targovax

Redeye – Fight Cancer Day 2023

Victor Levitsky,
Chief Scientific Officer

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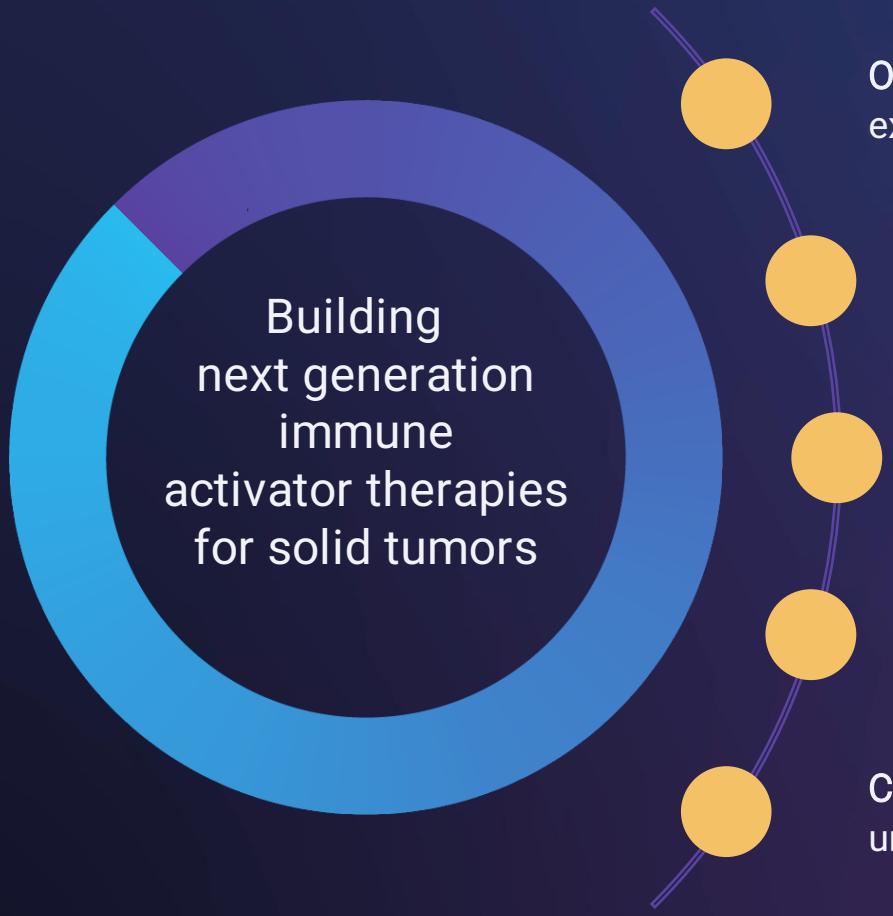
This report contains certain forward-looking statements based on uncertainty, since they relate to events and depend on circumstances that will occur in the future and which, by their nature, will have an impact on the results of operations and the financial condition of Targovax and the Targovax Group. Such forward-looking statements reflect the current views of Targovax and are based on the information currently available to the company. Targovax cannot give any assurance as to the correctness of such statements.

There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in these forward-looking statements. These factors include, among other things, risks or uncertainties associated with the success of future clinical trials; risks relating to personal injury or death in connection with clinical trials or following commercialization of the company's products, and liability in connection therewith; risks relating to the company's freedom to operate (competitors patents) in respect of the products it develops; risks of non-approval of patents not yet granted and the company's ability to adequately protect its intellectual property and know-how; risks relating to obtaining regulatory approval and other regulatory risks relating to the development and future commercialization of the company's products; risks that research and development will not yield new products that achieve commercial success; risks relating to the company's ability to successfully commercialize and gain market acceptance for Targovax's products; risks relating to the future development of the pricing environment and/or regulations for pharmaceutical products; risks relating to the company's ability to secure additional financing in the future, which may not be available on favorable terms or at all; risks relating to currency fluctuations; risks associated with technological development, growth management, general economic and business conditions; risks relating to the company's ability to retain key personnel; and risks relating to the impact of competition.

Targovax executive summary



ONCOS-102: oncolytic immunotherapy with demonstrated clinical efficacy and excellent safety profile in multiple solid tumors and treatment combinations

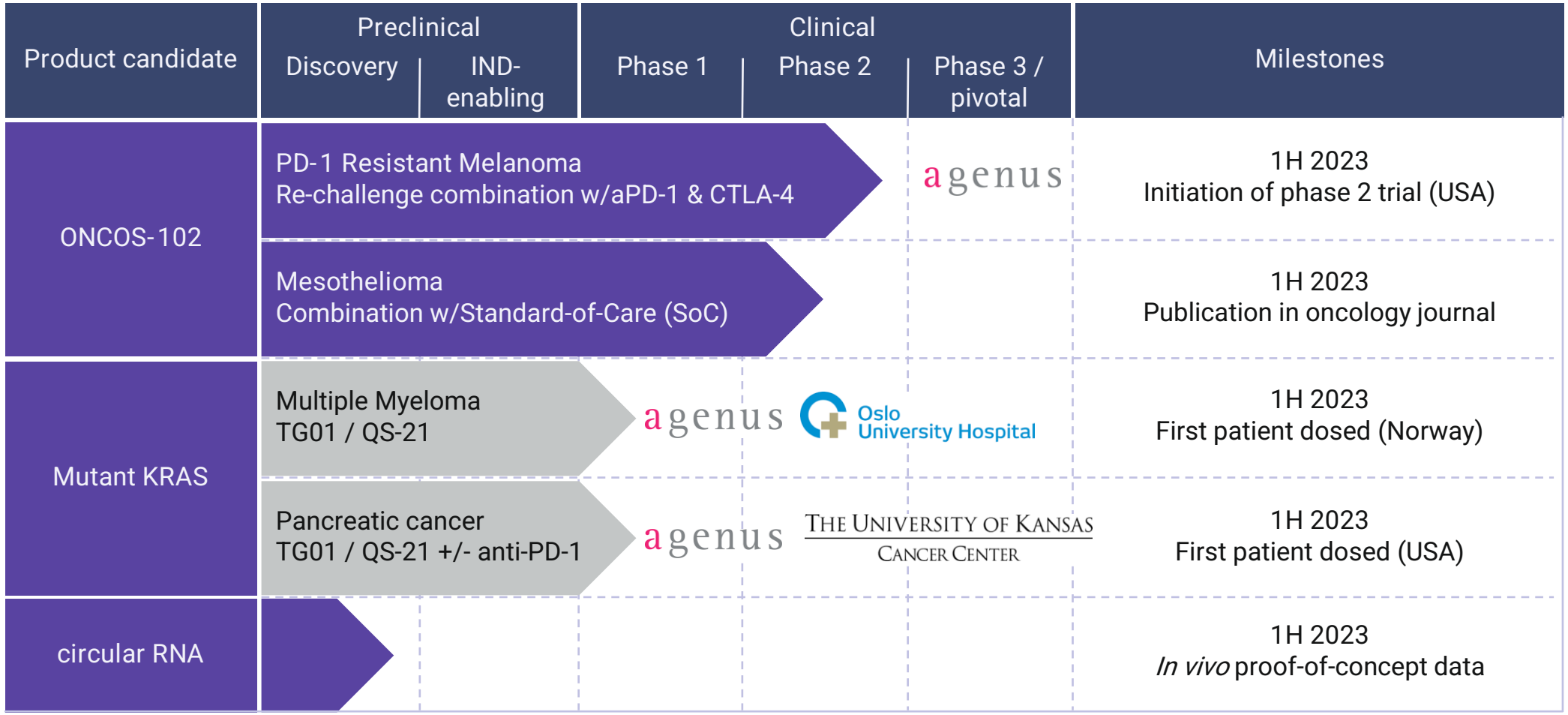
Highly competitive response rate: 35% ORR in anti-pd-1 resistant melanoma, responses in non-injected lesions and deep mechanistic analyses

KRAS immunotherapy: Clinical-stage polyvalent mutant KRAS vaccine with high-profile collaboration network and KRAS IO concepts in discovery phase

Circular RNA: Emerging pipeline in novel RNA biology leveraging 10 years of academic research, unique delivery approach for solid tumors

Company Financials: OSE listed since 2016, raised >USD 100M in total, cash runway until mid-2023

Targovax development pipeline



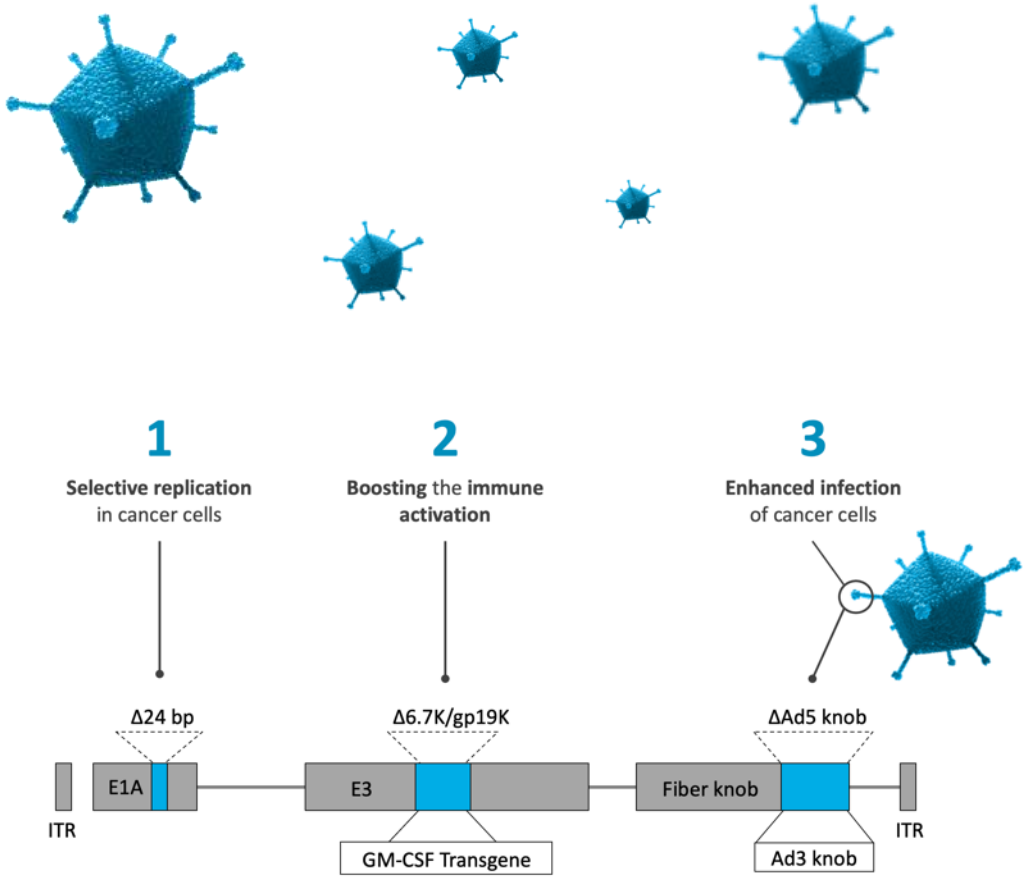
Trials run and financed by collaboration partners

1

Lead clinical program: ONCOS-102

i. Melanoma
ii. Mesothelioma

ONCOS-102: oncolytic immunotherapy based on an adenovirus serotype 5 backbone



Reverses immuno-suppressive defence mechanisms in the tumor

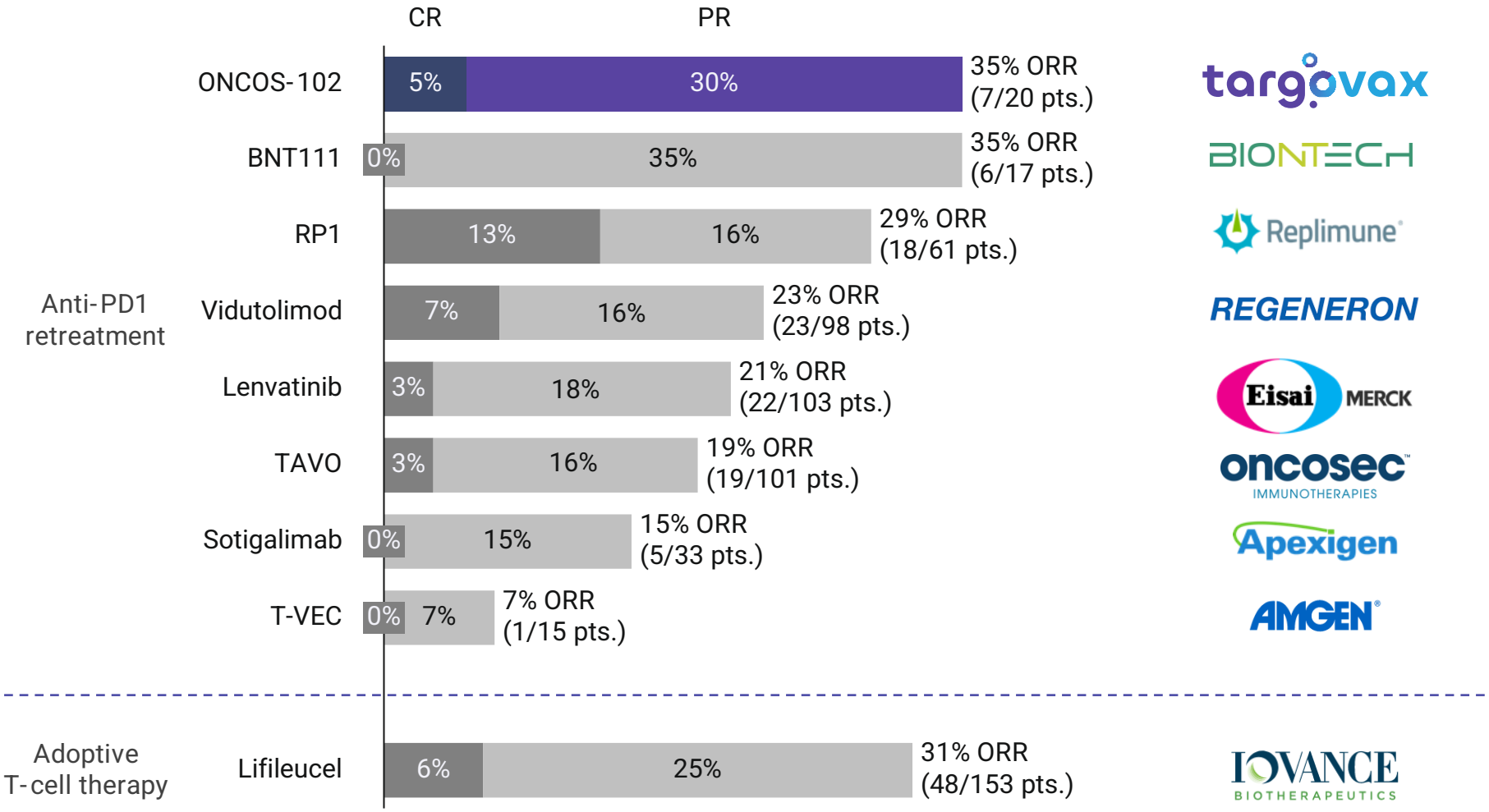
Primes anti-cancer T-cell responses

Delivers immune stimulatory payloads

There is a major and growing unmet medical need in PD-1 resistant melanoma

Incidence	Total ~50,000 patients per year diagnosed with unresectable advanced malignant melanoma globally
PD-1 resistance	~50% of cases become PD-1 resistant Total ~25,000 patients per year
Addressable	Estimated 10,000 – 20,000 patients per year addressable with intra-tumoral therapies
Other PD-1 resistance	*>100,000 patients per year lung cancer* *>50,000 patients per year head and neck*

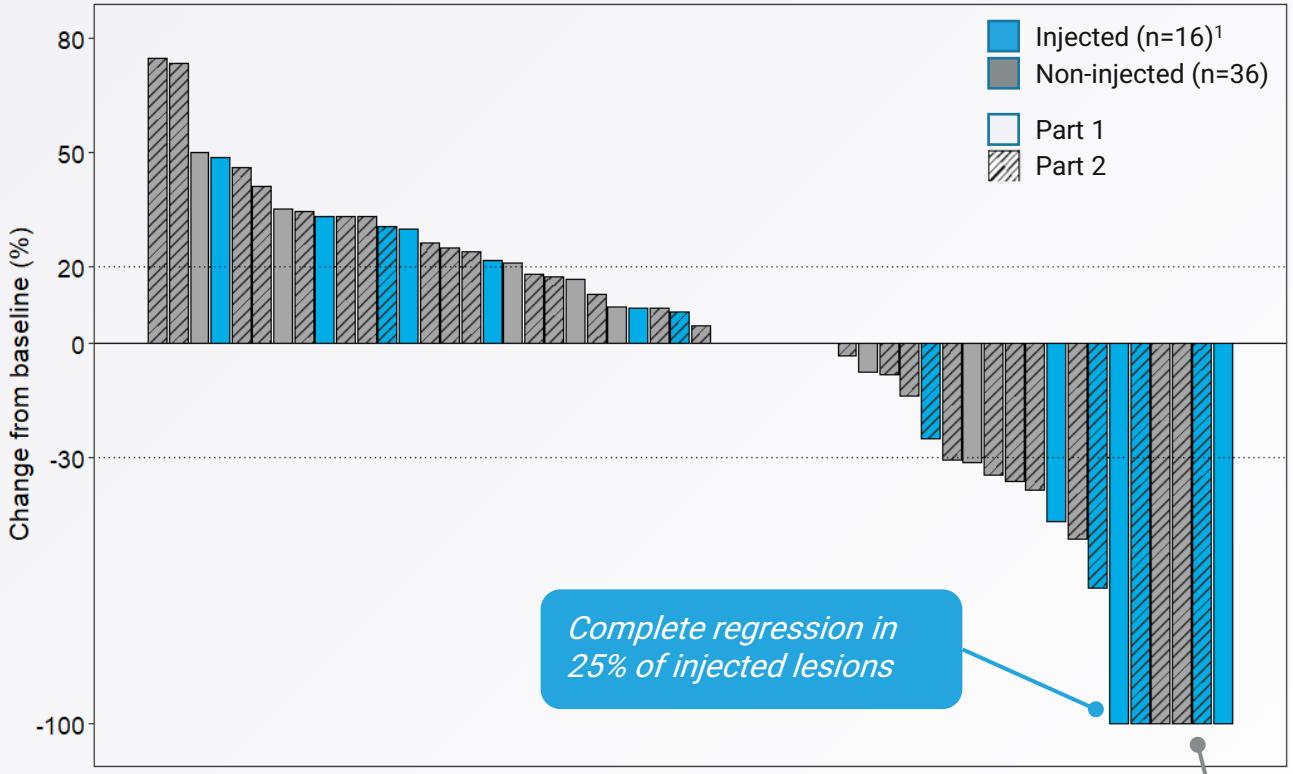
ONCOS-102 achieved a highly competitive ORR of 35% in PD-1 resistant melanoma



Targovax assessment, December 2022

Multiple examples of systemic (abscopal) effect, including complete regression in non-injected lesions

Response in individual tumors
% change from baseline; injected and non-injected target lesions



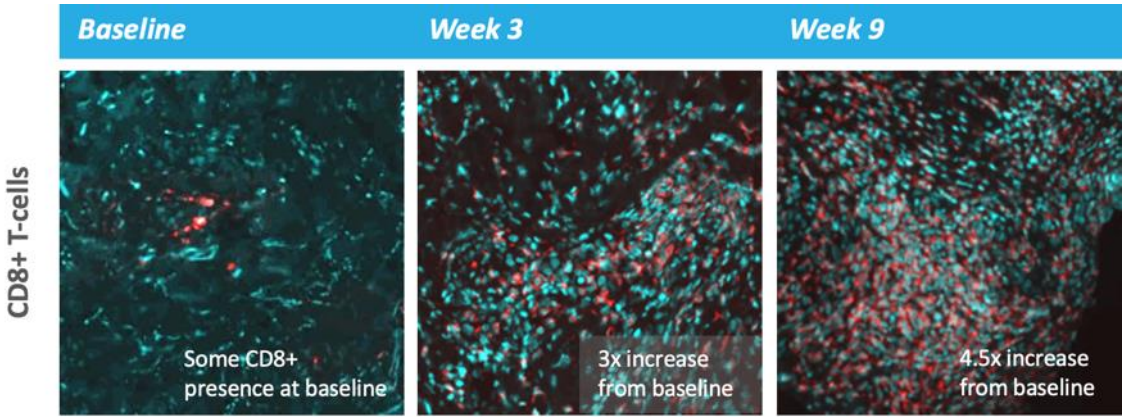
Observed systemic effect:

- 12 of 36 (33%) non-injected target lesions reduced in size
- 8 of 15 (53%) patients had reduction in non-injected target lesions
- 6 of 15 patients (40%) with abscopal objective response (PR) according to RECIST 1.1 30% tumor shrinkage criteria

1: 8 patients had non-injected target lesions only, incl 2 patients with PR

ONCOS-102 drives strong and consistent T-cell infiltration in responding patients

CD8+ T-cell tumor infiltration
Tumor biopsy IHC, patient case example



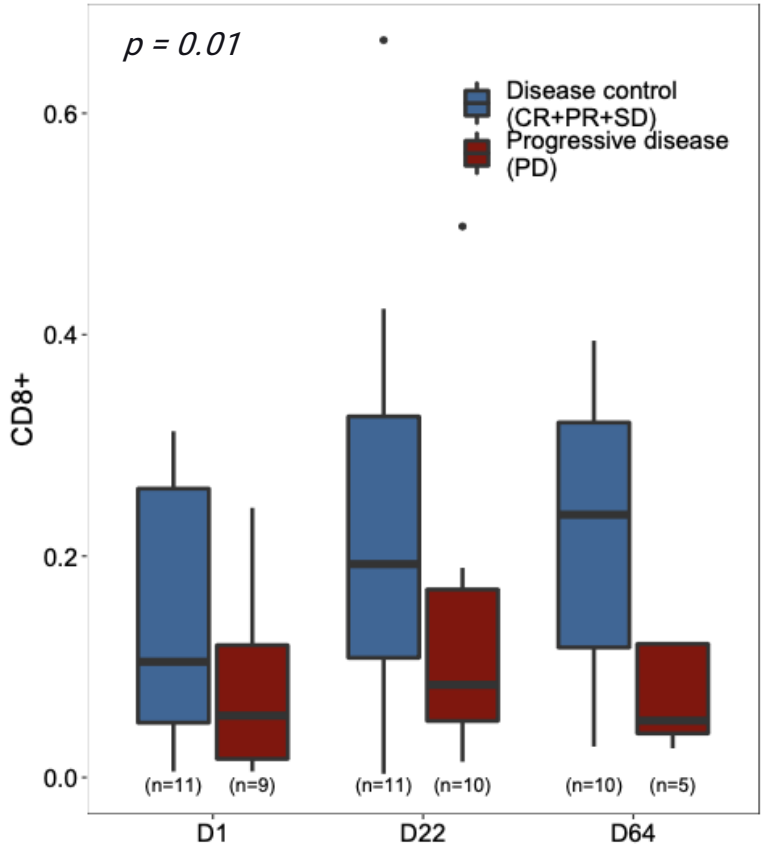
Progression on pembrolizumab

3x ONCOS-102 only monotherapy

6x ONCOS-102
2x pembrolizumab

Prior therapies:	T-vec (oncolytic virus)	Disease stage:	T4a-M1
	Ipilimumab (aCTLA-4)	Outcome	PR RECIST 1.1
	Pembrolizumab (aPD-1)		Week 9 - EoS

CD8+ T-cell infiltration increased over time in patients with clinical benefit (CR+PR+SD)



Next step ONCOS-102: multi-cohort phase 2 trial with 2nd gen CTLA-4 checkpoint inhibitor combination

Part 1 – higher dose exploration run-in

1 ONCOS-102 monotherapy high dose[1]

Randomize

2 ONCOS-102 + balstilimab low[2] → high dose

- *Confirm safety*
- *Select dose for expansion*

- *10 patients per cohort to start*
- *Extend selected dose to n=18*

Part 2 – multi-cohort extension

2 ONCOS-102 + balstilimab high dose[3]
- *Expand to n=37*

3 ONCOS-102 + botensilimab
- *Safety run-in n=6*
- *Expand first to n=18, then n=37*

4 ONCOS-102 + balstilimab + botensilimab
- *Safety run-in n=6*
- *Expand first to n=18, then n=37*

Collaboration partner: agenus

Balstilimab: anti-PD-1

Botensilimab: Fc-enhanced anti-CTLA-4

1: High dose: $1x10^{12}$ viral particles (VP)
2: Low dose $3x10^{11}$ VP
3: High dose expected selection for Part 2

The phase 2 trial is designed to enable future out-licensing and address regulatory requirements

- ✓ Opportunity to achieve best-in-class data in PD-1 resistant melanoma setting
- ✓ Differentiated botensilimab combination, with strong scientific and strategic rationale and clinically validated activity in cold tumors
- ✓ Design and size to enable licensing decisions for big pharma partners
- ✓ Confirm ONCOS-102 high dose and address FDA requirements for contribution of components
- ✓ Support future expansion of combinations into earlier lines of melanoma

2

Circular RNA pipeline program

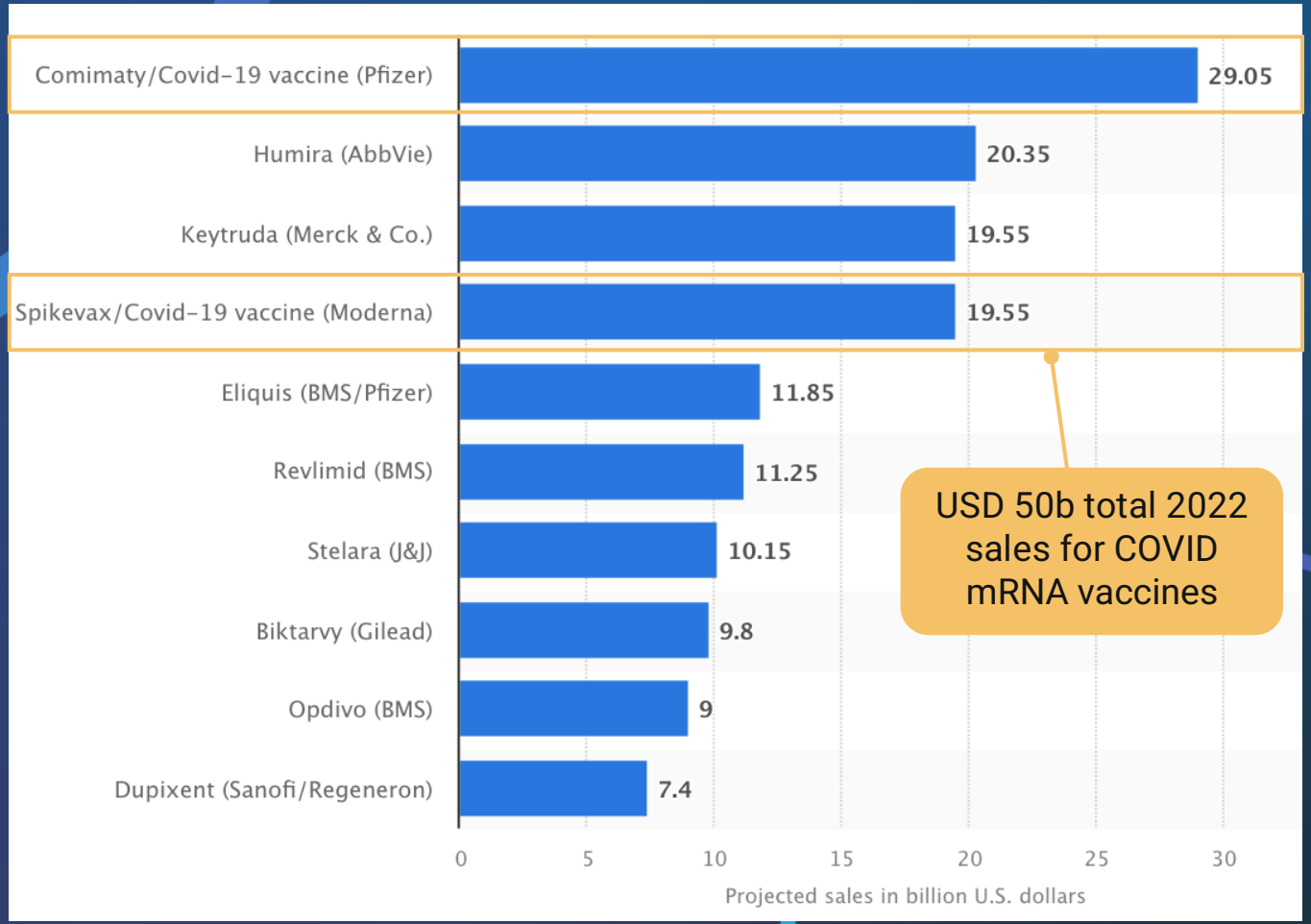
mRNA was the top-selling drug class in 2022

Remarkable speed - first mRNA therapeutics were approved in 2020

mRNA outcompeted more established concepts in COVID vaccine race

Oncology is the next frontier for mRNA

Top 10 drugs by 2022 projected sales



SOURCE: Statista analysis January 2023

Although mRNA is already a successful therapeutic class, several challenges remain unsolved

RNA is chemically unstable – mRNA vaccines have required significant modifications

Efficient delivery of RNA therapeutics is currently limited to vaccines and liver disease

Challenging to achieve sufficient spread and half-life in tumors

Circular RNA (circRNA) can overcome these challenges

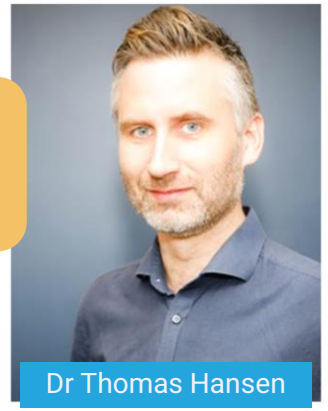
Circular RNA (circRNA) is quickly gaining momentum – the discoverers work for Targovax

Article | 30 September 2011 | FREE ACCESS

miRNA-dependent gene silencing involving Ago2-mediated cleavage of a circular antisense RNA

Thomas B Hansen,Erik D Wiklund,Jesper B Bramsen,Sune B Villadsen,Aaron L Statham,Susan J Clark, Jørgen Kjems

Initial circRNA papers establishing the field



Dr Thomas Hansen

Dr Erik D Wiklund

nature

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Published: 27 February 2013

Natural RNA circles function as efficient microRNA sponges

Thomas B. Hansen, Trine I. Jensen, Bettina H. Clausen, Jesper B. Bramsen, Bente Finsen, Christian K. Damgaard & Jørgen Kjems

Nature 495, 384–388 (2013) | Cite this article

100k Accesses | 4746 Citations | 130 Altmetric | Metrics

As RNA remains hot, Flagship's Laronde raises $440m for a new class of medicines

By Anissa Gardizy Globe Staff, Updated August 30, 2021, 6:30 a.m.

BIOTECH

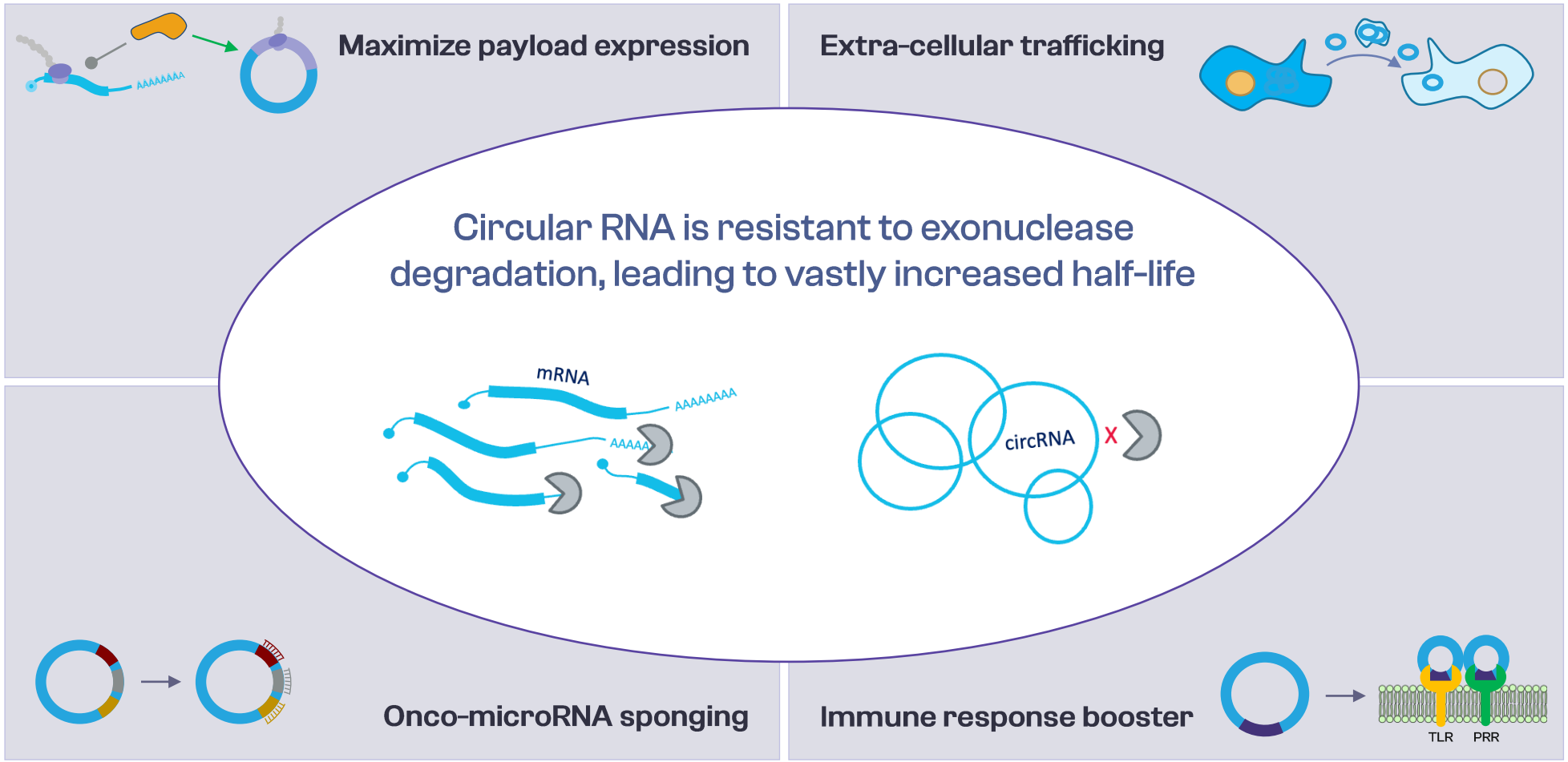
Merck bets big on circular RNA, paying $150M to work with Orna

Orna revealed a double dose of good news, taking the lid off an alliance with Merck worth $150 million upfront and a $221 million series B round.

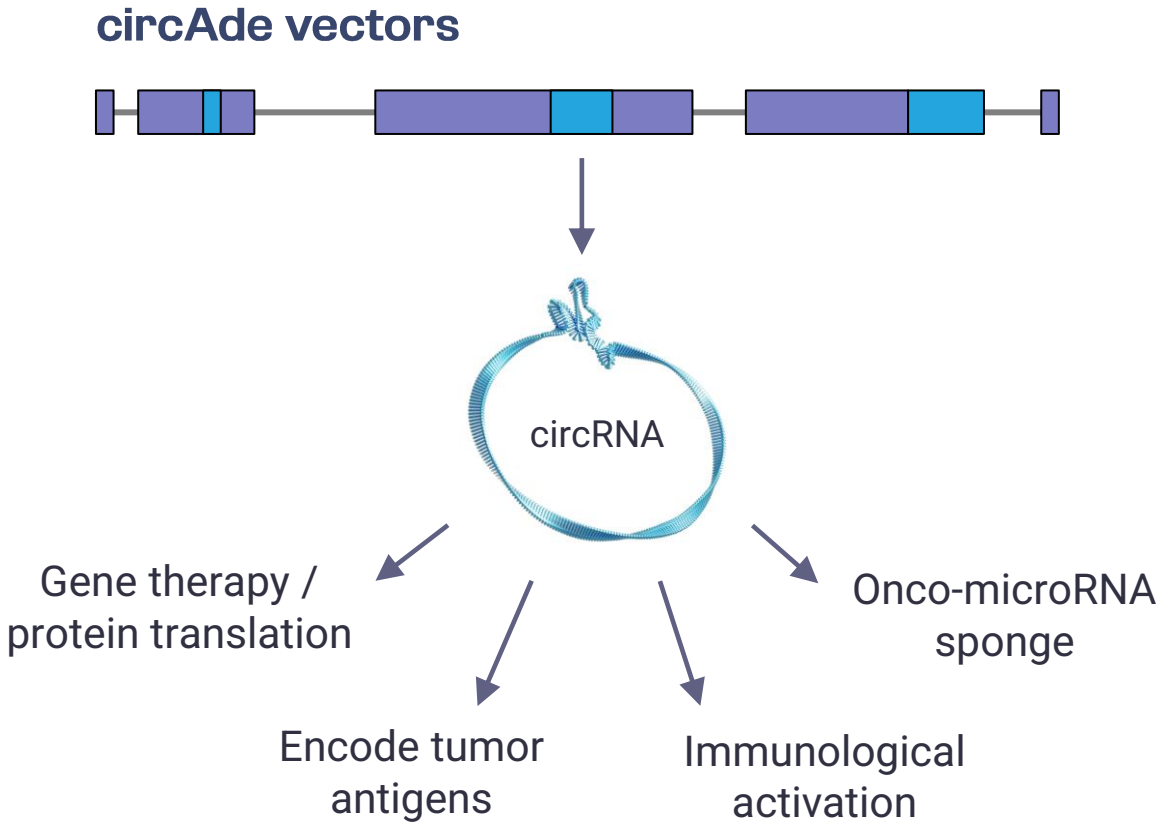
moderna

Flagship Pioneering

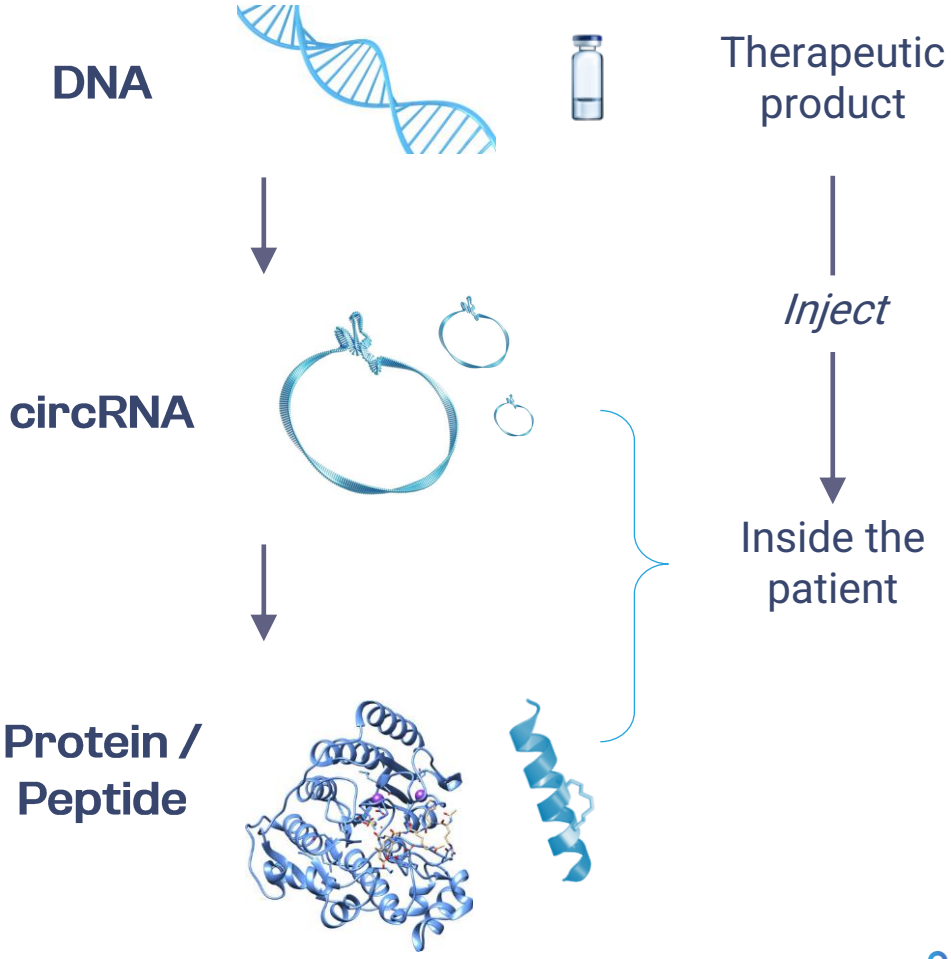
The versatility of circRNA provides a toolbox to create a novel class of medicines for multiple applications



circAde – Targovax´s proprietary vector system



Highly versatile – Multi-modal MoA – Excellent stability



Targovax´s circAde vector system is technologically differentiated and offers important advantages

		Enhanced intra-cellular stability	*Does not require packaging*	*Delivery to liver*	*Suitable vaccination platform*	*Delivery to solid tumors*	*Existing GMP manu-facturing*
targovax	circAde vector approach	✓	✓	✓	✓	✓	✓
ORNA laronde	Synthetic circRNA	✓	✗	✓	✓	✗	✗
moderna BIONTECH	Synthetic mRNA	✗	✗	✓	✓	✗	✓

- Targovax has the only approach for circRNA delivery to solid tumors
- Vector-based manufacturing available at scale

Leading investors have backed the two other main circRNA biotech players - Targovax is technologically differentiated

ORNA — USD 325m raised to date

Main backers:
Merck (MSD), MPM Capital & BioImpact Capital

Approach: synthetic circRNA, LNP delivered

- oRNA – engineered, IRES driven circRNAs
- *In vitro* production using self-splicing group I introns
- Delivery using Lipid Nano-Particles (LNPs)
- FORCE – Candidate IRES selection platform

Therapeutic Areas:

- *In situ* CAR-T therapy (ORN-101)
- Gene therapy - dystrophin replacement
- COVID-19 vaccine

laronde — USD 490m raised to date

Main backers:
Flagship Pioneering, Fidelity, Invus & Blackrock

Approach: synthetic circRNA, LNP delivered

- eRNA – engineered, open ORF circRNAs
- Infinite Open Reading Frame (ORF) resulting in 'rolling circle' protein/peptide translation: "endless" RNA concept
- *In vitro* circular RNA production

Therapeutic Areas – details not disclosed:

- Gene therapy in wide range of diseases
- "100 product candidates in the next 10 years"

Targovax assessment, November 2022

Targovax has a unique edge in the emerging circRNA field

World-leading experts in-house with over 10 years circRNA experience

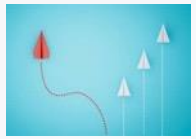
- Led by circRNA pioneer Dr. Thomas Hansen

circAde system is applicable for many therapeutic areas

- Technical PoC established, *in vivo* PoC studies initiated
- Ability for broad and rapid library-based screening

Vector GMP manufacturing at scale using commercially available equipment

- Synthetic circRNA GMP manufacturing at scale faces unresolved issues



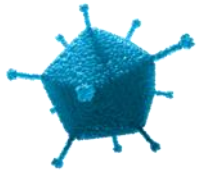
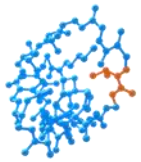
No known competitors active in circRNA therapeutics for solid tumors

- Efficient delivery of synthetic RNA to solid tumors is an unresolved challenge

3

Outlook

Multiple value inflection points in the short- to mid-term

Pillar	Value creation opportunities
 ONCOS-102	Opportunity to become best-in-class in PD-1 resistant melanoma • Data from differentiated combination with botensilimab +/- PD-1 • Phase 2 designed and sized to be attractive for big pharma partnering
 Circular RNA	Validate platform and prepare for clinical introduction of first candidate • In vivo PoC demonstrating platform potential in multiple applications • Establising broad IP portfolio • Early partnering opportunity 2023-24 for non-dilutive funding
 KRAS program	Added upside: creating broad optionality in KRAS cancers at low cost • Externally funded academic clinical trials with industrial partners • Several indications and novel combinations being explored