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3M, Aussie firm collaborate to develop vaccine technology

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Singapore: Australia based Ascend Biopharmaceuticals has collaborated with 3M Drug Delivery Systems to evaluate 3M's Toll-Like Receptor 7/8 (TLR7/8) agonist 3M-051 in combination with Ascend's proprietary cancer vaccine technology.

The collaboration will support the creation and preclinical assessment of novel immunotherapy treatments to be potentially used for a number of different solid tumor types.

Under the terms of the agreement, 3M will provide access to the proprietary TLR7/8 agonist 3M-051 that will be chemically conjugated to Ascend's ASN platform - an antigen presenting, cell targeting and delivery technology that allows vaccine antigens and immune modulators to be selectively targeted to specialized antigen presenting cells.

An important feature of Ascend's targeting platform is its ability to efficiently enable cross presentation and to allow the generation of a strong cytotoxic CD8+ T cell response to a vaccine antigen in addition to a strong antibody response. Many earlier generations of cancer vaccines had a tendency to generate predominantly CD4+ T cell responses but only weak CD8+ T cell responses.

"Our research has demonstrated encouraging clinical and immunological responses and we believe the chemical conjugation of a potent TLR agonist could confer further improvements to the previously observed clinical responses," said Dr. Clement Leong, Ascend Biopharmaceuticals Chief Executive Officer. "The 3M TLR7/8 agonist 3M-051 is clearly a best-in-class compound, and we are particularly excited in exploiting this with our cancer vaccine platform."

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Both companies will contribute to the collaboration, with 3M providing good laboratory practices (GLP) and good manufacturing practices (GMP) material for preclinical and clinical studies. The collaboration will evaluate the potency of 3M-051 conjugated to Ascend's proprietary oxidized mannan, which is part of its ASN-004 vaccine candidate and forms the basis of the ASN platform. These preclinical immunogenicity models will last up to 12 months. No further terms have been disclosed.

"3M is pleased to provide our TLR7/8 agonist 3M-051 to Ascend Biopharmaceuticals for use in combination with its cancer vaccines. The collaboration provides further validation of the utility of 3M's adjuvant portfolio," said James Ingebrand, President & General Manager at 3M Drug Delivery Systems.