Genmab –an antibody innovation powerhouse

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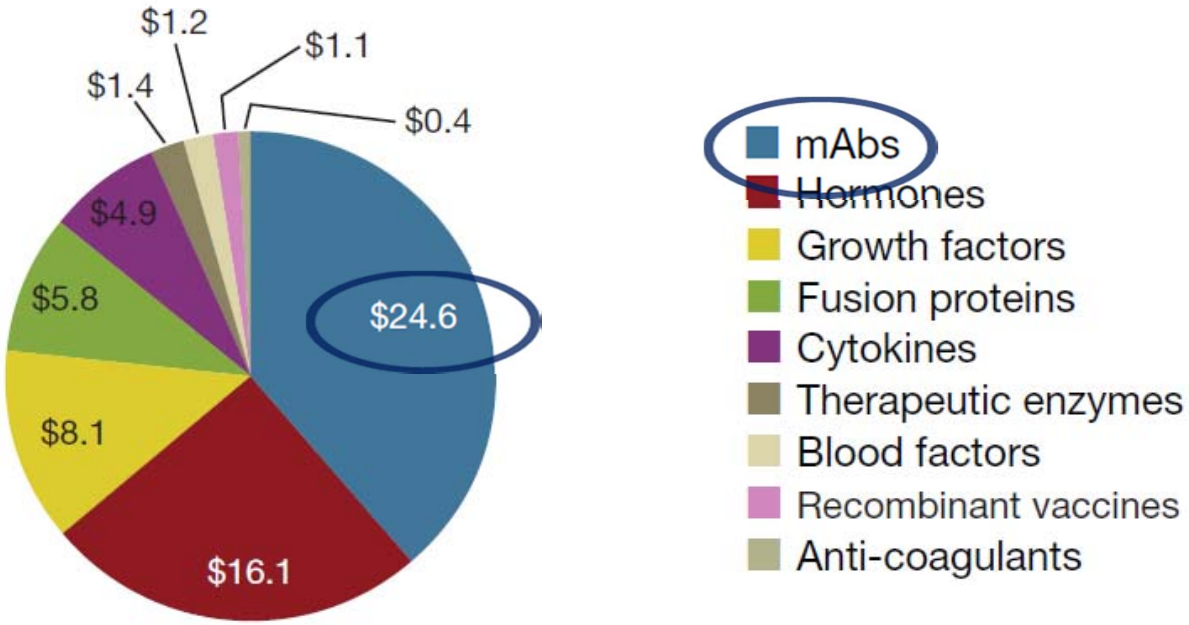
Genmab

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.

Antibodies lead Biologics

US sales 2012 [$ billions]

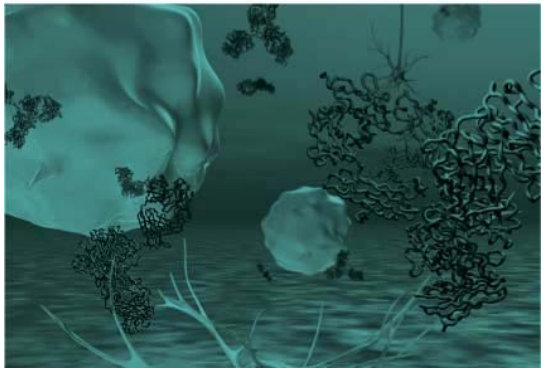


- **Biotechnology**
  - Drives innovation
  - Responsible for 1/3 all molecules in development
- **Antibodies**
  - 25% of all drugs in development

S. Aggarwal, Nature Biotechnol. 2014; 32: 32-39

Leading International Biotechnology Company

- Creating and developing human antibodies to treat cancer
- Arzerra® (ofatumumab), our first approved antibody, reached market in < 8 years
- Blue chip partners: GSK (Arzerra), Janssen (daratumumab & DuoBody platform), Roche, Novartis, Seattle Genetics, Lundbeck, Amgen, KHK, Lilly
- Innovative and proven R&D engine based on proprietary antibody technologies
  - 14 INDs filed in 14 years
- Broad pipeline of innovative drugs

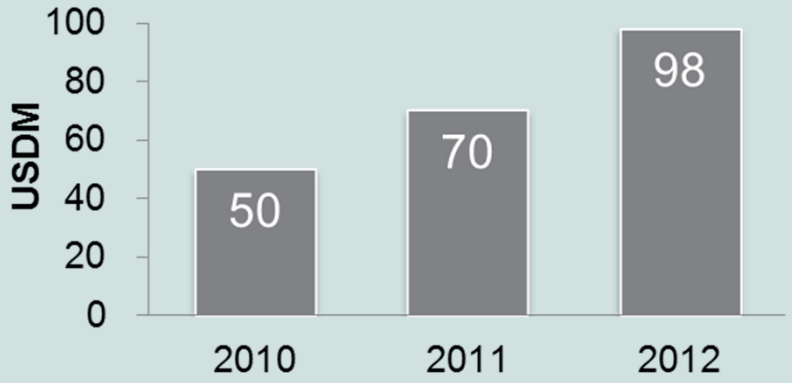


Arzerra® (ofatumumab)

Our First Marketed Product

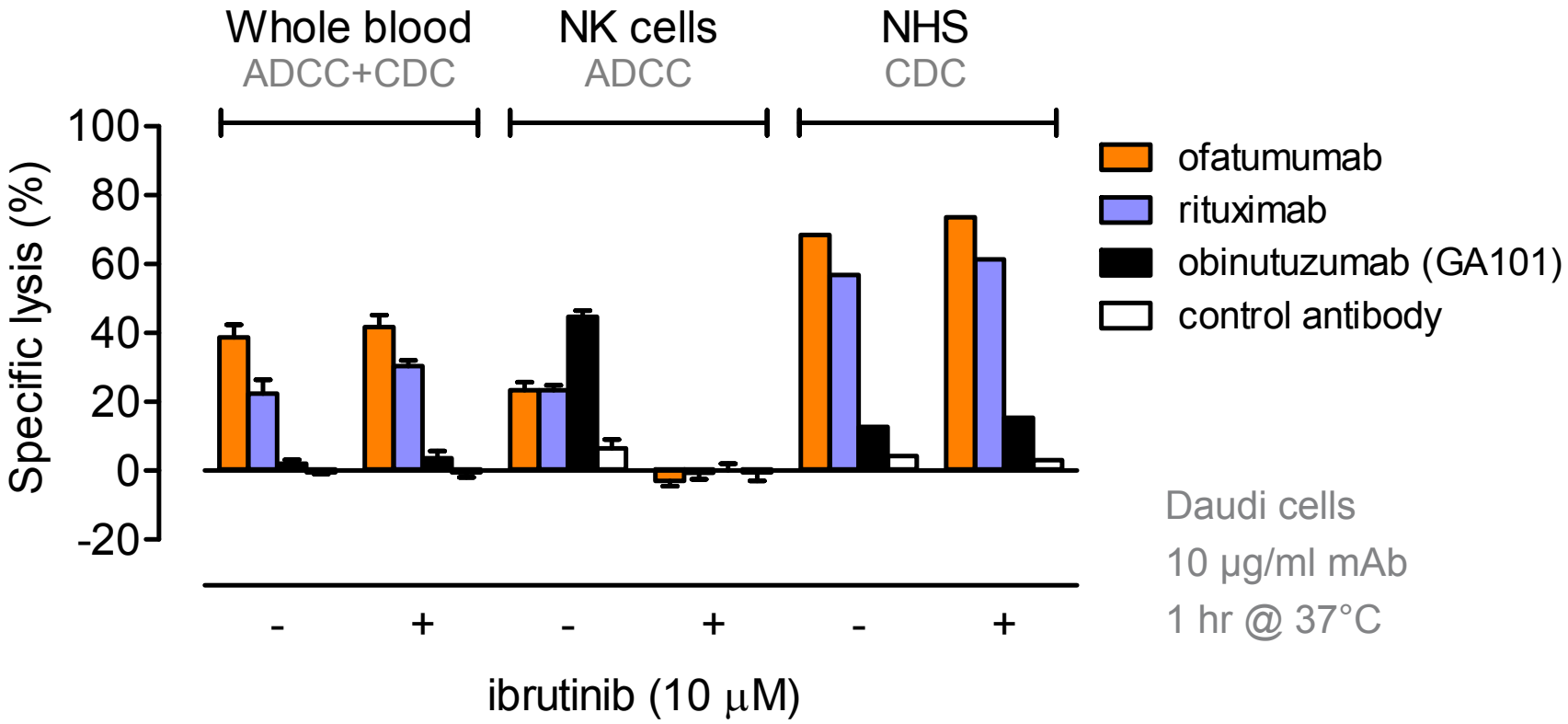
- Collaboration with GSK
- Fully human antibody targeting CD20 on cancerous B-cells
- Effectively engages immune system, binds to a unique epitope
- Differentiated to other CD20 mAbs, targets slice of > $7 Bn market
- Approved in major territories for CLL pts that do not respond to current treatments (fludarabine & alemtuzumab)
- Application for expanded label in 1st line CLL in EU, US PDUFA date April 19, 2014
- 7 cancer pivotal trials ongoing
- Potential in cancer & autoimmune diseases

Sales Growth by GSK



- 9 month 2013 sales GBP 56.1M (~$89M); royalty DKK 98M
- Genmab Cancer Royalty = 20%

Ibrutinib abrogates CD20 antibody-mediated killing by ADCC, whereas CDC is not affected



Daratumumab (HuMax®-CD38)

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

First-in-Class Fully Human Antibody

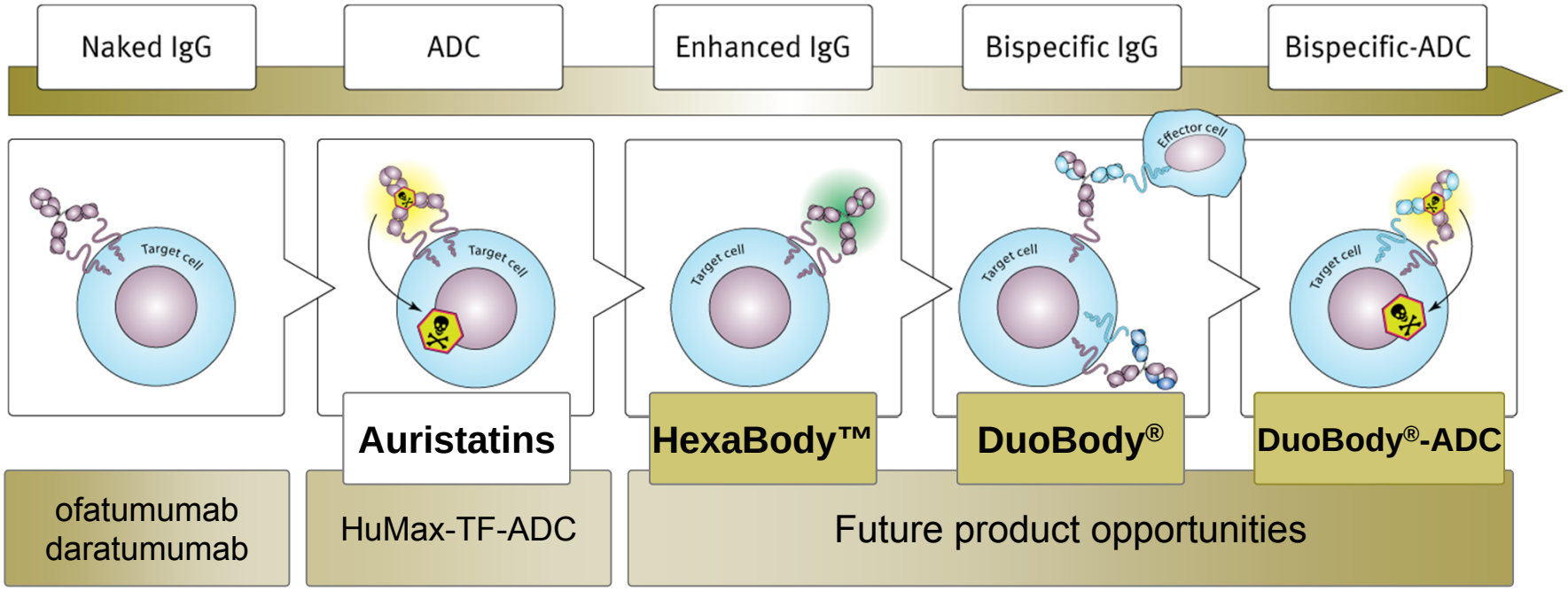
- Targets CD38 molecule on multiple myeloma (MM) cells
- Potential in: MM, DLBCL, FL, Plasma Cell Leukemia, ALL, Mantle Cell Lymph., AML
- Blockbuster potential
- Promising early clinical data
- Breakthrough Therapy Designation, Fast Track & Orphan Drug status awarded by FDA

Partner: Janssen Biotech

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

Genmab Product Innovation

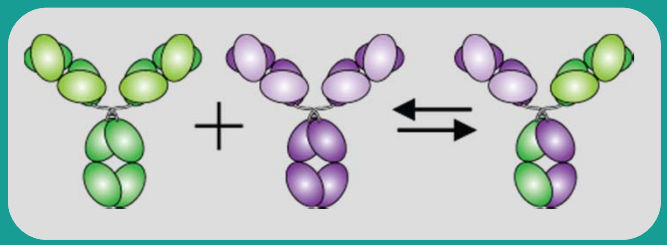
Exploiting the Ways Antibodies Work



DuoBody® platform

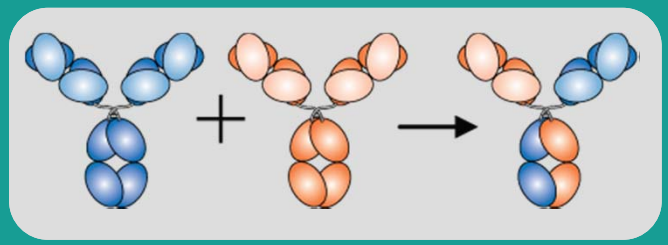
Efficient bispecific antibody generation

DuoBody platform is based on Fab-arm exchange,
a naturally occurring process for generating bispecificity



Natural process for bispecificity

IgG4
Naturally occurs in human body
Dynamic reaction



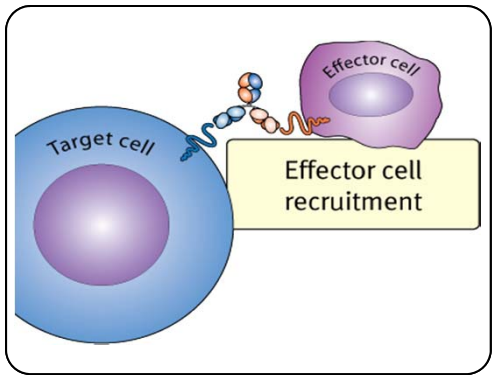
DuoBody process for bispecificity

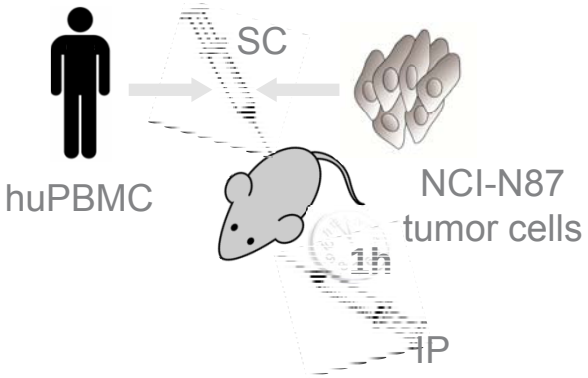
IgG1
Controlled laboratory conditions
Unidirectional reaction

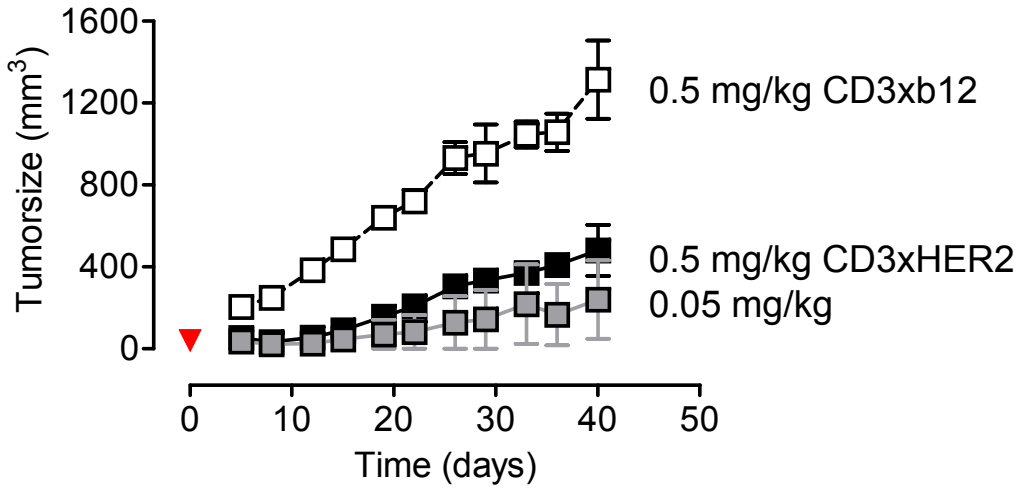
Duobody

Proof-of-concept - Potent therapy at low dose

- Example: CD3 x tumor target bispecific antibodies recruit T-cells to specifically kill tumor cells







A Labrijn et al. PNAS 2013; 110; 5145-5150

DuoBody® Platform

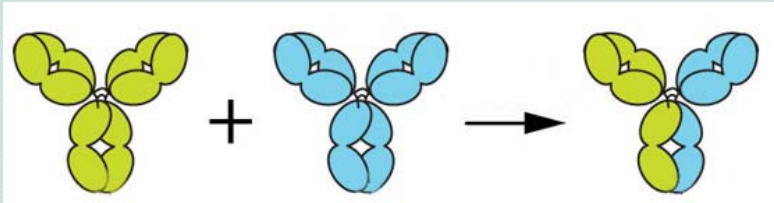
Innovative Technology for Bispecific Antibodies

DuoBody

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

Major Collaborations

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



HexaBody antibody technology

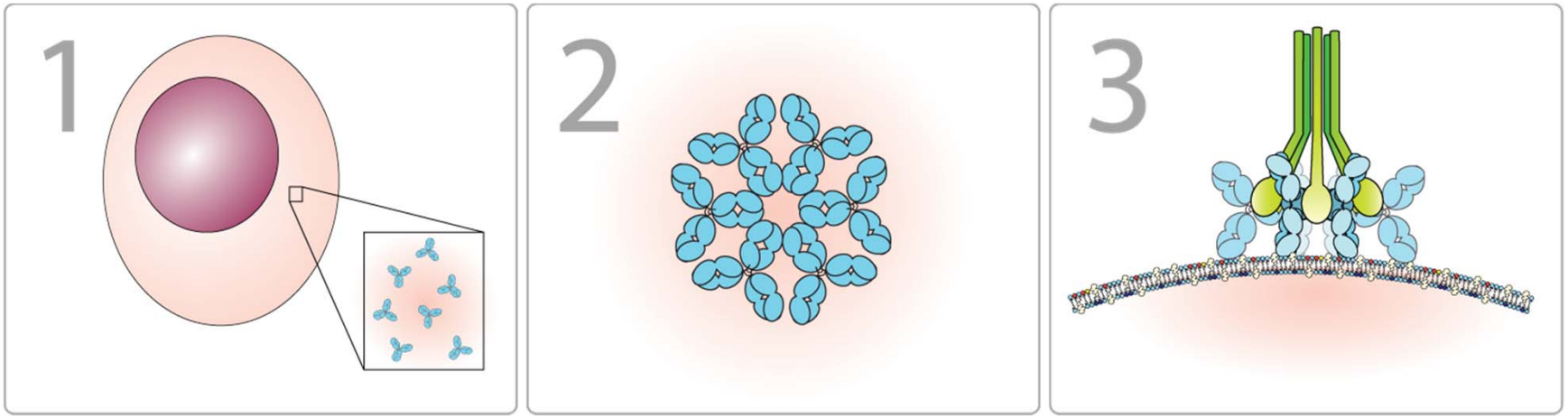
Enhancing natural killing mechanisms

Builds on natural antibody biology

- Potentiates the natural ability of antibodies to activate target killing by antibody hexamerization after target binding

Induces and enhances complement-dependent cytotoxicity (CDC)

- CDC is major MoA for existing therapeutic antibodies, including ofatumumab and daratumumab
- The HexaBody antibody technology can bestow CDC capability to essentially any antibody



HexaBody – Proof of Concept

Enhanced CDC Applicable to Wide Range of Targets

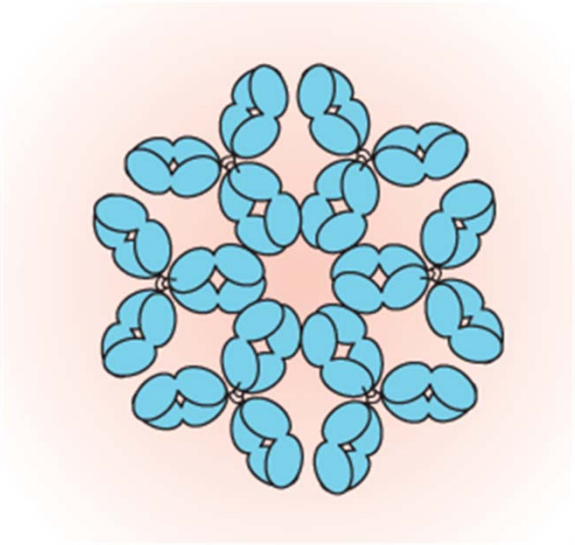
- The HexaBody technology profoundly increased CDC activity of CD20, CD19, CD38 and CD52 antibodies

HexaBody™ Antibody Technology

Enhancing Multiple Natural Killing Mechanisms

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

HexaBody



Open Innovation

Networking Leads to Better Insights in Antibody Biology, Accelerating the Creation of Innovative Antibody Formats

40 patent applications & patents

DuoBody

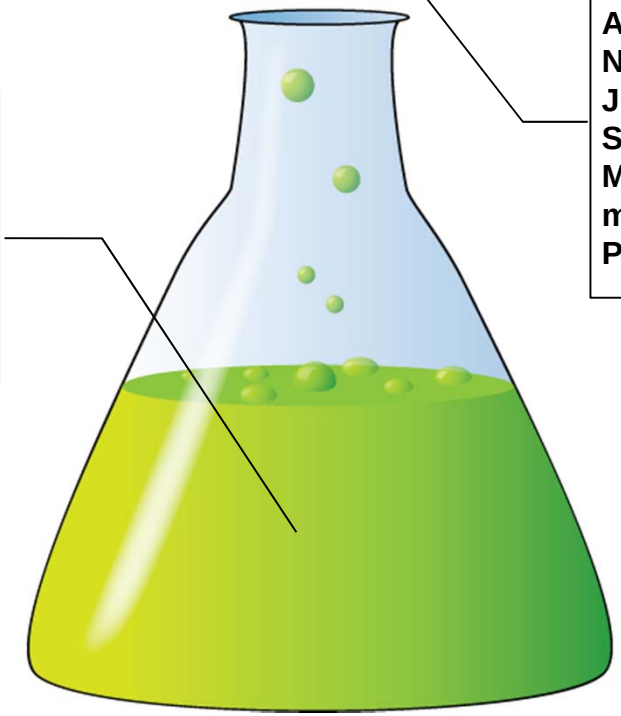
HexaBody

High quality scientific publications

Science 2007
Ann NY Acad Sci 2008
Nature Biotech. 2009
J. Immunol. 2011
Structure 2011
Mol. Immunol. 2011
mAbs 2012 /13
PNAS 2013

Industry – University networking

Sanquin
Genmab
Utrecht University
Maastricht University
Algonomics
The Scripps Research Institute
University of Virginia



DuoBody Ideation challenge

Genmab Challenge: Pioneering Applications for DuoBody Technology

TAGS: Requests for Partners and Suppliers, Nature, Life Sciences, Theoretical-IP Transfer

AWARD: **$35,000 USD** | DEADLINE: **2/18/14** | ACTIVE SOLVERS: 49 | POSTED: 12/18/13

Genmab is looking for innovative concepts for the treatment of important human diseases with bispecific antibodies generated with its DuoBody technology.

Therapeutic antibodies are revolutionizing the treatment of many diseases including cancer and inflammatory diseases. Bispecific antibodies provide an exciting opportunity for developing directed potent therapies, which are based on their dual binding properties. Genmab has developed a novel and versatile technology for the discovery and development of bispecific antibodies. This technology is termed the DuoBody platform.

The goal of this Challenge is to leverage the DuoBody platform and identify pioneering concepts for the generation of bispecific antibodies for the treatment of human diseases.

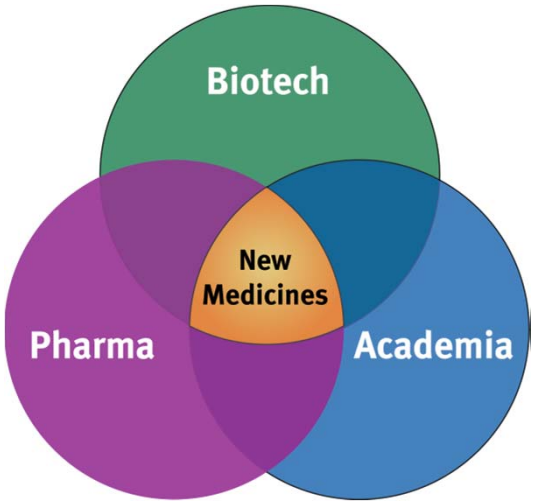
Genmab is also interested in identifying potential collaboration partners with innovative insights and proposals – research grants of up to $100,000 (direct costs) – are available for negotiation with the institutions to which winning Solvers are affiliated.

This Challenge requires only a written proposal.

Development of therapeutics
Partnering supports future growth

Key factors for successful drug development

- Networking & strategic partnering
- New partnerships
  - Pharma
  - Biotechnology
  - Academia
- Open and transparent communication



Thank you