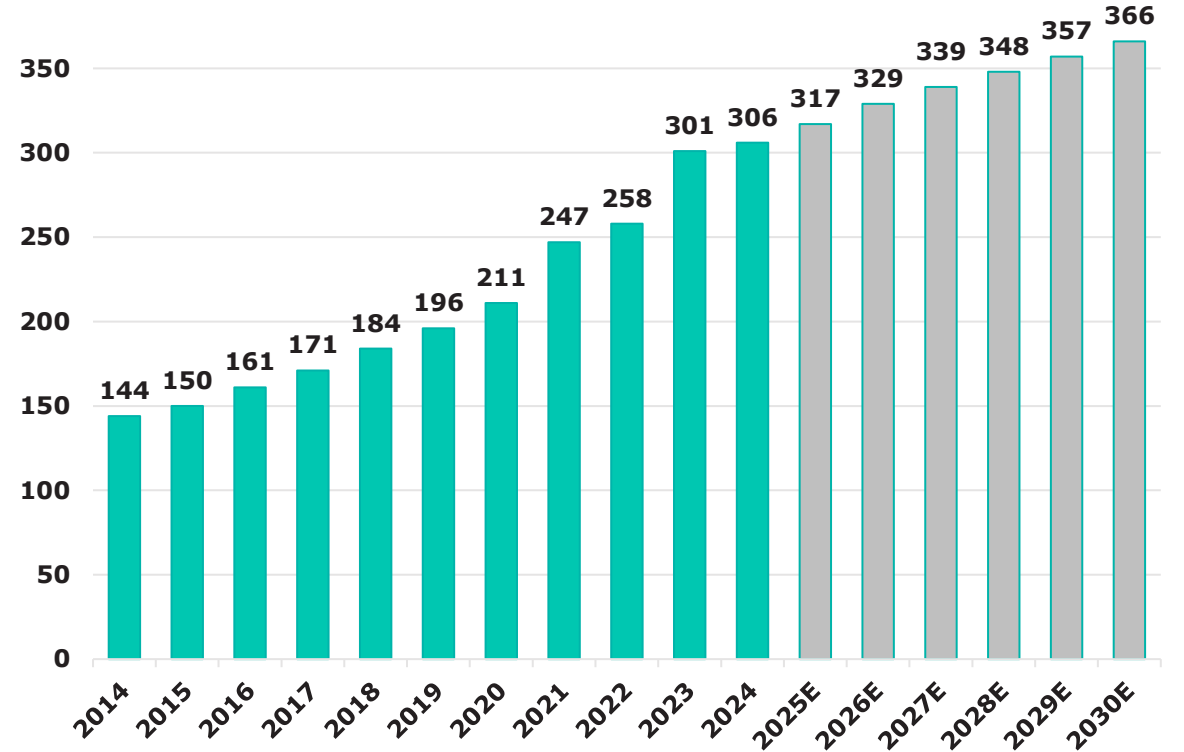
Fewer than 50 drugs approved in the US annually on average...

...while the global pharma industry R&D expenditure exceeds \$300B

Annual number of novel drug approvals by FDA 2010-2024



Global pharmaceutical R&D spending 2014-2030E (USDbn)

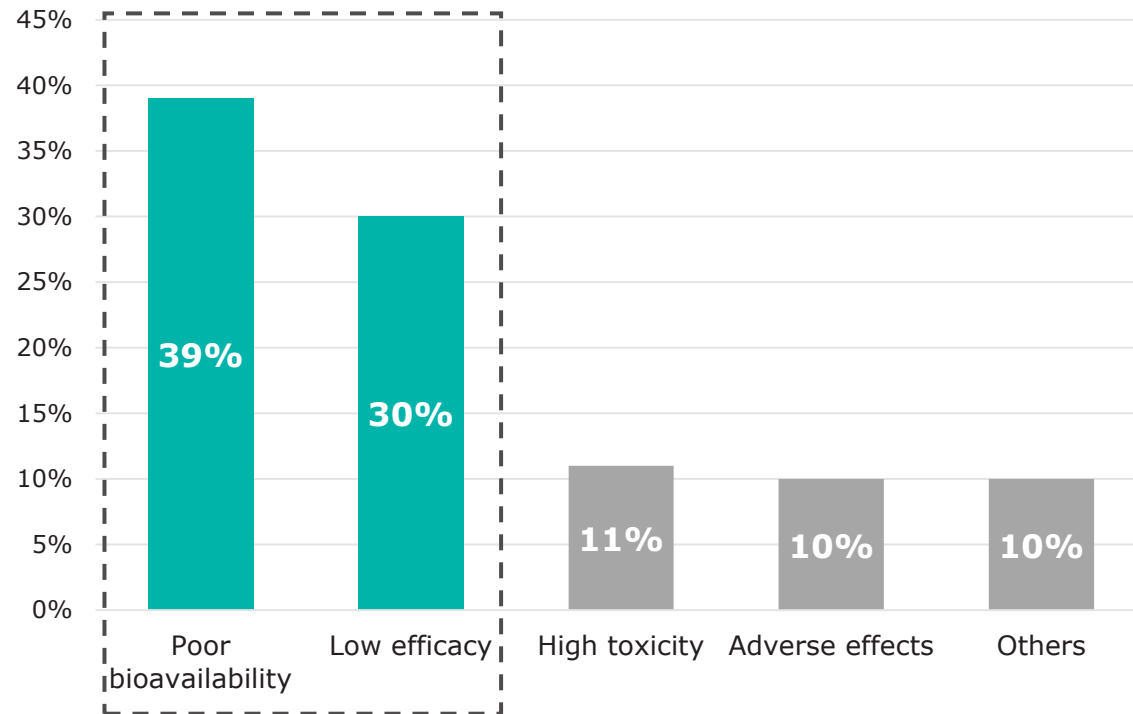


➤ A game changer is needed to improve R&D yield

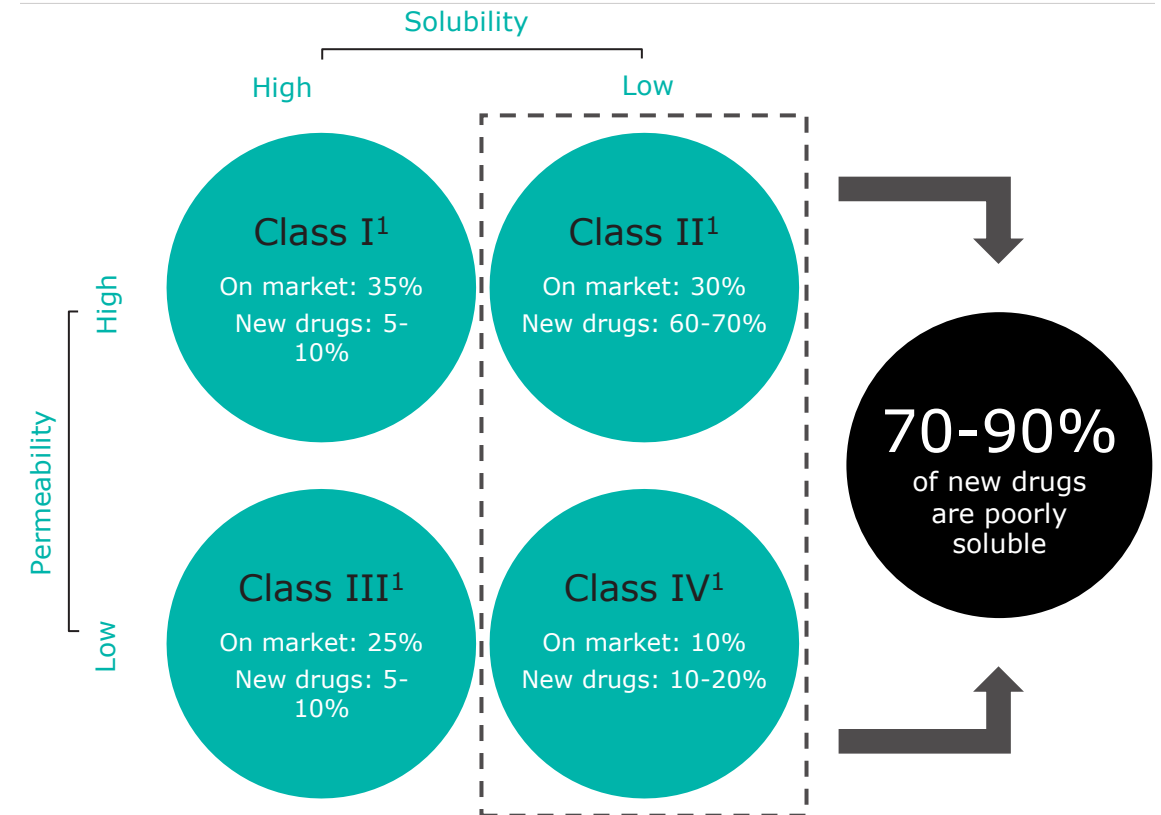
# Low bioavailability is the key issue

## Poor bioavailability and low efficacy most common reasons for drug failure

Reasons for drug failure in pre-clinical trials (share of molecules)



## Majority of new drugs suffer from poor solubility

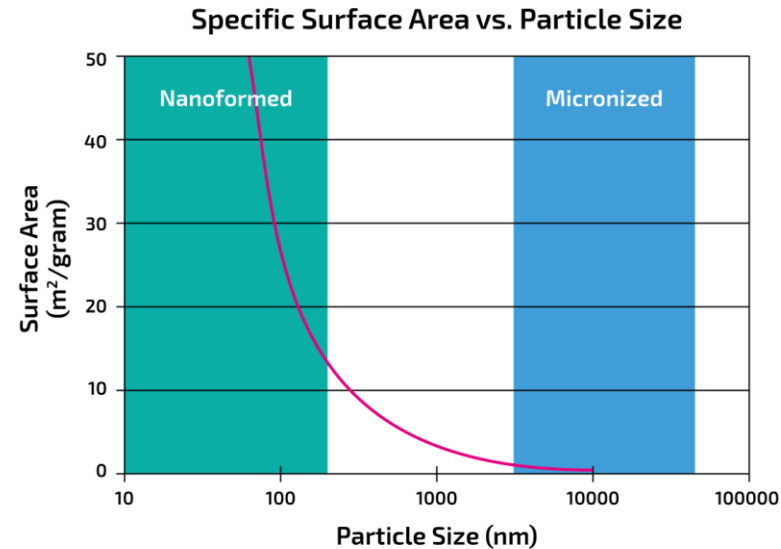


➤ Nanoform can enhance the pharma industry output by targeting poorly soluble drugs

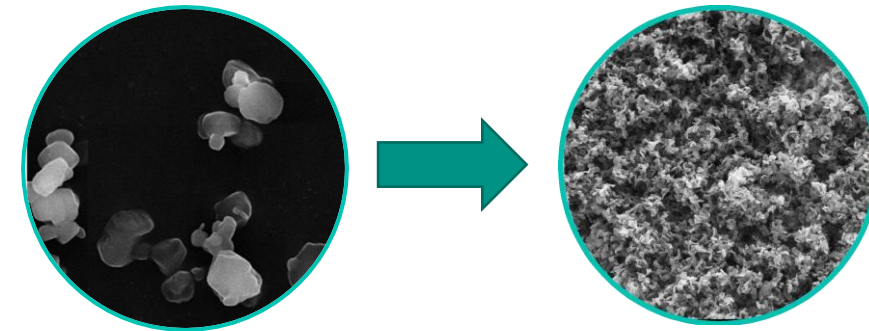


# Particle size is key

## Smaller particle size can improve a drug's bioavailability



- The surface area increases 30-fold from a 10 micron<sup>1</sup> sized particle once the particle size is reduced to 100nm
- Reduction of particle size down to 50nm increases the surface area by 1,000-fold



Pre-nanoforming

Post-nanoforming

- Smaller particles have a larger surface area
- Larger surface area of particles enables improved bioavailability of a drug
- Improved bioavailability implies increased absorption of a drug by the body's circular system
- CESS<sup>®</sup> can produce API with large surface areas which can significantly improve the bioavailability of drugs

➤ CESS<sup>®</sup> produced nanoparticles have a larger surface area and as such improved bioavailability.

# Small molecules - Small is powerful®



# Nanoform is here to fill the gap

Enabling  
new drugs

> **20,000**  
drugs in  
development\*

Improving  
existing  
drugs

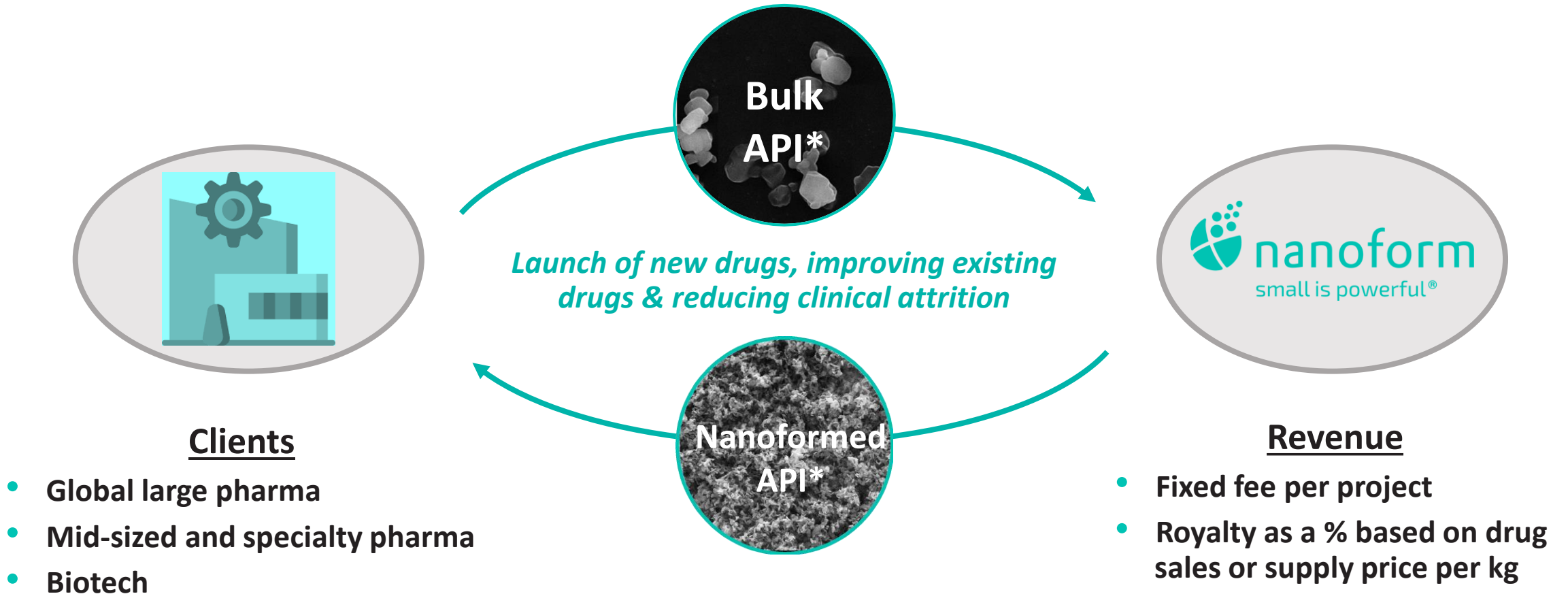
> **5,800**  
existing drugs\*

Giving  
unsuccessful  
drug candidates a  
second chance

> **58,000** failed  
drugs in the last 40  
years\*

# Simplified value chain

*High level overview of Nanoform's value chain and business model*



# Growth from IPO 2020 to December 2024

|                                  | <i>IPO June 2020</i> | <i>December 2024</i> | <i>Growth</i> |
|----------------------------------|----------------------|----------------------|---------------|
| <b>Employees</b>                 | <b>50</b>            | <b>181</b>           | <b>~3x</b>    |
| <b>Manufacturing lines</b>       | <b>5</b>             | <b>20</b>            | <b>~4x</b>    |
| <b>Customers enrolled</b>        | <b>5</b>             | <b>52</b>            | <b>~10x</b>   |
| <b>Customer projects started</b> | <b>5</b>             | <b>96</b>            | <b>~19x</b>   |
| <b>Patents granted</b>           | <b>5</b>             | <b>42</b>            | <b>~8x</b>    |

# Revenue drivers & industry attrition rates

## Nanoform pre-clinical and clinical revenue drivers

### Non-GMP

Proof of Concept (PoC)

- # of active customers
- # of APIs per customer
- Price per PoC per API

Proof of Process (PoP)

- Attrition between PoC and PoP
- Price per PoP per API
- Time lag between PoC and PoP

### GMP

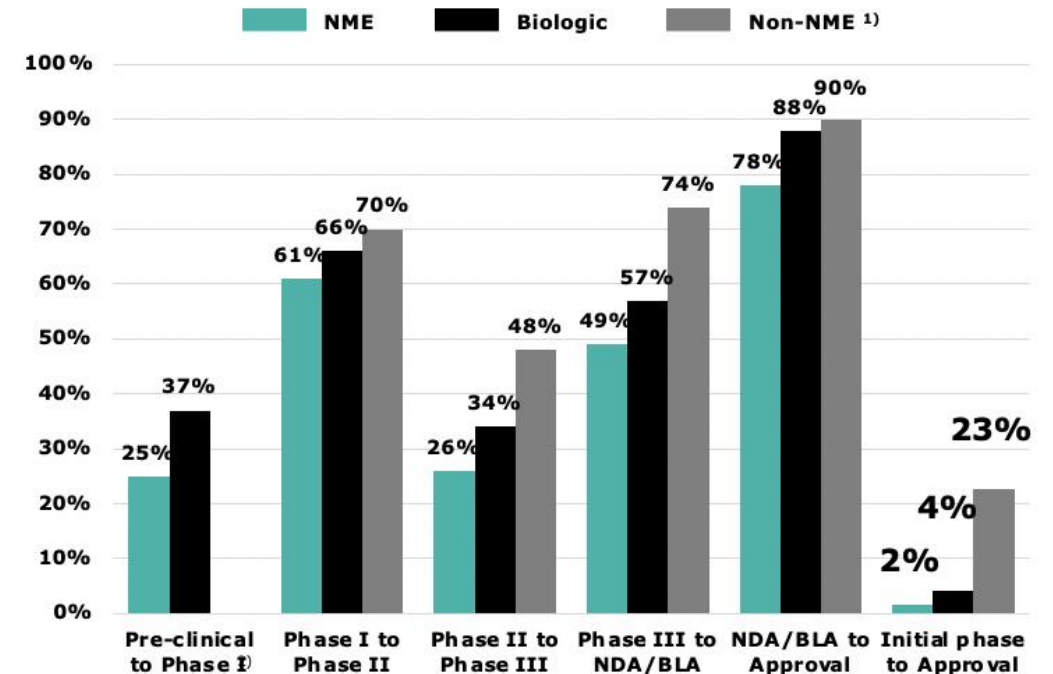
Phase I, II & III and/or 505(b)(2)

- Attrition between previous and current phase
- Price per phase per API
- Time lag between previous and current phase
- # of customers with 505(b)(2) strategy
- Proportion of new drug candidates and 505(b)(2) APIs

Drugs on the market

- # of drugs on the market using CESS®
- License fee & royalty level per drug
- Net revenues per drug
- Time lag Phase II and market (505b2)
- Time lag Phase III and market
- Speed of uptake on market

## Global Pharmaceutical industry's pre-clinical and clinical success rates



| Timeline (years) | Pre-clinical | Phase I                                 | Phase II | Phase III | Approval | Total |
|------------------|--------------|---|----------|-----------|----------|-------|
| New drugs        | ~1-4         | ~2                                      | ~2       | ~3-4      | ~1       | ~9-13 |
| Existing drugs   | -            | Clinical development for 505(b)(2) ~2-5 |          |           | ~1       | ~3-6  |

# Attractive revenue model with pharma and biotech customers

| Phase         | Proof of Concept / Proof of Process   | Phase I – III clinical trials  | Drugs on the market  |
|---------------|---|--|--|
| Certification | Non-GMP   | GMP  | GMP  |
| Description   | <ul style="list-style-type: none"> <li>• Proof of concept study - assessment of the possibility to nanoform a specific API</li> <li>• Proof of process study - definition of parameters to establish the optimal process and controls for a specific API</li> </ul> | <ul style="list-style-type: none"> <li>• API for clinical trials are manufactured in Nanoforms GMP facility</li> <li>• Supply of material for customers' Phase I, II and III trials</li> </ul> | <ul style="list-style-type: none"> <li>• Drugs that have passed the trials and reached commercialization</li> <li>• Significant potential from patent extension (505b2 projects) of drugs already on market</li> </ul> |
| Revenue model | <p><u>Fixed fee per project</u></p> <p>Estimated project fee of EUR 50-500k per API per project</p>   | <p><u>Fixed fee per project</u></p> <p>Estimated project fee of EUR 0.5-10m per API per phase</p>  | <p><u>Royalty as a % on drug sales or supply price per kg</u></p> <p>Estimated royalty fee of 1-20%</p>  |

# Nanoform customer projects – therapy area overview\*

| Pre-Clinical   | Phase I  | Phase II & III   | Marketed/505b2  |
|--|--|--|---|
| <p><b>Cardiology</b><br/>(e.g. Anemia)</p> <p><b>Gastroenterology</b><br/>(e.g. Microbiome)</p> <p><b>Immunology/Inflammation</b><br/>(e.g. Psoriasis)</p> <p><b>Infectious Disease</b><br/>(e.g. HIV)</p> <p><b>Metabolism and Endocrinology</b><br/>(e.g. Diabetes)</p> <p><b>Neurology</b><br/>(e.g. Parkinsons)</p> <p><b>Oncology</b><br/>(e.g. Multiple Myeloma)</p> <p><b>Ophthalmology</b><br/>(e.g. Glaucoma)</p> <p><b>Respiratory</b><br/>(e.g. COPD)</p> | <p><b>Immunology/Inflammation</b><br/>(e.g. Cystic Fibrosis)</p> <p><b>Dermatology/Oncology</b><br/>(e.g. Basal Cell Carcinoma)</p> <p><b>Neurology</b><br/>(e.g. Parkinsons)</p> <p><b>Oncology</b><br/>(e.g. Solid Tumors)</p> <p><b>Ophthalmology</b><br/>(e.g. Cataract)</p> <p><b>Pain</b><br/>(e.g. Post Operative Pain)</p> <p><b>Infectious Disease</b><br/>(e.g. HIV)</p> | <p><b>Metabolism and Endocrinology</b><br/>(e.g. Adrenal Hyperplasia)</p> <p><b>Neurology</b><br/>(e.g. Schizophrenia)</p> <p><b>Oncology</b><br/>(e.g. lung cancer)</p> | <p><b>Infectious Disease</b><br/>(e.g. HIV)</p> <p><b>Immunology/Inflammation</b><br/>(e.g. HEP B)</p> <p><b>Immunology/Inflammation )</b><br/>(e.g. Cystic Fibrosis)</p> <p><b>Oncology</b><br/>(e.g. Prostate Cancer)</p> <p><b>Ophthalmology</b><br/>(e.g. Glaucoma)</p> |



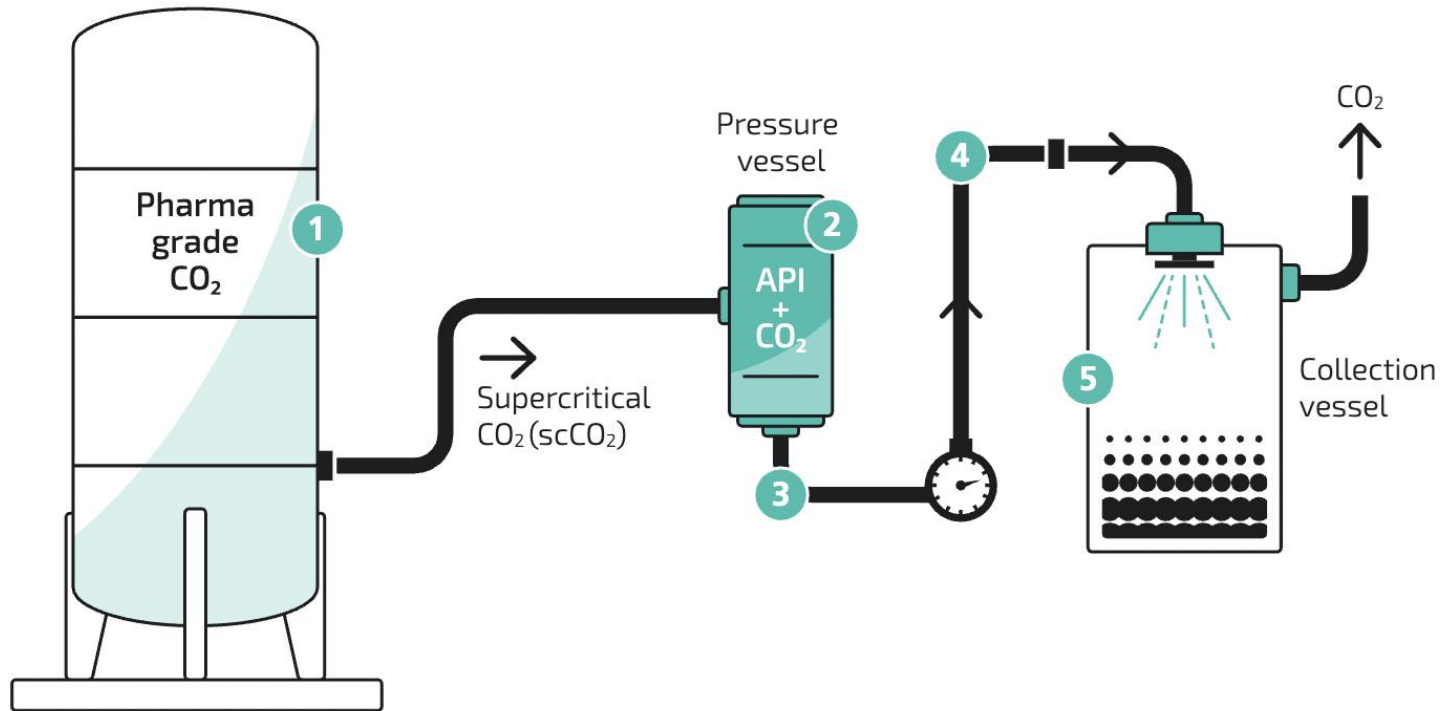
# Customer projects and customer's formulation challenge\*

|                         | Company Type            | Therapeutic Area    | Customer Formulation Challenge         | Pre-Clinical           | Phase 1 | Phase 2 | Phase 3 | Marketed |
|-------------------------|-------------------------|---------------------|--|------------------------|---------|---------|---------|----------|
| Small Molecule          | Mid-Size Pharma/Biotech | Oncology            | Drug Load                              |                        |         |         |         |          |
|                         | Mid-Size Pharma/Biotech | Oncology            | Drug Load                              |                        |         |         |         |          |
|                         | Mid-Size Pharma/Biotech | Autoimmune          | Food Effect/Dose Reduction             |                        |         |         |         |          |
|                         | Large Pharma            | Immunology          | Dissolution                            |                        |         |         |         |          |
|                         | Mid-Size Pharma/Biotech | CNS                 | Drug Load                              |                        |         |         |         |          |
|                         | Large Pharma            | Autoimmune          | Drug Load                              |                        |         |         |         |          |
|                         | Mid-Size Pharma/Biotech | Oncology            | Pill Burden                            |                        |         |         |         |          |
|                         | Mid-Size Pharma/Biotech | Glioblastoma        | Drug Load/Stability                    |                        |         |         |         |          |
|                         | Mid-Size Pharma/Biotech | Respiratory         | Fine Particle Fraction                 |                        |         |         |         |          |
|                         | Mid-Size Pharma/Biotech | Infectious Disease  | Bioavailability/Release Profile        |                        |         |         |         |          |
|                         | Mid-Size Pharma/Biotech | Infectious Disease  | Bioavailability/Release Profile        |                        |         |         |         |          |
|                         | Large Pharma            | Infectious Disease  | Long Acting Injectable/Release Profile |                        |         |         |         |          |
|                         | Mid-Size Pharma/Biotech | Infectious Disease  | Long Acting Injectable/Release Profile |                        |         |         |         |          |
|                         | Large Molecule          | Large Pharma        | Respiratory                            | Fine Particle Fraction |         |         |         |          |
| Mid-Size Pharma/Biotech |                         | Autoimmune/Oncology | Release Profile                        |                        |         |         |         |          |
| Mid-Size Pharma/Biotech |                         | Autoimmune/Oncology | Release Profile                        |                        |         |         |         |          |
| Large Pharma            |                         | Respiratory         | Fine Partciel Fraction/Drying          |                        |         |         |         |          |
| Large Pharma            |                         | Respiratory         | Fine Partciel Fraction/Drying          |                        |         |         |         |          |
| Mid-Size Pharma/Biotech |                         | Obeseity            | Long Acting Injectable/Release Profile |                        |         |         |         |          |
| Mid-Size Pharma/Biotech |                         | Obeseity            | Long Acting Injectable/Release Profile |                        |         |         |         |          |
| Mid-Size Pharma/Biotech |                         | Respiratory         | Fine Particle Fraction                 |                        |         |         |         |          |
| Mid-Size Pharma/Biotech |                         | Endocrinology       | Long Acting Injectable/Release Profile |                        |         |         |         |          |

# Nanoform has made substantial progress in Nanoforming solutions with in-vitro, in-vivo, and clinical study results

- Oncology:** Replaced amorphous solid dispersion (ASD) formulations with nanocrystalline high drug load formulations, matching bioequivalence for Enzalutamide and Apalutamide where life cycle management **opportunities to reduce tablet burden to a single, smaller, easier-to-swallow tablet** as well as working on Aprepitant in partnership with PlusVitech for lung cancer to develop a regimen with substantially fewer tablets.
- Inhalation:** Engineering nanoformulations of both small and large molecules with excellent fine-particle dose (FPD) and fine-particle fraction (FPF) performance in comparison to spray drying technologies. In biologics, Nanoform has shown FPF >95% vs 50% with spray drying for delivering **high drug load** to the lungs.
- Biologics:** Demonstrated in partnership, with Takeda and other companies, **ultra-high concentrations for subcutaneous drug delivery** with acceptable viscosity for injection (Takeda – Plasma Derived Therapies).
- Ophthalmic:** Multiple projects where nanoparticles have shown improved delivery potential. **High drug load** to the eye enabling smaller implants with no requirement for mesh membranes, eye drop suspensions and ophthalmic inserts.
- Hydrogels:** Shown **high drug load** applications (5 x more than nanomilling) for post-surgical glioblastoma drug delivery and deep penetration across the brain parenchyma **enabling non-recurrence of glioblastoma** where other formulations failed.
- IP:** **Novel technologies, processes and formulations** can enable market opportunities, lifecycle management and strong launch strategies

## Controlled Expansion of Supercritical Solutions - CESS<sup>®</sup>



- 1 Supercritical CO<sub>2</sub> is guided into a pressure vessel loaded with API
- 2 Increasing the pressure and temperature in the vessel dissolves the API in supercritical CO<sub>2</sub>
- 3 The CO<sub>2</sub> and the API are released from the pressure vessel and the flow, pressure and temperature profiles are accurately controlled
- 4 The pressure and temperature is controlled to achieve a stable nucleation phase and formation of nanoparticles
- 5 In a collection vessel the CO<sub>2</sub> is sublimated resulting in final nanoparticles ready for collection and formulation

➤ Relatively simple process developed through combining deep knowledge in physics, chemistry, and pharma

# CESS<sup>®</sup> Superior to Existing Technologies

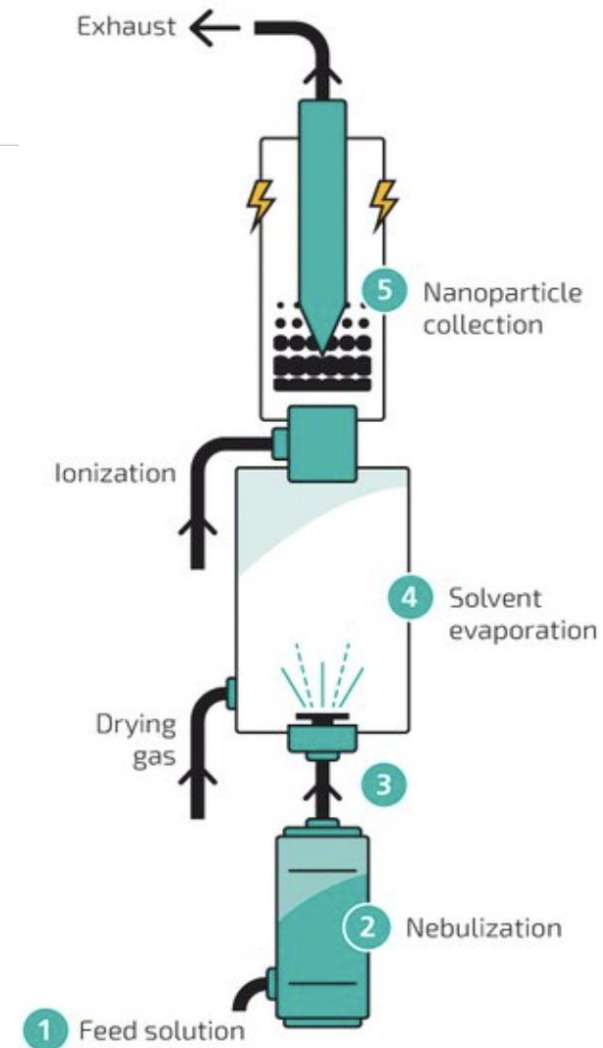
|                                   | Controlled Expansion of Supercritical Solutions (CESS <sup>®</sup> )                         | Solid dispersion (e.g. spray drying)   | Jet milling  | Nanomilling   |
|-----------------------------------|--|--|--|---|
| Description                       | Extracts API from supercritical CO <sub>2</sub> by applying controlled reduction in pressure | API is dispersed into a solid material, which dissolves when exposed to an aqueous media | Application of energy to physically break down API particles to finer ones | API particle size is reduced in a liquid vehicle via grinding       |
| Particle size                     | Down to 10nm   | 300nm-25µm   | 800nm-10µm   | >150nm  |
| Particle formation                | Controlled crystalline or amorphous and stable   | Amorphous (unstable without excipients)  | Unstable (crystalline and amorphous structures)                            | Unstable (crystalline and amorphous – needs excipient to stabilise) |
| Ease of formulation               | ✓  | ✗  | ✗  | ✗   |
| Reproducibility                   | ✓  | ✓  | ✗  | ✗   |
| Free from excipients and solvents | ✓  | ✗  | ✓  | ✗   |
| Yield                             | High   | Low  | High   | Low   |
| Investment                        | Low  | High   | Low  | Low   |

# Large molecules - Proprietary technology

Green  
technology

## Nanoforming process for biologics

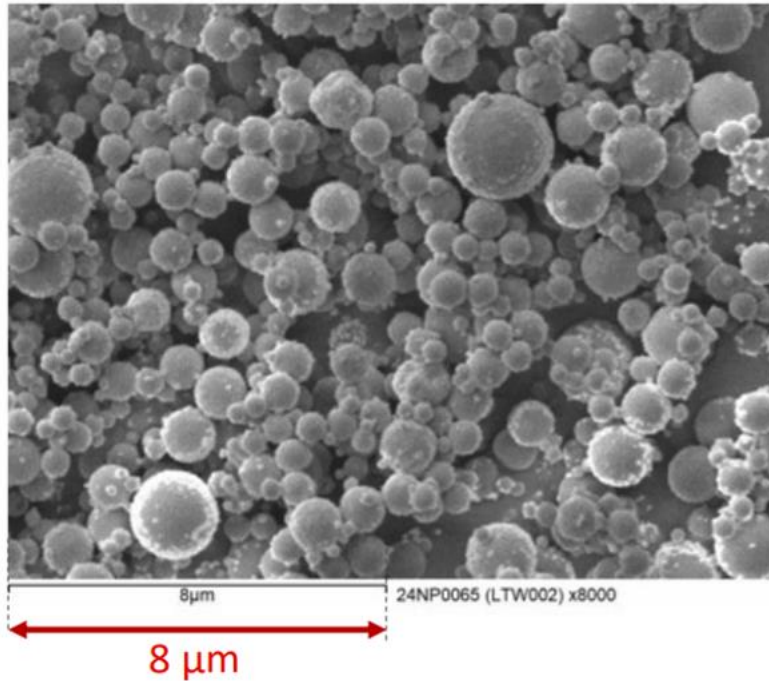
- 1 API containing feed solution is pumped into the nebulizer
- 2 Feed solution is nebulized into a carrier gas
- 3 Mist is transported into the drying chamber via a connection pipe
- 4 Mist is dried using low-temperature drying gas
- 5 Dried particles are charged by the ionizer and collected using electrostatic precipitation



# Comparison of Nanoform's proprietary biologics technology vs existing technologies

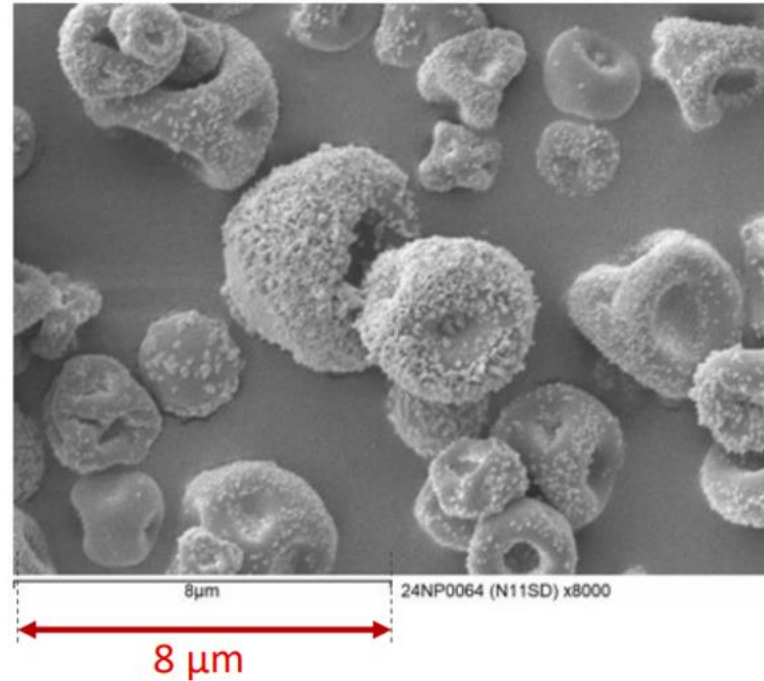
## Nanoformed

Perfect spheres, highly flowable and aerodynamic, great packing and injection properties



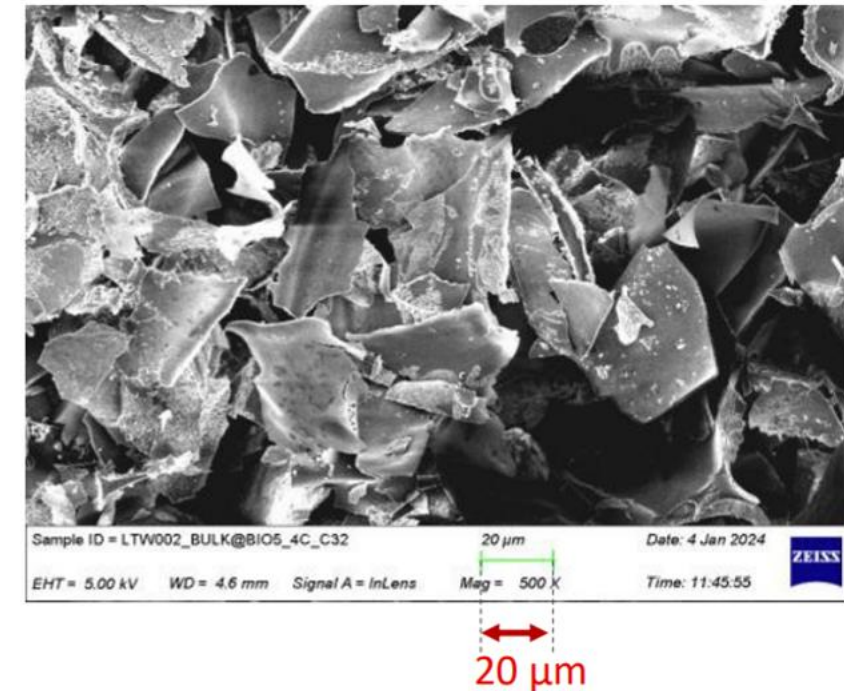
## Spray dried

Sticky, poor flowability, raisin shaped



## Lyophilized / freeze dried

Flaky morphology, dry cake, no flowability



**Nanoforming biologics: Superior flowability, aerodynamic performance, high density packing, lower injection force properties, improved material quality and stability properties vs spray drying and lyophilization**

# Business case Amorphous Solid Dispersions (ASDs)

Amorphous solid dispersion (ASD) medicines are currently the leading formulation strategy for poorly soluble APIs and there are ~50 marketed medicines globally that are ASDs and sell for ~\$50bln annually

Nanoformed and nanocrystalline medicines (e.g. nanoenzalutamide etc) offer an attractive alternative to ASD medicines (and other) with the following benefits to originators and supergeneric/high value medicines companies:

- ***green manufacturing process***
- ***substantially higher drug load in the final drug product***
- ***reduced pill burden for the patient***
- ***opportunity to extend IP protection for the reformulated and improved product***
- ***opportunity for earlier market entry***
- ***possibility for fixed dose combinations***

# Nanoenzalutamide clinical trials

2023-2024

Phase 1/Pilot clinical trial in North America.

**Relative bioavailability study** of nanocrystalline-enabled enzalutamide (nanoenzalutamide) tablet formulation, an alternative to the amorphous solid dispersion (ASD) used in Xtandi®.

The single-dose, randomized, comparative bioavailability study, which was performed by a contract research organization (CRO) in North America and completed on January 25, 2024, compared enzalutamide 160mg filmcoated tablets (Bluepharma) and Xtandi® 4×40 mg film-coated tablets (Astellas Pharma Europe B.V.).

The **clinical trial demonstrated promising results.**

2025

**Pivotal bioequivalence clinical trials** in EU and US are expected to start in Q2 2025, with first read-outs in Q2 2025.

Bioequivalence means 80% - 125% of the Cmax and AUC in a **large cohort study in fed and fasted states** with a 90% confidence interval.

Nanoenzalutamide is expected to progress via the ANDA (Abbreviated New Drug Application)/Hybrid generic pathway and as such will need **to show bioequivalence vs the originator product, Xtandi®.**

License and commercial supply agreements are expected to be signed shortly.

We plan nanoenzalutamide to take a meaningful share of this market through its highly **patient centric product differentiation** (1 tablets 4 tablets) and **unique IP position** (different technology, crystalline product, different excipients), while not forgetting its **green attributes.**



# Project Nanoenzalutamide (oral tablet for prostate cancer)

**Clinical results 26.1.2024:** Very promising relative bioavailability study of nanocrystalline-enabled enzalutamide\* (nanoenzalutamide) tablet formulation.

**Nanoforming benefits:** 1) Opportunity for an improved and differentiated finished product, 2) Development of a 160mg, single tablet per day regimen may be preferable for patients in need of reducing their total number of daily pills 3) Unique IP position may allow the nanoenzalutamide product to enter the market prior to other generic competition based on the ASD formulation, which is currently patent protected in the US and Europe until 2033

**Next steps:** Manufacture Nanoformed material for registration batches and EU/US **pivotal bioequivalence clinical trials that are expected to start in Q2 2025**, with first read-outs in Q2 2025. **License and commercial supply agreements are expected to be signed in coming quarters.**

**Target launch:** Submissions of dossiers 1H 2026, launch after expiry of the enzalutamide substance patent in USA 2027 & in Europe in 2028. Nanoenzalutamide is expected to progress via the ANDA (Abbreviated New Drug Application)/Hybrid generic pathway and as such will need to show bioequivalence vs the originator product, Xtandi®. In the eyes of the regulators, bioequivalence typically means 80% - 125% of the Cmax and AUC in a large cohort study in fed and fasted states with a 90% confidence interval. The global annual sales of Xtandi® is presently USD 6bn and growing. We plan nanoenzalutamide to take a meaningful share of this market through its highly patient centric product differentiation (1 tablets 4 tablets) and unique IP position (different technology, crystalline product, different excipients), while not forgetting its green attributes. We expect nanoenzalutamide to be the first nanoformed medicine to reach the market.

**Value added medicine companies vs originators:** We see the program to be attractive to value added medicine companies as a uniquely differentiated and high value supergeneric product that can enable a product launch before market entry by other generic products based on the ASD formulation, for which the originator currently holds patents in both Europe and the US (with expiry dates in 2033). For the originator company we believe that the nanocrystalline single tablet product offers a patient centric life cycle extension opportunity with compelling sustainability advantages that would be difficult for generic competitors to match. Avoiding the inherent stability challenges associated with amorphous materials is also a clear benefit for any company considering alternative formulation approaches.

# Project Nanoapalutamide (oral tablet for prostate cancer)

**FEBRUARY 19, 2024 – APALUTAMIDE STUDY AGAIN DEMONSTRATES THE ADVANTAGES OF NANOFORMING OVER TRADITIONAL CANCER TREATMENT FORMULATIONS**

**Positive results from own pre-clinical, in-vivo study of a nanocrystalline-enabled apalutamide oral formulation, which shows potential to enable a much smaller tablet than Erleada<sup>®</sup>, (Erleada is a registered trademark for Apalutamide owned by Johnson & Johnson / Janssen Biotech, Inc.) a nonsteroidal antiandrogen (NSAA) blockbuster amorphous solid dispersion (ASD) medicine used to treat prostate cancer. The nanocrystalline-enabled formulation provided high serum concentration (Cmax), fast time to peak drug concentration (Tmax), and 100% absolute bioavailability.**

Nanoform's nanocrystalline formulations enable significantly higher drug loading, allowing for smaller pills and a reduced pill burden. Its technology is free from organic hydrocarbon solvents, offering an environmentally sustainable alternative.

**NOVEMBER 18, 2024 – PROJECT NANOAPALUTAMIDE PROGRESSING ACCORDING TO PLAN**

We were pleased with the **positive results from a recent in vivo study** comparing Nanoform's tablet prototypes with the currently marketed product. The results provide confidence in our choice of the lead tablet prototypes and are expected to further accelerate interest among potential partners. Based on earlier experience with Nanoenzalutamide, we expect that following further optimization of the formulation, the **next major development milestone for this project is a pilot PK study in humans during H2 2025.**

# Takeda (plasma-derived formulations for rare conditions)

**MAY 7, 2024 - NANOFORMED HIGH-CONCENTRATION BIOLOGICS FORMULATION FOR SUBCUTANEOUS DELIVERY RESULTS TO BE PRESENTED BY TAKEDA AT DDF SUMMIT**

The proof-of-concept study data support the potential of Nanoform's patented biologics platform to achieve high protein concentrations in suspension formulations that are suitable for subcutaneous injection, as shown by results of syringeability and injectability studies.

Controlling the viscosity and aggregation of protein-based solutions is important for pharmaceutical formulators. Because injection volume is limited by the device, therapeutic protein formulations which are to be delivered via intramuscular or intravenous injection need to be highly concentrated. At protein concentrations greater than 200 mg\*mL<sup>-1</sup> however, viscosity increases to significantly higher than 20 cP (centipoise) to quickly exceed the maximum 40 cP viscosity deemed acceptable for a conventional subcutaneous injection.

**AUG 15, 2024 - NANOFORM COLLABORATES WITH TAKEDA ON THEIR PLASMA-DERIVED THERAPY DEVELOPMENT**

Nanoform enter into a pre-clinical development agreement with the Plasma-derived Therapies Business Unit of Takeda Pharmaceuticals Inc. to develop innovative plasma-derived therapy formulations for the treatment of rare conditions. Following the completion of in vitro proof of concept studies of a novel plasma-derived therapy formulation, Nanoform will provide non-GMP nanomaterial to Takeda for in vivo studies. The first results of these studies are expected in Q2 2025. It is the intention of both Nanoform and Takeda to develop medicine candidates to clinic and then take them as products to the market.

Nanoform Biologics' nanoforming technology can deliver large-molecule drug particles of tuneable size and morphology, while retaining biological activity. The technology can be applied across the biologics field, from 1 to 150kDa, to enable novel routes of delivery, enhance drug loading, tailor release profiles and engineer new drug combinations.

# Project Glioblastoma (hydrogel for central nervous system cancer)

Nanoform customer TargTex S.A. was granted **Orphan Drug Designation** by FDA for its nanoformed drug candidate TTX101 to be used in patients with malignant gliomas (October 2023). The orphan drug designation follows the generation of a preclinical rodent data package in which a **survival advantage** was shown for this nanoform-enabled medicine candidate.

The hydrogel **nanoformulation developed by Nanoform enabled a 200-fold increase** in drug load compared to bulk and a 5-fold increase in drug load compared to nanomilling.

In November 2023, the **European Innovation Council and SMEs Executive Agency (EISMEA)** awarded **TargTex €14m in funding**.

TargTex is currently raising additional funds to take this innovative treatment to clinic and is planning a phase 1/2a **clinical trial in recurrent glioblastoma (GBM) patients across the US and EU**, in which nanoformed TTX101 is applied as adjunct to surgery after tumour excision.

# 4 cases

## Nanoenzalutamide

Product Kernel

Prostate Cancer

Small molecule

Reformulated existing ASD marketed product (Xtandi)

Promising clinical data

Pivotal bioequivalence clinical trial starts Q2 2025

Development partners in place

Commercial partnering discussions ongoing

Target launch 2027 US and 2028 EU



## Nanoapalutamide

Product Kernel

Prostate Cancer

Small molecule

Reformulated existing ASD marketed product (Erleada)

Promising animal data

Partnering discussions ongoing

Commercial partnering discussions ongoing

Target launch 2032 US and EU



## TargTex

Biotech customer

Glioblastoma Multiforme

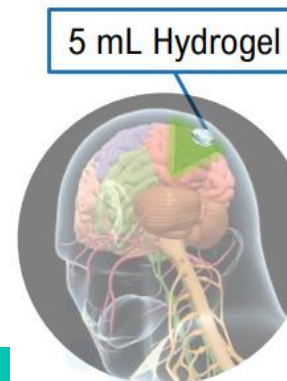
Small molecule

New medicine/s

200x higher drug load with Nanoformed API

Promising animal data

GMP manufacture and then clinic (Phase 1/2a)



## Takeda

Major pharma customer

Rare diseases

Large molecule (Plasma Derived Therapy)

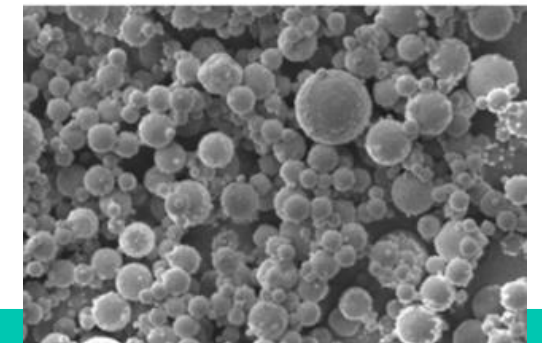
New medicine/s

Innovative Drug Delivery

In-vivo results due Q2 2025

### Nanoformed

Perfect spheres, highly flowable and aerodynamic, great packing and injection properties



# Management team: Multi-disciplinary with international merits



**CEO & Co-founder; Ph.D. (Applied physics), MBA**

**Edward Hæggström**

- Professor at the University of Helsinki, Head of Electronics Research Lab. within the Dept. of Physics
- Previously visiting professor at Harvard Medical School, visiting scholar at Stanford University and project leader at CERN
- Has led large number of scientific projects
- *Current ownership: 5,409,405 shares and 204,000 options*



**CCO; M.Sc. (Chemistry)**

**Christian Jones**

- Previously Commercial Director and member of the Senior Leadership Team for the Global Health Sector at Johnson Matthey
- Senior roles at Dr. Reddy's Global Custom Pharma Solutions and Prosonix
- **Key area of responsibility:** Commercial strategy and business development
- *Current ownership: 384,000 options*



**General Counsel & Chief Development Officer; LL.M**

**Peter Hänninen**

- Previously Attorney, Borenium Attorneys
- Successful track-record of advising technology companies from founding to exit in key transactions and collaborations
- **Key area of Responsibility:** Legal, Compliance, IPR, HR, IT
- *Current ownership: 133,125 shares and 530,000 options*



**Chief Quality Officer, M.Sc. (Pharmacology)**

**Johanna Kause**

- Previously Head of Quality, Regulatory and Safety for Finland and the Baltics at Takeda Pharmaceuticals
- 25 years of experience in Quality Management in the Pharma sector
- **Key area of responsibility:** Quality Management, GMP, GDP
- *Current ownership: 130,000 options*



**CFO and member of the Board; B.Sc. (Economics)**

**Albert Hæggström**

- 20 years of finance and investing experience
- Prior roles include positions at Alfred Berg, BNP Paribas, Nordea and SEB
- *Current ownership: 749,275 shares and 670,000 options*



**Head of Manufacturing; Ph.D. (Chemistry)**

**David Rowe**

- Previously Particle Size Reduction Lead for GlaxoSmithKline
- Chaired the PSR Centre of Excellence
- **Key area of responsibility:** Technical leadership within new chemical entities and commercial assets
- *Current ownership: 413,720 options*



**Chief of Business Operations (Chemistry and Quality)**

**Antonio da Silva**

- Degree in Chemistry from Lisbon University and Master degree in Quality from the University Aberta of Lisbon
- Extensive background in the CDMO and particle engineering space (19 years at Hovione)
- **Key area of responsibility:** Pharmaceutical product launches
- *Current ownership: 24,500 shares and 224,516 options*



# Board of directors: Top executives from leading industry positions



## Miguel Calado

### Chairman of the Board

- Previously CFO at international particle engineering CDMO company Hovione Group
- Other previous roles include CFO at PepsiCo International and President International Operations at Dean Foods
- Experienced Board member in both the EU and the US
- *Current ownership: 101,386 shares and 380,000 options*
- **Key experience:**



## Albert Hæggröm

### CFO and Board Member

- 20 years of finance and investing experience
- Prior roles include positions at Alfred Berg, BNP Paribas, Nordea and SEB
- *Current ownership: 749,275 shares and 670,000 options*
- **Key experience:**



## Mads Laustsen

### Board Member

- Over 30 years of experience in pharmaceutical development and manufacturing
- Co-Founder and former CEO of international biologics CDMO company CMC Biologics and former CEO of Bactolife A/S
- Extensive experience in process development and patenting
- Senior positions within several Danish biotech companies
- *Current ownership: 50,308 shares and 300,000 options*
- **Key experience:**



## Jeanne Thoma

### Board Member

- 30+ years of experience in global pharmaceutical and life science leadership
- Prior roles include executive positions at BASF Inc, Lonza AG and SPI Pharmaceuticals
- *Current ownership: 50,308 shares and 38,630 options*
- **Key experience:**





## FURTHER ENQUIRIES

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DIR Henri von Haartman - [hvh@nanoform.com](mailto:hvh@nanoform.com), +46 76866 50 11