

Taking a BiTE
out of cancer.

micromet

2008 Annual Report

About:

Micromet, Inc. is developing novel antibodies based on its proprietary BiTE[®] antibody platform. BiTE antibodies represent a new class of antibodies that specifically activate T cells from the patient's own immune system to eliminate cancer cells or other disease related cells. Four of Micromet's antibodies are currently in clinical trials, with the remainder of its product pipeline in preclinical development.

Micromet's lead product candidate is a BiTE antibody known as blinatumomab, or MT103. It is in a phase 2 clinical trial for the treatment of patients with acute lymphoblastic leukemia and a phase 1 clinical trial for the treatment of patients with non-Hodgkin's lymphoma.

Micromet's second BiTE antibody in clinical development is MT110, which targets the epithelial cell adhesion molecule (EpCAM). MT110 is in a phase 1 clinical trial for the treatment of patients with solid tumors.

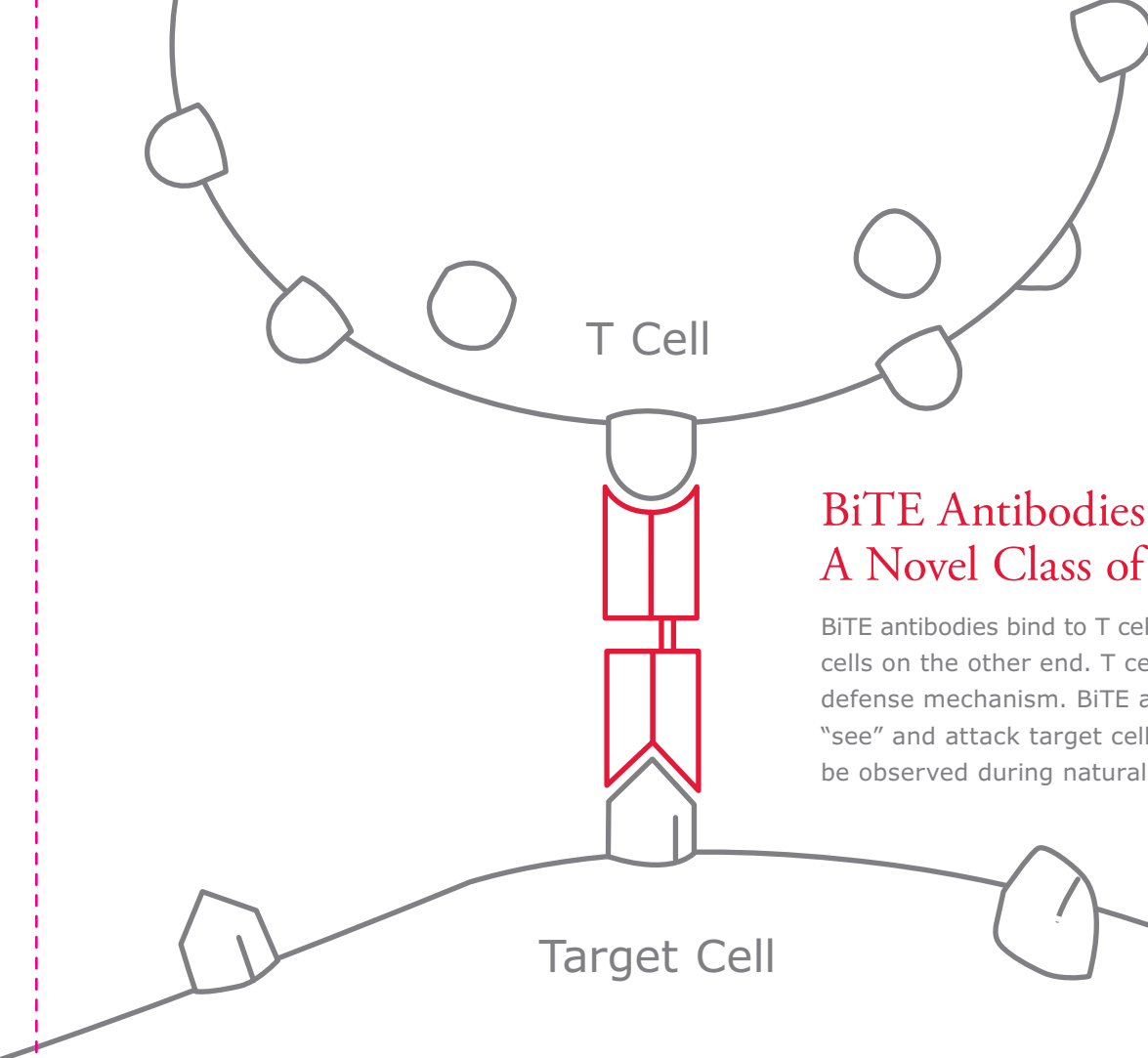
In addition to the clinical trials with blinatumomab and MT110, Micromet is developing several BiTE antibodies which are in various stages of preclinical development, including BiTE antibodies targeting CEA, MCSP, EGFR, CD33 and others. In addition, Micromet has granted an exclusive option to Bayer Schering Pharma AG to license a BiTE antibody against an undisclosed solid tumor target.

Micromet's development pipeline of conventional monoclonal antibodies consists of two product candidates in clinical trials and two additional product candidates expected to enter clinical trials in 2009. Adecatumumab, also known as MT201, is a human monoclonal antibody that targets EpCAM expressing solid tumors. Micromet is developing adecatumumab in collaboration with Merck Serono in a phase 1b clinical trial evaluating adecatumumab in combination with docetaxel for the treatment of patients with metastatic breast cancer and a phase 2 trial for the treatment of patients with colorectal cancer (CRC) after complete resection of liver metastases.

MT293 is an anti-angiogenic monoclonal antibody for the treatment of patients with solid tumors. Micromet licensed MT293 to TRACON Pharmaceuticals, Inc., which is currently conducting a phase 1 clinical trial of the drug for the treatment of patients with cancer.

MT203, which is being developed in collaboration with Nycomed, is a conventional human monoclonal antibody that neutralizes the activity of granulocyte/macrophage colony stimulating factor (GM-CSF). MT203 has potential applications in the treatment of inflammatory and autoimmune diseases, such as rheumatoid arthritis, psoriasis, or multiple sclerosis. Nycomed has made the required regulatory filings to initiate a phase 1 clinical trial, which we expect to start in the first half of 2009.

MT228, licensed to Morphotek, a wholly-owned subsidiary of Eisai, Co. Ltd, is a human monoclonal antibody targeting glycolipid found on melanoma cells. We expect Morphotek to initiate Phase 1 clinical trials with MT228 in 2009.



T Cell

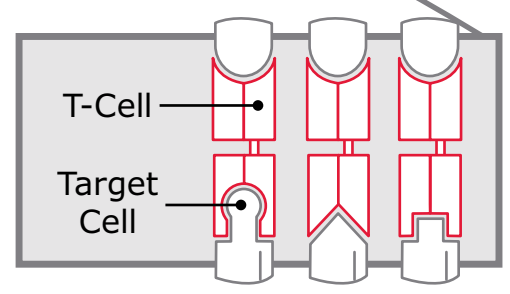
BiTE Antibodies A Novel Class of Antibodies

BiTE antibodies bind to T cells on one end and to the target cells on the other end. T cells are part of the body's own defense mechanism. BiTE antibodies enable T cells to "see" and attack target cells in the same manner as can be observed during naturally-occurring T cell activity.

Target Cell

BiTE Antibodies Can Be Tailored to Treat Different Diseases

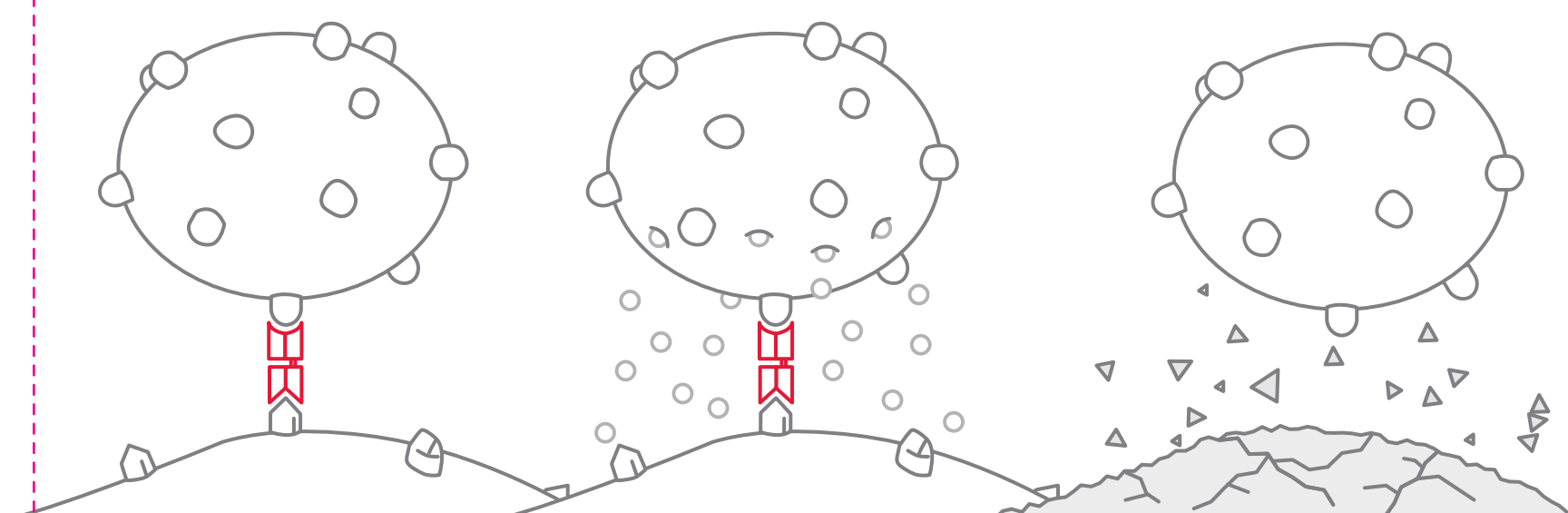
A BiTE antibody can be designed to recognize different antigens on target cells enabling the treatment of various diseases. The portion of the BiTE antibody recognizing the T cell remains constant (top).



1. BiTE antibody temporarily links T cell with cancer cell.

2. BiTE antibody triggers release of toxins from the T cell.

3. Cancer cell is destroyed, T cell and BiTE repeat process with another cancer cell.



Micromet Antibody Development Pipeline

	<i>Preclinical</i>	<i>Phase 1</i>	<i>Phase 2</i>	<i>Indications</i>	<i>Partner</i>
BiTE® Antibodies					
Blinatumomab (MT103) (CD19)				Acute Lymphoblastic Leukemia	—
Blinatumomab (MT103) (CD19)				Non-Hodgkin's Lymphoma	—
MT110 (EpCAM)				Solid Tumors	—
MT111 (CEA)				Solid Tumors	Medimmune ^{1,2}
Undisclosed				Carcinoma	Bayer Schering Pharma AG
CD33				AML	—
MCSP				Melanoma	—
EGFR				Carcinoma	—
Conventional Antibodies					
Adecatumumab (MT201) (EpCAM)				Colorectal Cancer	Merck Serono
Adecatumumab (MT201) (EpCAM)				Metastatic Breast Cancer	Merck Serono
MT293 Denatured Collagen				Solid Tumors	Tracon
MT228 (Gp28)				Metastatic Melanoma	Morphotek ³
MT203 (GM-CSF)				Inflammation	Nycomed
MT204 (IL-2)				RA/MS	—

1) Medimmune is a wholly-owned subsidiary of AstraZeneca, plc.

2) Micromet retains all rights in the European Union. Medimmune licensed rights for all markets outside of Europe.

3) Morphotek, Inc. is a wholly-owned subsidiary of Eisai Co., Ltd.

Dear Shareholders,

2008 was a transforming year for Micromet. We were able to demonstrate compelling clinical activity for our lead BiTE® antibody blinatumomab in late stage non-Hodgkin's lymphoma (NHL) patients and in patients with acute lymphoblastic leukaemia (ALL). We initiated the first clinical trial with our second BiTE antibody MT110 targeting solid tumors. Finally, we secured the funds necessary to progress our product development programs into the second half of 2010. We would like to take this opportunity to provide you with some more detail on these highlights as well as to report on other important events that occurred at Micromet in the course of 2008.



Christian Itin, Ph.D.
*President, Chief Executive Officer
and Director*



David F. Hale
Chairman of the Board of Directors

We presented initial data demonstrating response rate and durability of response from the ongoing phase 1 clinical trial of blinatumomab in late stage NHL patients at the International Congress on Malignant Lymphoma (ICML) in Lugano in June 2008. That data was then published in an article in the scientific journal *Science* in August 2008. An update of the clinical data, which included the durability of patient responses, was presented at the annual meeting of the American Society for Hematology (ASH) in December 2008. The data presented at ASH showed that all seven patients treated at doses of 0.06 mg/m² per day had complete or partial remissions with a median relapse-free interval of more than 9 months. Based on these promising phase 1 results in patients with advanced NHL, we are planning to initiate a phase 2 clinical trial with blinatumomab in NHL patients in 2009. Also at ASH, we published the first data from our clinical trial in ALL patients treated with blinatumomab. After a series of chemotherapy treatments, a significant portion of ALL patients have ALL cancer cells

BiTE® Antibodies Have Exceptional Properties

- > A 1,000–100,000 fold higher efficacy in tumor cell lysis relative to conventional and improved antibodies.
 - > BiTE antibodies activate T cells only in the presence of targeted tumor cells.
 - > BiTE antibodies circumvent the mechanism by which tumor cells evade recognition by T cells, the patients' most potent immune cells.
 - > BiTE antibodies cause T cells to selectively attack tumor cells, leading to a highly targeted and potent elimination of tumor cells.
-

“ The duration of responses seen after monotherapy of NHL patients with blinatumomab is very encouraging and may represent a new advance in targeted therapy to improve on rituximab. ”

Ronald Levy, M.D.

*Professor of Medicine, Chief of the Division of Oncology,
at Stanford University School of Medicine*

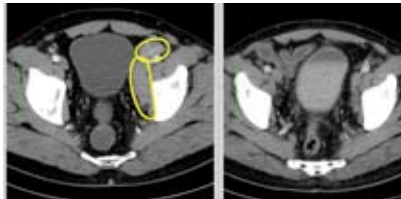
remaining in their bone marrow. This condition is called minimal residual disease, or MRD. The only curative treatment option available for patients with MRD is high dose chemotherapy with severe side effects and bone marrow stem cell transplantation with the risk of transplant rejection or death. As shown at ASH, treatment with blinatumomab eliminated the remaining tumor cells from the bone marrow in three of four patients treated, changing patients from MRD positive to MRD negative status. The importance of MRD negativity is illustrated by the observation that patients who are MRD negative have a relatively low probability of relapse, whereas patients who are MRD positive have a significant likelihood of relapse (relapse risk of 0–6% in MRD negative patients compared to 61–94% in MRD positive patients; Raff et al., *Blood Journal*, 2007). In 2009, we are continuing this phase 2 clinical trial in ALL. If the encouraging initial clinical data are confirmed, we believe that ALL may offer an opportunity for fast track registration and approval of blinatumomab. Further results from the phase 2 clinical trial in patients with ALL are planned to be presented at the Congress of the European Hematology Association in June and ASH in December 2009. In March of this year, we regained the North American rights to blinatumomab from MedImmune, Inc., a division of AstraZeneca. We are planning to leverage the promising clinical data that we have generated in our European clinical trials to initiate a development path for blinatumomab in the United States.

In April of 2008, we initiated the first clinical trial with our second BiTE antibody MT110. This BiTE antibody has been developed to target solid tumors. We are recruiting patients in this trial with late-stage colorectal cancer, gastric cancer and lung cancers. It is currently in the dose escalation phase and we expect to establish the appropriate dose for further clinical development towards the end of 2009. Demonstration of anti-tumor activity in this patient population could be a significant value inflection point for this product candidate and also for our BiTE antibody platform. We plan to present first clinical data of MT110 at the joint 15th Congress of the European Cancer Organization (ECCO) and 34th Congress of the European Society for Medical Oncology (ESMO) in September 2009.

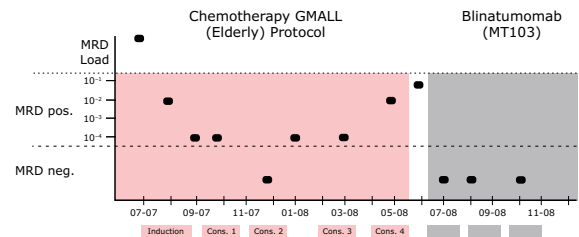
In addition to advancing the clinical BiTE antibody programs, we continued our efforts to improve our BiTE antibody platform. Based on these improvements, the new BiTE antibodies that we have developed are cross-reactive with a wide range of

BiTE antibodies combine significant potency to address advanced disease with Seek and Destroy capabilities to reach disseminated disease.

Significant Potency
Use in Advanced Disease



Seek & Destroy
Consolidation Therapy



non-human primate species. This new feature expedites preclinical development of our new BiTE antibodies by simplifying toxicology studies, and allows for an early risk reduction for new BiTE antibody product candidates. In 2008, we filed patent applications covering this new BiTE antibody cross-reactive technology. If the patents based on these patent applications issue in the scope we expect, the patents will provide exclusivity for our new BiTE antibodies into the second half of the 2020's. First results of *in vitro* and *in vivo* testing of new cross-reactive BiTE antibodies were presented at the annual meeting of the American Association for Cancer Research (AACR) in April of 2008, where preclinical data on BiTE antibodies developed to target CD33 (acute myelogenous leukaemia), MCSP (melanoma), EGFR (colorectal and lung cancers) and Her-2 (breast cancer) were presented. At the upcoming AACR meeting in April 2009, we are planning to provide an update on these, as well as, several new BiTE antibodies.

The increased visibility of BiTE antibodies has generated significant interest of potential collaboration partners in the pharmaceutical industry. In January 2009, we announced a significant option and collaboration agreement with Bayer. If Bayer exercises this option before it expires in early 2010, the total potential option, upfront and milestone payments could approach \$396 million.

We also achieved significant progress in 2008 with our partnered, conventional antibodies. Adecatumumab, which is being developed in collaboration with Merck Serono, showed clinical responses in a phase 1b trial in metastatic breast cancer patients in combination with docetaxel. We are planning to present data from this clinical trial at The American Society of Clinical Oncology (ASCO) in June 2009. In addition, we initiated a phase 2 clinical trial in colorectal cancer patients with resected liver metastasis in March of 2009. Our licensee TRACON Pharmaceuticals presented the first safety data from a phase 1 clinical trial in patients with solid tumors treated with MT293 at the AACR-EORTC-NCI meeting in October 2008. MT293 is a humanized antibody targeting denatured collagen surrounding solid tumors. Two of our preclinical stage conventional antibodies are expected to enter clinical trials in 2009. Morphotek, a wholly-owned subsidiary of Eisai, is our licensee for MT228, a human monoclonal antibody targeting a glycolipid found on melanoma cells. We expect Morphotek to initiate a phase 1 clinical trial

Experienced Management



> Christian Itin, Ph.D.
*President, Chief Executive Officer
and Director*



> Patrick A. Baeuerle, Ph.D.
*Senior Vice President,
Chief Scientific Officer*



> Carsten Reinhardt, M.D., Ph.D.
*Senior Vice President,
Chief Medical Officer*



> Jens Hennecke, Ph.D.
*Senior Vice President,
Business Development*



> Matthias Alder, lic. iur., LL.M.
*Senior Vice President, General
Counsel and Secretary*



> Mark Reisenauer
*Senior Vice President,
Chief Commercial Officer*



> Barclay A. Phillips
*Senior Vice President,
Chief Financial Officer*

with MT228 in 2009. Nycomed, our collaboration partner for the development and commercialization of MT203, a human antibody which neutralizes GM-CSF, has filed a clinical trial application in March of this year and is planning to start clinical trials with MT203 by mid-2009.

We were also successful in securing additional financing for Micromet in 2008. In September, we raised gross proceeds of \$40 million in a private placement. With these funds, we have cash to fund operations into the second half of 2010. In addition, in December 2008, we expanded our Committed Equity Financing Facility with Kingsbridge Capital from \$25 million to \$75 million, which provides us with additional flexibility to obtain funding through the sale of shares to Kingsbridge Capital.

Considering the challenging macro-economic outlook for 2009 and 2010, we will focus the Company through investments in four areas that we believe offer the greatest opportunity for value creation: Advancing blinatumomab in additional clinical trials; completing the phase 1 clinical trial of MT110; establishing strategic partnerships with major pharmaceutical companies for the development of our BiTE antibodies; and creating additional partnering opportunities by developing the pre-clinical data packages for new BiTE antibodies and for our interleukin-2 neutralizing antibody MT204 to support our business development activities.

We would like to thank you all for your continued support of Micromet. We had a successful 2008 and we have no doubt that we will continue on this path in 2009.

Christian Itin
President, Chief Executive Officer
and Director

David F. Hale
Chairman of the Board of Directors

Board of Directors

- > David F. Hale
(Chairman)
- > Jerry C. Benjamin
- > John E. Berriman
- > Michael G. Carter
- > Kapil Dhingra
- > Christian Itin
- > Peter Johann
- > Joseph P. Slattery
- > Otello Stampacchia

Corporate Information

Annual Meeting

The Annual Meeting of Shareholders of Micromet, Inc. will be held at 1:00 PM Eastern Time, June 17, 2009, at the Marriott Suites Bethesda located at 6711 Democracy Boulevard, Bethesda, MD 20817.

Stock Listing

The Company's common stock trades on the Nasdaq Global Market under the symbol "MITI."

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