Second Quarter Results

Period Ended June 30, 2012

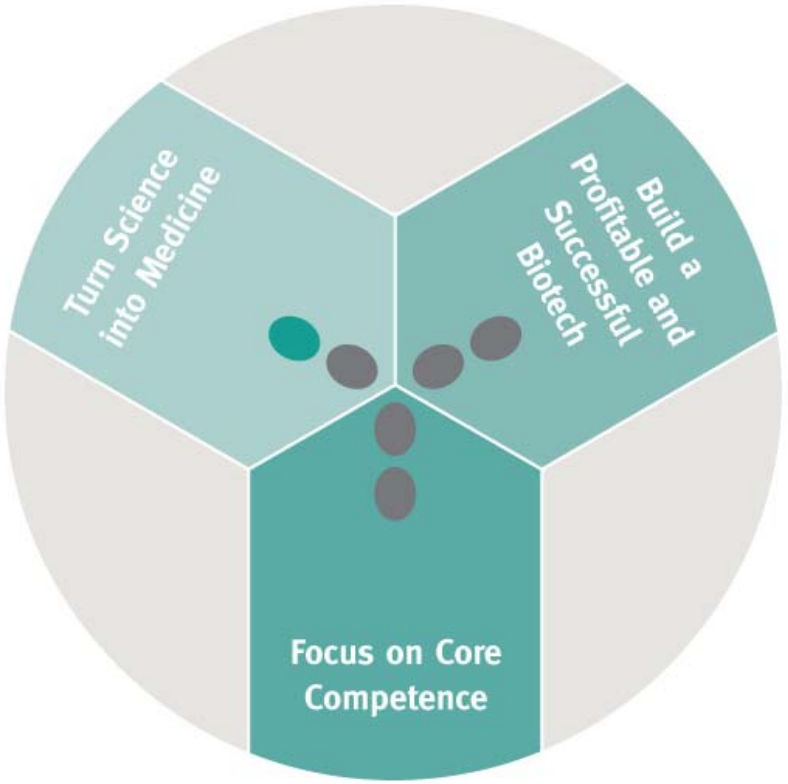
Genmab

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.

Delivering on Our Strategy

- Monetizing the unique strengths of DuoBody platform
- Broadening partnership base to build our business
- Progressing daratumumab
- Maximizing the value of Arzerra [ofatumumab]
- Disciplined resource allocation & financial management



Potential Value of DuoBody Collaborations: Over $1.9 Billion

Novartis

- 2 DuoBody programs
- Genmab receives
  - $2 million upfront payment
- $175 million total potential deal value
- Royalties on sales
- Novartis fully funds research

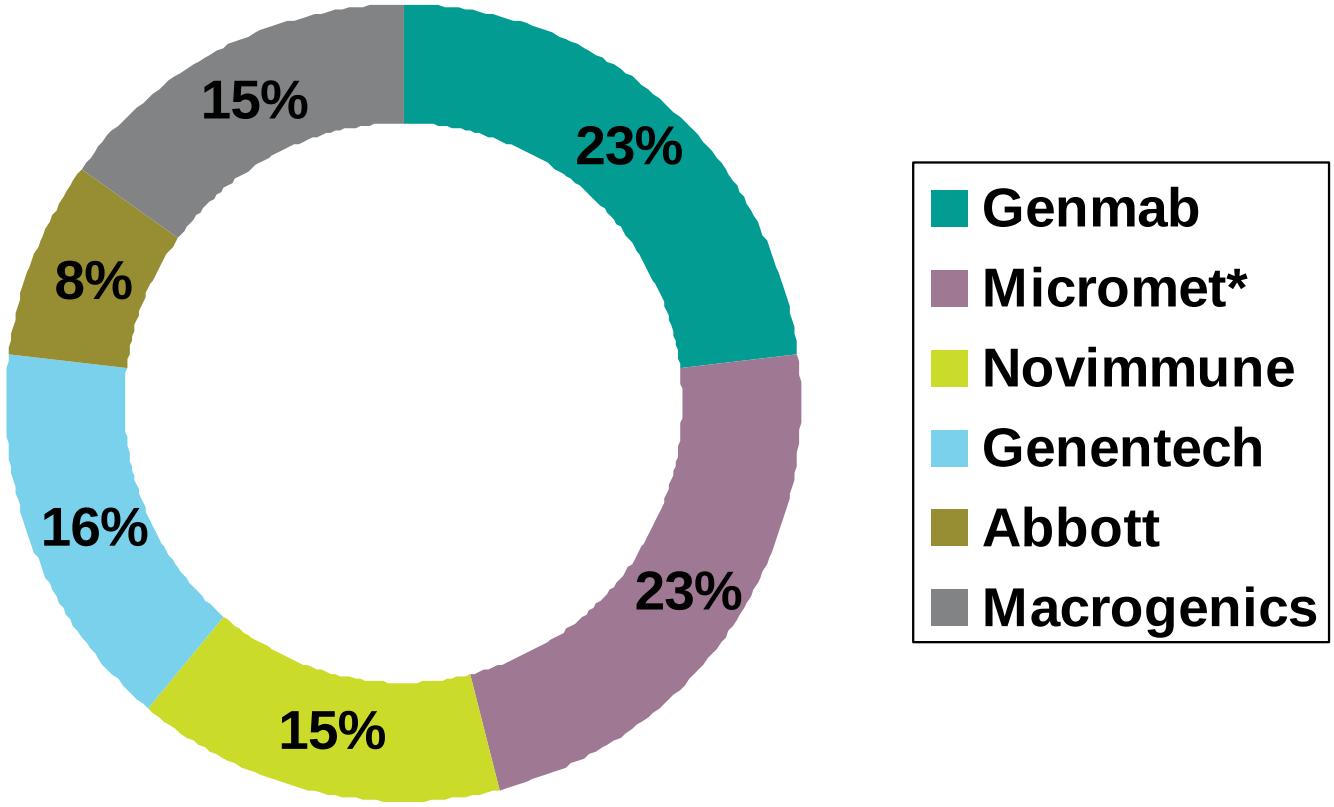
Janssen Biotech

- 10 DuoBody programs
- Genmab receives
  - $3.5M up front payment
  - $175M in potential milestone & license payments *per product*
- $1.75 billion total potential deal value
- Royalties on sales
- Janssen fully funds research

DuoBody Ranked Best Bispecific Technology

Hanson Wade Survey Results on Bispecifics

"Which organizations do you think are developing the best solution for bispecific development?"

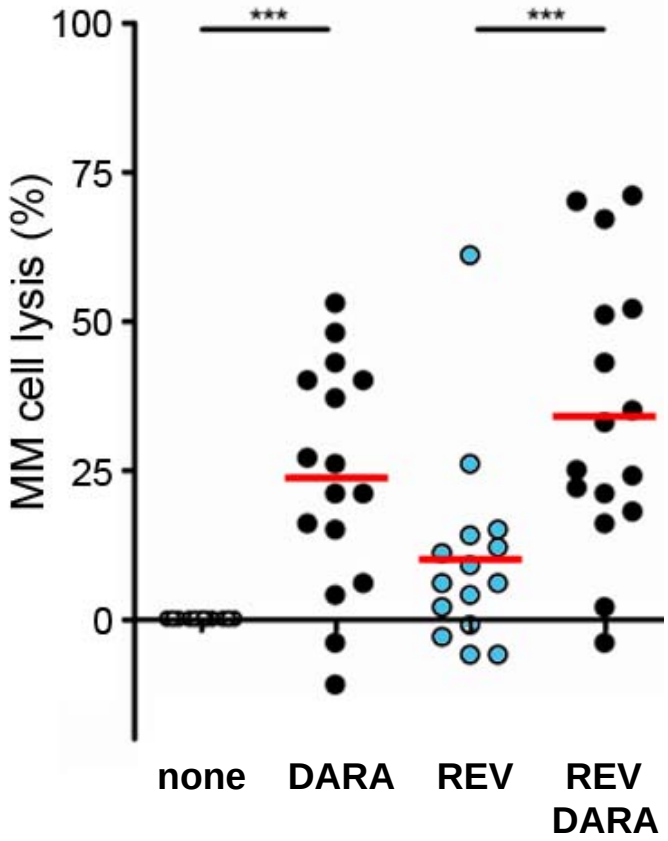


*Acquired by Amgen

Exciting Future for Daratumumab

- Promising preliminary efficacy data in relapsed multiple myeloma
  - 62% overall response rate
- Initiated Phase I/II combination study with Revlimid
- Additional combination study with Velcade planned
- Daratumumab targets a potential MM market of >$3.9 Bn
- Partnership expected by year end

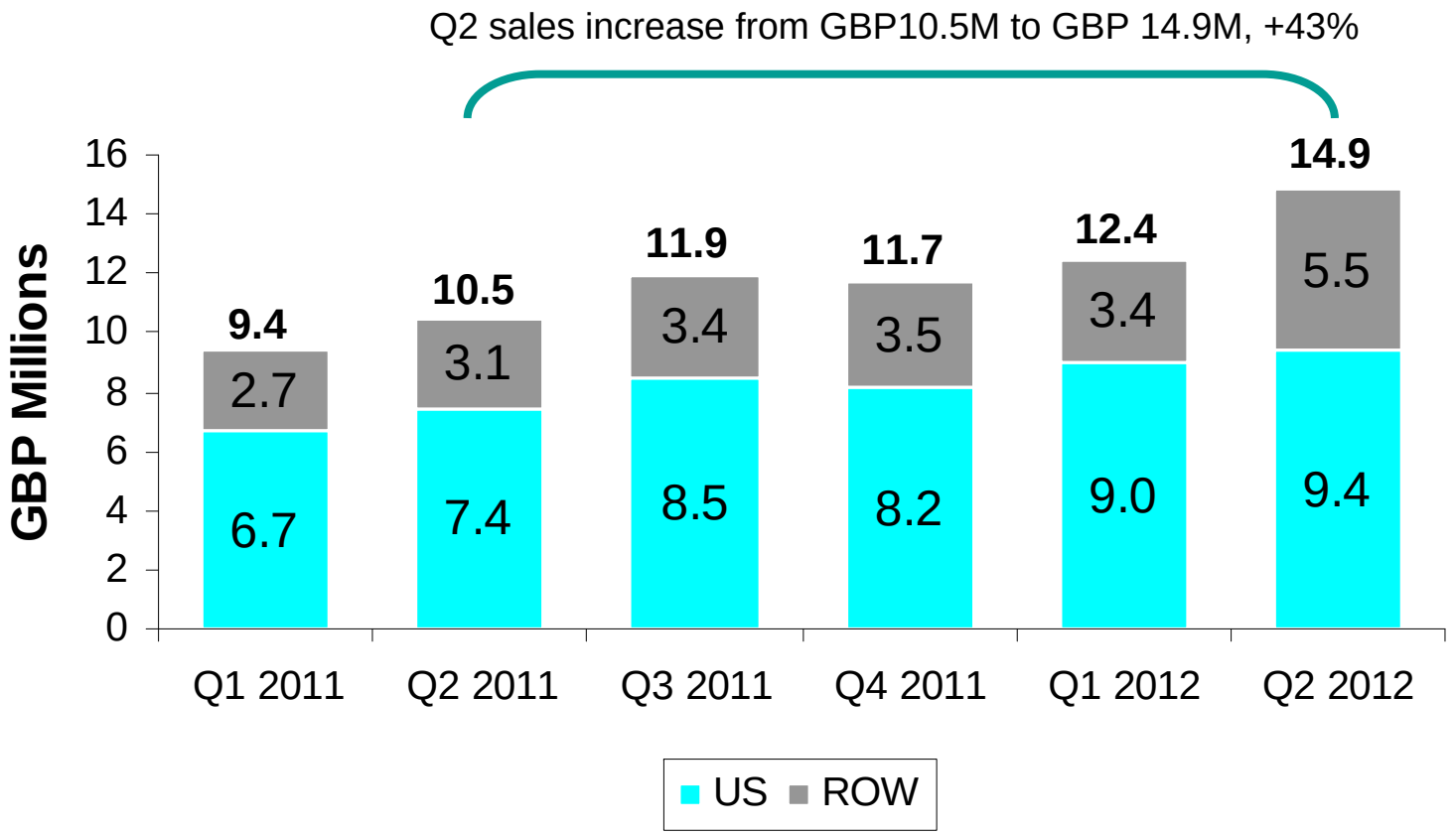
Daratumumab Enhances Efficacy in Pre-Clinical Studies



REV: Revlimid (lenalidomide)
DARA: daratumumab

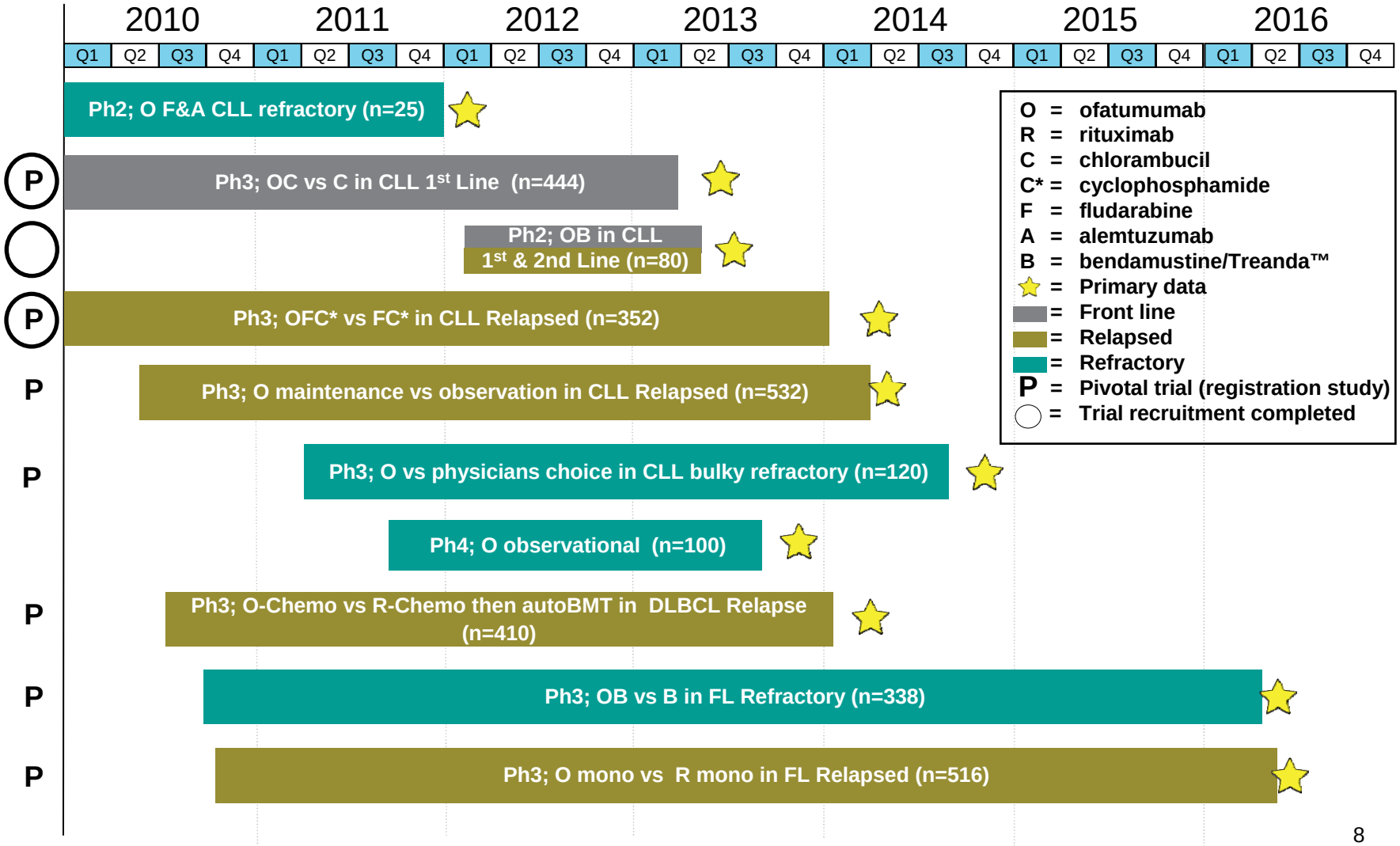
GSK Arzerra Sales Trend

43% Increase



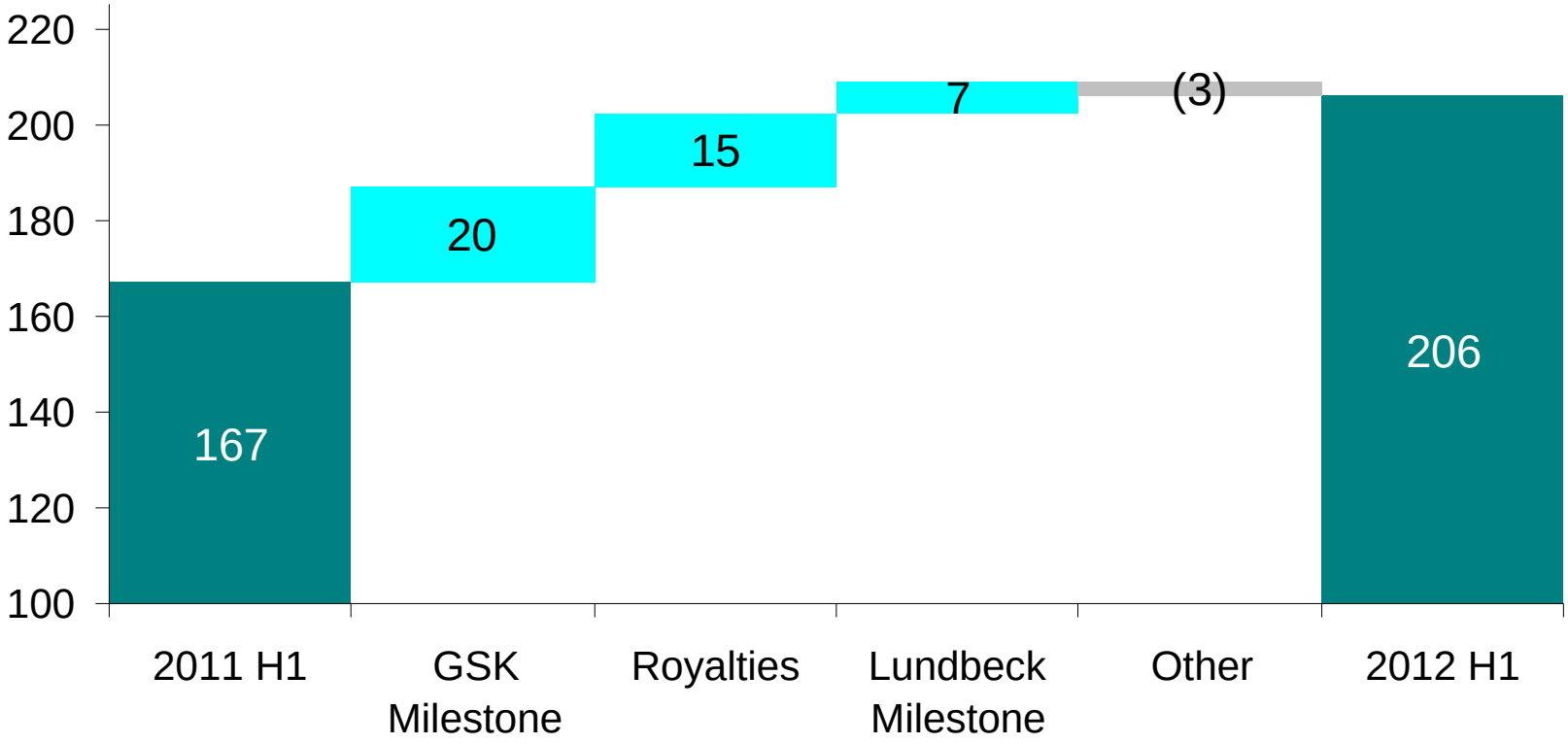
Ofatumumab Cancer Clinical Trials

Timeline to Primary Data – Per June 2012



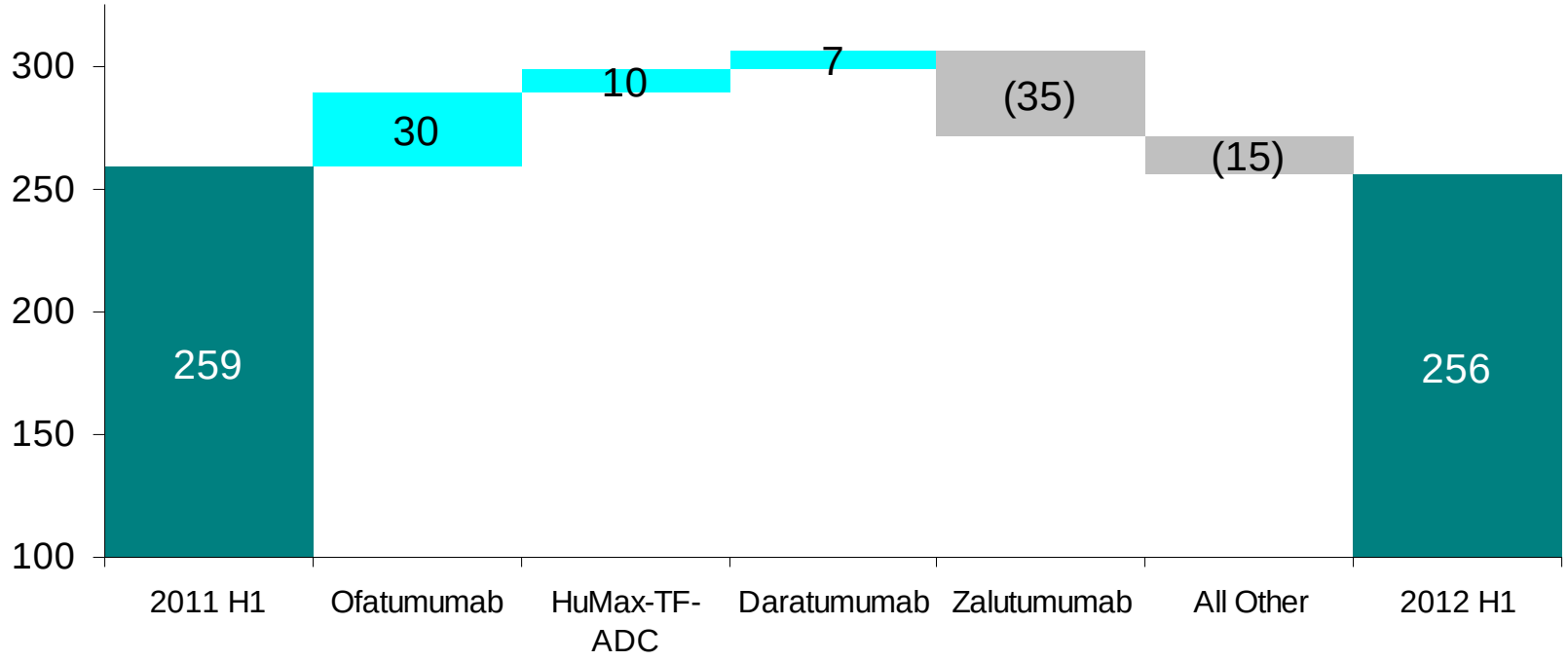
23% Increase in Revenue

2012 vs. 2011 – 6 months ended June 30



Expenses Under Control

2012 vs. 2011 – 6 months ended June 30



Focused investment in key projects offset by zalutumumab savings

Income Statement

6 months ended June 30, 2012

	DKK millions			USD millions*	
	2012	2011	Change	2012	2011
Revenue	206	167	39	35	28
R&D Costs	(256)	(259)	3	(43)	(44)
G&A Expenses	(32)	(35)	3	(6)	(6)
Operating Expenses	(288)	(294)	6	(49)	(50)
Operating Loss	(82)	(127)	45	(14)	(22)
Financial Items & Tax	30	(46)	76	5	(7)
Continuing Operations	(52)	(173)	121	(9)	(29)
Discontinued Operations	(20)	(19)	(1)	(3)	(3)
Net Loss	(72)	(192)	120	(12)	(32)
Cash Burn	(153)	(237)	84	(26)	(40)

*USD 1.00 = DKK 5.9042 (Danish Central Bank spot rate on June 30, 2012)

Improved 2012 Guidance

MDDK	Revised Guidance	Previous Guidance
Revenue	375 – 400	350 – 375
Operating expenses	(600) – (625)	(600) – (625)
Operating loss continuing operations	(200) – (250)	(225) – (275)
Discontinued operation	(40)	(40)
Cash position beginning of year*	1,105	1,105
Cash used in operations	(375) – (400)	(425) – (450)
Cash at end of year* excl. MN sale	705 – 730	655 – 680
Facility sale	320	320
Cash position at end of year*	1,025 – 1,050	975 – 1,000

**Cash, cash equivalents and marketable securities*

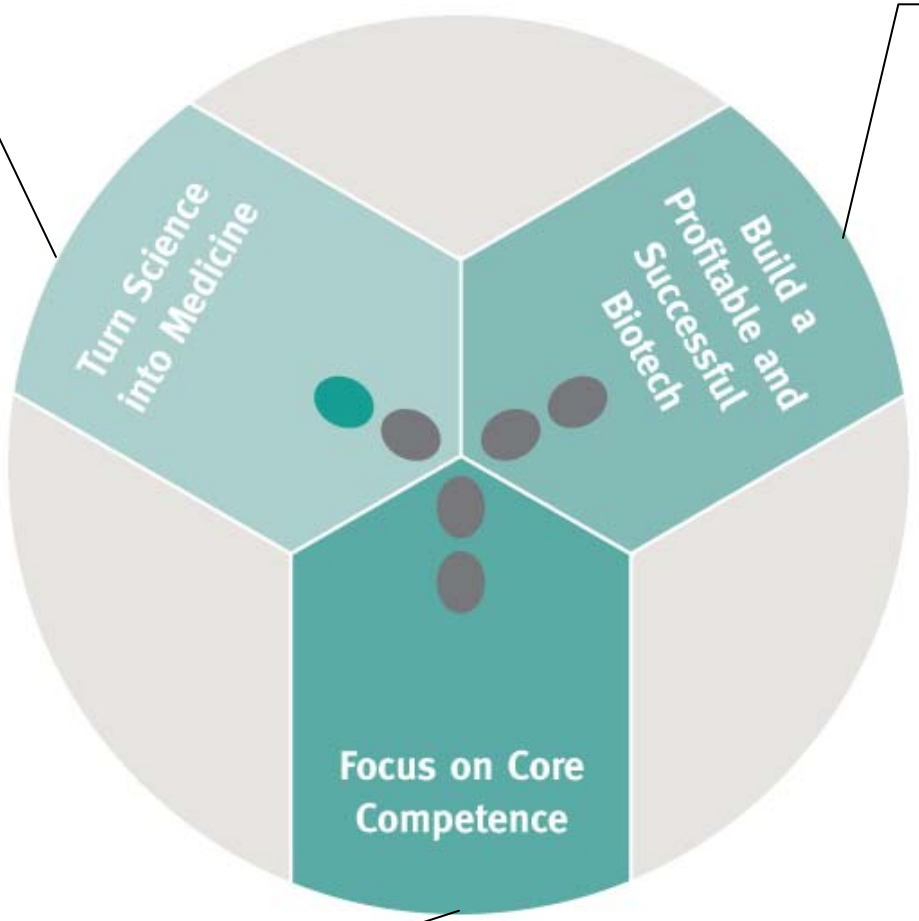
Light green highlight indicates key improvement

Progress on 2012 Objectives

Priority	Milestone	Current Progress
Maximize value of ofatumumab	» Report Ph II F&A CLL refract. data » Ph III CLL mainten. safety interim data » Ph III DLBCL O vs R interim analysis for futility » Report data multiple ISS studies	✓ Data presented at ASCO ✓IDMC recommends continuing study ✓ Data from 5 ISS studies presented at ASCO / EHA
Expansion Arzerra	» Launch & reimbursement new countries » Filing in new territory	✓ 1st launch in S. America; now in 24 countries ✓ GSK submitted NDA in Japan
Daratumumab	» Report efficacy data Ph I/II MM study » Initiate Ph I/II combination studies » Complete partnering	✓ Prelim data ASCO/EHA ✓ 1st patient dosed Ph I/II study daratumumab + Revlimid
Expand pipeline	» Report proof-of-concepts ADC and DuoBody product candidates	✓ DuoBody platform proof-of-concepts presented at 7 conferences
DuoBody platform	» Enter new collaboration » Advance platform	✓ Novartis & Janssen collaborations
Partnered programs	» Report progress pre-clinical programs » Report progress clinical programs » Enter new collaboration	✓ Lundbeck 2nd milestone ✓ Outlicense HuMax-IL8
Manage and control cash burn	» Reduce cash burn & lengthen cash runway » Execute sale manufacturing facility	✓ Guidance improved

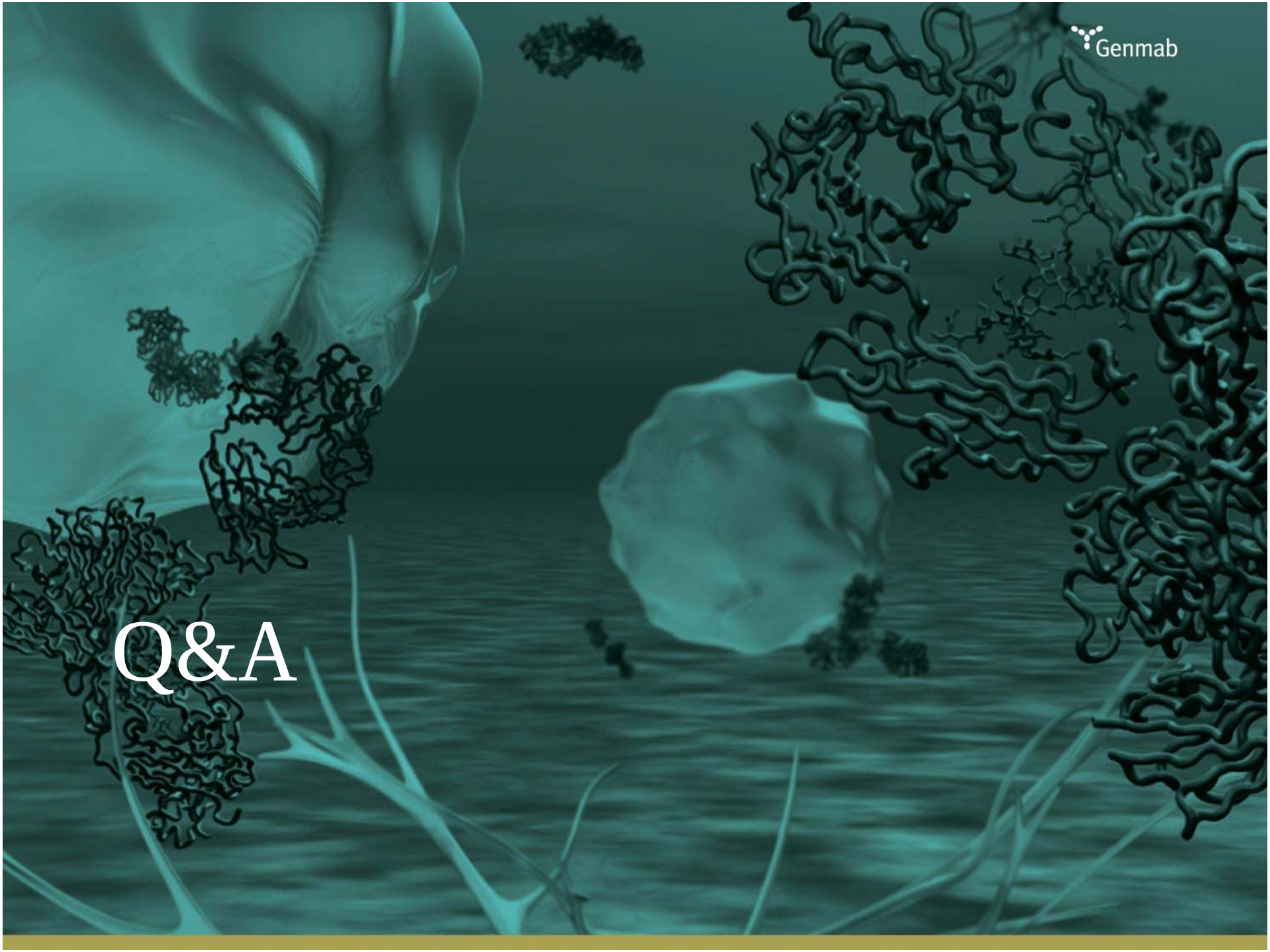
Following Through on Our Commitments

Arzerra
Daratumumab



6 New partnerships
Disciplined financial management

Daratumumab
DuoBody
HuMax-TF-ADC
DuoBody-ADC


Genmab
Q&A