Transforming Immuno-Oncology Using Next-Generation Immune Cell Engagers

Corporate Presentation
March 2018

Forward-looking statements / safe harbor

This presentation and the accompanying oral commentary contain “forward-looking” statements that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this presentation and the accompanying oral commentary, including statements regarding our future financial condition, business strategy and plans and objectives of management for future operations, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “believe,” “will,” “may,” “estimate,” “continue,” “anticipate,” “intend,” “should,” “plan,” “might,” “approximately,” “expect,” “predict,” “could,” “potentially” or the negative of these terms or other similar expressions. Forward-looking statements appear in a number of places throughout this presentation and the accompanying oral commentary and include statements regarding our intentions, beliefs, projections, outlook, analyses and current expectations concerning, among other things, the safety and efficacy of our product candidates, our ongoing and planned preclinical development and clinical trials, our collaborations and development of our products in combination with other therapies, the timing of and our ability to make regulatory filings and obtain and maintain regulatory approvals for our product candidates our intellectual property position, our collaboration activities, our ability to develop commercial functions, expectations regarding clinical trial data, our results of operations, cash needs, financial condition, liquidity, prospects, future transactions, growth and strategies, the industry in which we operate, the trends that may affect the industry or us and the risks uncertainties and other factors described under the heading “Risk Factors” in Affimed’s filings with the Securities and Exchange Commission.

Forward-looking statements involve known and unknown risks, uncertainties, assumptions and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Forward-looking statements represent our management’s beliefs and assumptions only as of the date of this presentation. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

Affimed

Pioneering immune cell-based cancer immunotherapies

Approach

- Eliminating tumor cells by engaging NK cells or T cells

Pipeline

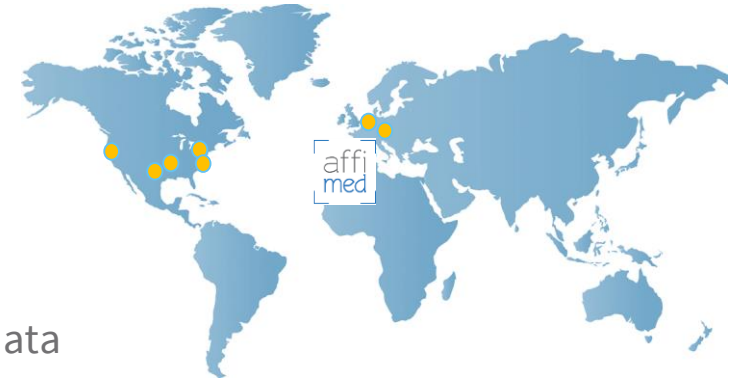
- Clinical and preclinical assets based on tetravalent bispecific antibody formats

Leader in NK cell engagement

- AFM13 is the most advanced NK cell engager with favorable safety and efficacy data
- Suitable for combinations with checkpoint inhibitors (CPIs), adoptive NK cell transfer or cytokines (IL-2, IL-15)
- Differentiated T cell-based approach
- Two molecules in clinical development based on AFMD platform

Partnerships with industry, academia, and advocacy groups

- Merck (MSD), MD Anderson Cancer Center (MDACC), Leukemia & Lymphoma Society (LLS)



THE UNIVERSITY OF TEXAS MD Anderson Cancer Center Making Cancer History®

MHH Medizinische Hochschule Hannover

STANFORD SCHOOL OF MEDICINE Stanford University Medical Center

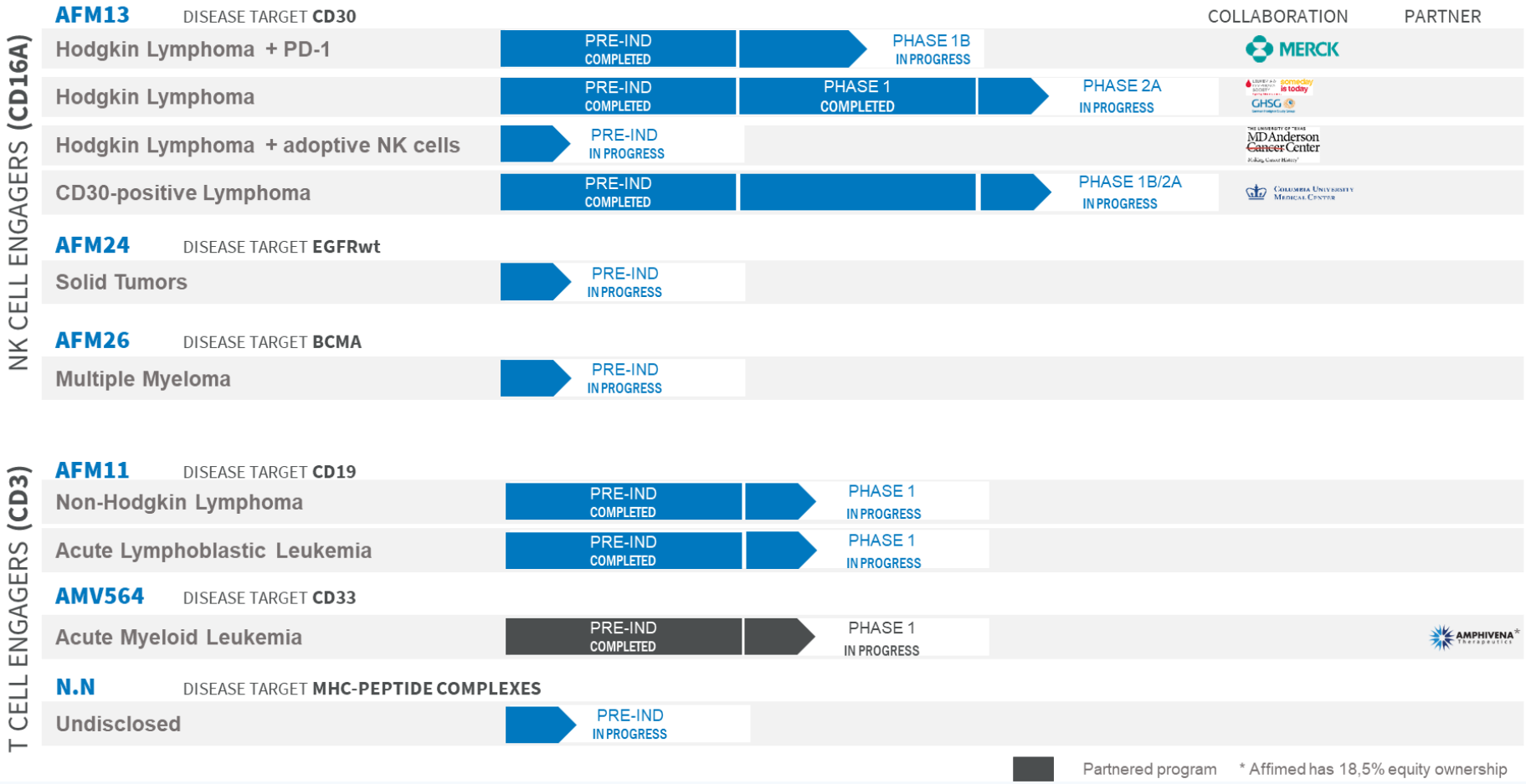
dkfz.

MERCK

Washington University in St. Louis

LEUKEMIA & LYMPHOMA SOCIETY® fighting blood cancers

Affimed's pipeline



AFMD's pipeline opportunities

Differentiated NK and T cell engager programs

AFM13: Most advanced NK cell engager in clinical development

- Positive efficacy data as monotherapy in HL and in CD30-positive lymphoma
- Encouraging efficacy in combination with Keytruda (best response preliminary data: ORR of 89% and CR rate of 44%)
- CD30+ lymphoma represents a novel opportunity with limited competition (e.g. ALCL, PTCL)

AFM26: Leveraging BCMA as target in autologous stem cell transplant (ASCT)-eligible patients

- Addressing MRD challenge in MM due to its ability to eliminate MM cells with very low BCMA expression

AFM24: Potential to widen therapeutic window and address EGFR-resistant patient population

- First-in-class NK cell engager in solid tumors
- Opportunity to improve efficacy of CPIs

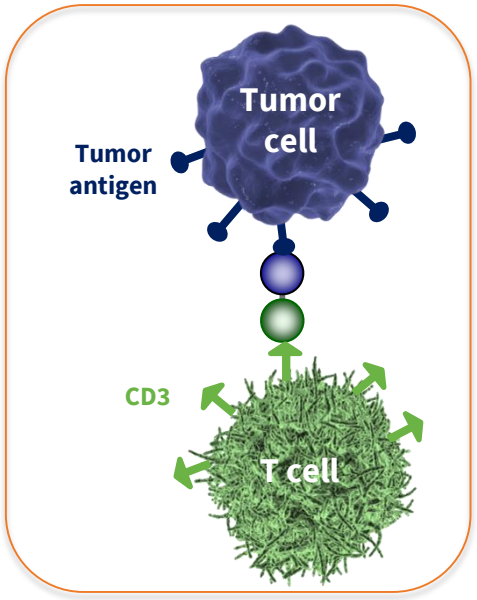
AFM11: Well-differentiated approach for CD19+ malignancies

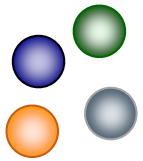
- Positioned for treatment of DLBCL and MCL
- Opportunity: Potential to pave path for fast market approval

Affimed's tetravalent bispecific antibody formats

Versatile immune cell engager formats designed for avidity, high specificity and tailored PK

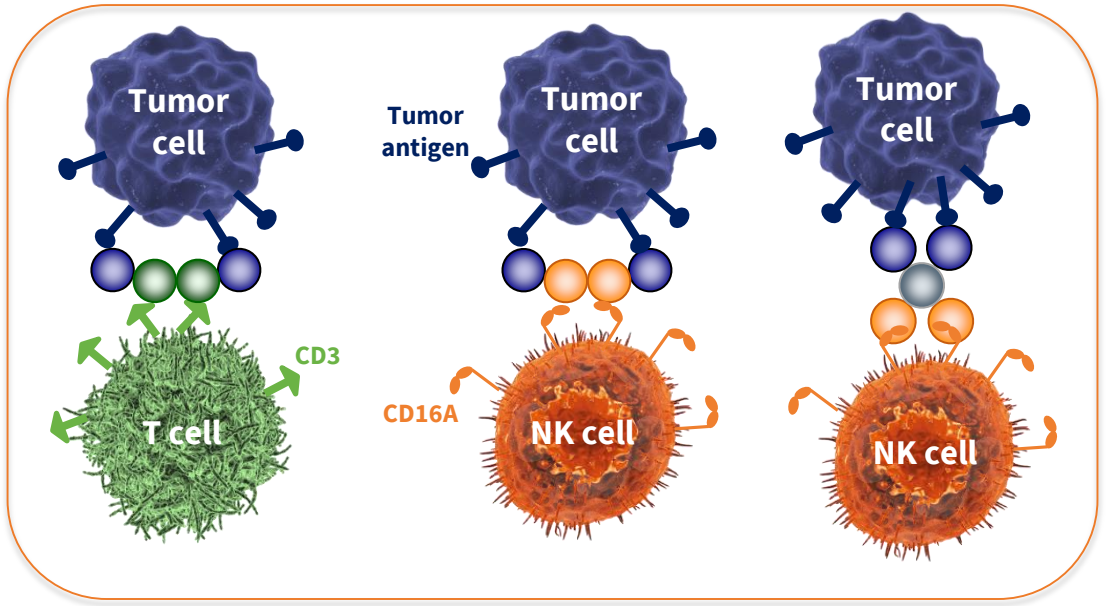
Most competitors
Bivalent, T cell focus





Different antibody binding domains

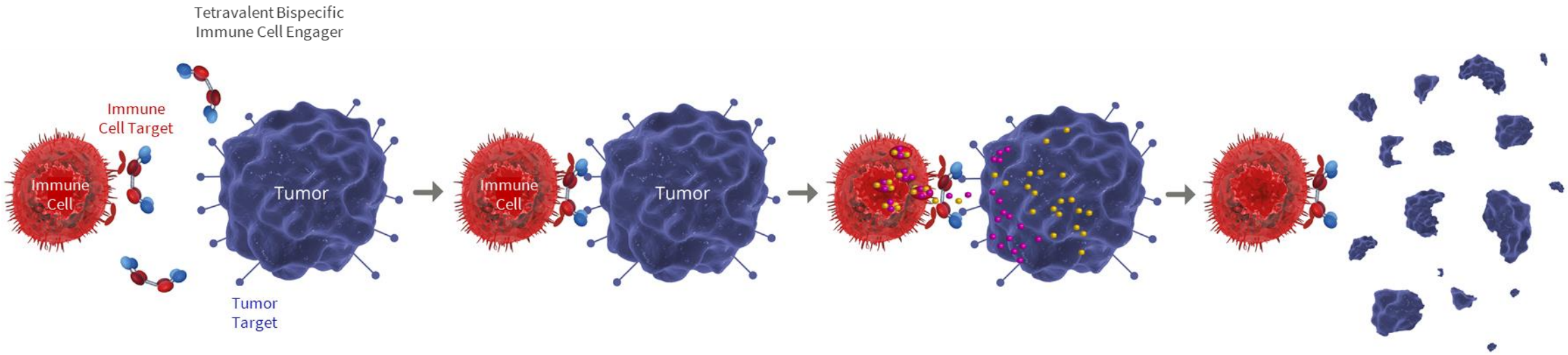
AFMD engager formats
Tetravalent, NK and T cells



Avidity, high specificity, tailored PK

Redirecting and activating immune cells

Tetravalent, bispecific immuno-engager binding redirects NK/T cell cytotoxicity to specific tumor target

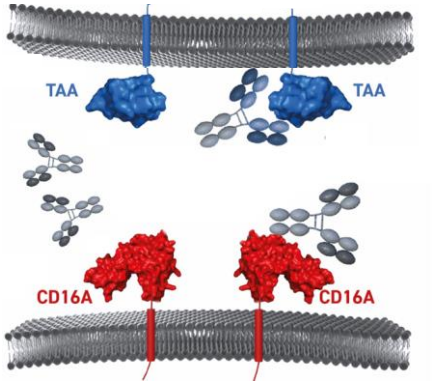


Engager Therapy | Immunological Synapse | Release of Perforins and Granzymes | Tumor Cell Lysis

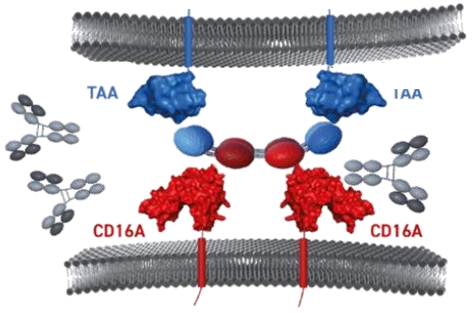
Targeting NK cells through high affinity binding to CD16A

Addressing need of targeting malignant cells that escape elimination by current therapeutics

Current IgG-based approaches



AFMD approach



NK cells

- Crucial in the body's defense against pathogens and malignantly transformed cells
- NK cell engagers can address immune evasion, which compromises immune cell activation

Unique target CD16A

- Key activating receptor capable of "arming" the NK cell
- Constitutively expressed on ~95% of NK cells

Tetravalent bispecific NK cells engagers

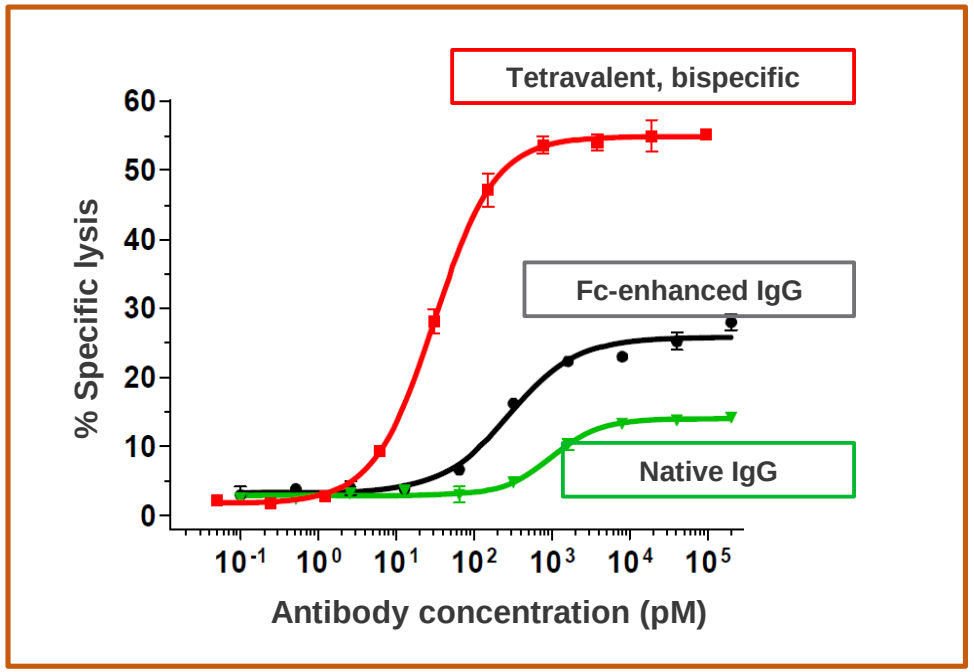
- Up to 1000x higher affinity for CD16A than monoclonal antibodies
- Binding largely unaffected by competing IgG
- High potency independent of whether NK cells express high or low affinity CD16A (V/F)
- No binding to CD16B

Adapted from Koch & Tesar, Transfus. Med. Chemother., 2017

NK cell engager efficacy

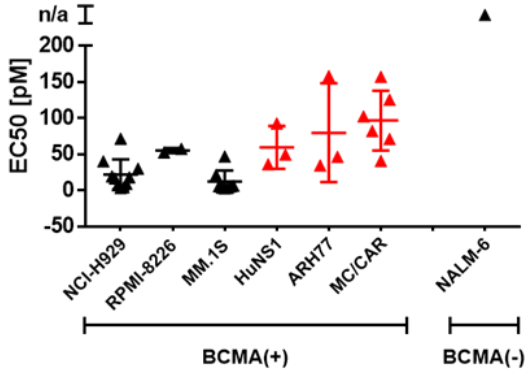
Designed to elicit more potent and effective tumor cell lysis compared to monoclonal antibodies even in cells with very low target expression

Superior potency and efficacy



CD30

Tumor cell lysis at a few hundred receptors



Cell line	Anti-BCMA (SABC)	Mean EC_{50} [pM]
NCI-H929	51,480	22
RPMI-8226	14,710	55
MM.1S	13,180	12
HuNS1	1,440	59
ARH77	1,180	80
MC/CAR	450	97

BCMA

AFM13 (CD30/CD16A) clinical development (1)

Favorable safety profile and single agent clinical activity demonstrated in Hodgkin Lymphoma

Phase 1: Safety and clinical activity demonstrated in heavily pre-treated HL patients

- Dose escalation study: 0.01 – 7.0 mg/kg
- No MTD, favorable safety profile determined
- Tumor shrinkage in 62 % (8/13) and PRs in 23% (3/13) of patients at doses of at least 1.5 mg/kg

Phase 2a: Monotherapy in r/r HL (IST by GHSG, ongoing) demonstrates single agent activity

- Favorable safety profile confirmed
- ORR of 29% (2/7) in patients failing standard treatments including B.V. and who were anti-PD1 naïve
- Data set important for combination studies

AFM13 (CD30/CD16A) clinical development (2)

NK cell engagement shows synergy with PD-1 blocking antibodies *in vivo* and in patients

Synergy between AFM13 and anti-PD-1 in PDX model provides rationale for combination of AFM13 with CPIs

- AFM13 synergizes with anti-PD-1 for tumor control and lymphocyte infiltration
- AFM13 induces rapid NK cell infiltration (as early as day 2 after treatment start)

Phase 1b in r/r HL in combination with Merck's Keytruda® (ongoing)

- Patients with a minimum of three prior lines of treatments: High-dose chemotherapy, ASCT, B.V.
- Favorable safety profile: Well-tolerated with most of the adverse events observed mild to moderate in nature and manageable with standard of care
- Best response preliminary data for 9 patients
  - ORR of 89% (8/9) in patients failing standard treatments including B.V. (vs. 58-63% with anti-PD-1 monotherapy)
  - CR rate of 44% (4/9) in patients failing standard treatments including B.V. (vs. 9-22% with anti-PD-1 monotherapy)
- Both ORR and CRs compare favorably to historical data of anti-PD-1 monotherapy alone in a similar patient population
- Recruitment completed into dose expansion cohort; total of 21 patients to be treated at highest dose

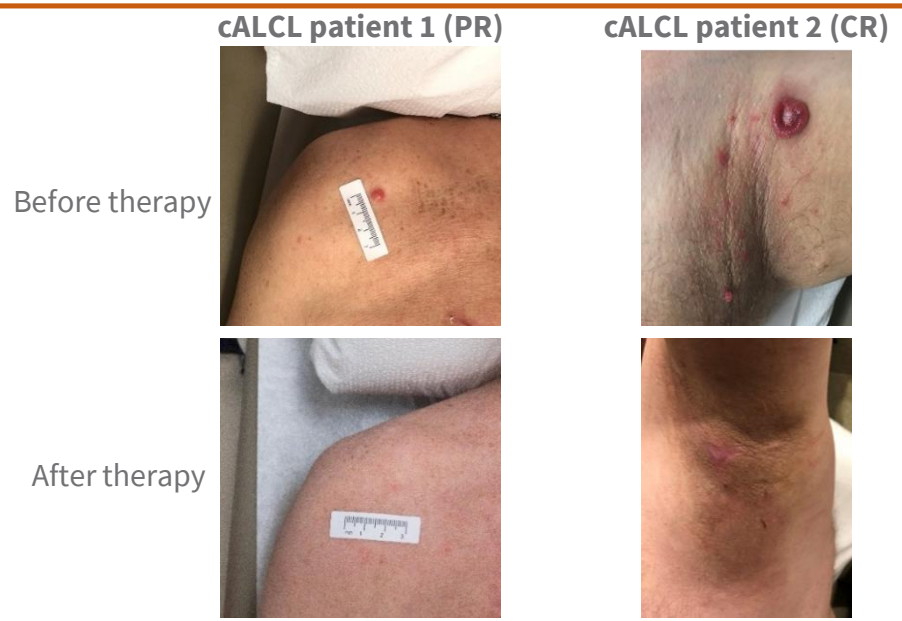
AFM13 (CD30/CD16A) clinical development (3)

CD30-positive lymphoma represents a novel opportunity (e.g. ALCL, PTCL)

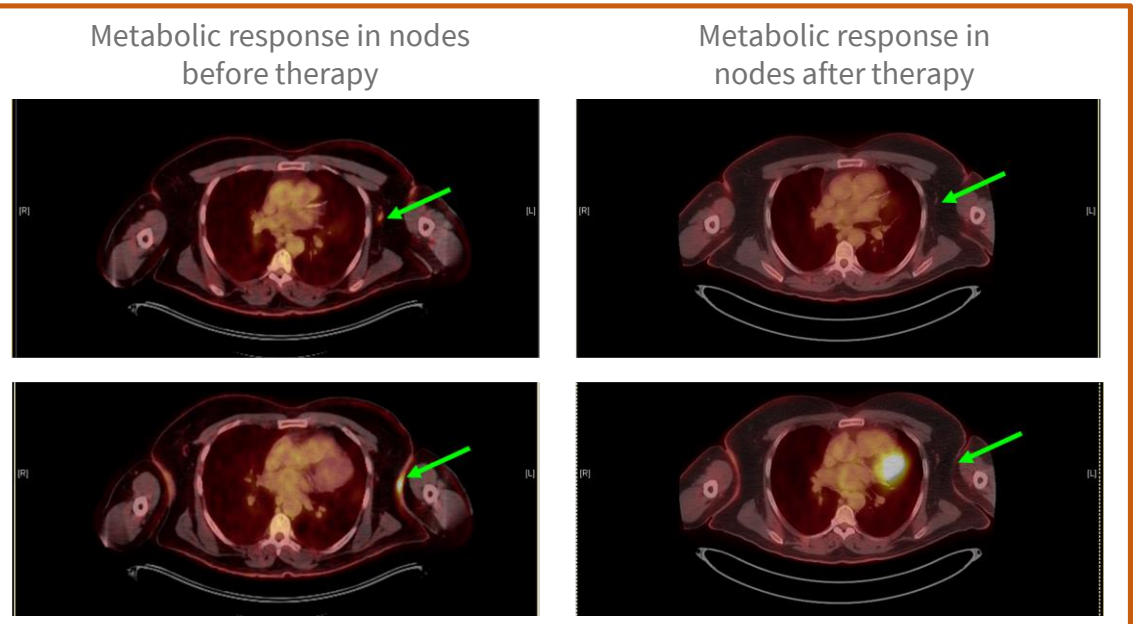
Phase 1b/2a study in r/r CD30+ lymphoma (IST by Columbia University, ongoing)

- Response data from first cohort by global response score (3 patients treated at 1.5 mg/kg)
  - 1 CR, 1 PR (both cALCL) and 1 SD (TMF)
- Recruitment into 2nd cohort completed, 3rd cohort ongoing

Cutaneous lesions



PET CT results - cALCL Patient 2 (CR)



cALCL: cuteanous anaplastic large-cell lymphoma; TMF: transformed mycosis fungoides

AFM13 (CD30/CD16A) further upside potential

Enhancing NK cell efficacy by combining NK cell-engagers with adoptive NK cell transfer or cytokines

Combination with adoptive NK cell transfer

- Higher NK cell numbers show increased efficacy (*in vitro*)
- MDACC collaboration investigates AFMD's NK cell engagers in combination with cord blood derived NK cells
- Initially focused on AFM13
- Approach independent of a patient's endogenous NK cell count
- May pave way for combinations in further indications, e.g. multiple myeloma

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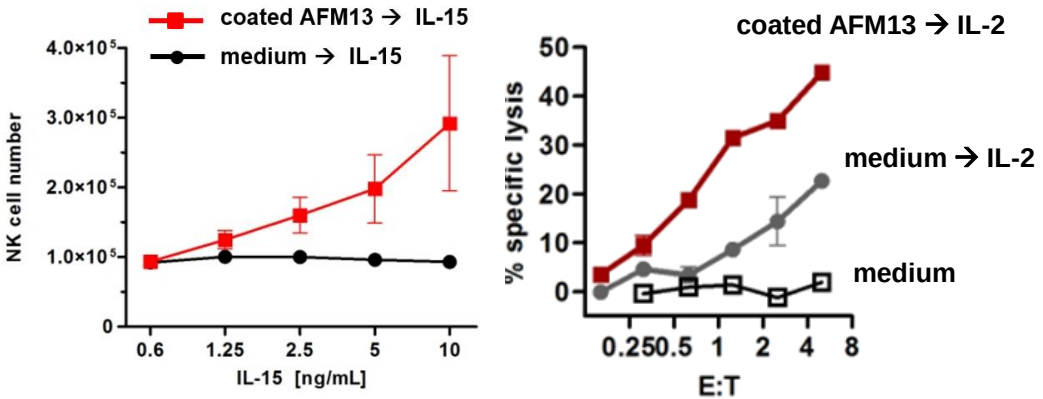
Combination with cytokines

- Cytokines show strong activation of immune cells
- Preclinical data suggest that AFM13 sensitizes NK cells to IL-2 and IL-15 stimulation and proliferation

AFM13-induced sensitization for cytokine-stimulated cytotoxicity of NK cells



AFM26

Leveraging BCMA as target in autologous stem cell transplant (ASCT)-eligible patients

Medical need for a novel approach to treat multiple myeloma

- Treatment at or shortly after ASCT to eliminate minimal residual disease (MRD), avoiding relapse

Targeting BCMA

- BCMA is a highly promising target for therapeutic intervention based on early clinical data (CAR-T and ADCs)
- Low expression of BCMA is a significant hurdle to eliminate malignant cells
- NKs are the first population of lymphocytes to recover post transplant; opportunity to exploit AFM26 in ASCT setting
- Unique opportunity for combination of AFM26 with adoptive NK cell transfer

AFM26: Final candidate selected

- Differentiated MOA: High affinity engagement of NK cells
  - Efficacy (*in vitro*) against cells expressing very low levels of BCMA
  - NK cell binding largely unaffected by IgG competition
- Safety: Lower cytokine release vs. BiTE
- Convenience: Novel NK cell format selected with prolonged half life

AFM24

Targeting EGFR: Development of NK cell engagers to treat solid tumors

Medical need for a novel approach to treat EGFR+ solid tumors

- Widen therapeutic window and address resistant patient population

Targeting EGFR

- EGFR as validated target in solid tumors, however side effects negatively impact market potential (skin toxicity)
- Receptor blocking (e.g. cetuximab) cannot address activating mutations (K-RAS)

AFM24: Final candidate selected

- Differentiated MOA: NK cell activation vs. solely receptor inhibition
  - Increased potency compared to cetuximab enabling NK cell-mediated killing of EGFR low cells
  - Efficacy against *Ras*-mutated, cetuximab-resistant HCT-116 cells in a humanized mouse model
- Convenience: Novel NK cell format selected with prolonged half life

T cell-based therapies

CAR-Ts in the lead, however, antibody-based platforms can address weaknesses

T cell-based anti-tumor therapies

- Clinically validated for CD19 and BCMA
- Limited by significant associated toxicities (CRS, neurotoxicity), high COGS and accessibility (CAR-Ts)

Immune cell engagers

- Different platforms in development
- Short-lived molecules (BiTE, DART) with evidence of good efficacy
- Long-lived platforms with setbacks (stopped trials, low ORRs)

Affimed's tetravalent bispecific antibody platform

- Differentiating features
- Two programs in clinical development with the potential for fast development timelines
  - AFM11 (CD19/CD3), developed by AFMD
  - AMV564 (CD33/CD3) developed by Amphivena

Affimed's T cell-targeting platform

Well-differentiated approach designed to optimize T cell engagement

Platform: Potential to overcome challenge to find the optimal therapeutic window

- No unspecific activation of T cells in absence of target cells
- Targeting tumor cells with very low target expression; lysis of tumor cells independent of number of T cells
- Significantly improved PK vs. BiTEs

AFM11: a CD19/CD3 TandAb

- Determining best dose: Two Phase 1 dose-escalation trials ongoing in patients with r/r ALL and with r/r NHL, respectively
- Trial status: Currently recruiting into the 5th dose cohort (ALL) and into the 3rd dose cohort (NHL)
- Opportunity: Potential to pave path to fast market approval in indications such as DLBCL and MCL

AMV564 (Amphivena): a CD33/CD3 TandAb

- Phase 1 ongoing in r/r acute myeloid leukemia (AML)
- ASH 2017: Treatment with AMV564 selectively depletes myeloid-derived suppressor cells (MDSCs) in bone marrow cells from patients with myelodysplastic syndrome (MDS) with resultant reactivation of T lymphocytes
- Amphivena plans to launch a Phase 1 clinical study in patients with MDS in early 2018

YE 2017 actual and pro forma Cash Positions[1)]

(preliminary estimates; unaudited)

	€m	$m[2)]
Cash and cash equivalents January 1, 2017	35.4	42.5
Cash and cash equivalents December 31, 2017	39.8	47.8
Cash and cash equivalents December 31, 2017 (pro forma, including financing[3)])	64.2	77.0

- Runway through Q4/2019

[1)] These figures are preliminary estimates prepared by Affimed's management, and may differ from the results that will be reflected in our audited consolidated financial statements as of December 31, 2017. You should not place undue reliance upon these preliminary financial results.
[2)] $/€ exchange rate as of December 31, 2017 (1.1993)
[3)] Reflects Affimed's receipt of approximately $29.2m (€24.4m) in net proceeds from February 2018 public offering and ATM usage following December 31, 2017

Milestones 2018

Maximize value from pipeline and technologies

Expand NK cell engagement leadership

- Develop AFM13 (CD30/CD16A) as monotherapy in CD30+ lymphoma and in combination with Keytruda® in r/r HL
- Explore NK cell engager combinations with CPIs, adoptive NK cells or immune activating agents (IL-2, IL-15)
- Advance AFM26 (BCMA/CD16A) and AFM24 (EGFRwt/CD16A)

Focus on DLBCL, MCL and AML in T cell engagement

- Generate POC for AFM11 (CD19/CD3) in NHL
- Prepare for follow-on trial for AFM11
- Additional POC through AMV564 (CD33/CD3) in AML

Use pipeline and technologies to create value through both next-generation products and partnership opportunities

Experienced Management Team

Proven track record in biotech, pharma, product development and finance

Adi Hoess, Ph.D., CEO

Extensive background in general management, product commercialization, fundraising and M&A

- AFMD CEO since 2011, joined in 2010 from Jerini/Jenowis
- Led AFMD IPO in 2014
- CCO at Jerini, instrumental in IPO and M&A with Shire
- GM and VP Molecular Medicine at Carl-Zeiss
- Co-founded MorphoSys; VP Licensing and BD

Florian Fischer, Ph.D., CFO

Strong financial background, lead advisor in a variety of transactions & financings life sciences/healthcare

- AFMD full-time CFO since 2014, joined in 2005 from MedVenture Partners, a company he founded
- Led AFMD IPO in 2014
- CFO of Activaero GmbH and of Vivendy
- Deutsche Bank and KPMG (Biotech/Healthcare)

Wolfgang Fischer, Ph.D, COO, CMO (interim)

In-depth expertise in research and drug development with a focus on oncology, immunology and pharmacology

- Joined AFMD in 2017 from Sandoz Biopharmaceuticals
- Global Head of Program and Project Management at Sandoz Biopharmaceuticals
- Regional Medical Director Hematology at Novartis Oncology
- Medical Director Oncology at Novartis Switzerland

Martin Treder, Ph.D., CSO

Broad experience in the field of biotherapeutics R&D in I/O discovery and pre-clinical development

- Joined AFMD in 2015 from CT Atlantic AG, a Swiss I/O company he co-founded
- Co-founder of U3 Pharma (targeted cancer therapeutics)
- Responsible for U3's innovative anti-HER3 therapeutic antibodies portfolio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