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Rigel and Bristol-Myers Squibb Announce Research and Development Collaboration for TGF Beta Receptor Kinase Inhibitors for Use in Immuno-Oncology Related Indications

SOUTH SAN FRANCISCO, Calif. and NEW YORK, February 23, 2015 /PRNewswire/ - [Rigel Pharmaceuticals, Inc.](#) (Nasdaq: RIGL) and [Bristol-Myers Squibb Company](#) (NYSE: BMY) today announced that they have entered into a collaboration agreement for the discovery, development and commercialization of cancer immunotherapies based on Rigel's extensive portfolio of small molecule TGF beta receptor kinase inhibitors. TGF beta can promote tumor growth, broadly suppress the immune system and increase the ability of tumors to spread in the body. The collaboration will focus on developing a new class of therapeutics aimed at increasing the immune system's activity against various cancers either as monotherapy or in combination with immune checkpoint inhibitors, including Bristol-Myers Squibb's *Opdivo* (nivolumab) and *Yervoy* (ipilimumab).

Under the terms of the agreement, Bristol-Myers Squibb will obtain exclusive, worldwide rights to develop and commercialize small molecule therapeutics derived from Rigel's TGF beta library, including, but not limited to, those approved to treat cancer. Bristol-Myers Squibb will pay \$30 million upfront and Rigel will be eligible to receive development and regulatory milestones that could total more than \$309 million for a successful compound approved in multiple indications. Rigel will also be eligible to receive tiered royalties on the net sales of any products from the collaboration.

"As a company dedicated to leading scientific advances in immuno-oncology, we are committed to exploring the utility of TGF beta inhibition as a potential therapeutic to fight certain cancers," said Carl Decicco, Ph.D., Head of Discovery, R&D, Bristol-Myers Squibb. "Working with Rigel and having access to their TGF beta receptor kinase inhibitors extends our existing portfolio of immunotherapeutic approaches to include this key mediator of immunosuppression in the tumor microenvironment."

"This collaboration places our TGF beta receptor kinase inhibitor program into the hands of Bristol-Myers Squibb, a premier immuno-oncology company. Together, we believe TGF beta inhibition may offer novel therapeutic opportunities in oncology treatments," said Raul

Rodriguez, president and chief executive officer of Rigel. "Rigel has focused on immunology, and oncology via numerous partnerships. This collaboration is Rigel's first in immuno-oncology and is one of the Company's several programs in this area."

TGF beta Inhibition

Within the immune system, TGF beta often plays an immunosuppressive role by potentially suppressing effector cell proliferation and function while simultaneously promoting differentiation of certain suppressive T-cells. This master regulator is often present within tumor microenvironments and can significantly dampen anti-tumor host immune responses. Current evidence suggests that TGF beta can arise from many sources, including the cancer itself, surrounding cells and infiltrating macrophages.

Developing a drug that inhibits TGF beta signaling in cancer patients has the potential to counteract an important mechanism used by cancers to escape immuno-surveillance, thereby making this signaling pathway an appealing therapeutic target for immuno-oncology related applications.

Rigel has identified a large number of orally bioavailable, potent and selective small molecule inhibitors of TGF beta receptor kinases that have demonstrated *in vivo* efficacy, in preclinical animal models of cancer, consistent with an immune-mediated mechanism of action.

About Rigel (www.rigel.com)

Rigel Pharmaceuticals, Inc. is a clinical-stage drug development company that discovers and develops novel, small-molecule drugs for the treatment of inflammatory and autoimmune diseases, immuno-oncology related diseases, and muscle disorders. Rigel's pioneering research focuses on signaling pathways that are critical to disease mechanisms. Rigel currently has the following product candidates in development: fostamatinib, an oral spleen tyrosine kinase (SYK) inhibitor, which is in Phase 3 clinical trials for immune thrombocytopenic purpura (ITP) and initiating a Phase 2 clinical trial for IgA nephropathy (IgAN); R348, a topical JAK/SYK inhibitor, in a Phase 2 clinical trial for dry eye in ocular graft-versus-host disease (GvHD); two oncology product candidates in Phase 1 development with partners BerGenBio AG and Daiichi Sankyo; and two preclinical programs with AstraZeneca for R256 in asthma and Bristol-Myers Squibb for TGF beta inhibitors in immuno-oncology.

About Bristol-Myers Squibb

Bristol-Myers Squibb is a global biopharmaceutical company whose mission is to discover, develop and deliver innovative medicines that help patients prevail over serious diseases. For more information, please visit www.bms.com or follow us on Twitter at <http://twitter.com/bmsnews>.

Rigel Forward-Looking Statements

This release contains forward-looking statements relating to, among other things, the discovery, development and commercialization of cancer immunotherapies and the collaboration with Bristol-Myers Squibb, potential payments and royalties to Rigel, Rigel's

product development programs, and the timing of expected results in its clinical programs. Any statements contained in this press release that are not statements of historical fact may be deemed to be forward-looking statements. Words such as "planned," "will," "may," "expect," and similar expressions are intended to identify these forward-looking statements. These forward-looking statements are based on Rigel's current expectations and inherently involve significant risks and uncertainties. Actual results and the timing of events could differ materially from those anticipated in such forward looking statements as a result of these risks and uncertainties, which include, without limitation, the availability of resources to develop Rigel's product candidates, Rigel's need for additional capital in the future to sufficiently fund Rigel's operations and research, the uncertain timing of completion of and the success of clinical trials, market competition, risks associated with and Rigel's dependence on Rigel's corporate partnerships, as well as other risks detailed from time to time in Rigel's reports filed with the Securities and Exchange Commission, including its Quarterly Report on Form 10-Q for the quarter ended September 30, 2014. Rigel does not undertake any obligation to update forward-looking statements and expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein.

Bristol-Myers Squibb Forward-Looking Statement

This press release contains "forward-looking statements" as that term is defined in the Private Securities Litigation Reform Act of 1995 regarding the discovery, development and commercialization of cancer immunotherapies. Such forward-looking statements are based on current expectations and involve inherent risks and uncertainties, including factors that could delay, divert or change any of them, and could cause actual outcomes and results to differ materially from current expectations. No forward-looking statement can be guaranteed. Among other risks, there can be no guarantee that we will be able to successfully develop a TGF Beta Receptor Kinase Inhibitor. Forward-looking statements in this press release should be evaluated together with the many uncertainties that affect Bristol-Myers Squibb's business, particularly those identified in the cautionary factors discussion in Bristol-Myers Squibb's Annual Report on Form 10-K for the year ended December 31, 2014 in our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K. Bristol-Myers Squibb undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

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