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New Evidence of Sutro ADC's Potency in Human Tumor Xenografts

STRO-001 Targets CD74, Eradicates B-Cell Hematologic Malignancy & Prolongs Survival

A Powerful Attack on Multiple Myeloma & Lymphoma

SOUTH SAN FRANCISCO, Calif., July 17, 2017 /PRNewswire/ -- STRO-001,Sutro Biopharma's antibody drug conjugate targeting the CD74 cell surface protein in hematologic B-cell malignancies, has been shown to eradicate tumors in human xenograft models of non-Hodgkin lymphoma and multiple myeloma – diseases that Sutro plans to evaluate for treatment in a Phase I clinical trial planned for early 2018.

The research findings, which come as Sutro prepares to file an investigational new drug application to begin the clinical testing, show that STRO-001 eliminated tumors or significantly delayed tumor growth in diffuse large B-cell lymphoma and mantle cell lymphoma xenograft models and prolonged survival in the disseminated Mino mantle cell lymphoma xenograft model compared to tumor models treated with vehicle, which developed advanced disease with palpable neck and abdominal tumors.

The Sutro antibody drug conjugate, or ADC, also suppressed tumor growth in a diffuse large B-cell lymphoma tumor model, SU-DHL-6, when administered with standard of care chemotherapy.

In immunohistochemistry testing using the unconjugated antibody component of STRO-001 with a large number of human lymphoma tissue samples, researchers also confirmed that CD74 is highly-expressed in diffuse large B-cell lymphoma, follicular lymphoma and mantle cell lymphoma.

Sutro presented the findings on June 14-16 in Lugano, Switzerland at the 14th International Conference on Malignant Lymphoma, and on June 23 in Madrid at the 22nd Congress of the European Hematology Association.

Additionally, research on STRO-001 revealed potent antitumor activity in multiple myeloma xenograft models and potent in vitro cytotoxicity in multiple non-Hodgkin lymphoma cell lines.

Bioluminescence imaging with the luciferase MM.1S xenograft model showed that a single dose of the Sutro ADC eradicated multiple myeloma at each post-treatment time point investigated, compared to animals treated with vehicle, which experienced diffuse replacement of bone marrow with malignant myeloma. The imaging enabled researchers to quantify tumor growth in response to treatment and vehicle more precisely than in earlier

xenograft tumor models designed to assess survival. Sutro presented the findings on June 23 in Madrid at the 22nd Congress of the European Hematology Association.

"These results are the clearest, most compelling evidence that STRO-001 performs effectively in multiple malignant B-cell lines and xenograft tumor models," Sutro CEO Bill Newell remarked.

Preventing the 'Bystander Effect'

"STRO-001 was developed with Sutro's proprietary cell-free protein synthesis and site-specific conjugation platforms, which facilitate multiple rounds of antibody and ADC optimization," said Dr. Arturo Molina, a medical oncologist and Sutro's Chief Medical Officer.

"Sutro's Xpress CF+™ platform enables us to produce novel ADCs that directly target cancer cells while minimizing a toxic 'bystander effect' on adjacent healthy cells," he added.

Unlike conventional cell-based expression systems, Sutro's technology isolates a cell's protein production machinery into a cell-free extract, *Xtract CF™, which* includes all the necessary biochemical components for energy production, transcription and translation to generate aglycosylated homogeneous antibodies*. The Xpress CF+™ platform* allows the incorporation of non-natural amino acids into specific positions of the generated antibody, allowing for site-specific conjugation of cytotoxins and the creation of homogeneous ADCs. This process is capable of producing homogeneous proteins at large scale within 24 hours, unconstrained by *cellular structures and their limitations*.

Sutro's manufacturing facility in San Carlos, California, is built to maximize the speed and efficiency of cell-free extract and protein production. The cell-free extract is manufactured by a multi-day continuous process producing extract for large scale *Xpress CF™ and Xpress CF+™ reactions.*

About Sutro Biopharma

Sutro Biopharma, located in South San Francisco, has pioneered a compelling and unique way of discovering, developing and manufacturing therapeutics. Sutro's focus is primarily next generation cancer therapeutics — antibody drug conjugates, or ADCs, and bispecific antibodies.

Without the traditional constraints of cell-based protein generation, Sutro's cell-free technology enables the rapid design, optimization and scale-up of novel proteins. Using this novel cell-free technology, Sutro is also transcending the limitations of biologics manufacturing with the world's only cGMP cell-free manufacturing facility located in San Carlos, California. This state-of- the-art facility provides an important competitive advantage to Sutro as the company heads into human clinical trials in 2018. In addition to developing its own oncology pipeline, Sutro Biopharma is collaborating with select pharmaceutical and biotech companies to discover and develop novel, next-generation therapeutics.

Follow Sutro on Twitter, @Sutrobio, and atwww.sutrobio.com to learn more about our passion for changing the future of oncology.

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