Better Antibodies By Design

Bank of America Merrill Lynch
Global Healthcare Conference
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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.

Transforming Cancer Treatment

Focus

- Differentiated antibodies
- Treatment of cancer

Products

- DARZALEX™ approved in US & EU
- Arzerra® marketed globally
- 8 other antibodies in clinical studies
- Innovative pre-clinical pipeline

Technologies

- DuoBody® platform
- HexaBody® technology

Partnerships

- Leverage our technologies
- Strategic collaborations with pharma & biotech

Innovative Clinical & Pre-clinical Pipeline

Further Development for Marketed Products

Product	Disease Indications	Development Phase: Pre-clinical / I / II / III
Daratumumab BTD (2) Target: CD38 Partner: Janssen	Multiple myeloma (MM)	
	Non-Hodgkin's lymphoma (NHL)	
	Solid tumor	Announced
Ofatumumab BTD Target: CD20 Indication: Cancer Partner: Novartis	Chronic lymphocytic leukemia (CLL)	
	Follicular lymphoma (FL)	
Ofatumumab (OMB157) Target: CD20 Indication: AI Partner: Novartis	Relapsing multiple sclerosis (RMS) (SubQ)	Announced

Innovative Clinical & Pre-clinical Pipeline - Continued

Product	Disease Indications & Target	Development Phase (Pre-clinical / I / I/II / II / III)
Tisotumab vedotin Partner: Seattle Genetics	Solid Cancers, Target: TF	
➢ **20 Active Pre-clin. progr. incl. HuMax-AXL-ADC, HexaBody DR5/DR5, DuoBody CD3xCD20**	Proprietary programs: HuMab, HuMab-ADC, DuoBody, DuoBody-ADC & HexaBody	
	Partnered programs: HuMab, DuoBody & HexaBody	
Teprotumumab **BTD** Partner: River Vision	Graves' orbitopathy, Target: IGF-1R	
	Diabetic macular edema, Target: IGF-1R	
HuMax-TAC-ADC Partner: ADCT	Lymphoma, Target: CD25	
	Acute myeloid leukemia (AML) or acute lymphoblastic leukemia (ALL), Target: CD25	
HuMax-IL8 Partner: BMS	Metastatic solid tumors, Target: IL-8	
JNJ-61178104 Partner: Janssen	Autoimmune disorders, Target: inflammatory mediators	
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	

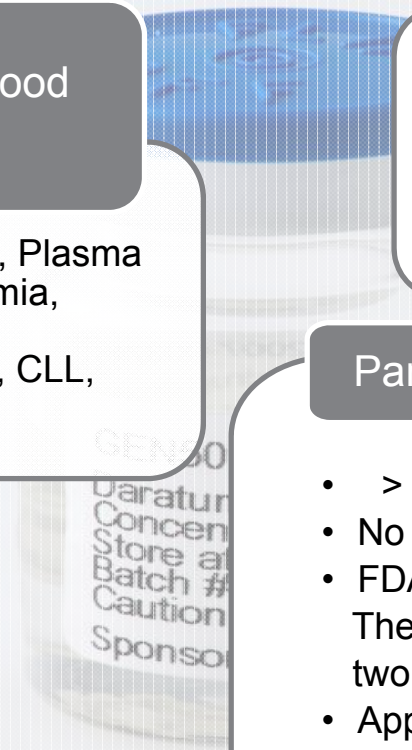
Daratumumab (Marketed as DARZALEX™)
Approved in US & EU as Fourth Line Treatment for MM Patients

First-in-Class Fully Human Antibody

- Targets CD38 - six ways of attacking cancer cells
- MM & other blood cancers, and solid tumors
- Blockbuster potential
- Broad & expansive development in MM

Additional Potential Blood Cancer Indications

- DLBCL, FL, Plasma Cell Leukemia, Mantle Cell Lymphoma, CLL, ALL, AML



Partner: Janssen Biotech

- > $1.1B potential deal value, + double-digit royalties
- No development / commercialization costs for Genmab
- FDA Breakthrough Therapy Designation for two indications
- Approved in both US & Europe

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

Expansive Daratumumab Clinical Development

Indication	Disease Stage	Therapy	No. Pts*	Development Phase (I / I/II / II / III)
Multiple Myeloma**	High Risk Smoldering	Mono	120	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	497	✓ MMY3004 (Castor)
		Dara +Pom + Dex	155	H-35360
		Subcutaneous	128	MMY1004 (Pavo)
		Dara + Tecentriq	214	GO29695
		Dara + durvalumab	138	FUSION MM003
NHL (DLBCL / MCL / FL)	Relapsed or Refractory	Mono	210	LYM2001 (Carina)
Solid Tumor	To be confirmed	Dara + Tecentriq	100	Announced
		Total:	**4,893**	

*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

Efficacy in Monotherapy
Combined Analysis of Monotherapy Studies

Daratumumab as a single agent

- Approved by FDA and conditionally approved by EMA in relapsed/refractory multiple myeloma[1,2]

Patients received a median of 5 prior lines of therapy

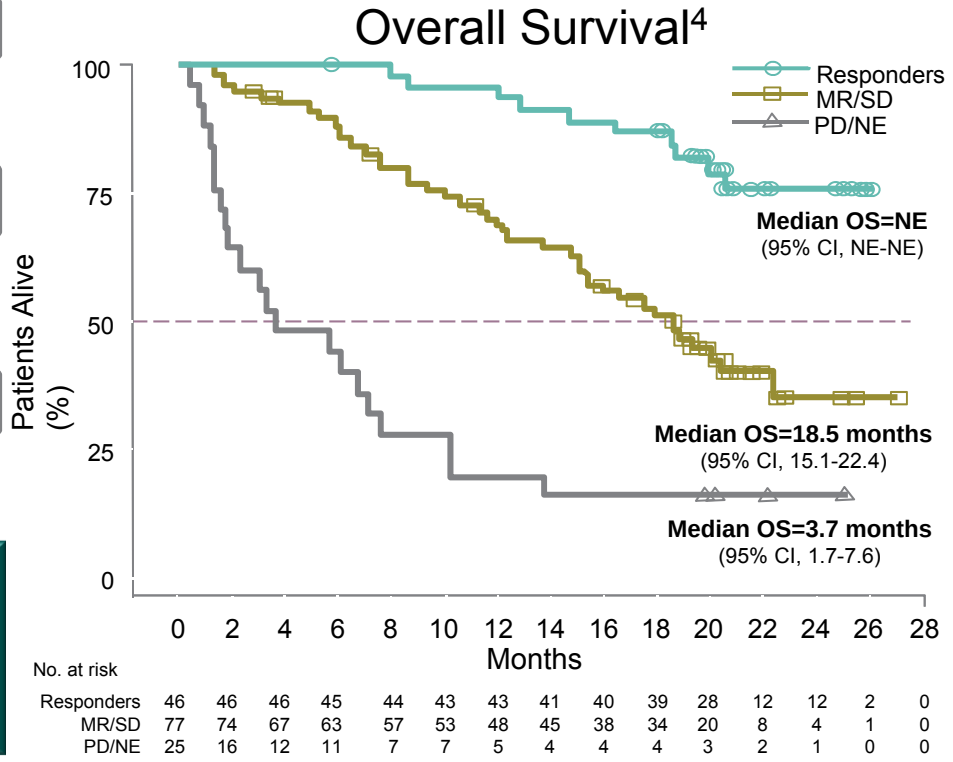
- 86.5% of patients were double refractory to a proteasome inhibitor (PI) and immunomodulatory drug (IMiD)[3]

Median overall survival (OS): 20.1 months[3]

- 2-year OS was ~75% in responders
- Median OS was 18.5 months MR/SD patients

ORR = 31%[3]

ORR was consistent in subgroups including age, number of prior lines of therapy, refractory status, or renal function



MR, minimal response; SD, stable disease; PD, progressive disease; OS, overall survival; CI, confidence interval; NE, not evaluable.

1. Lokhorst HM, et al. *N Engl J Med*. 2015;373:1207-19.
2. Lonial S, et al. *Lancet*. 2016;387:1551-60.
3. Usmani SZ, et al. *Blood*. 2016;128(1):37-44
4. Data presented at ASCO 2016

Two Phase III Studies Hit Primary Endpoint at Interim

Relapsed or Refractory Multiple Myeloma: CASTOR

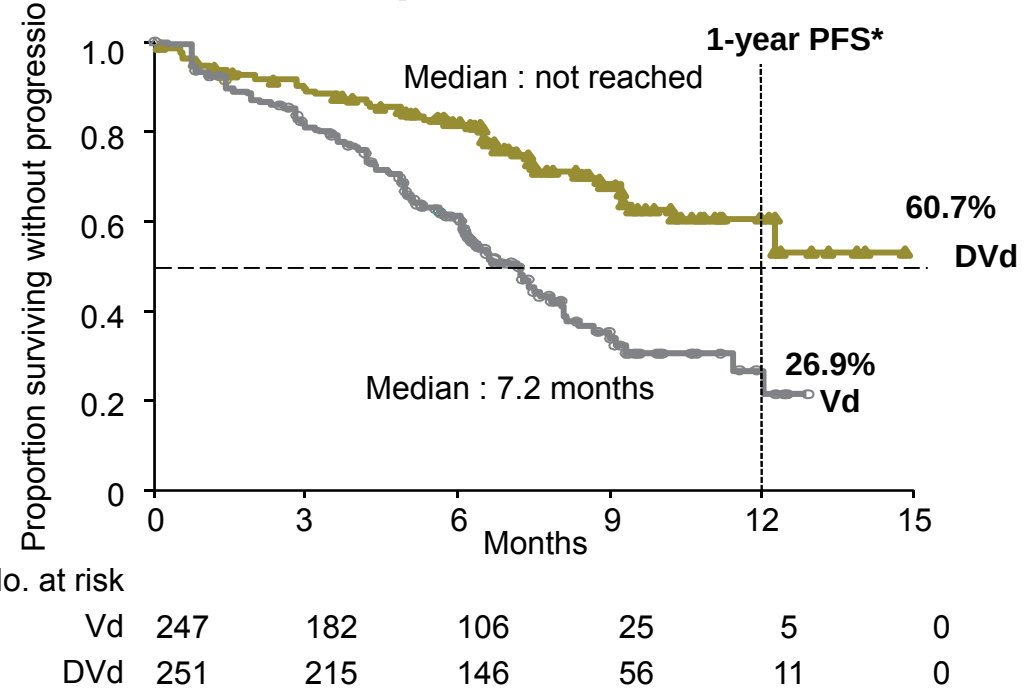
CASTOR

Dara + Bort + Dex (DVd)

Hazard Ratio=0.39 (P<0.0001)

	DVd	Vd
ORR	83%	63%
≥ VGPR	59%	29%
≥ CR	19.2%	9%
PFS	NR	7.2 mo

CASTOR Kaplan-Meier Plot - PFS



*KM estimate

Presented at ASCO Plenary session – Chicago, June 5

Two Phase III Studies Hit Primary Endpoint at Interim

Relapsed or Refractory Multiple Myeloma: POLLUX

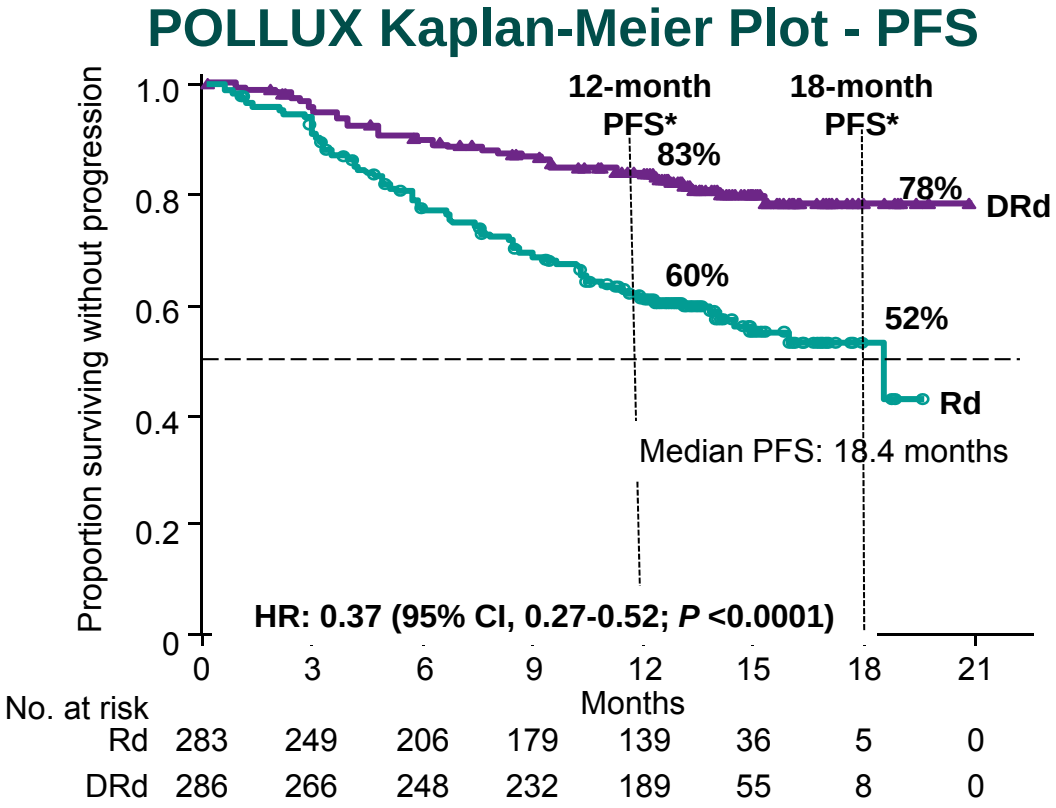
POLLUX

Dara + Len + Dex (DRd)

Hazard Ratio=0.37 (P<0.0001)

	DRd	Rd
ORR	93%	76%
≥ VGPR	76%	44%
≥ CR	43%	19%
PFS	NR	18.4 mo

Presented at EHA Copenhagen, June 10



Arzerra® (ofatumumab)

Autoimmune diseases (unapproved)

- Relapsing MS Ph IIIs started, sc administration
- Novartis acquired AI rights from GSK in Dec. 2015

Marketed Globally

- Human antibody targeting CD20 on cancerous B-cells

Cancer

- Approved*
  - US 1st Line CLL in combo w/ chlorambucil
  - EU 1st Line CLL in combo w/ chlorambucil or bendamustine
  - Fludarabine and alemtuzumab refractory CLL
  - US recurrent and progressive CLL extended treatment
  - US relapsed CLL in combo w/fludarabine & cyclophosphamide
- Phase III trials in CLL & FL
- Partnered with Novartis
- EU reg. subm. in combo w/ fludarabine & cyclophosphamide for relapsed CLL

Arzerra® (ofatumumab) Injection, for intravenous infusion 20 mg/mL

*In US: approved in combination with chlorambucil for the treatment of previously untreated patients with CLL for whom fludarabine-based therapy is considered inappropriate as well as for the treatment of patients with CLL refractory to fludarabine and alemtuzumab. Arzerra is approved for extended treatment of patients who are in complete or partial response after at least two lines of therapy for recurrent or progressive CLL. Furthermore, Arzerra is approved in combination with fludarabine and cyclophosphamide for the treatment of patients with relapsed CLL.

In EU: approved in combination with chlorambucil or bendamustine for the treatment of patients with CLL who have not received prior therapy and who are not eligible for fludarabine-based therapy, as well as for the treatment of patients with CLL refractory to fludarabine and alemtuzumab.

Tisotumab vedotin: Next Generation Therapeutic

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

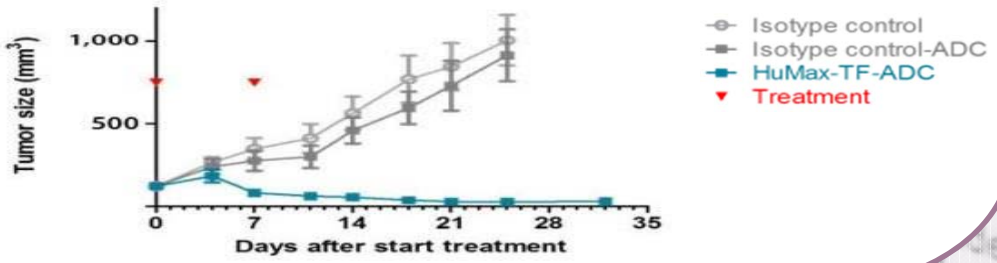
8 Tumors

- Ovary, cervix, endometrium, bladder, prostate, head & neck, esophagus, lung
- Potential in pancreatic cancer

Fully Human antibody-drug conjugate

- Targets Tissue Factor (TF)
- Potent anti-tumor activity in pre-clinical models for multiple solid cancers
- First-in-human Phase I/II trial ongoing
- Phase I/II dose escalation in solid tumors finalized
  - Clinically relevant dose of 2.0 mg/kg identified as MTD
  - Preliminary evidence of efficacy encouraging
- Collaboration: Seattle Genetics opt-in (after Ph I/II)

Pre-clinical Cervical Cancer Model

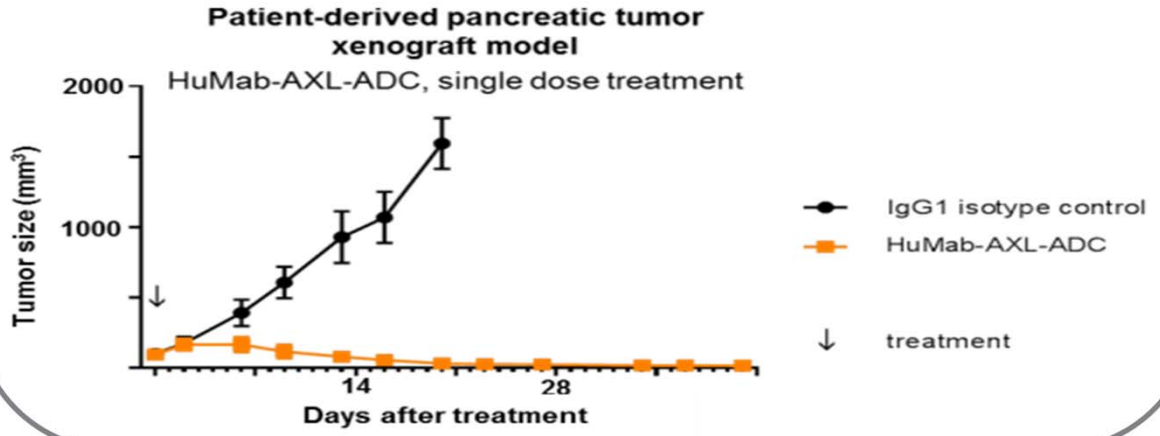


Next in the Clinic: HuMax-AXL-ADC

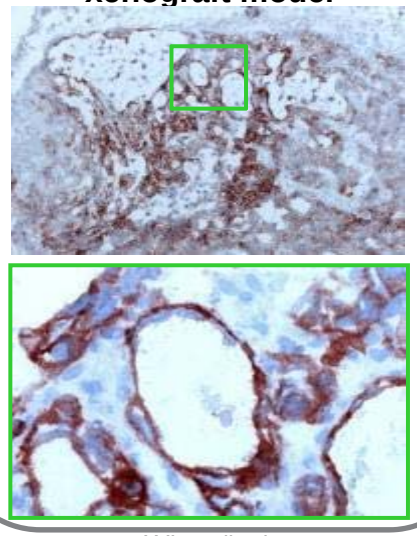
Efficacy in *in vivo* Tumor Model

Fully Human Antibody-Drug Conjugate

- Targets AXL signaling molecule expressed on many solid cancers
- HuMax-AXL-ADC shows anti-tumor activity in patient-derived xenograft model with heterogeneous target expression
- Collaboration: Seattle Genetics



AXL expression in xenograft model



AXL antibody

Cutting Edge Proprietary Technologies
Creating Truly Differentiated Products

DuoBody

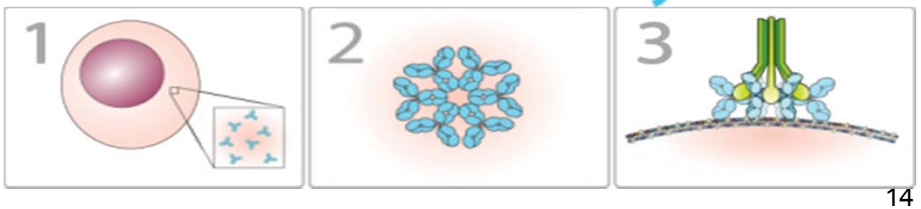
HexaBody

- 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

DuoBody

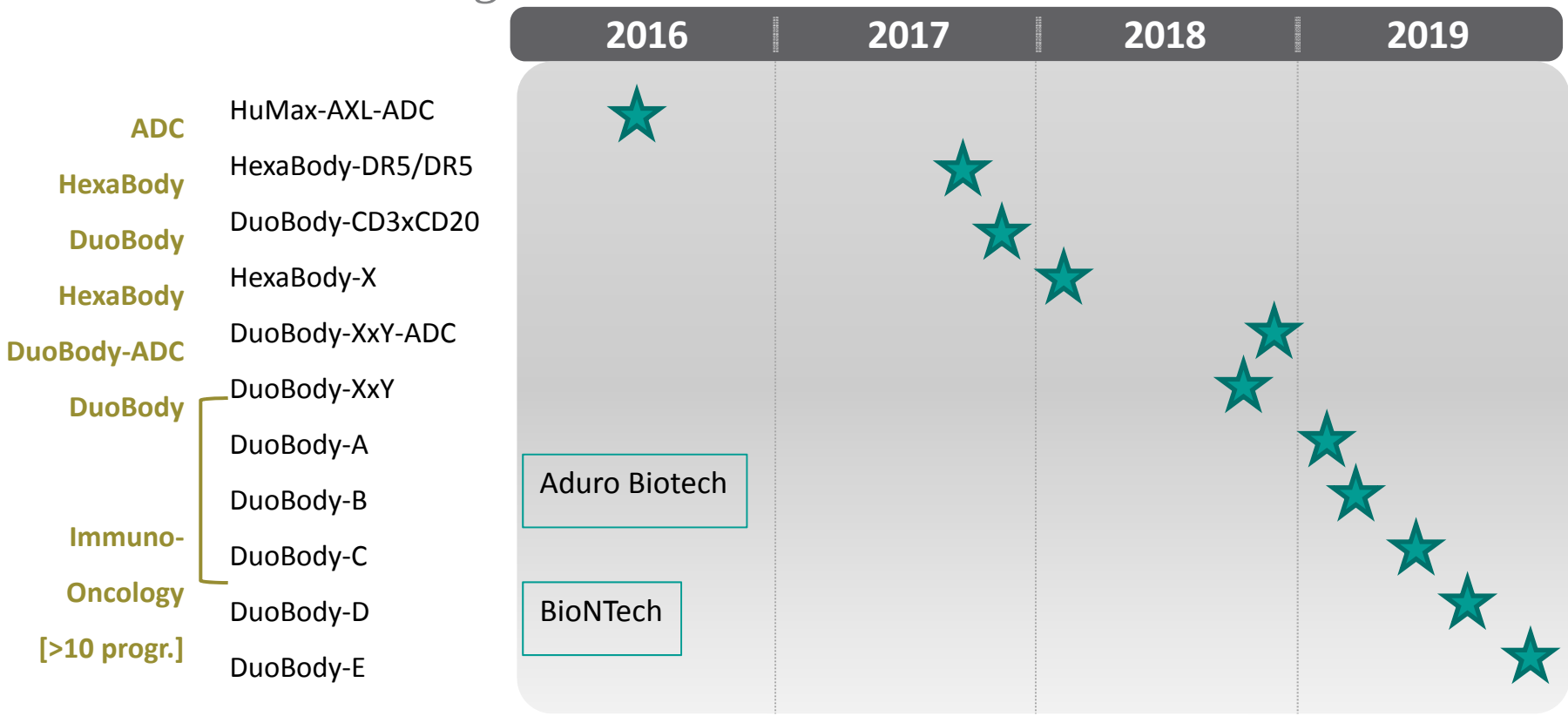
- Efficient & versatile bispecific Ab platform
- Applicable to any antibody from any platform
- Regular IgG format
- Large scale production validated
- No developability liabilities
- Robotized bispecific library generation
- 10 ongoing collaborations incl. with Novartis, Novo Nordisk, Gilead & Janssen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

HexaBody



Genmab Proprietary Knock-Your-Socks-Off Pipeline

Efficient IND Engine



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

= potential IND

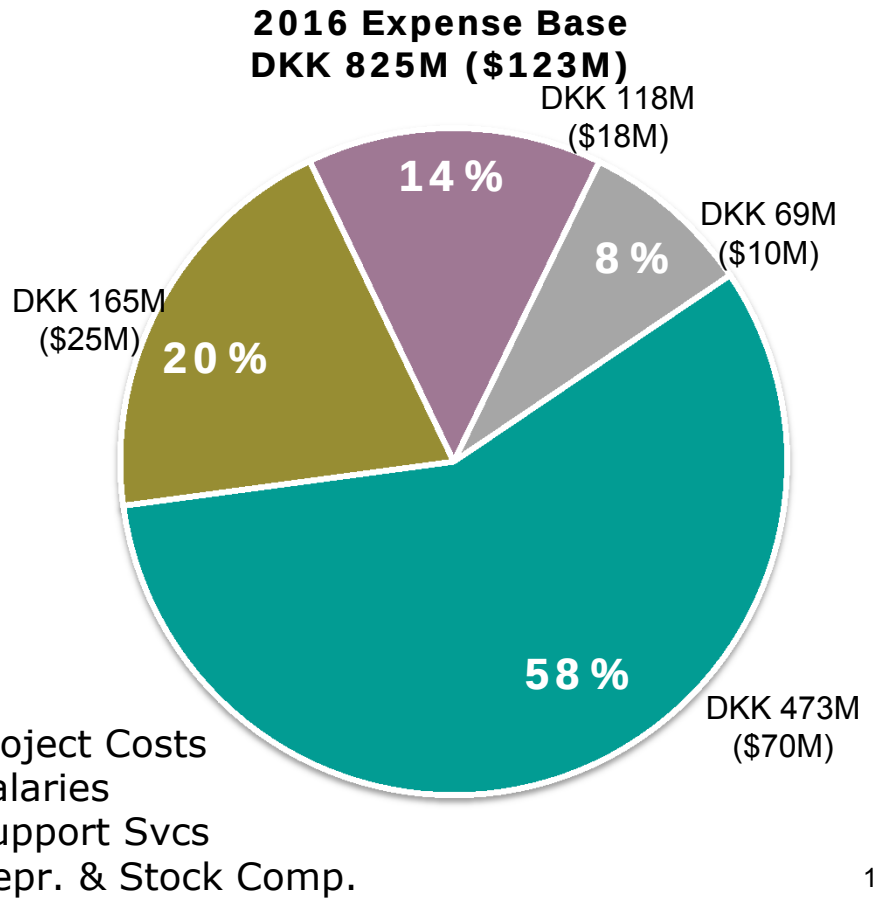
Well-Capitalized Biotech – 2016 Guidance

Income Statement	DKKM	USDM*
Revenue	975 – 1,025	146 - 153
Operating expenses	(800) – (850)	(119) – (127)
Operating income	150 - 200	22 - 30
Cash position at end of year**	3,550 – 3,650	530 - 545

*USD 1.00 = DKK 6.7009 (June 30, 2016)
**Cash, cash equivalents and marketable securities

2016 Guidance – Aug 9, 2016

- Largest increase in expenses (over 2015) is in development
  - Driven by additional investment in pipeline products
  - Total 2016 spend on 4 key products is ~DKK 319M or 39% of total expense
- Additional investment in pre-clinical pipeline

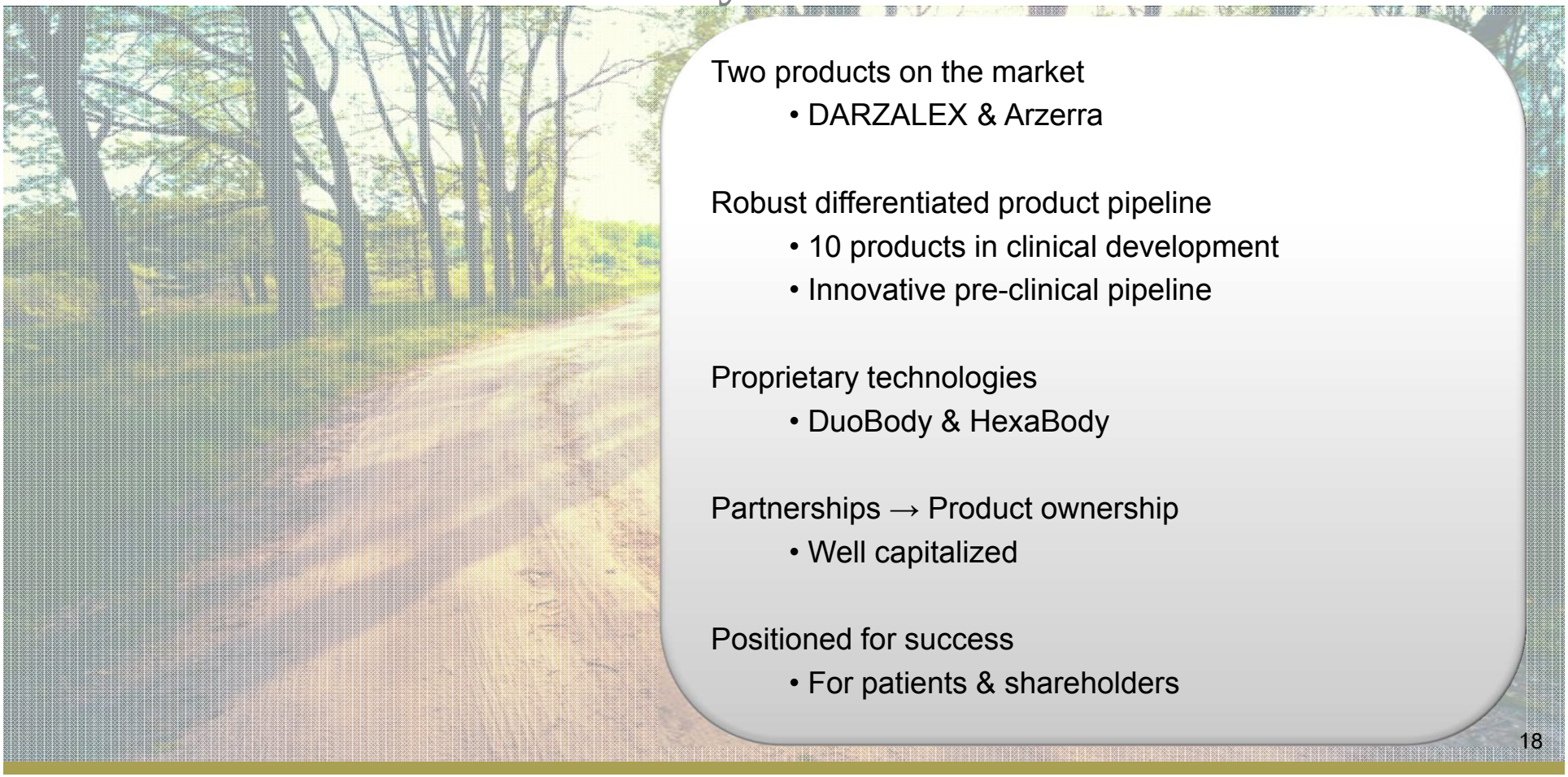


2016 Goals: Maximizing Product Portfolio Value

Priority	✓	Targeted Milestone
Maximize daratumumab progress	✓ ✓ ✓ ✓	» Launch DARZALEX™ in US and other approved territories » CHMP decision on monotherapy application » Phase III multiple myeloma (MM) interim efficacy analysis in relapsed / refractory MM settings [Pollux and Castor trials] » File for label in relapsed / refractory settings if results of interim analyses are favorable » Start multiple clinical trials in MM and non-MM indications » Report initial clinical data non-MM indications
Optimize ofatumumab value	 ✓ ✓ 2017*	» Start Phase III sc autoimmune trials » Regulatory decision for CLL maintenance » File for label in relapsed CLL » Phase III refractory follicular lymphoma (FL) interim efficacy data
Strengthen differentiated product pipeline		» Phase I tisotumab vedotin additional data » IND for HuMax-AXL-ADC and start clinical trial » Progress HexaBody-DR5/DR5 program » Progress pre-clinical DuoBody & HexaBody projects
Broaden partnership portfolio with next generation technologies	 ✓	» Sign new / expanded DuoBody & HexaBody collaborations » Progress partnered programs » New IND filings
Disciplined financial management		» Selectively invest to progress and broaden differentiated product pipeline

*Study continued at interim analysis. Full data expected 2017.

On Track to a Sustainably Profitable Future



Two products on the market
- DARZALEX & Arzerra

Robust differentiated product pipeline
- 10 products in clinical development
- Innovative pre-clinical pipeline

Proprietary technologies
- DuoBody & HexaBody

Partnerships → Product ownership
- Well capitalized

Positioned for success
- For patients & shareholders

Better Antibodies By Design

Genmab