Genmab

Innovating Antibodies, Improving Lives

39th Annual J.P. Morgan Healthcare Conference

13 January 2021

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.

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On the Road to 2025:
Evolving Into a Fully Integrated Biotech

Core Purpose

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

Our Strategy

- ✓ Focus on core competence
- ✓ Turn science into medicine
- ✓ Build a profitable & successful biotech

Vision

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

Our Core Purpose, Strategy & Vision Guide Our Work

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Well Positioned for Future Growth

Consistent and solid track record

World-class pipeline & innovation with two potential near-term launches

Partnerships with innovators and industry leaders

Strong Financials to invest in growth opportunities

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Consistent, Solid Track Record Fuels Our Growth:
Over 20 Years of Achievements

- ✓ 38 Cumulative INDs since 1999
- ✓ 22 Genmab-created product candidates in ongoing clinical trials

- ✓ Multiple Genmab-created products approved
- ✓ 8 Years of profitability & expanding top line
- ✓ Investing in our capabilities

- ✓ Experienced, international management team
- ✓ Dual-listed in US & DK with 2019 US IPO

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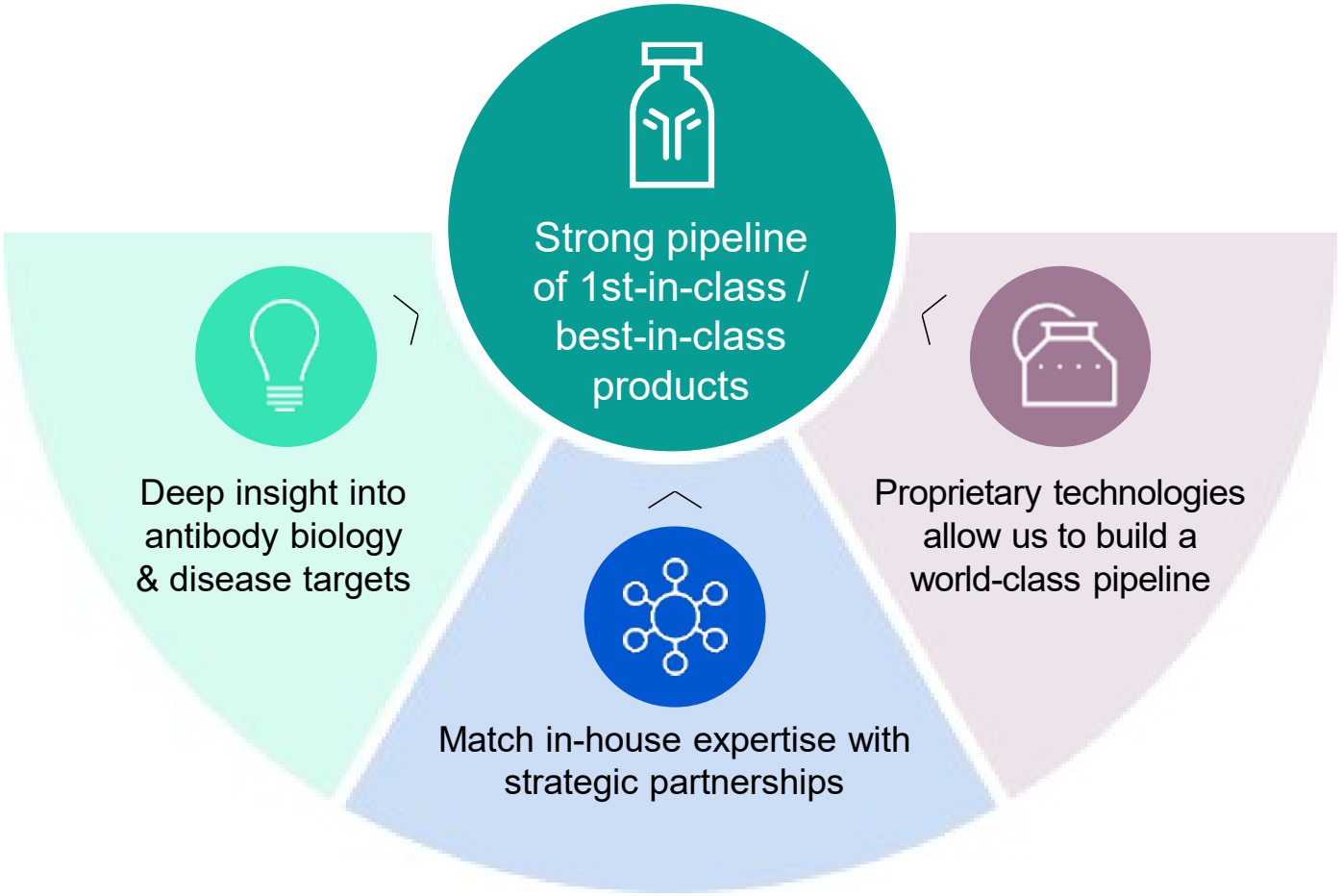
The Genmab Difference



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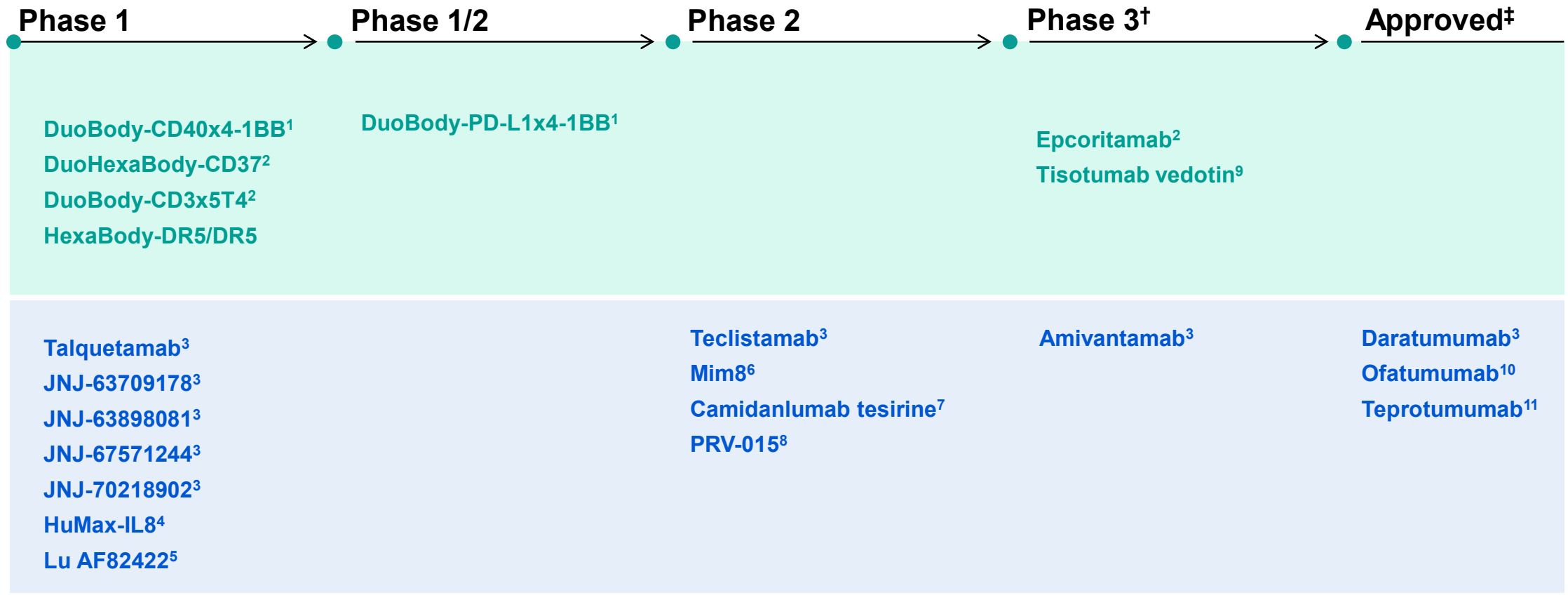
Innovative Clinical Pipeline: Genmab Proprietary* and Partnered Products - Most Advanced Development Phase



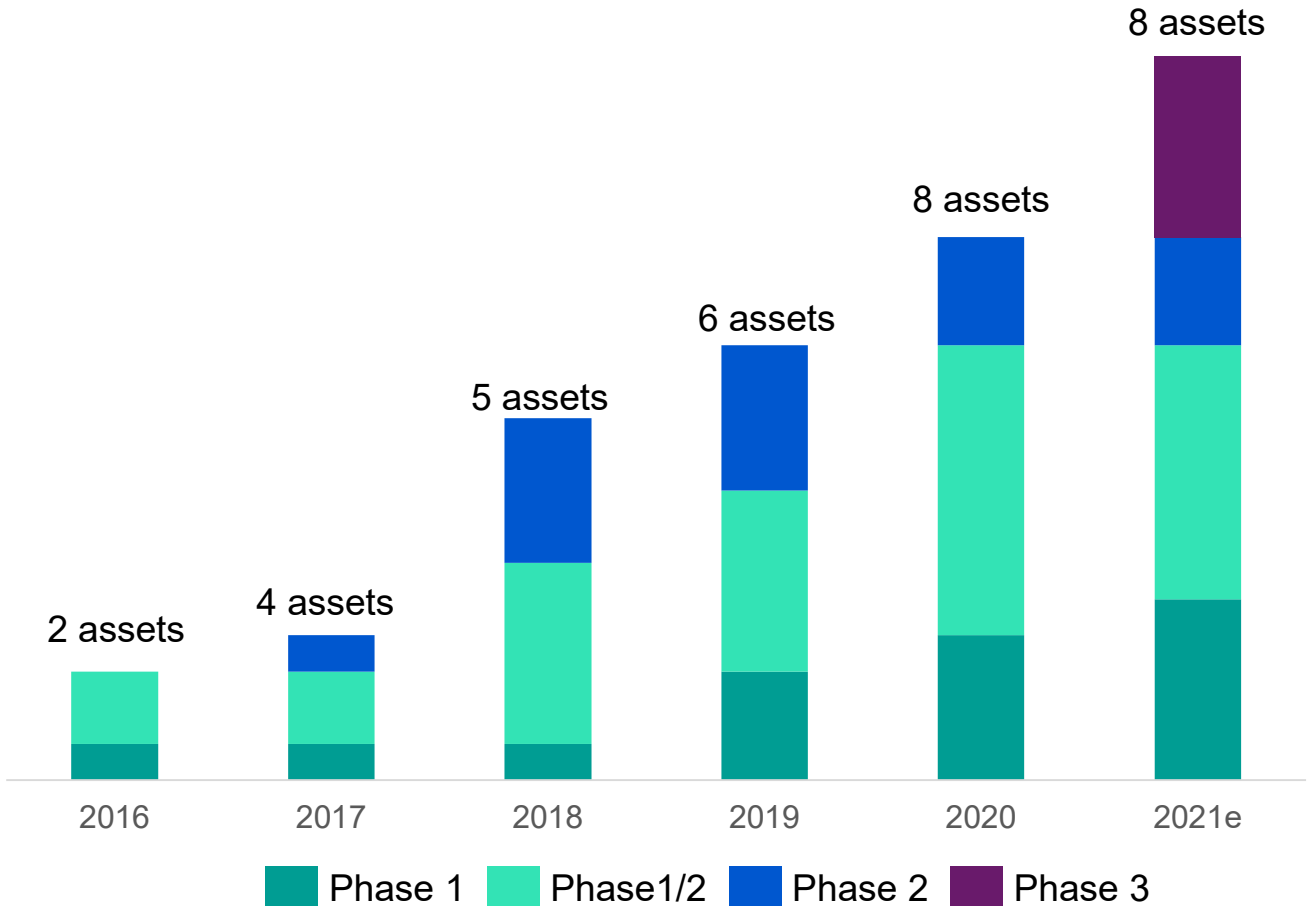
*Products where Genmab has ownership of at least 50%
† For epcoritamab and tisotumab vedotin, Phase 3 FPD anticipated 2021
‡See local prescribing information for full indications / safety information
[1]50/50 co-development with BioNTech [2]50/50 co-development with AbbVie; [3]Development by Janssen Biotech, Inc; [4]Development by BMS; [5]Development by Lundbeck; [6]Development by Novo Nordisk, approved in the US; [7]Development by ADC Therapeutics; [8]Development by Provention Bio; [9]50/50 co-development with Seagen; [10]Development by Novartis; [11]Development by Horizon Therapeutics, approved in the US

Investing in the Breadth & Depth of our Pipeline

R&D Engine

- DuoBody® technology
- HexaBody® technology
- DuoHexaBody® technology
- HexElect® technology

Expanding & maturing trials for our proprietary* assets



*Genmab owned ≥50%; number of active clinical trials in 2021 is estimated

Tisotumab Vedotin
in Collaboration with Seagen

First-in-class

- Antibody–drug conjugate (ADC) directed against Tissue Factor (TF)

Very favorable efficacy with manageable safety profile

- Very favorable overall response in Phase 2 innovaTV 204 study vs. prior reported SoC, with manageable safety profile

Broad population in innovaTV 204 study

- Not restricted to biomarker selection
- Pre-treated as per current SoC
- Regardless of histology

In Phase 2 innovaTV 204 study: Tisotumab vedotin demonstrated very favorable, durable responses and a manageable safety profile in 2L+ r/m cervical cancer patients

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Epcoritamab
in Collaboration with AbbVie

Novel MoA
- Next-generation, bispecific antibody

Potential best-in-class
- Potential for Improved efficacy & safety

Subcutaneous administration
- Enhanced convenience & ease of administration for HCPs & patients compared to IV infusion

Comprehensive development plan
- Trials in several B-cell malignancies
- Trials across multiple lines of therapy
- Exploration as both monotherapy and in combination

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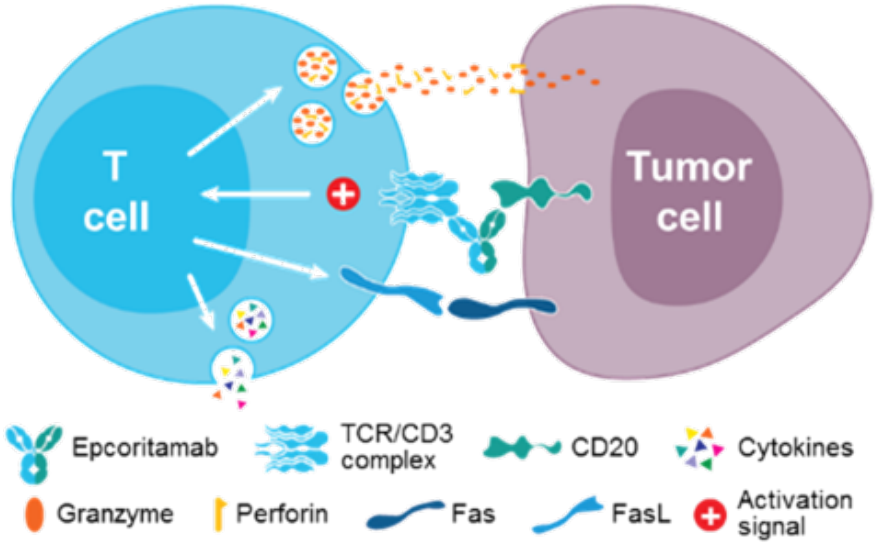
Currently investigated in several clinical trials across B-cell NHL histologies / in various combinations: Phase 2 expansion part is ongoing, as is Phase 1b exploring combinations with multiple SoC treatments. Phase 3 initiated in DLBCL, FPD anticipated 2021

Epcoritamab: Potential Best-in-Class



Updated Dose-escalation Data Presented at ASH 2020*

Novel, off-the-shelf therapy with convenient SubQ administration

- Phase 1/2 study (NCT03625037) in patients with relapsed, progressive or refractory B-cell lymphoma
- RP2D: 48 mg reached with no DLTs; MTD not reached

Favorable safety profile

- Supports potential for combination therapies / future outpatient administration
- CRS events were Grade 1 and 2

Demonstrated substantial single-agent activity in heavily pre-treated patients with B-NHL

- Patients with DLBCL receiving ≥48 mg:
- Responses achieved in 10 of 11 evaluable patients, including CR in 6 patients
- All patients receiving ≥12 mg who achieved CR remain in remission
- Patients with FL receiving ≥12 mg: ORR was 80%, with 60% CR
- Encouraging responses, including CR, observed in 2 of 4 evaluable patients with MCL

Binds to distinct epitope

- Different from that of rituximab and obinutuzumab:
- Has potential to be partner of choice in combinations with SoC therapies containing rituximab

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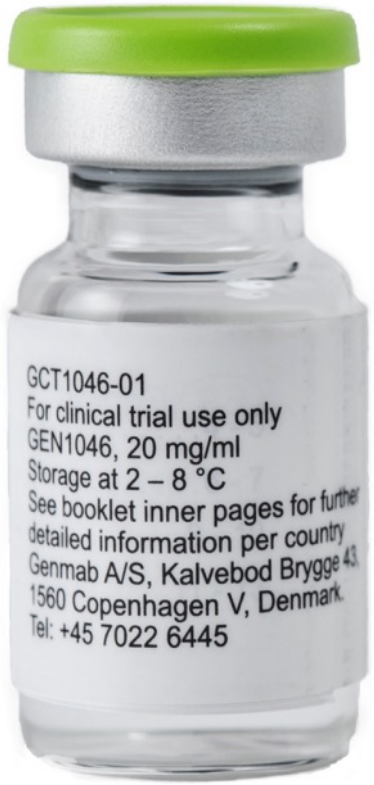
*"Subcutaneous Epcoritamab Induces Complete Responses with an Encouraging Safety Profile Across Relapsed/Refractory B-cell Non-Hodgkin Lymphoma Subtypes, Including Patients with Prior CAR-T Therapy: Updated Dose-escalation Data" Hutchings, et al.

DuoBody-PD-L1x4-1BB (GEN1046) & DuoBody-CD40x4-1BB (GEN1042) in Collaboration with BioNTech

GEN1046

- First-in-class bispecific next generation checkpoint immunotherapy
- Designed to enhance T-cell and NK cell function through conditional 4-1BB co-stimulation
- Simultaneously blocking the PD-L1 axis
- Enhances proliferation and cytokine production of activated T-cells
- Activates immune cells in the tumor-draining lymph nodes
- Induces tumor regression *in vivo*.



GEN1042

- First-in-class bispecific antibody
- Designed to conditionally activate both CD40-expressing antigen-presenting cells (APC) and 4-1BB-expressing T cells
- Conditionally activates T cells and APC in the presence of CD40-expressing cells

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Earlier Stage Clinical Development

DuoHexaBody-CD37

- Combination of DuoBody & HexaBody platforms
- Novel target for hematological malignancies
- Unique MoA
- Dose escalation ongoing
- 50:50 co-development with AbbVie

DuoBody-CD3x5T4

- Based on proprietary DuoBody Technology
- CD3 bispecific, T cell mediated cytotoxicity of 5T4+ tumor cells
- 5T4 expressed on multiple solid tumors, limited expression in healthy tissue
- Dose escalation ongoing
- 50:50 co-development with AbbVie

HexaBody-DR5/DR5

- First HexaBody in the clinic
- Targets 2 distinct DR5 epitopes
- DR5 clustering & DR5 agonist activity
- Dose escalation ongoing in multiple solid tumors

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Approved Antibody Therapeutics Created by Genmab

DARZALEX® (daratumumab) & DARZALEX *FASPRO*® Redefining Treatment of Multiple Myeloma*

Collaboration with Janssen Biotech, Inc.: Genmab entitled to tiered royalty of 12-20% of net sales

DARZALEX *FASPRO* first and only SubQ CD38 mAb approved in U.S. for treatment of MM

DARZALEX (daratumumab) injection for intravenous infusion 100 mg/5 mL, 400 mg/20 mL

DARZALEX Faspro™ (daratumumab and hyaluronidase-fihj) Injection for subcutaneous use | 1,800mg/30,000units

Kesimpta® (ofatumumab) Approved in U.S. in Relapsing Multiple Sclerosis*

Collaboration with Novartis: Genmab entitled to royalty of 10% of net sales

First B-cell therapy that can be self-administered by patients at home using Sensoready® autoinjector pen

Kesimpta® (ofatumumab) 20 mg injection

TEPEZZA® (teprotumumab) Approved in U.S. in Thyroid Eye disease (TED)*

Developed and commercialized by Horizon Therapeutics: Genmab entitled to mid single digit royalty of net sales

First and only U.S. FDA-approved medicine for treatment of TED

TEPEZZA® teprotumumab-trbw

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*See local prescribing information for full indication and safety information.

Building Our Capabilities

Research

Track record of success and investing for tomorrow

- State-of-the-art facilities
- Novel technologies and formats
- External innovation

Development

Scaling up to expand from early to late stage

- Clinical development & operations
- Disease area expertise
- Medical Affairs, Safety and Regulatory

Commercialization

Step change in our business

- Leadership team in place
- Focused on U.S. and Japan
- Building expanded team

Enabling functions to support growth & manage risk | Data Sciences to drive insights

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2020 Guidance: Recurring Revenue Growth and Focused Investments

Income Statement	DKKM	~USDM*
Revenue	9,250 – 9,850	1,423 – 1,515
Operating Expenses	(3,850) – (3,950)	(592) – (608)
Operating Income	5,350 – 5,950	823 - 915

Key Observations

Summary P&L

- DARZALEX royalties of ~DKK 4.1bn to ~DKK 4.5bn to drive recurring revenue growth
- Nearly 90% of USD 750M upfront from AbbVie collab. recognized immediately
- Growth in operating expenses driven by expanding and accelerating our clinical pipeline

DARZALEX Sales of USD 3.9bn – USD 4.2bn

- Significant opportunity for growth in 1L MM market
- SubQ DARZALEX approvals in H1 in U.S. & EU
- Market share gain in the U.S. and RoW driven by uptake in all lines of treatment
- 8 approved indications in U.S., late stage to 1L MM

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*2020 Guidance – November 4, 2020 / USD 1.00 = DKK 6.50.

Key 2021 Priorities: Build a Strong Differentiated Product Pipeline & Bring Own Medicines to Market

Priority	✓ Targeted Milestones
Bring our own medicines to patients	» Tisotumab vedotin[1] - U.S. FDA decision on BLA and progress to market » Tisotumab vedotin - JNDA submission in cervical cancer » Epcoritamab[2] - acceleration & maximization of development program by advancing expansion cohorts and initiating additional Phase 3 trials
Build world-class differentiated product pipeline	» DuoBody-PD-L1x4-1BB[3] – expansion cohort data » DuoBody-CD40x4-1BB[3] – dose escalation data » Tisotumab vedotin – data in other tumor indication » Earlier stage products – progress & expand innovative product pipeline
Become leading integrated innovation powerhouse	» Operational commercialization model in US & Japan » Further strengthen solid financial foundation

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1. 50:50 dev. w/ Seagen; 2. 50:50 dev w/ AbbVie; 3. 50:50 dev. w/ BioNTech

Well On Track to Reaching Our 2025 Vision

Successful track record

	Strategy	2025 Vision
Focus Areas	▪ Focus on core competence ▪ Turn science into medicine ▪ Build a profitable and successful biotech	By 2025, our own product has transformed cancer treatment and we have a pipeline of knock-your-socks-off antibodies
Progress	**Sustained Execution**	**Building fully integrated biotech innovation powerhouse**

Genmab profile today

- **2 potential near-term Genmab owned product launches**
- **Imperative to invest**
- **Remain focused and disciplined**

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