Iovance Biotherapeutics Announces Regulatory and Clinical Updates for Lifileucel in Melanoma

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Positive FDA Feedback on Potency Assay Matrix to Support BLA Submission

Further Defines Frontline Melanoma Strategy for Lifileucel in Combination with Pembrolizumab

SAN CARLOS, Calif., April 05, 2022 (GLOBE NEWSWIRE) -- Iovance Biotherapeutics, Inc. (NASDAQ: IOVA), a late-stage biotechnology company developing novel T cell-based cancer immunotherapies, today announced that the U.S. Food and Drug Administration (FDA) has provided feedback on April 1, 2022 regarding Iovance's proposed matrix of potency assays for its upcoming Biologics License Application (BLA) for lifileucel in metastatic melanoma. Iovance received positive feedback from the FDA on both its potency assay matrix and its proprietary cell co-culture assay included in the potency assay matrix. Based on this response, Iovance expects to request a pre-BLA meeting in July 2022 and to complete a BLA submission for lifileucel by August 2022.

Frederick Vogt, Ph.D., J.D., Interim President and Chief Executive Officer of Iovance, stated, "The favorable feedback received from the FDA on our potency assays and assay matrix brings Iovance a step closer to our submission of a BLA for lifileucel in metastatic melanoma. We look forward to bringing lifileucel to the market quickly to offer melanoma patients a new option following anti-PD-1 therapy."

In addition, Iovance today announced plans to open a Phase III study for lifileucel in combination with pembrolizumab for the treatment of immune checkpoint inhibitor (ICI) naïve frontline metastatic melanoma in late 2022. Updated data from the combination cohort of lifileucel and pembrolizumab in ICI naïve patients (Cohort 1A in the IOV-COM-202 study, n=12) demonstrated an overall response rate (ORR) of 67%. Eight out of 12 patients had a confirmed objective response per RECIST 1.1, including three complete responses and five partial responses. Six of the eight responders had ongoing response at the time of the last data cut, and five responders had a duration of response of more than one year. The FDA previously granted Fast Track Designation for lifileucel in combination with pembrolizumab for the treatment of ICI naïve metastatic melanoma based on the unmet medical need and potential advantages for this combination over available care.

Management will host a conference call and live audio webcast to discuss these updates at 8:00 a.m. Eastern time on April 6, 2022. To participate in the conference call, please dial 1-844-646-4465 (domestic) or 1-615-247-0257 (international) and reference the access code 3734669. The live webcast can be accessed in the Investors section of the Company's website at www.iovance.com. The archived webcast will also be available for one year in the Investors section at www.iovance.com.

About Iovance Biotherapeutics, Inc.

Iovance Biotherapeutics aims to be the global leader in innovating, developing and delivering tumor infiltrating lymphocyte (TIL) therapies for patients with cancer. We are pioneering a transformational approach to cure cancer by harnessing the human immune system's ability to recognize and destroy diverse cancer cells in each patient. Our lead late-stage TIL product candidate, lifileucel for metastatic melanoma, has the potential to become the first approved one-time cell therapy for a solid tumor cancer. The Iovance TIL platform has demonstrated promising clinical data across multiple solid tumors. We are committed to continuous innovation in cell therapy, including gene-edited cell therapy, that may extend and improve life for patients with cancer. For more information, please visit www.iovance.com.

Forward-Looking Statements

Certain matters discussed in this press release are "forward-looking statements" of Iovance Biotherapeutics, Inc. (hereinafter referred to as the "Company," "we," "us," or "our") within the meaning of the Private Securities Litigation Reform Act of 1995 (the "PSLRA"). All such written or oral statements made in this press release, other than statements of historical fact, are forward-looking statements and are intended to be covered by the safe harbor for forward-looking statements provided by the PSLRA. Without limiting the foregoing, we may, in some cases, use terms such as "predicts," "believes," "potential," "continue," "estimates," "anticipates," "expects," "plans," "intends," "forecast," "guidance," "outlook," "may," "could," "might," "will," "should" or other words that convey uncertainty of future events or outcomes and are intended to identify forward-looking statements. Forward-looking statements are based on assumptions and assessments made in light of management's experience and perception of historical trends, current conditions, expected future developments and other factors believed to be appropriate. Forward-looking statements in this press release are made as of the date of this press release, and we undertake no duty to update or revise any such statements, whether as a result of new information, future events or otherwise. Forward-looking statements are not guarantees of future performance and are subject to risks, uncertainties and other factors, many of which are outside of our control, that may cause actual results, levels of activity, performance, achievements and developments to be materially different from those expressed in or implied by these forward-looking statements. Important factors that could cause actual results, developments and business decisions to differ materially from forward-looking statements are described in the sections titled "Risk Factors" in our filings with the Securities and Exchange Commission, including our most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q, and include, but are not limited to, the following substantial known and unknown risks and uncertainties inherent in our business: the effects of the COVID-19 pandemic; risks related to the timing of and our ability to successfully develop, submit, obtain and maintain U.S. Food and Drug Administration ("FDA") or other regulatory authority approval of, or other action with respect to, our product candidates, and our ability to successfully commercialize any product candidates for which we obtain FDA approval; preliminary and interim clinical results, which may include efficacy and safety results, from ongoing clinical trials or cohorts may not be reflected in the final analyses of our ongoing clinical trials or subgroups within these trials or in other prior trials or cohorts; the risk that enrollment may need to be adjusted for our trials and cohorts within those trials based on FDA and other regulatory agency input; the changing landscape of care for cervical cancer patients may impact our clinical trials in this indication; the risk that we may be required to conduct additional clinical trials or modify ongoing or future clinical trials based on feedback from the FDA or other

regulatory authorities; the risk that our interpretation of the results of our clinical trials or communications with the FDA may differ from the interpretation of such results or communications by the FDA; the acceptance by the market of our product candidates and their potential reimbursement by payors, if approved; our ability or inability to manufacture our therapies using third party manufacturers or our own facility may adversely affect our potential commercial launch; the results of clinical trials with collaborators using different manufacturing processes may not be reflected in our sponsored trials; the risk that unanticipated expenses may decrease our estimated cash balances and forecasts and increase our estimated capital requirements; and other factors, including general economic conditions and regulatory developments, not within our control.

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