F-star Therapeutics Announces Positive Preclinical Antitumor Activity and Safety of FS222 Published in Clinical Cancer Research

Strong Evidence That Tetravalent Bispecific Antibodies Can Provide Greater Benefit to Patients than Combinations of Single Monoclonal Antibodies in Solid Tumors

Data Support Continued Development with IND Submission Expected in 2020

Cambridge, UK and Cambridge, MA, April 28, 2020 – F-star Therapeutics Ltd., a clinical-stage biopharmaceutical company focused on transforming the lives of patients with cancer through the development of innovative tetravalent bispecific (mAb²™) antibodies, today announces the publication of preclinical data on the focused, potent and safe immune response shown with FS222 in leading peer-reviewed journal Clinical Cancer Research. FS222 is a PD-L1 and CD137 targeting, potentially best-in-class, conditional agonist tetravalent antibody.

The preclinical data show the synergistic benefit of F-star’s tetravalent mAb², with evidence of robust CD4⁺ and CD8⁺ T cell activation, which outperformed combinations of monoclonal antibodies in multiple in vitro assays. FS222 showed no signs of liver toxicity with doses up to 30 mg/kg in a non-human primate dose-range finding study. In a mouse tumor model resistant to PD-L1 and CD137, in both mono and combination therapy, FS222 caused complete tumor eradication, concomitant with CD8⁺ T cell activation.

FS222 targets PD-L1 (programmed death-ligand 1), the immune checkpoint protein which regulates the balance of activated T cells in the immune system and is expressed on many solid tumors, and CD137, a co-stimulatory molecule from the tumor necrosis factor receptor superfamily (TNFRSF), which is widely known to be upregulated on CD8⁺ T cells following activation. Currently, only a fraction of patients respond to monotherapies that block the PD-1/PD-L1 pathway, and CD137-targeting molecules have yet to demonstrate significant responses in patients without toxicity. FS222 is designed to simultaneously target the two modalities, combining PD-L1 blockade and provoking strong CD137 agonism in a safe and efficacious manner that does not rely on a combination of antibodies approach. A regulatory application to commence clinical development of FS222 is expected to be submitted later this year.

A link to the full study can be found [here](#).

Neil Brewis, CSO of F-star, said: “Considering the broad expression of PD-L1 on many solid tumors, we believe FS222 has the potential to provide best-in-class benefit for patients with cancer who remain challenging to treat. By targeting CD137 agonism to areas of PD-L1 expression, predominantly found in the tumor microenvironment, FS222 has the potential to leverage a focused, potent and safe immune response, enhancing the PD-L1 blockade. These data support our view that FS222 could outperform CD137 and PD-L1 monospecific antibodies in a very safe way, providing greater benefit to patients than a combination approach against both targets in solid tumors. We look forward to
progressing this tetravalent bispecific antibody into the clinic, targeting tumors that are tough to treat.”

About F-star Therapeutics Ltd

F-star is a leading clinical-stage biopharmaceutical company delivering tetravalent bispecific antibodies for a paradigm-shift in cancer therapy. By developing medicines that seek to block tumor immune evasion, the Company’s goal is to offer patients greater and more durable benefits than current immuno-oncology treatments. Through its proprietary tetravalent, bispecific antibody (mAb²™) format, F-star is generating first- and best-in-class drug candidates with monoclonal antibody-like manufacturability. Building on the combined expertise of its world-class management team and scientific leadership, F-star is poised to deliver the next breakthrough immunotherapies for patients with cancer. For more information visit www.f-star.com.

For further information, please contact:

For investor enquiries
Lindsey Trickett
VP Investor Relations & Communications
+1 240 543 7970
lindsey.trickett@f-star.com

For media enquiries
Consilium Strategic Communications
Chris Gardner, Sue Stuart, David Daley
Tel: +44 (0)20 3709 5700
E-mail: F-star@consilium-comms.com