Better Antibodies By Design

Kempen 10th Life Sciences Conference
April 2017

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.

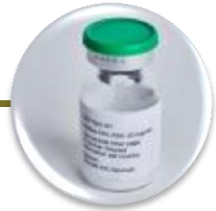
Genmab At-A-Glance

Vision

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

2 marketed products generating royalty income

- DARZALEX®
- Arzerra®



2 exciting proprietary clinical programs

- Tisotumab vedotin
- HuMax®-AXL-ADC

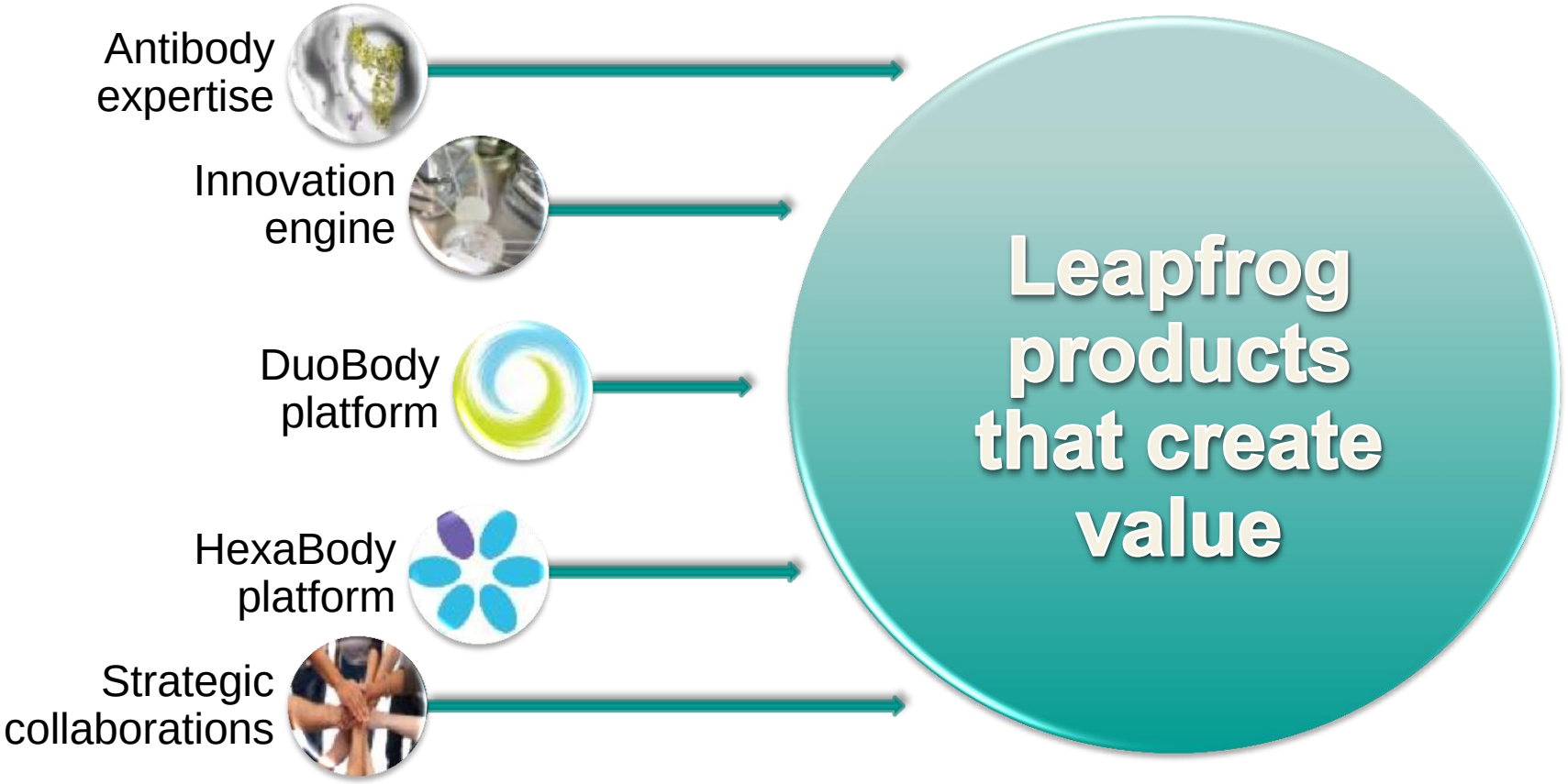
2 proprietary next generation technologies for robust pre-clinical pipeline

- DuoBody® platform
- HexaBody® technology

Solid Financial Base

- Aim to own at least 50% of product rights
- Allows for building capabilities to market our own product in the future

Antibody Innovation Powerhouse
Creating Value for Stakeholders

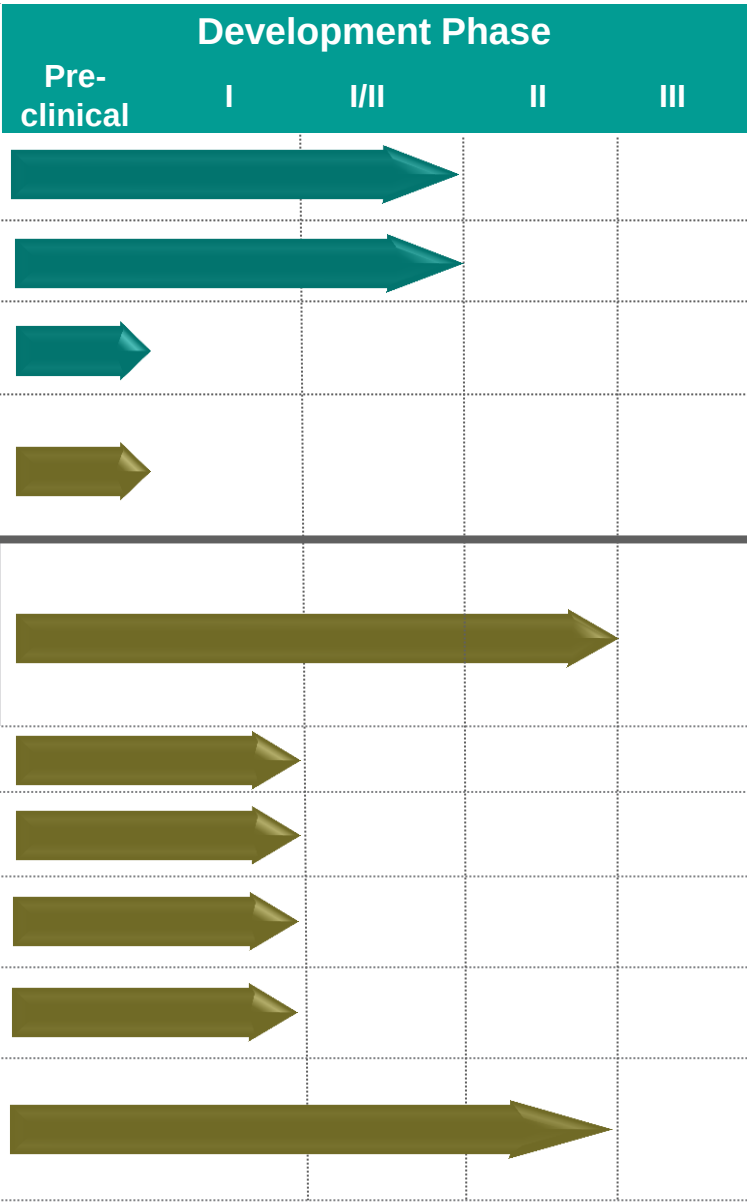


Innovative Clinical & Pre-clinical Pipeline
Further Development for Marketed Products

Product	Disease Indications	Development Phase: Pre-clinical / I / II / III
Daratumumab Target: CD38 Partner: Janssen **BTD (2 – MM)**	Multiple myeloma (MM)	
	Natural Killer /T-Cell Lymphoma (NKTCL), Nasal Type	
	Myelodysplastic Syndromes (MDS)	
	Solid tumors	
Ofatumumab Target: CD20 Indication: Cancer Partner: Novartis **BTD (CLL)**	Follicular lymphoma (FL)	
Ofatumumab (OMB157) Target: CD20 Indication: AI Partner: Novartis	Relapsing multiple sclerosis (RMS) (SubQ)	

Innovative Clinical & Pre-clinical Pipeline

Product	Disease Indications & Target
Tisotumab vedotin	Solid Cancers, Target: TF
HuMax-AXL-ADC	Solid Cancers, Target: AXL
➢ **20 Active Pre-clin. progr. incl., HexaBody DR5/DR5, DuoBody CD3xCD20**	Proprietary programs: HuMab, HuMab-ADC, DuoBody, DuoBody-ADC & HexaBody
	Partnered programs: HuMab, DuoBody & HexaBody
Teprotumumab (RV001) Partner: River Vision **BTD (Grave's orbitopathy)**	Graves' orbitopathy, Target: IGF-1R
ADCT-301 (HuMax-TAC-ADC) Partner: ADCT	Lymphoma, Target: CD25
	Acute myeloid leukemia (AML) or acute lymphoblastic leukemia (ALL), Target: CD25
JNJ-61186372 Partner: Janssen	Non-small-cell lung cancer (NSCLC), Targets: EGFR, cMET
JNJ-63709178 Partner: Janssen	Acute Myeloid Leukemia (AML), Targets: CD3,CD123
AMG 714 Partner: Celimmune (sublicensed from Amgen)	Celiac Disease, Target: IL-15



Daratumumab (Marketed as DARZALEX®)
Approved in US & EU

- First-in-class antibody targeting CD38
- Marketed as monotherapy in US and EU for double refractory MM
- Approved in US in combination with Revlimid & dex or Velcade & dex for relapsed / refractory MM
- 2 FDA Breakthrough Therapy Designations
- Clinical studies ongoing in MM, NKT-cell lymphoma, MDS, and solid tumors
- Blockbuster potential – growing royalty income
  Royalty Rate: 12% - 20%
- Collaboration with Janssen Biotech
  Up to $1bn in dev., reg. & sales milestones, Janssen responsible for all costs assoc. with dev.& commercialization

Expansive Daratumumab Clinical Development
Multiple Myeloma

Indication	Disease Stage	Therapy	No. Pts*	Development Phase (I / I/II / II / III)
Multiple Myeloma**	High Risk Smoldering	Mono	126	✓ SMM2001 (CENTAURUS)
	Front line (transplant & non-transplant)	Dara + VMP	700	✓ MMY3007 (ALCYONE)
		Dara + Rd	730	✓ MMY3008 (MAIA)
		Dara + VTd	1,080	MMY3006 (CASSIOPEIA)
		Dara + RVd	216	MMY2004
		Multi combo Study (6 arms)	250	MMY1001 (EQUULEUS)
	Relapsed or Refractory	Dara + Rd	571	✓ MMY3003 (POLLUX)
		Dara + Vd	498	✓ MMY3004 (CASTOR)
		Dara + K + Dex	450	Announced
		Dara +Pom + Dex	155	H-35360
		Subcutaneous	93	MMY1004 (PAVO)
		Dara + Tecentriq	214	GO29695
		Dara + durvalumab	264	FUSION
		Dara + Opdivo	375	CA209-039
		Dara + Opdivo	TBC	Announced

*Approx. no. based on clinicaltrials.gov **Maintenance integrated into some study protocols

V = bortezomib , MP = melphalan-prednisone , T = thalidomide , d= dexamethasone, R = lenalidomide

✓ Fully Recruited

Select Studies

Expansive Daratumumab Clinical Development
Other Indications

Indication	Disease Stage	Therapy	No. Pts*	Development Phase
				I / I/II / II / III
NKTCL	Nasal Type	Mono	32	NKT2001(VOLANS)
NSCLC, pancreatic, triple neg. breast cancers	Advanced or metastatic	Dara + Opdivo	120	CA209-9GW
Colon Cancer	Recurrent & metastatic	Dara + Opdivo	260	CA209-142
Virus Associated Tumors	Virus positive & negative	Dara + Opdivo	500	CA209-358
MDS	Relapsed or refractory	Mono	30	CR108261
NSCLC	Advanced or metastatic	Dara + Tecentriq	96	LUC2001 (CALLISTO)

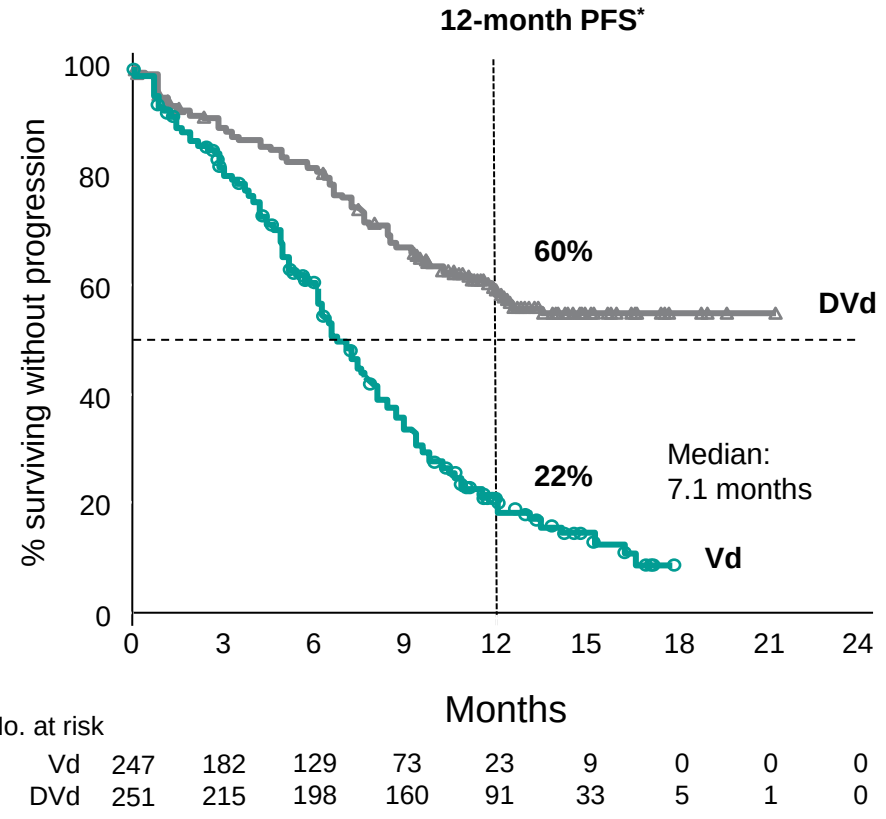
*Approx. no. based on clinicaltrials.gov

Updated Efficacy: CASTOR & POLLUX

Phase III Relapsed or Refractory Multiple Myeloma

CASTOR

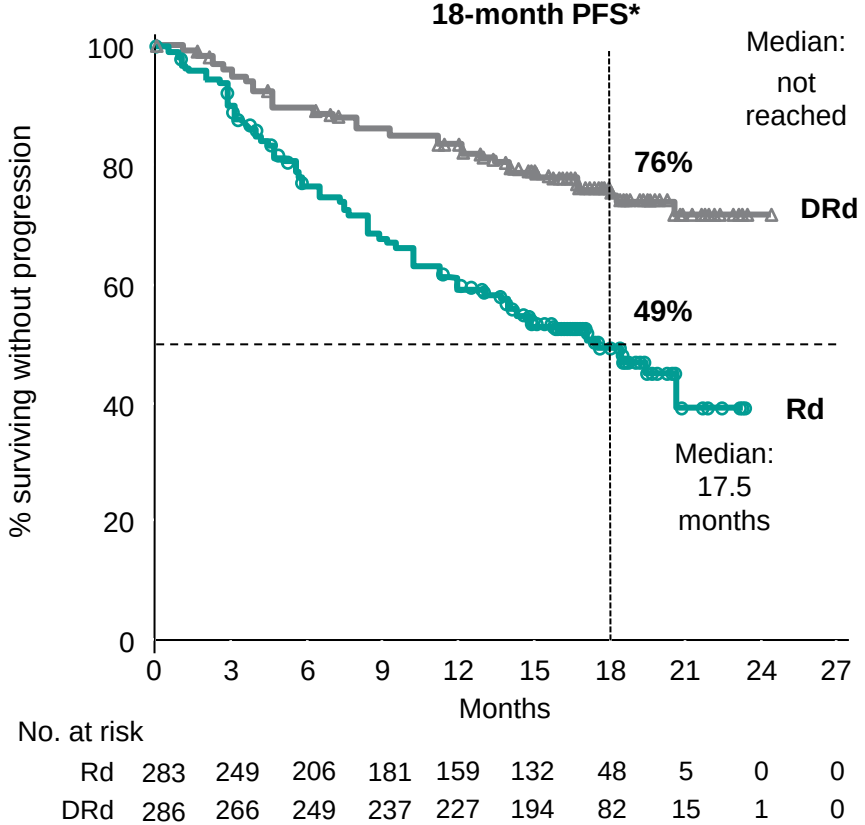
Dara + Bort + Dex (DVd)



Hazard Ratio=0.33	DVd	Vd
ORR	84%	63%
≥ CR	26%	10%

POLLUX

Dara + Len + Dex (DRd)

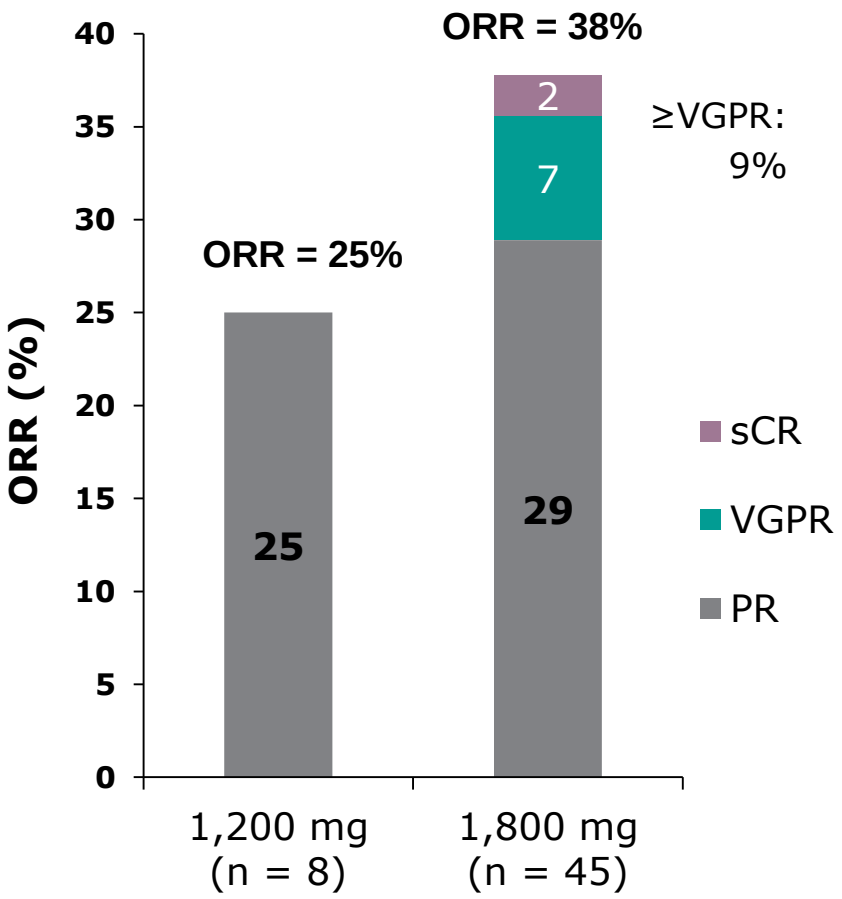


Hazard Ratio=0.37	DRd	Rd
ORR	93%	76%
≥ CR	46%	20%

Presented at ASH – San Diego, Dec. 2016

Subcutaneous Daratumumab

Data PhIb PAVO Study in Relapsed or Refractory MM



Faster Infusion time

- 1,800 mg dose: ~30min
- First IV infusion: 7 hrs

Lower IRR incidence

- 1,800 mg dose: 24%
- 16 mg/kg IV dose: 48%

PK profile of 1,800 mg dose consistent with 16 mg/kg IV dose

Presented at ASH – San Diego, Dec. 2016

Ofatumumab (Arzerra®)

- Human antibody targeting CD20
- Two Phase III studies in relapsing MS started
- MS Advantages: Dosing
  - Better disease management, subcutaneous dosing
- MS Advantages: Attributes
  - Potential for low immunogenicity, manageable safety profile
- Marketed in various territories for certain CLL indications*
- Collaboration with Novartis
  - Cash flow positive for Genmab

*See local country prescribing information for precise indications

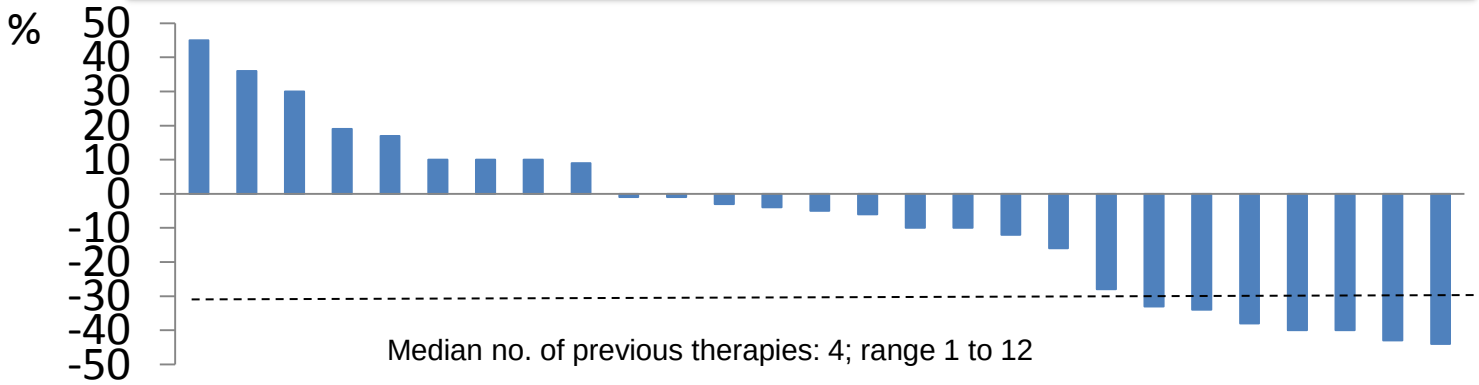
Clinical Projects: Tisotumab vedotin

Phase I/II & Phase I studies in Patients with Solid Tumors

- Fully human antibody-drug conjugate (ADC)
- Targets Tissue Factor (TF)
- Therapeutic potential in broad range of solid tumors
- 2 Phase I/II studies ongoing in seven solid tumors*
- Encouraging preliminary safety & efficacy data
- ADC technology licensed from Seattle Genetics**

*Currently being studied in the following cancers: gynecologic (ovarian, cervical, and endometrial), prostate, bladder, esophageal & NSCLC.

Early efficacy data - best % change (RECIST) from baseline



Median no. of previous therapies: 4; range 1 to 12

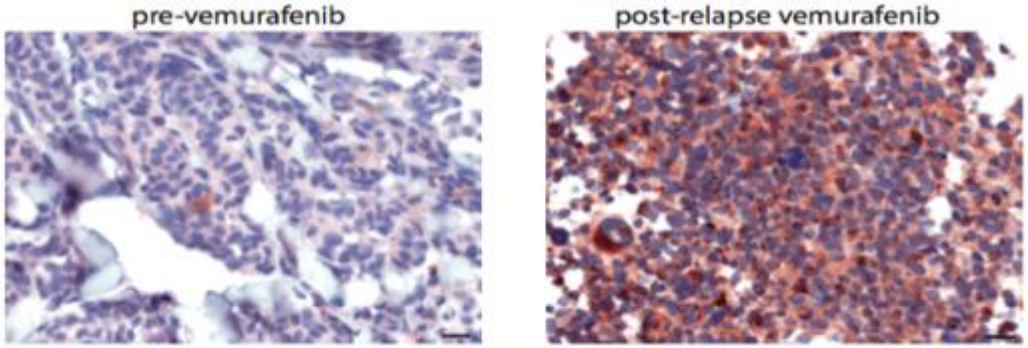
**Seattle Genetics holds option to co-own program [following Phase I/II clinical evaluation]

Clinical Projects: HuMax-AXL-ADC
Efficacy in *in vivo* Tumor Model

- Human ADC
- Targets the tumor-associated antigen AXL
- Therapeutic potential in solid tumors
- First-in-human Phase I/II study*
- ADC technology licensed from Seattle Genetics

*Currently being studied in the following cancers: gynecologic (ovarian, cervical, and endometrial), thyroid & NSCLC.

Malignant Melanoma

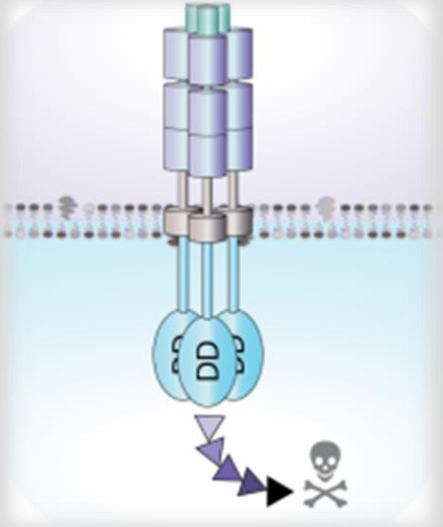


AXL expression indicated by brown staining

Next in the Clinic: 2017 IND Candidates

HexaBody-DR5/DR5

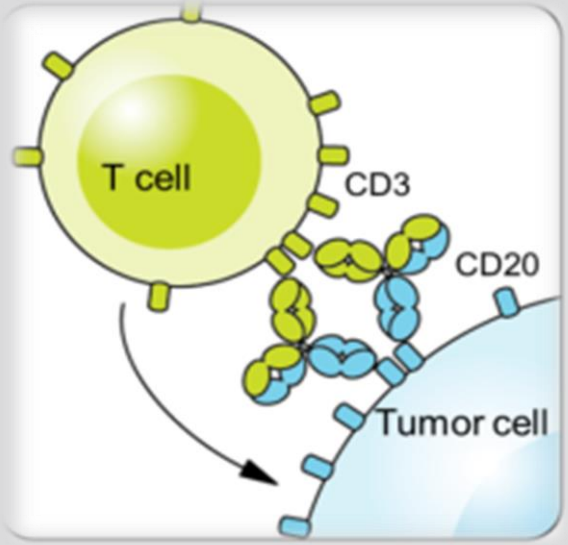
- Targets DR5 for Cancer Therapy
- Potentially effective in multiple tumor types



DR5 activation induces cell death

DuoBody CD3xCD20

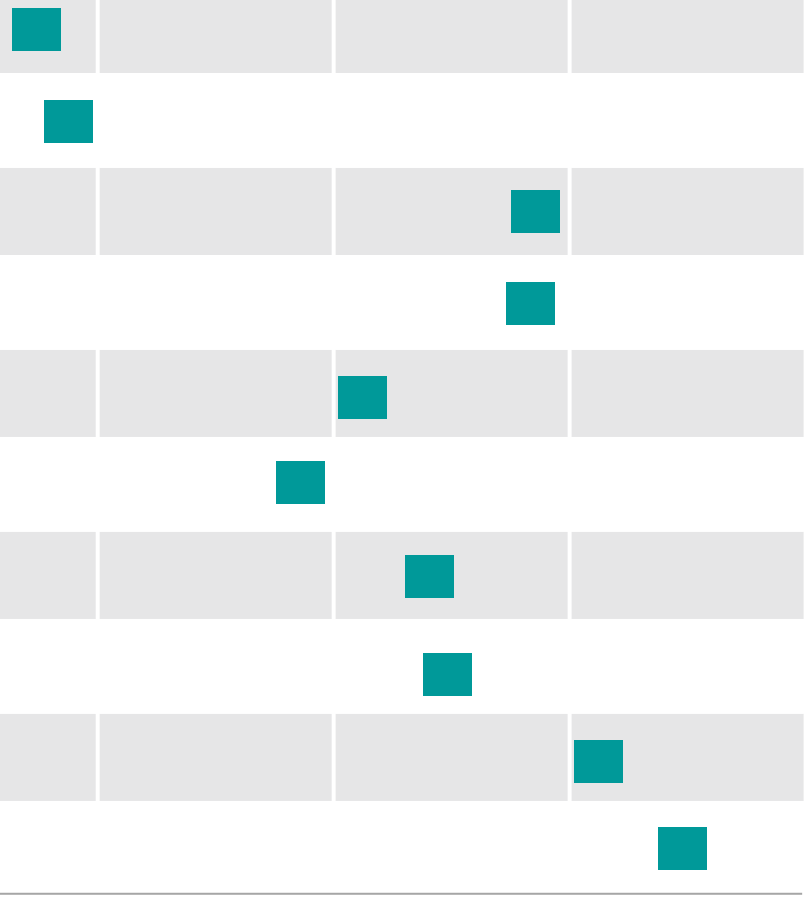
- Humanized IgG1 bispecific antibody
- Activates T cells to kill $CD20^{+}$ tumor cells



Genmab Proprietary Innovative Pipeline

Potential INDs in next 4 years

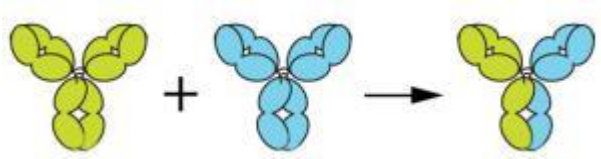
Technology	product	2017	2018	2019	2020
HexaBody	HexaBody-DR5/DR5				
DuoBody	DuoBody-CD3xCD20				
HexaBody	HexaBody-X				
DuoBody-ADC	DuoBody-XxY-ADC				
DuoBody	DuoBody-CD3xX				
Immuno-Oncology [>10 progr.]*	DuoBody-A				
	DuoBody-B				
	DuoBody-C				
	DuoBody-D				
*: Aduro Biotech & BioNTech	DuoBody-E				



Pre-clinical pipeline targeting at least 4 leapfrog INDs in next 4 years

Cutting Edge Capabilities: Proprietary Technologies to create Leapfrog Drugs

DuoBody



DuoBody

- Efficient & versatile bispecific Ab platform
- Applicable to any antibody from any platform
- Regular IgG format
- Large scale production validated
- No developability liabilities
- Robotized bispecific library generation
- Multiple ongoing collaborations incl. with Novartis, Novo Nordisk, Gilead & Janssen Biotech

HexaBody

- Robust effector function enhanced Ab
- Enables antibodies to readily form clusters of 6 (hexamers)
- Induces & enhances target cell killing after binding (CDC and apoptosis)
- Creates innovative products in cancer & infectious diseases
- Collaborations with Humabs BioMed, Agenus and others

HexaBody

Cutting Edge Capabilities: Immuno-Oncology

Turning Cancer into a Chronic Condition

Innovating cancer treatment

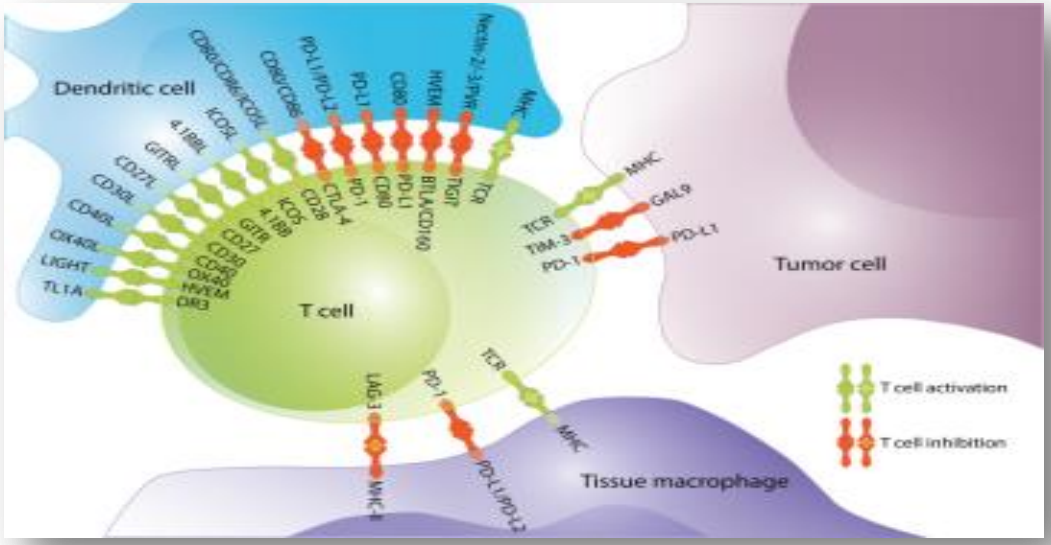
- Activate patient's own immune system
- Long duration of response
- Potential game changer
- >$50B market

DuoBody technology

- Robust & versatile bispecific antibody platform
- Screening multiple combinations in final therapeutic format
- Combined targeting immune check points
- Current Partnerships
  - Aduro Biotech
  - BioNTech

daratumumab + anti-PD-L1 / PD-1

- Multiple studies started in 2016 & 2017
- PhIb/II studies in combi. w/Tecentriq (Genentech) in relapsed / refractory MM & NSCLC
- PhII study in combi. w/ durvalumab (Celgene) in relapsed / refractory MM
- Ph Ib/II in combi. w/Opdivo (BMS) in solid tumors & MM



Well-Capitalized Biotech – 2017 Guidance

Income Statement	DKKM	USDM*
Revenue	1,950 – 2,150	276 - 305
Operating expenses	(1,000) – (1,100)	(142) – (156)
Operating income	900 – 1,100	128 - 156
Cash position at end of year**	>4,500	>638

*USD 1.00 = DKK 7.0528
**Cash, cash equivalents and marketable securities

2017 Guidance – February 22, 2017

DARZALEX sales

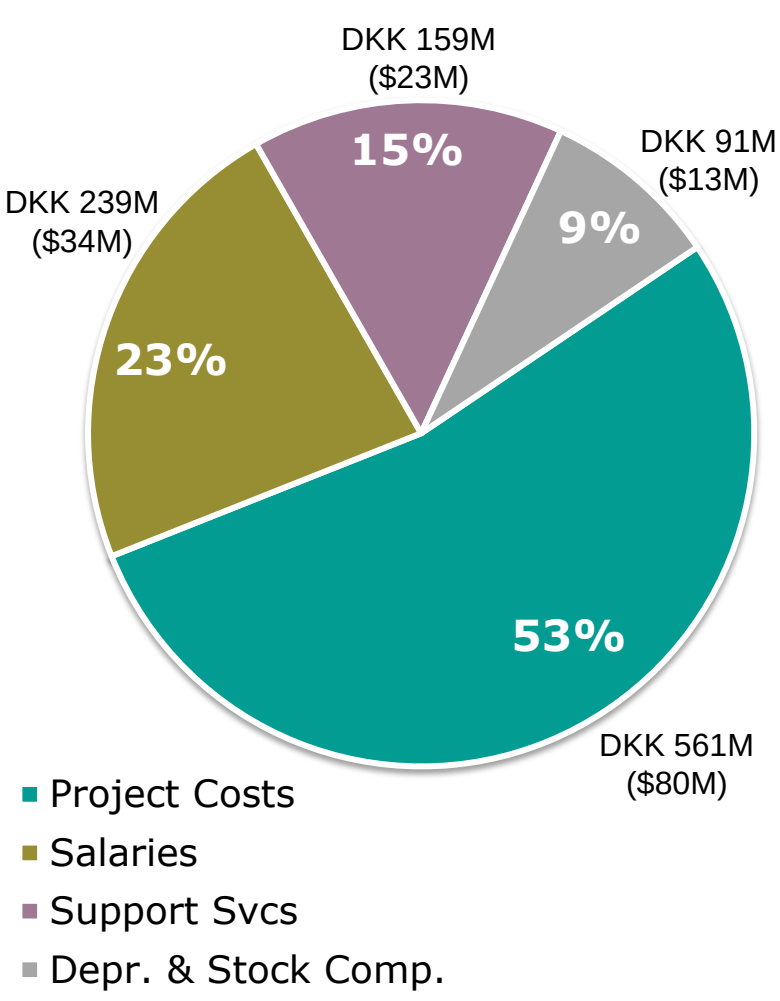
- Genmab's estimate of DARZALEX net sales USD 1.1-1.3 billion

Revenue mid-point DKK 2,050M

- DARZALEX royalties DKK 1,000M
- DARZALEX milestones DKK 800M
- Quality of revenue improving

Expense mid-point DKK 1,050

- Expense increase DKK 287M, +38%
- Continued investment in our clinical & pre-clinical pipeline
- 8 pipeline projects drive ~DKK 440M, 42% of total expense



2017 Goals: Maximizing Differentiated Product Portfolio Value

Priority	✓	Targeted Milestone
Maximize daratumumab progress		» EMA decision & launch in 2nd line+ in multiple myeloma (MM) relapsed / refractory setting » FDA decision in 3rd line MM setting (daratumumab + POM) » Phase III MM interim efficacy analysis in frontline (Alcyone trial) » Start Phase III subcutaneous trial » Start trials in solid tumors and non-MM blood cancers » Report non-MM clinical data
Optimize ofatumumab value		» Phase III refractory follicular lymphoma headline results
Strengthen differentiated product pipeline		» Phase I/II tisotumab vedotin data » Progress HuMax-AXL-ADC Phase I/II clinical trial » IND/CTA submission HexaBody-DR5/DR5 » IND/CTA submission DuoBody-CD3xCD20 » Progress pre-clinical pipeline
Broaden partnership portfolio with next generation technologies		» Enter new technology collaborations » Progress partnered programs
Disciplined financial management		» Execute controlled company growth with selective investments in product pipeline

Creating Value for Patients and Shareholders

Building on 3 central pillars: Focus, Innovation & Execution

- 2 marketed products
- 2 proprietary early stage clin. programs
- 2 proprietary technologies
- Robust pre-clinical pipeline
- Unique Antibody & R&D expertise
- Strategic collaborations
- Building commercial expertise
- Solid financials
- Proven track record

Better Antibodies By Design

Genmab