Better Antibodies By Design

Investor Presentation December 2017





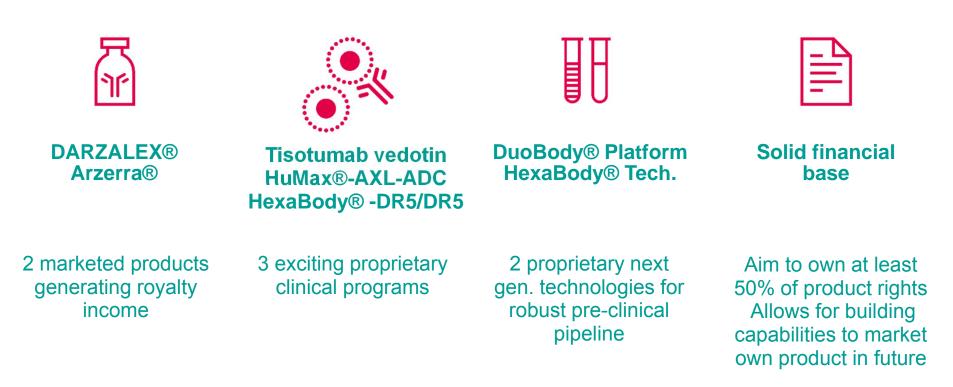
Forward Looking Statement

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 gualified 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.



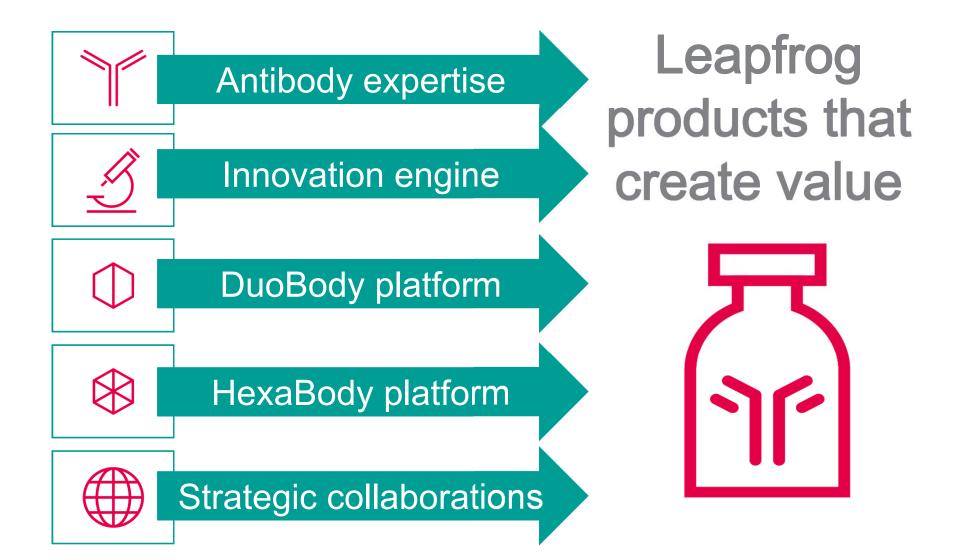
Genmab At-A-Glance

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





Antibody Innovation Powerhouse Creating Value for Stakeholders





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

Product	Disease Indications	Developm	Development Phase					
		Pre- Clinical	Ι	1/11	II	111		
Daratumumab BTD (2 - MM)	Multiple myeloma (MM)							
Target: CD38 Partner: Janssen	Amyloidosis							
	Natural Killer /T-Cell Lymphoma (NKTCL), Nasal Type							
	Myelodysplastic Syndromes (MDS)							
	Solid tumors							
OfatumumabBTD (CLL)Target: CD20Indication: CancerPartner: Novartis	Follicular lymphoma (FL)							
Ofatumumab (OMB157) Target: CD20 Indication: AI Partner: Novartis	Relapsing multiple sclerosis (RMS) (SubQ)							

Innovative Clinical & Pre-clinical Pipeline

Product	Disease Indications	Development Phase						
		Pre- Clinical	I	1/11	П	Ш		
Tisotumab vedotin Target: TF	Solid cancers							
HuMax-AXL-ADC Target: AXL	Solid cancers							
Teprotumumab (RV001)BTDTarget: IGF-1R, Partner: HorizonPharma	Graves' orbitopathy							
AMG 714 Target: IL-15, Partner: Celimmune	Celiac Disease							
ADCT-301 (HuMax-TAC-ADC) Target: CD25, Partner: ADCT	Lymphoma							
	Acute myeloid leukemia (AML) or acute lymphoblastic leukemia (ALL)							
JNJ-61186372 Targets: EGFR, cMet, Partner: Janssen	Non-small-cell lung cancer (NSCLC)							
JNJ-63709178 Targets: CD3, CD123, Partner: Janssen	Acute Myeloid Leukemia (AML)							
JNJ-64007957 Targets: BCMA, CD3, Partner: Janssen	Relapsed or refractory MM							
>20 Active Pre-clinical programs incl. HexaBody-DR5/DR5, DuoBody CD3xCD20	Proprietary programs: HuMab, HuMab-ADC, DuoBody, DuoBody- ADC & HexaBody							
	Partnered programs: HuMab, DuoBody & HexaBody					6		



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

First-in-class antibody targeting CD38 – 2 FDA BTDs

Marketed as monotherapy in US & EU for double refractory MM

Approved in US, EU & Japan in combo. w/ Revlimid & dex or Velcade & dex for relapsed / refractory MM

Approved in the US in combo. w/ Pomalyst & dex for pts w/ MM who have received at least 2 prior therapies

Industry sponsored clinical studies ongoing in MM, NKT-cell lymphoma, MDS, amyloidosis and solid tumors

Blockbuster potential – growing royalty income Royalty rate: 12% - 20%

Collaboration w/ Janssen Biotech

Up to \$1bn in dev., reg. & sales milestones, Janssen responsible for all costs assoc. w/ dev. & commercialization



Genmab

Expansive Daratumumab Clinical Development: MM

Disease Stage	Therapy	Development Phase					
		No. Pts	Pre- Clinical	Ι	1/11	II	111
High Risk Smoldering	Subcutaneous	360	AQUI	LA			
	Monotherapy	126		AURUS			
Front line (transplant & non- transplant)	Dara + VMP	706	ALCY	ONE			
transplantj	Dara + VMP (Asia Pacific)	192					
	Dara + Rd	744					
	Dara + VTd	1,080	CASS	SIOPEIA			
	Dara + RVd	216	GRIF	FIN			
	Multi combo study (6 arms)	250	EQU	JLEUS			
Relapsed or Refractory	Dara + Vd (China)	210					
	Dara + Kd	450	CANE	DOR			
	Dara + Pom + d	302	APOL	LO			
	Subcutaneous vs IV	480	COLL	JMBA			
	Dara + Imfinzi*	264	FUSI	ON			
	Dara + Keytruda	57					
weite MD = melabolan	Dara + Venclexta + d +/- V	90					
zomib , MP = melphalan- e , T = thalidomide , d= asone, R = lenalidomide, K = Pom = Pomalyst	Dara + Opdivo*	375					
cruited *Trials on partial clinical lated to daratumumab nce integrated into some study	Dara + Tecentriq*	288					
	Dara + JNJ-63723283	386				Select St	8 udies

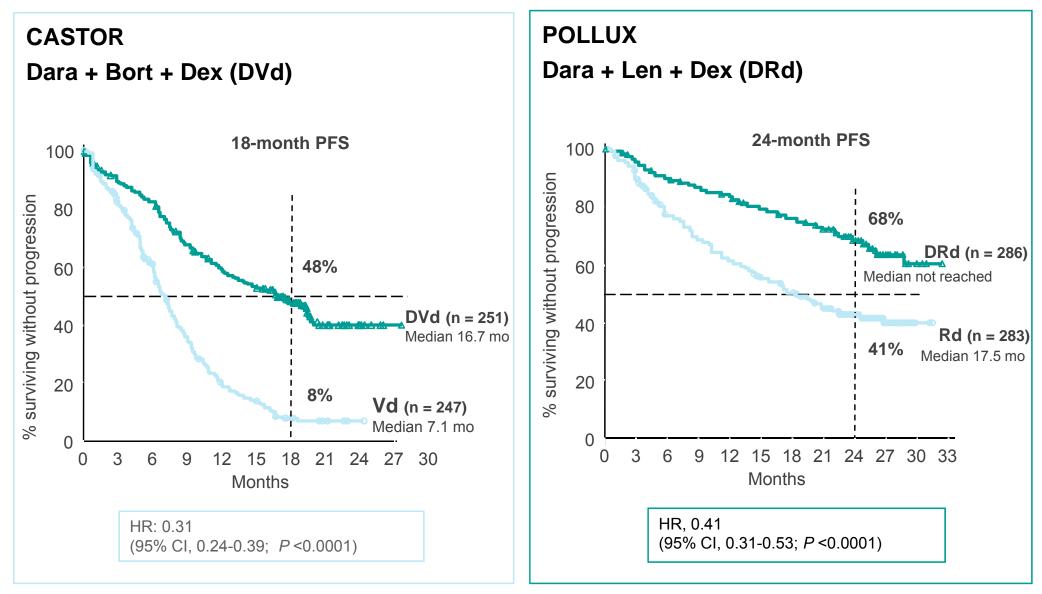


Expansive Daratumumab Clinical Development Other Indications

Disease Stage	Therapy		Development Phase						
		No. Pts	Pre-Clinical	Ι	1/11		II	Ш	
Amyloidosis	Dara SC + CyBorD	370	ANDROM	EDA					
NKTCL (nasal type)	Monotherapy	32	VOLANS						
Colon cancer	Dara + Opdivo	340							
MDS	Dara or talacotuzumab	31							
NSCLC	Dara + Tecentriq	96	CALLIST	D					
NSCLC, pancreatic, triple neg. breast cancers	Dara + Opdivo	120							
Virus associated tumors	Dara + Opdivo	500							



Updated Efficacy: CASTOR & POLLUX Phase III Relapsed or Refractory Multiple Myeloma

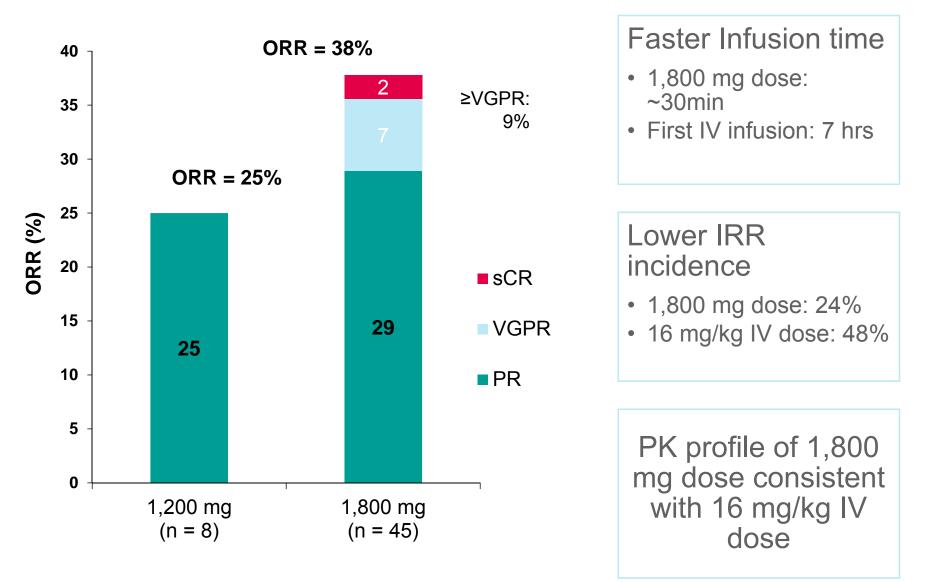


Presented at ASCO – Chicago, June 2017



Subcutaneous Daratumumab

Data PhIb PAVO Study in Relapsed or Refractory MM



Presented at ASH – San Diego, Dec. 2016



Ofatumumab (Arzerra®)

Human antibody targeting CD20

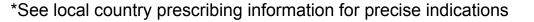
Two Phase III studies in relapsing MS ongoing

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







Clinical Projects: Tisotumab vedotin Phase I/II studies in Patients with Solid Tumors

Fully human antibody-drug conjugate (ADC)

Targets Tissue Factor (TF) Therapeutic potential in broad range of solid tumors

Studies ongoing in solid tumors Indications incl. gynecologic (ovarian, cervical, and endometrial) cancers, prostate, bladder, & esophageal cancers, NSCLC & SCCHN

Encouraging preliminary safety & efficacy data Promising data in pts w/ cervical cancer Based on data, looking at further dev. in indication

Co-development with Seattle Genetics





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

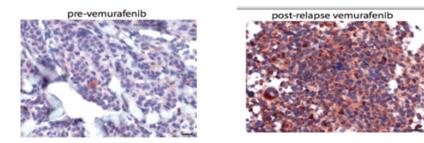
Human ADC

Targets tumor-associated AXL

Therapeutic potential in solid tumors

First-in-human Phase I/II study Indications incl. gynecologic (ovarian, cervical, & endometrial) cancers, thyroid cancer, NSCLC and melanoma

ADC technology licensed from Seattle Genetics





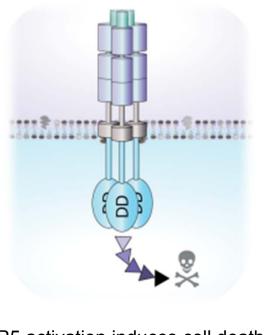
Malignant Melanoma: AXL expression indicated by brown staining



Next in the Clinic: 2017 IND Candidates

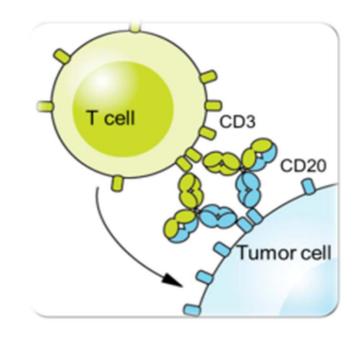
HexaBody-DR5/DR5

- Targets DR5 for cancer therapy
- Potentially effective in multiple tumor types



DuoBody CD3xCD20

- Humanized IgG1 bispecific antibody
- Activates T cells to kill CD20⁺ tumor cells



DR5 activation induces cell death



Genmab Proprietary Innovative Pipeline Potential INDs in next 4 years

Technology	product	2017	2018	2019	2020
HexaBody	HexaBody-DR5/DR5				
DuoBody	DuoBody-CD3xCD20				
HexaBody	DuoHexaBody				
DuoBody	DuoBody-CD3xX				
Immuno-Oncology	DuoBody-A				
[>10 progr.]*	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



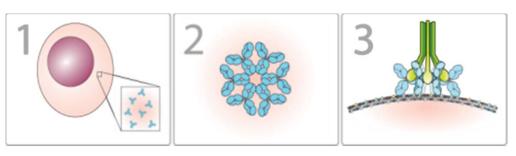
HexaBody

- 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

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 Novo Nordisk, Gilead & Janssen Biotech







Cutting Edge Capabilities: Immuno-Oncology Turning Cancer into a Chronic Condition

Innovating cancer treatment

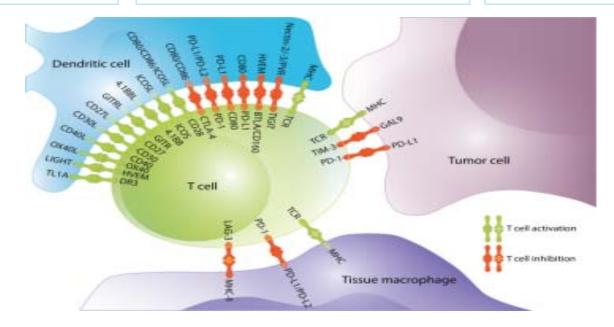
- Activate patient's own immune system
- Long duration of response
- Potential game changer
- >\$50B market

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
- Ph II study in combi. w/Tecentriq (Genentech) in relapsed / refractory MM & NSCLC
- PhII study in combi. w/ Imfinzi (Celgene) in relapsed / refractory MM
- Ph Ib/II in combi. w/Opdivo (BMS) in solid tumors & MM
- •Ph II in combi. w/ Keytruda (Merck) in MM





Well-Capitalized Biotech – 2017 Guidance

Income Statement	DKKM	USDM*
Revenue	2,240 - 2,440	355 - 387
Operating expenses	(1,000) – (1,100)	(159) – (174)
Operating income	1,190 – 1,390	189 - 221
Cash position at end of year**	>4,900	>777

*USD 1.00 = DKK 6.3038 **Cash, cash equivalents and marketable securities

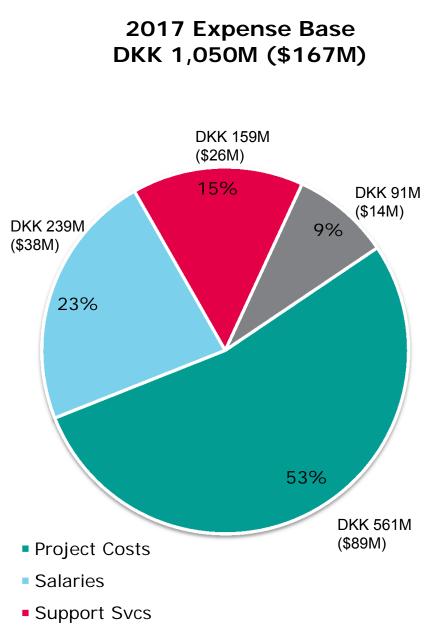
2017 Guidance - Nov 29, 2017

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 1,090M
- 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



Depr. & Stock Comp.



2017 Goals Maximizing Differentiated Product Portfolio Value

Priority	\checkmark	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	2018*	» 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

*Data read out now expected to occur in 2018.

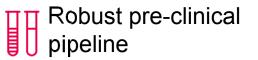


Creating Value for Patients & Shareholders

Building on 3 central pillars: Focus, Innovation & Execution

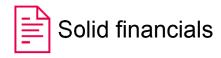


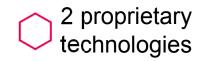
2 proprietary early stage clin. programs

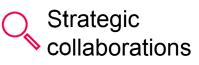


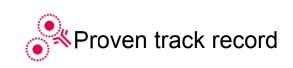
Building commercial expertise

World-class antibody & R&D expertise









Better Antibodies by Design





Publicly Listed Company with Large Free Float

Large cap, listed on Nasdaq Copenhagen, Denmark & ADR in US

Rest of shares held across world incl.

USA UK DK NL

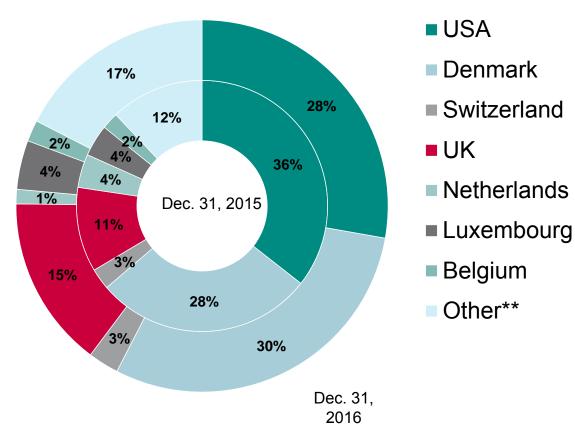
Approx. Market Cap DKK 74 bn USD 12 bn

Approx. shares outstanding: 61.2M

Warrants outstanding: 1.4M (2%)

Approx. diluted shares: 63M

Geographical Shareholder Distribution* As of December 31, 2016



* Based on figures from the internal shareholder register per December 31, 2015 and December 31, 2016

** "Other" includes shares held in other countries and shares not held in nominee accounts, including OTC traded shares

Genmab



DARZALEX® (daratumumab) Sales Potential

\$871M

Net sales 1st 9 Mo. 2017 **\$1.1 – 1.3B** Genmab projected 2017 sales



Average analyst* projected MM sales

Potential upside: smoldering disease, other blood cancers, solid tumors



Daratumumab

Other Opportunities

Smoldering MM

Novel combos with other drugs

- Tecentriq®
- Imfinzi
- Opdivo®
- Keytruda

Subcutaneous formulation

Other Indications:

Beyond Mult

Incl. Solid Tumors

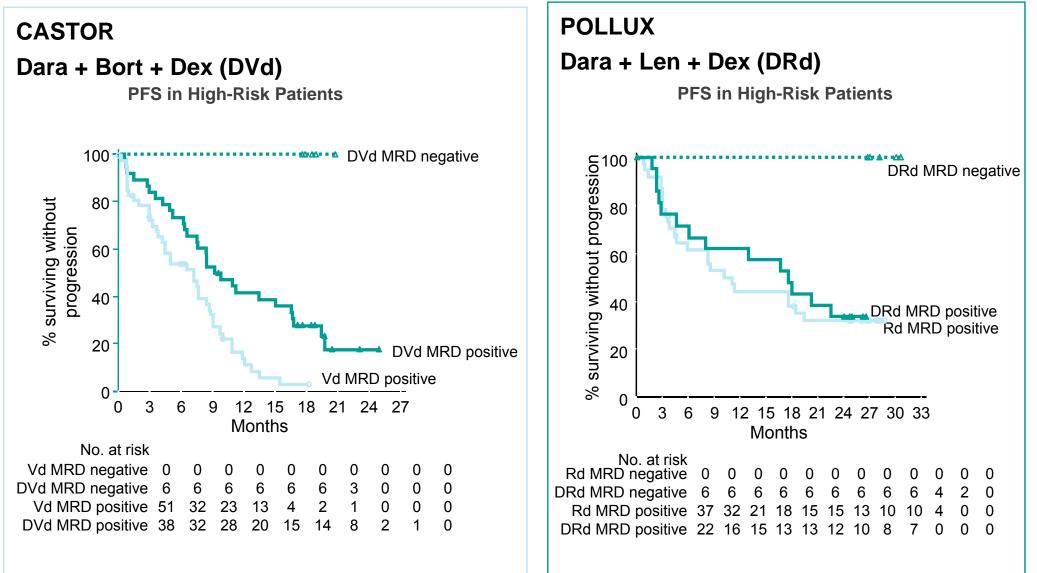
- Amyloidosis, Mantle cell lymphoma (MCL), acute myeloid leukemia (AML), acute lymphoblastic leukemia (T-ALL and B-ALL), myelodysplastic syndromes (MDS), Waldenstrom's macroglobulinemia, NKT-cell lymphomas, non-small cell lung cancer (NSCLC), colorectal cancer, virus assoc. tumors, rheumatoid arthritis (RA)
 - Exploit immune modulation as key mechanism of action
 - Combination therapy with immune check point inhibitors (Tecentriq, Opdivo)

Multiple Myeloma



Updated Efficacy: CASTOR & POLLUX

Phase III RRMM: MRD by Cytogenic Risk Status



Presented at ASCO – Chicago, June 2017



HexaBody-DR5/DR5

DR5 (death receptor 5)

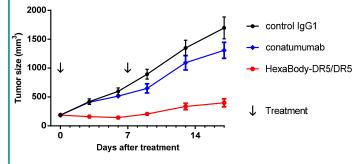
Cell surface receptor that mediates programmed cell death In normal physiology, binding of TRAIL ligand results in DR5 clustering & cell death

Targeting DR5 for treatment of cancer

Agonistic DR5 mAb induce apoptosis after crosslinking

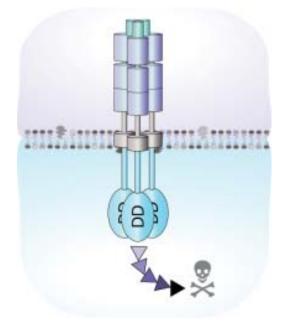
 Agonistic DR5 antibodies have shown limited anti-tumor activity in the clinic

Mouse xenograft model



Need for increased therapeutic potency

- Use HexaBody technology to induce clustering & activation of DR5 molecules, <u>without</u> a need for additional crosslinking
- Combination of two HexaBody molecules against two non-overlapping DR5 epitopes induces maximal cell death



DR5 activation induces cell death

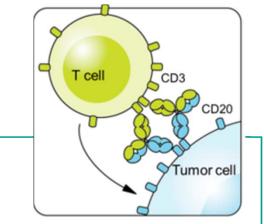


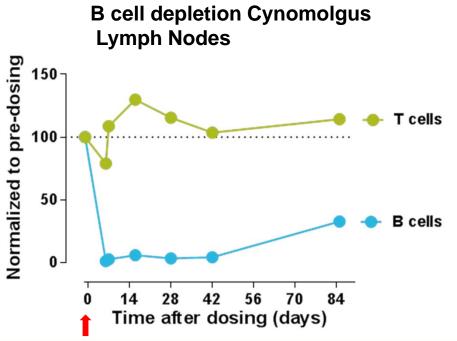
DuoBody CD3xCD20

Key Characteristics

Humanized IgG1 bispecific antibody

- DuoBody platform
- Regular half life
- Non-activating Fc-domain
- Potently activates T cells to kill CD20⁺ tumor cells
- Cynomolgus CD3 & CD20 x-reactive
 - Potent Cynomolgus B cell depletion (peripheral blood, lymph nodes)
- 2017 IND candidate







Ongoing Daratumumab Clinical Trials Janssen Sponsored Phase II & III

Daratumumab Trials Sponsored by Pharma / Biotech

Ct.gov Identifier	Phase	Sponsor	Indication	Therapy
NCT02252172	III	Janssen	Untreated MM	Daratumumab + Rd (MAIA)
NCT02195479	III	Janssen	Untreated MM	Daratumumab + VMP (ALCYONE)
NCT02541383	Ш	Janssen	Untreated MM	Daratumumab + VTd (CASSIOPEIA)
NCT02076009	III	Janssen	Relapsed or Refractory MM	Daratumumab + Rd (POLLUX)
NCT02136134	III	Janssen	Relapsed or Refractory MM	Daratumumab + Vd (CASTOR)
NCT03180736	Ш	Janssen	Relapsed or Refractory MM	Daratumumab + Pom-d (APOLLO)
NCT03201965	Ш	Janssen	Amyloidosis	Daratumumab + CyBorD
NCT03217812	III	Janssen	Untreated MM	Daratumumab + VMP (Asia Pacific)
NCT03234972	Ш	Janssen	Relapsed or Refractory MM	Daratumumab + Vd vs Vd (China)
NCT03277105	III	Janssen	Relapsed or Refractory MM	Daratumumab SC vs IV
NCT03301220	Ш	Janssen	Smoldering MM	Daratumumab SC
NCT01985126	II	Janssen	Relapsed or Refractory MM	Monotherapy, basis for approval
NCT02951819	II	Janssen	Untreated and Relapsed MM	Daratumumab + CyBorD (LYRA)
NCT02874742	П	Janssen	Untreated MM	Daratumumab + RVd (GRIFFIN)
NCT02316106	II	Janssen	Smoldering MM	Monotherapy (CENTAURUS)
NCT02927925	II	Janssen	NKTCL, Nasal Type	Monotherapy 29
NCT03011034	II	Janssen	Myelodysplastic Syndromes	Daratumumab or Talacotuzumab

Ongoing Daratumumab Clinical Trials Janssen Sponsored Phase I & I/II



Daratumumab Trials Sponsored by Pharma / Biotech

Ct.gov Identifier	Phase	Sponsor	Indication	Therapy
NCT01615029	1/11	Janssen	Relapsed and Refractory MM	Daratumumab + Rd
NCT03023423	1/11	Janssen	Previously treated NSCLC	Daratumumab + Tecentriq (atezolizumab)
NCT02852837	I	Janssen	Relapsed or Refractory MM	Monotherapy (in China)
NCT02519452	I	Janssen	Relapsed or Refractory MM	Monotherapy, subcutaneous (PAVO)
NCT02497378	I	Janssen	Relapsed or Refractory MM	Daratumumab + Vd (in Japan)
NCT02918331	I	Janssen	Untreated MM	Daratumumab + Rd (Japan)
NCT03242889	I	Janssen	Relapsed or Refractory MM	Daratumumab subq (Japan)
NCT01998971	I	Janssen	Various MM	Daratumumab + backbone regimens (Vd, VMP, VTd, Pom-d, Kd, KRd) (EQUULEUS)
NCT03320707	I	Janssen	Healthy volunteers	Daratumumab vs placebo
NCT03357952	I	Janssen	Relapsed or Refractory MM	Daratumumab + JNJ-63723283



Ongoing Daratumumab Clinical Trials Other Industry Sponsored Trials

Daratumumab Trials Sponsored by Pharma / Biotech

Ct.gov Identifier	Phase	Sponsor	Indication	Therapy
NCT03158688	III	Amgen	Relapsed or Refractory MM	Daratumumab + Kd
NCT01946477	П	Celgene	Relapsed or Refractory MM	Daratumumab + Pom-d
NCT03000452 NCT02807454	II	Celgene	Relapsed and Refractory MM	Daratumumab + Imfinzi (FUSION)
NCT02060188	II	BMS	Recurrent & Metastatic Colon Cancer	Daratumumab + nivolumab
NCT03221634	II	Merck	RRMM	Daratumumab + Keytruda
NCT03314181	II	AbbVie	RRMM	Daratumumab + Venetoclax + dex w/wout bort
NCT02488759	1/11	BMS	Virus assoc tumors	Daratumumab + nivolumab
NCT03098550	1/11	BMS	Various solid tumors	Daratumumab + nivolumab
NCT02343042	1/11	Karyopharm	Relapsed or Refractory MM	Daratumumab + Selinexor + Dex
NCT01592370	I	BMS	Relapsed or Refractory MM	Daratumumab + nivolumab
NCT02431208	I	Roche	Resistant or Refractory MM	Daratumumab + Tecentriq (atezolizumab)
NCT03068351	I	Roche	Resistant or Refractory MM	Daratumumab + RO6870810 31



Ongoing Daratumumab Clinical Trials Investigator Sponsored Study (ISS): MM

Investigator Sponsored Studies (ISS) of Daratumumab

Ct.gov Identifier	Phase	Sponsor	Indication	Therapy
NCT02944565	П	ISS	MM	Daratumumab accelerated infusion
NCT02977494	П	ISS	R/R MM & Severe Renal Impairment	Daratumumab + Vd
NCT02626481	П	ISS	Resistant or Ref9ractory MM	Daratumumab + dexamethasone
NCT03004287	П	ISS	Newly diagnosed MM	KTD-Dara-PACE / Dara-KD / Dara-RD
NCT03012880	П	ISS	Newly diagnosed MM	Daratumumab+ Ixazomib, Len & Dex
NCT03143036	П	ISS	RRMM	Daratumumab + thalidomide + Dex
NCT03184194	П	ISS	RRMM	Daratumumab + nivolumab w/ or w/out Len & Dex
NCT03188172	П	ISS	Newly diagnosed MM	Daratumumab + VRd
NCT03215524	П	ISS	RRMM	Daratumumab + Dex, Cy, Pom
NCT03224507	П	ISS	Deep remission in MM	Daratumumab + KRd
NCT03290950	П	ISS	Newly Diagnosed MM	Daratumumab + KRd
NCT03289299	П	ISS	Smoldering MM	Daratumumab + carfilzomib, lenalidomide & dexamethasone
NCT03346135	П	ISS	MM	Dara as maintenance after ASCT
NCT03236428	I	ISS	Smoldering MM	Daratumumab
NCT02955810	I	ISS	Untreated MM	Daratumumab + CyBorD
NCT03311828	I	ISS	Relapsed MM	Daratumumab + positron emission tomography
NCT02751255	1/11	ISS	RRMM	Daratumumab + All-trans retinoic acid 32



Ongoing Daratumumab Clinical Trials

ISS: Other Indications

Investigator Sponsored Studies (ISS) of Daratumumab

Ct.gov Identifier	Phase	e Sponso	r Indication	Therapy
NCT02816476	II	ISS	Amyloidosis	Monotherapy
NCT03067571	II	ISS	AML or MDS	Monotherapy
NCT03095118	II	ISS	Membranoproliferative Glomerulonephritis	Monotherapy
NCT03187262	II	ISS	Waldenstrom macroglobulinemia	Monotherapy
NCT03207542	II	ISS	ALL	Monotherapy
NCT02841033	1/11	ISS	Amyloidosis	Monotherapy
NCT03177460	I	ISS	High-risk localized prostate cancer	Monotherapy with prostatectomy
NCT03283917	1	ISS	Amyloidosis	Daratumumab, ixazomib & dex

Pom-d = Pomalyst (pomalidomide) + dexamethasone CyBorD = Cyclophosphamide, bortezomib, dexamethasone KRd = Kyprolis (carfilzomib) + Revlimid (lenalidomide) + dexamethasone

 VTd = Velcade (bortezomib) + thalidomidde + dexamethasone
 Vd = Velcade (bortezomib) + dexamethasone

 VMP = Velcade (bortezomib) + melphalan-prednisone
 33

 Kd = Kyprolis (carfilzomib) + dexamethasone
 Ac per clinical tricle cart.

www.genmab.com