KalVista Pharmaceuticals Presents Data Showing Single On-Demand Treatment with Orally Administered KVD900 Significantly Slows Progression and Accelerates Resolution of Attacks in Patients with HAE

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– Phase 2 data for KVD900 in late-breaking session at European Academy of Allergy and Clinical Immunology (EAACI) Congress –

CAMBRIDGE, Mass. & SALISBURY, England--(BUSINESS WIRE)--Jul. 12, 2021-- KalVista Pharmaceuticals, Inc. (NASDAQ: KALV), a clinical stage pharmaceutical company focused on the discovery, development, and commercialization of small molecule protease inhibitors, today announced data presented for its oral drug candidates at the European Academy of Allergy and Clinical Immunology (EAACI) Congress. Data presentations include a late-breaking poster for the Phase 2 data for KVD900, KalVista's lead drug program for oral on-demand treatment of hereditary angioedema (HAE) attacks, two posters on the prevalence and clinical management of normal C1-INH HAE in the US, and two posters on the Company's earlier stage research assets.

"HAE patients continue to seek an oral option for on-demand treatment of their disease, to fully manage their disease or for breakthrough attacks for those on prophylaxis," said Dr. Emel Aygören-Pürsün, Principal Investigator for the KVD900 Phase 2 Clinical Trial and Head of the HAE Center at the University Hospital Frankfurt. "As KVD900 halted attack progression and resolved attacks more quickly in patients with HAE, while demonstrating a good safety and tolerability profile, it could be a valued choice for physicians and patients in managing HAE."

The late-breaking poster, titled *A single on-demand treatment with orally administered KVD900 significantly slows progression and accelerates resolution of attacks in patients with hereditary angioedema (HAE): results of a phase 2, placebo-controlled, double-blind cross-over trial,* contains the comprehensive data set from the company's Phase 2 clinical trial of KVD900 in HAE patients. The presented data supports the topline results reported in February 2021.

- Early use of KVD900 halted attack progression.
- Use of KVD900 significantly shortened the time to improvement of attack symptoms.
- KVD900 accelerated attack resolution.
- KVD900 was generally safe and well tolerated in the study.

KalVista presented four other posters at EAACI related to the HAE clinical landscape and unmet needs, as well as preclinical data from other oral molecules.

Poster Title: *Prevalence of hereditary angioedema with normal C1-inhibitor (nC1-HAE) in the United States: results from a nationwide survey of HAE-treating physicians*

- While patients with nC1-HAE require similar care to those with C1INH-HAE (type I and II), the population prevalence of this condition is unknown.
- This study aimed to estimate the prevalence of nC1-HAE in the U.S. based on physician-level prescription data and responses to an internet-based survey which yielded 113 survey responses.
- Respondents were required to have seen at least 5 HAE patients in the prior 12 months and treated at least 1 nC1-HAE patient in that timeframe.
- The estimated prevalence for nC1-HAE was 0.44 per 100,000, accounting for up to 16.4%-22.7% of the total HAE population.
- Patients with nC1-HAE may represent a more sizeable population of patients with HAE in the U.S. than previously suspected.

Poster Title: *Current management of hereditary angioedema with normal C1-inhibitor (nC1-HAE) in the United States: results from a nationwide survey of HAE-treating physicians*

- Robust study data are lacking on the management of patients with nC1-HAE.
- The study included a 10-minute online survey of specialist practices managing HAE who commonly evaluate and treat patients with HAE and nC1-HAE.
- Patients are currently managed and treated with medications studied in patients with HAE types I and II, with icatibant being the most commonly used treatment for acute attacks and lanadelumab most preferred for prophylaxis.
- The highest-ranked unmet need in acute treatment and preventative care was for an oral, FDA-approved, nC1-HAE-specific treatment.

Poster Title: *Oral plasma kallikrein inhibitor KV998052 improves arterial blood oxygenation in a murine model of acute respiratory distress syndrome*

(ARDS)

- Recent data from published sources support the association of kallikrein-kinin activation and bradykinin generationwith SARS-CoV-2 induced acute respiratory distress syndrome (ARDS).
- Pretreatment of mice with orally administered KV998052 was associated with significantly improved blood oxygenation in mice with HCI induced ARDS compared with mice receiving vehicle.
- Pharmacological inhibition of plasma kallikrein (PKa) provides a therapeutic opportunity to improve arterial blood oxygenation in ARDS.

Poster Title: *Selective oral Factor XIIa inhibitor KV998083 protects mice against captopril induced vascular leakage and cleavage of high molecular weight kininogen*

- In the study, FactorXII knockout mice were fully protected against captopril-induced leakage.
- KV998083 achieved protection of kininogen (HK) in plasma.
- These preclinical results suggest that Factor XIIa inhibition may prevent bradykinin-induced angioedema.

About KalVista Pharmaceuticals, Inc.
KalVista Pharmaceuticals, Inc. is a pharmaceutical company focused on the discovery, development, and commercialization of small molecule protease inhibitors for diseases with significant unmet need. KalVista has developed a proprietary portfolio of novel, small molecule plasma kallikrein inhibitors initially targeting hereditary angioedema (HAE) and diabetic macular edema (DME). KalVista is developing KVD900 as an oral on-demand therapy for acute HAE attacks, which completed a Phase 2 efficacy trial in February 2021, demonstrating statistical and clinical significance across all endpoints. KVD824 is in development for prophylactic treatment of HAE. In addition, KalVista's oral Factor XIIa inhibitor program represents a new generation of therapies that may further improve the treatment of HAE for patients. In DME, an intravitreally administered plasma kallikrein inhibitor, called KVD001, has completed a Phase 2 clinical trial.

For more information, please visit www.kalvista.com.

Forward-Looking Statements
This press release contains "forward-looking" statements within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as: "anticipate," "intend," "plan," "goal," "seek," "believe," "project," "estimate," "expect," "strategy," "future," "likely," "may," "should," "will" and similar references to future periods. These statements are subject to numerous risks and uncertainties, including the potential impact of COVID-19, that could cause actual results to differ materially from what we expect. Examples of forward-looking statements include, among others, our expectations about safety and efficacy of our product candidates and timing of clinical trials and its results, our ability to commence or complete clinical studies and to obtain regulatory approvals for KVD900, KVD824 and other candidates in development, our ability to resolve a clinical hold with regards to KVD824, the ability of KVD900, KVD824 and other candidates in development to treat HAE or DME, the size of the potential market or incidence rates of KVD900, the future progress and potential success of our oral Factor XIIa program, and the sufficiency of our cash, cash equivalents and investments to fund our operations. Further information on potential risk factors that could affect our business and financial results are detailed in our annual report on Form 10-K when it is filed, our quarterly reports on Form 10-Q, and other filings we may make from time to time with the Securities and Exchange Commission. We undertake no obligation to publicly update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.

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