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Threshold Pharmaceuticals Announces Workforce Reduction

Threshold to Focus on Clinical Trials of Tarloxotinib While Evaluating Potential Further Development of Evofosfamide and Other Strategic Options for the Company

SOUTH SAN FRANCISCO, CA -- (Marketwired) -- 12/18/15 -- Threshold Pharmaceuticals, Inc. (NASDAQ: THLD) today announced that it has initiated a significant reduction in its workforce in order to focus the company's financial resources in the near term on two ongoing Phase 2 proof-of-concept clinical trials of tarloxotinib bromide* ("tarloxotinib"), the company's novel epidermal growth factor receptor tyrosine kinase inhibitor (EGFR TKI) licensed from the University of Auckland, New Zealand.

Threshold will reduce its workforce by approximately two-thirds, resulting in between 20-25 remaining employees. Threshold anticipates the one-time severance-related charge associated with the workforce reduction to be approximately $2.6 million, which includes approximately $0.3 million of non-cash expense related to the extension of the post-termination exercise period for the outstanding vested stock options for the affected employees. The majority of the charges will be paid by the end of the first quarter of 2016.

"We are enacting this reduction in workforce as a result of the recently announced outcomes from our two Phase 3 trials of evofosfamide in which neither trial met its primary endpoint of demonstrating a statistically significant improvement in overall survival," said Barry Selick, Ph.D., Chief Executive Officer at Threshold. "I would like to express my sincere gratitude to our employees who are being affected by this difficult but necessary action. This is a loss to our Threshold family of talented and dedicated individuals who have worked with integrity and passion towards improving the lives of people living with cancer."

Dr. Selick continued, "With this workforce reduction, we will focus our efforts on the ongoing Phase 2 clinical trials of tarloxotinib while evaluating potential further development of evofosfamide and other strategic options for the company. We plan to provide additional guidance in the first quarter of 2016."

Threshold has a global license and co-development agreement for evofosfamide with Merck KGaA, Darmstadt, Germany. Both companies are evaluating next steps for the evofosfamide program.

About Tarloxotinib Bromide
Tarloxotinib bromide, or "tarloxotinib," is a prodrug designed to selectively release a covalent (irreversible) EGFR tyrosine kinase inhibitor under severe hypoxia, a feature of many solid tumors. Accordingly, tarloxotinib has the potential to effectively shut down aberrant EGFR signaling in a tumor-selective manner, thus potentially avoiding or reducing the systemic side effects associated with currently available EGFR tyrosine kinase inhibitors. Tarloxotinib is currently being evaluated in two Phase 2 proof-of-concept trials: one for the treatment of patients with mutant EGFR-positive, T790M-negative advanced non-small cell lung cancer progressing on an EGFR tyrosine kinase inhibitor, and the other for patients with recurrent or metastatic squamous cell carcinomas of the head and neck or skin. Threshold licensed exclusive worldwide rights to tarloxotinib from the University of Auckland, New Zealand, in September 2014.

About Evofosfamide
Evofosfamide (previously known as TH-302) is an investigational hypoxia-activated prodrug of a bis-alkylating agent that is preferentially activated under severe hypoxic tumor conditions, a feature of many solid tumors. Areas of low oxygen levels (hypoxia) in solid tumors are due to insufficient blood vessel supply. Similarly, the bone marrow of patients with hematological malignancies has also been shown, in some cases, to be severely hypoxic.

Threshold previously announced the outcomes of two Phase 3 cancer studies (MAESTRO and TH-CR-406/SARC021) of evofosfamide stating that neither study met its primary endpoint. The related news release dated December 7, 2015, be can be accessed on the company's website in the Investors/News Releases section http://investor.thresholdpharm.com/releases.cfm.

About Threshold Pharmaceuticals
Threshold Pharmaceuticals, Inc. is a biotechnology company focused on the discovery and development of drugs targeting tumor hypoxia, the low oxygen condition found in microenvironments of most solid tumors as well as the bone marrows of some hematologic malignancies. This approach offers broad potential to treat a variety of cancers. By selectively targeting

tumor cells, we are building a pipeline of drugs that hold promise to be more effective and less toxic to healthy tissues than conventional anticancer drugs. For additional information, please visit our website (www.thresholdpharm.com).

Forward-Looking Statements
Except for statements of historical fact, the statements in this press release are forward-looking statements, including statements regarding Threshold's expectations regarding its ability to fund its operations through the release of preliminary results from its two Phase 2 trials of tarloxotinib, Threshold's expectations with respect to the timing of the release of those preliminary results, the expected restructuring charge that Threshold expects to incur in connection with the workforce reduction and the anticipated timing for completion of the workforce reduction, and the therapeutic potential of Threshold's product candidates. These statements involve risks and uncertainties that can cause actual results to differ materially from those in such forward-looking statements. Potential risks and uncertainties include, but are not limited to: the difficulty and uncertainty of pharmaceutical product development, including the time and expense required to conduct clinical trials and analyze data, and the uncertainty of clinical success and regulatory approval; risks related to Threshold's dependence upon its collaborative relationship with Merck KGaA, Darmstadt, Germany, to further develop evofosfamide; the risks that the development of evofosfamide could be abandoned altogether as a result of the negative efficacy results in the Phase 3 studies or otherwise, and that even if its development continues, evofosfamide may never receive any marketing approvals; risks related to Threshold's ability to enroll or complete the ongoing Phase 2 trials of tarloxotinib and that tarloxotinib may not be found to be safe or effective in those trials; risks related to the impact of the workforce reduction on Threshold's business and unanticipated charges, costs and expenditures not currently contemplated that may occur as a result of the workforce reduction; and Threshold's need for and the availability of resources to develop its product candidates and to support Threshold's operations. Further information regarding these and other risks is included under the heading "Risk Factors" in Threshold's Quarterly Report on Form 10-Q, which has been filed with the Securities and Exchange Commission on November 2, 2015 and is available from the SEC's website (www.sec.gov) and on our website (www.thresholdpharm.com) under the heading "Investors." We undertake no duty to update any forward-looking statement made in this news release.

* Tarloxotinib bromide is the proposed International Nonproprietary Name (pINN)

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