



Autolus announces publication in *Molecular Therapy* on its small molecule-activated fast-acting permanent off switch

March 19, 2018

- Rapamycin activated Caspase 9 (rapaCasp9) "Off Switch" -

London, 19 March 2018

Autolus Limited, a clinical-stage biopharmaceutical company developing next-generation programmed T cell therapies, today announced the publication of an article in *Molecular Therapy* describing its small molecule-activated off switch which is designed to allow for the selective elimination of T cells programmed to incorporate Caspase 9 (rapaCasp9) using rapamycin (sirolimus, Rapamune®).

CAR T cell therapies have demonstrated results in haematological cancers and promise in the treatment of solid tumours. However, some patients treated with CAR T cells have experienced life-threatening adverse events. In order to manage such adverse events, a fast-acting permanent "off-switch" that can be triggered with rapamycin has been developed to selectively eliminate the programmed T cells.

Autolus already incorporates RQR8, a permanent off switch activated by the commercially available antibody Rituxan® (rituximab), into certain of its programmed T cell product candidate programmes for the treatment of certain haematological cancers, AUTO2 and AUTO4. However, for the treatment of solid tumours, Autolus believes that an off switch activated by a small molecule may be more desirable, as it is expected to have better tissue penetration and may require less time to take effect.

In the article, Dr Martin Pule and his co-authors describe Autolus' next generation permanent off switch which is being developed for incorporation into future programmed T cell product candidates. This permanent off switch uses the Caspase 9 enzyme to drive programmed T cell death, and can be activated by the administration of rapamycin, a commercially available small molecule drug.

The full manuscript, "*A Rapamycin activated Caspase 9 based suicide gene*" can be found in the March 2018 issue of *Molecular Therapy* - <http://www.cell.com/action/showImagesData?pii=S152...>

Dr Christian Itin, CEO of Autolus Ltd, commented:

"We continue to expand our broad array of proprietary T cell programming technologies designed to tackle specific aspects of tumour biology and we are pleased to highlight the article published in *Molecular Therapy* about our novel small-molecule-activated permanent off switch."

– Ends –

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Notes for Editors:

About Autolus

Autolus is a private, clinical-stage, biopharmaceutical company developing next-generation programmed T-cell therapies for the treatment of cancer. Using a broad suite of proprietary and modular T-cell programming technologies, the Company is engineering precisely targeted, controlled and highly active T-cell therapies that are designed to better recognise cancer cells, break down their defence mechanisms and kill the cells.

Autolus has a pipeline of products in development for the treatment of both haematological malignancies and solid tumours. For further information please visit the Company's website at: www.autolus.com