



*Innovating  
antibodies,  
improving lives*

# Better Antibodies By Design

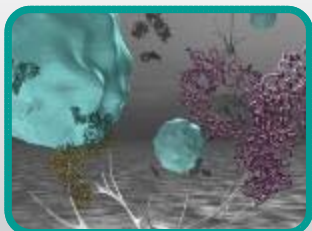
Jefferies 2014 Global Healthcare Conference  
November 20, 2014



# 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 Cancer

- Differentiated human antibodies
- Track record breakthrough therapeutics



## Robust Product Pipeline

- Ofatumumab – cancer & autoimmune potential (marketed as Arzerra<sup>®</sup> in various CLL indications)
- Daratumumab blockbuster potential
- HuMax<sup>®</sup>-TF-ADC in Phase I solid cancers



## Passion for Innovation

- World class antibody know-how
- Proprietary technologies – DuoBody<sup>®</sup> & HexaBody<sup>™</sup>
- Innovative pre-clinical pipeline



## Partnerships → Product Ownership

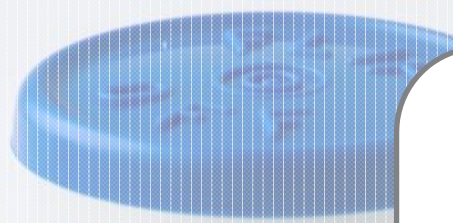
- Key collaborations drive current pipeline
- Product opt-ins + retain products for future value
- Well capitalized

# Innovative Pipeline

Product	Disease Indications	Development Phase				
		Pre-clinical	I	I/II	II	III
<b>Ofatumumab</b> 17 studies Target: CD20 Partner: GSK*  <small>*Novartis to develop cancer indications subject to asset swap approval</small>	Chronic lymphocytic leukemia (CLL)					
	Follicular lymphoma (FL)					
	Pemphigus vulgaris (PV)					
	Relapsing remitting multiple sclerosis (RRMS)	Announced				
	Neuromyelitis optica (NMO)	Announced				
<b>Daratumumab</b> 10 studies Target: CD38 Partner: Janssen	Multiple myeloma (MM)					
<b>HuMax-TF-ADC</b> Target: TF Partner: Seattle Genetics	Solid Cancers					
<b>Teprotumumab</b> 2 studies Target: IGF-1R Partner: River Vision	Active thyroid eye disease					
	Diabetic macular edema					
<b>&gt; 10 Active Pre-clinical programs incl. HuMax-AXL-ADC</b>	Partnered programs: HuMab, DuoBody & HexaBody					
	Proprietary programs: HuMab, HuMab-ADC, DuoBody, DuoBody-ADC & HexaBody					

# Daratumumab (HuMax<sup>®</sup>-CD38)

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



### Additional Potential Blood Cancer Indications

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

### First-in-Class Fully Human Antibody

- Targets CD38 - 5 different ways of attacking cancer cells
- Multiple Myeloma & other blood cancers
- Blockbuster potential
- Promising early clinical MM data
- Broad & expansive development in MM
- Breakthrough Therapy Designation

### Partner: Janssen Biotech

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

# Expansive Daratumumab Development

## 10 Ongoing or Announced Studies in Multiple Myeloma

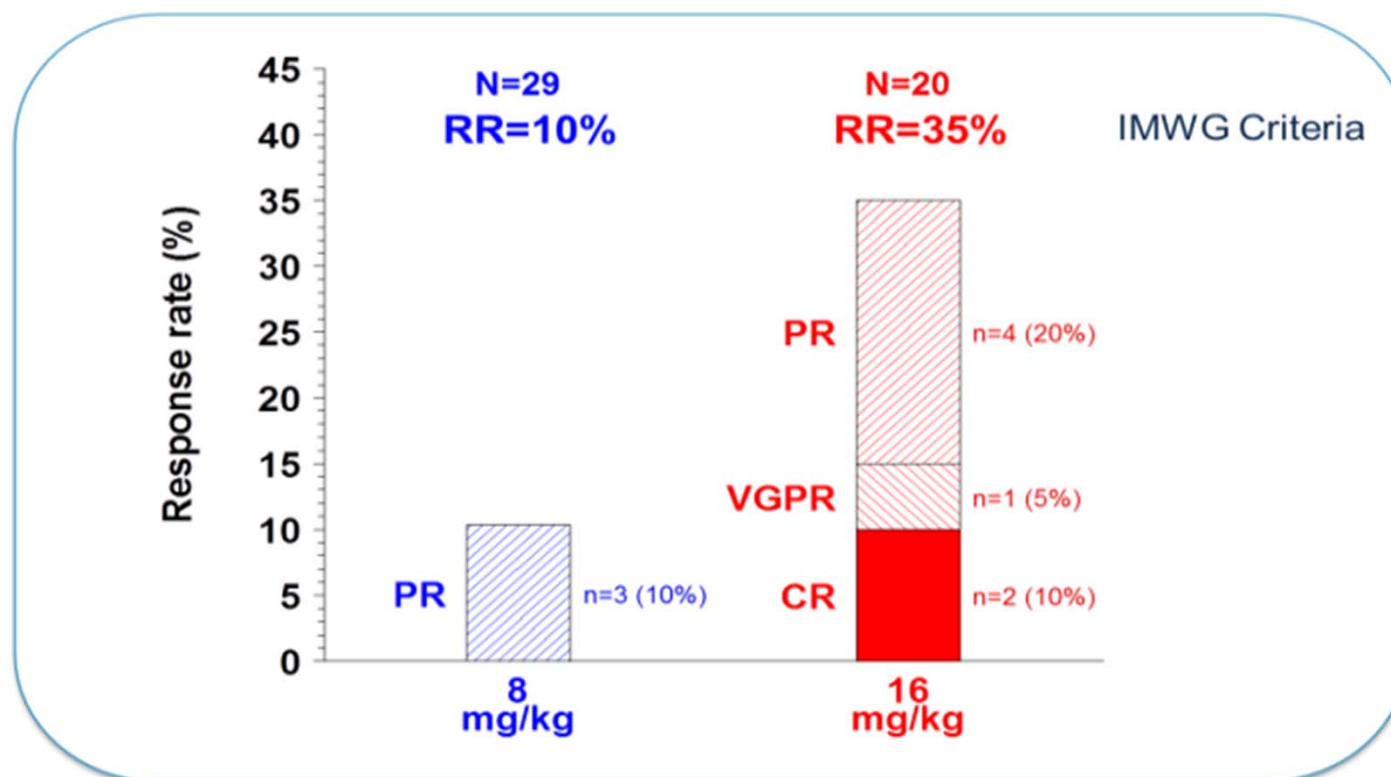
Indication	Disease Stage	Therapy	Development Phase					
			Pre-clinical	I	I/II	II	III	IV
Multiple Myeloma	Front line (transplant & non-transplant)	Dara + VMP*						
		Dara + Revlimid + Dex*						
		Dara + VTD*						
		Multi combo: 1 Study						
	Relapsed or Refractory	Dara + Revlimid + Dex 2 Studies						
		Dara + Velcade + Dex 1 Study						
		Mono, Japan						
		Mono, safety						
	Double Refractory	Mono, BTD population						
	Smoldering		In planning					
	Maintenance		Integrated into some study protocols					
Non-MM	Various	Potential in: ALL, AML, DLBCL, FL, Plasma Cell Leukemia, Mantle Cell Lymphoma, CLL						

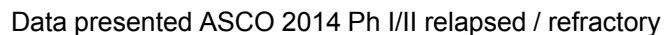
\*Phase III study announced, not yet started.

# Daratumumab: Early Signs of Clinical Activity

## Phase I/II Monotherapy Study

- Relapsed and refractory multiple myeloma, ASCO 2014
- Safety & efficacy in 49 patients
- 35% response rate at 16 mg/kg
- Treatment well tolerated

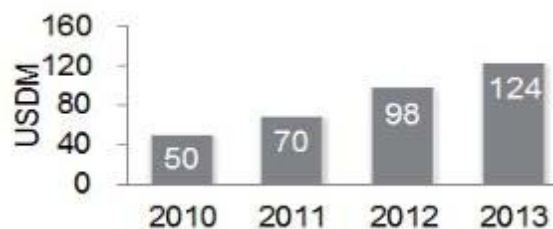




# Arzerra® (ofatumumab)

## Sales Growth by GSK

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



## Our First Marketed Product

- Fully human antibody targeting CD20 on cancerous B-cells
- Differentiated vs other CD20 mAb, targets slice of > \$7B market

### Cancer

- Approved\*
  - US 1<sup>st</sup> Line CLL in combo w/ chlorambucil
  - EU 1<sup>st</sup> Line CLL in combo w/ chlorambucil or bendamustine
  - Fludarabine and alemtuzumab refractory CLL
- 7\*\* Phase III trials in CLL & FL
- Novartis potential partner 2015 (subject to GSK / Novartis deal close)

### Autoimmune diseases (unapproved)

- Phase III trial ongoing in PV
- Relapsing remitting MS Ph IIIs & pivotal NMO trial announced
- Partnered with GSK

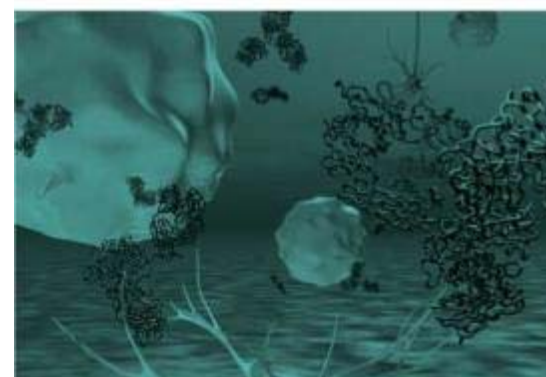
\*In US approved in combination with chlorambucil for the treatment of previously untreated patients with CLL for whom fludarabine-based therapy is considered inappropriate as well as for the treatment of patients with CLL refractory to fludarabine and alemtuzumab.

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.

\*\*Source: clinicaltrials.gov

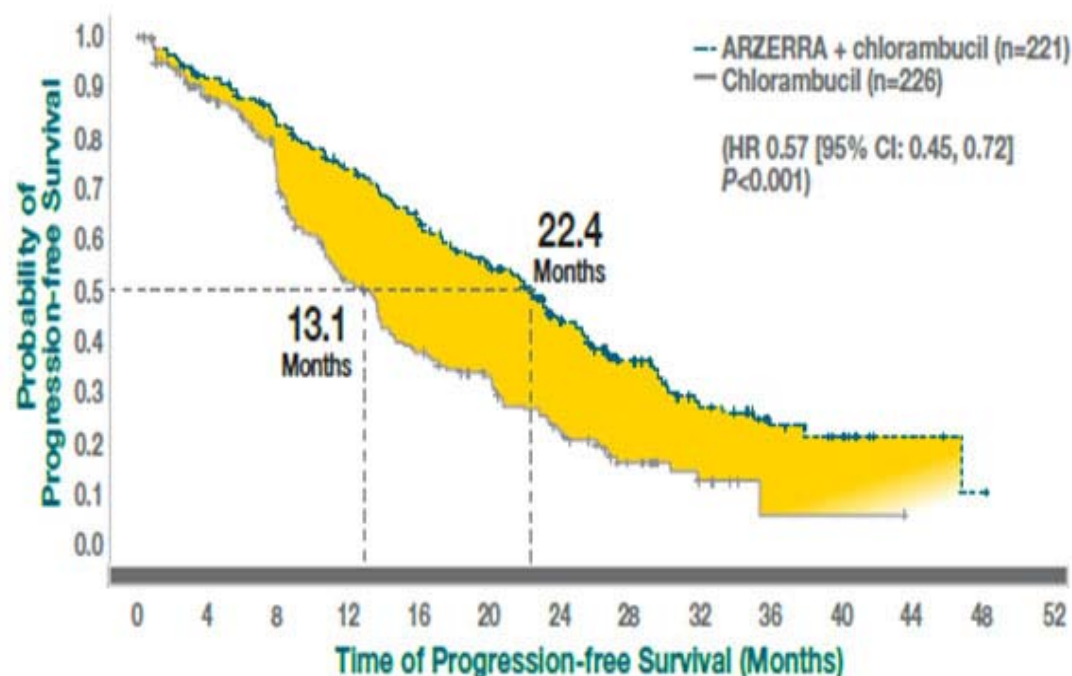
## Transfer of Ofatumumab Collaboration from GSK to Novartis

- Existing ofatumumab collaboration to be transferred to Novartis
- Novartis to develop ofatumumab in cancer indications
- GSK to continue ofatumumab development in autoimmune diseases
- No further Genmab funding beyond December 2014
- Future cash impact of GBP 60 M (DKK 570 M)
- CD20 exclusivity provisions modified
- Agreement dependent on closing of wider GSK-Novartis transaction



# Arzerra Label Expansion: Phase III Data Ofatumumab + Chlorambucil Extends Progression Free Survival

- Ofa + chlorambucil vs. chlorambucil in front line CLL
- 71% improvement in PFS
- No unexpected safety findings - Most common SAEs:
  - Neutropenia (5%), anemia (4%), pneumonia (4%) and pyrexia (2%)



	Number at risk											
ARZERRA plus Chlorambucil	221	192	169	148	125	104	70	46	28	15	9	3
Chlorambucil	226	173	130	92	67	52	33	17	6	1	1	

HR=hazard ratio; CI=confidence interval.

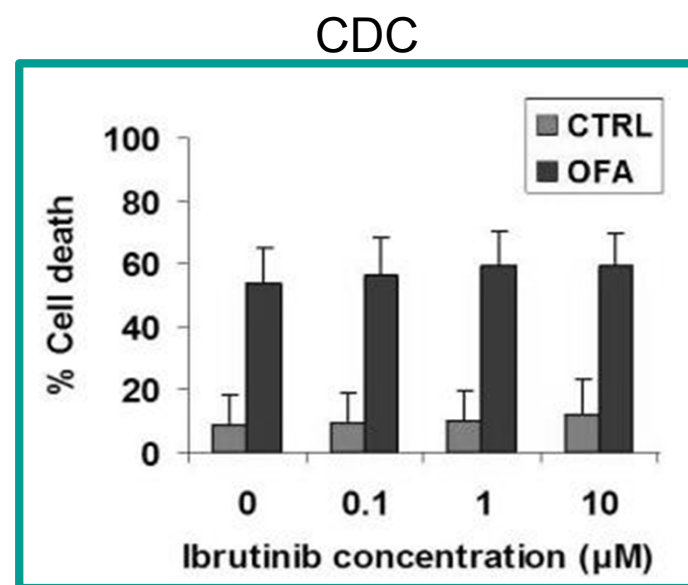
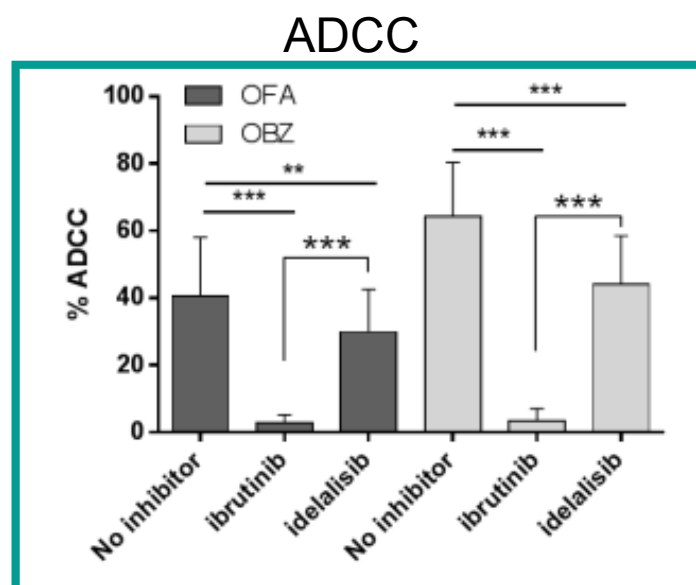
# Ofatumumab: Planned & Ongoing Trials

Cancer (IV) Pivotal Study Readouts	
2014	Relapsed CLL* O maintenance vs observation ✓
2015	Relapsed CLL OFC vs FC
2016	Refractory FL O+B vs B
2017	Relapsed FL O mono vs R mono

Autoimmune (SC) Ongoing & Planned	
Ongoing	RRMS Ph II monotherapy
	PV Ph III efficacy & safety
Planned	RRMS multiple Ph III's
	NMO pivotal study

Note: The indications above are unapproved  
\*Interim data reported

# Ofatumumab: Potential to Combine with Tyrosine Kinase Inhibitors



TKIs knock out immune effector cells (NK cells, macrophages) so ADCC ineffective

Ofatumumab most active CDC killing compared to other CD20 mAb

Ibrutinib - ofatumumab combination highly active in CLL, ISS study at ASCO 2014

## Sources:

Da Roit et al. "Ibrutinib interferes with the cell-mediated anti-tumor activities of therapeutic CD20 antibodies: implications for combination therapy." Abstract. EHA 2014

Jaglowski et al. "A Phase Ib/II study evaluating activity and tolerability of the BTK inhibitor ibrutinib in combination with ofatumumab in patients with chronic lymphocytic leukemia / small lymphocytic lymphoma (CLL/SLL) and related diseases." ASCO 2014

# Ofatumumab - Future in Autoimmune

## Multiple Ph III Trials to Start in Autoimmune Indications

### **Relapsing Remitting Multiple Sclerosis (RRMS)**

- Phase III's in RRMS expected to begin in 2015
- Follow encouraging Phase II data
  - Sustained reduction cumulative number new brain lesions over 12 week period
  - No unexpected safety findings
- MS market forecast to peak at \$18.5B in 2018\*

### **Neuromyelitis Optica (NMO)**

- GSK plans IND for potential pivotal study in NMO in 2014
- NMO, a rare autoimmune disorder
- No licensed therapy for NMO
- Orphan indication

### **Pemphigus Vulgaris (PV)**

- Phase III study ongoing
- Orphan indication

\*Source: Datamonitor "Multiple Sclerosis Forecast" 2014. Incl. US, Japan & 5 major EU

# HuMax<sup>®</sup>-TF-ADC: In the Clinic

## Next Generation Therapeutics

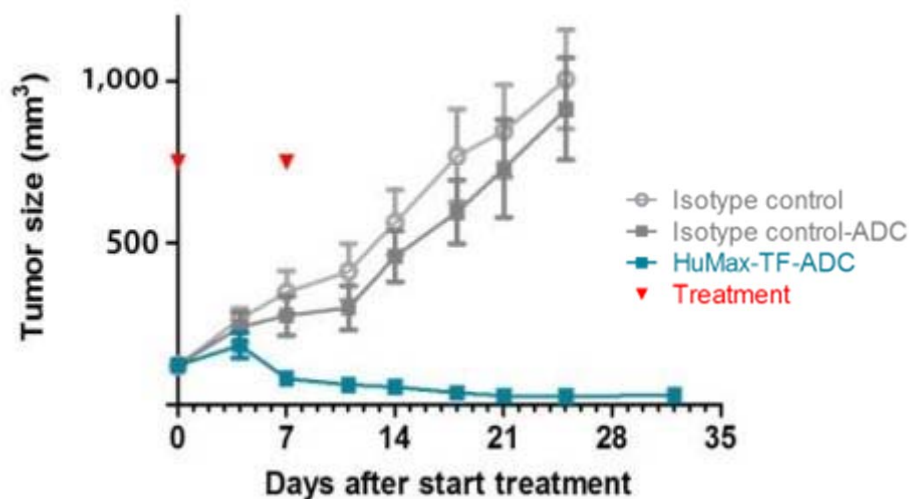
### 8 Tumors

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

### Fully Human Antibody-drug Conjugate

- Targets Tissue Factor (TF)
- Strong pre-clinical data in multiple solid cancers
- Ongoing Phase I study
- Collaboration: Seattle Genetics opt-in (after Ph I/II)

### Pre-clinical Cervical Cancer Model



# DuoBody® Technology

## Efficient & Versatile Platform for Bispecific Antibodies



### DuoBody

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



### Ongoing Collaborations

- 2 Commercial deals
  - Novartis (2 programs, \$175M potential deal value + royalties)
  - Janssen Biotech (20 programs, \$3.6B potential deal value + royalties)
- 7 Research deals
  - Lilly, Kirin, Cormorant, undisclosed major Biotech, Agenus, BioNovion, Humabs BioMed

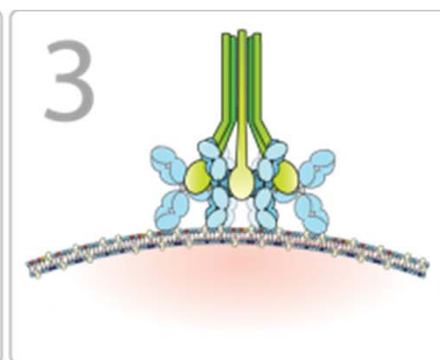
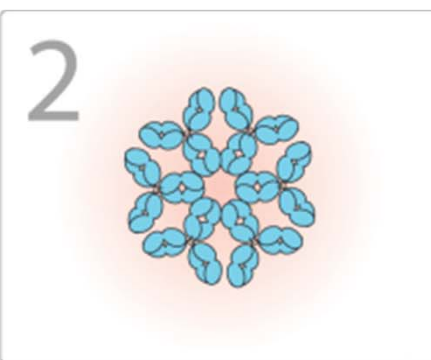
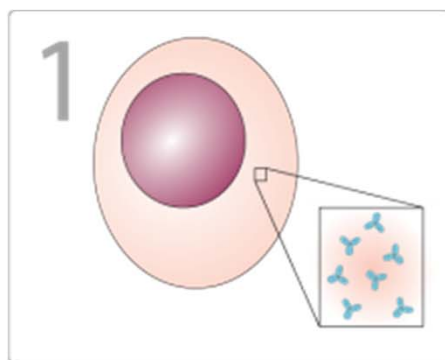
# HexaBody™ Technology

## Robust Effector Function Enhanced Antibodies

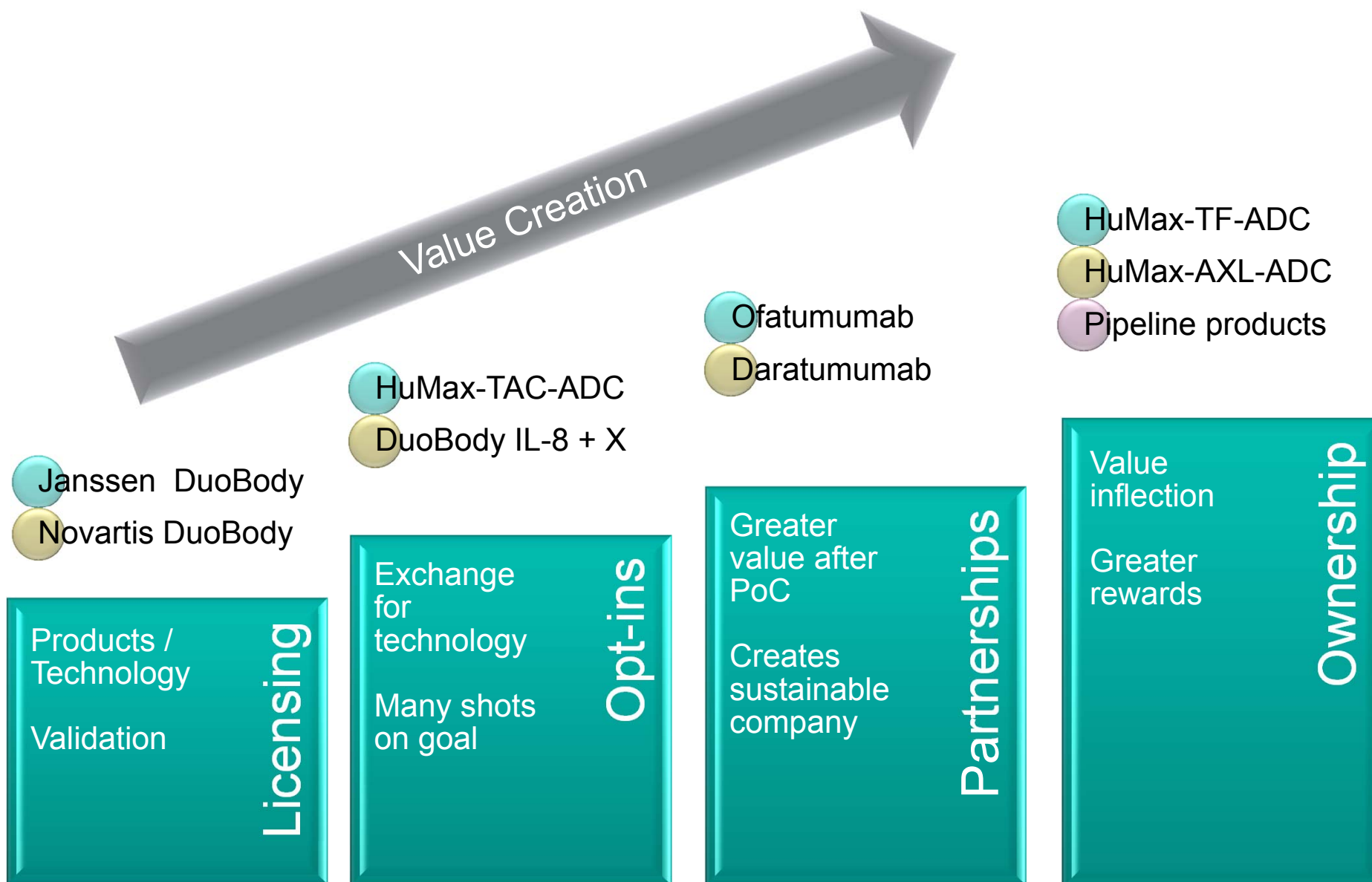


### HexaBody

- 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
- Builds on natural antibody biology - minimal engineering
- Create novel, differentiated products in cancer & infectious disease
- Repurpose / rescue drug candidates that failed in Phase II/III
- Life cycle management
- Collaborations with undiscl. major Biotech & Humabs BioMed



# Creating Value With Our Technologies



# Well-Capitalized Biotech – 2014 Guidance

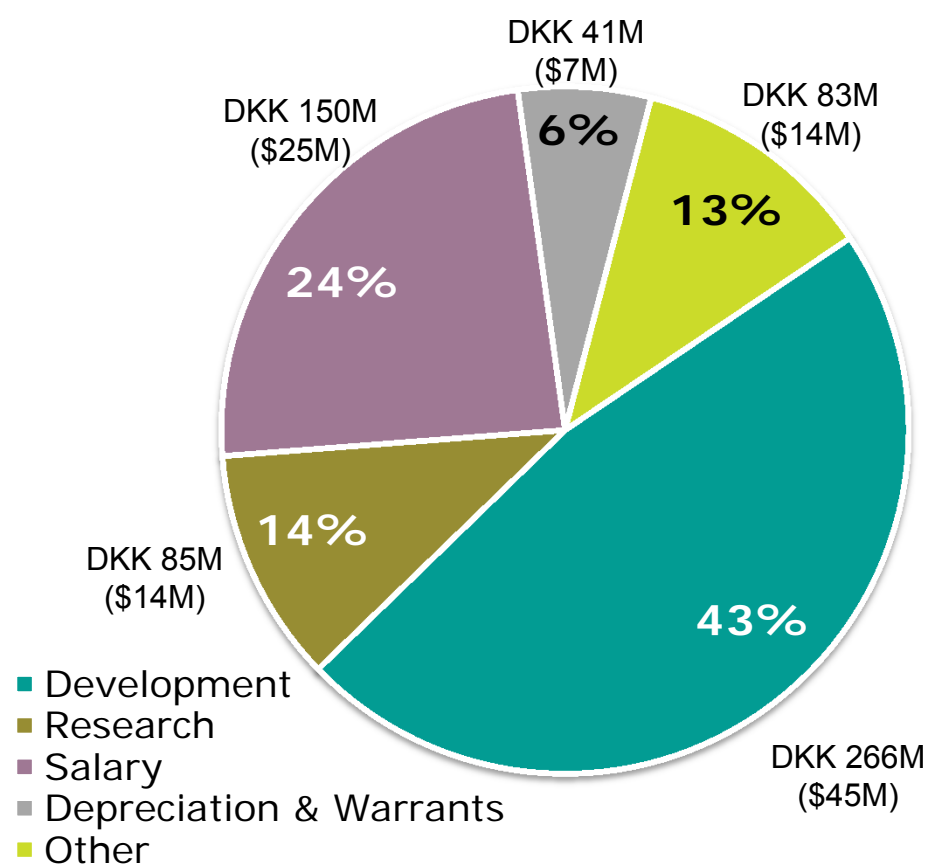
Income Statement	DKKM	USDM*
Revenue	800 - 875	135 - 148
Operating expenses	(600) – (650)	(101) – (110)
Operating income	175 – 250	30 - 42

Cash Position	DKKM	USDM*
Cash position beginning of year**	1,557	263
Cash used in operations	0 – (50)	0 - (8)
Proceeds from private placement	972	164
Warrant exercises	46	8
Cash position at end of year**	2,450 – 2,550	414 - 431

\*USD 1.00 = DKK 5.9152

\*\*Cash, cash equivalents and marketable securities

## 2014 Expense Base DKK 625M (\$105M)



## 2014 Goals: Fueling Growth Through Our Platforms & Products

Priority	✓	Targeted Milestone
Maximize value of ofatumumab	<b>2015</b> ✓ X X ✓	» 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	✓ ✓ <b>2015</b> ✓ ✓	» 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



- Robust differentiated product pipeline
  - Daratumumab, ofatumumab, HuMax-TF-ADC
  - Innovative pre-clinical pipeline
- Proprietary technologies -DuoBody & HexaBody
- Partnerships → Product ownership
  - Well capitalized
- Positioned for success
  - For patients & shareholders



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