



## **Affimed**

A technology and product orientated company

**BioCapital Europe, Amsterdam, March 28, 2007**

## Mission



Our mission is to become a leader in the discovery and development of next generation antibodies for the treatment of cancer and other diseases with unmet medical need.

## Company history



- Founded May 2000 by Prof. Melvyn Little and VC investor SHS
- A spin-off of Little's work group 'Recombinant Antibodies' at the German Cancer Research Center (DKFZ) in Heidelberg
- 23 employees, 9 scientists (with key scientists from DKFZ), located at the biotechnology park in Heidelberg
- Several federal grants for cutting edge technology and innovative products
- July 2005, initial financing round closed with First Ventury, KfW and SHS
- **March 2007, closed Series B financing of €25 million (~US\$32M)**
  - BioMed Invest, Life Science Partners, OrbiMed, First Ventury

# Globally experienced Executive Team



**Dr. Rolf H. Günther** MD, PhD, CEO (Aventis, Aventis Behring)  
– Drug Development, Commercial Operations, General Management



**Prof. Melvyn Little** PhD, CSO (Founder, DKFZ)  
– Science, Technology, Academia, Oncology, Intellectual Property



**Dr. Florian Fischer** PhD, MBA, CFO (MedVenture Partners, KPMG, Deutsche Bank)  
– Corporate Finance, Corporate Development



**Dr. Miroslav Ravic** MD, PhD, CMO (Antisoma, Eisai, Boehringer Ingelheim)  
– Clinical Development, Antibodies, Oncology



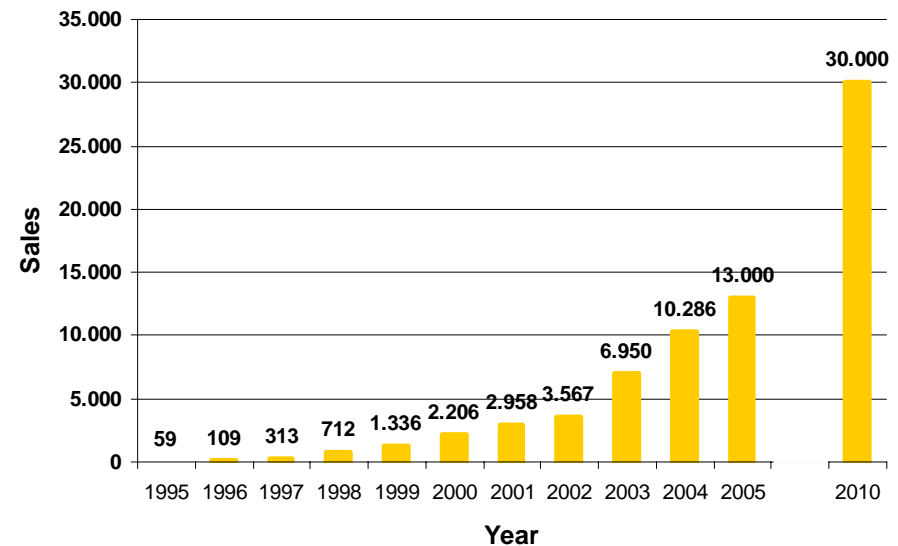
**Gavin D. Clark** BSc, VP Business Development (Procera, J&J, Novartis, Bayer, GSK, Tibotec)  
– Business Development, Commercial Operations

# Therapeutic antibodies fastest growing market



- Sales of US\$ 13 bn in 2005
- CAGR 20% until 2010 with expected sales of US\$ 30 bn
- Several therapeutic MABs with sales > US\$ 1 bn, 3 in cancer indications

Market for therapeutic antibodies (in US\$ million)



Source: Datamonitor 2005

# Antibodies technologies



## Transgenic mouse

Immunizing mice with human AB repertoire that express human antibodies

Major companies are:

- **Amgen (Abgenix)**
- **Medarex**

## Library technologies

Using recombinant DNA-technologies and phage display for antibody selection

Major companies are:

- **AstraZeneca (CAT)**
  - Naïve library
- **Morphosys**
  - Synthetic library

# Affimed's antibody libraries



## Special IgM library



A naïve library derived from the immune system's antibody gene repertoire

## Synthetic library



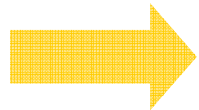
A fully synthetic library of human antibodies

## Semi-synthetic library



A semi synthetic antibody library incorporating aspects of both the naïve and synthetic antibody libraries

# Advantages of using different libraries



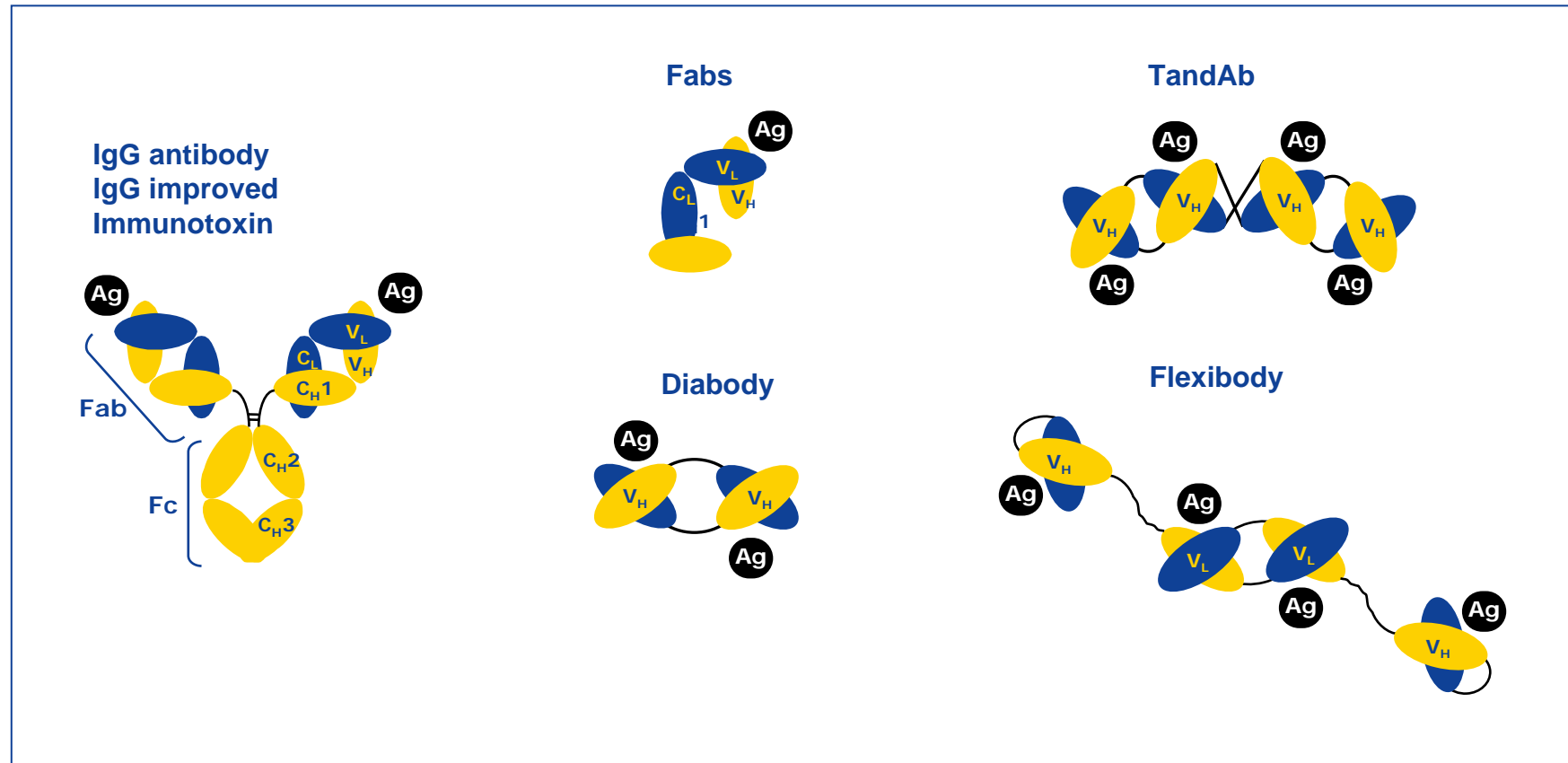
## HIGHER DIVERSITY

### Ideal for the discovery of antibodies for difficult targets

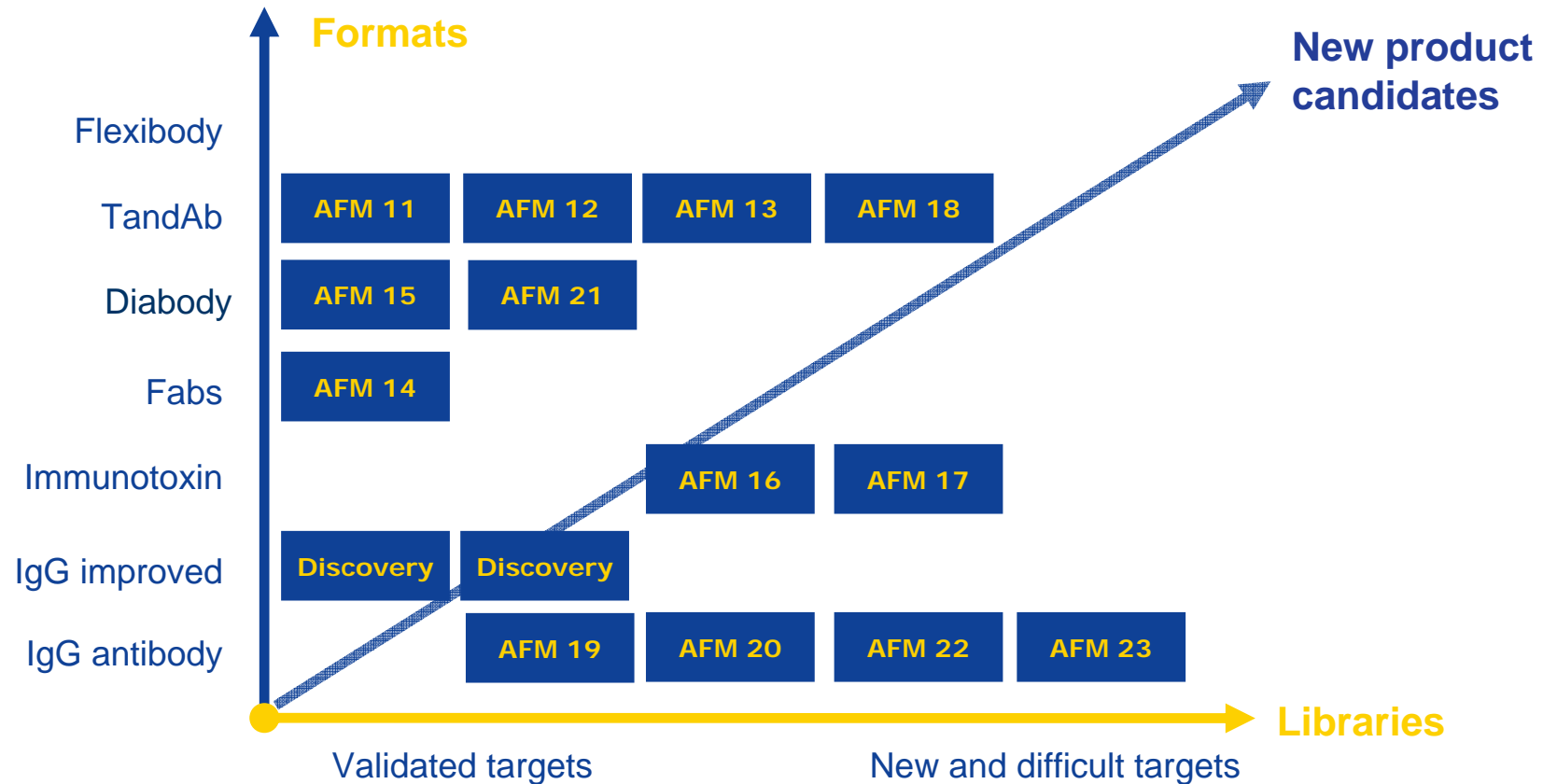
#### Examples of selected antibodies

- Antibody specific for activated form of GPIIb/IIIa
- Antibodies to different domains of CD5
- Antibody that efficiently INHIBITS SIGNALLING PATHWAY anti-IL13R
- Antibody specific for activation receptor isotype  
– anti-FcγIIIa on natural killer cells  
(only three amino acid differences to FcγIIIB)

# Affimed uses a variety of antibody formats including propriety TandAbs and flexibodies



# Optimized formats and targets specific to indications



# Product pipeline



# Discovery



# AFM13 - Anti CD30xCD16 TandAb for the treatment of Hodgkin's Disease



## **Current treatment – aggressive chemotherapy and/or radiotherapy**

- High response rate, but relapsing patients difficult to treat
- Need for gentler, more specific method that also permits the treatment of chemo resistant tumors
- No immunotherapeutic product is available

## **AFM13 targets CD30 antigen and CD16A on NK-cells**

- Specific and very effective engagement of NK-cells
- Induces antibody dependent cell mediated cytotoxicity (ADCC)

## **Results:**

- *In vitro* and both pre-clinical and clinical *in vivo* data using this approach have demonstrated the potential efficacy of this product for treating Hodgkin's Disease

**Affimed's strategy is to develop AFM13 as the lead product to end of phase IIa clinical trials.**

# AFM11 & AFM12 – Anti CD19xCD3/CD16 TandAb for the treatment of Non-Hodgkins Lymphoma



## **Current therapy – chemotherapy or radiation**

- remission in > 50% but serious side effects

## **Rationale**

- CD19 – more widely expressed on B cells than CD20 (Rituximab) – broader spectrum of indications
- Bi-specificity of both TandAbs enables activation of T-lymphocytes or NK-cells
- Synergistic effect with greater efficacy and fewer side effects

## **Results:**

- POC established for both *in vitro* as well as *in vivo*

**Affimed's strategy is to select the most promising candidate for development as second product to the end of clinical phase IIa.**

# Business strategy

## Revenue and value driven



### **Product development**

- Own development of two products until the end Phase IIa
- Strategic alliances in oncology

### **Commercialization of the technology**

- Partner specific screening projects

### **Out-licensing and partnering**

- Three non-oncology
- Five oncology

# Broad patent portfolio of antibody technologies



- Patents for **own antibody libraries** with very broad claims
- Patents for **novel antibody formats**
- Patents for a variety of **products**
- IP for **combination** of bi-specific antibodies for recruiting both **T cells and NK cells**
- Freedom of operation due to license and cross-license agreements
- **Less than 5% royalty obligations** with licensing partners for its products

## Summary



- **Affimed develops next generation antibody cancer products**  
Affimed is maturing with operations from discovery through to clinic
- **Source of new antibodies:**  
3 different fully human Antibody libraries
- **Innovative product formats:**  
TandAbs and Flexibodies
- **Production of new formats in bacteria possible – Lower COGS**
- **13 pre-clinical products and product candidates**
- **Strong IP position**
- **Raised ~€34M (~US\$44M) – fully funded through to Q4 2010**