



New Preclinical Data on ALKS 4230 in Combination With Lucitanib to be Presented at 2020 American Association for Cancer Research (AACR) Virtual Annual Meeting II

June 22, 2020

- Combination Therapy Resulted in Durable, Dose-Dependent Antitumor Efficacy in a Preclinical Model of Colon Cancer -

DUBLIN and BOULDER, Colo., June 22, 2020 /PRNewswire/ -- [Alkermes plc](#) (Nasdaq: ALKS) and [Clovis Oncology, Inc.](#) (Nasdaq: CLVS) today announced positive preclinical data from a study designed to evaluate the combination potential of ALKS 4230, Alkermes' investigational engineered interleukin-2 (IL-2) variant immunotherapy, with lucitanib, Clovis' investigational angiogenesis inhibitor. The data will be presented during a poster session at the American Association for Cancer Research (AACR) Virtual Annual Meeting II, taking place June 22-24, 2020.

The study evaluated the antitumor efficacy and mechanism of action of *mALKS 4230*, a mouse ortholog of ALKS 4230, and lucitanib as monotherapies and in combination in a preclinical syngeneic mouse model of colon cancer. The combination of *mALKS 4230* with lucitanib resulted in dose-dependent, durable complete responses (absence of any detectable tumor) and enhanced survival compared with monotherapy treatment with *mALKS 4230* and lucitanib.

"Combining treatments with complementary mechanisms may offer synergistic clinical benefit and expand treatment options for a broader set of patient populations," said Craig Hopkinson, M.D., Chief Medical Officer and Executive Vice President of Research & Development at Alkermes. "These compelling preclinical data provide a foundational rationale to further explore novel combination options, such as an angiogenesis inhibitor, for ALKS 4230, with the goal of bringing improved therapeutic outcomes to patients across multiple tumor types."

Key findings presented in the poster include the following:

- In the group that received the higher dose of *mALKS 4230* (out of two doses tested) combined with lucitanib, 100 percent of the treated mice exhibited complete tumor regression and protection from new tumor growth upon re-challenge, an indication of the development of immunological memory.
- The combination of *mALKS 4230* with lucitanib resulted in an increase in intratumoral immune cells, including CD8⁺ T cells and dendritic cells, compared to monotherapy treatment, changes that are associated with anti-tumor immune responses.
- The combination of *mALKS 4230* with lucitanib elicited a distinct gene expression profile associated with anti-tumor activity, including increased immune cytolytic gene expression with decreased expression of genes with pro-angiogenic functions.

A virtual poster titled, "The Combination of a Mouse Ortholog of ALKS 4230, a Selective Agonist of the Intermediate-Affinity IL-2 Receptor, and the Angiogenesis Inhibitor Lucitanib Enhances Antitumor Activity," along with a pre-recorded audio presentation by Dr. Jared Lopes, Principal Scientist, Alkermes will be available on the AACR website at <https://www.aacr.org/meeting/aacr-annual-meeting-2020/>.

About ALKS 4230

ALKS 4230 is an investigational, novel, engineered fusion protein comprised of modified interleukin-2 (IL-2) and the high affinity IL-2 alpha receptor chain, designed to selectively expand tumor-killing immune cells while avoiding the activation of immunosuppressive cells by preferentially binding to the intermediate-affinity IL-2 receptor complex. The selectivity of ALKS 4230 is designed to leverage the proven anti-tumor effects of existing IL-2 therapy while mitigating certain limitations.

About Lucitanib

Lucitanib is an oral, potent inhibitor of the tyrosine kinase activity of vascular endothelial growth factor receptors 1 through 3 (VEGFR1-3), platelet-derived growth factor receptors alpha and beta (PDGFR α/β) and fibroblast growth factor receptors 1 through 3 (FGFR1-3). Emerging clinical data support the combination of angiogenesis inhibitors and immunotherapy to increase effectiveness in multiple cancer indications. Angiogenic factors, such as vascular endothelial growth factor (VEGF), are frequently up-regulated in tumors and create an immunosuppressive tumor microenvironment. Use of antiangiogenic drugs reverses this immunosuppression and can augment response to immunotherapy.

Lucitanib is an unlicensed medical product.

About Alkermes

Alkermes plc is a fully integrated, global biopharmaceutical company developing innovative medicines in the fields of neuroscience and oncology. The company has a portfolio of proprietary commercial products focused on addiction and schizophrenia, and a pipeline of product candidates in development for schizophrenia, bipolar I disorder, neurodegenerative disorders and cancer. Headquartered in Dublin, Ireland, Alkermes plc has an R&D center in Waltham, Massachusetts; a research and manufacturing facility in Athlone, Ireland; and a manufacturing facility in Wilmington, Ohio. For more information, please visit Alkermes' website at www.alkermes.com.

About Clovis Oncology

Clovis Oncology, Inc. is a biopharmaceutical company focused on acquiring, developing and commercializing innovative anti-cancer agents in the U.S., Europe and additional international markets. Clovis Oncology targets development programs at specific subsets of cancer populations, and simultaneously develops, with partners, diagnostic tools intended to direct a compound in development to the population that is most likely to benefit from its use. Clovis Oncology is headquartered in Boulder, Colorado; please visit www.clovisoncology.com for more information, including additional office locations in the U.S. and Europe.

Alkermes Note Regarding Forward-Looking Statements

Certain statements set forth in this press release constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, but not limited to, statements concerning the potential therapeutic value of ALKS 4230, as a monotherapy or in combination. You are cautioned that forward-looking statements are inherently uncertain. Although the company believes that such statements are based on reasonable assumptions within the bounds of its knowledge of its business and operations, the forward-looking statements are neither promises nor guarantees and they are necessarily subject to a high degree of uncertainty and risk. Actual results may differ materially from those expressed or implied in the forward-looking statements due to various risks and uncertainties. These risks and uncertainties include, among others, whether preclinical and preliminary, interim or final clinical results for ALKS 4230—whether as a monotherapy or in combination—will be predictive of future data from the same studies, results of future clinical studies or real-world results; whether ALKS 4230, as a monotherapy or in combination, could be shown to be unsafe or ineffective; whether future clinical trials or future stages of ongoing clinical trials for ALKS 4230, as a monotherapy or in combination, will be initiated or completed on time or at all; changes in the cost, scope and duration of, and clinical trial operations for, development activities for ALKS 4230, including changes relating to the novel coronavirus (COVID-19); and those risks and uncertainties described under the heading "Risk Factors" in the company's Annual Report on Form 10-K for the year ended Dec. 31, 2019, the company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 and in subsequent filings made by the company with the U.S. Securities and Exchange Commission (SEC), which are available on the SEC's website at www.sec.gov. Existing and prospective investors are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. Except as required by law, the company disclaims any intention or responsibility for updating or revising any forward-looking statements contained in this press release.

Clovis Oncology Note Regarding Forward-Looking Statements

To the extent that statements contained in this press release are not descriptions of historical facts regarding Clovis Oncology, they are forward-looking statements reflecting the current beliefs and expectations of management. Examples of forward-looking statements contained in this press release include, among others, statements regarding the potential benefit of our drug candidate lucitanib in combination with ALKS 4230 and expanding treatment options for a broader set of patient populations. Such forward-looking statements involve substantial risks and uncertainties that could cause our future results, performance or achievements to differ significantly from that expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, whether future pre-clinical or clinical study results will support continued development or regulatory approval, whether our clinical development programs for our drug candidates and those of our partners can be completed on time or at all, whether future study results will be consistent with study findings to date, and actions by the FDA, the EMA or other regulatory authorities regarding data required to support drug applications and whether to accept or approve drug applications that may be filed, as well as their decisions regarding drug labeling, reimbursement and pricing, and other matters that could affect the development, approval, availability or commercial potential of our drug candidates. Clovis Oncology does not undertake to update or revise any forward-looking statements. A further description of risks and uncertainties can be found in Clovis Oncology's filings with the Securities and Exchange Commission, including its Annual Report on Form 10-K and its reports on Form 10-Q and Form 8-K.

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