Better Antibodies By Design

Investor Presentation
June 2014

Genmab

Forward Looking Statement

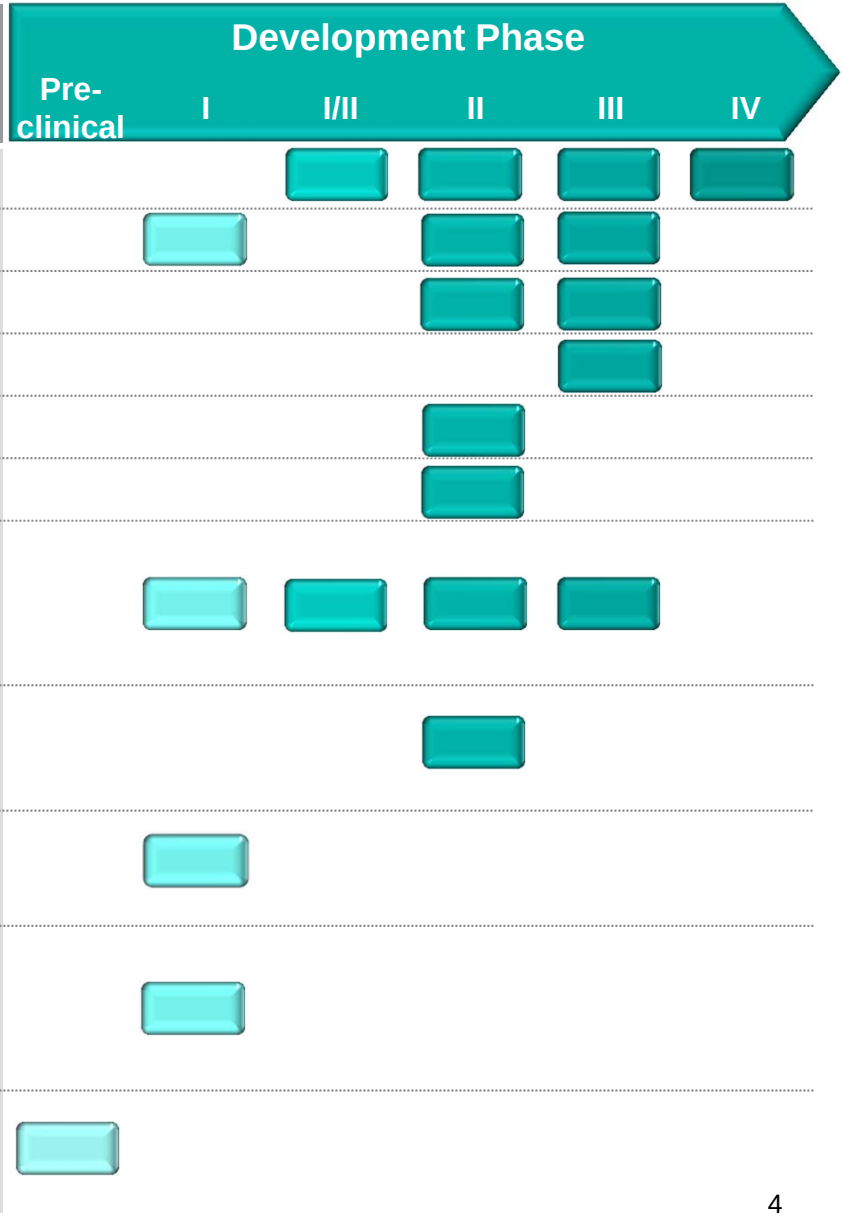
This presentation contains forward looking statements. The words “believe”, “expect”, “anticipate”, “intend” and “plan” and similar expressions identify forward looking statements. All statements other than statements of historical facts included in this presentation, including, without limitation, those 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.

Antibody Innovation Generating World Class Products

- Focus on human antibodies to treat cancer
- Differentiated product pipeline
  - Arzerra® on the market for CLL with growing sales & two approved indications.
    - Additional potential label expansions in the future
    - Devel. plans ofatumumab in autoimmune indications announced
  - First-in-class daratumumab potential next to market
  - HuMax®-TF-ADC in Phase I
- Passion for innovation
  - Proprietary technologies – DuoBody® & HexaBody™
  - Innovative pre-clinical pipeline
  - World class antibody know-how
- Collaborations with blue chip partners incl. GSK and Janssen
- Aim to build value by taking products further towards the market

Innovative Pipeline

Product	Disease Indications
Ofatumumab 18 studies Target: CD20 Partner: GSK	Chronic lymphocytic leukemia (CLL)
	Follicular lymphoma (FL)
	Diffuse large B-cell lymphoma (DLBCL)
	Pemphigus vulgaris (PV)
	Relapsing remitting multiple sclerosis (RRMS)
	Waldenström's macroglobulinemia (WM)
Daratumumab 7 studies Target: CD38 Partner: Janssen	Multiple myeloma (MM)
Teprotumumab 2 studies Target: IGF-1R Partner: River Vision	Active thyroid eye disease
	Diabetic macular edema
HuMax-TF-ADC Target: TF Partner: Seattle Genetics	Solid cancers
➢ **10 Active Pre-clinical Programs**	HuMab, Enhanced HuMab, HuMab-ADC, DuoBody or DuoBody-ADC

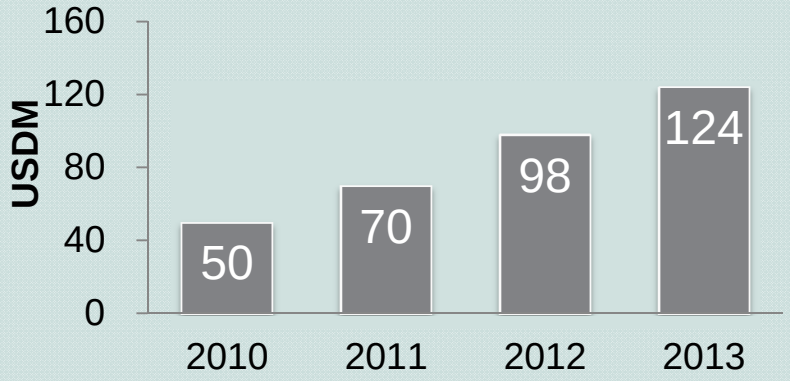


Arzerra® (ofatumumab)

Our First Marketed Product

- Fully human antibody targeting CD20 on cancerous B-cells
- Approved in US for frontline CLL in combo w/ chlorambucil, and in major territories for CLL pts that do not respond to current treatments (fludarabine & alemtuzumab)
- CHMP positive opinion in EU for 1st line CLL combo w/ chlorambucil or bendamustine for pts who are not eligible for fludarabine-based therapy
- 7 cancer pivotal trials ongoing
- Expansion of development in autoimmune indications recently announced
- Effectively engages immune system, binds to a unique epitope
- Differentiated to other CD20 mAbs, targets slice of > $7 Bn market
- Potential in cancer & autoimmune diseases
- Collaboration with GSK

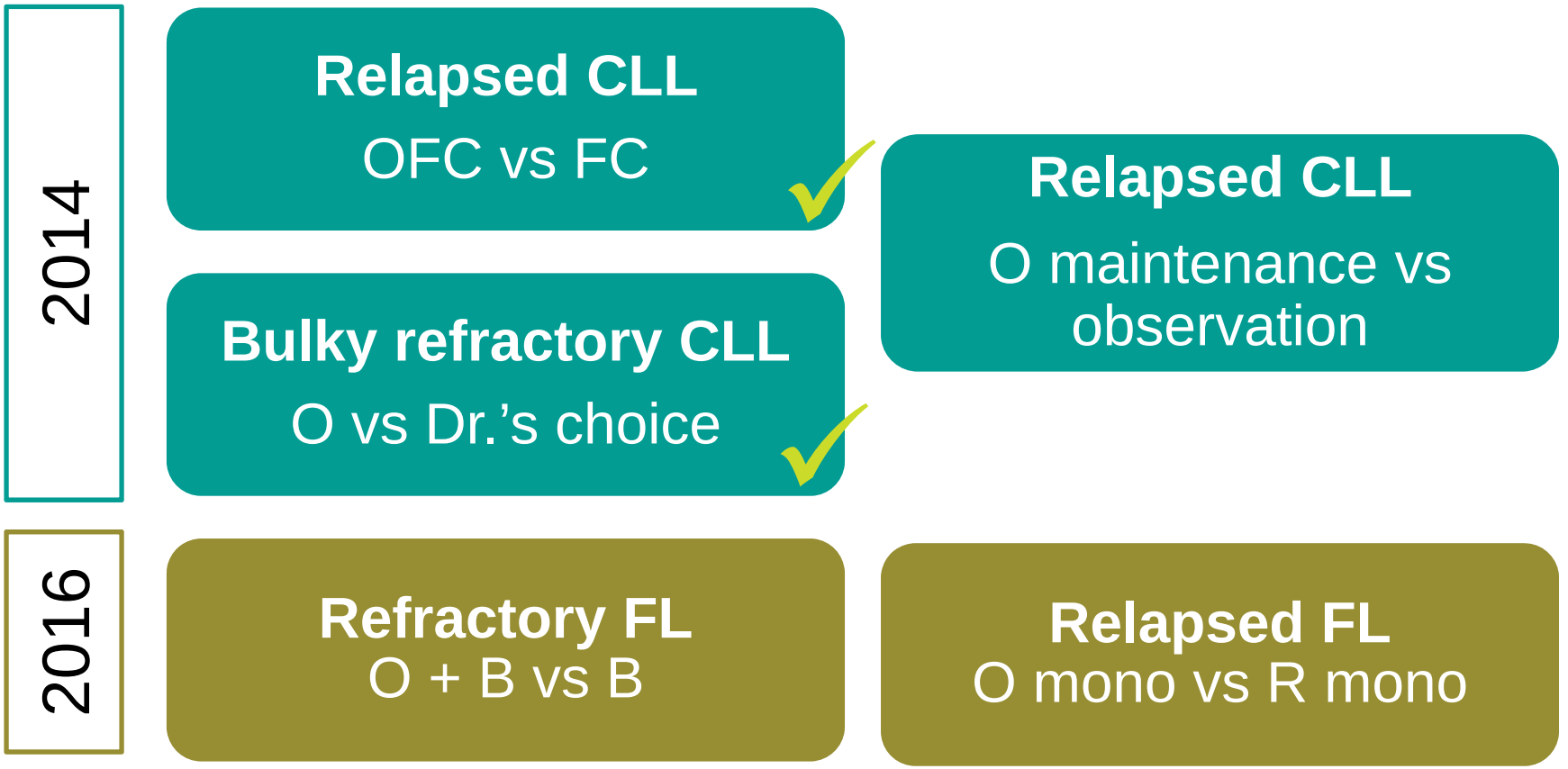
Sales Growth by GSK



- 2013 sales GBP 74.9M (~$124M); royalty DKK 131M
- Genmab Cancer Royalty = 20%

Data to Drive Ofatumumab Sales

3 Pivotal Study Readouts in 2014



✓ = recruitment completed

Note: The indications above are unapproved.

Ofatumumab + Chlorambucil Extends Progression Free Survival: Phase III Results

- Ofatumumab + chlorambucil vs. chlorambucil alone in front line CLL
- 447 patients in the study
- Met primary endpoint in the study – PFS
  - 38% of CR patients in Ofa + Chl arm MRD negative
- No unexpected safety findings - Most common SAEs:
  - Neutropenia (5%), anemia (4%), pneumonia (4%) and pyrexia (2%)

Key Efficacy Results	IRC Assessment		Investigator Assessment	
	Ofatumumab + chlorambucil	Chlorambucil	Ofatumumab + chlorambucil	Chlorambucil
Median PFS	22.4 months	13.1 months	23.4 months	14.8 months
ORR*	82%	69%	88%	81%
CR**	14%	1%	49%	21%

*As per IWCLL 2008 criteria, CR includes CRi, PR includes nPR

**Discrepancy IRC vs Inv due to missing / incomplete BM, or >30% BM invasion

Recent Ofatumumab News

Phase III DLBCL H2H study misses primary endpoint

- 447 pts enrolled in ORCHARRD study
- 2 treatment arms: ofatumumab + chemo vs. rituximab + chemo
- Primary endpoint not met
  - No statistically significant difference in PFS between treatment arms
- Safety data requires further analysis
  - No difference in AEs leading to treatment discontinuation
  - More dose interruptions & delays due to infusion reactions; increased serum creatinine in ofa + chemo arm
- Regulatory filing unlikely basedon data
- Details to be presented at upcoming medical conference

Multiple Phase III trials to start in Autoimmune indications

- Phase III studies of sc ofatumumab in RRMS expected to begin in 2015
  - Follows encouraging Phase II data
  - Sustained reduction cumulative nr new brain lesions over 12 wk period
  - No unexpected safety findings

- GSK plans to file IND for potential pivotal study of sc ofatumumab in NMO in 2014
  - Neuromyelitis optica (Devic disease), a rare autoimmune disorder
  - No licensed therapy for NMO

Daratumumab (HuMax®-CD38)

First-in-Class Antibody with Broad-Spectrum Killing Activity

First-in-Class Fully Human Antibody

- Targets CD38 molecule on multiple myeloma (MM) cells
- Potential in: MM, DLBCL, FL, Plasma Cell Leukemia, ALL, Mantle Cell Lymph., AML
- Blockbuster potential
- Promising early clinical data
- Breakthrough Therapy Designation, Fast Track & Orphan Drug status awarded by FDA

Partner: Janssen Biotech

- Janssen funds development & commercialization
- > $1.1Bln potential deal value*, + double-digit royalties
- Zero cost / limited risk for Genmab

* Represents aggregate of all milestone payments and license fees that could be payable to Genmab if collaboration partner successfully initiates, develops and commercializes all programs under the collaboration

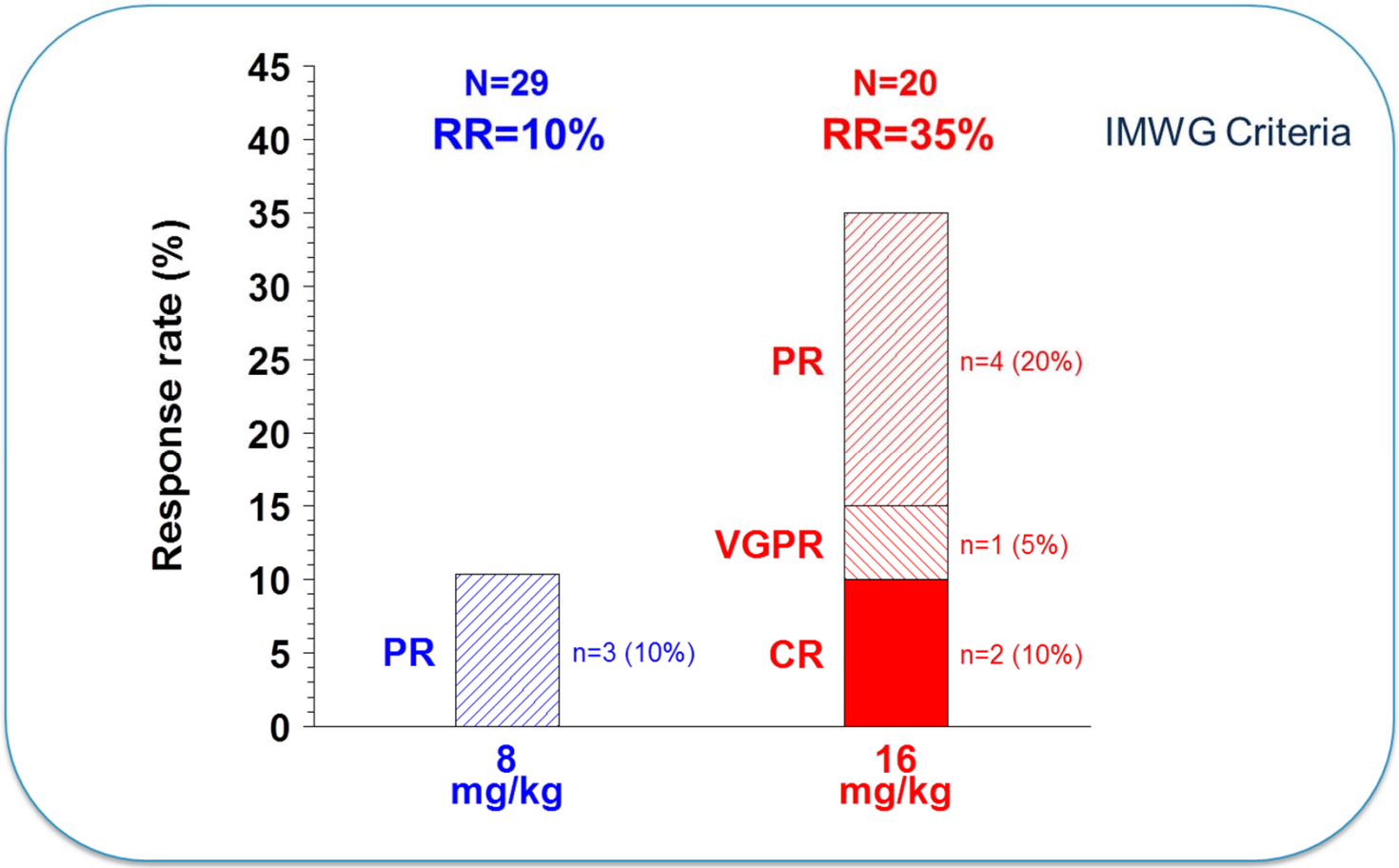
Extensive Daratumumab Development Plans in Multiple Myeloma – 7 ongoing studies

Smoldering	• New studies planned
Front line (transplant & non-transplant)	• Ph Ib multi combo
Relapsed	• Ph I/II len/dex combo • Ph III len/dex combo • Ph III bort/dex combo
Relapsed-Refractory	• Ph I/II • Ph II single agent • Ph I (Japan)

Daratumumab: Early Signs of Clinical Activity

Phase I/II Monotherapy Study

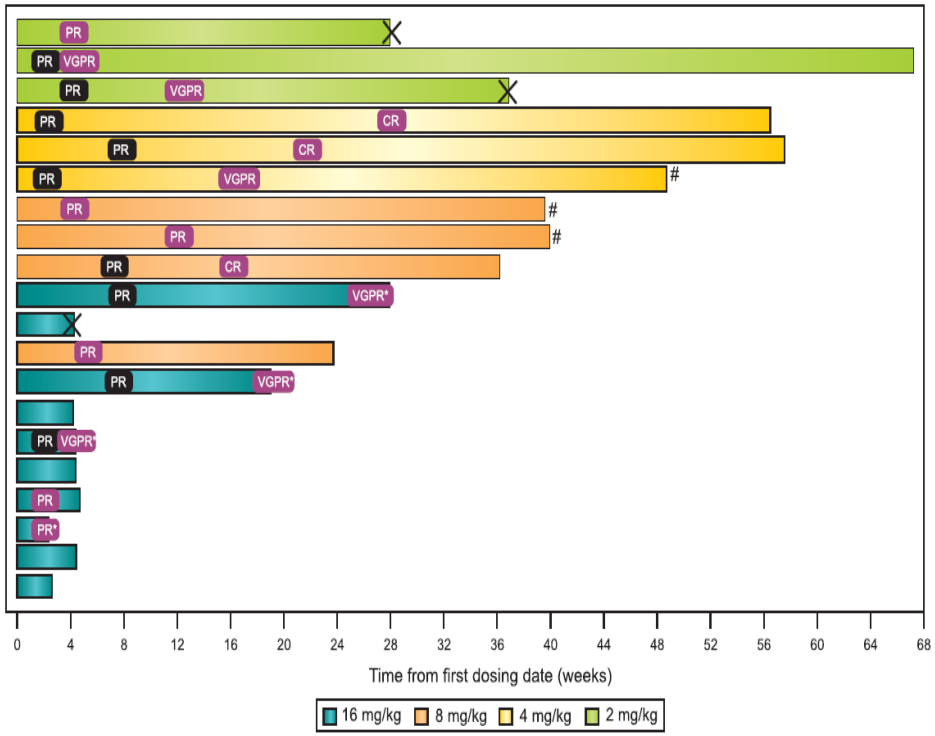
- Ph I/II data for daratumumab as monotherapy presented at ASCO 2014
- Treating patients with relapsed / refractory multiple myeloma
- Safety and efficacy measured in 49 patients
- Treatment well tolerated



Daratumumab: Early Signs of Clinical Activity

Phase I/II Combination Study

- Ph I/II data daratumumab in combination with lenalidomide & dexamethasone in pts with relapsed / refractory multiple myeloma presented at ASCO 2014
- Treatment well tolerated
- Safety and efficacy measured in 20 patients
  - Response rate in all patients; 75% (15 /20)
  - Response rate 92.3% (12/13) for part 1 pts, with > 2 months follow-up
- Data merit further clinical development daratumumab in combi with len / dex

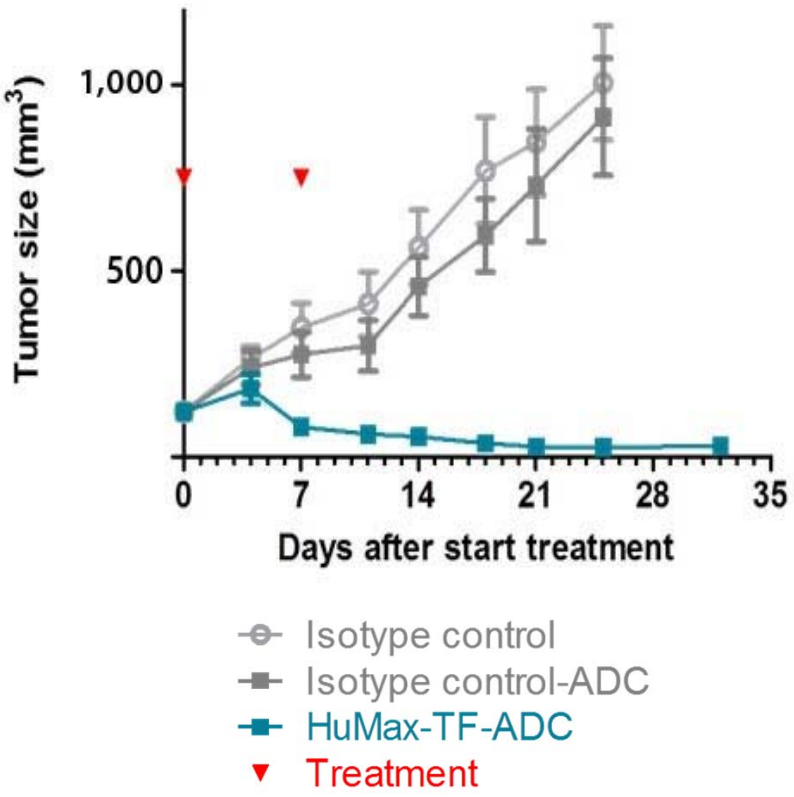


HuMax®-Tissue Factor-ADC: In the Clinic

Next Generation Therapeutics

- Fully human antibody-drug conjugate
- Targets Tissue Factor (TF)
- Ongoing Phase I study in 8 different tumors: ovary, cervix, endometrium, bladder, prostate, head & neck, esophagus, lung
- Potential also in pancreatic cancer
- Collaboration with Seattle Genetics

Pre-clinical Cervical Cancer Model



DuoBody® Platform

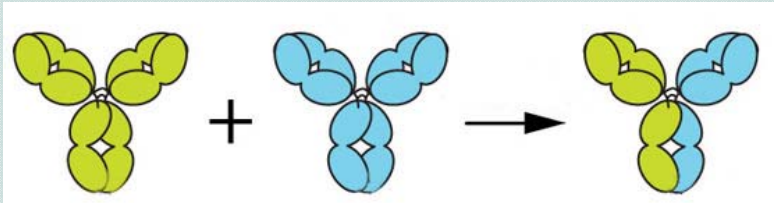
Innovative Technology for Bispecific Antibodies

DuoBody

- Dual-targeting, potential to improve specificity, efficacy
- Large scale manufacturing
  - Minimal protein engineering
  - Excellent quality antibodies at very high yields
- Differentiated from competitor platforms
  - Proper in vivo half-life
  - Fc-effector functions
  - Good manufacturability

Major Collaborations

- Novartis
  - 2 programs, $175M potential deal value, plus royalties
- Janssen Biotech
  - 20 programs, $3.6B potential deal value, plus royalties
- Kirin (KHK) research deal
- Lilly research deal

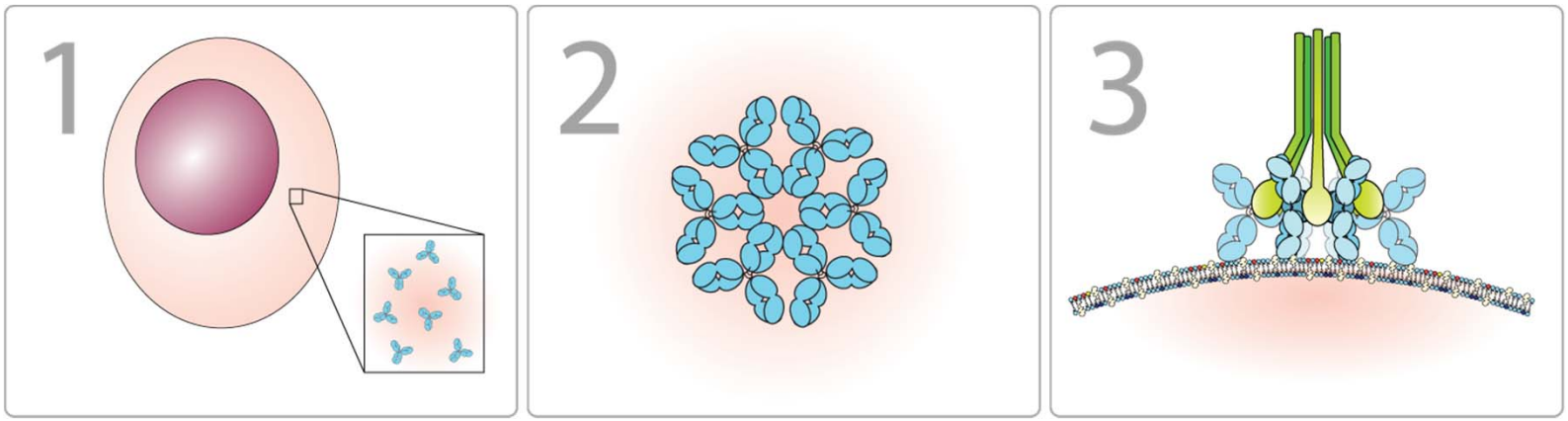


HexaBody™ Technology

Enhancing Multiple Natural Killing Mechanisms

- Builds on natural antibody biology - minimal engineering required
- Enables antibodies to more readily form clusters of 6 (hexamers)
- Induces & enhances target cell killing after binding via CDC
    - CDC capability to essentially any antibody
- Potential to create novel, differentiated products in cancer & infectious disease
    - Repurpose / rescue drug candidates that failed in Phase II/III
    - Life cycle management

HexaBody

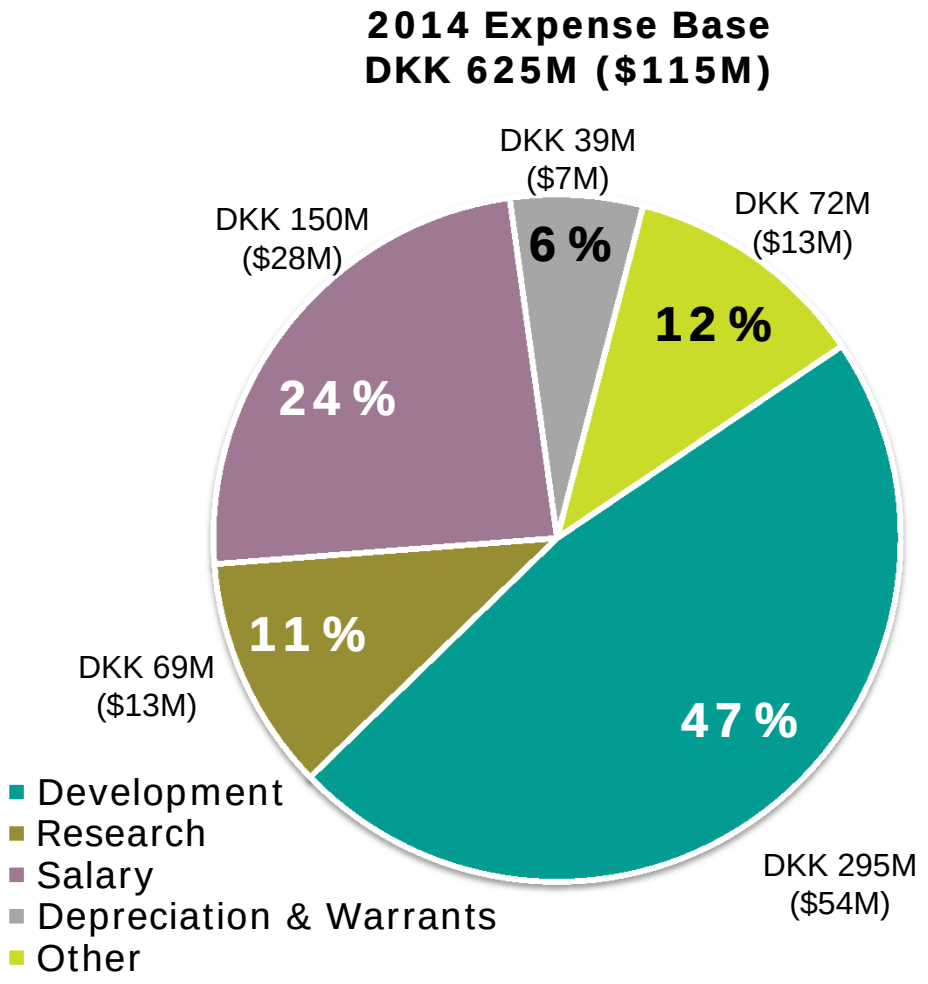


2014 Guidance

Income Statement	DKKM	USDM*
Revenue	775 - 825	143 - 152
Operating expenses	(600) – (650)	(111) – (120)
Operating income	140 – 210	26 - 39

Cash Position	DKKM	USDM*
Cash position beginning of year**	1,557	288
Cash used in operations	0 – (50)	0 - (9)
Proceeds from private placement	972	180
Warrant exercises	28	5
Cash position at end of year**	2,450 – 2,550	452 - 471

**USD 1.00 = DKK 5.4148*
***Cash, cash equivalents and marketable securities*

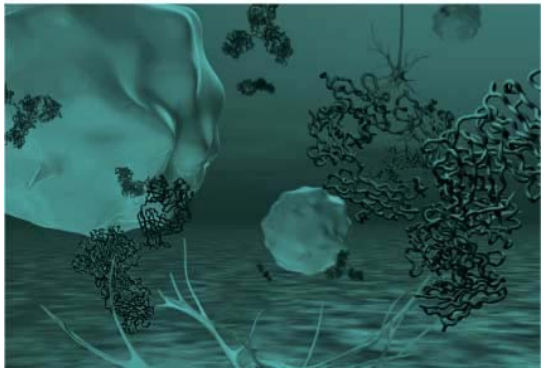


2014 Goals: Fueling Growth Through Our Platforms & Products

Priority	✓	Targeted Milestone
Maximize value of ofatumumab		» Ph III relapsed CLL ofa + FC data
		» Ph III maintenance CLL data
		» Ph III bulky refractory CLL ofa vs physician's choice data
	✓	» Ph III relapsed DLBCL; ofa + chemo vs RTX + chemo data
	✓	» Update progress sc autoimmune development
Expansion Arzerra	✓	» CLL front line label expansion and launch
	✓	» Launch & reimbursement in new countries
Fully exploit the potential of daratumumab	✓	» Ph I/II MM monotherapy matured efficacy data
	✓	» Ph I/II MM dara + Revlimid safety & efficacy data
		» Ph II MM monotherapy preliminary data
		» Ph Ib MM multi combo data
	✓	» Start multiple new MM trials
		» Progress non-MM indications
Expand pipeline		» Progress Ph I HuMax-TF-ADC study
		» Report progress pre-clin. ADC, DuoBody & HexaBody projects
Next generation technologies	✓	» Enter new DuoBody technology collaborations
	✓	» Report progress DuoBody collaborations
		» Start HexaBody technology collaborations
Partnerships		» Report progress partnered programs
	✓	» Enter new collaboration
Disciplined financial management	✓	» Significant daratumumab milestones
		» No significant increase in cost base
		» Increase operating income and reduce cash burn

On Track to a Sustainably Profitable Future

- World class antibody know-how
- Next generation antibody technologies
- Arzerra pivotal trials and further label expansion
- Expansive daratumumab development with Janssen Biotech
- HuMax-TF-ADC in Phase I solid cancers
- Broad pre-clinical pipeline includes multiple DuoBody & ADC programs
- New partnership deals
- Disciplined spending & selectively invest



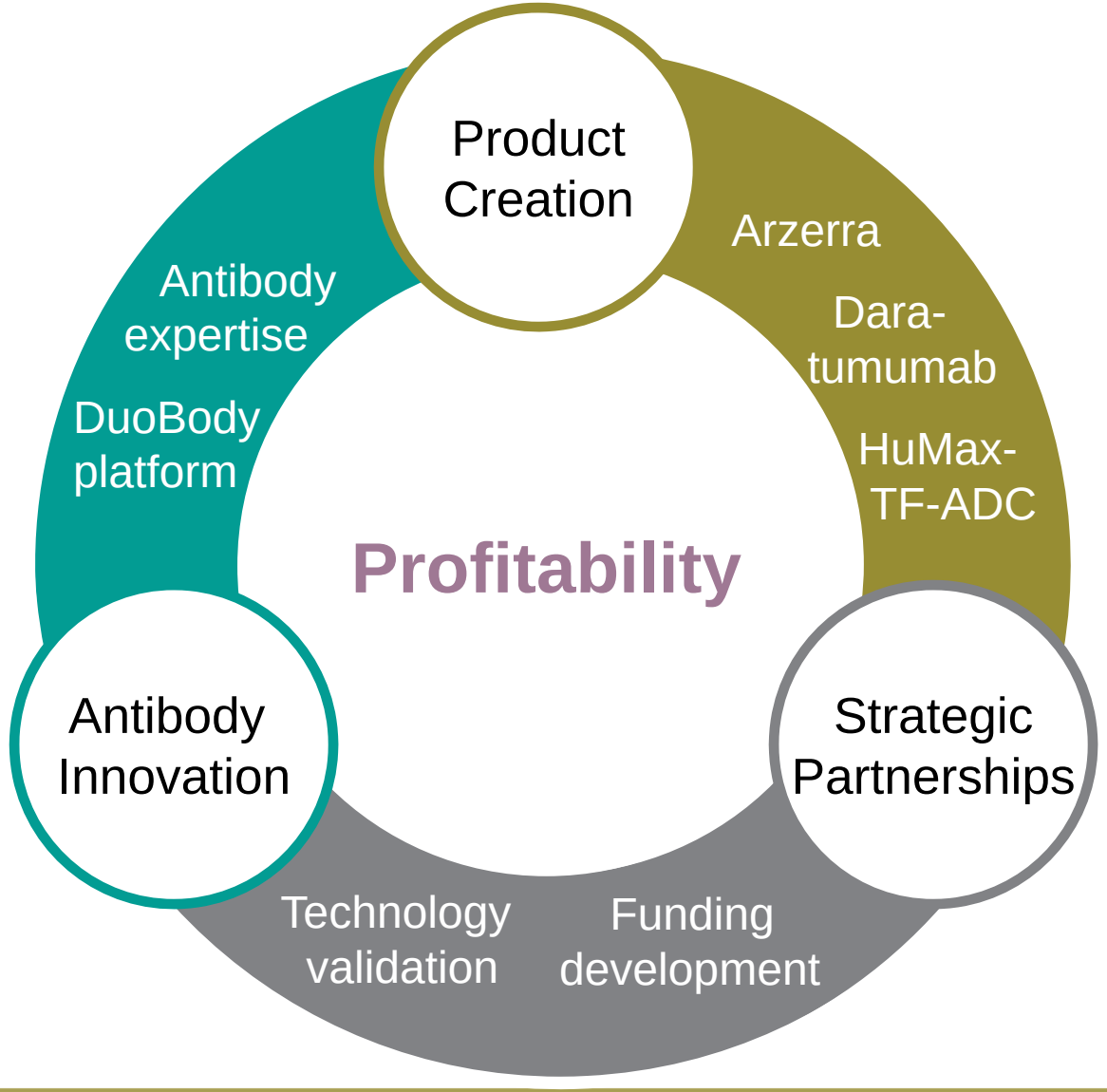
Better Antibodies By Design

Appendix

Genmab

Hybrid Business Model

Trend-Setting Technologies & Differentiated Products



Leveraging Our Assets

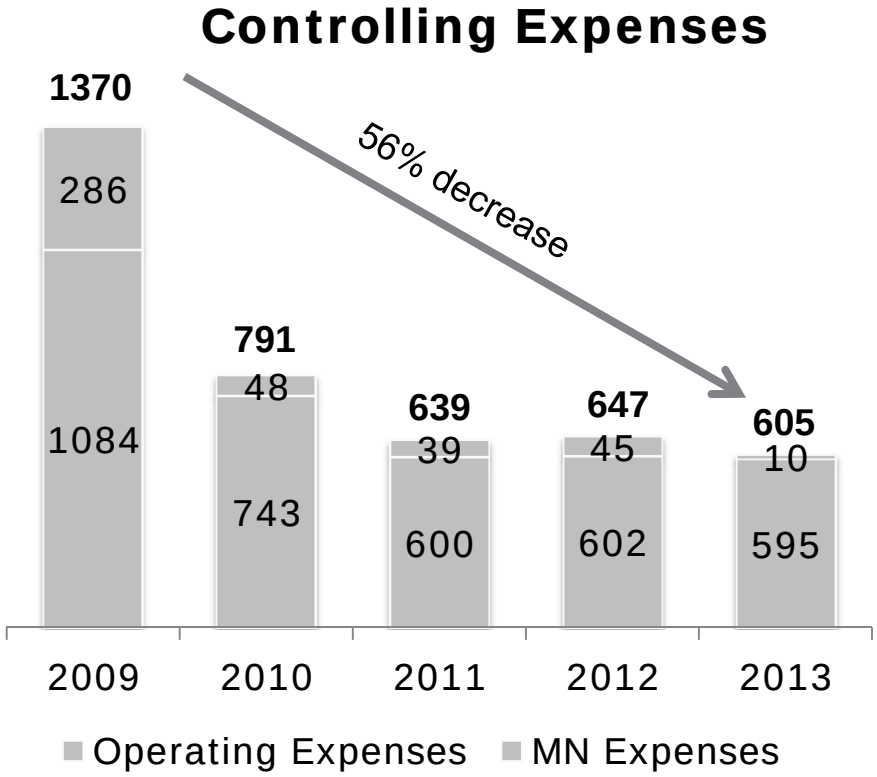
Creative partnerships for new product opportunities

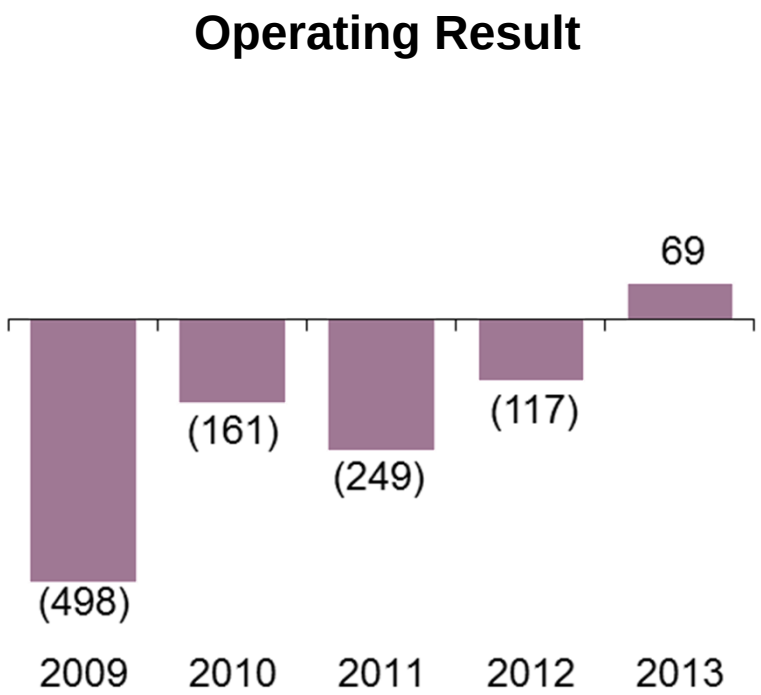
- HuMax-TAC-ADC (target: IL-2R) – ADC Therapeutics
- HuMax-IL8 (target: Interleukin-8) – Cormorant Pharmaceuticals
- HuMax-IL8 + undisclosed target, DuoBody research collaboration – Cormorant Pharmaceuticals

Top class antibody knowhow

- 2001/2 Roche agreement
  - Inclacumab (target: P-selectin) – PoC established for reduction myocardial injury. Available for outlicensing
  - Teprotumumab (target: IgF1R) – outlicensed to River Vision, in Phase II for Graves' orbitopathy & Ph I for DME
- 2012 Janssen DuoBody agreement
  - EM1-mAb, EGFrxcMet bispecific (targets: EGFr & cMet)

Progress Towards a Sustainable Future



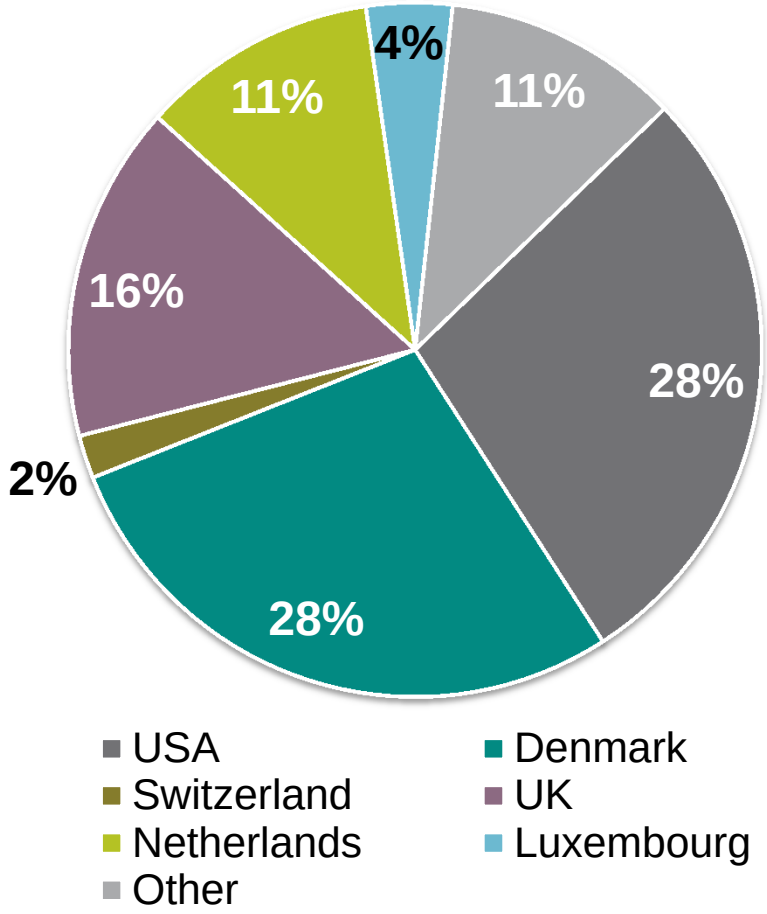


*All amounts in DKK millions unless otherwise noted

International Shareholder Base

- Major shareholders >5%
  - Johnson & Johnson Development Corporation
  - Glaxo Group Ltd.
  - ATP and AES
  - Hendrikus Stienstra
  - FMR (Fidelity)
- ADR program in US
  - Ticker: GMXAY
  - Sponsored level 1
  - Ratio: 2 ADR: 1 ordinary share
  - Depositary Deutsche Bank
  - Info at www.adr.db.com

Geographical Shareholder Distribution
January 31, 2014*



*Based on internal shareholder registry

Hematological Cancer Market Size

Estimated Prevalence in 7 Major Markets

Disease	Estimated Incidence in 7 Major Markets	Estimated Prevalence
CLL	32,000	250,000
FL	32,000	260,000
MM	55,000	190,000

Sources: CLL, DLBCL, FL 2013 forecast incidence: Datamonitor, “Pipeline Insight: Leukemias” and “Pipeline Insight: Lymphomas, Multiple Myeloma & Myelodysplastic Syndromes”, March 2010.
CLL, DLBCL, FL prevalence based on median survival of 8 yrs: company estimates.
MM 2012 incidence: Datamonitor, “Multiple Myeloma Epidemiology”, May 2013; MM prevalence: SEER 2012; company estimates.

Positive Phase II Ofatumumab + Bendamustine Data in CLL

- 97 CLL patients in study
- Previously untreated CLL
  - 44 patients
  - 95% Overall response rate (ORR)
  - 43% Complete response rate (CR)
    - 56% of these achieved MRD negativity in Bone Marrow
- Relapsed CLL
  - 53 patients
  - 74% ORR
  - 11% CR

Robust Technology & IND Engine to Produce Better Cancer Therapeutic Antibodies

UltiMAb® Platform

- Validated technology
  - 5 approved products
  - 29 in development
- Naked & potency-enhanced antibodies

DuoBody® Platform

- Genmab proprietary -

- Creates bispecific antibodies with ability to bind to 2 targets
- Potential in: cancer, infectious disease, autoimmune & CNS
- Collaborations with Novartis, Janssen, Eli Lilly, Cormorant & KHK

Antibody-Drug Conjugates

- Major new advancement in antibody technology
- Collaboration with Seattle Genetics
- Collaboration with ADC Therapeutics

HexaBody™ Platform

- Genmab proprietary -

- Enhances natural killing ability of antibodies
- Creates novel, differentiated products
- Potential in: cancer & infectious disease

Better Antibodies By Design

Genmab