

Section: Research & Development

Sanofi and Micromet Collaborate on Early Stage Cancer Antibody

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Micromet has licensed out one of its BiTE anticancer antibodies to Sanofi-aventis in a deal that is worth up to US\$477 M if all milestones are achieved. Micromet's BiTE® (Bispecific T Cell Engager) is a novel therapeutic approach for treating cancer.

Sanofi-aventis has agreed to collaborate with Bethesda, MD based Micromet for an antibody that acts against an antigen present on the surface of carcinoma cells. Micromet will be responsible for the discovery, research and development of the antibody utilising its BiTE technology through to completion of Phase I clinical trials. Sanofi would then pick up the development following proof-of-concept and be responsible for the global commercialisation of the drug.

BiTE® (Bispecific T Cell Engager) is Micromet's proprietary technology and is a novel therapeutic approach for treating cancer. BiTE antibodies are designed to direct the body's cytotoxic T cells against tumour cells – typically antibodies cannot engage T cells because they lack the appropriate receptors for binding antibodies.

The deal is back-ended with a low upfront but future payments are high and these hinge on the success of Micromet's technology platform. Micromet will receive €8 M (US\$12 M) followed by regulatory and development milestones adding up to €162 M (US\$241 M). In addition, there are performance-based sales milestones up to €150 M (US\$224 M) and royalties on worldwide product sales.

There is good reason for investors to be confident. Micromet's success story with the BiTE technology is blinatumomab, which targets CD19, a protein that is highly expressed on cancer cells. Blinatumomab achieved positive results in a Phase II clinical trial in patients with acute lymphoblastic leukaemia and has potential in other blood cancers representing a multibillion dollar market opportunity.

In 2003, MedImmune signed a co-development agreement with Micromet with US rights to blinatumomab (Deal no. 13022) but handed them back to Micromet earlier this year as part of its portfolio review by its parent company, AstraZeneca. Having raised US\$75 M in a public offering in July and in a stronger financial position, Micromet bought-out MedImmune's stake in blinatumomab and plans to continue clinical development of the drug. The company may be able to re-license the drug at better terms than those originally signed with MedImmune and fulfil the real potential of the drug.

The Sanofi deal surpasses in value a similar deal with Bayer-Schering signed earlier this year. Bayer-Schering paid Micromet €4.5 M to secure a one-year option on a specific BiTE antibody for cancer (Deal no. 32164). The deadline for exercising this option is 5th January 2010 through an additional payment would trigger a joint collaboration on the development of the BiTE antibody against a solid tumor target through the completion of Phase I clinical trials, at which point Bayer Schering would assume full control of the further development and commercialization of the antibody.

Micromet's other development partnerships have resulted in drug candidates reaching the clinic. This is likely to have been a factor in Sanofi in collaborating with Micromet and in confirming the validity of the technology. Nycomed has filed a clinical trial application and is expected to commence a Phase I clinical trial of MT203, a human antibody neutralizing the activity of granulocyte/macrophage colony stimulating factor (GM-CSF), which has potential applications in the treatment of various inflammatory and autoimmune diseases, such as rheumatoid arthritis, psoriasis, or multiple sclerosis (Deal no. 27335). Morphotek, a wholly-owned subsidiary of Eisai, is also expected to initiate a first Phase I clinical trial with Micromet's glycolipid-binding human antibody MT228 for the treatment of melanoma (Deal no. 26522).

Sanofi has been on pipeline expansion mode for some time now, mainly to offset anticipated losses due to patent expiry. The company is seeking to re-establish its presence in oncology following the success of Taxotere® (docetaxel). This will be its fifth deal in the oncology sector this year, which included acquiring BiPar Sciences, a cancer specialist in April (Deal no. 33133).