

March 2016

# Company Update



This presentation includes forward-looking statements.

Actual results could differ materially from those included in the forward-looking statements due to various risk factors and uncertainties including changes in business, economic competitive conditions, regulatory reforms, foreign exchange rate fluctuations and the availability of financing. These and other risks and uncertainties are detailed in the Company's Annual Report.

# Strong Value Drivers Supported by Sound Financial Position

MOR208

“MOR208 is ideally suited to be a key component of combination therapy in B cell malignancies.”

MOR202

“Patients receiving MOR202 plus pomalidomide have shown very encouraging responses, which have deepened considerably since data was reported at ASH in December 2015.”

Bima-  
grumab

“If approved, bimagrumab would become the first marketed product from our technology platform. Market entry will start the transformation of our revenue statement to one based on product sales.”

Gusel-  
kumab

“Guselkumab is currently being developed by Janssen in six phase 3 trials in psoriasis settings, three of which will read out this year.”



- FY2015 revenues of EUR 106.2m and EBIT of EUR 17.2m exceeded financial guidance
- Strong cash position of EUR 298.4m enables increased R&D investment in 2016

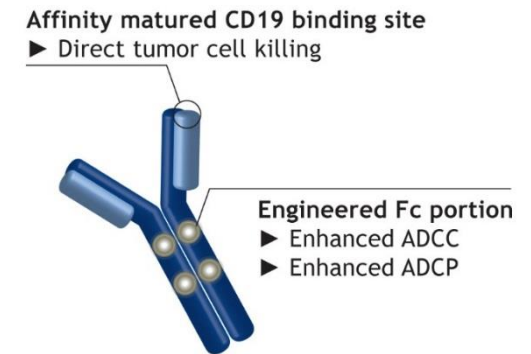


Program	Indication	Target	Discovery	Preclinic	Phase 1	Phase 2	Phase 3
<b>Unpartnered</b>							
MOR208	DLBCL	CD19	FTD, orphan status US & EU				
	CLL		Orphan status US & EU				
MOR202	Multiple myeloma	CD38					
MOR107	Fibrosis	AT2-R					
Immuno-oncology program	Cancer	MHC-associated peptides					
6 Programs	Various	Various					
<b>Co-development &amp; co-promotion</b>							
MOR209/ES414 (Emergent)	Prostate cancer	PSMA / CD3					
MOR106 (Galapagos)	Inflammation	Undisclosed					
Immuno-oncology program (Merck Serono)	Cancer	Undisclosed					
<b>Outlicensed to GSK</b>							
MOR103/ GSK3196165	RA/hand osteoarthritis	GM-CSF					

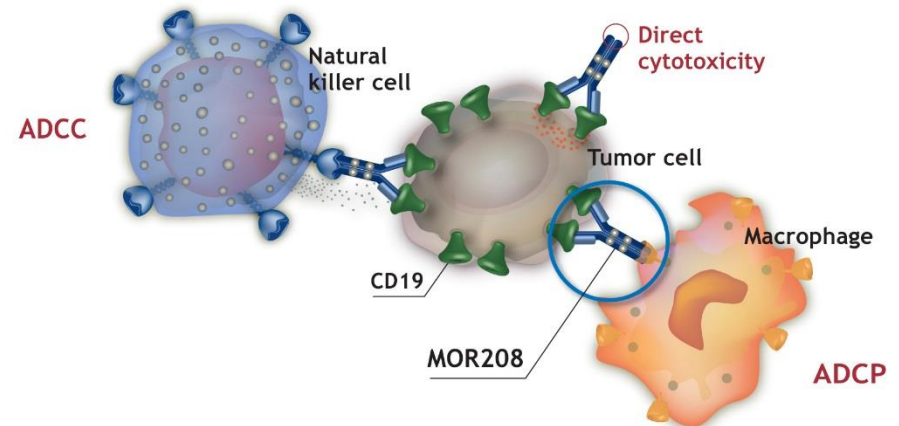
# MOR208

## First- & Best-in Class Potential

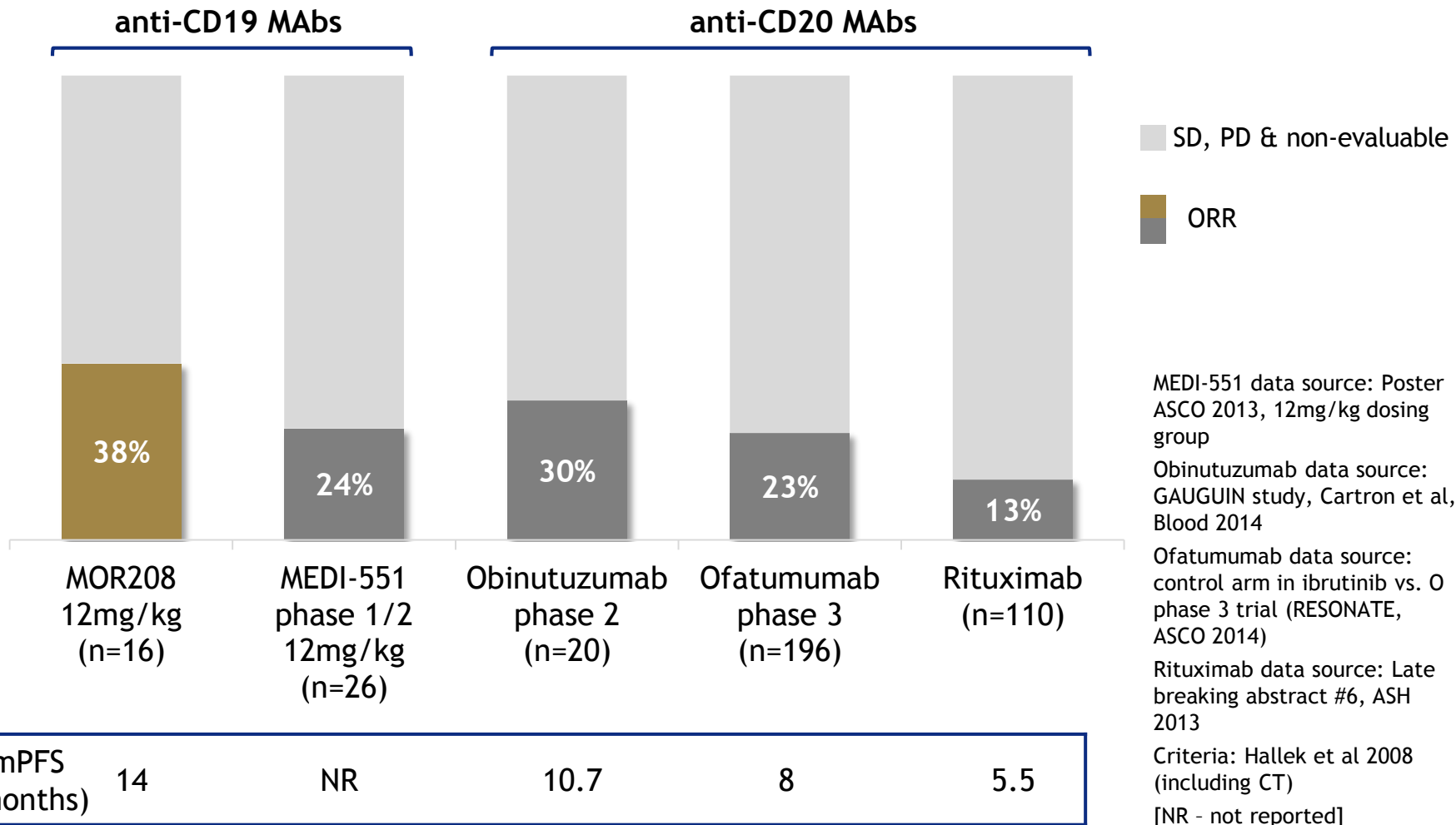
- Fc-enhanced, humanized IgG1 antibody targeting CD19
- CD19 is target of choice for B-cell malignancies
  - CD20 down-regulated after anti-CD20 treatment
  - CD19 down-regulation not described
- Fc modification leads to dramatically enhanced B cell depletion
  - Antibody dependent cellular cytotoxicity (ADCC)
  - Phagocytosis
  - Direct cytotoxicity
- Convenient dosing schedule
- Straightforward manufacturing
- Strong pre-clinical support for combo therapy



MOR208



### Response Rates Based on IWCLL2008 Criteria



Best overall response* n (%)	DLBCL n=35	iNHL incl. FL n=45	MCL n=12	Total n=92
Complete response	2 (6%)	5 (11%)	0	7 (8%)
Partial response	7 (20%)	7 (16%)	0	14 (15%)
Stable disease	5 (14%)	21 (47%)	6 (50%)	32 (35%)
Progressive disease	11 (31%)	7 (16%)	5 (42%)	23 (25%)
Not evaluable <sup>‡</sup>	10 (29%)	5 (11%)	1 (8%)	16 (17%)
ORR (CR + PR)	9 (26%)	12 (27%)	0	21 (23%)
ORR (Evaluable pts)	9 (36%)	12 (30%)	0	21 (28%)

\*Investigator assessed

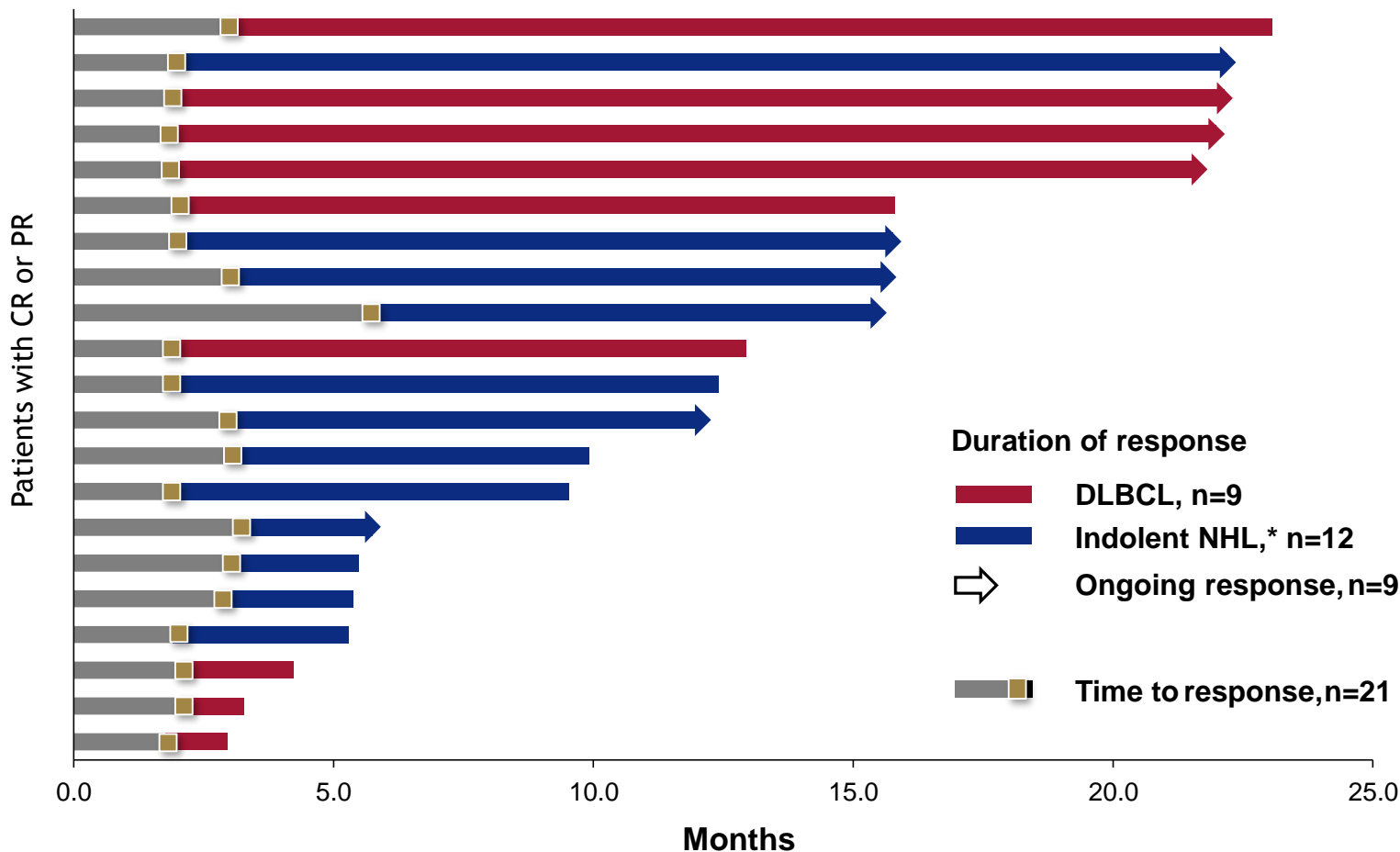
<sup>†</sup>iNHL cohort not expanded due to heterogeneity

<sup>‡</sup>Post-baseline response assessment not performed/data unavailable

CR, complete response; PR, partial response; ORR, objective response rate

Jurczak et al, #1528, ASH 2015



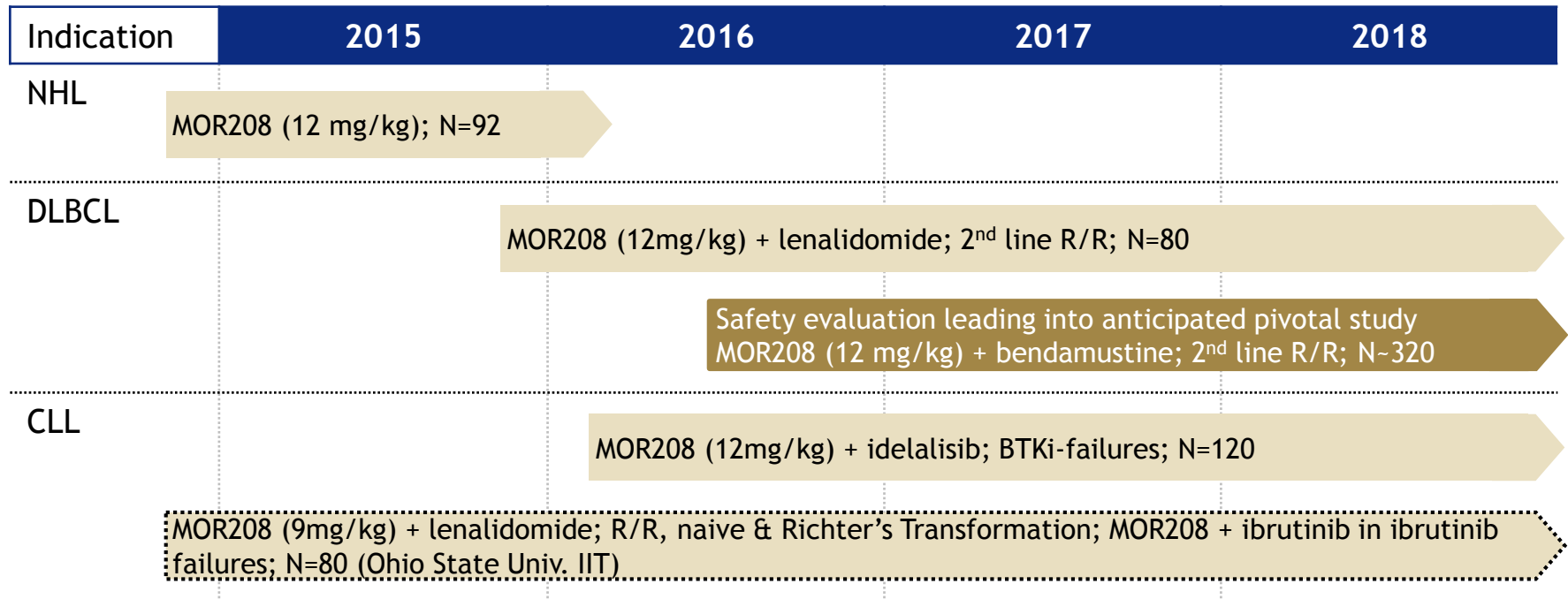


\* Includes follicular lymphoma and other indolent NHLs  
 DLBCL, diffuse large B-cell lymphoma; NHL, non-Hodgkin’s lymphoma.

Jurczak et al, #1528, ASH 2015

# MOR208

## Comprehensive Clinical Development Plan

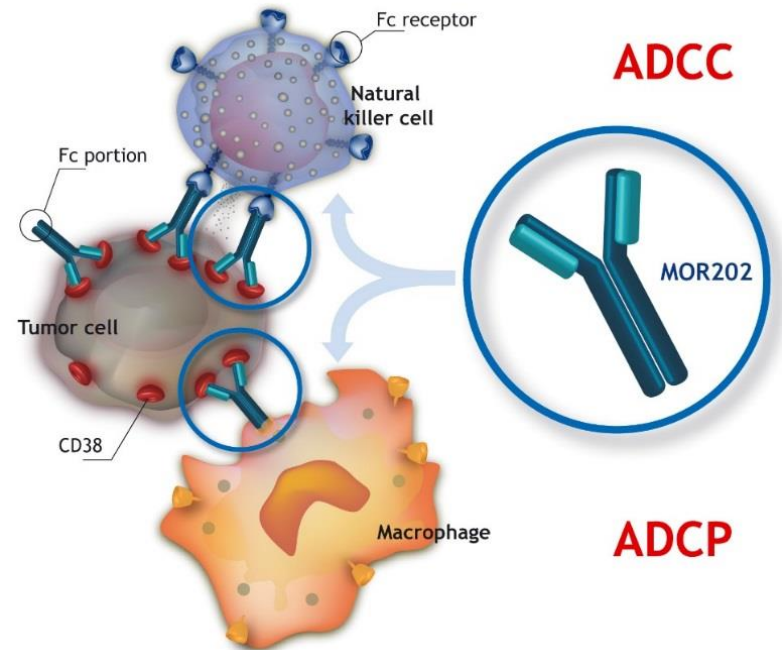


- Phase 2
- Phase 2/3
- IIT: Investigator-initiated trial

# MOR202

## A Novel Antibody for Multiple Myeloma

- HuCAL IgG1 antibody binding unique epitope on CD38
- One of only three CD38 antibodies in clinic
- Potent ADCC and ADCP
  - Enhanced killing of MM cells
  - Low-level killing of NK cells
- Strongly synergistic with IMiDs and proteasome inhibitors in pre-clinical models
- Best-in-class infusion tolerability as consistent 2-hour infusion



# MOR202: Differentiated by Clinical Safety & Potentially by Durability of Response

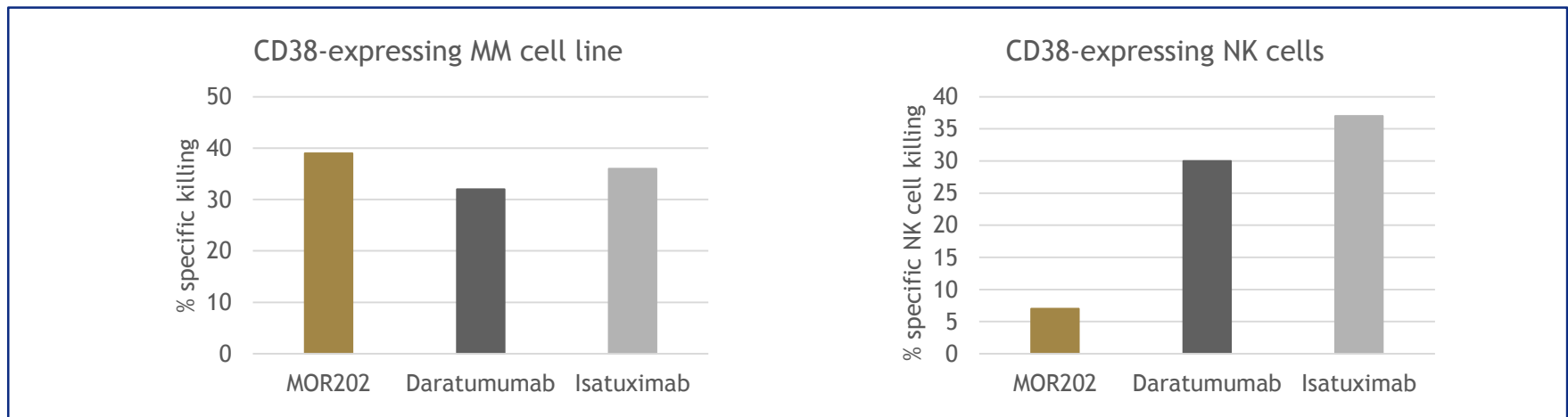


MOR202 shows best-in-class infusion tolerability & convenience

	MOR202	Daratumumab	Isatuximab
Infusion volume	250 ml	500-1000 ml	?
Speed of infusion	125 ml / h	Start at 50 ml/h* If IRR: restart with 25 ml/h	?
Infusion time	2h	6.5 h (1st infusion) 3.5 h (3rd infusion)	4-6 h
IRRs (with Steroids)	6% (grade 1 only)	70 / 77%	52%

\* Moreau @ Janssen Symposium IMW 2015

MOR202 shows best-in-class difference between MM and NK-cell killing



# MOR202 - Phase 1/2a

## Summary of Preliminary Efficacy Data

### Preliminary Results of Single Agent MOR202 (weekly + Dex)

- VGPR and PR: 3/9 evaluable patients
- SD: 6/9 evaluable patients
- ORR of 33%

### Preliminary Results of Combo of MOR202 with IMiDs

- VGPR and PR: 3/6 evaluable patients
- MR: 1/6 evaluable patients
- Clinical benefit rate of 67%

### Responder Analysis (all patients)

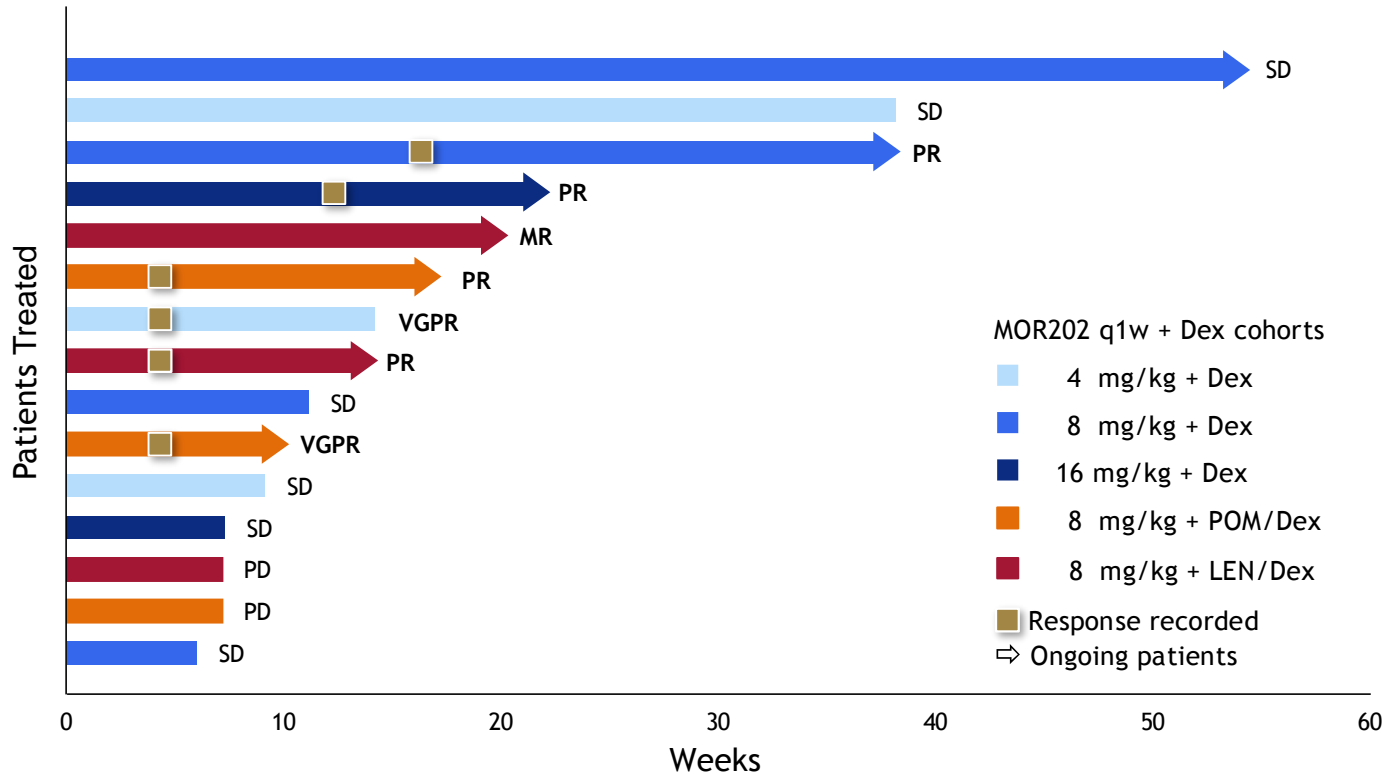
- Immediate decrease in M-Protein
  - Improvement in remission quality with longer treatment duration
- Ongoing responses: 5/6 patients
  - Best stabilization: 52+ weeks

#### Data from ASH, December 2015

“Since these data were reported, responses in combo cohorts have deepened considerably”

# MOR202 - Phase 1/2a

## Time on Study and Best Response



Data from patients treated with the clinically relevant dose regimens who received > 1 treatment cycle.

Dex, dexamethasone; LEN, Lenalidomide; MR, minor response; POM, Pomalidomide; PD, progressive disease; PR, partial response; q1w, weekly; SD, stable disease; VGPR, very good partial response.

Raab et al, #3035, ASH 2015



# Clinical Programs from Partnered Discovery Alliances (II)



Program	Partner	Target	Indication	Phase 1	Phase 2	Phase 3
LFG316	Novartis	C5	Age-related geographic atrophy	██████████	██████████	
			Geographic atrophy (combo with CLG561)	██████████	██████████	
			Panuveitis	██████████	██████████	
			Paroxysmal nocturnal hemoglobinuria	██████████	██████████	
LJM716	Novartis	HER3	ESCC (combo with BYL719)	██████████	██████████	
			HER2+ cancer (combo BYL719 & trastuzumab)	██████████	██████████	
			HER2+ cancer, combo with trastuzumab	██████████	██████████	
Tarextumab (OMP-59R5)	Oncomed/GSK	Notch 2	Small cell lung cancer (Pinnacle)	██████████	██████████	
			Solid tumors	██████████	██████████	
VAY736	Novartis	BAFF-R	Pemphigus vulgaris	██████████	██████████	
			Primary Sjögren's syndrome	██████████	██████████	
			Rheumatoid Arthritis	██████████	██████████	
BAY1093884	Bayer	TFPI	Bleeding disorders	██████████	██████████	
BI-836845	BI	IGF-1	Solid tumors, Japanese patients	██████████	██████████	
			EGFR mutant NSCLC	██████████	██████████	
			Metastatic breast cancer	██████████	██████████	
			CRPC + enzalutamide	██████████	██████████	
			Advanced solid tumors	██████████	██████████	
NOV-7	Novartis	n.d.	Eye disease	██████████	██████████	
NOV-8	Novartis	n.d.	Inflammation	██████████	██████████	
NOV-9	Novartis	n.d.	Diabetic eye disease	██████████	██████████	
NOV-10	Novartis	n.d.	Cancer	██████████	██████████	
NOV-11	Novartis	n.d.	Blood disorders	██████████	██████████	
PF-05082566	Pfizer	4-1BB	Advanced malignancies, with avelumab	██████████	██████████	
			Solid tumors, NHL (+rituximab)	██████████	██████████	
			Solid tumors, combo with PD-1i MK-3475	██████████	██████████	
			Advanced solid tumors, with mogamulizumab	██████████	██████████	
Vantictumab (OMP-18R5)	Oncomed/Bayer	Fzd 7	Solid tumors	██████████	██████████	
			Metastatic breast cancer	██████████	██████████	
			Pancreatic cancer (combo)	██████████	██████████	
			NSCLC	██████████	██████████	



# Bimagrumab (BYM338)

## A Novartis Musculoskeletal Program

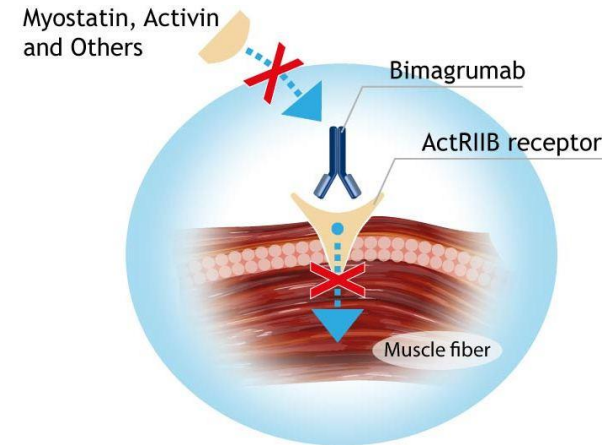


### Bimagrumab

- HuCAL antibody specific for ActRIIB, antagonizes myostatin binding to muscle cells
- Lead indication: sporadic inclusion body myositis (sIBM)
- FDA breakthrough therapy designation
- Orphan drug designation

### Current Status

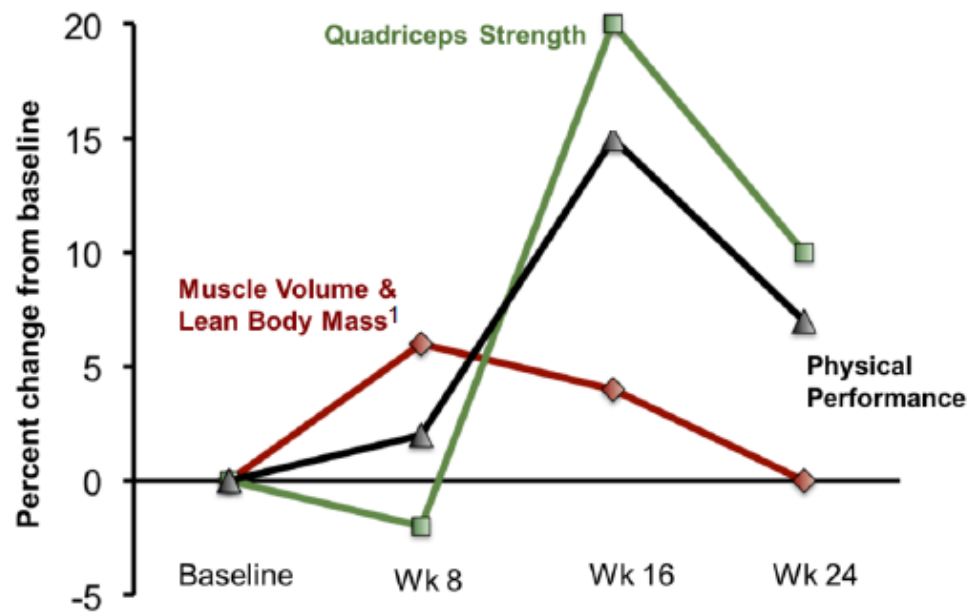
- Pivotal study in sIBM with 240 patients ongoing, phase 3 data expected in H1 2016
- Listed by Novartis as “planned filing 2016”
- Phase 2 studies in sarcopenia, cachexia and hip fracture surgery



WK Engel and V Askanas; Neurology 2006; 20-29

# Bimagrumab (BYM338) Promising Phase 2 Data in sIBM\*

- Bimagrumab, single dose, 30 mg/kg
- Muscle mass increased approx. 5% more than placebo
- Muscle gain was functional
  - Increases in strength parallel to physical performance and in 6-minute walking distance



Data courtesy of Novartis

[\*] A Amato *et al*; Neurology; Nov 7, 2014, online

[1] Statistically significant difference

# Guselkumab (CNTO1959)

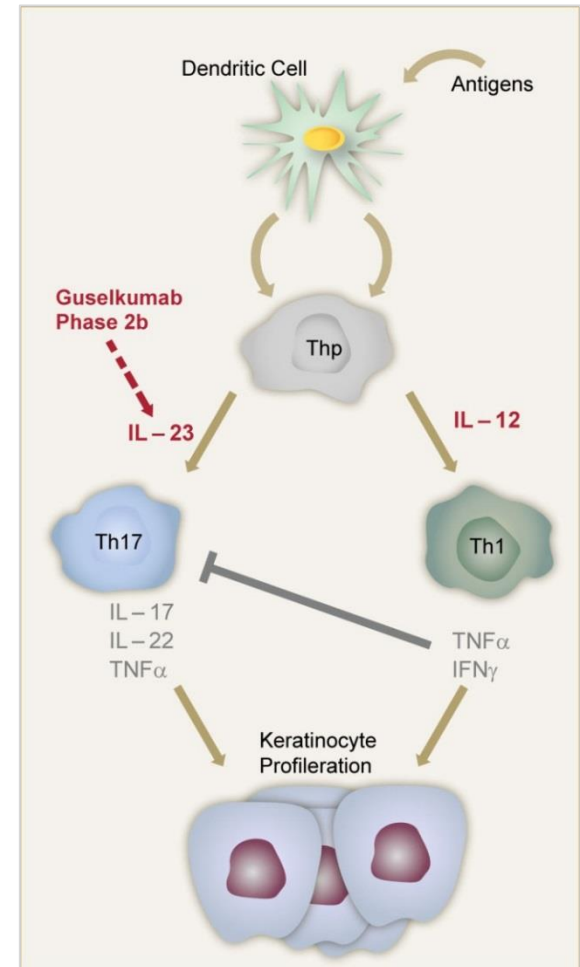
## A Janssen Anti-Inflammatory Program

### Guselkumab

- A HuCAL antibody specific for IL-23, does not bind IL-12
- IL-23 blockade inhibits production of multiple cytokines beyond IL-17A and preserves Th1 & Treg regulatory pathways
- Being developed in psoriasis and psoriatic arthritis

### Current Status

- Six Phase 3 clinical trials ongoing
- First Phase 3 data expected in 2016
- Anticipated filing in 2016



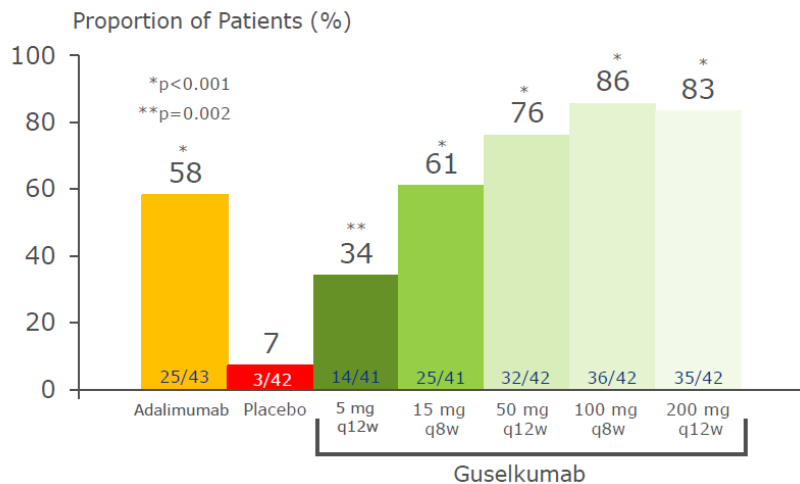
Source: Jetten AM, Nucl Recept Signal, 2009

# Guselkumab (CNTO1959) Clinical Data

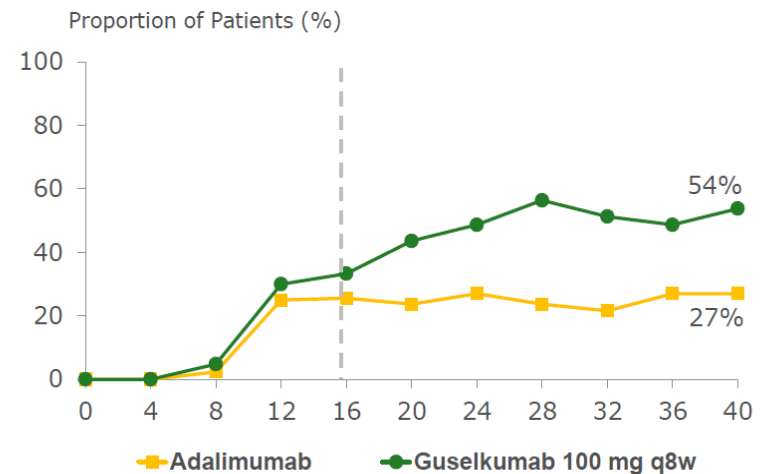


- Highest levels of durable skin clearance with less intensive dosing regimens vs. anti-IL-17 class
- Potential for similar safety profile vs. long-term blockade of IL-12 + 23 with STELARA®
- Potential for long-term, drug-free efficacy

## Primary Endpoint: Patients with PGA Scores of Cleared (0) or Minimal (1) at Week 16



## PASI 100 through Week 40



Adalimumab: 80 mg at Week 0, followed by 40 mg at Week 1 and q2w thereafter through Week 39.  
Duffin, KC, et al. AAD 2014. Late breaker.

Data courtesy of Janssen

# Highlighted Programs All Have Blockbuster Potential

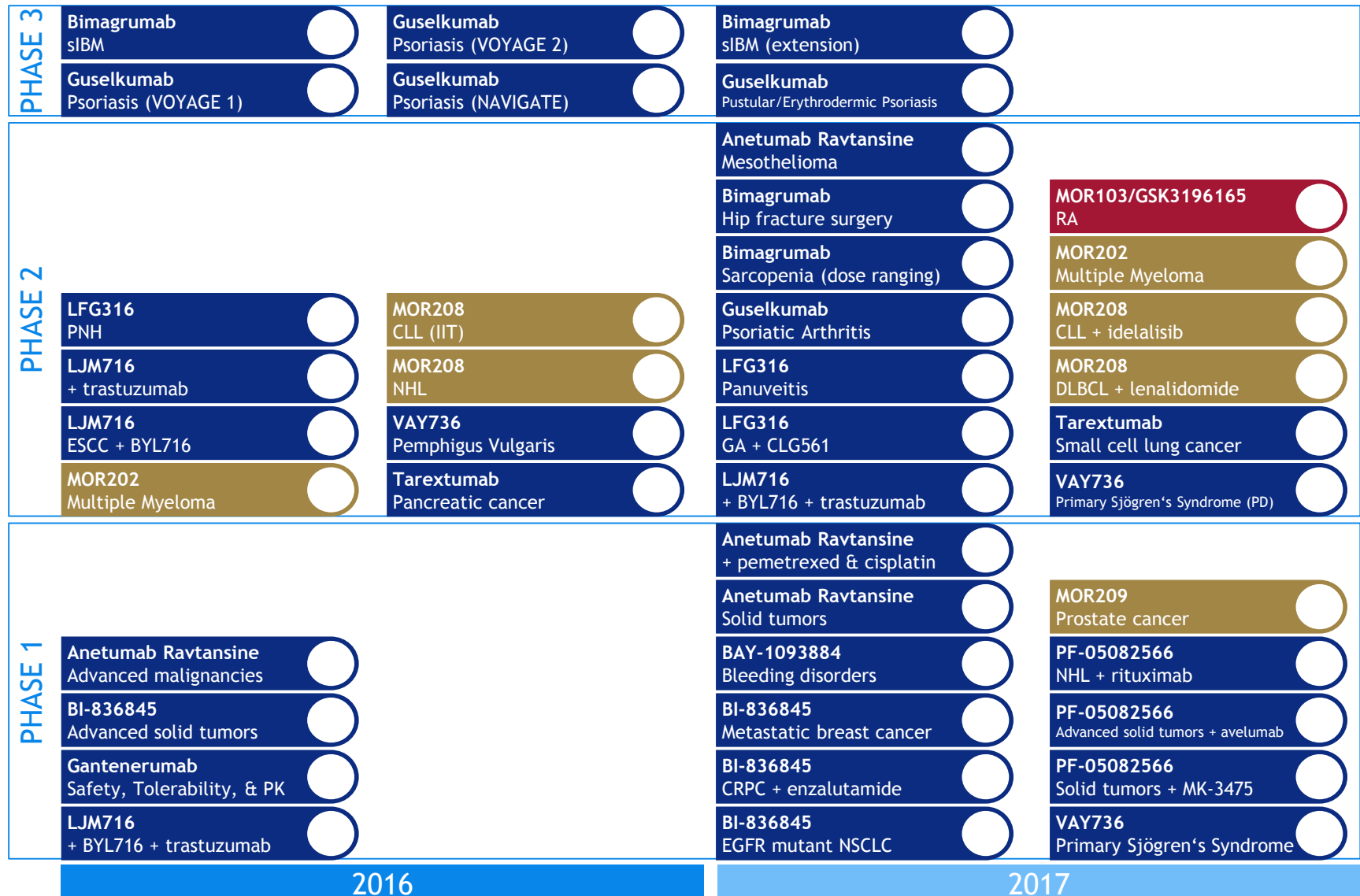


Program	Indication	Forecast Peak Sales*	
MOR208	NHL	\$790m	} \$1.4bn
	CLL	\$350m	
	ALL	\$250m	
MOR202	Multiple myeloma	\$2.1bn	
Bimagrumab	sIBM	\$400m-\$890m	} \$3.9bn-\$5.8bn
	Cachexia	\$1.0bn-\$2.0bn	
	Sarcopenia	\$1.6bn	
	Atrophy after hip fracture surgery	\$872m-\$1.3bn	
Guselkumab	Psoriasis	\$1.6bn	} \$2.8bn
	Pustular psoriasis	\$871m	
	Psoriatic arthritis	\$299m	

\* Based on an external study by Defined Health using publicly available information; the forecasted peak sales do not represent company guidance.



# Pipeline Set to Deliver a Lot of Clinical Data



Based on published information and MorphoSys estimates

Partnered Discovery Programs MOR Programs/Outlicensed programs

# Powerful Technology Base Ensures Pipeline Sustainability

## Innovative Targets

GPCRs, ion channels



Immune checkpoints



MHC-presented, tumor-associated peptides



Source of novel targets



Differentiated drug candidates

## Proprietary Platforms

Antibody library



Protein optimization

SLONOMICS

Lantipeptides



in € million	2015A	Guidance 2016
<b>Group Revenues</b>	<b>106.2</b>	<b>47 to 52</b>
Proprietary R&D Expenses (incl. Technology Development)	56.6	76 to 83
<b>EBIT</b>	<b>17.2</b>	<b>-58 to -68</b>

Cash, cash equivalents & marketable securities  
as well as other short-term and long-term financial assets

298.4



# What to Expect?

<b>Bimagrumab</b>	sIBM	Data from pivotal trial and regulatory filing expected
<b>Guselkumab</b>	Psoriasis	Data from 3 pivotal trials and regulatory filing expected
<b>MOR208</b>	DLBCL	<ul style="list-style-type: none"> <li>■ Phase 2 lenalidomide combo trial to start in Q1 2016</li> <li>■ Phase 2 bendamustine combo safety evaluation to start mid 2016</li> <li>■ Phase 3 bendamustine combo pivotal study planned for 2017</li> <li>■ First data of combination trials in 2017</li> </ul>
		CLL
<b>MOR202</b>	MM	Updated data from phase 1/2a trial at ASCO 2016 and ASH 2016
<b>MOR209</b>	Prostate cancer	Continuation of trial under amended protocol, clinical data in 2017
<b>MOR106</b>	Inflammation	Start of phase 1 with Galapagos in H1 2016
<b>MOR107</b>	Fibrosis	Start of phase 1 in Q4 2016
<b>MOR103</b>	RA Osteoarthritis	<ul style="list-style-type: none"> <li>■ Start of phase 1b/2a in osteoarthritis of the hand</li> <li>■ Data from the phase 2b in RA in 2017</li> </ul>
<b>Pipeline</b>		<ul style="list-style-type: none"> <li>■ Up to 5 new program starts</li> <li>■ Around 5 clinical milestones</li> </ul>



## APPENDIX

# MOR103/GSK3196165

## Anti-inflammatory Program Licensed to GSK



### MOR103/GSK3196165

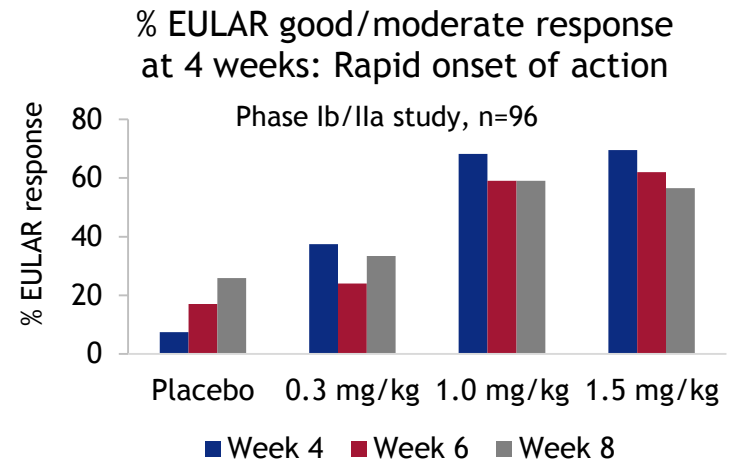
- HuCAL antibody specific for GM-CSF
- GM-CSF is important in every step of macrophage production and infiltration in the tissues
- Good magnitude of effect with fast onset of action and long duration post treatment
- Effect size appears similar to or greater than anti-TNF
- Targeting the macrophage in early RA
- Potential for early use to induce remission

### Indications

- Lead indication: Rheumatoid arthritis (RA)
- Potential for disease modification & analgesic activity in hand osteoarthritis (HOA)

### Current Status

- BAROQUE (RA phase 2b) ongoing
- Initial clinical read-out 2016
- Phase 2 in hand osteoarthritis to start in 2016



Behrens, *et al.* Ann Rheum Dis. 2015;74:1058-64



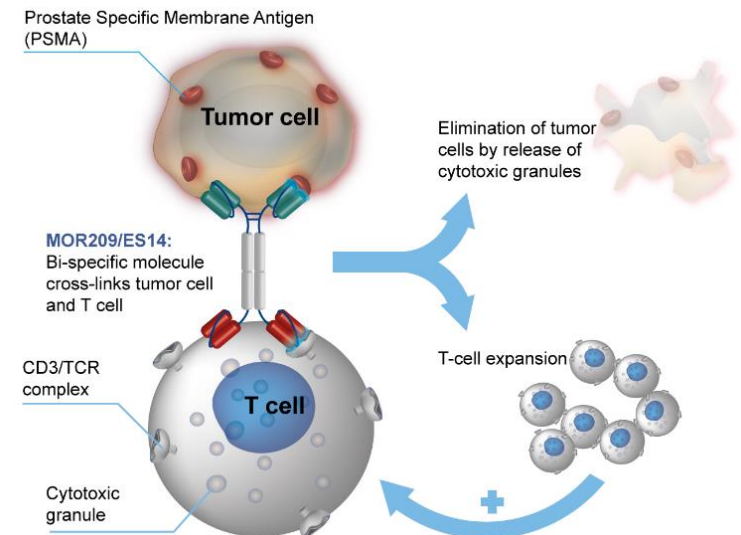
### MOR209/ ES414

#### Co-development Agreement with Emergent BioSolutions

- Phase 1 clinical trial in mCRPC patients was started in March of 2015

#### Restructured Agreement with Emergent BioSolutions

- Adjustment of dosing regimen and administration
- Reduction of MorphoSys's cost sharing and reduced milestone payments



Clinical development will continue in 2016 under an adapted clinical development plan.

Trial	Phase	Patients	Prim. Compl.	Endpoints
<b>Efficacy and Safety of Bimagrumab/BYM338 at 52 Weeks on Physical Function, Muscle Strength, Mobility in sIBM Patients (RESILIENT)</b>	2/3 Active, not recruiting	240	12/2015	<ul style="list-style-type: none"> <li>• Change from Baseline in 6 Minute Walking Distance Test meters to Week 52</li> <li>• Change from Baseline in lean body mass (LBM), quadriceps Quantitative Muscle Testing (QMT), Patient-Reported Physical Function, Rate of Fall Events, Short Physical Performance Battery score</li> <li>• Safety and Tolerability of different i.v. BYM338 doses</li> <li>• Change from Baseline in 6MWD meters to Week 52, dose-response relationship</li> </ul>
<b>An Extension Study of the Efficacy, Safety and Tolerability of BYM338 (Bimagrumab) in Patients With sIBM Who Previously Participated in the Core Study</b>	2/3 Recruiting	240	11/2017	<ul style="list-style-type: none"> <li>• Safety Assessment, incidence of Treatment-Emergent Adverse Events (2 years)</li> <li>• Change from baseline in 6 Minute Walking Distance Test (6MWD) (1 year)</li> <li>• Change from baseline in quadriceps muscle strength, patient-reported physical performance, incidence of patients with self-reported falls and self-reported injurious falls, physical performance, change in muscles of the thigh</li> <li>• Number of patients who develop immunogenicity against BYM338</li> </ul>
<b>Study of Long-term Safety, Efficacy Tolerability of BYM338 in Patients With sIBM</b>	2/3 Active, not recruiting	10	01/2018	<ul style="list-style-type: none"> <li>• Long-Term Safety &amp; Tolerability (Time Frame: Approx. 3 Years)</li> <li>• Changes in lean body mass from baseline, physical function reported by patients, muscle strength, function and thigh muscle volume from baseline</li> <li>• Collect pharmacokinetic data from multiple i.v. dosing</li> </ul>
<b>Study of Efficacy and Safety of Bimagrumab in Patients After Hip Fracture Surgery</b>	2 Recruiting	245	12/2017	<ul style="list-style-type: none"> <li>• Change from baseline in total lean body mass measured by DXA at week 24</li> <li>• Change from baseline in gait speed at week 24</li> <li>• Change from baseline in short physical performance battery at week 24</li> <li>• Safety &amp; Tolerability of bimagrumab assessed by various measures such as AEs</li> <li>• Change from baseline in SPPB and gait speed at week 48</li> </ul>
<b>Dose Range Finding Study in Sarcopenia</b>	2 Recruiting	280	• 08/2017	<ul style="list-style-type: none"> <li>• 6 minute walk test</li> <li>• Safety and tolerability as assessed by various measures such as adverse events</li> <li>• Short Physical Performance Battery</li> <li>• Total lean body mass and appendicular skeletal muscle index measured by DXA</li> </ul>
<b>BYM338 in COPD Patients With Cachexia</b>	2 Completed	67	12/2014	<ul style="list-style-type: none"> <li>• Change in thigh muscle volume compare to placebo as measured by MRI</li> <li>• Change in 6 minute walk distance compared to placebo</li> <li>• Safety and tolerability of BYM338 in COPD patients with cachexia</li> <li>• Pharmacokinetic profile and immunogenicity response to BYM338 in COPD patients with cachexia</li> <li>• Number of participants with adverse events as a measure of safety and tolerability of BYM338 in COPD patients with cachexia</li> </ul>

Trial	Phase	Patients	Prim. Compl.	Primary Outcome Measures
A Study of Guselkumab in the Treatment of Participants With Moderate to Severe Plaque-Type Psoriasis (VOYAGE 1)	3 Active, not recruiting	833	04/2016	<ul style="list-style-type: none"> <li>The percentage of participants with an Investigator's Global Assessment (IGA) score of 0 or 1 comparing the guselkumab group and the placebo group</li> <li>The percentage of participants with a Psoriasis Area and Severity Index (PASI) 90 Response comparing the guselkumab group and the placebo group</li> </ul>
A Study of Guselkumab in the Treatment of Participants With Moderate to Severe Plaque-Type Psoriasis With Randomized Withdrawal and Re-treatment (VOYAGE 2)	3 Recruiting	1000	05/2016	<ul style="list-style-type: none"> <li>Percentage of participants with an Investigator's Global Assessment (IGA) score of 0 or 1 comparing the guselkumab group and the placebo group</li> <li>Percentage of participants with a Psoriasis Area and Severity Index (PASI) 90 Response comparing the guselkumab group and the placebo group</li> </ul>
A Study of Guselkumab in Participants With Moderate to Severe Plaque-type Psoriasis and an Inadequate Response to Ustekinumab (NAVIGATE)	3 Active, not recruiting	876	08/2016	<ul style="list-style-type: none"> <li>The number of visits at which participants achieve an Investigator's Global Assessment (IGA) response of 0 or 1 and at least a 2 grade improvement (from Week 16) among randomized participants with an inadequate (IGA<math>\geq</math>2) response to ustekinumab at Week 16</li> </ul>
An Efficacy and Safety Study of CNTO1959 (Guselkumab) in the Treatment of Participants With Generalized Pustular Psoriasis or Erythrodermic Psoriasis	3 Active, not recruiting	21	01/2017	<ul style="list-style-type: none"> <li>Percentage of Participants with Treatment Success at Week 16</li> </ul>
An Efficacy and Safety of Guselkumab in Participants With Palmoplantar Pustulosis	3 Recruiting	225	01/2018	<ul style="list-style-type: none"> <li>Change From Baseline in Palmo-Plantar Area and Severity Index (PPPASI) Total Score at Week 16</li> </ul>
An Efficacy and Safety of CNTO 1959 (Guselkumab) in Participants With Moderate to Severe Plaque-type Psoriasis	3 Recruiting	226	09/2018	<ul style="list-style-type: none"> <li>Number of Participants who Achieve an Investigator's Global Assessment (IGA) Score of 0 or 1</li> <li>Number of Participants who Achieve Psoriasis Area and Severity Index (PASI) 90 Response</li> </ul>
Efficacy and Safety Study of Guselkumab in the Treatment of Participants With Active Psoriatic Arthritis (PsA)	2 Recruiting	150	07/2017	<ul style="list-style-type: none"> <li>Percentage of Participants who Achieve an American College of Rheumatology (ACR) 20 Response at Week 24</li> </ul>

Institution	Contact
Baader Helvea	Dr. Bruno Bulic
Commerzbank	Mr. Daniel Wendorff
Deutsche Bank	Mr. Gunnar Romer
Edison	Mr. Maxim Jacobs
Goldman Sachs	Mr. Keyur Parekh
Independent Research GmbH	Mr. Bernhard Weininger
J.P. Morgan Cazenove	Mr. James Gordon
Kempfen & Co.	Mr. Sachin Soni / Mr. Mark Pospisilik
Landesbank Baden-Württemberg	Mr. Timo Kürschner
Oddo Seydler	Mr. Igor Kim

# Thank You

[www.morphosys.com](http://www.morphosys.com)

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