Insmed Receives FDA Breakthrough Therapy Designation for Brensocatib in Patients with Non-Cystic Fibrosis Bronchiectasis (NCFBE)

--Full Results from Phase 2 WILLOW Study of Brensocatib in NCFBE to be Presented at Virtual ATS Session on June 24, 2020--

BRIDGEWATER, N.J., June 8, 2020 /PRNewswire/ -- Insmed Incorporated (Nasdaq:INSM), a global biopharmaceutical company on a mission to transform the lives of patients with serious and rare diseases, today announced that the U.S. Food and Drug Administration (FDA) has granted breakthrough therapy designation for brensocatib (formerly known as INS1007) for the treatment of adult patients with non-cystic fibrosis bronchiectasis (NCFBE) for reducing exacerbations. Brensocatib is a novel oral, reversible inhibitor of dipeptidyl peptidase 1 (DPP1) currently being developed by Insmed for the treatment of bronchiectasis and other inflammatory diseases.

The FDA's breakthrough therapy designation is designed to expedite the development and review of therapies that are intended to treat a serious or life-threatening disease and for which preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over available therapy. The benefits of breakthrough therapy designation include more frequent communication and meetings with FDA, eligibility for rolling and priority review, intensive guidance on an efficient drug development program, and organizational commitment from the FDA involving senior managers.

"We are very pleased that the FDA has granted breakthrough therapy designation to brensocatib for treating patients with NCFBE, recognizing the strength of data from our Phase 2 WILLOW study and the potential for brensocatib to offer a novel, first-in-class treatment approach to bronchiectasis," said Martina Flammer, M.D., MBA, Chief Medical Officer of Insmed. "There are currently no approved therapies specifically targeting this severe and chronic pulmonary disease in the United States, Europe, or Japan. We look forward to continuing to work with the FDA as we advance the development of brensocatib to address this urgent medical need."

The breakthrough therapy designation for brensocatib is based on positive results from the global randomized, double-blind, placebo-controlled Phase 2 WILLOW study of brensocatib in adults with NCFBE. As previously announced, full results from this study will be presented during a virtual clinical trials session hosted by the American Thoracic Society (ATS) on Wednesday, June 24, 2020. Insmed will hold a conference call following the oral session during which the lead study investigator will further discuss the WILLOW data and Insmed management will provide a business assessment of brensocatib.

Insmed expects to initiate a Phase 3 program for brensocatib in bronchiectasis in the second half of 2020.

Post-ATS Conference Call Details

Insmed will host a conference call on Wednesday, June 24, 2020 at 4:00 pm ET. Shareholders and other interested parties may participate in the conference call by dialing (888) 317-6003 (domestic) or (412) 317-6061 (international) and referencing conference ID number 9628054. The call will also be webcast live on the company's website at www.insmed.com.

A replay of the conference call will be accessible approximately one hour after its completion through July 8, 2020, by dialing (877) 344-7529 (domestic) or (412) 317-0088 (international) and referencing replay access code 10144366. A webcast of the call will also be archived for 90 days under the Investor Relations section of the Company's website at www.insmed.com.

About WILLOW

WILLOW was a randomized, double-blind, placebo-controlled, parallel-group, multi-center, multi-national, Phase 2 study to assess the efficacy, safety and tolerability, and pharmacokinetics of brensocatib administered once daily for 24 weeks in patients with non-cystic fibrosis bronchiectasis (NCFBE). WILLOW was conducted at 116 sites and enrolled 256 adult patients diagnosed with NCFBE who had at least two documented pulmonary exacerbations in the 12 months prior to screening. Patients were randomized 1:1:1 to receive either 10 mg or 25 mg of brensocatib or matching placebo. The primary efficacy endpoint was the time to first pulmonary exacerbation over the 24-week treatment period in the brensocatib arms compared to the placebo arm.

About Brensocatib (Formerly INS1007)

Brensocatib is a small molecule, oral, reversible inhibitor of dipeptidyl peptidase I (DPP1) being developed by Insmed for the treatment of patients with bronchiectasis. DPP1 is an enzyme responsible for activating neutrophil serine proteases (NSPs), such as neutrophil elastase, in neutrophils when they are formed in the bone marrow. Neutrophils are the most common type of white blood cell and play an essential role in pathogen destruction and inflammatory mediation. In chronic inflammatory lung diseases, neutrophils accumulate in the airways and result in excessive active NSPs that cause lung destruction and inflammation. Brensocatib may decrease the damaging effects of inflammatory diseases such as bronchiectasis by inhibiting DPP1 and its activation of NSPs.

About Non-Cystic Fibrosis Bronchiectasis

Non-cystic fibrosis bronchiectasis (NCFBE) is a severe, chronic pulmonary disorder in which the bronchi become permanently dilated due to a cycle of infection, inflammation, and lung tissue damage. The condition is marked by frequent pulmonary exacerbations requiring antibiotic therapy and/or hospitalizations. Symptoms include chronic cough, excessive sputum production, shortness of breath, and repeated respiratory infections, which can worsen the underlying condition. NCFBE affects approximately 340,000 to 520,000 patients in the U.S. Today, there are no approved therapies specifically targeting NCFBE in the U.S., Europe, or Japan for the treatment of patients with NCFBE.

About Insmed

Insmed Incorporated is a global biopharmaceutical company on a mission to transform the lives of patients with serious and rare diseases. Insmed's first commercial product, ARIKAYCE® (amikacin liposome inhalation suspension), is the first and only therapy approved in the United States for the treatment of refractory *Mycobacterium avium* complex (MAC) lung disease as part of a combination antibacterial drug regimen for adult patients with limited or no alternative treatment options. MAC lung disease is a chronic, debilitating condition that can cause severe and permanent lung damage. Insmed's earlier-stage clinical pipeline includes brensocatib, a novel oral reversible inhibitor of dipeptidyl peptidase 1 with therapeutic potential in non-cystic fibrosis bronchiectasis and other inflammatory diseases, and treprostinil palmitil, an inhaled formulation of a treprostinil prodrug that may offer a differentiated product profile for rare pulmonary disorders, including pulmonary arterial hypertension. For more information, visit www.insmed.com.

Forward-looking Statements

This press release contains forward-looking statements that involve substantial risks and uncertainties. "Forward-looking statements," as that term is defined in the Private Securities Litigation Reform Act of 1995, are statements that are not historical facts and involve a number of risks and uncertainties. Words herein such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "intends," "potential," "continues," and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) may identify forward-looking statements.

The forward-looking statements in this press release are based upon the Company's current expectations and beliefs, and involve known and unknown risks, uncertainties and other factors, which may cause the Company's actual results, performance and achievements and the timing of certain events to differ materially from the results, performance, achievements or timing discussed, projected, anticipated or indicated in any forward-looking statements. Such risks, uncertainties and other factors include, among others, the following: the risk that the full data set from the WILLOW study, our six-month Phase 2 trial of brensocatib in patients with NCFBE or data generated in further clinical trials of brensocatib will not be consistent with the top-line results of the study; the risk that brensocatib does not prove effective or safe for patients in the STOP-COVID19 study; business or economic disruptions due to catastrophes or other events, including natural disasters or public health crises; impact of the novel coronavirus (COVID-19) pandemic and efforts to reduce its spread on our business, employees, including key personnel, patients, partners and suppliers; failure to successfully commercialize or maintain U.S. approval for ARIKAYCE, the Company's only approved product; uncertainties in the degree of market acceptance of ARIKAYCE by physicians, patients, third-party payors and others in the healthcare community; the Company's inability to obtain full approval of ARIKAYCE from the FDA, including the

risk that the Company will not timely and successfully complete the study to validate a PRO tool and complete the confirmatory post-marketing study required for full approval of ARIKAYCE; inability of the Company, PARI or the Company's other third party manufacturers to comply with regulatory requirements related to ARIKAYCE or the Lamira® Nebulizer System; the Company's inability to obtain adequate reimbursement from government or third-party payors for ARIKAYCE or acceptable prices for ARIKAYCE; development of unexpected safety or efficacy concerns related to ARIKAYCE or brensocatib; inaccuracies in the Company's estimates of the size of the potential markets for ARIKAYCE or brensocatib or in data the Company has used to identify physicians; expected rates of patient uptake, duration of expected treatment, or expected patient adherence or discontinuation rates; the Company's inability to create an effective direct sales and marketing infrastructure or to partner with third parties that offer such an infrastructure for distribution of ARIKAYCE; failure to obtain regulatory approval to expand ARIKAYCE's indication to a broader patient population; failure to successfully conduct future clinical trials for ARIKAYCE, brensocatib and the Company's other product candidates, including due to the Company's limited experience in conducting preclinical development activities and clinical trials necessary for regulatory approval and the Company's inability to enroll or retain sufficient patients to conduct and complete the trials or generate data necessary for regulatory approval; risks that the Company's clinical studies will be delayed or that serious side effects will be identified during drug development; failure to obtain, or delays in obtaining, regulatory approvals for ARIKAYCE outside the U.S. or for the Company's product candidates in the U.S., Europe, Japan or other markets, including the United Kingdom as a result of its recent exit from the European Union; failure of third parties on which the Company is dependent to manufacture sufficient quantities of ARIKAYCE or the Company's product candidates for commercial or clinical needs, to conduct the Company's clinical trials, or to comply with laws and regulations that impact the Company's business or agreements with the Company; the Company's inability to attract and retain key personnel or to effectively manage the Company's growth; the Company's inability to adapt to its highly competitive and changing environment; the Company's inability to adequately protect its intellectual property rights or prevent disclosure of its trade secrets and other proprietary information and costs associated with litigation or other proceedings related to such matters; restrictions or other obligations imposed on the Company by its agreements related to ARIKAYCE or the Company's product candidates, including its license agreements with PARI and AstraZeneca AB, and failure of the Company to comply with its obligations under such agreements; the cost and potential reputational damage resulting from litigation to which the Company is or may become a party, including product liability claims; the Company's limited experience operating internationally; changes in laws and regulations applicable to the Company's business, including any pricing reform, and failure to comply with such laws and regulations; inability to repay the Company's existing indebtedness and uncertainties with respect to the Company's ability to access future capital; and delays in the execution of plans to build out an additional FDA-approved third-party manufacturing facility and unexpected expenses associated with those plans.

The Company may not actually achieve the results, plans, intentions or expectations indicated by the Company's forward-looking statements because, by their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. For additional information about the risks and uncertainties that may affect the Company's business, please see the factors discussed in Item 1A, "Risk Factors," in the Company's Annual Report on Form 10-K for the year ended December 31, 2019, our Quarterly Report on Form 10-Q for the quarter ended March 31, 2020 and any subsequent Company filings with the SEC.

The Company cautions readers not to place undue reliance on any such forward-looking statements, which speak only as of the date of this press release. The Company disclaims any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any such statements to reflect any change in expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

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