Innovating Antibodies, Improving Lives

38th Annual J.P. Morgan Healthcare Conference
January 15, 2020

Genmab

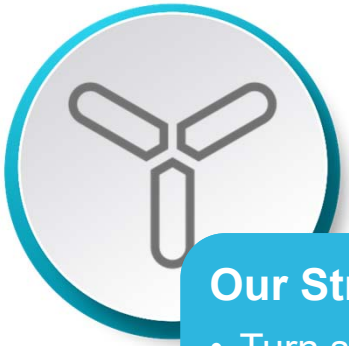
Forward Looking Statement

This presentation contains forward looking statements. The words “believe”, “expect”, “anticipate”, “intend” and “plan” and similar expressions identify forward looking statements. All statements other than statements of historical facts included in this presentation, including, without limitation, those regarding our financial position, business strategy, plans and objectives of management for future operations (including development plans and objectives relating to our products), are forward looking statements. Such forward looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward looking statements. Such forward looking statements are based on numerous assumptions regarding our present and future business strategies and the environment in which we will operate in the future. The important factors that could cause our actual results, performance or achievements to differ materially from those in the forward looking statements include, among others, risks associated with product discovery and development, uncertainties related to the outcome of clinical trials, slower than expected rates of patient recruitment, unforeseen safety issues resulting from the administration of our products in patients, uncertainties related to product manufacturing, the lack of market acceptance of our products, our inability to manage growth, the competitive environment in relation to our business area and markets, our inability to attract and retain suitably qualified personnel, the unenforceability or lack of protection of our patents and proprietary rights, our relationships with affiliated entities, changes and developments in technology which may render our products obsolete, and other factors. Further, certain forward looking statements are based upon assumptions of future events which may not prove to be accurate. The forward looking statements in this document speak only as at the date of this presentation. Genmab does not undertake any obligation to update or revise forward looking statements in this presentation nor to confirm such statements to reflect subsequent events or circumstances after the date made or in relation to actual results, unless required by law.

Our Core Purpose, Strategy & Vision Guide Our Work

Core Purpose

- To improve the lives of patients by creating & developing innovative antibody products



Our Strategy

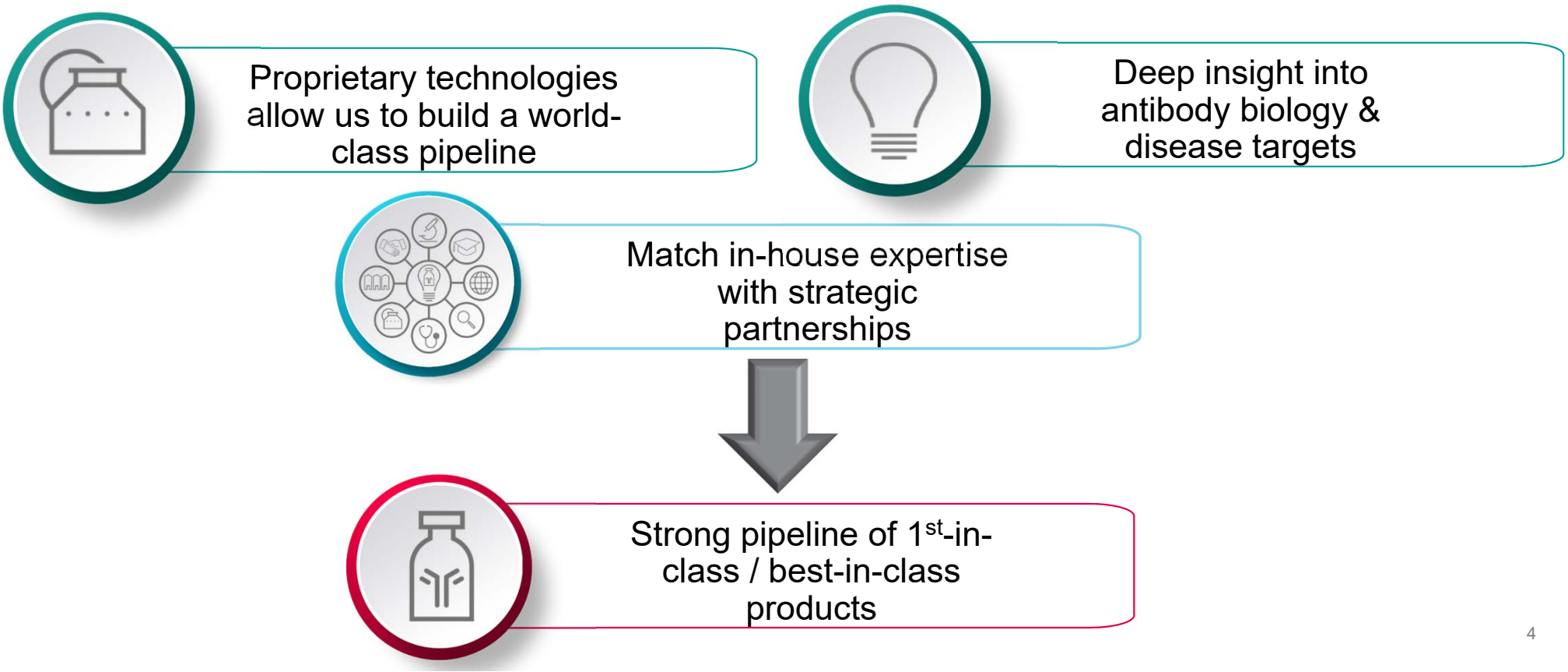
- Turn science into medicine
- Build a profitable & successful biotech
- Focus on Core Competence

Vision

- By 2025, our own product has transformed cancer treatment and we have a pipeline of knock-your-socks off antibodies

The Genmab Difference

Innovation Powerhouse Transforming Cancer Treatment & Creating Value



Track Record & Growth: Over 20 Years of Achievement

34 Cumulative INDs since 1999

18 Genmab Created Products in Ongoing Clinical Trials

2 Genmab Created Products on the Market

7 Years of Profitability & Expanding Top Line

Dual-listed in US & DK with 2019 US IPO

Solid Foundation Built on a Differentiated Pipeline

Foundational Products

- DARZALEX®,[1]
- Arzerra®,[2]
- Ofatumumab[3] [RMS]

Solid Financial Base Significant Potential

Our Own Clinical Pipeline

- Tisotumab Vedotin[4]
- Enapotamab Vedotin
- HexaBody®-DR5/DR5
- DuoBody®-CD3xCD20
- DuoBody-PD-L1x4-1BB[5]
- DuoBody-CD40x4-1BB[5]
- DuoHexaBody®-CD37

Potential 1st-in-Class/ Best-in-Class

Partner Programs

- 10 product candidates in clinical development w/ partners
- Incl. 6 DuoBody products with Janssen
- Teprotumumab

Additional Shots on Goal

Technologies & Pre-Clinical

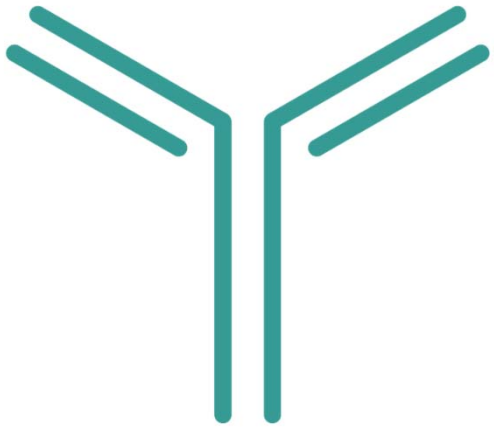
- DuoBody technology
- HexaBody technology
- HexElect® technology
- DuoHexaBody technology
- DuoHexaBody®
- Rich Pre-Clinical Pipeline

R&D Engine

[1]In dev. w/ Janssen; [2]with Novartis; [3]In dev. by Novartis; [4]50:50 partnership Seattle Genetics; [5]50:50 partnership BioNTech, GEN1046 & GEN1042 respectively

Daratumumab (Marketed as DARZALEX®)

Redefining Treatment of Multiple Myeloma Across All Lines of Therapy

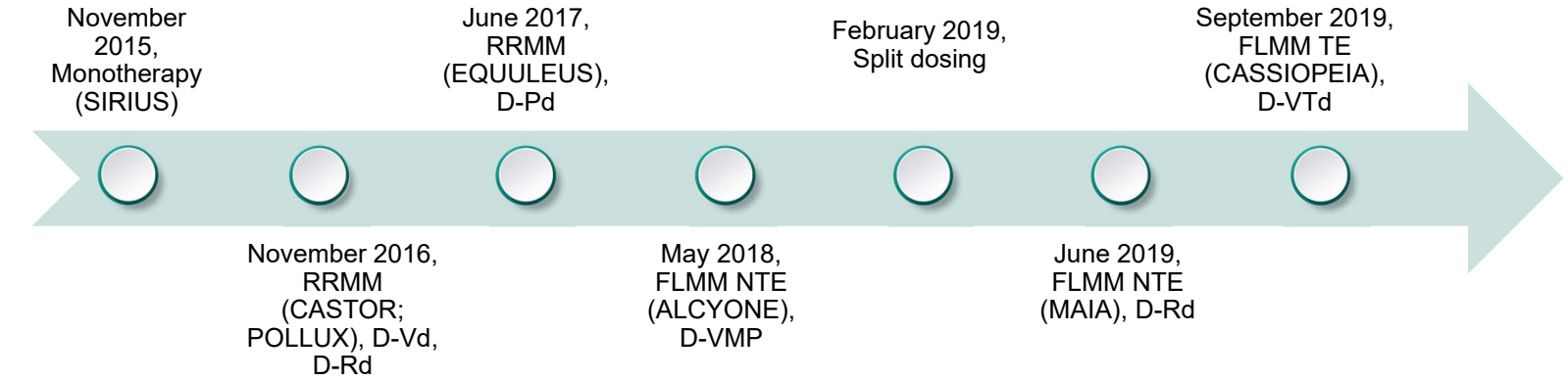


- First-in-class CD38 antibody in development to treat cancer
- Collaboration with Janssen: Genmab entitled to tiered royalty of 12-20% of net sales, majority of $1bn milestones collected
- Approved in certain territories for various multiple myeloma (MM) indications[1]
- 2018 WW net sales by J&J: $2,025M: 9 mo 2019 WW net sales by J&J: $2,168M
- Multiple Phase III studies ongoing in MM and amyloidosis, filed for SubQ formulation

[1]Approved in combination with other therapies for frontline multiple myeloma in U.S. and EU, in combination with other therapies in relapsed/refractory multiple myeloma in U.S., EU and Japan; and as monotherapy for heavily pretreated or double-refractory multiple myeloma in U.S. and EU. See local country prescribing information for precise indications

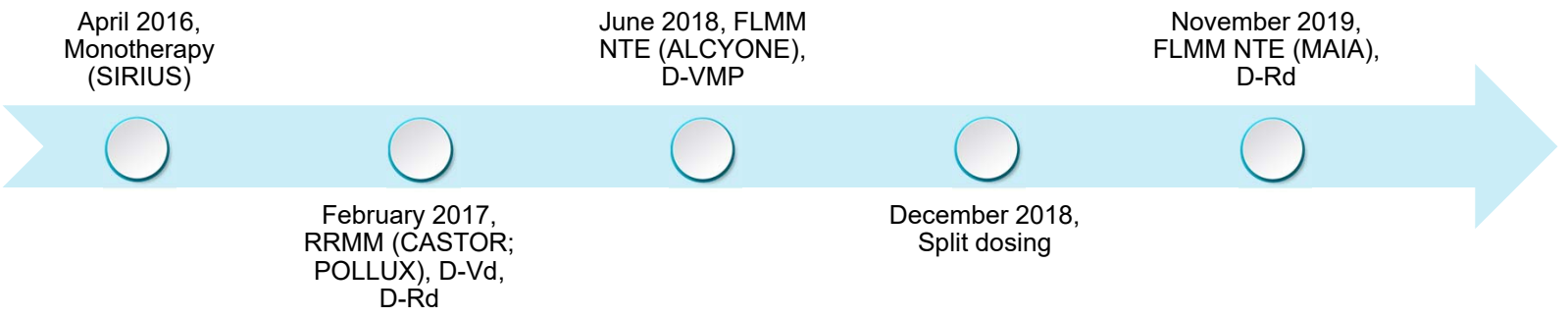
DARZALEX Approvals: US and EU

On Track for Approval Across All Lines of MM Treatment



US submissions;

- Subcutaneous July 2019

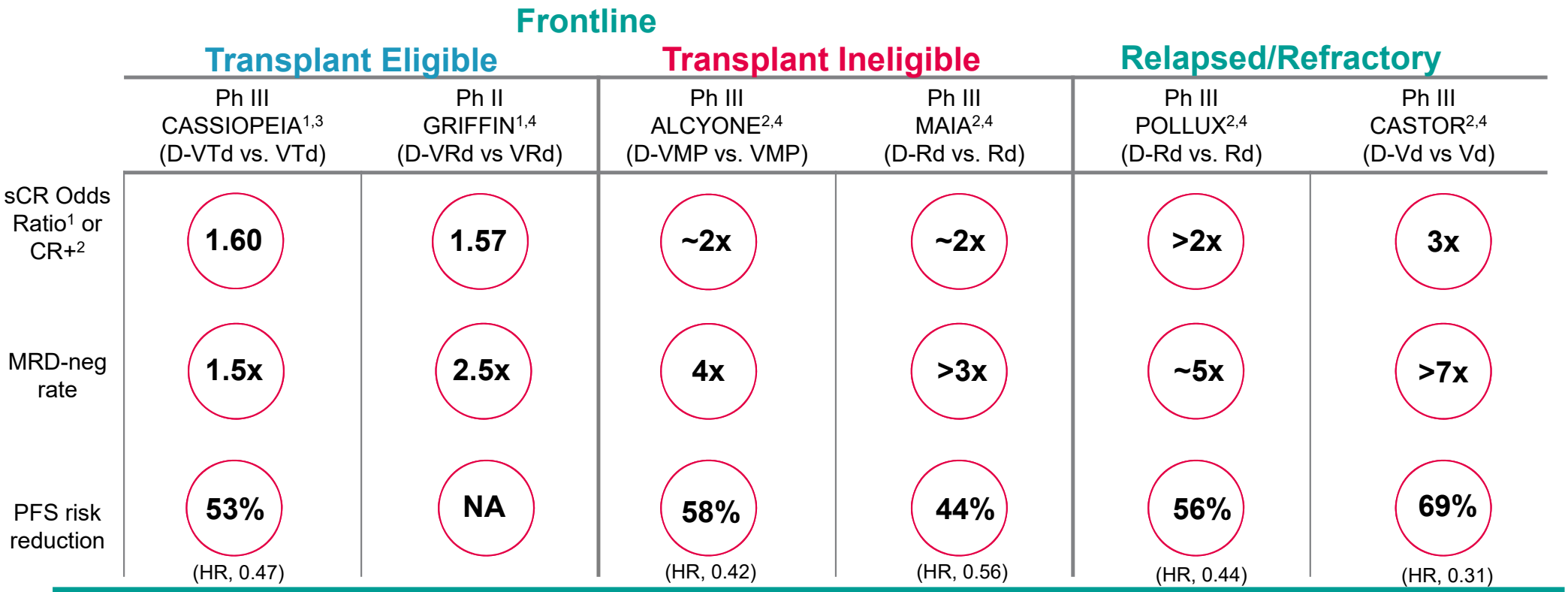


EU submissions;

- FLMM TE March 2019
- Subcutaneous July 2019

US Approvals EU Approvals

Daratumumab: Proving to be the Critical Driver Across Different Combinations & Treatment Lines

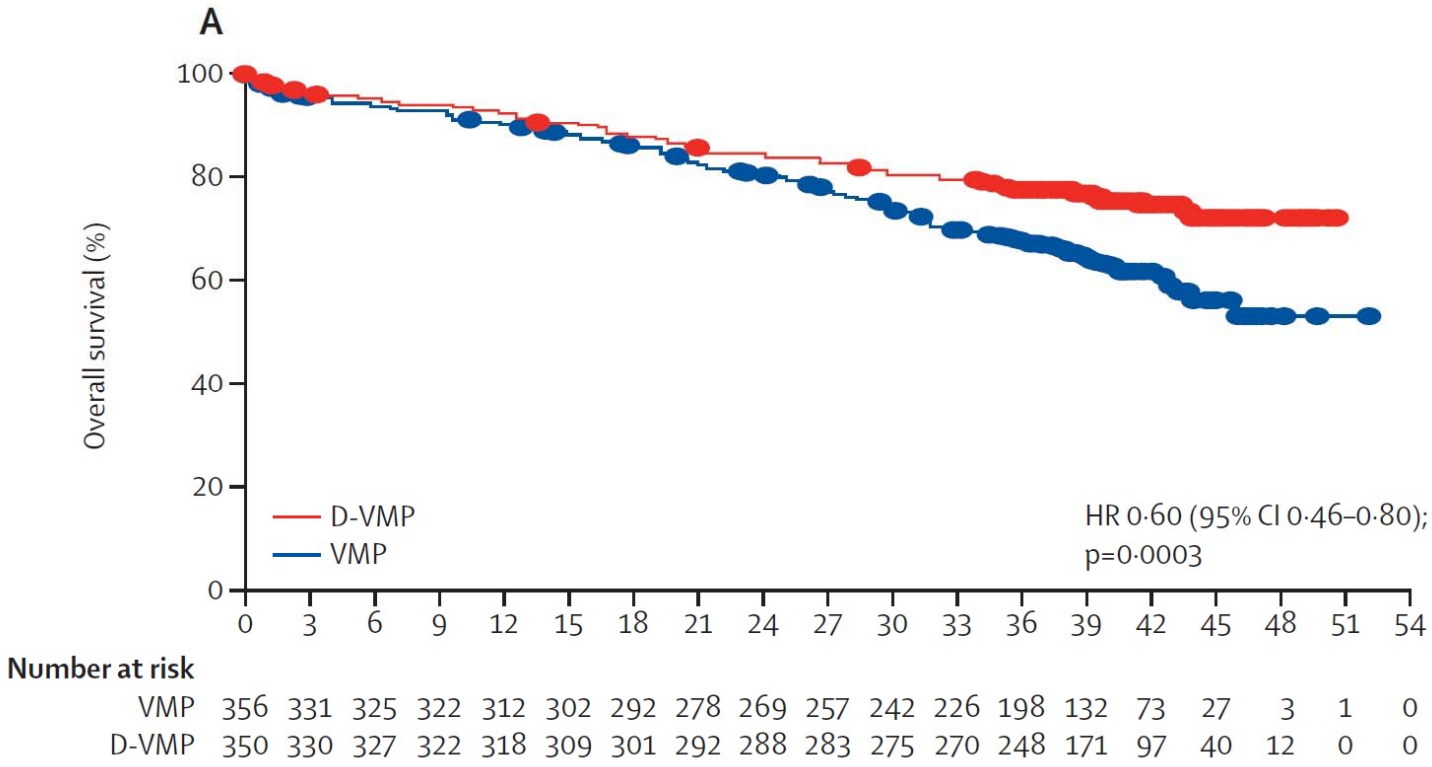


Ongoing Phase III Studies: APOLLO (D-Pom-d, RRMM), CEPHEUS (D-VRd, NDMM NTE), PERSEUS (D-VRd, NDMM TE)

[3]Data as per ASCO 2019; [4]Data as per ASH 2019

Improved Survival for Patients with Multiple Myeloma

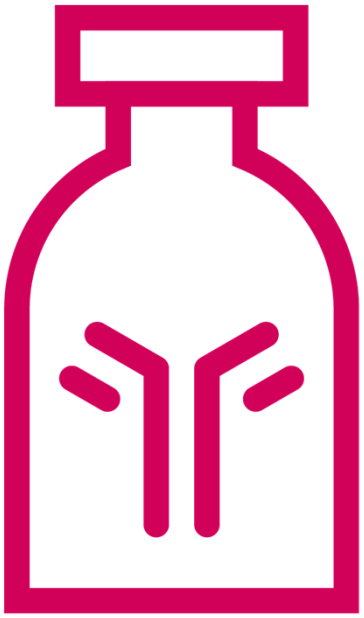
Overall Survival Analysis from the ALCYONE Trial



Kaplan-Meier estimates of overall survival in intention-to-treat population. Mateos, MV et al, 'Overall survival with daratumumab, bortezomib, melphalan, and prednisone in newly diagnosed multiple myeloma (ALCYONE): a randomized, open-label, phase 3 trial,' *The Lancet*, published online December 9, 2019

Ofatumumab (OMB 157)

Potential in Relapsing Multiple Sclerosis



- Human mAb targeting CD20 – well validated target
- Positive data from two Phase III studies (ASCLEPIOS I&II) in relapsing multiple sclerosis (RMS) – met primary and key secondary endpoints
- ASCLEPIOS I&II: Subcutaneous dosing regimen, 20mg monthly after initial dosing on weeks 0, 1 and 2
- Developed by Novartis: submission to US health authorities initiated end 2019
- Genmab entitled to 10% royalty payment of net sales
- Second Genmab created product with blockbuster potential

Tisotumab Vedotin

Genmab's Most Advanced Asset with Potential in Solid Tumors

- Fully human antibody-drug conjugate (ADC) targeting Tissue Factor (TF) in development to treat solid tumors
- License and collaboration agreement with Seattle Genetics 50:50
- Phase II potentially registrational study (innovaTV 204) in cervical cancer ongoing after encouraging Phase I/II data (innovaTV 201)
- Phase II clinical studies in ovarian and solid tumor basket studies: expanding development with additional studies planned

Tisotumab Vedotin in Cervical Cancer (innovaTV 201)

Designed to Address a High Unmet Medical Need

Recurrent or metastatic cervical cancer

- Poor prognosis for advanced / recurrent cervical cancer
  - Response rates to standard therapies generally <15%
  - Median overall survival 6-8 months
- Data on ORR and survival after progression on 1L bevacizumab + doublet chemotherapy are limited

Conclusions*

- Manageable adverse events and encouraging early antitumor activity in patients with previously treated recurrent or metastatic cervical cancer
- IRC-assessed overall response rate of 35% (confirmed and unconfirmed) and confirmed ORR was 22%, with a median DOR of 6.0 months and a 6-month PFS of 40%

Encouraging Antitumor Activity Observed*

	N=55	
	IRC-Assessed[a]	INV-Assessed
ORR confirmed + unconfirmed (95% CI), %	35 (22–49)	31 (19–45)
ORR confirmed (95% CI), %	22 (12–35)	24 (13–37)
CR, n (%)	1 (2)	0
PR, n (%)	11 (20)	13 (24)
SD, n (%)	19 (35)	21 (38)
PD, n (%)	17 (31)	17 (31)
Not evaluable,[b] n (%)	5 (9)	4 (7)
DCR confirmed (95% CI), %	56 (42–70)	62 (48–75)
Median DOR (range), months	6.0 (1.0+–9.7)	4.2 (1.0+–9.7)
Median PFS (95% CI), months	4.1 (1.7–6.7)	4.2 (2.1–5.3)
6-month PFS rate (95% CI), %	40 (24–55)	29 (17–43)

*Data from innovaTV 201 study, Hong DS, et al. Tisotumab Vedotin in Cervical Cancer, SGO March 16-19, 2019

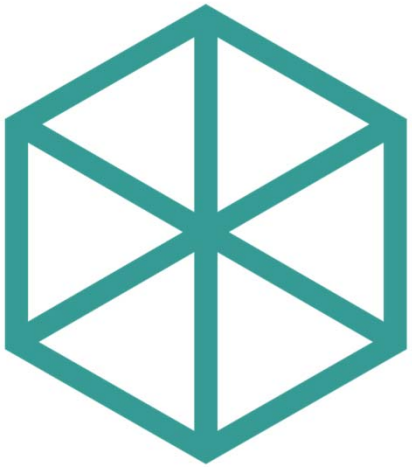
Enapotamab Vedotin

Potential in Solid Tumors

- Fully human ADC, targets tumor-associated AXL
- AXL over-expressed on many resistant tumors
- Phase I/II study ongoing in multiple solid tumors: expansion cohorts recruiting
- ADC technology license from Seattle Genetics
- 100% Genmab owned

HexaBody-DR5/DR5 (GEN1029)

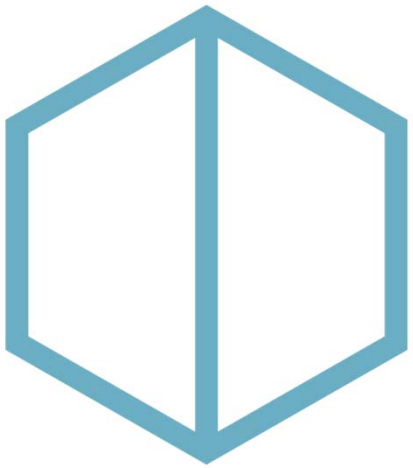
First HexaBody in Clinical Development



- Targets two distinct epitopes on death receptor 5 (DR5), cell surface receptor that mediates programmed cell death
- HexaBody platform induces DR5 clustering, results in DR5 agonist activity
- Proprietary HexaBody technology: first Genmab-owned HexaBody product in clinic
- 100% Genmab owned
- Phase I/II study ongoing in multiple solid tumors

DuoBody-CD3xCD20 (GEN3013)

Potential for Improved Efficacy & Safety in B-Cell Malignancies



- Simultaneous binding to CD3 on T cells & CD20 on B cells observed in pre-clinical studies
- Proprietary DuoBody Technology: first Genmab-owned DuoBody product in the clinic
- Differentiated subcutaneous formulation
- 100% Genmab owned
- Phase I/II study with subcutaneous formulation ongoing in B-cell malignancies

DuoBody-CD3xCD20 (GEN3013)

Early Clinical activity and Safety presented at ASH 2019

Anti-tumor activity observed at low dose levels

- PR in 5/5 pts with FL on GEN3013 ≥ 0.76mg
- PR or better in 3/5 pts with DLBCL on GEN3013 ≥6 mg
- Promising early activity at low doses in heavily pretreated pts
- Dose escalation ongoing

Safety

- Most AEs were mild to moderate, transient, and reversible
- No DLTs were observed; MTD has not been reached
- No Grade ≥ 3 CRS events were observed
- No tumor lysis syndrome or CRS-related neurological toxicities observed

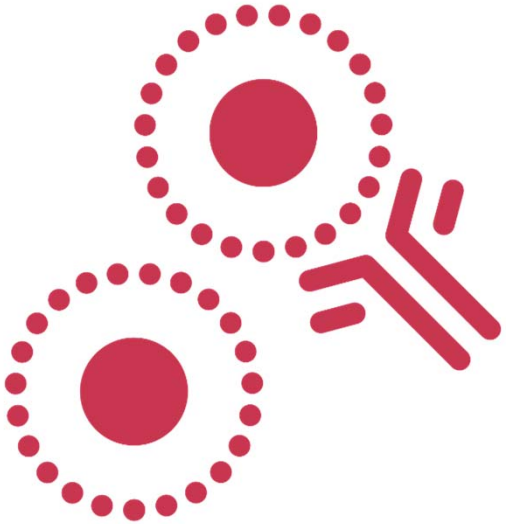
Treatment- Emergent Adverse Events of Special Interest*

	≥0.76 mg (0.76–6 mg) n=22	All doses (0.004–6 mg) n=31
Tumor lysis syndrome	0 (0%)	0 (0%)
Neurological symptoms (change in CARTOX-10 score)	0 (0%)	0 (0%)
Cytokine release syndrome Grade 1 Grade 2 Grade ≥3	12 (54.5%) 8 (36.4%) 4 (18.2%) 0 (0%)	15 (48.4%) 9 (29.0%) 6 (19.4%) 0 (0%)
Symptoms of cytokine release syndrome (n≥5%)		
Pyrexia	12	15
Chills	2	2
Hypotension	4	6
Tachycardia	3	5
Dyspnea	2	2
Hypoxia	2	2

* Source:First-in-Human, Phase 1/2 Trial to Assess the Safety and Clinical Activity of Subcutaneous GEN3013 (DuoBody®-CD3×CD20) in B-Cell Non-Hodgkin Lymphoma presented at ASH 2019

DuoBody-PD-L1x4-1BB (GEN1046)

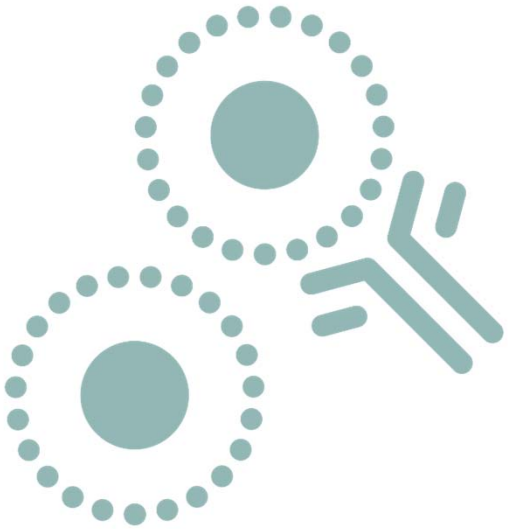
Bispecific Next Generation Checkpoint Immunotherapy



- Bispecific antibody targeting PD-L1 & 4-1BB (CD137)
- Potential to provide Genmab with differentiated PD-L1 product
- Combines checkpoint blockade with T-cell stimulation
- Phase I/II study ongoing in solid tumors
- 50:50 co-development Genmab and BioNTech

DuoBody-CD40x4-1BB (GEN1042)

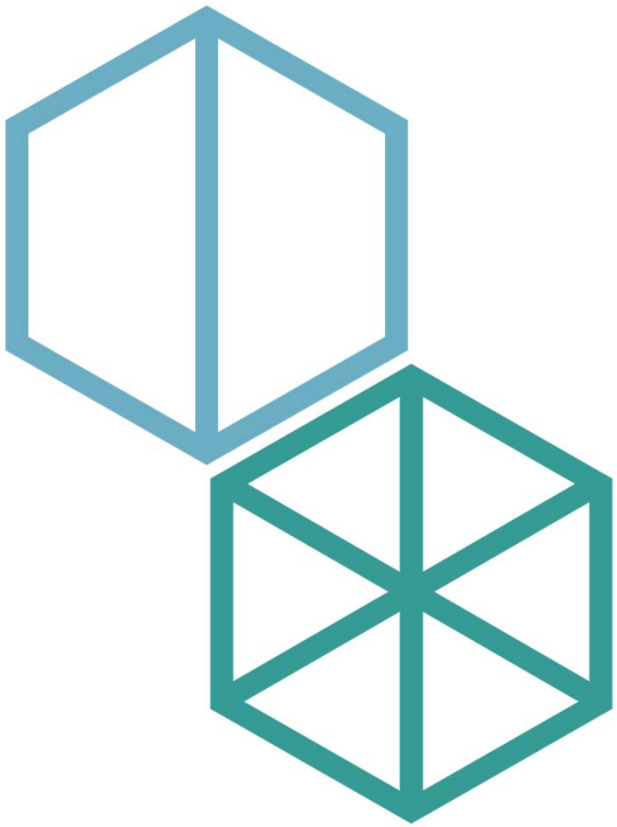
Bispecific Agonistic Antibody



- Bispecific antibody targeting CD40 & 4-1BB (CD137)
- Designed to conditionally activate T cells and antigen-presenting cells in the presence of CD40-expressing cells
- Phase I/II study ongoing in solid tumors
- 50:50 co-development Genmab and BioNTech

DuoHexaBody-CD37 (GEN3009)

Building Our Pipeline: Next in the Clinic



- Based on a combination of the DuoBody & HexaBody platforms
- Novel target for hematologic malignancies
- Unique mechanism-of-action
- 100% Genmab owned
- IND filed in 2019

Well-Capitalized Biotech – 2019 Guidance

Income Statement	DKKM	~USDM*
Revenue	5,100	761
Operating expenses	(2,750)	(410)
Operating income	2,350	351

Revenue Detail	DKKM	~USDM*	Comments
DARZALEX Royalties	3,000	448	DARZALEX net sales $3.0bn
DARZALEX Milestones	1,675	250	Milestone payment of $150M (DKK 1,000M) from DARZALEX net sales of $3.0bn
All Other	425	63	Includes reimbursement income, DuoBody milestones, Arzerra royalties
Total Revenue	5,100	761	

Expense Detail	DKKM	~USDM*	Comments
Project Investment	1,625	243	Driven by Top 10 Projects (~DKK 1,425 – approx. 50% total expense)
Personnel Costs	625	93	Increase in 2019 by 180 FTEs
Business Support	500	75	Incl. technologies & systems, Commercial & Medical Affairs
Total Operating Expenses	2,750	410	

2019 Guidance – November 6, 2019 / *USD 1.00 = DKK 6.70

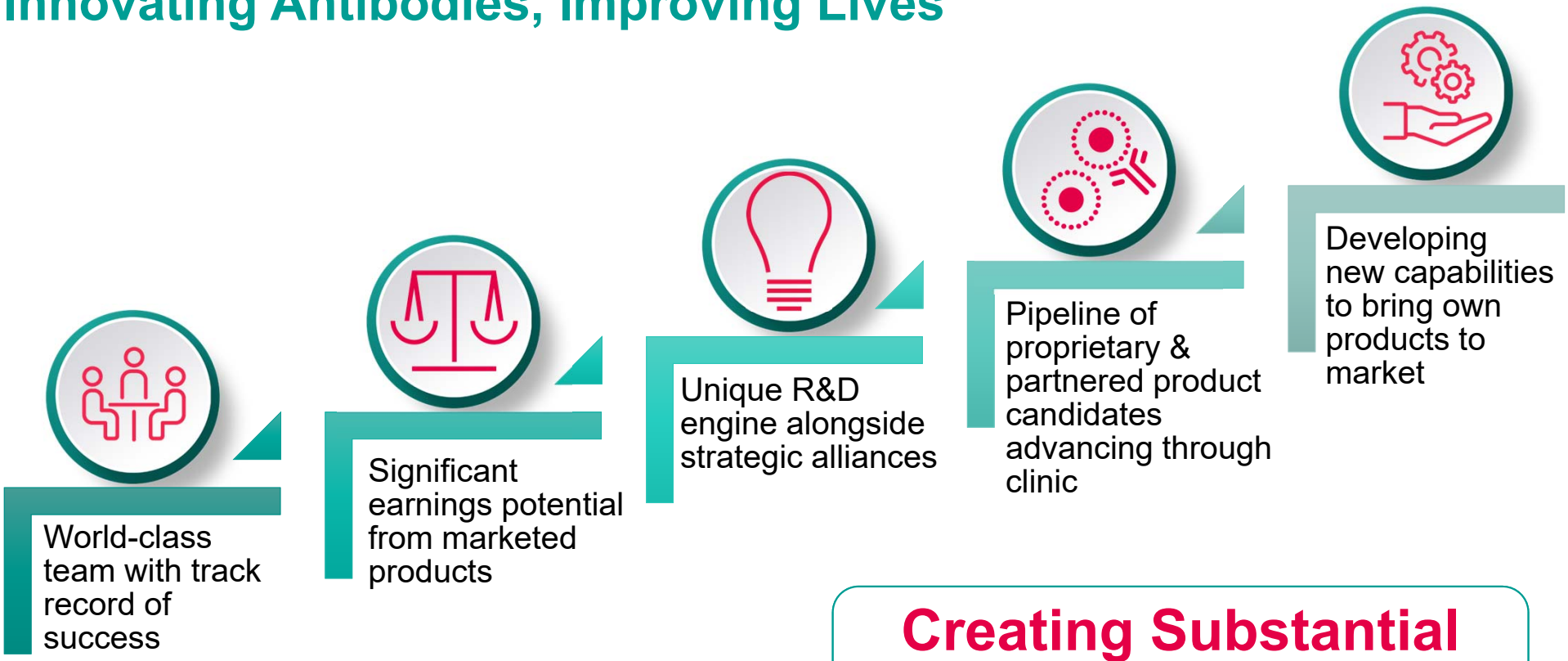
Key 2020 Priorities

Building a Strong Differentiated Product Pipeline

Priority	✓	Targeted Milestones
Genmab proprietary* products		» Tisotumab vedotin[1] - Phase II innovaTV 204 safety & efficacy analysis in recurrent/metastatic cervical cancer and engage U.S. FDA for BLA submission subject to trial results » Tisotumab vedotin - data on other solid tumor types » Enapotamab vedotin – data to support late stage development » DuoBody-CD3xCD20 Phase I/II – decision on recommended Phase II dose & initiate expansion cohorts » HexaBody-DR5/DR5 Phase I/II - advance dose escalation » DuoBody-PD-L1x4-1BB[2] Phase I/II – initiate expansion cohorts » File INDs and/or CTAs for 2 new products
Daratumumab[3]		» U.S. FDA and EMA decision on Phase III COLUMBA multiple myeloma SubQ submission » sBLA and MAA Submission Phase III ANDROMEDA amyloidosis » sBLA and MAA submission Phase III APOLLO multiple myeloma
Ofatumumab[4]		» U.S. FDA decision on regulatory dossier submission in multiple sclerosis
Teprotumumab[5]		» U.S. FDA decision on Phase III OPTIC active thyroid eye disease submission

*Certain product candidates in development with partners, as noted.
1. 50:50 dev. w/ Seattle Genetics; 2. 50:50 dev. w/ BioNTech; 3. In dev. w/ Janssen; 4. In dev. by Novartis; 5. In dev. w/ Horizon Therapeutics

Delivering on Genmab's Promise: Innovating Antibodies, Improving Lives



Creating Substantial Value

www.genmab.com