FOR IMMEDIATE RELEASE

Merrimack Pharmaceuticals Initiates Enrollment in a Phase 1/2 Combination Study of MM-121 and Tarceva® in Patients with Non-Small Cell Lung Cancer

CAMBRIDGE, Mass., February 22, 2010 – Merrimack Pharmaceuticals, Inc. announced today that the first patient has received an initial dose in a Phase 1/2 clinical study combining MM-121 with Tarceva® (erlotinib) in patients with non-small cell lung cancer (NSCLC). This is the first of multiple trials that Merrimack and sanofi-aventis expect to initiate in 2010 as part of a broad Phase 2 clinical development program for MM-121.

MM-121, Merrimack's lead oncology therapeutic candidate, is an antibody designed to block signaling of ErbB3. Erlotinib is a small molecule targeting the epidermal growth factor receptor (EGFR).

"Our Network Biology analysis of cancer cells indicates that tumors often become resistant to EGFR-targeted therapies by compensating for tumor growth restriction through the ErbB3 receptor," stated Clet Niyikiza, Ph.D., Senior Vice President of Development at Merrimack. "We believe that this discovery, which has since been confirmed by leading academic laboratories, indicates that MM-121 in combination with Tarceva® could be a powerful treatment for lung cancer patients who no longer respond to EGFR treatment alone."

The Phase 1/2 study will initially evaluate the human safety and pharmacokinetics (PK) of MM-121 in combination with erlotinib, establish a safe combination regimen, and then investigate the regimen's efficacy in the NSCLC patient population. Enrollment of the trial is underway at Horizon Oncology Center in Indiana. Several additional sites are expected to participate in the Phase 1/2 trial.

MM-121 is a monoclonal antibody designed to block signaling of the ErbB3 receptor. ErbB3 is a member of the ErbB family consisting of 4 different receptors, EGFR (aka ErbB1), ErbB2 (Her2), ErbB3 (Her3) and ErbB4 (Her4). These receptors play a critical role in cancer signaling. MM-121 was the first engineered antibody that emerged from Merrimack's Network Biology platform as well as the first selective ErbB3 antagonist to enter human clinical development. A Phase 1 dose escalation trial testing the safety and pharmacokinetics of MM-121 is ongoing at three sites in the US. Preclinical data exhibiting MM-121s impact on multiple cancer models, including the combination with eroltinib, were presented at the annual meeting of the American Association for Cancer Research and the World Lung Cancer Conference in 2009.

Merrimack has developed a broad intellectual property position around MM121. This portfolio includes U.S. and international patent filings relating to compositions of matter and methods of use as well as licensed patents and pending patent applications, trade secrets and proprietary know-how. Merrimack and sanofi-aventis entered into an exclusive, global collaboration and licensing agreement for MM-121 in 2009.

About Merrimack
Merrimack is a biopharmaceutical company dedicated to the discovery and development of novel medicines for the treatment of cancer and inflammation. The Company is advancing a robust pipeline of engineered therapeutics paired with molecular diagnostics. Merrimack's first two oncology candidates, MM-121, partnered with sanofi-aventis, and MM-111, are in Phase 1 clinical testing with multiple pre-clinical development and research stage programs in the pipeline. MM-121 and MM-111 are investigational drugs and have not been approved by the U.S. Food and Drug Administration or any international regulatory agency. The Company's proprietary Network Biology discovery platform, developed with the help of leading scientists from MIT and Harvard, integrates the fields of engineering, biology, and computing to enable mechanism-based, model driven discovery and development of both therapeutics and diagnostics. Merrimack is a privately-held company based in Cambridge, Massachusetts. For additional information, please visit http://www.merrimackpharma.com.

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