June 2, 2015

# Nektar and MD Anderson Cancer Center Announce Phase 1/2 Clinical Research Collaboration for NKTR-214, a CD122-Biased Immuno-Stimulatory Cytokine

## New collaboration to include translational research into predictive biomarkers

SAN FRANCISCO, June 2, 2015 /PRNewswire/ -- Nektar Therapeutics (NASDAQ:NKTR) and The University of Texas MD Anderson Cancer Center today announced a research collaboration that includes a Phase 1/2 clinical study to evaluate NKTR-214, a CD122-biased cytokine designed to preferentially stimulate production of CD8-positive T cells, which are tumor killing cells found naturally in the body. CD122, which is also known as the Interleukin-2 receptor beta sub-unit, is a key signaling receptor that is known to increase proliferation of these effector T cells.[1]

"We are certain that cytokines are an essential pillar of immunotherapy, along with checkpoint inhibitors, adoptive T cell therapy and cancer vaccines," said Patrick Hwu, M.D., Division Head of Cancer Medicine at MD Anderson. "Through clinical studies, we will explore this new cytokine's potential to preferentially activate an established target, the IL-2 receptor beta or CD122, in order to stimulate tumor cell killing within the tumor microenvironment. Collaborations with industry allow MD Anderson to pursue new treatment regimens that could dramatically improve patient treatment in the future."

The agreement covers a Phase 1/2 study to evaluate NKTR-214 in a variety of tumor types as a monotherapy and in combination with other therapies, including PD-1 pathway inhibitors. Nektar and MD Anderson expect to initiate the first dose-escalation clinical study later this year. The two organizations will also conduct translational research to identify predictive biomarkers that can be used in the future development of NKTR-214.

"Nektar is pleased to collaborate with MD Anderson, a recognized leader in immuno-oncology, for clinical development of our lead immunotherapy candidate, NKTR-214," said Ivan Gergel, M.D., Senior Vice President and Chief Medical Officer of Nektar. "We believe NKTR-214 has great potential in different tumor types, both as a single agent and in combination with checkpoint inhibitors and other inhibiting agents. This new alliance with MD Anderson will significantly advance the development of NKTR-214 and help us to potentially offer a new and important therapeutic option for cancer patients."

In preclinical studies, NKTR-214 demonstrated a mean ratio of 450:1 within the tumor micro-environment of CD8-positive effector T-cells, which promote tumor killing, compared with CD4-positive regulatory T-cells, which are a type of cell that can suppress tumor killing.[2] Furthermore, although NKTR-214 is a cytokine, it is designed to be dosed on an antibody-like schedule similar to the dosing schedules for PD-1 and CTLA-4 agents.

**About NKTR-214**
NKTR-214 is a CD122-biased immune-stimulatory cytokine, which is designed to stimulate the patient's own immune system to kill tumor cells. By biasing activation to the CD122 receptor, NKTR-214 enhances CD8+ memory effector T cells (tumor-killing cells) in the tumor. In preclinical studies, a single dose of NKTR-214 resulted in a 400-fold AUC exposure within the tumor compared with an equivalent dose of the existing IL-2 therapy, enabling, for the first time, an antibody-like dosing regimen for a cytokine.[3] In dosing studies in non-human primates, there was no evidence of low blood pressure or vascular leak syndrome with NKTR-214 at predicted clinical therapeutic doses.[4] NKTR-214 is currently completing final IND-enabling studies and is expected to begin clinical testing in the second half of 2015.

**About Nektar**
Nektar Therapeutics has a robust R&D pipeline in pain, oncology, hemophilia and other therapeutic areas. In the area of pain, Nektar has an exclusive worldwide license agreement with AstraZeneca for MOVANTIK™ (naloxegol), the first FDA-approved once-daily oral peripherally-acting mu-opioid receptor antagonist (PAMORA) medication for the treatment of opioid-induced constipation (OIC), in adult patients with chronic, non-cancer pain. The product is also approved in the European Union as MOVENTIG® and is indicated for adult patients with OIC who have had an inadequate response to laxatives. The AstraZeneca agreement also includes NKTR-119, an earlier stage development program that is a co-formulation of MOVANTIK™ and an opioid. NKTR-181, a wholly-owned mu-opioid analgesic molecule for chronic pain conditions, is in Phase 3 development. NKTR-171, a wholly-owned new sodium channel blocker being developed as an oral therapy for the treatment of peripheral neuropathic pain, is in Phase 1 clinical development. In hemophilia, BAX 855, a longer-acting PEGylated Factor VIII therapeutic is in Phase 3 development conducted by partner Baxter. A BLA for BAX 855 was filed by Baxter to the US FDA in December, 2014 and is currently under review. In anti-infectives, Amikacin Inhale is in Phase 3 studies conducted by Bayer Healthcare as

an adjunctive treatment for intubated and mechanically ventilated patients with Gram-negative pneumonia.

Nektar's technology has enabled nine approved products in the U.S. or Europe through partnerships with leading biopharmaceutical companies, including AstraZeneca's MOVANTIK™, UCB's Cimzia® for Crohn's disease and rheumatoid arthritis, Roche's PEGASYS® for hepatitis C and Amgen's Neulasta® for neutropenia.

Nektar is headquartered in San Francisco, California, with additional operations in Huntsville, Alabama and Hyderabad, India. Further information about the company and its drug development programs and capabilities may be found online at http://www.nektar.com.

MOVANTIK™ is a trademark of the AstraZeneca group of companies.

**About MD Anderson**
The University of Texas MD Anderson Cancer Center in Houston ranks as one of the world's most respected centers focused on cancer patient care, research, education and prevention. MD Anderson is one of only 41 comprehensive cancer centers designated by the National Cancer Institute (NCI). For the past 25 years, MD Anderson has ranked as one of the nation's top two cancer centers in U.S. News & World Report's annual "Best Hospitals" survey. MD Anderson receives a cancer center support grant from the NCI of the National Institutes of Health (P30 CA016672).

***Cautionary Note Regarding Forward-Looking Statements***

This press release contains forward-looking statements which can be identified by words such as: "anticipate," "intend," "plan," "expect," "believe," "should," "may," "will" and similar references to future periods. Examples of forward-looking statements include, among others, statements we make regarding the therapeutic potential of NKTR-214, the anticipated start of NKTR-214 clinical studies, and the potential of our technology and drug candidates in our research and development pipeline. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of our control. Our actual results may differ materially from those indicated in the forward-looking statements. Therefore, you should not rely on any of these forward-looking statements. Important factors that could cause our actual results to differ materially from those indicated in the forward-looking statements include, among others: (i) prior to commencing clinical studies for NKTR-214, Nektar must successfully finalize and submit an Investigational New Drug application to the FDA and such application must become effective; (ii) NKTR-214 is in early-stage research and there are a number of hurdles, including the successful completion of preclinical toxicology studies and successful manufacture of drug product, prior to the commencement of clinical studies for NKTR-214; (iii) our drug candidates and those of our collaboration partners are in various stages of clinical development and the risk of failure is high and can unexpectedly occur at any stage prior to regulatory approval for numerous reasons including safety and efficacy findings even after positive findings in previous preclinical and clinical studies; (iv) the timing of the commencement or end of clinical trials and the commercial launch of our drug candidates may be delayed or unsuccessful due to regulatory delays, slower than anticipated patient enrollment, manufacturing challenges, changing standards of care, evolving regulatory requirements, clinical trial design, clinical outcomes, competitive factors, or delay or failure in ultimately obtaining regulatory approval in one or more important markets; (v) scientific discovery of new medical breakthroughs is an inherently uncertain process and the future success of applying our technology platform to potential new drug candidates (such as NKTR-214) is therefore highly uncertain and unpredictable and one or more research and development programs could fail; and (vi) certain other important risks and uncertainties set forth in our Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 1, 2015. Any forward-looking statement made by us in this press release is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation to update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.

**Contact:**
Investors
Jennifer Ruddock of Nektar Therapeutics
415-482-5585

Media
Ryan Flinn of WCG
415-946-1059
nektar@wcgworld.com

1. Boyman, J., et al., Nature Reviews Immunology, 2012, 12, 180-190.
2. Charych, D., et al., Cancer Res. 2013;73(8 Suppl):Abstract nr 482 and Data on file.
3. Hoch U, at al. AACR; Mol Cancer Ther. 2013;12(11 Suppl):Abstract nr B296.
4. Data on file. Nektar Therapeutics.