

Kymab new therapeutic antibody for autoimmune diseases shows potential for improvement of post-transplant survival

Cambridge, UK, 5 December 2016: Kymab Group Limited ("Kymab"), a leading monoclonal antibody biopharmaceutical group, announces today remarkable early stage results of its new antibody treatment, KY1005, which showed an improvement in post-transplant survival in an animal model of acute graft-versus-host-disease (GvHD), a common and potentially deadly complication of bone marrow transplants.

The results, obtained in a joint project led by Dr. Leslie Kean, Associate Director of the Ben Towne Center for Childhood Cancer Research at Seattle Children's Research Institute and Dr. Phil Bland-Ward, VP of Non-Clinical Development at Kymab, were published on 4 December 2016 in a poster presentation at the American Society of Hematology Annual Meeting in San Diego, California.

The research teams showed that KY1005 dampened the exaggerated immune response that causes acute GvHD following bone marrow transplants. Most strikingly, when combined with an established, yet on its own insufficient, therapy to prevent acute GvHD, KY1005 completely prevented signs of acute GvHD. All animals survived to the end of the study.

The new product, KY1005 is a fully human monoclonal antibody produced by Kymab's unique suite of technologies that include Kymouse™, which has a complete set of human antibody genes. The KY1005 antibody binds to OX40L and blocks it from activating OX40, a protein that induces prolonged response in T-cells of the immune system, which can lead to the damaging effects of acute GvHD and autoimmune diseases.

"These are unprecedented results for a prophylactic approach to controlling disease in bone marrow transplant," **said Dr. Leslie Kean, a pediatric cancer specialist at the Seattle Children's Research Institute.** "None of the treated animals showed signs of the disease and all were healthy to the end of the study: we were amazed as each set of data emerged. It is the first time that uniform, long-term disease-free survival has been seen in this model. All of the biochemical, histological and pathological measures for disease in this transplant model were stable in the treated animals. It is a remarkable result."

The reported experiments looked at the effect of KY1005 in a model of acute GvHD, closely simulating the processes leading to human GvHD after bone marrow transplant. Without effective prophylaxis, the transplanted immune system launches a vigorous attack against the tissues of the transplant recipient, which was inhibited by KY1005.

Currently, the development of acute GvHD is reduced but not eliminated in patients undergoing bone marrow transplant by prophylaxis with standard immunosuppressant drugs that inhibit cellular pathways controlling T-cell activation. The impressive survival rate occurred when Kymab's antibody KY1005 was administered with one of these immune suppressants, Rapamycin, a prophylactic regimen. The two molecules interfered with separate cellular pathways resulting in the enhanced effect.

The experiments prove that OX40L has an important role in this strong immune response. These results add to the body of evidence indicating that OX40L is involved in a range of both allo-immune and autoimmune diseases in which inappropriate T-cell responses are directed

either towards a transplant, or towards a patient's own tissues.

"We have set the bar high in this study and results were outstanding — beyond our expectations," says **Dr. David Chiswell CEO of Kymab**. "The acute GvHD model represents an aggressive disease and demands that any new candidate drug works convincingly against a robust T-cell response: it is about as tough a test as we can envisage. Given the results for prophylactic use of Kymab's KY1005 antibody in this research, the same team has also begun to examine its potential use for treatment after acute GvHD onset. Kymab is also exploring the potential of KY1005 to treat a number of autoimmune diseases, which represent a high unmet medical need."

KY1005 is scheduled to commence human clinical trials in 2017.

###END OF PRESS RELEASE###

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Notes to Editors

About acute GVHD

In patients with acute GVHD, newly transplanted T cells from the bone marrow graft attack the transplant recipient's body. Over 10,000 people in the United States alone receive bone marrow transplants each year for treatment of leukemia, other non-malignant blood conditions and autoimmune diseases. Over 50 percent of bone marrow transplant patients will develop acute GVHD. Of those, who develop the most severe form, up to half will die. The disease can affect any part of the body, but the most common and severe damage is to liver, skin and gastrointestinal tissues.

About Autoimmune disease

Autoimmune disease affects up to 50 million Americans, according to the American Autoimmune Related Diseases Association (AARDA). An autoimmune disease develops when the immune system, which defends the body against disease, decides healthy cells are foreign. As a result, the immune system attacks healthy cells. Depending on the type, an autoimmune disease can affect one or many different types of body tissue and can result in tissue damage, altered tissue growth, and impaired organ function. This can be highly painful and debilitating. There are as many as 80 types of autoimmune diseases. Currently, treatment for autoimmune

diseases focuses on dampening or rebalancing the immune system and relieving symptoms because there is no curative therapy.

About American Society of Hematology (ASH)

ASH (www.hematology.org) is the world's largest professional society concerned with the causes and treatment of blood disorders. Its mission is to further the understanding, diagnosis, treatment, and prevention of disorders affecting blood, bone marrow, and the immunologic, hemostatic, and vascular systems by promoting research, clinical care, education, training, and advocacy in hematology. The 2016 ASH Annual Meeting is the premier hematology event of the year and is taking place December 3-6, 2016, at the San Diego Convention Center in San Diego.

About Kymab

Kymab Group Limited ("Kymab") is a leading biopharmaceutical group focused on the discovery and development of fully human monoclonal antibody drugs using its proprietary Kymouse antibody platform.

Kymouse has been designed to maximise the diversity of human antibodies produced in response to immunisation with antigens. Selecting from a broad diversity of fully human antibodies assures the highest probability of finding that rare drug candidate with best-in-class characteristics. The Kymouse naturally matures these molecules to highly potent drugs obviating the need for further time-consuming modifications. Kymab is using the platform for its internal drug discovery programmes and in partnership with pharmaceutical companies. Kymab commenced operations in 2010 and has raised over US\$220m of equity financing which includes \$100m Series C financing. It has an experienced management team with a successful track record in drug discovery and development and has numerous therapeutic antibody programmes in immuno-oncology, auto-immunity, haematology, infectious disease and other areas.

<http://www.kymab.com>

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