2018 Capital Markets Day

September 26, 2018
Live in Utrecht and via Webcast

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.

Agenda

14.00	Welcome	Introduction	Jan van de Winkel, President & CEO
14.10	Innovative Excellence: New Proprietary Technology	HexElect	Janine Schuurman, Corporate VP, Research & Innovation
14.20 14.30	Future Leapfrog Products: Pre-clinical Candidates	DuoHexaBody-CD37 DuoBody-CD40x4-1BB & DuoBody-PD-L1x4-1BB	Esther Breij, Director, Translational Research David Satijn, VP, New Antibody Products
14.35	Q&A		
14.55	Reaching Our Inspirational Vision: Late Stage Clinical Pipeline	Tisotumab vedotin	Judith Klimovsky, Executive VP & CDO
15.05	Reaching Our Inspirational Vision: Early Stage Clinical Pipeline	Enapotamab vedotin (HuMax-AXL-ADC) GEN3013 (DuoBody-CD3xCD20) GEN1029 (HexaBody-DR5/DR5)	Tahi Ahmadi, Senior VP, Oncology and Translational Medicine
15.25	Building the Business: Translational Research	Building a world-class translational research unit	Kate Sasser, Corporate VP, Translational Research
15.30	Building the Business: Commercial Capabilities	Next steps	John Keating, Corporate VP, Commercial
15.35	Q&A		
15.55	Break		
16.25	The Next Generation of Therapeutics	Strategic alliances	Jan van de Winkel
16.45	Solid Financial Foundation	Strong foundation for building the business	David Eatwell, Executive VP & CFO
16.50	Closing	2018 Achievements & Beyond	Jan van de Winkel
16.55	Q&A		

Today's Speakers


Jan van de Winkel
President & CEO


Janine Schuurman
CVP, Research & Innovation

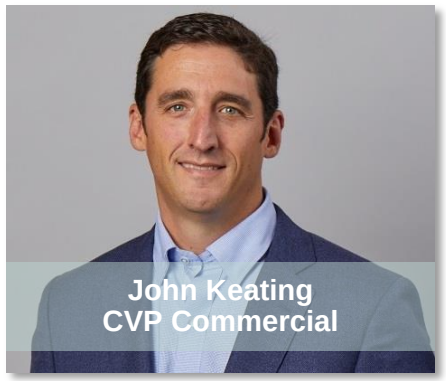

Esther Breij, Director,
Translational Research


David Satijn, VP, New
Antibody Products


Judith Klimovsky, EVP &
CDO


Tahi Ahmadi, SVP Oncology
and Translational Medicine


Kate Sasser, CVP,
Translational Research


John Keating
CVP Commercial


David Eatwell, EVP & CFO

Our Focus

Core Purpose, Strategy & Vision

Core Purpose

- To improve the lives of patients by creating & developing innovative antibody products

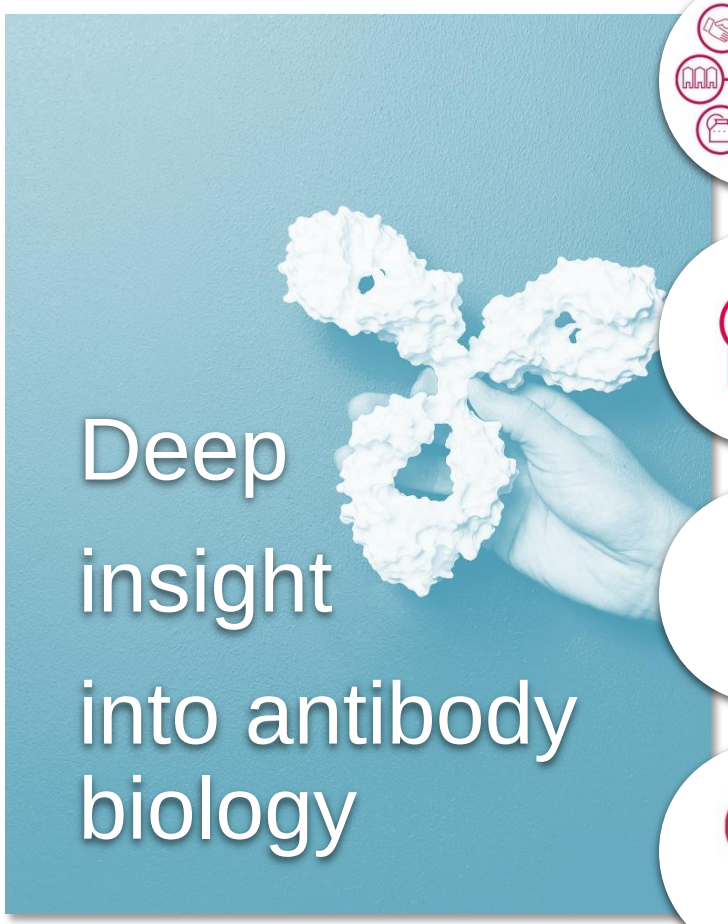
Our Strategy

- Turn science into medicine
- Build a profitable & successful biotech
- Focus on Core Competence

Vision

- By 2025, our own product has transformed cancer treatment and we have a pipeline of knock-your-socks off antibodies

Innovation Powerhouse



Match in-house expertise with strategic partnerships

Proprietary technologies allow us to create truly differentiated products

- For our own and partner pipelines to create revenue streams
- Target variety of indications

Strong pipeline

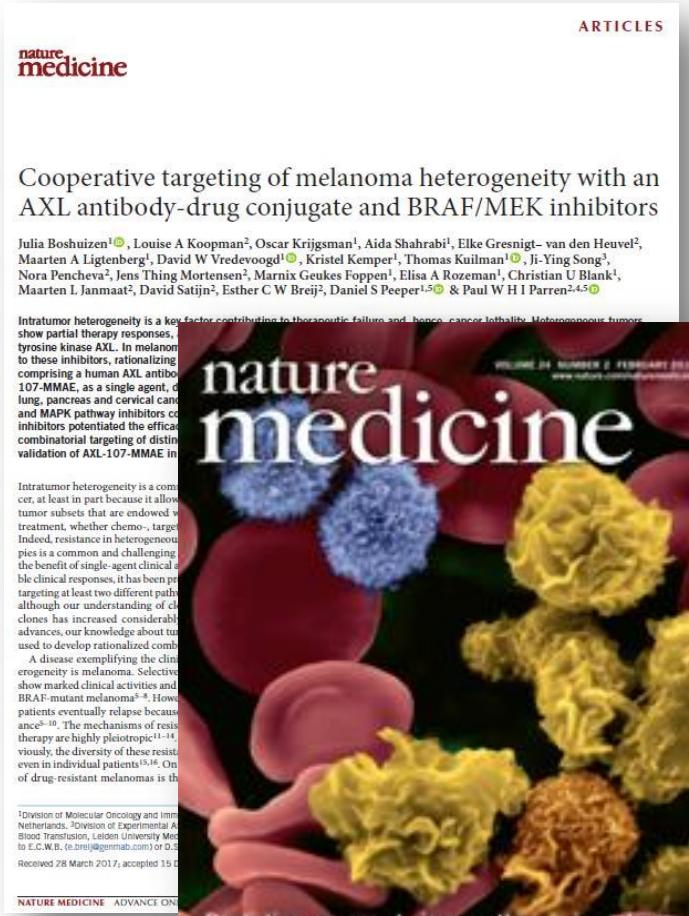
- 6 products in clinical dev.
- Approx. 20 pre-clinical projects → multiple INDs in coming years

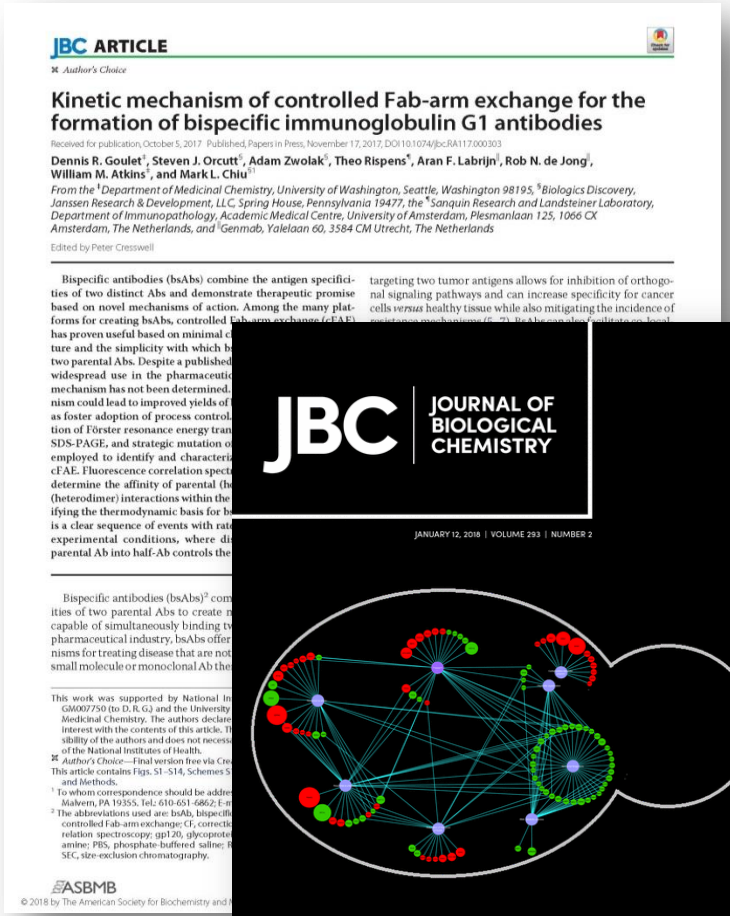
Continually innovating

Innovation Powerhouse

Scientific Excellence

>200 articles published in scientific journals since 2001[1]

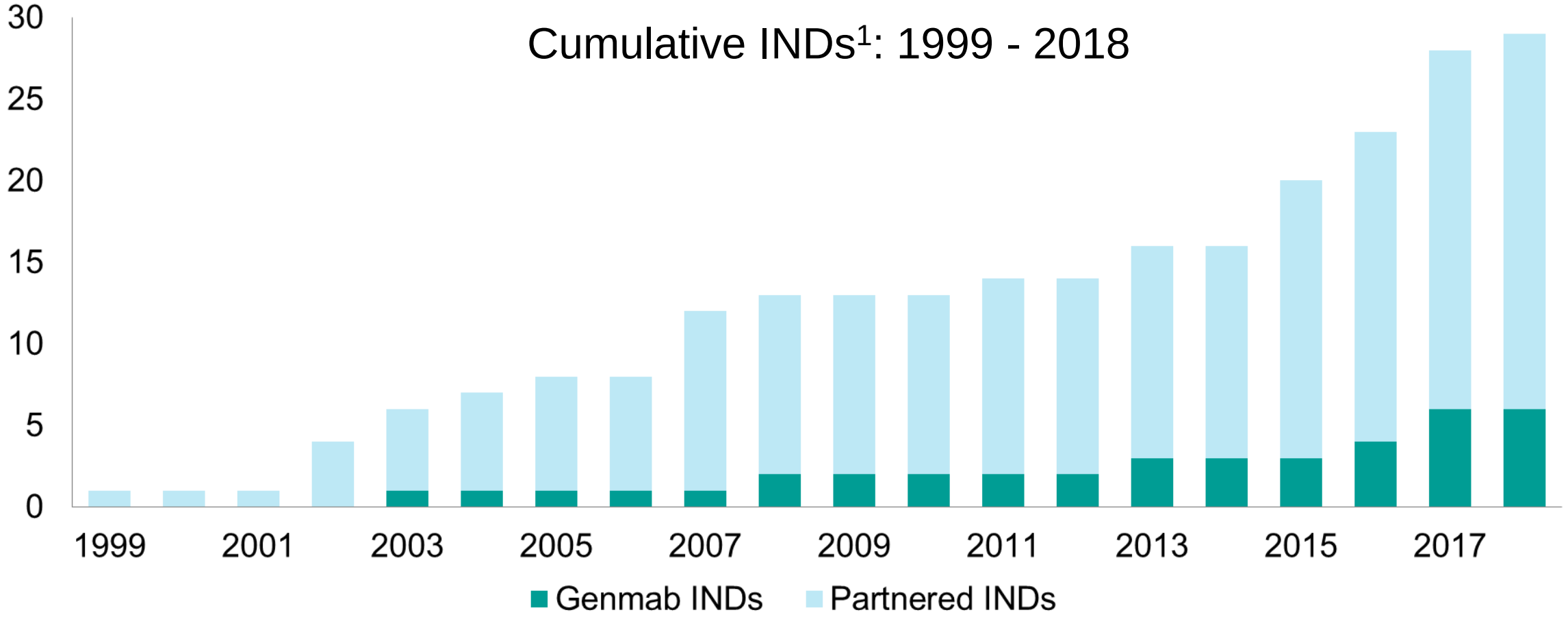




[1]Based on PubMed and internal Genmab lists

Innovation Powerhouse

Strong IND Track Record



[1]Includes INDs filed by Genmab and partners; 6 of 27 INDs through December 2017 are ≥50% owned by Genmab

Innovation in Action

Two Marketed Products: Latest News

DARZALEX® (daratumumab)

- Approved globally in various MM indications*
- Submission of reg. apps. for split dosing in US & EU
- Submission of reg. application in China (pending acceptance)
- Blockbuster status: >USD 1 bn WW sales in 2017
- On track for 2018 sales guidance of USD 2.0 – 2.3 bn
- Ph III MAIA & CASSIOPEIA data anticipated in 2018
- Other key data: COLUMBA (Ph III SC D), GRIFFIN (Ph II D-RVd) and CANDOR (Ph III D+Kd) anticipated, 2019
- >80 clinical studies ongoing

Arzerra® (ofatumumab)

- Marketed in various territories for certain CLL indications*: in non-US markets, Novartis will transition from commercial to compassionate use

ofatumumab

- Recruitment completed in Ph III SC RMS studies
- Ph III RMS data anticipated, 2019
- Potential regulatory filing soon after data, based on study completion & positive results
- Double digit royalty to Genmab, no costs

*See local country prescribing information for precise indications

Genmab R&D Center

Connect, Inspire, Create

Excellence in Innovation: Novel Proprietary Technology Platform

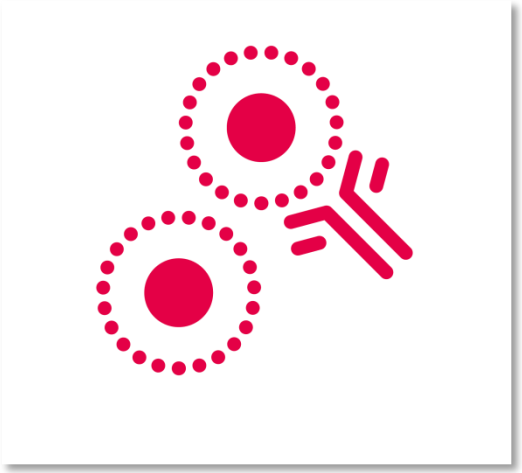
Janine Schuurman, Corporate Vice President, Research & Innovation

Genmab

Harnessing the Potency of the Immune System:

Basic Immunological Principles to Technologies and Products

The power of our immune system inspires us



We are curious to understand basic immunological principles

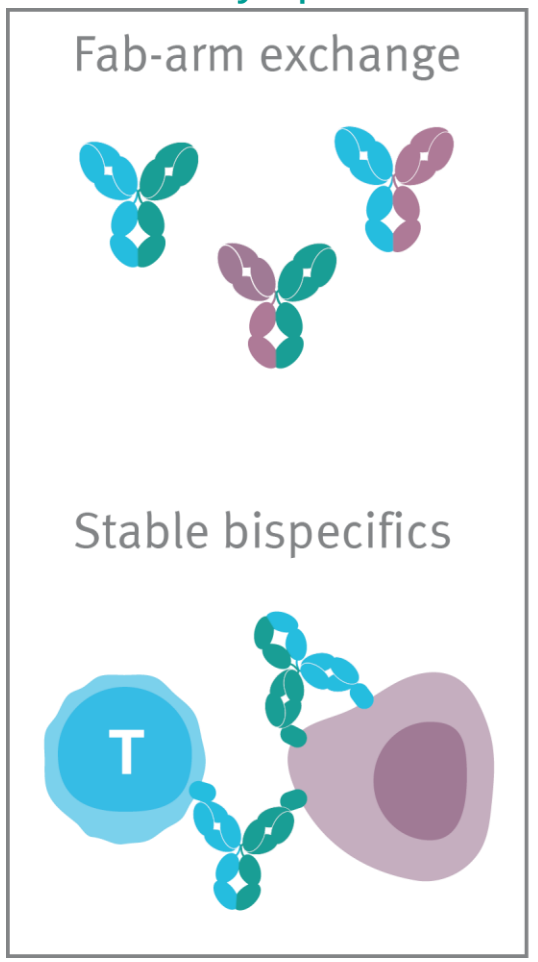
We translate this to practical applications

Innovative technologies and differentiated antibody products

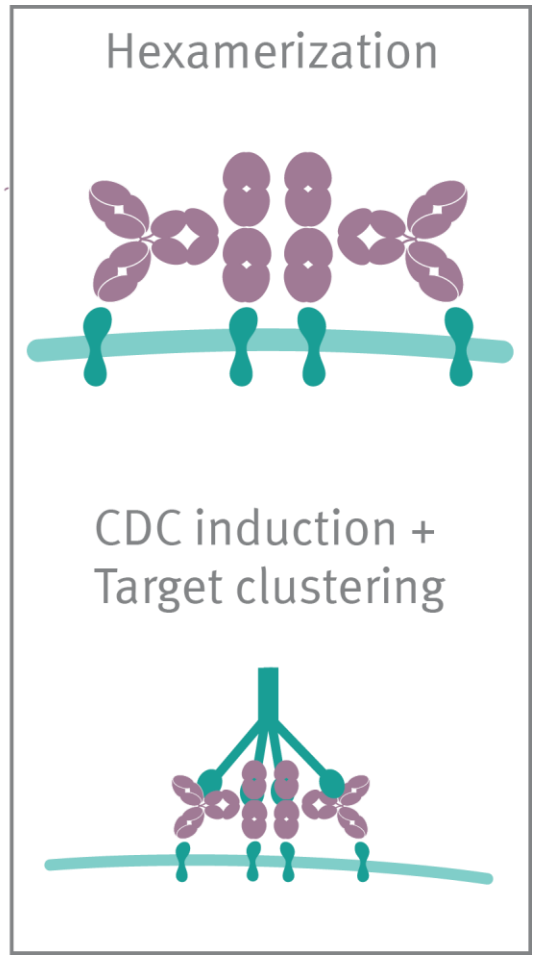
Genmab Antibody Technology Innovation

Creating Differentiated Antibody Products

DuoBody® platform



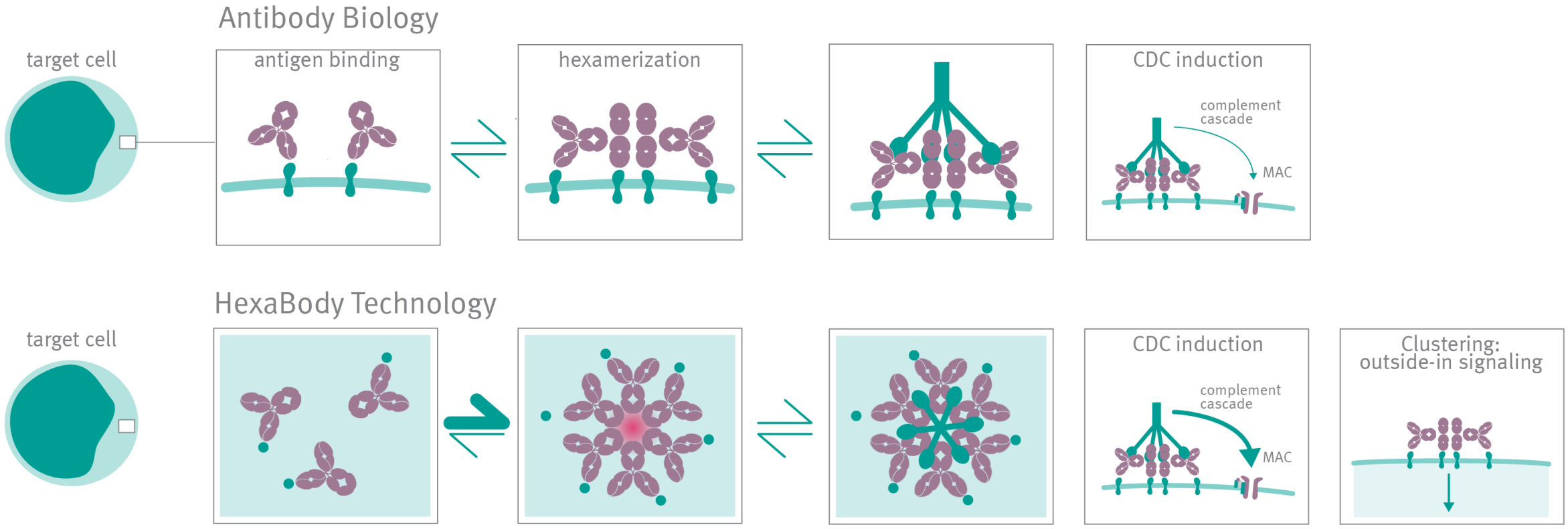
HexaBody® platform



van der Neut Kolfschoten *et al.* 2007 *Science*
Diebolder *et al.* 2014 *Science*

Biology Of IgG Hexamerization:

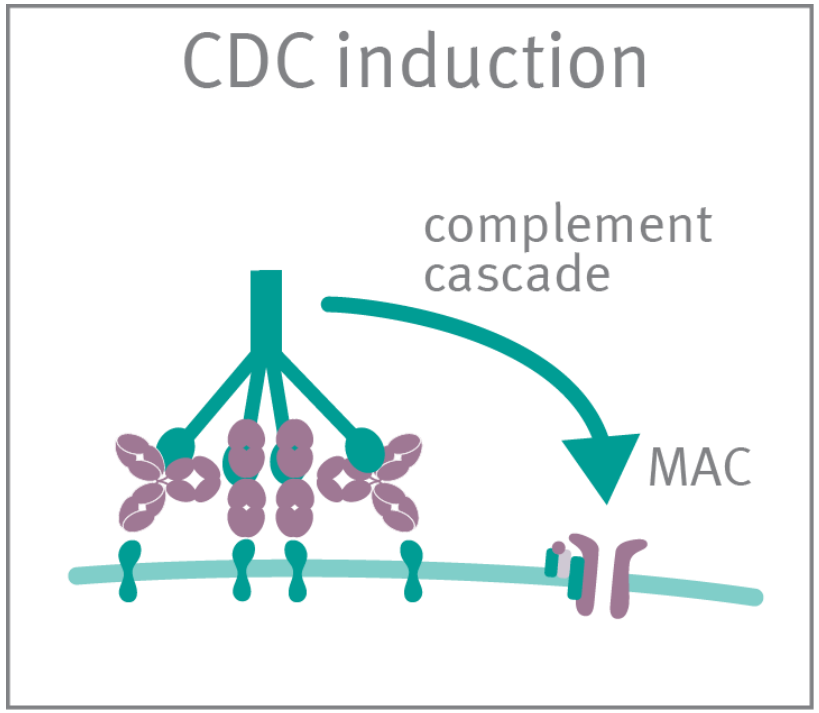
From Science To HexaBody® Platform

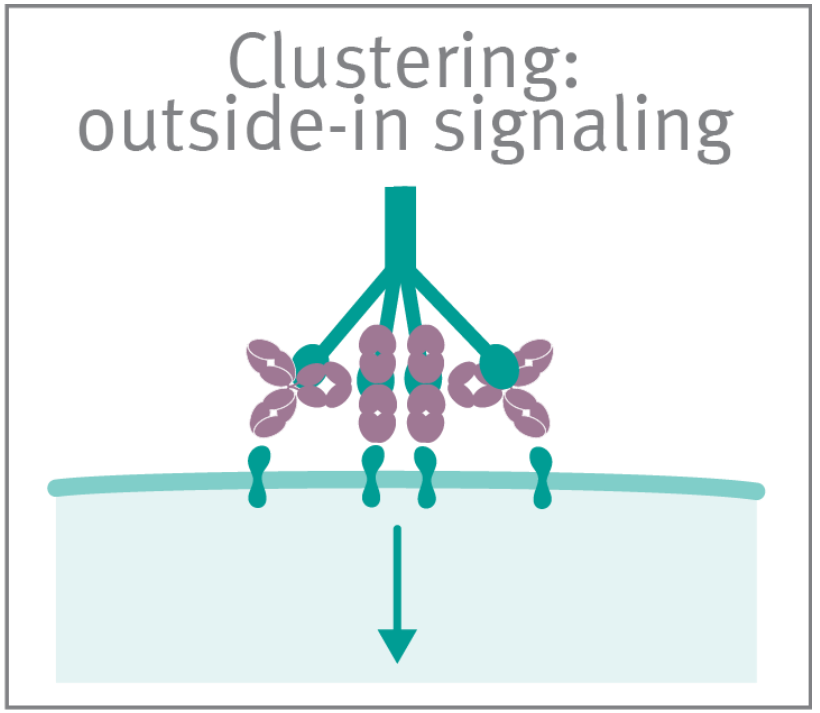


Diebolder *et al.* 2014 *Science*
de Jong *et al*. 2016 *PLoS Biol*

HexaBody Platform

The concept of target-dependent hexamerization on the cell surface can be utilized to develop potentiated antibody therapeutics

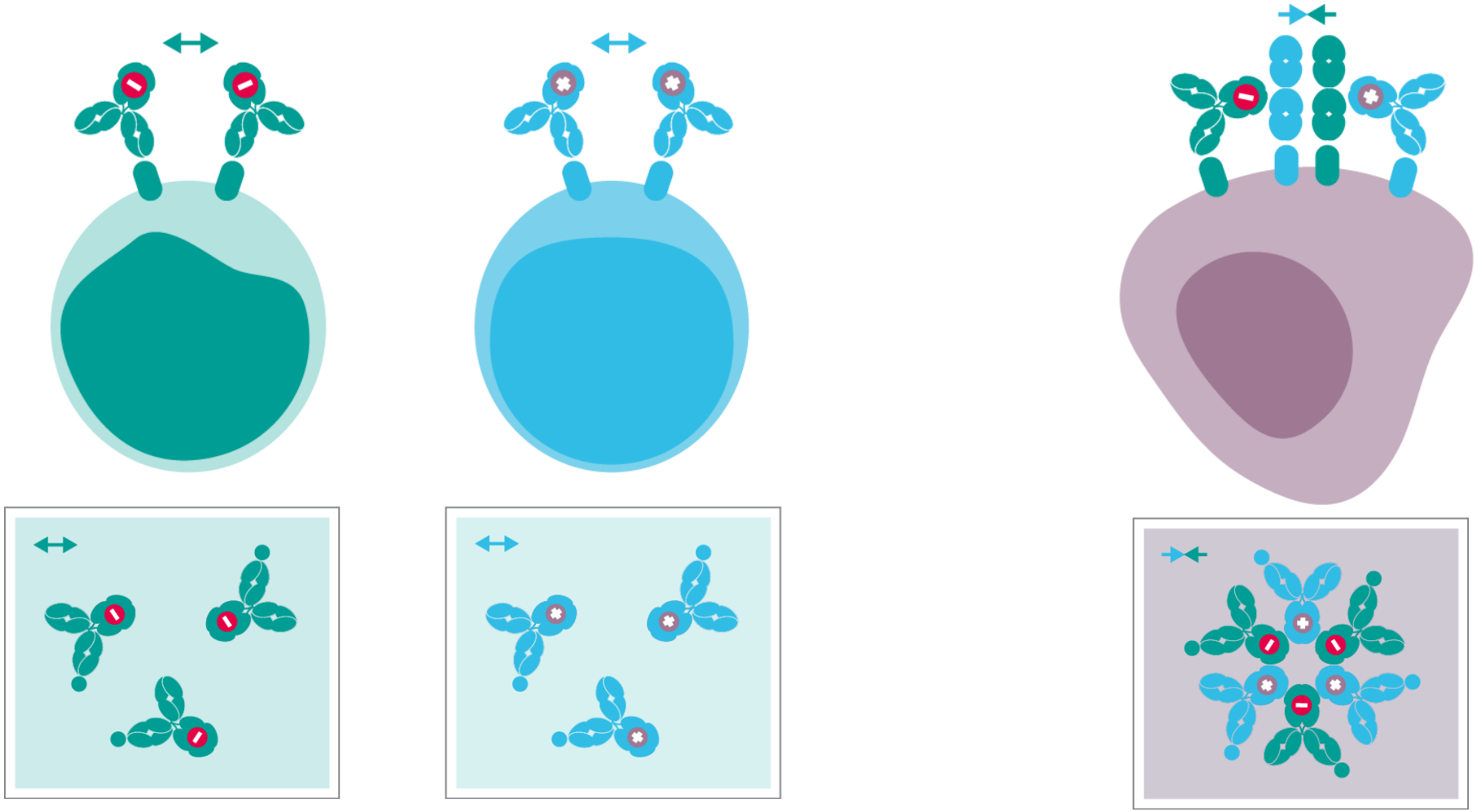




de Jong et al. (2016) PLoS Biol.

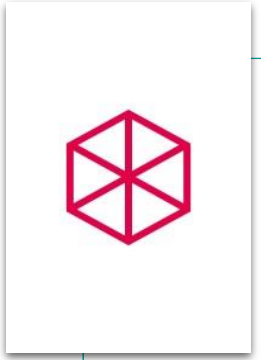
HexElect™ Platform:

Two Co-dependently Acting HexaBody Molecules: Introducing Selectivity, Maximizing Therapeutic Potency



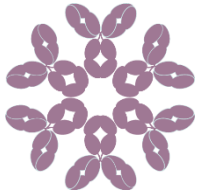
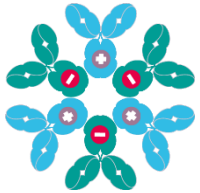
HexElect Platform

Proof of Principle: Selective Depletion of Cellular Subset



Two co-dependently acting HexaBody® molecules: to maximize therapeutic potency while minimizing potential toxicity

Platform Technology Suite Boosting Our Product Pipeline

		Principle	Applications
DuoBody		Bispecific antibodies	Dual targeting: - Recruitment (e.g. T cells) - Tumor heterogeneity
HexaBody		Target-mediated enhanced hexamerization	Enhanced potency: - CDC - Target clustering, outside-in signaling, apoptosis
DuoHexaBody™		Bispecific antibodies with target-mediated enhanced hexamerization	Dual targeting + enhanced potency - CDC - Target clustering, outside-in signaling, apoptosis
HexElect		Two co-dependent antibodies with target-mediated enhanced hexamerization	Dual targeting + enhanced potency & selectivity: - Co-dependent unlocking of potency - New target space, previously inaccessible

Future Leapfrog Products: Pre-clinical Candidate DuoHexaBody-CD37

Esther Breij, Director, Translational Research

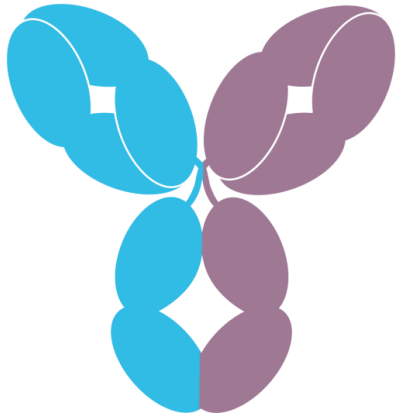
Genmab

DuoHexaBody-CD37

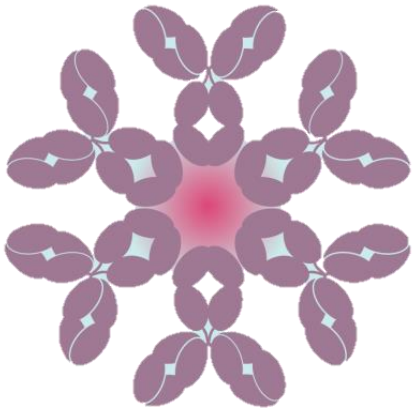
Based on Two of Genmab's Proprietary Antibody Platforms

- Bispecific IgG1 with an E430G hexamerization-enhancing mutation in IgG Fc domain
- DuoHexaBody targets two non-overlapping epitopes on CD37

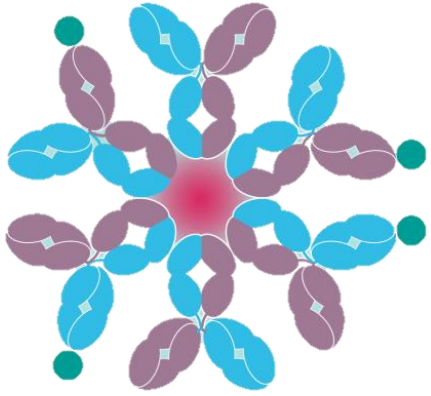
DuoBody



HexaBody



DuoHexaBody

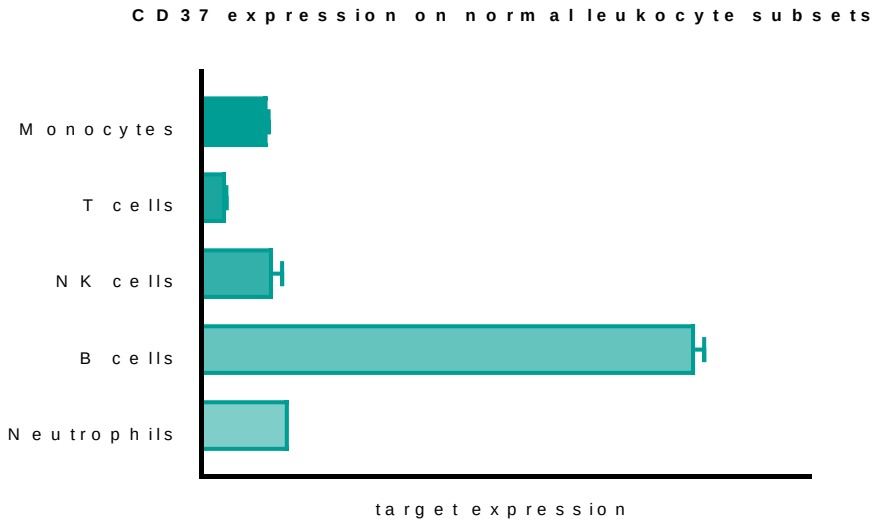


DuoHexaBody-CD37

CD37 is Novel Target for Hematological B cell Malignancies

CD37

- abundantly expressed on the plasma membrane in B cell malignancies ranging from CLL to DLBCL
- membrane protein from the tetraspanin family
- normal tissue expression mostly restricted to B cells, low expression on other leukocyte subsets
- not expressed outside hematopoietic lineage

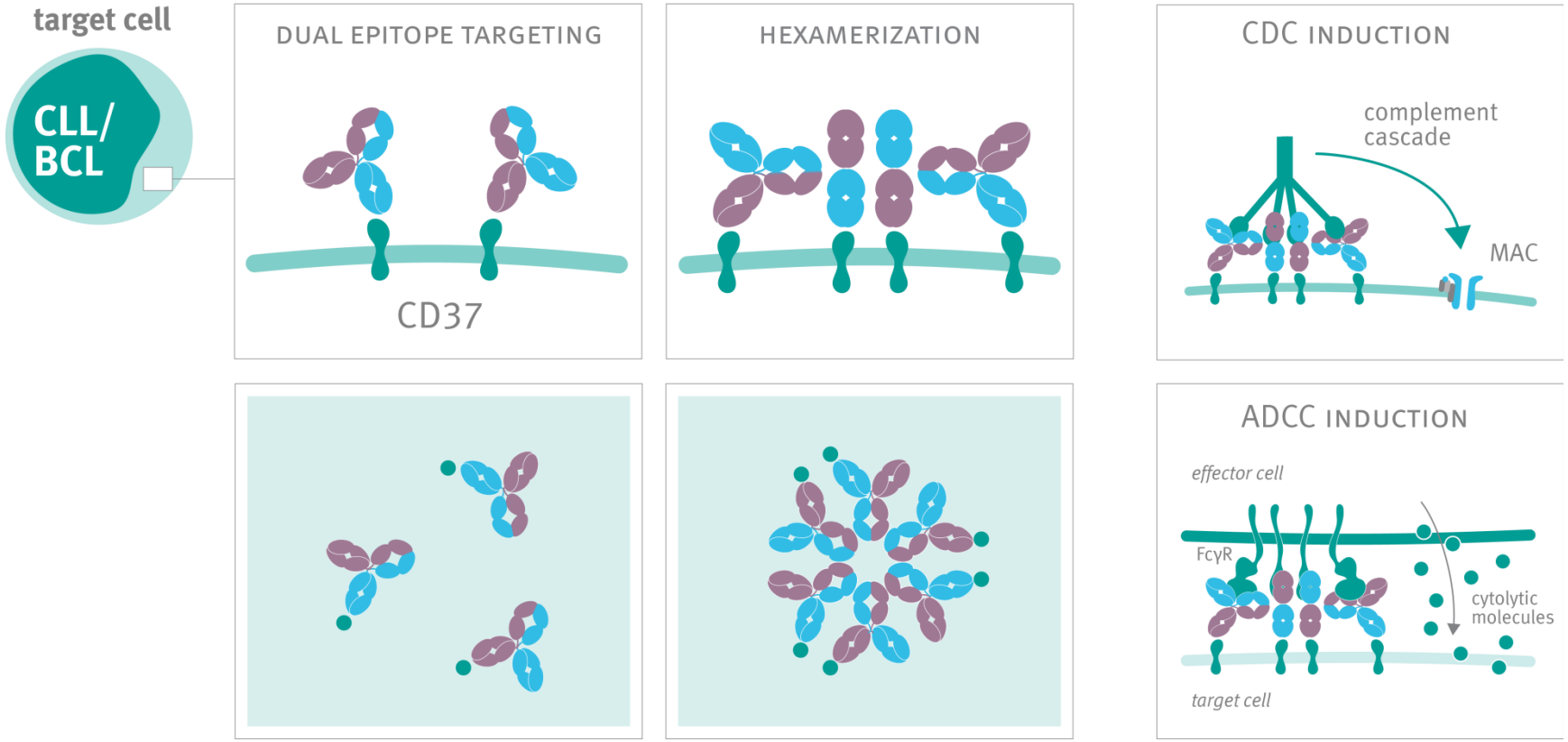


adapted from Deckert et al, Blood 2013

DuoHexaBody-CD37

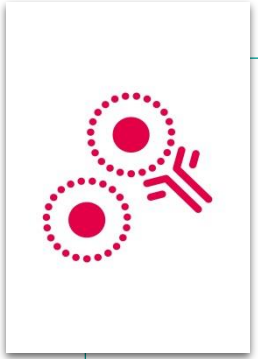
Unique Mechanism of Action

- In pre-clinical settings DuoHexaBody-CD37 induces potent anti-tumor activity through superior complement-dependent cytotoxicity (CDC) and potent antibody-dependent cell-mediated cytotoxicity (ADCC)



DuoHexaBody-CD37

Promising Pre-clinical Data - CLL Patient Samples



Potent anti-tumor activity in untreated and refractory CLL [ex vivo]

DuoHexaBody-CD37

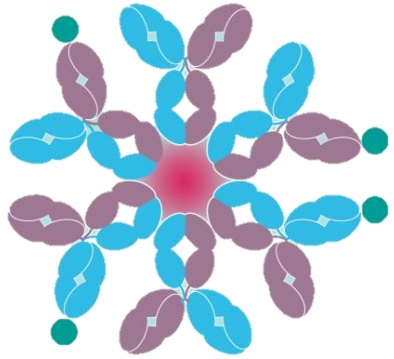
Promising Pre-Clinical Data – Therapeutic Activity *in vivo*

Therapeutic activity in non-Hodgkin lymphoma (NHL) xenograft model [mice]

DuoHexaBody-CD37

Overview

- DuoHexaBody molecule, based on Genmab's DuoBody & HexaBody platforms
- Targets two non-overlapping epitopes on CD37, a membrane protein widely expressed in B cell malignancies
- Pre-clinical Setting: superior cytotoxic activity through superior complement-dependent cytotoxicity (CDC) and efficient antibody-dependent cell-mediated cytotoxicity (ADCC)
- Highly potent killing of tumor cells from CLL patients *ex vivo*, including cells from treatment resistant patients
- Potent anti-tumor activity *in vivo* xenograft mouse model
- IND/CTA filing, H2 2019



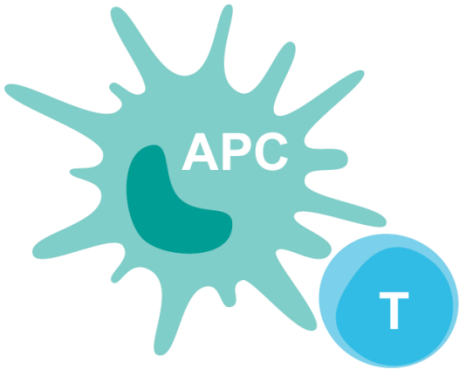
Future Leapfrog Products: Pre-clinical Candidates DuoBody-CD40x4-1BB & DuoBody-PD-L1x4-1BB

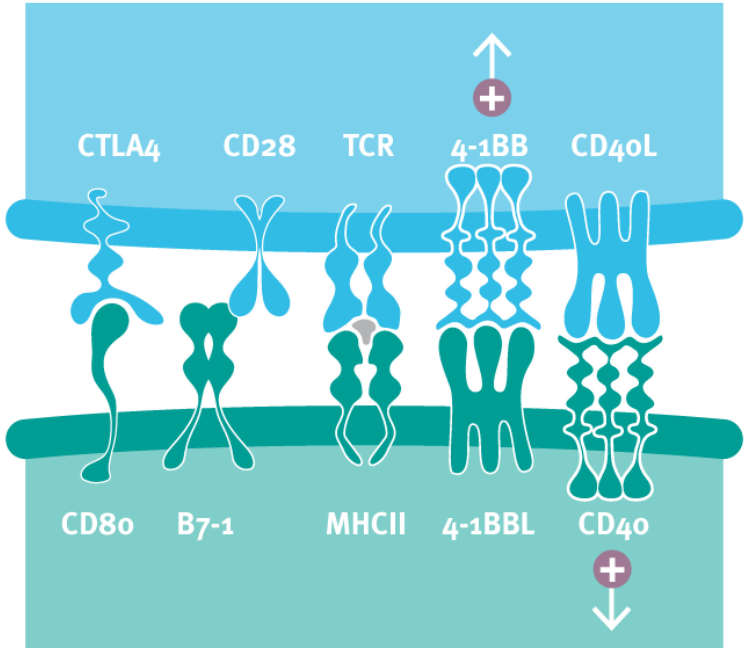
David Satijn, Vice President, New Antibody Products

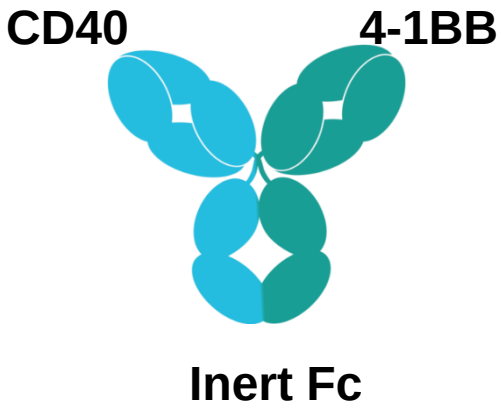
Genmab

DuoBody-CD40x4-1BB

Concept



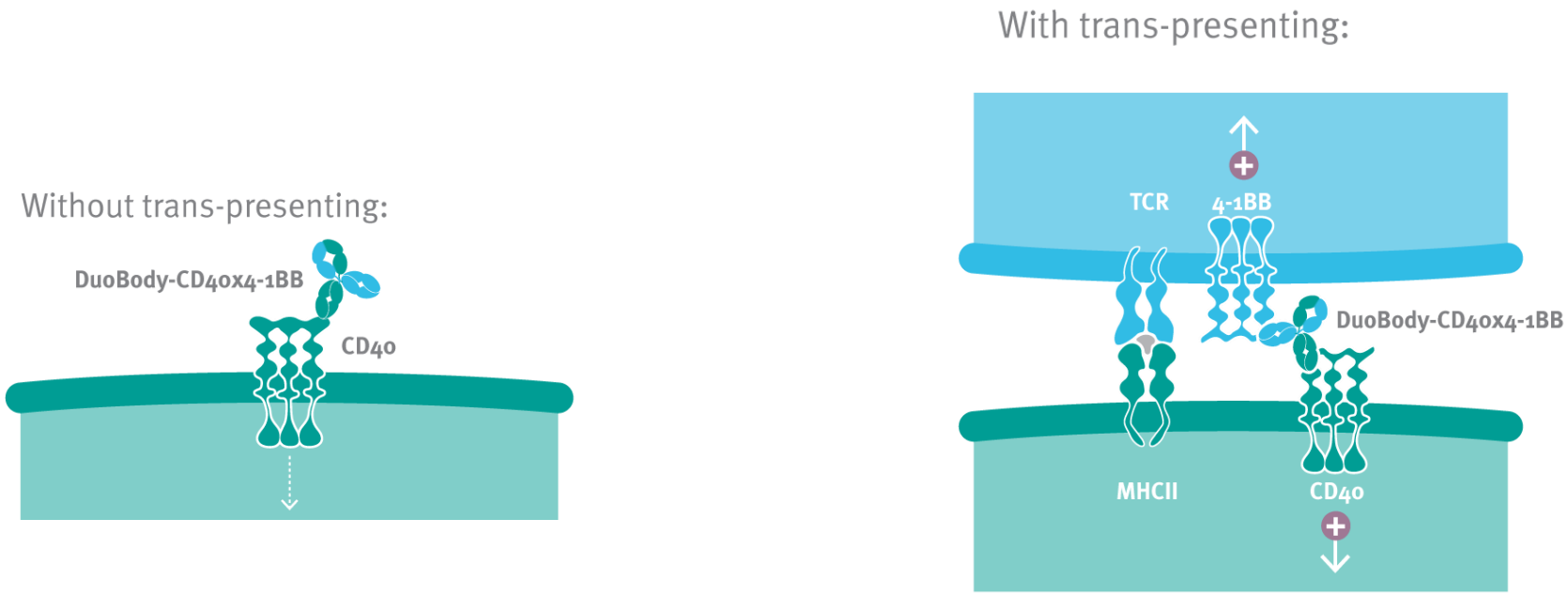




CD40 and 4-1BB are selected as targets to enhance both DC- and antigen-dependent T cell activation, using an inert DuoBody format.

DuoBody-CD40x4-1BB developed in collaboration with BioNTech

DuoBody-CD40x4-1BB Induces Conditional T-cell Proliferation

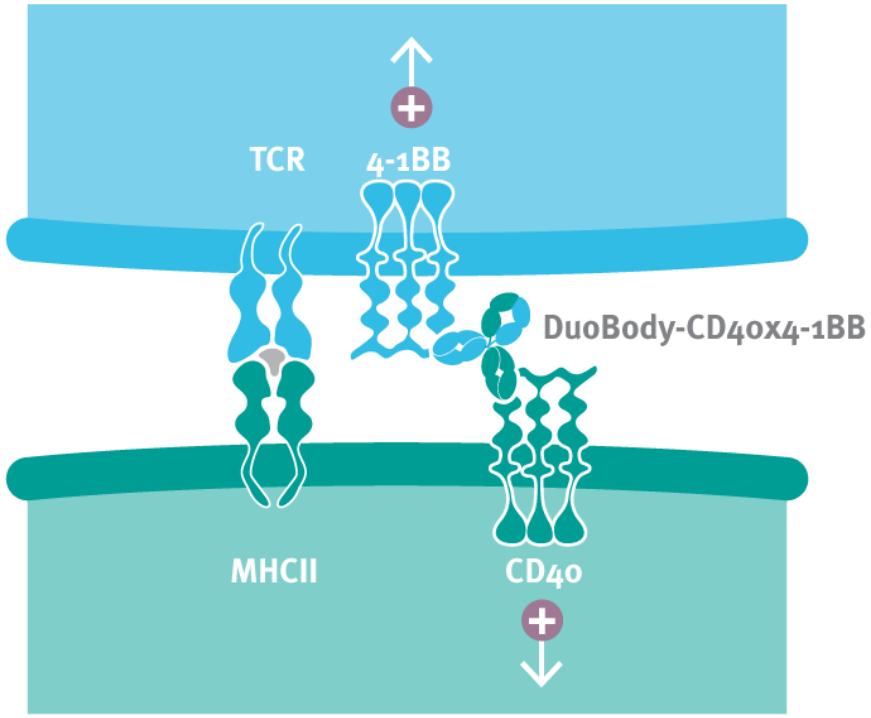


- Conditional, simultaneous targeting of CD40 and 4-1BB provides essential trans-activity for potent immune responses.
- DuoBody-CD40x4-1BB firmly enhances T-cell proliferation, whereas combination of IgG1-CD40 and IgG1-4-1BB is ineffective.

DuoBody-CD40x4-1BB

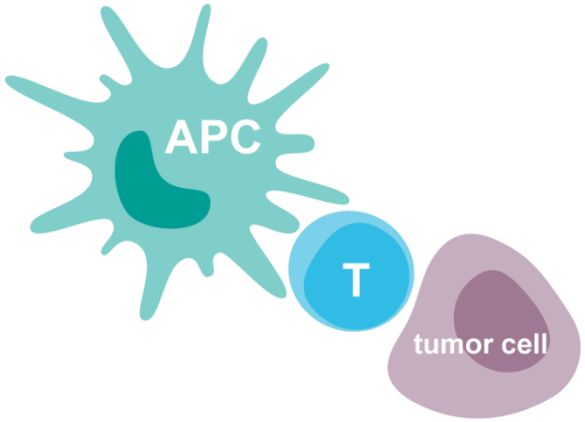
Characteristics

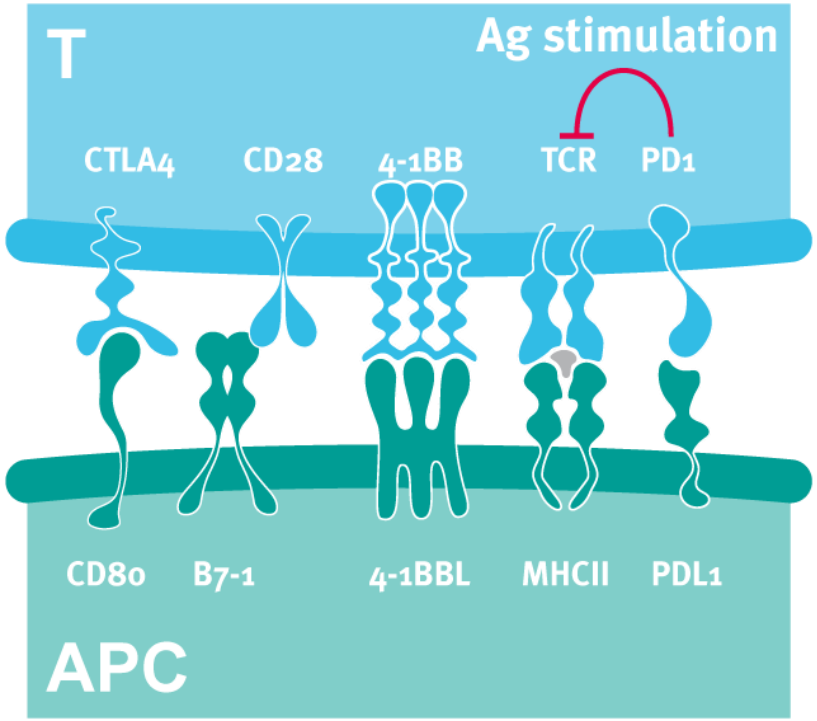
- Bispecific antibody targeting CD40 and 4-1BB (CD137) using an inert Fc backbone.
- For treatment of solid cancers
- In pre-clinical settings simultaneously activates APC & enhances T cell activation
  - Enhances activation of APC's
  - Conditional activation and expansion of previously activated cytotoxic $CD8^+$ T cells
  - Clonal expansion of T cells
  - Cytokine production
- IND/CTA, H1 2019

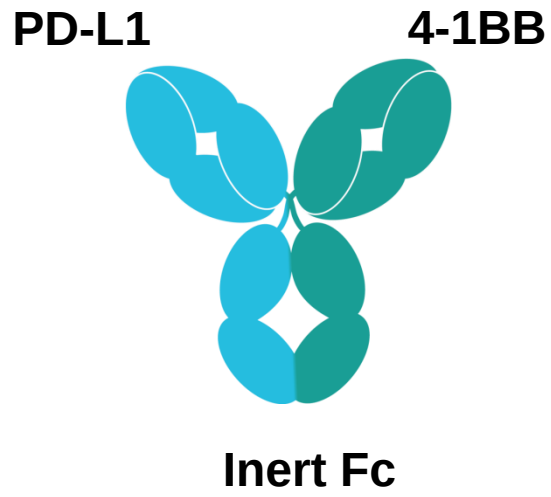


DuoBody-PD-L1x4-1BB

Concept



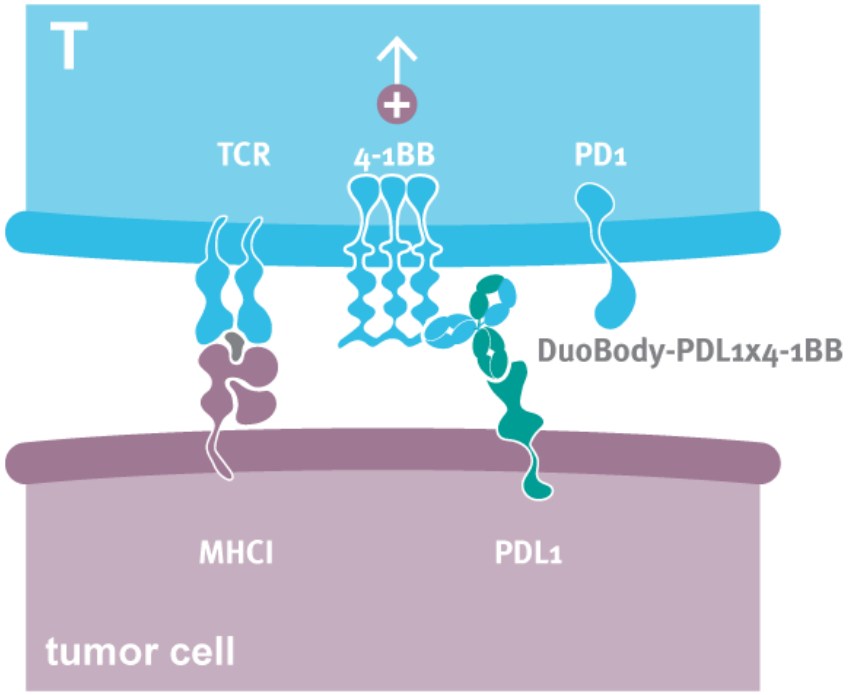




- PD-L1 and 4-1BB are selected as targets to block the inhibitory PD-1/PD-L1 axis and simultaneously activate essential co-stimulatory activity via 4-1BB using inert DuoBody antibody format.

DuoBody-PD-L1x4-1BB developed in collaboration with BioNTech

DuoBody-PD-L1x4-1BB Induces Conditional T-cell Proliferation

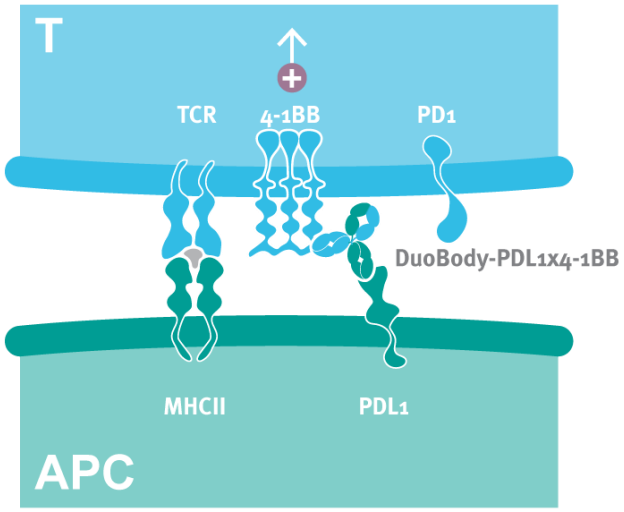


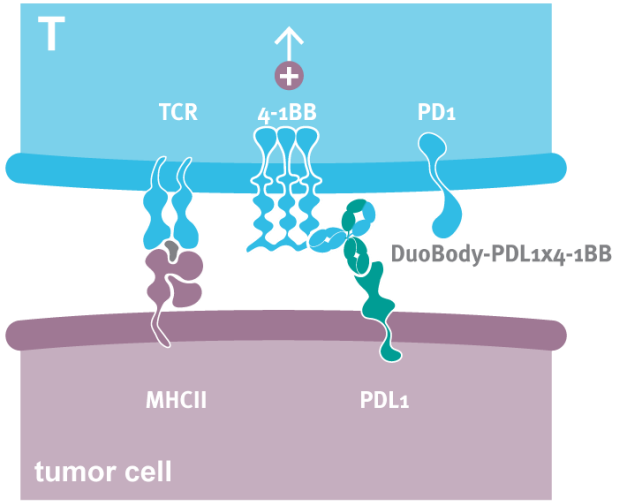
- Conditional transactivation of DuoBody-PD-L1x4-1BB leads to enhanced/synergistic proliferation of T-cells
- No enhanced or synergistic effects of combination of PDL1 and 4-1BB is observed

DuoBody-PD-L1x4-1BB

Characteristics

- Bispecific antibody targeting PD-L1 and 4-1BB using an inert Fc backbone.
- Treatment of solid cancers
- In pre-clinical settings promotes conditional T cell activation in a tumor-specific manner by simultaneous activation and release of key inhibitory brake.
  - Release of T cell inhibition through PD-1/ PD-L1 axis, also in the absence of 4-1BB.
  - Strong co-stimulation via the agonistic activity of 4-1BB.
  - T cell clonal expansion
- IND/CTA, H1 2019





Q&A

Genmab

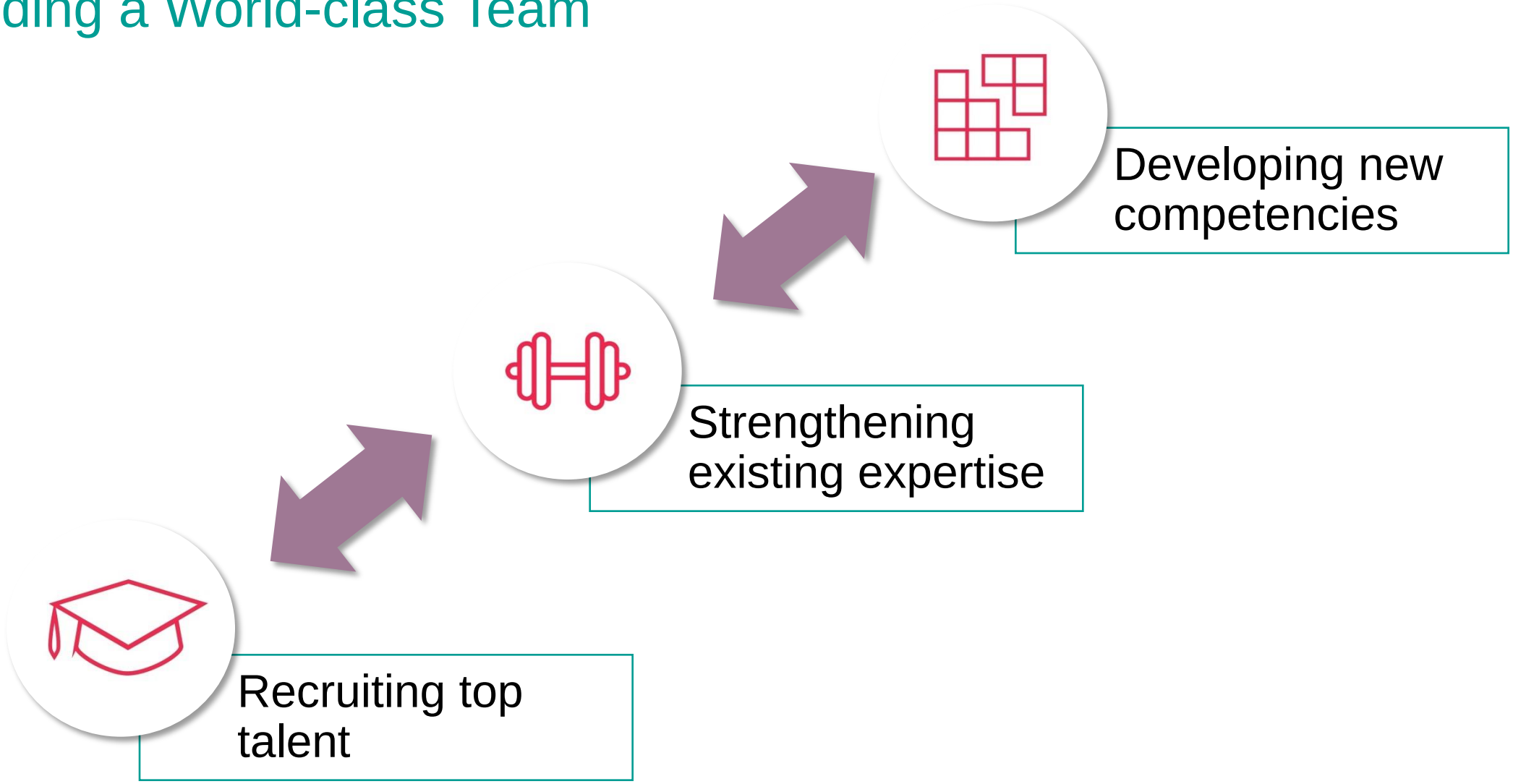
Reaching Our Inspirational Vision: Late Stage Clinical Pipeline

Judith Klimovsky, Executive Vice President & Chief Development Officer

Genmab

Clinical Development

Building a World-class Team



Reaching Our Vision: Tisotumab Vedotin

Background

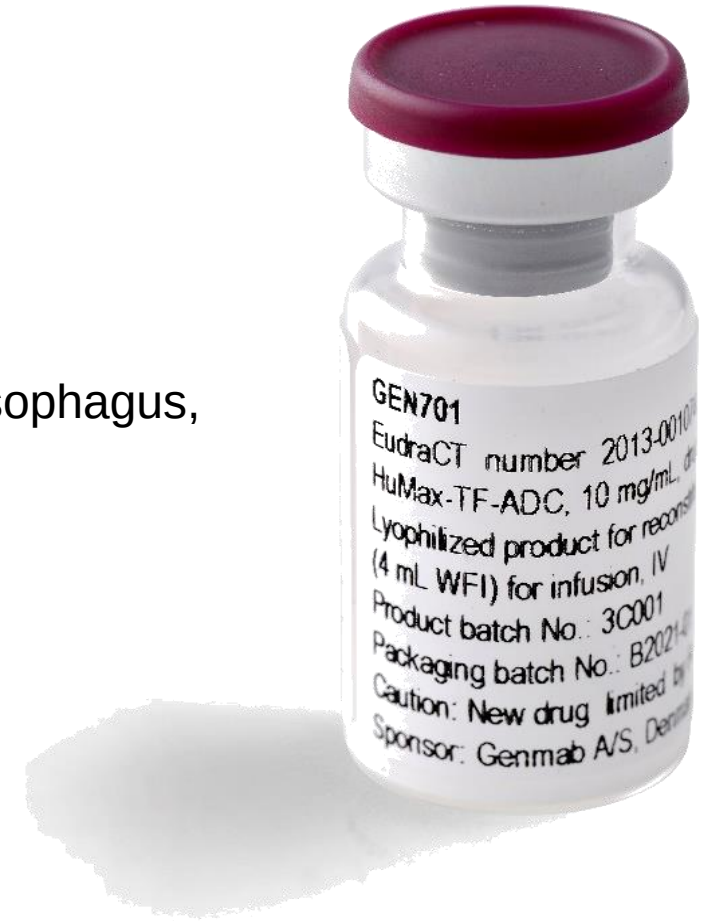
Fully human antibody-drug conjugate (ADC)

Targets Tissue Factor (TF)
- Therapeutic potential in broad range of solid tumors

Ongoing Studies
- Ph I/II solid tumors: ovary, cervix, endometrium, bladder, prostate, esophagus, NSCLC, SCCHN
- Ph II second line cervical cancer: potentially registrational
- Ph II solid tumors: colorectal, NSCLC, pancreatic, SCCHN
- Ph II ovarian cancer (planned)

Planned Studies
- Ph II first/second line combo. in cervical cancer
- Ph I/II safety in Japan

50:50 Co-development with Seattle Genetics



Reaching Our Vision: Tisotumab Vedotin

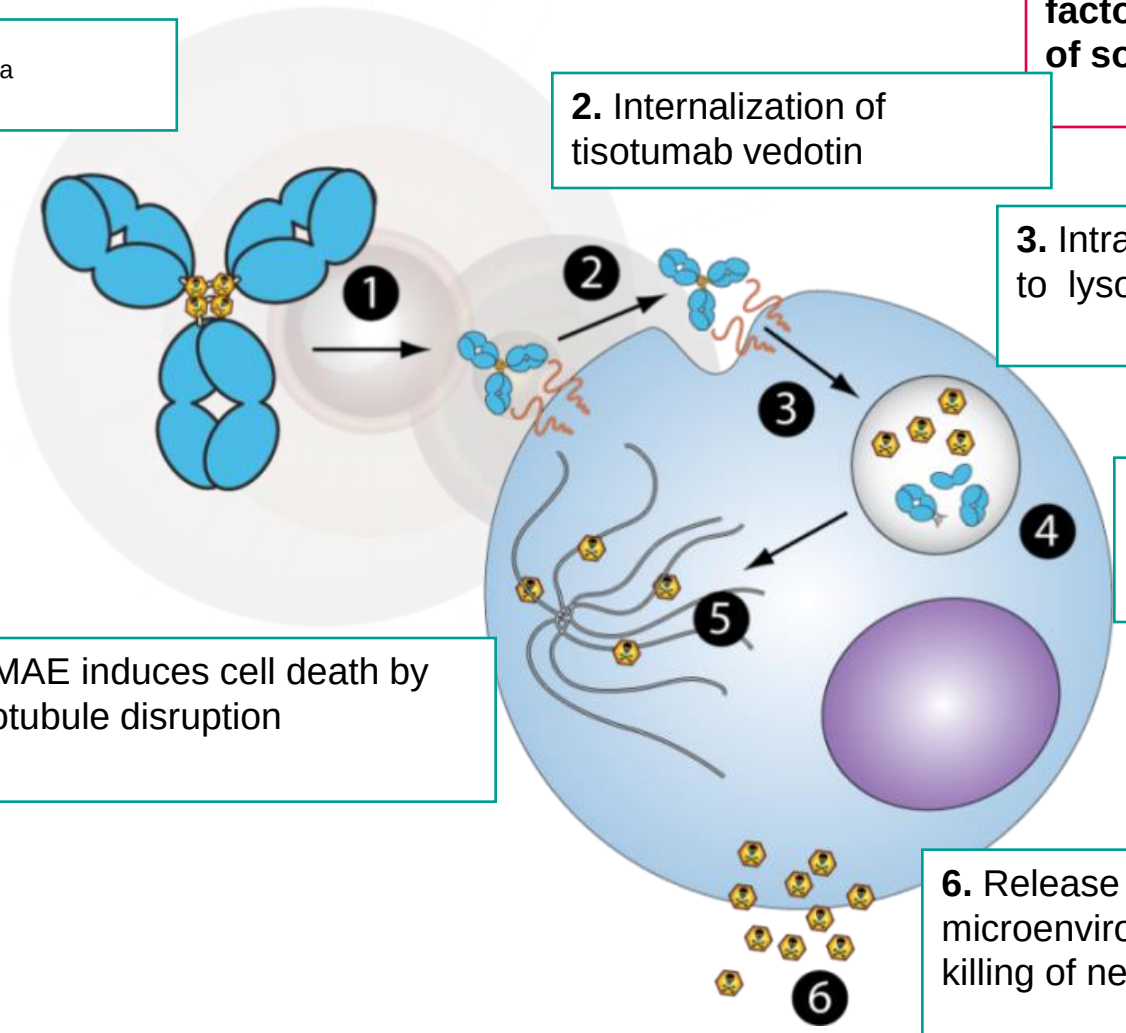
Science Behind the Product

Tisotumab vedotin
is antibody-drug conjugate targeting tissue factor with therapeutic potential in broad range of solid tumors

1. Binding to TF[a]

2. Internalization of tisotumab vedotin

3. Intracellular trafficking to lysosomes



4. Enzymatic degradation of tisotumab vedotin, intracellular release of MMAE

5. MMAE induces cell death by microtubule disruption

6. Release of MMAE in tumor microenvironment induces bystander killing of neighboring cancer cells

[a] Tissue factor is also known as TF, CD142, and thromboplastin

Reaching Our Vision: Tisotumab Vedotin

ESMO 2017: innovaTV 201, Cervical Cancer Cohort

Baseline Patient Characteristics in Cervical Cancer Cohort

	Cervical (N=34)
Age (median, range), y	43 (21-73)
ECOG score, no (%)	
0	7 (21%)
1	26 (76%)
Missing	1 (3%)
Cancer type, no (%)	
Adenocarcinoma	15 (44%)
Adeno-squamous	3 (9%)
Squamous	15 (44%)
Missing/TBD	1 (3%)
Previous lines of systemic treatments, no (%)	
0[a]	3 (9%)
1	13 (38%)
2	11 (32%)
3	4 (12%)
4	3 (9%)

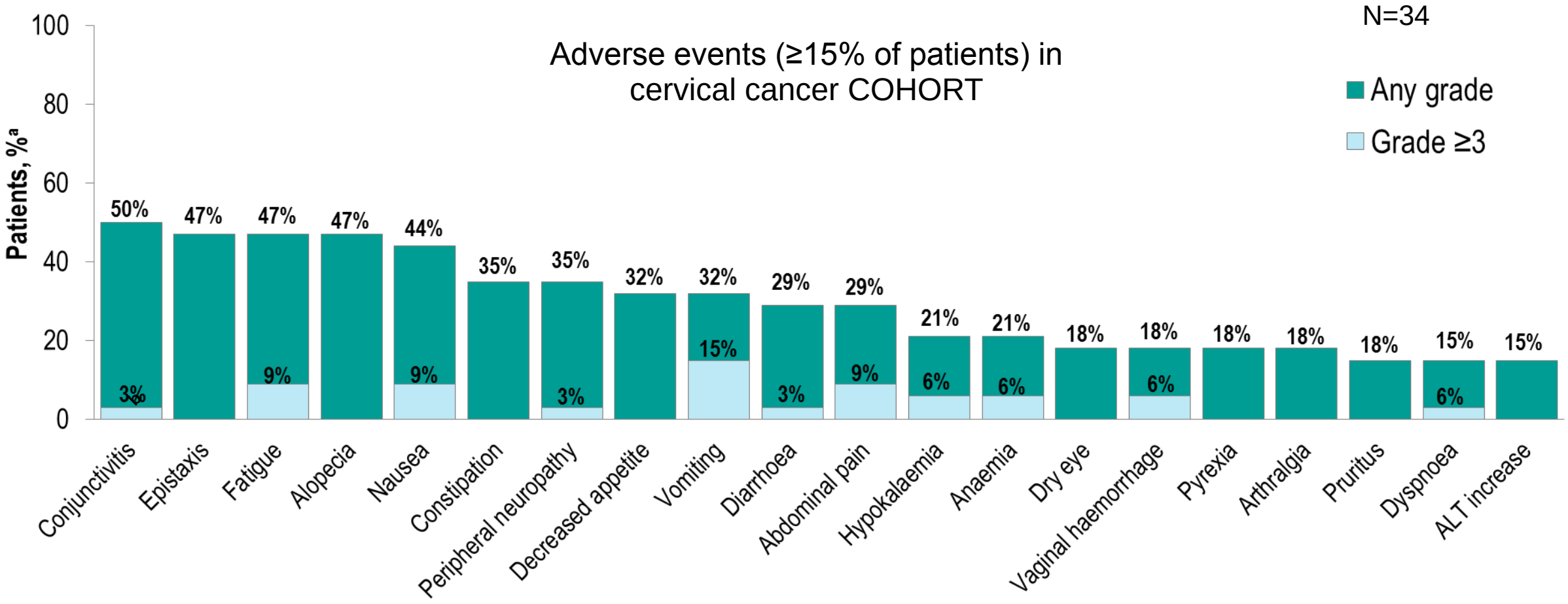
	Cervical (N=34)
Prior treatments, %[b]	
Platinum	91%
Taxane	91%
Bevacizumab[c]	71%
GOG 240 regimen[d]	68%
≥1 platinum doublet	17%
Prior radiotherapy[e]	74%

ECOG=Eastern Cooperative Oncology Group; TBD=to be determined.

[a]Patients progressed on therapy administered for treatment of locally advanced disease. [b]Missing data from 1 patient. [c]Including bevacizumab administered as combination therapy as either platinum/bevacizumab/paclitaxel or topotecan/bevacizumab/paclitaxel. [d]Combination therapy with cisplatin, paclitaxel, and bevacizumab. [e]External beam radiotherapy administered to the cervix or surrounding tissues. Data cutoff date July 24,2017.

Reaching Our Vision: Tisotumab Vedotin

ESMO 2017: innovaTV 201, Cervical Cancer Cohort



ALT=alanine aminotransferase.

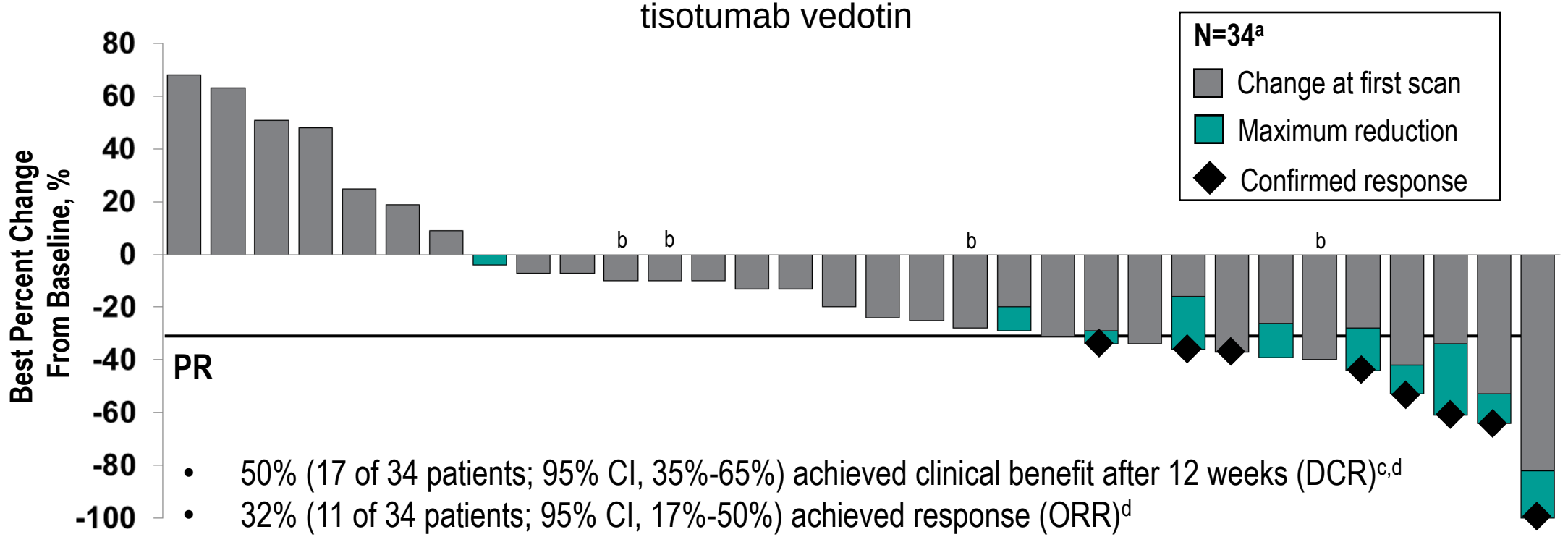
[a]Adverse events with events of any grade occurring in ≥15% of patients or of grade ≥3 in 2 or more patients. [b]Grade 2 conjunctivitis was reported in 32% of patients.

Data cutoff date July 24, 2017.

Reaching Our Vision: Tisotumab Vedotin

ESMO 2017: innovaTV 201, Cervical Cancer Cohort

32% of patients with recurrent/advanced cervical cancer achieved response with tisotumab vedotin



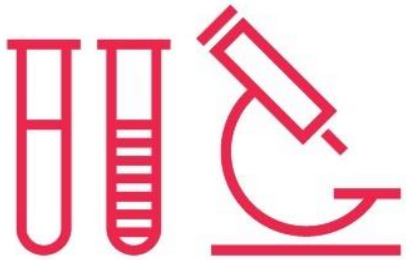
- 50% (17 of 34 patients; 95% CI, 35%-65%) achieved clinical benefit after 12 weeks (DCR)[c,d]
- 32% (11 of 34 patients; 95% CI, 17%-50%) achieved response (ORR)[d]
  - 8 PR, confirmed
  - 3 PR, unconfirmed[e]

CI=confidence interval; CR=complete response; CT=computed tomography; DCR=disease control rate; ORR=overall response rate; PD=progressive disease; PR=partial response; RECIST=Response Evaluation Criteria in Solid Tumors; SD=stable disease.

[a]Two patients were withdrawn prior to CT scan, and so are not represented in the graph. [b]PD due to new lesion at same scan. [c]Clinical benefit was defined as the DCR rate, the proportion of patients who achieved a CR, PR, or SD after 12 weeks. [d]Response was as assessed by investigators using standard RECIST 1.1 criteria. [e]One of which is still ongoing. Data cutoff date July 24, 2017.

Reaching Our Vision: Tisotumab Vedotin

innovaTV 201, Expansion Cohorts

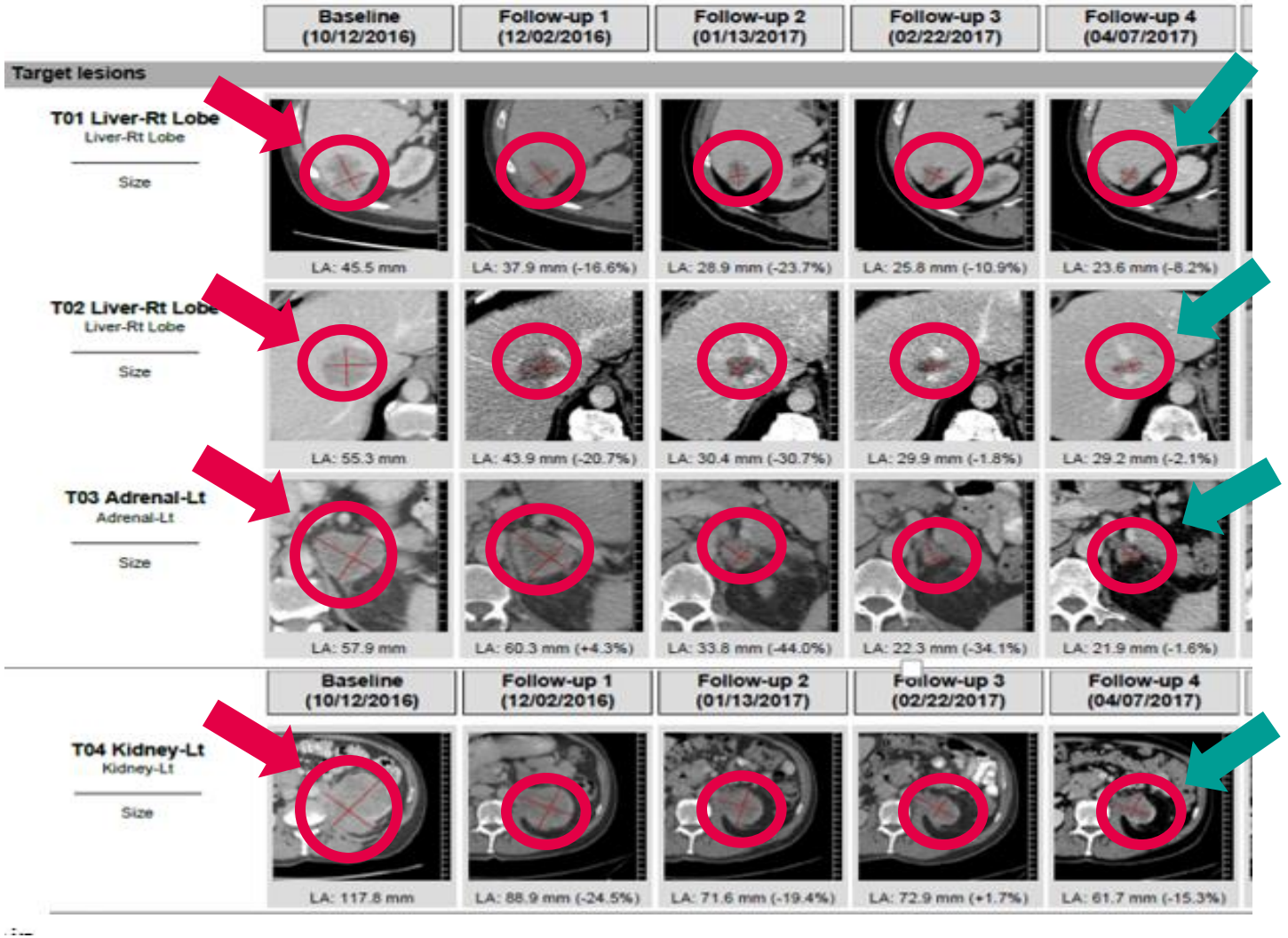


Active across several tumor types in Ph I/II expansion

- Bladder
- Cervical
- Endometrial
- Esophageal
- NSCLC
- Ovarian
- Prostate

Reaching Our Vision: Tisotumab Vedotin

innovaTV 201, Expansion Cohorts



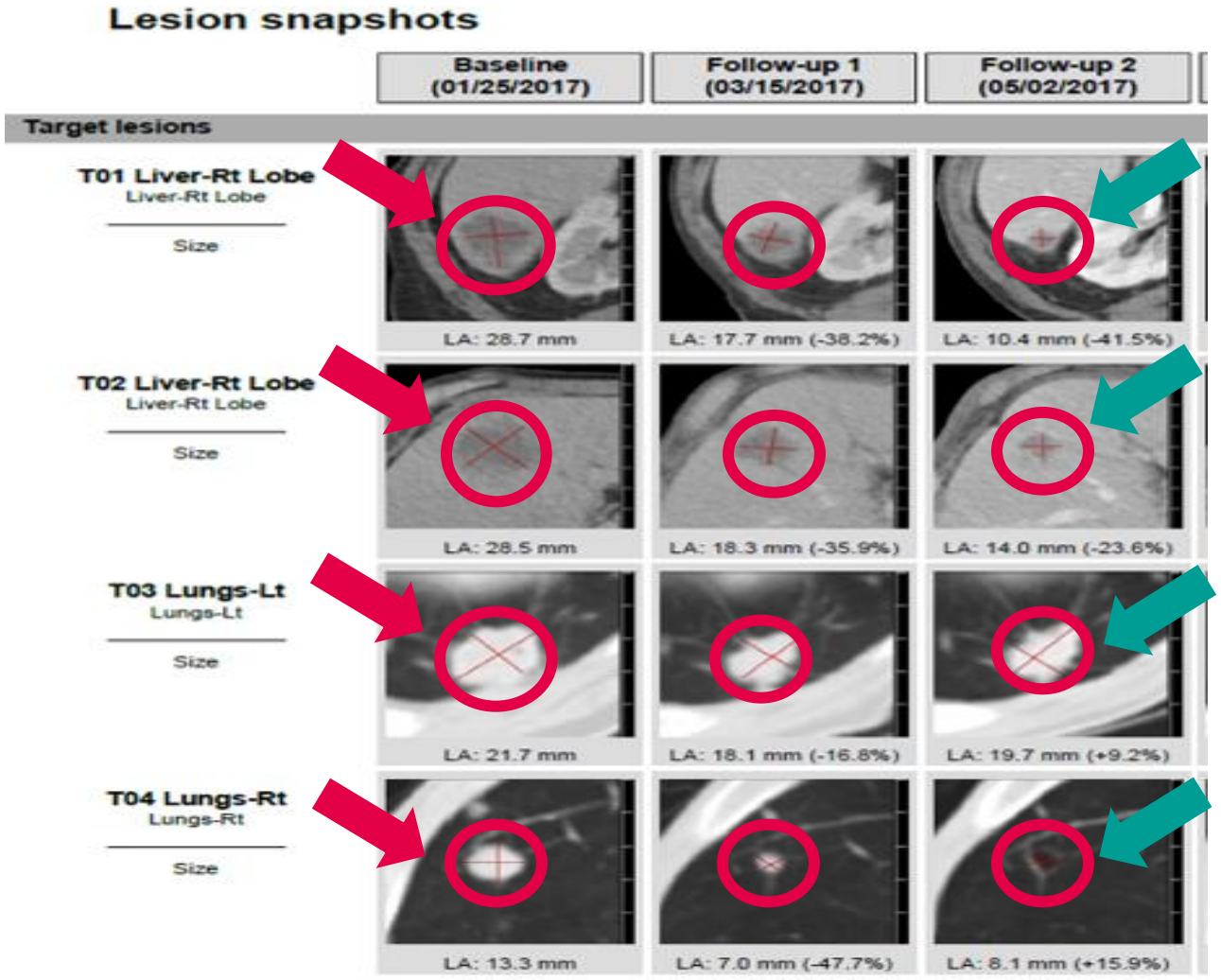
Prior treatments:

1. Cisplatin + Gemcitabine;
2. Vinflunine+ Pemetrexed;
3. Pembrolizumab

Bladder Cancer

Reaching Our Vision: Tisotumab Vedotin

innovaTV 201, Expansion Cohorts



Prior treatments:

1. 5-FU+Carboplatin;
2. Carboplatin + Paclitaxel;
3. Capecitabine

Esophageal Cancer

Reaching Our Vision: Tisotumab Vedotin

Clinical Development: Ongoing Ph II Studies

Ph II, recurrent or metastatic cervical cancer (innovaTV 204)

- Potentially pivotal
- Up to 100 pts
- Single arm, monotherapy
- Primary endpoint: confirmed objective response rate
- Secondary endpoints: duration of response, PFS, OS

Ph II, solid tumors (innovaTV 207)

- Colorectal neoplasms, NSCLC, pancreatic cancer, SCCHN
- Up to 200 pts
- Single arm, monotherapy
- Primary endpoint: ORR
- Secondary endpoints: Safety, disease control rate, duration of response, time to response, PFS, OS

Ph II, ovarian cancer (innovaTV 208)

- Ovarian cancer, fallopian tube cancer, peritoneal cancer
- Up to 142 pts, incl 12 pt safety run-in
- Monotherapy:
- 2 schedules: every 3 weeks and dose dense
- Primary endpoints: Safety & ORR
- Not yet recruiting

Reaching Our Inspirational Vision: Early Stage Clinical Pipeline

Tahi Ahmadi, Senior Vice President Oncology and Translational Medicine

Genmab

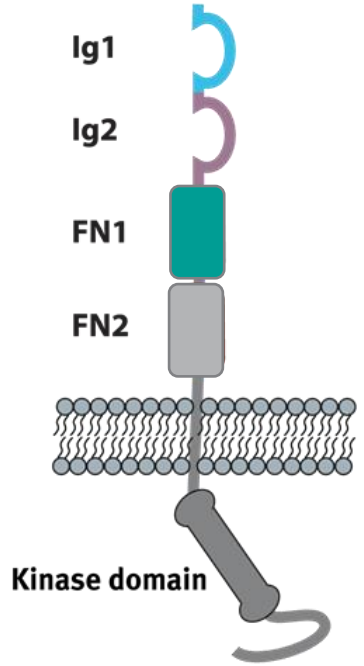
Enapotamab Vedotin (HuMax®-AXL-ADC)

Genmab

Scientific Background

AXL in Cancer Biology

- First identified in 1988 as a transforming gene in CML (*Liu et al., 1988*)

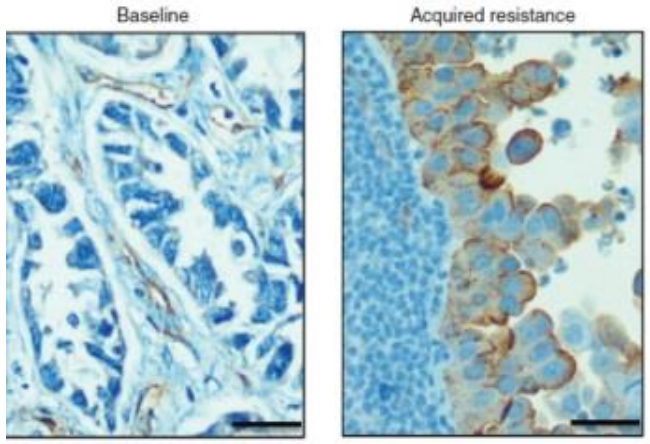


- AXL is aberrantly expressed in various cancers, including:
  - Sarcoma
  - Non-small cell lung cancer (NSCLC)
  - Ovarian cancer
  - Malignant melanoma
  - Glioblastoma

- AXL over-expression:
  - Associated with poor clinical prognosis in many cancer types
  - Prevalent in tumors with mesenchymal features
  - Associated with (acquired) resistance to therapy (TKI, chemo, immune checkpoint inhibitors)

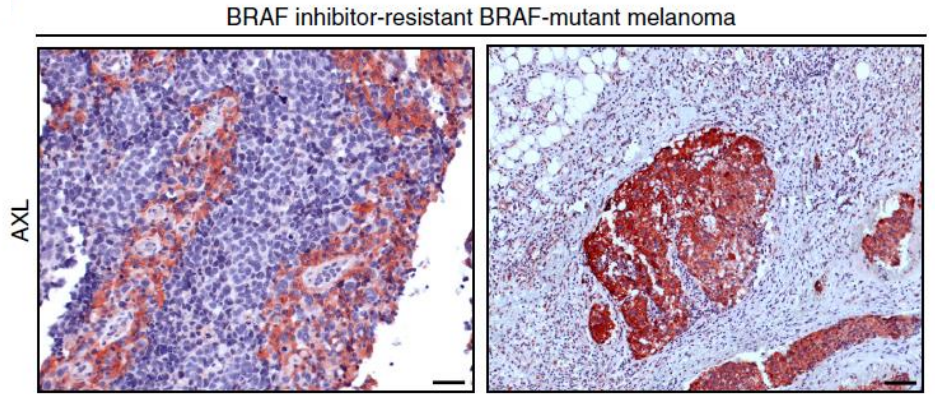
AXL Expression is Associated with Resistance

Increased AXL expression in ~20-30% of NSCLC that progressed on Erlotinib/Gefitinib



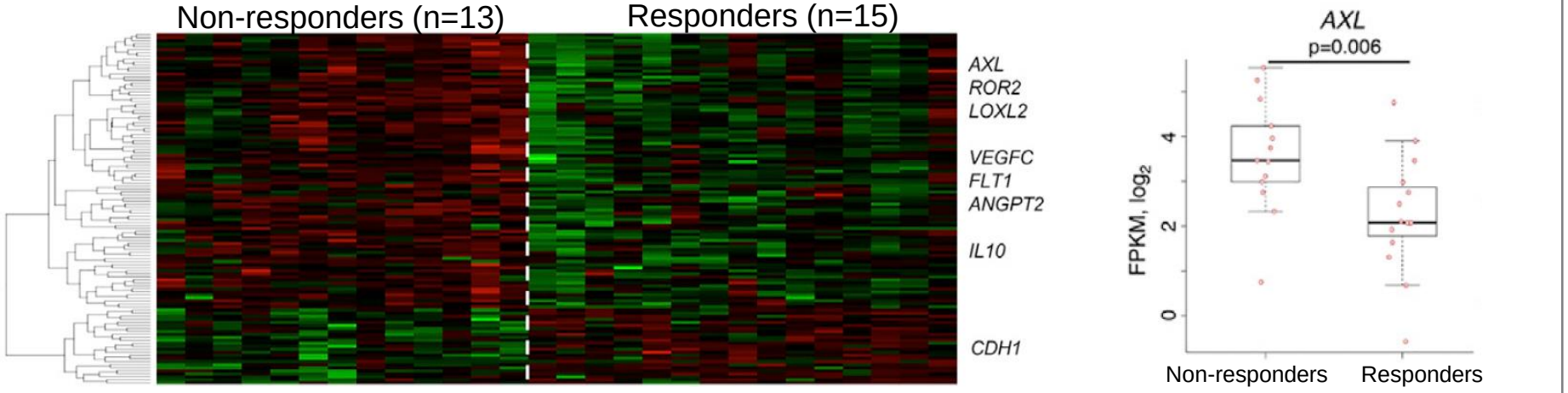
Zhang et al., Nature Genetics 2012

Increased AXL expression in 5/7 BRAF-mut and 2/3 NRAS-mut melanomas that progressed on BRAFi or MEKi, respectively



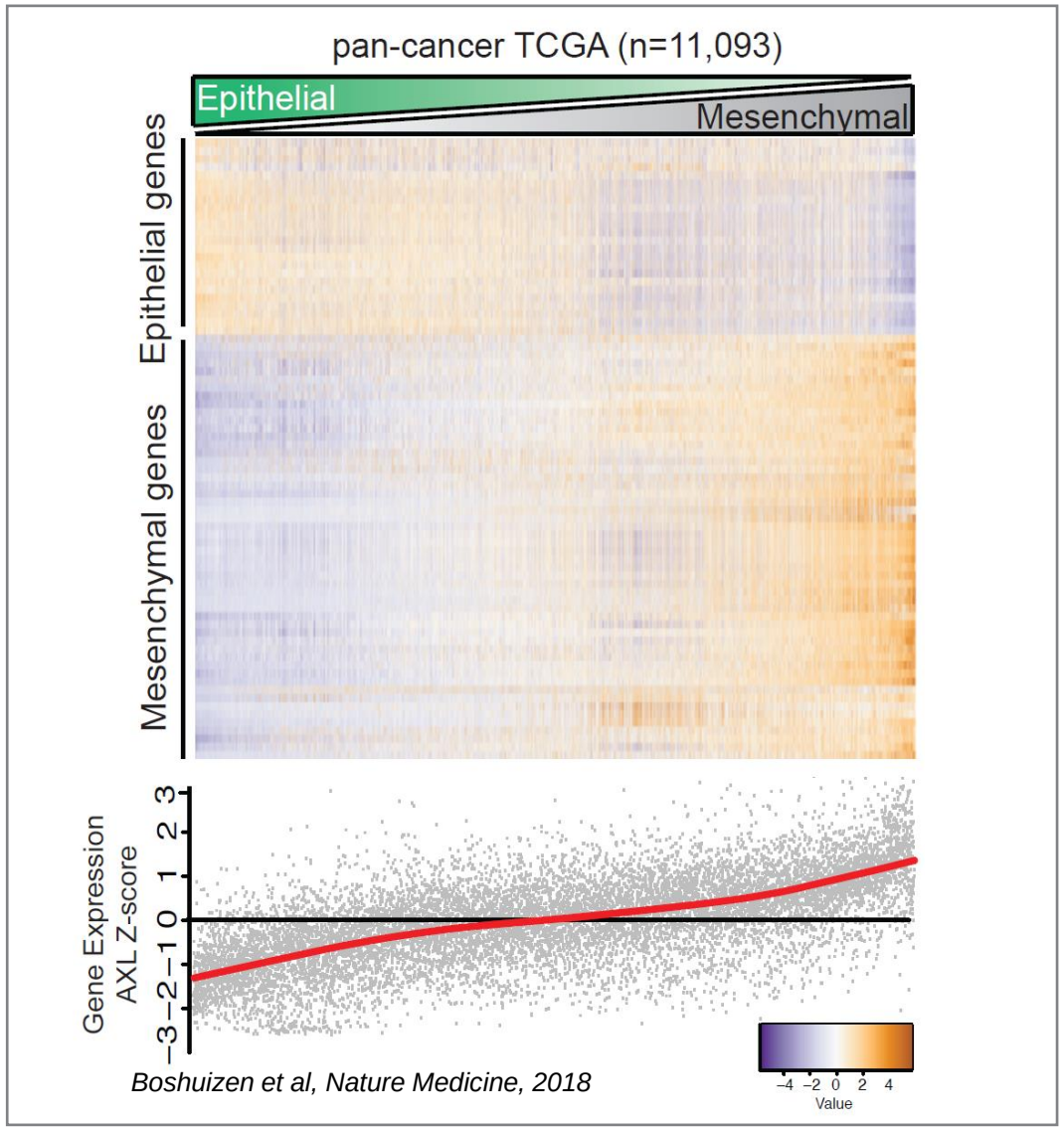
Boshuizen et al., Nature Medicine 2018

Increased AXL expression in melanoma tumors intrinsically resistant to PD-1 blockers



Hugo et al., Cell 2016

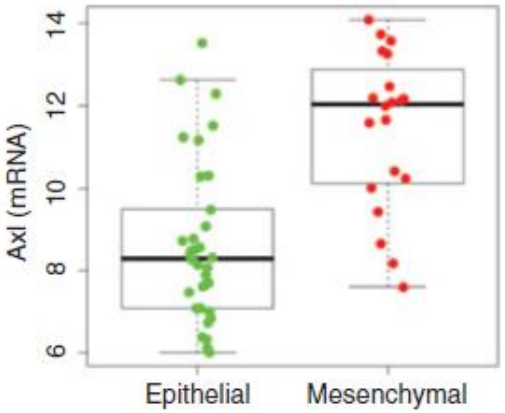
AXL is Overexpressed in Advanced Tumors Enriched in Mesenchymal Features

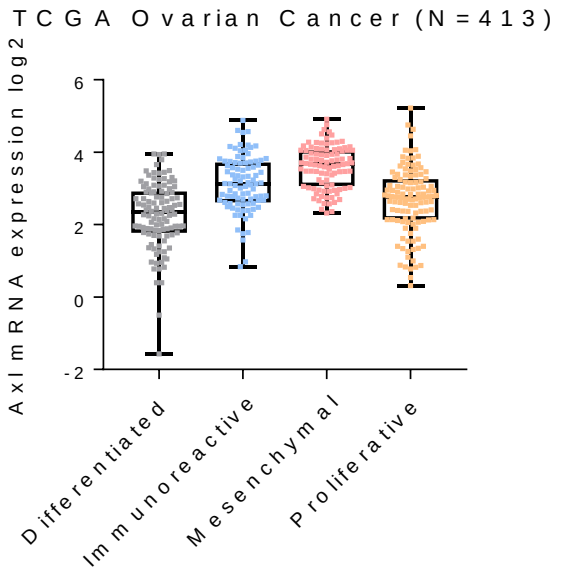


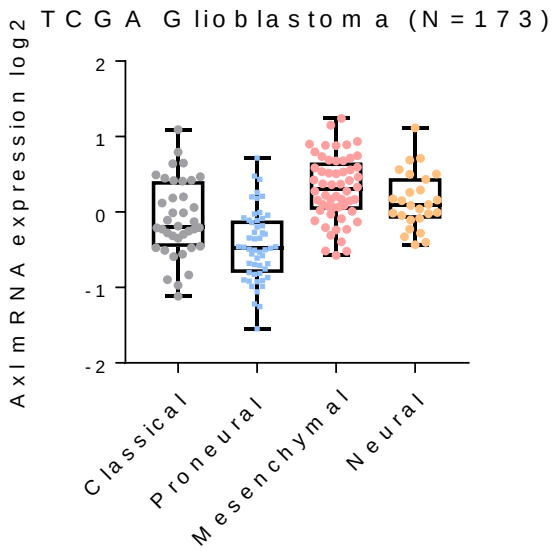
Boshuizen et al, Nature Medicine, 2018

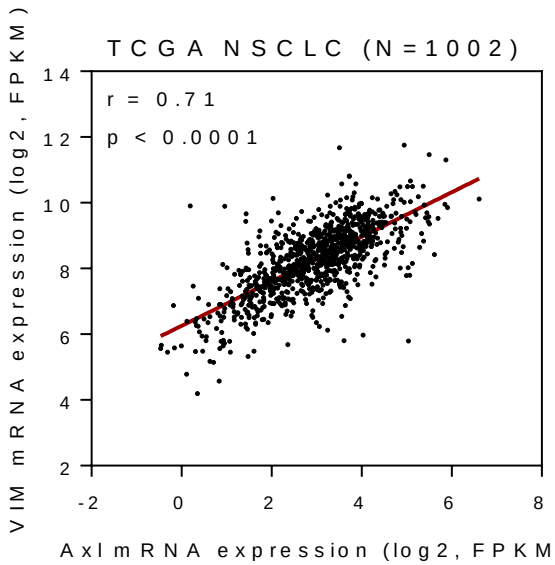
NSCLC

(Byers et al., Clin Cancer Res 2013)



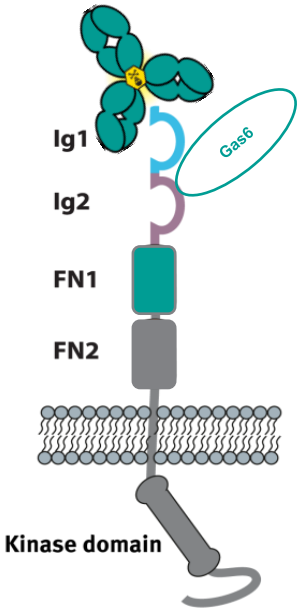


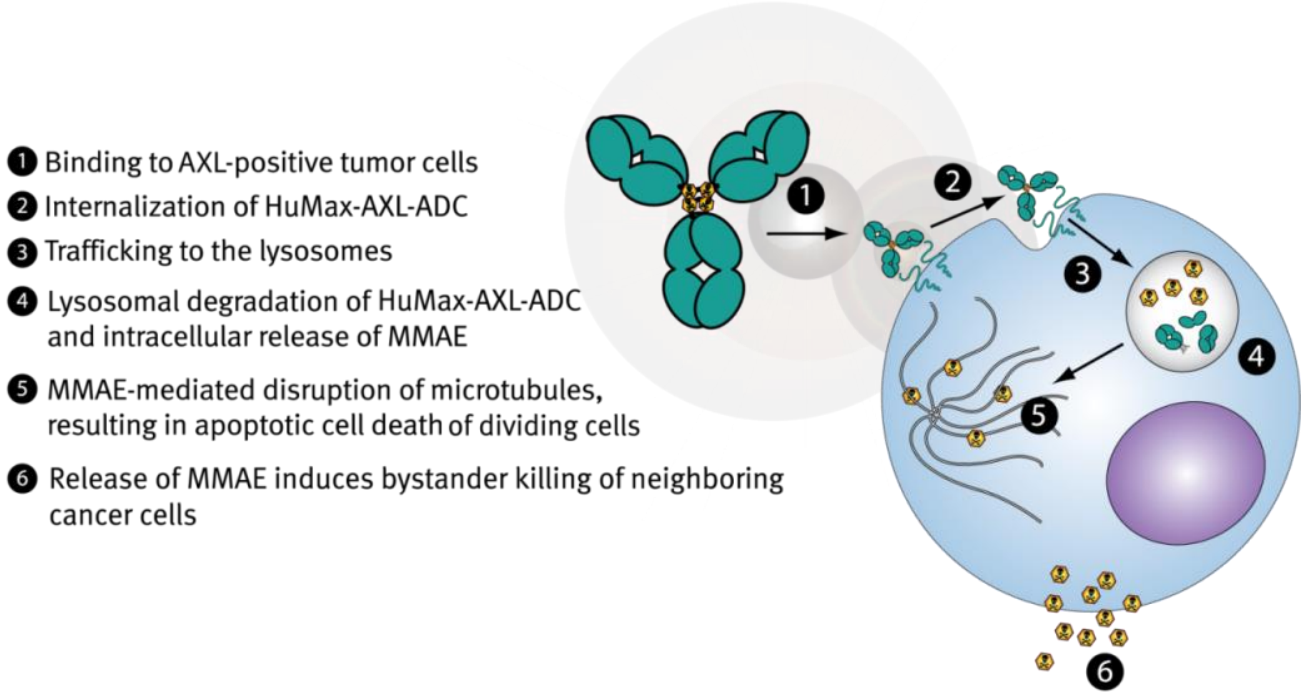




Enapotamab Vedotin (HuMax-AXL-ADC)

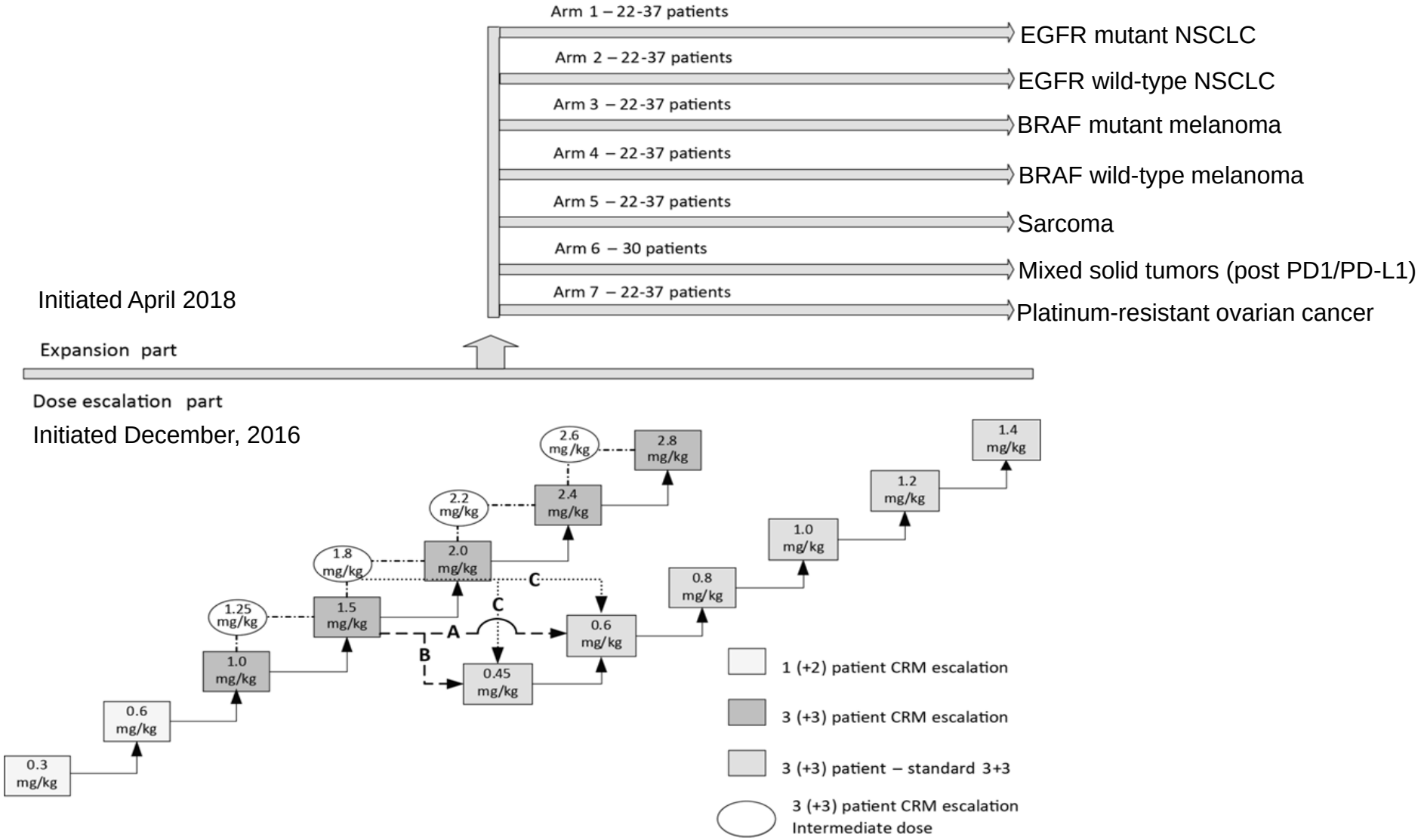
- First-in-Class human anti-AXL mAb vc-linked to MMAE
- Binds Ig1-AXL, does not compete with Gas6
- Naked antibody internalizes efficiently
- AXL-dependent, MMAE-mediated cytotoxicity in AXL-expressing tumor cells
- May target heterogeneous tumors via bystander kill
- Potent anti-tumor activity in various solid tumor xenograft models





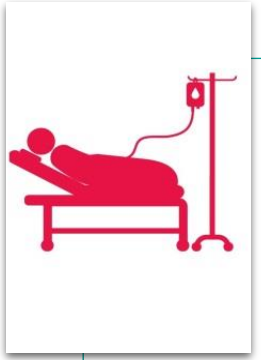
Enapotamab Vedotin (HuMax-AXL-ADC)

GCT1029-01 Phase I/II Trial Design



Enapotamab Vedotin (HuMax-AXL-ADC)

Cohort 2: Unmutated NSCLC



Case report: stage 4 NSCLC patient

GEN1029 (HexaBody-DR5/DR5)

Genmab

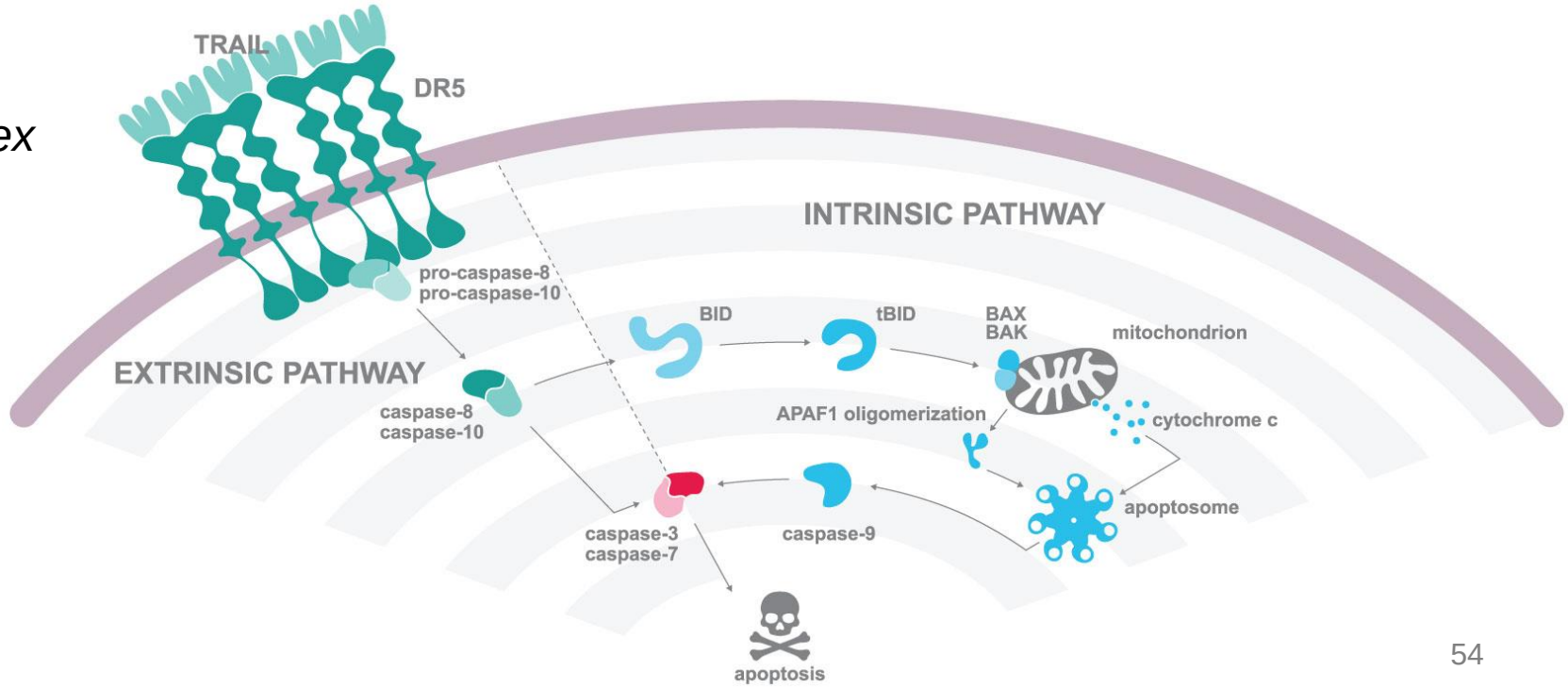
DR5 as a Target for Anti-tumor Therapy

DR5

- Death Receptor 5
- Tumor Necrosis Factor Receptor Superfamily member TNFRSF10b
- Receptor for TRAIL (TNF-related apoptosis-inducing ligand)

DR5 activation upon TRAIL binding results in apoptotic signaling

- Binding of TRAIL trimers to DR5 on the cell surface
- DR5 hyperclustering
- Intracellular DISC formation
  death-inducing signaling complex
- Caspase activation
- Programmed cell death



DR5 as a Target for Anti-tumor Therapy

DR5 expression and function

- DR5 is ubiquitously expressed in normal & malignant tissues
- Role in attenuating autoimmune reactions
- Protective function against oncogenic transformation

- Malignant cells more sensitive to TRAIL-induced killing than normal healthy cells
- Increased DR5 expression reported for several tumor indications

Multiple DR5 agonists have been in clinical trials for treatment of cancer

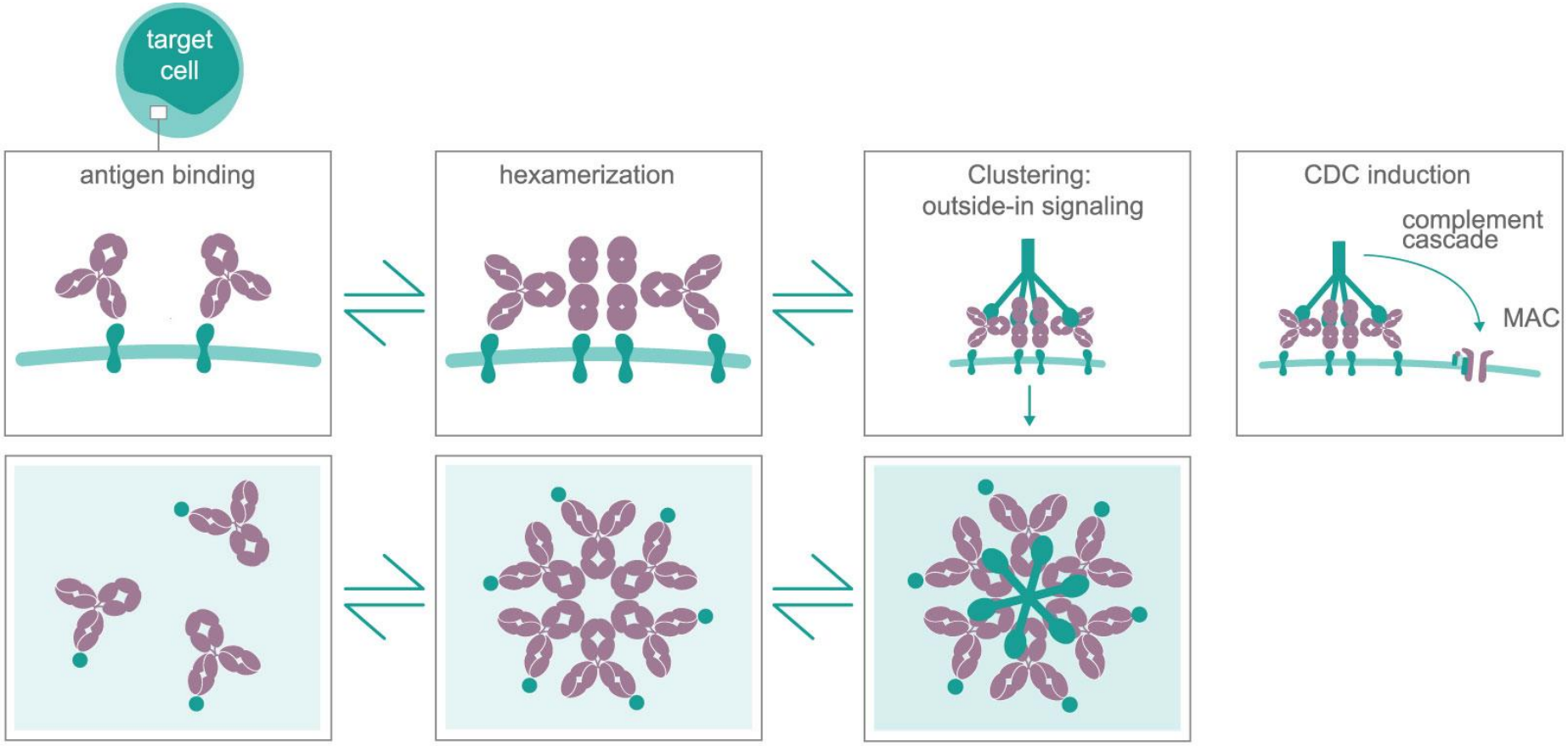
- Clinical results with anti-DR5 monoclonal antibodies have been disappointing due to lack of efficacy
- DR5 agonist activity “conventional” IgG1 DR5-specific antibodies dependent on FcγR-mediated crosslinking
- Lack of clinical activity has been attributed to insufficient FcγR-mediated crosslinking in patients

Holland Cytokine Growth Factor Rev 2014 Vol 25(2): 185-193
Von Karstedt et al. Nat Rev Cancer 2017 Vol 17(6): 352-366

From Science to HexaBody Platform

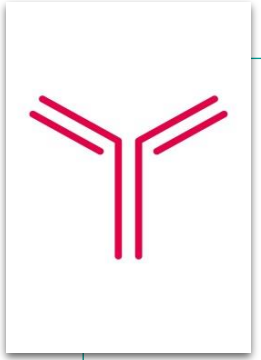
Applications

- Enhanced C1q binding and complement activation
- **Improved antibody-mediated clustering of cell surface receptors, e.g. to induce death receptors agonist activity**



GEN1029 (HexaBody-DR5/DR5)

Anti-tumor Activity Independent Of FcγR-mediated Crosslinking



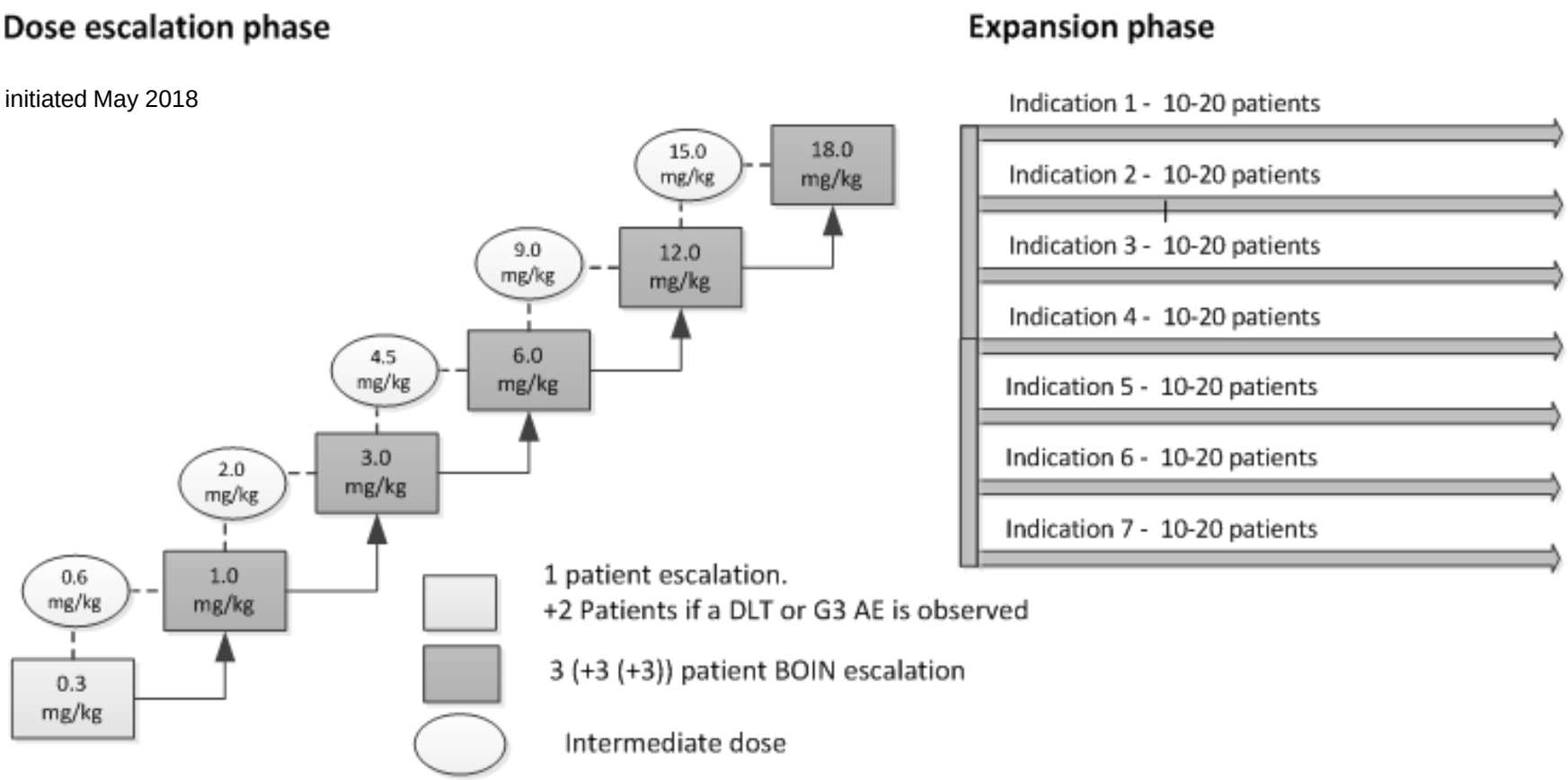
Anti-tumor activity of HexaBody-DR5/DR5 is independent of FcγR-mediated effector function/crosslinking

- In contrast to conventional DR5-specific antibody conatumumab
- FcγR independent tumor cell kill demonstrated in vitro and in vivo

DR5 antibodies acquired from iDD biotech

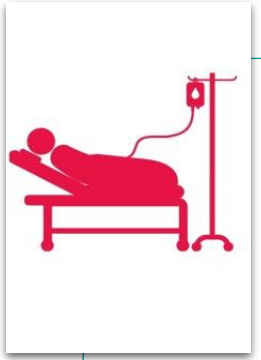
GEN1029 (HexaBody-DR5/DR5)

GCT1029-01 Phase I/II Trial Design



GEN1029 (HexaBody-DR5/DR5)

Dose Escalation



Case report: colorectal cancer patient

GEN3013
(DuoBody-CD3xCD20)

Genmab

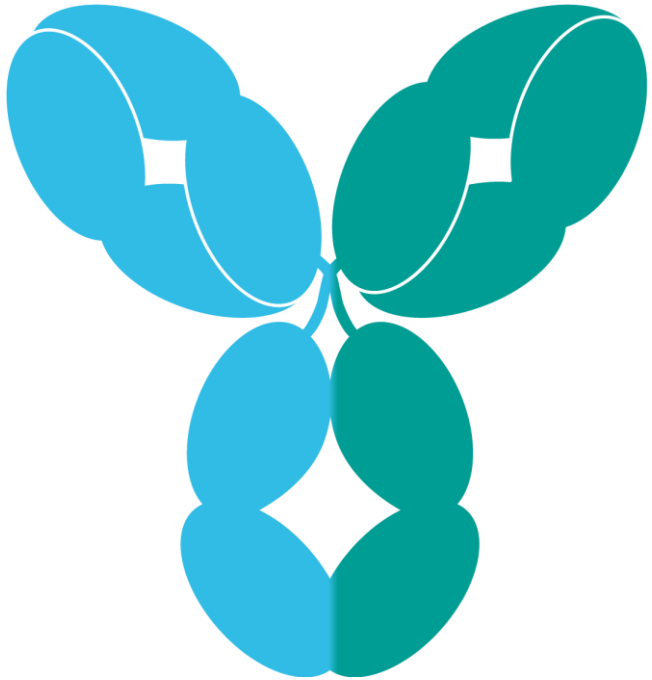
GEN3013 (DuoBody-CD3xCD20)

CD3ε on T cells

- On all T cell subtypes
- Part of T cell receptor-CD3 complex
- Crosslinking induces T cell activation

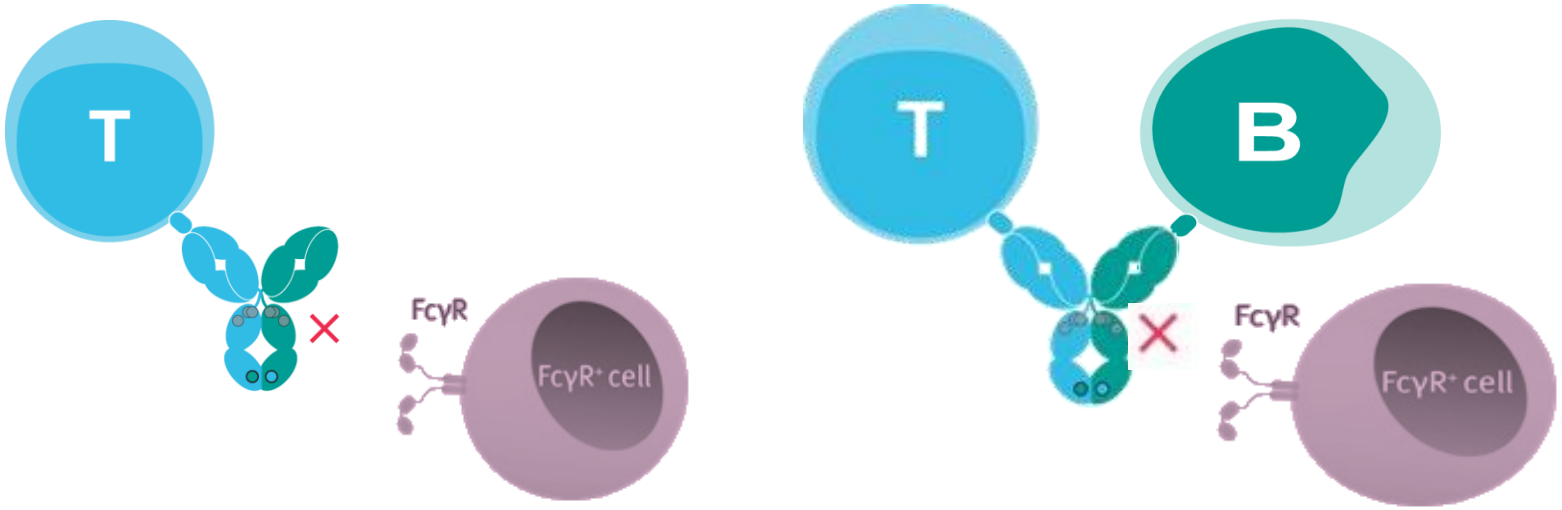
CD20 on B cells

- On pre-B cells to plasmablasts
- Expressed on a wide variety of B cell malignancies
- Well-validated therapeutic target



GEN3013 (DuoBody-CD3xCD20)

Has Inert Fc Region That Ensures Only Target-specific T cell Activation

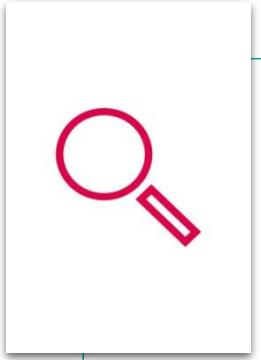


3 point mutations are introduced that ensure:

- **no** Fcγ receptor binding (no ADCC or ADCP induction)
- **no** C1q binding (no CDC induction)
- **normal** FcRn binding (long plasma half-life like regular IgG1 antibodies)

GEN3013 (DuoBody-CD3xCD20)

Subcutaneous Administration Route

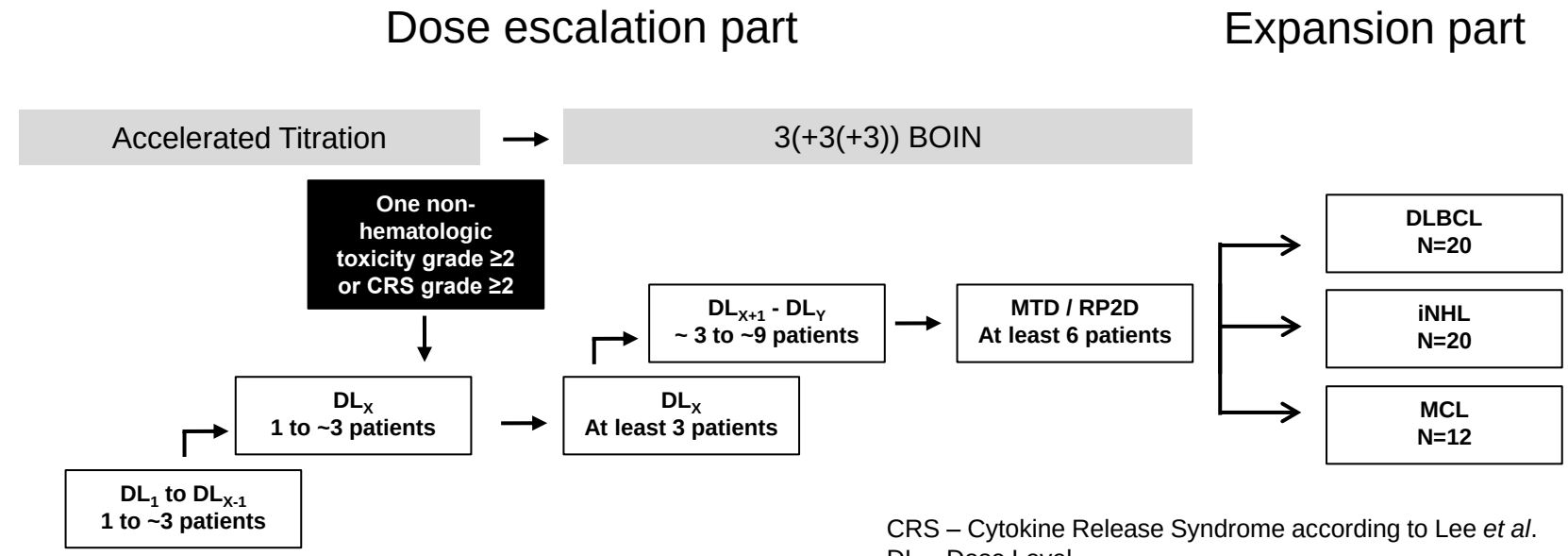


Pharmacokinetics, Cytokine Release and B cell depletion were compared between intravenous and subcutaneous administration routes

GEN3013 (DuoBody-CD3xCD20)

GCT3013-01 Phase I/II Trial

- Monotherapy Dose Escalation SC plus Expansion SC



Activated in June 2018

CRS – Cytokine Release Syndrome according to Lee *et al*.
DL – Dose Level
DLBCL – Diffuse large B cell lymphoma
iNHL – indolent Non-Hodgkin's lymphoma
MCL – Mantle cell lymphoma
MTD – Maximum tolerated dose
RP2D – Recommended phase 2 dose
BOIN – Bayesian Optimal Interval

Building the Business: Translational Research

Kate Sasser, Corporate Vice President, Translational Research

Genmab

Genmab's Core Research Areas

Novel and cutting-edge ANTIBODY FORMATS and TECHNOLOGIES

Transformative antibody PRODUCTS that can be combined in modular fashion

Tools and data science capabilities for PERSONALIZATION of our antibody therapeutics

PEOPLE and PROCESSES to support Genmab's evolution

Genmab is Building a Library of Antibody Therapeutics That can be Tailored to Patients

Genmab aims to invent, develop & commercialize differentiated antibody-based products; which can be utilized in a modular fashion, creating unique & tailored therapeutics to transform cancer treatment

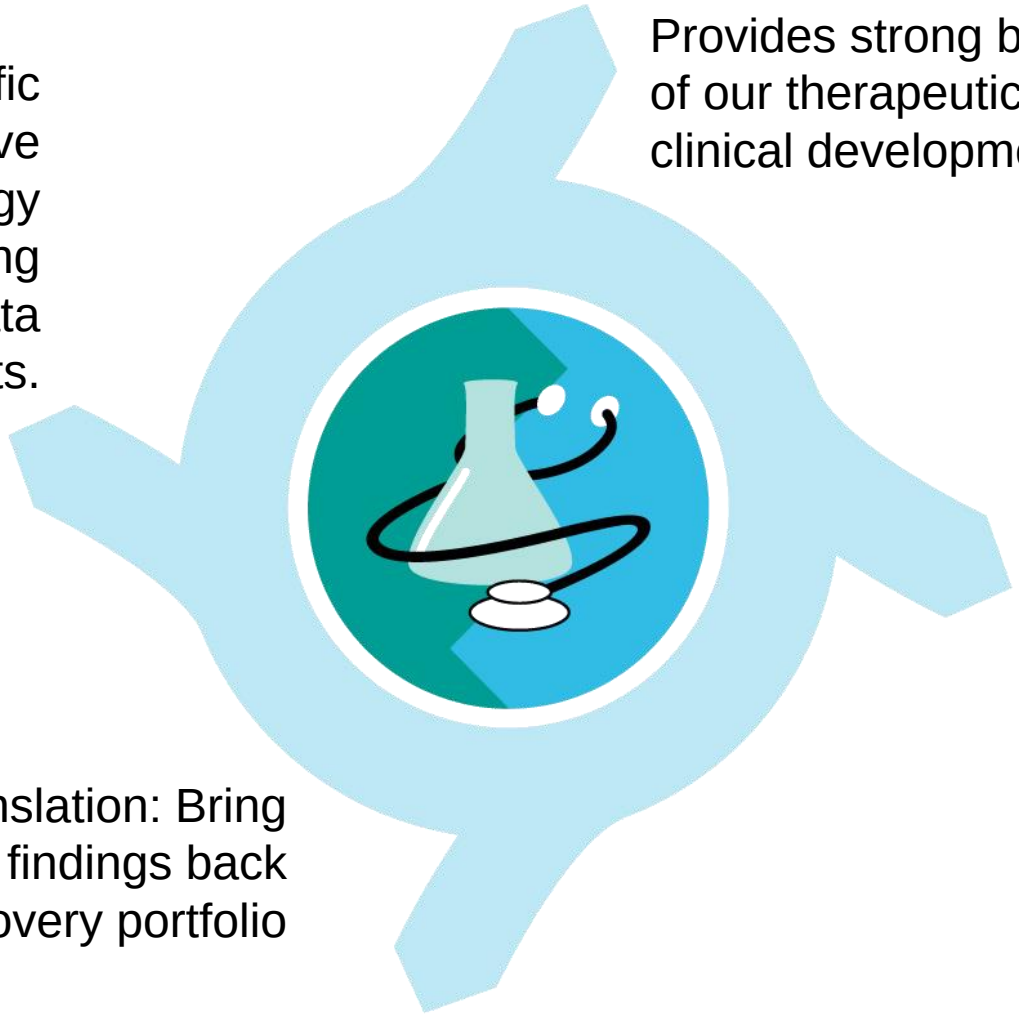
Tailoring of Genmab therapeutics requires strong **TRANSLATIONAL RESERACH**

Mission for Genmab Translational Research

Develop Transformative Medicines by Finding the Right Medicine, at the Right Dose, for the Right Patient.

Generate deep scientific insights by utilizing innovative computational biology approaches and integrating translational & clinical data sets.

Provides strong biological understanding of our therapeutic products to help drive clinical development decision making.



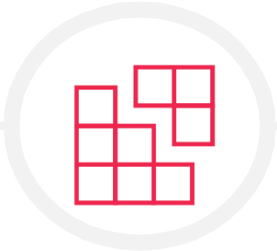
Understand the biology of our products, and our patients, to match the right drug with the right patients.

Reverse Translation: Bring novel scientific findings back to our Discovery portfolio

Translational Research Will Focus on Patient Profiling in Order to Create Tailored Therapeutics in the Future

Holistic patient characterization Clinical Translational Labs

- Establish strong translational laboratory capabilities to profile patient tumor and immune genotype/phenotype



Match patients with appropriate therapy

- Establish diagnostic modalities to match Genmab antibody therapies with appropriate patient populations and drive personalized treatment recommendations

Integrate Data to capture insights and identify novel targets and formats

- Expand Data Science capabilities to be able to probe our clinical and translational data to uncover novel targets and approaches.

Generating Insights from Data: Establishing Strong Data Sciences

Building robust DATA SCIENCES unit to obtain insights into diseases of interest, novel targets, our patients, and our products

Access to data: Building our Genmab data sets

Establishing collaborations within academia, industry, biotech, and consortiums to bring in large data sets

Generate patient data from our own portfolio of products and clinical trials

Data mining and insight generation

Processes data into actionable insight:

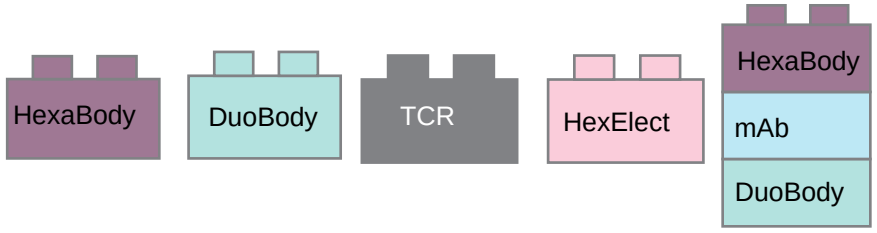
- Create and investigate hypotheses
- Identify novel targets and product profiles
- Develop in silico models for predicting mechanism of action, dose, and biomarkers for our therapeutics
- Speed clinical development decisions

BENEFITS of INSIGHT

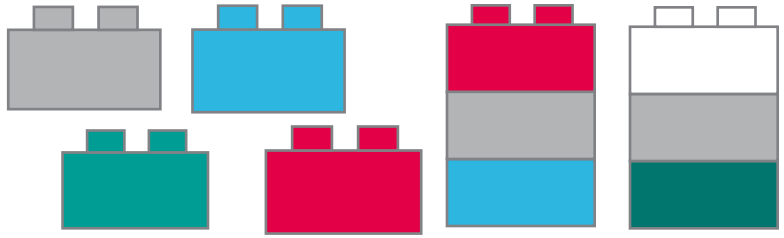
- Expand pipeline of early products
- Develop better models for predicting dose, toxicity, and patient biomarkers
- Make clinical dev decisions faster
- Understand patient populations and indications
- Develop patient diagnostic approaches

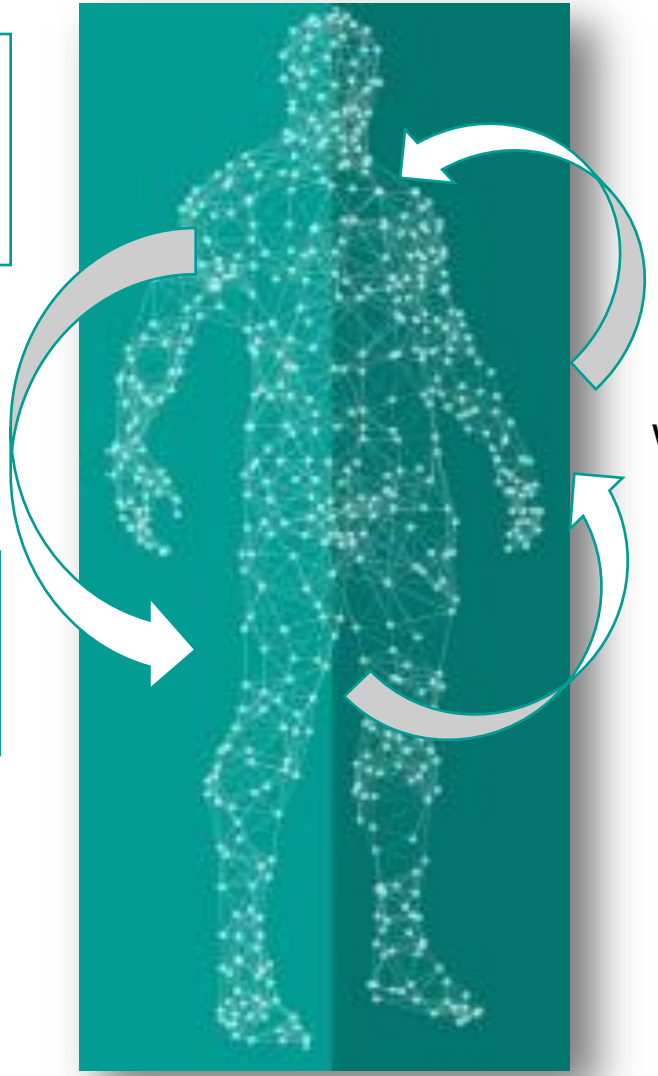
Translational Research at Genmab Will Tie Together Core Research Areas of: PLATFORMS, PRODUCTS & PATIENTS

Maximizing & expanding our repertoire of antibody **PLATFORMS** and delivery methods



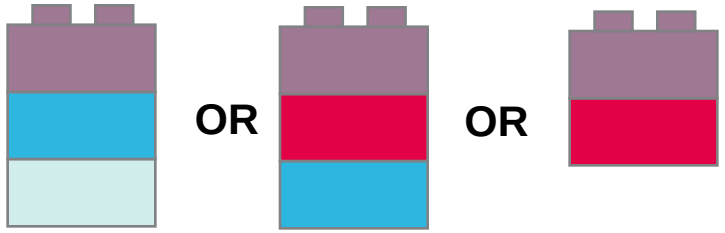
Identify novel targets and expand Genmab library of innovative **PRODUCTS**





In depth understanding of our products and our **PATIENTS**

In depth TRANSLATIONAL RESEARCH will link clinical and preclinical knowledge together, enabling bench to bedside development.



Building the Business: Commercial Capabilities

John Keating, Corporate Vice President, Commercial

Genmab

Genmab: Building an Oncology Footprint

- Prepare now for successful ***launch readiness by 2020***
- Build out **commercial *leadership team*** and ***core capabilities*** has started
- Organizational focus on ***Europe, Japan and United States***

Despite Increased Screening, Cervical Cancer Continues To Be a Health Burden in the US, Europe, and Japan

The overall incidence and mortality rate of cervical cancer has decreased due to regular screening with Pap tests, which effectively identifies cervical pre-cancer, however…[1]

United States[3]

New Diagnoses	Deaths
12,578	4,115

3rd most common gynecologic cancer in US[4]

Japan[6]

New Diagnoses	Deaths
9,390	3,654

2nd most common gynecologic cancer in Japan[6]

Europe[2]

New Diagnoses	Deaths
58,373	24,404

3rd most common gynecologic cancer in Europe[2*]

In developed countries, incidence rates are low (<7.9 per 100,000 women) compared with ***developing countries*** in sub-Saharan Africa and Central and South America, where incidence is especially high ***(>30 per 100,000 women)***[5]

***Europe is defined as the 40 countries in the four United Nations-defined areas of Europe and the European Union (EU-27).

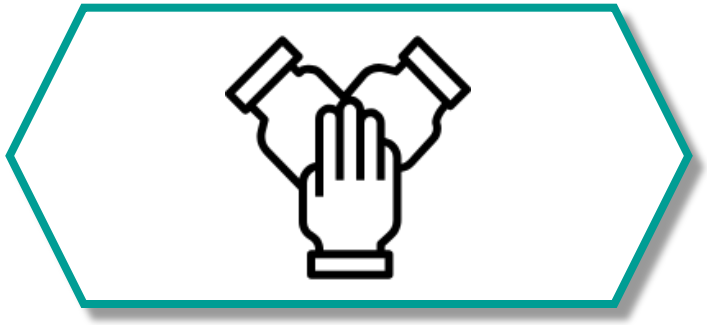
References: 1. American Cancer Society **2.** .EUCAN (2012) **3.** Centers for Disease Control and Prevention. Cervical Cancer Statistics (2017) **4.** *UpToDate*. **5.** Ginsburg O et al. *Lancet* 2017 **6.** HPV Information Centre Japan (2017)

US Commercial Readiness

SeattleGenetics®

+

Genmab



Currently evaluating co-promotion options with Seattle Genetics.

Potential option to collaborate with Seattle Genetics to support the US launch of tisotumab vedotin and set up rest of portfolio for commercial success.

Japan Commercial Strategy: Build for a Unique Opportunity

Independent entry presents high value with minimal upfront investment and stage-gated decisions

Low rate of cancer screening & HPV vaccinations

- In 2014, **32%** coverage rate for cervical cancer (vs. **83%** in US in 2010)
- In 2013, MHLW withdrew recommendation to use vaccines due to severe side effects
- Vaccination rate dropped from **70% to 0.7%**

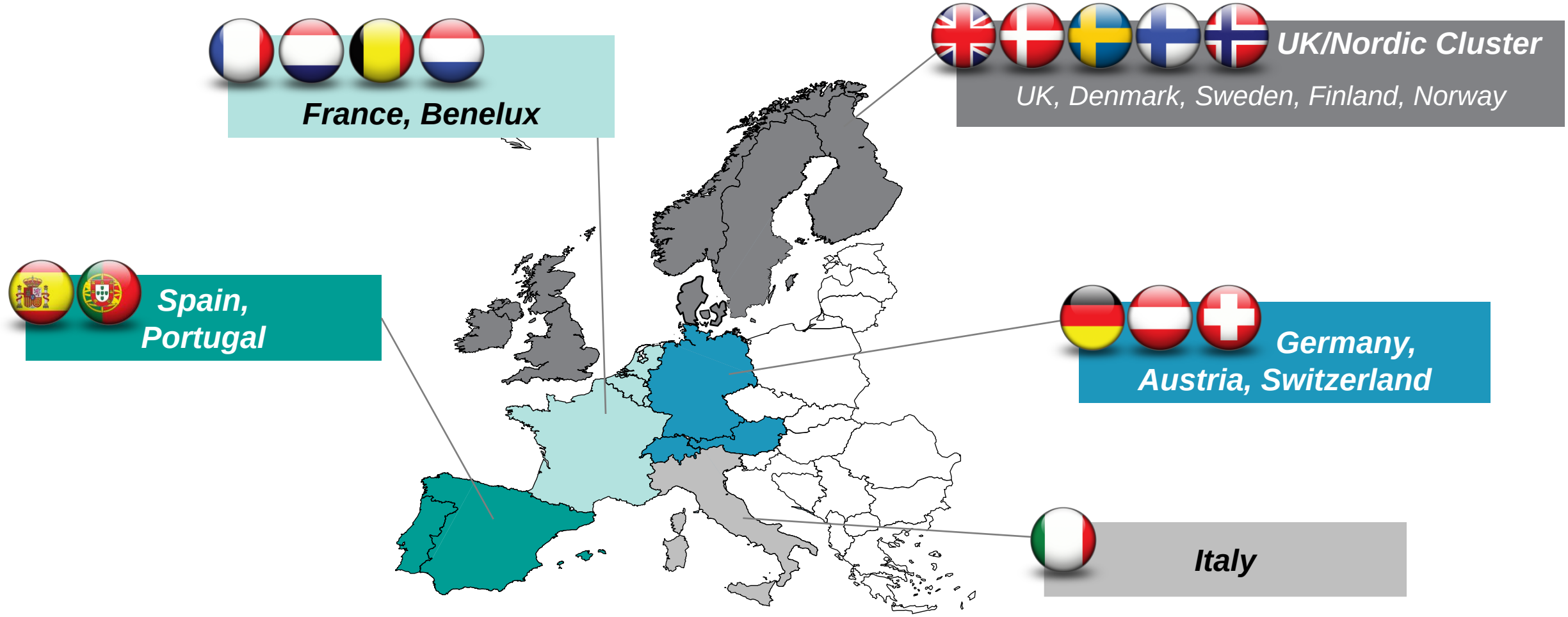
Commercial opportunity

- **No SoC for 2L** treatment
- **Modest commercial & medical affairs infrastructure** needed to support initial indication
- Clear path for **reimbursement and access**

"Majority do not respond to treatment, and most **die within a year**"

"**High Unmet need for defined population** allows for modest investment to retain the most value"

Potential EU Commercial Strategy: Build Footprint to Launch Tisotumab Vedotin Across Western Europe Ourselves (5 Local Clusters)



Critical Steps for Operational Success in Genmab Lead Territories of Japan and Europe

- ***Early investment in market access***, including building a seasoned value and reimbursement team today
- ***Building local integrated teams*** that have country-level authority to act independently and move quickly
- Engaging early with Japanese and European medical experts in cervical cancer and having the ***medical affairs team in place***
- ***Incorporating the voice of patient and key stakeholders*** across Japan and Europe, understanding that there are important differences across countries
- A seasoned team in Japan and Europe with direct ***sales and marketing experience***
- A ***stepwise approach*** that builds the team and footprint in a staged manner

Near-Term Planning: Growth of People & Spend

Today

- *Global Commercial Operations Team*
- *Head of Commercial*
- *Head of Medical Affairs, Additional Staff*
- *Head of Market Access*
- *MSL's*

Planning & Initial Growth

2019

- *Building US, EU and Japan staff:*
  - *Sales & Marketing*
  - *Medical Affairs*
  - *Market Access*
  - *Systems*

Hire Top Tier Leadership With Seasoned EU, Japanese and US Experience

2020

- *Additional Build:*
  - *Sales & Marketing*
  - *Medical Affairs*
  - *Supply Chain*
  - *G&A (EU)*
  - *Systems*

Build Launch Readiness Through Key Deployment

Why We'll Be Successful

Capital to support an oncology launch with appropriate resourcing

First launch in cervical cancer allows for initial focus on gynecologic cancers and provides foundation for future growth in new oncology indications

Europe oriented organization with existing partnerships in EU Oncology community

Early emphasis and investment on building the right team

Q&A

Genmab

Break

Genmab

The Next Generation of Therapeutics: Strategic Alliances

Jan van de Winkel, President & Chief Executive Officer

Genmab

Strategic Alliances

Creating Next Generation Leapfrog Drugs

Strategic alliances

- Immatics Biotechnologies
- BioNTech AG

Combines Genmab's proprietary technologies & antibody know-how with key outside capabilities

Strengthens Genmab's position in Immuno-Oncology

Further builds world-class Genmab pipeline

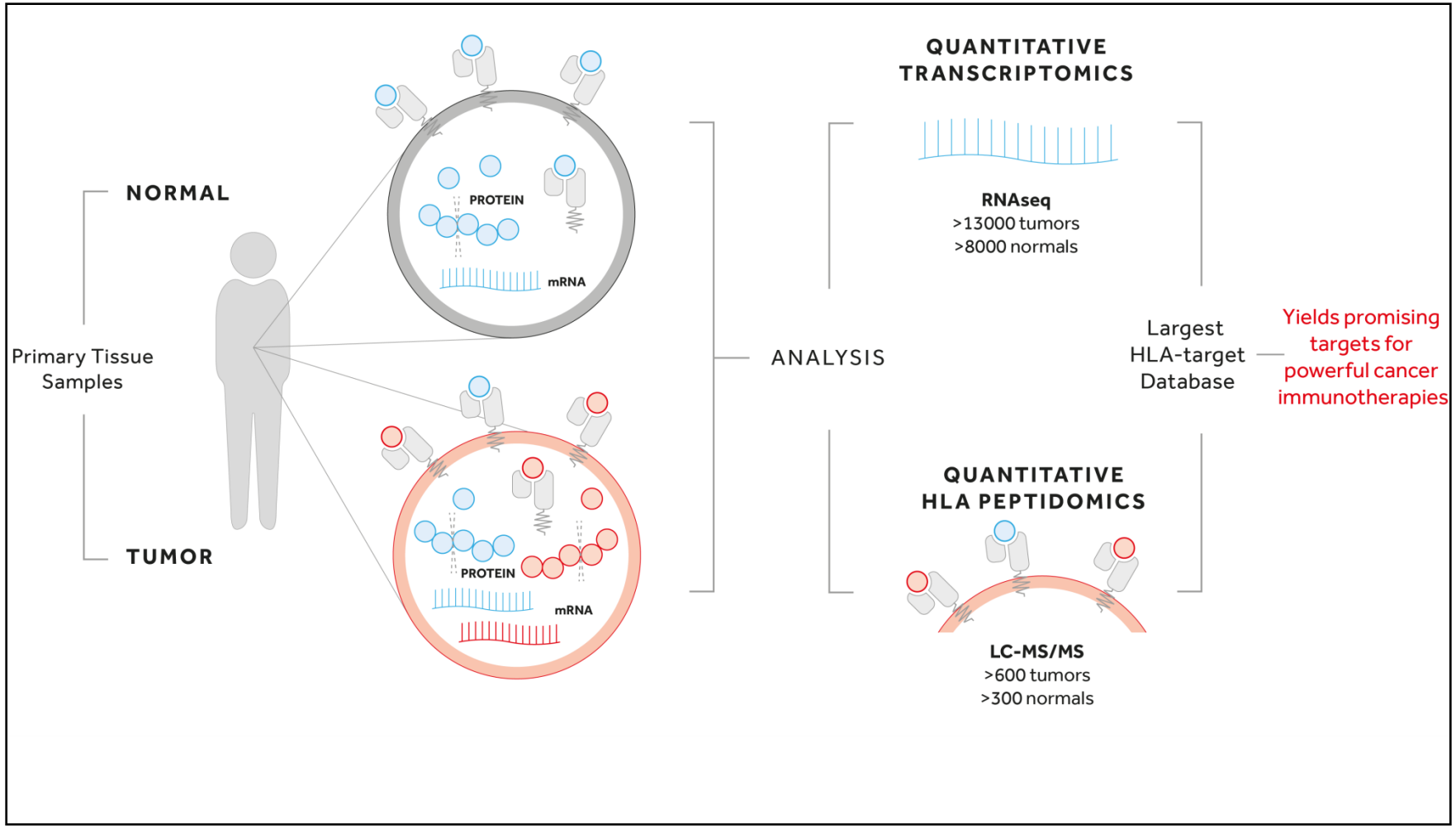
Strategic Alliances

Immatics

- Genmab's tech. & antibody know-how + Immatics' XPRESIDENT® tech. & TCR technology
- Exclusive access to multiple novel targets: joint research funded by Genmab
- Strengthens our position in Immuno-Oncology
- Genmab responsible for dev., manufacturing & WW commercialization
- Immatics, option to limited co-promo. efforts in select EU countries
- Upfront fee of USD 54M to Immatics, eligible for up to USD 550M in milestones per product & tiered royalties on sales

Immatics

XPRESIDENT® Platform



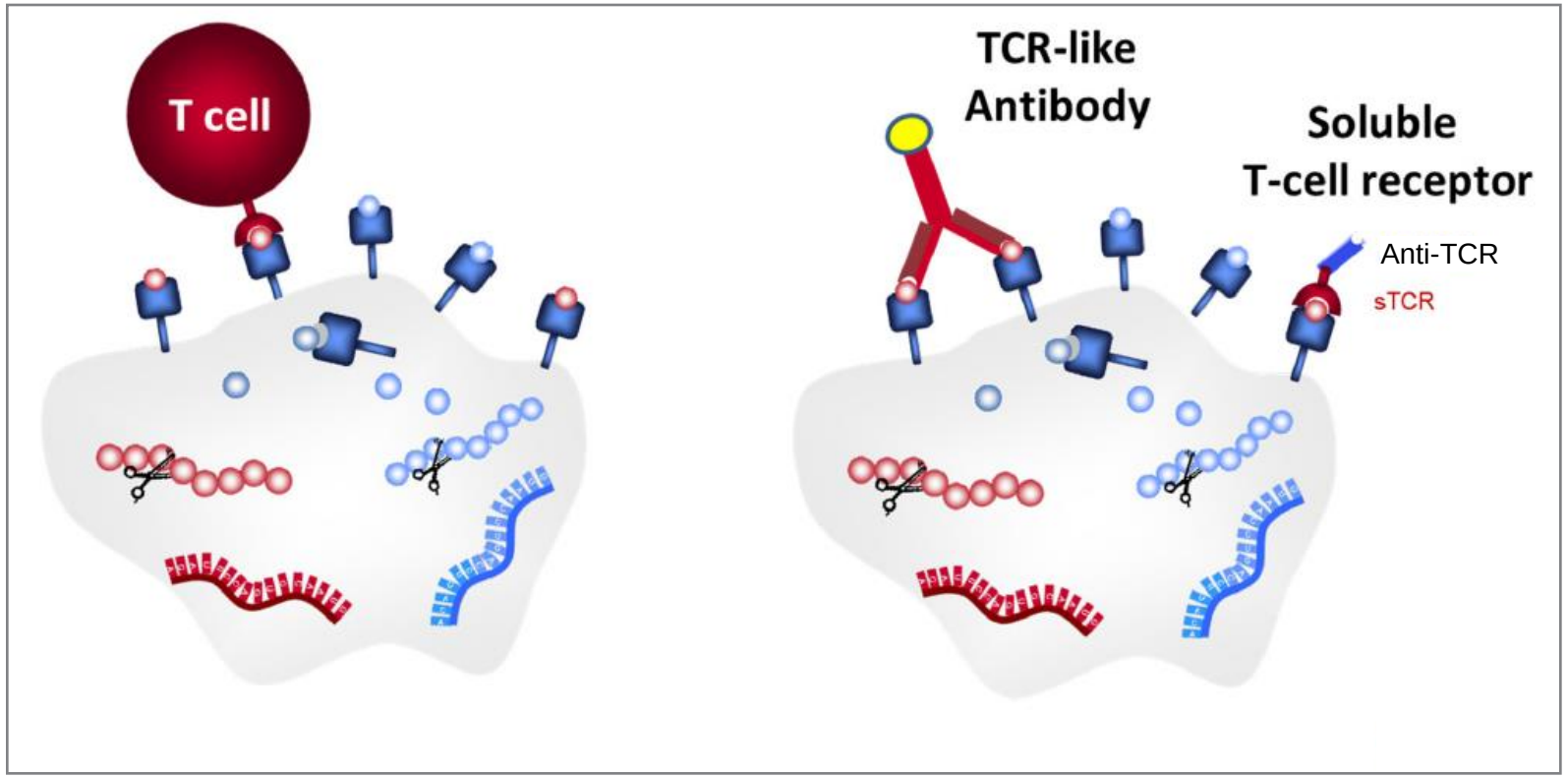
- Tumor biopsies as source
- Peptide identification
- Peptide selection
  - Quantitative transcriptomics
  - Quantitative peptidomics

Immatics

TUMAPs

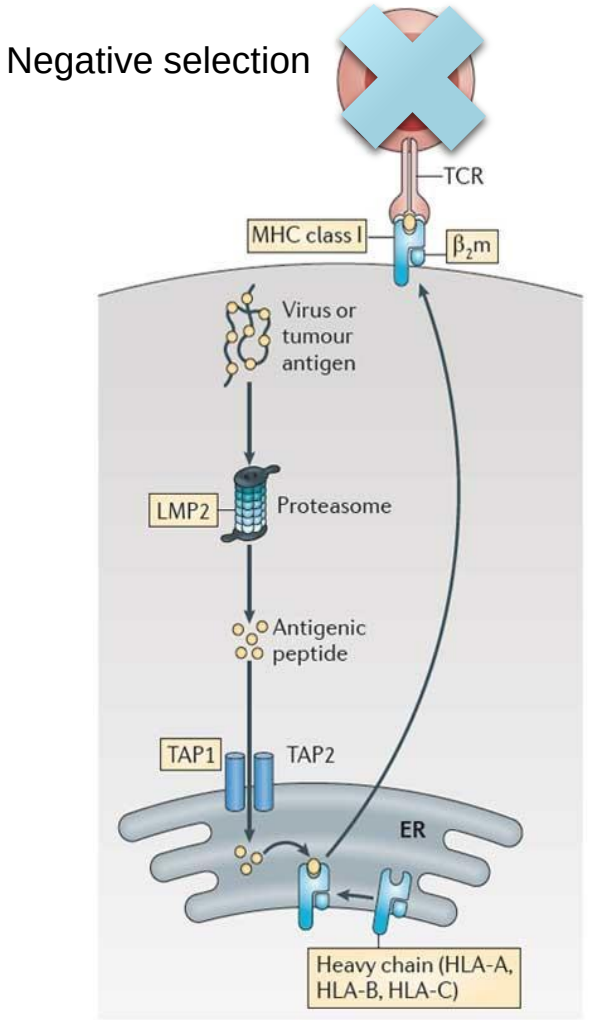
Targets for vaccines and adoptive cellular therapy

Intracellular targets for mAbs/sTCRs



Immatics

Targeting Intracellular Antigens Presented on Surface HLA Molecules



Nature Reviews Immunology **12**, 813-820 (Dec. 2012)
Stewart-Jones, G. Proc Natl Acad Sci U S A. 2009 Apr 7;106(14):5784-8.

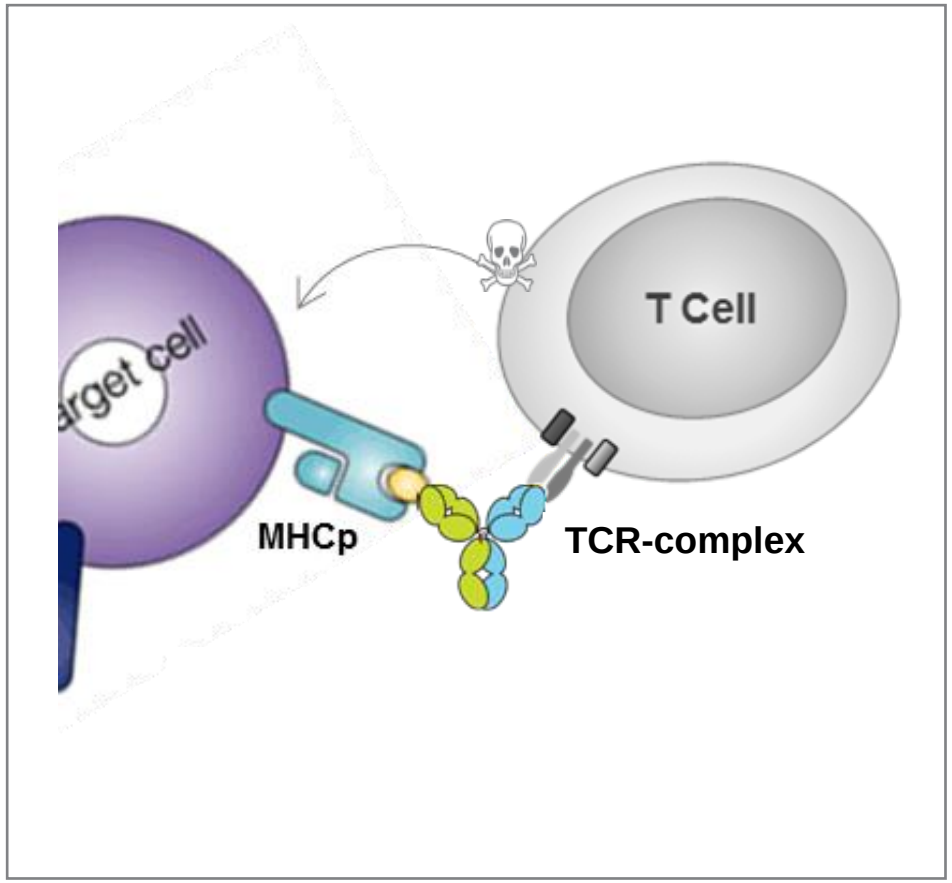
- Intracellular proteins are being degraded by proteasome and presented on cell surface by MHC class I (HLA) to T cells

- T Cell receptors (TCR) can target cellular proteins through recognition of HLA-presented peptides
- Self-reactive T cells are being deleted through negative selection
- Cancer antigens are often regarded as 'self' → Immune tolerance

- TCR-mimicking antibodies (TCRm) represent a novel class of antibodies capable of selectively targeting tumors via MHC/peptide complexes

Immatics

Proof-of-Principle



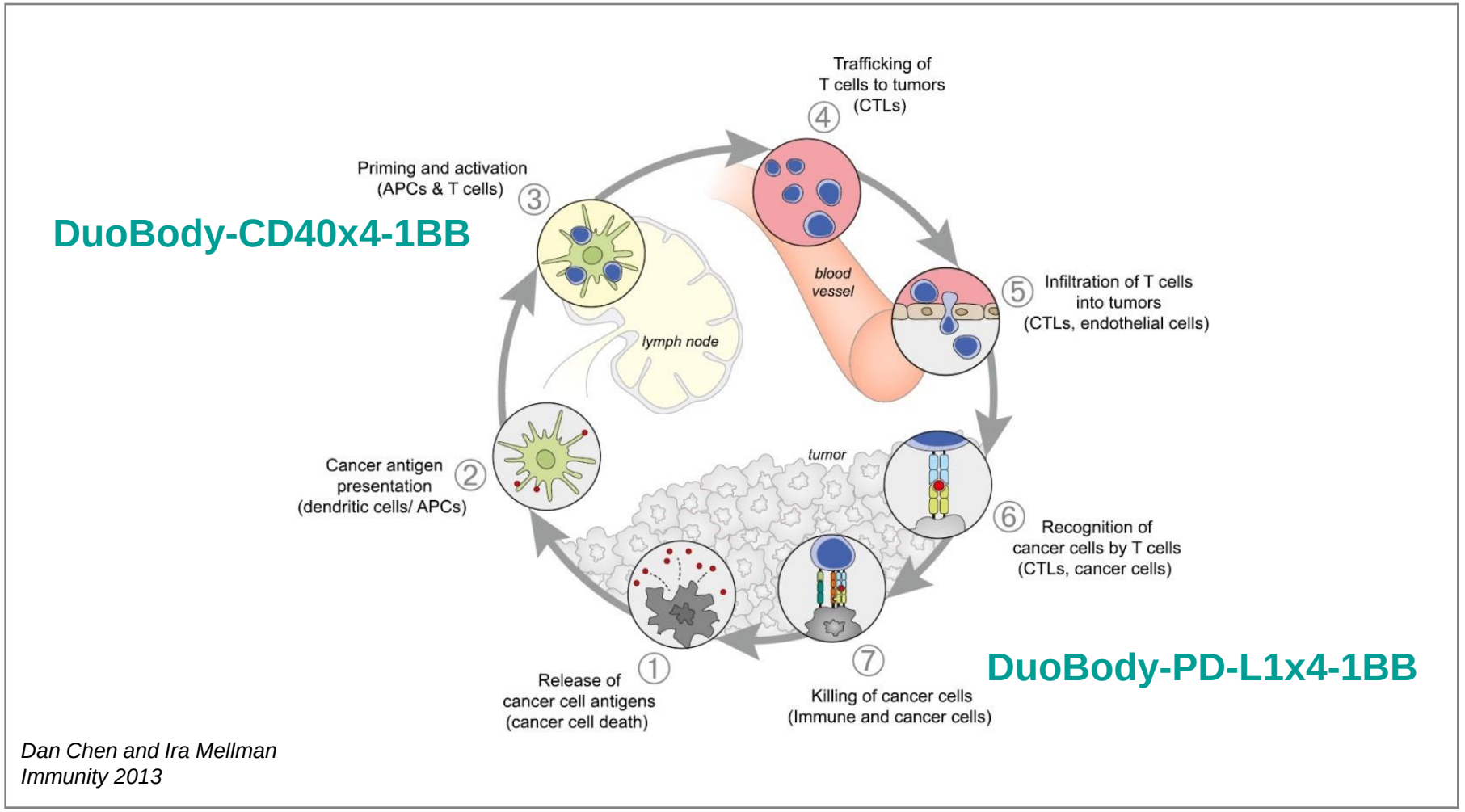
Strategic Alliances

BioNTech

Strategic partnership: research, develop & commercialize bispecific antibody products

- Genmab's DuoBody tech + BioNTech's proprietary antibodies
- Antibodies against key immunomodulatory targets
- For any products jointly selected for dev., costs & ownership shared 50:50
- Supports strategy of creating broad pipeline of next-generation differentiated therapeutics
- IND candidates in development
- Upfront fee of USD 10M to BioNTech, additional potential USD 5M if certain assets selected for development

Genmab-BioNTech Concepts in Cancer Immunity Cycle

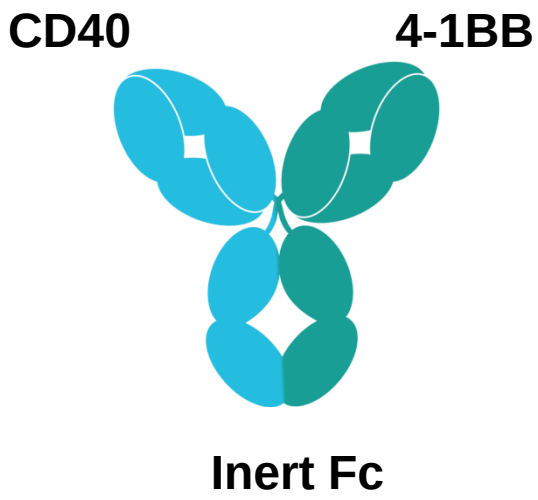


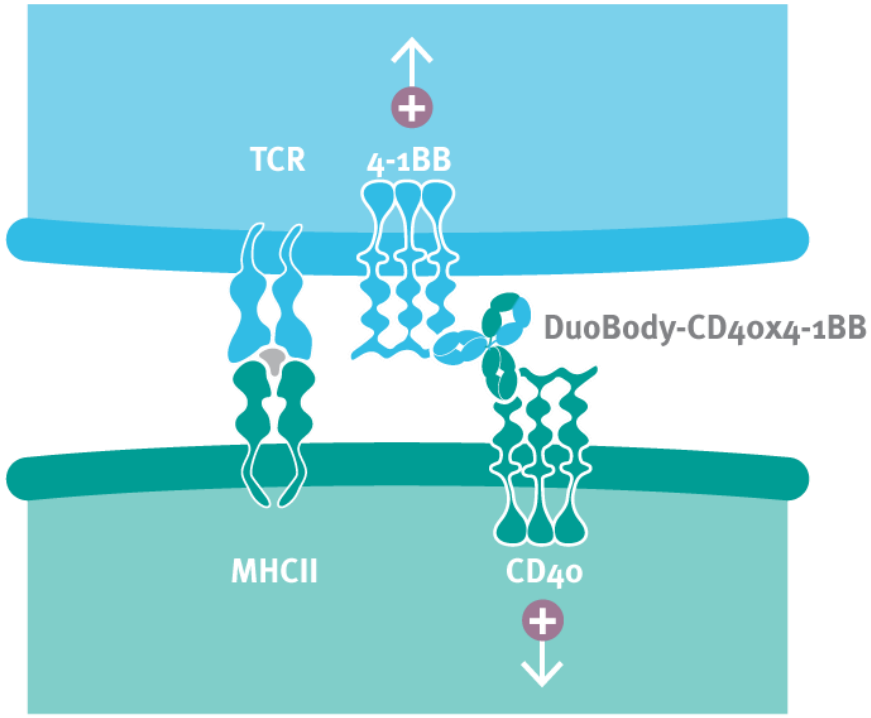
Dan Chen and Ira Mellman
Immunity 2013

- Series of stepwise events must be initiated & allowed for anticancer immune response to proceed & expand iteratively: depicted in the Cancer-Immunity Cycle
- DuoBody-CD40x4-1BB related to step 3 of cancer immunity cycle, leading to priming & activation of APCs and T cells
- DuoBody-PD-L1x4-1BB related to step 7 & direct killing of cancer cells

BioNTech

DuoBody-CD40x4-1BB

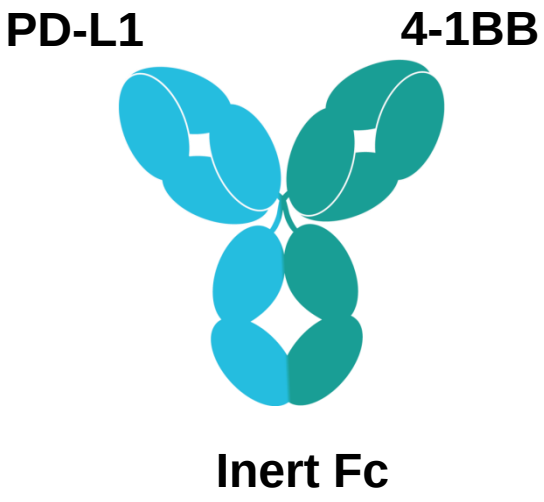


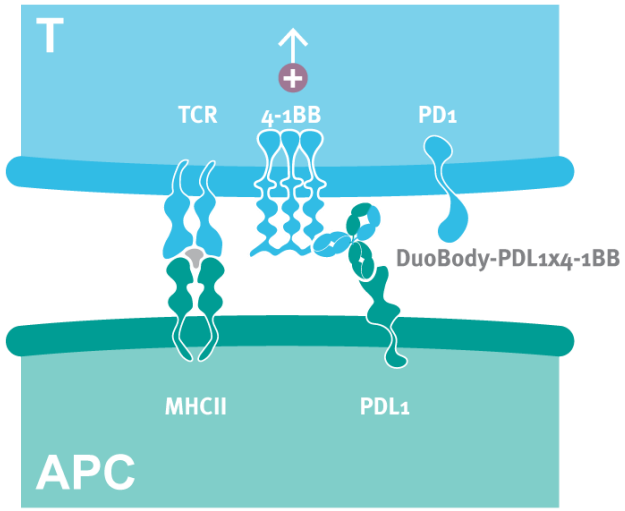


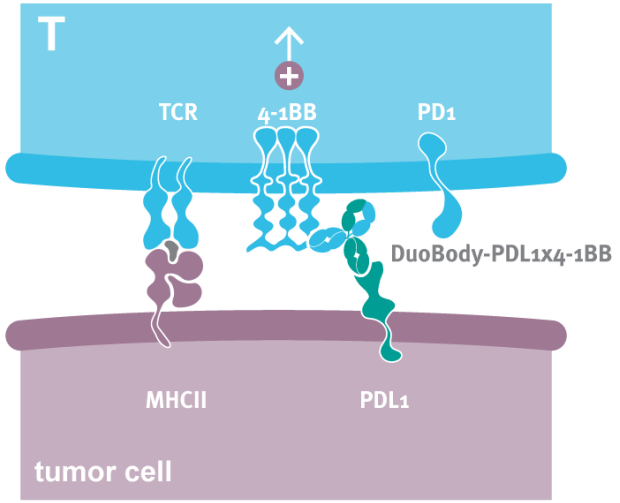
DuoBody-CD40x4-1BB developed in collaboration with BioNTech

BioNTech

DuoBody-PD-L1x4-1BB







DuoBody-PD-L1x4-1BB developed in collaboration with BioNTech

Solid Financial Foundation

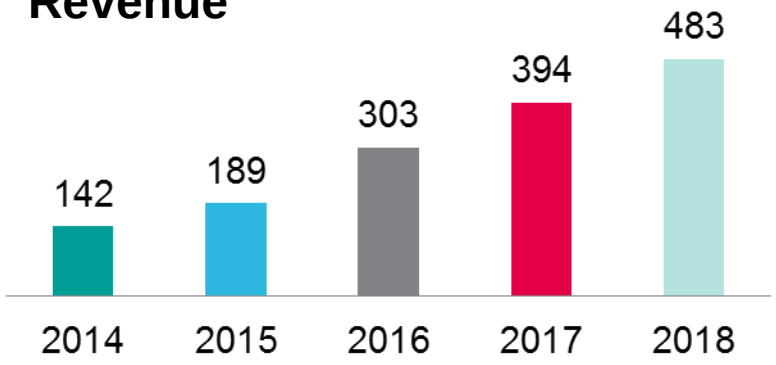
David Eatwell, Executive Vice President & Chief Financial Officer

Genmab

Strong Financial Foundation

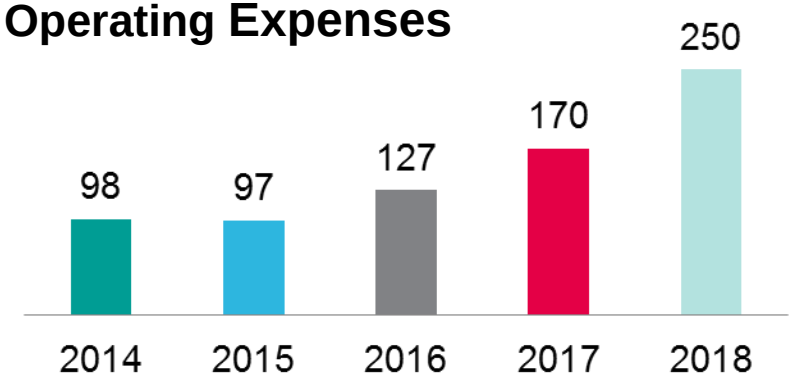
Expanding Top Line

Revenue



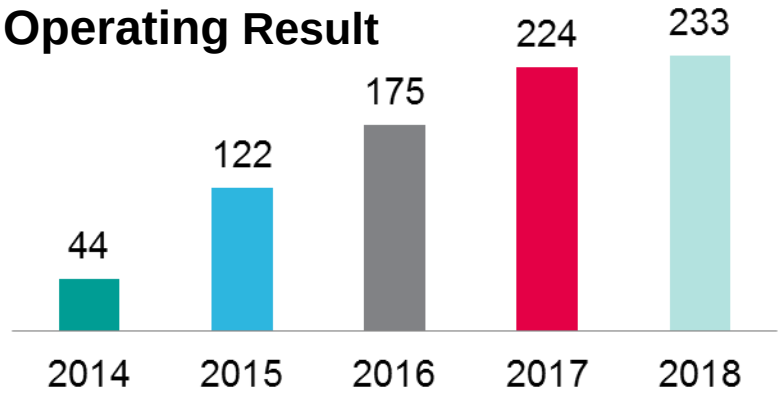
Increasing Investment

Operating Expenses



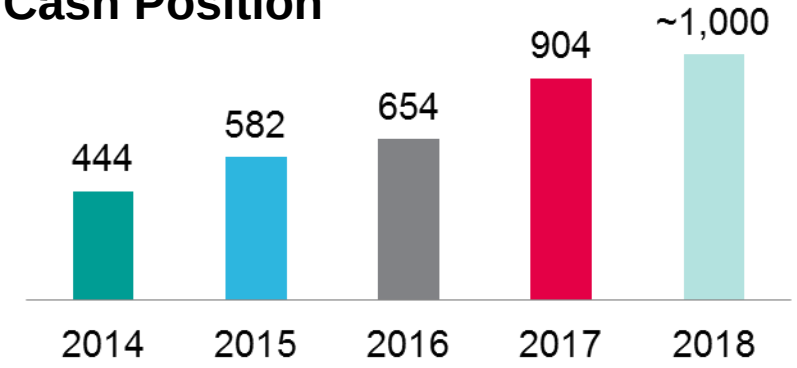
Sustainable Profits

Operating Result



Well Capitalized

Cash Position

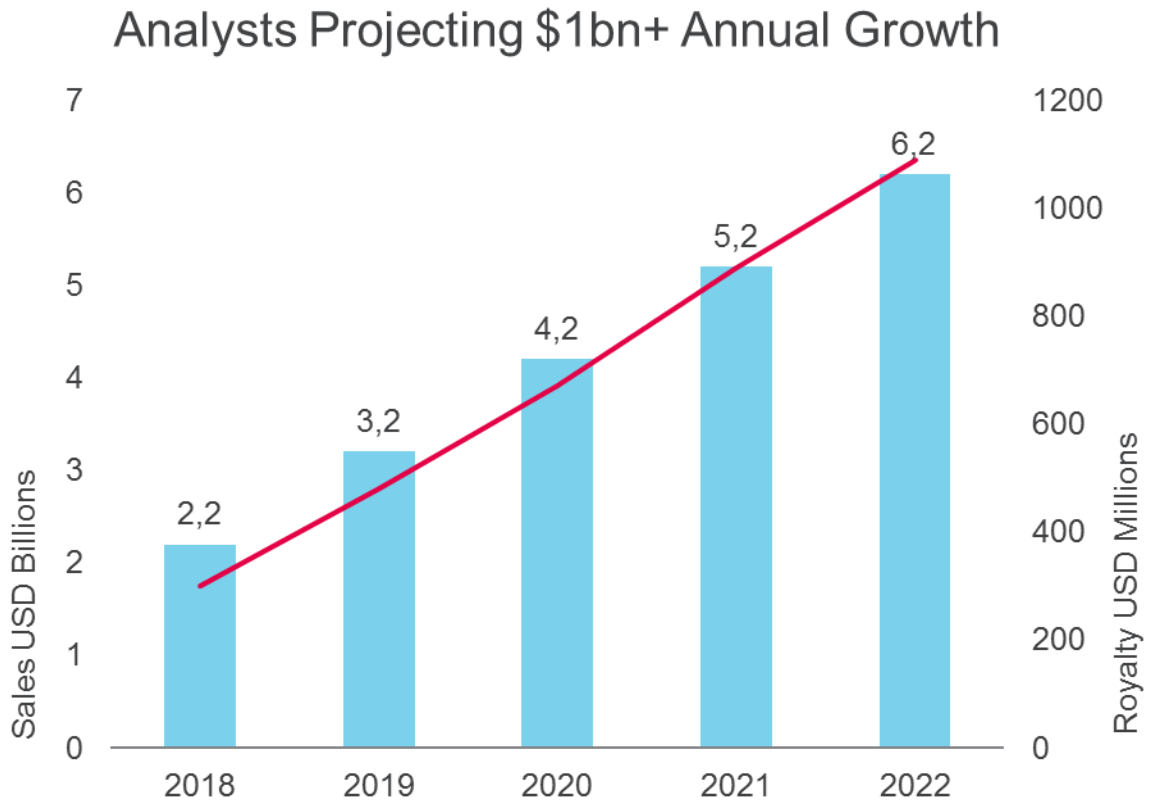


All amounts in USD millions. USD 1 = DKK 6.00

2018 = Mid-point of Guidance

DARZALEX

Significant Earnings Potential



Tiered royalty 12-20%

Bars = Sales
Line = Royalty

USD >20 Bn

in sales

(by Janssen)

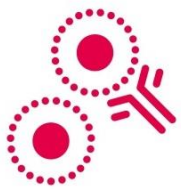
USD >3 Bn
in royalties

From 2018-2022

Disciplined Investment

Portfolio

- 2017: 2 products
- 2018: 4 products
- 2019: 7+ products

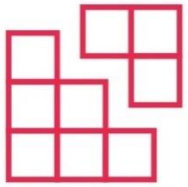


Next Gen.Technologies

- DuoBody
- HexaBody
- HexElect

Strategic Alliances

- BioNTech
- Immatics



Capabilities

- Expanding: R&D and support
- Adding: Translational Research and Commercial

In Summary

Positioned for Success

- Significant earnings potential
- Ability to invest in pipeline & technologies
- In control of our destiny
- Selectively invest in value creating products
- Option to in-license / acquire or out-license
- Retain ownership & achieve 2025 vision

2018 Achievements & Beyond

Jan van de Winkel, President & Chief Executive Officer

Genmab

2018 Achievements

DARZALEX

- ✓FDA approval in U.S. in 1L MM, based on ALCYONE data
- ✓ EC approval in EU in 1L MM, based on ALCYONE data
- ✓New Ph III D+RVd trial in 1L MM initiated
- ✓Upward sales trajectory

Ofatumumab

- ✓Recruitment completed in Ph III SC RMS studies

Tisotumab Vedotin

- ✓Ph II study in multiple solid tumors started
- ✓Ph II study in 1L/2L Cervical cancer planned
- ✓Ph II study in Ovarian cancer planned
- ✓First pts treated in Ph II Cervical cancer study
- ✓Total 55 Cervical pts treated in Ph I/II study
- ✓Promising data in multiple solid tumors

Other Pipeline

- ✓Enapotamab vedotin (HuMax-AXL-ADC) expansion
- ✓Pts dosed: GEN1029 & GEN3013
- ✓Agreement with Immatics
- ✓Pre-clin. milestone in DuoBody collab. w/ Novo Nordisk
- ✓First pts dosed in Ph I JNJ-64407564 study
- ✓JNJ-61186372 data in NSCLC

Key Events on the Horizon

Anticipated Near-term Newsflow

DARZALEX

- Phase III MAIA MM efficacy analysis in frontline
- Phase III CASSIOPEIA MM efficacy analysis in frontline
- Key 2019 readouts: COLUMBA, GRIFFIN, CANDOR

Ofatumumab

- Ph III RMS Data, 2019
- Potential regulatory filing soon after data, based on study completion & positive results

Tisotumab vedotin

- New Ph II study starts: ovarian & 1L/2L cervical
- Promising solid tumor data

Other pipeline

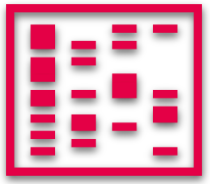
- Accelerate new programs towards the clinic
- Enter new strategic collaborations

2019: Anticipation of a Very Exciting Year

2019 promises to be an exciting year

- Aiming for 3 - 5 new INDs
- Read-out of ofatumumab SC data in RMS, followed by possible filing
- Read-out of daratumumab SC data, followed by possible filing
- Data from enapotamab vedotin (HuMax-AXL-ADC) expansion cohorts
- Data from HexaBody-DR5/DR5 trial
- Data from DuoBody-CD3xCD20 trial
- Progress expansive clinical development tisotumab vedotin
- Potential Ph III teprotumumab read out
- Move from 6 to 10 Genmab-owned products evaluated in clinic

Positioned to Become a Leader in Cancer Immunotherapy


Substantial existing pipeline

- DARZALEX blockbuster & growing
- Expansive rapid development tisotumab vedotin
- Promising truly differentiated products in early clin. development

Developing new proprietary next generation Ab technologies

- DuoBody & HexaBody technologies validated
- Novel HexElect antibody platform

Strategic alliances

- Pipeline expanded with additional next-generation bispecific products
- Supportive of future advancement

Building world-class team

- Expanding on existing broad expertise
- Building new capabilities

Well capitalized for strong growth

- Expenses more than paid for by growing revenues marketed products
- Able to invest in new products & next generation technologies

Q&A

Genmab