

Deciphera Pharmaceuticals Reports Updated Data from Ongoing Phase 1 Clinical Study of DCC-2618 at the European Society of Medical Oncology 2017 Congress

September 11, 2017

- Updated Data Include Durable Disease Control Rates in Heavily Pretreated GIST
 Patients –
- Reductions in KIT Mutant Allele Frequencies with DCC-2618 Support pan-KIT
 Activity Across the Spectrum of Exons 9, 11, 13, 14, 17 and 18 Mutations

Waltham, MA – September 11, 2017 – Deciphera Pharmaceuticals, a clinical-stage biopharmaceutical company focused on addressing key mechanisms of tumor drug resistance, today announced the presentation of updated data from its ongoing Phase 1 clinical trial of DCC-2618, the Company's pan-KIT and PDGFRα inhibitor, in patients with gastrointestinal stromal tumors (GIST). The data were presented in an oral presentation at the European Society for Medical Oncology (ESMO) 2017 Congress on September 9, 2017, in Madrid, Spain. This expands upon data from the same trial presented at the ASCO meeting in June 2017, providing further validation of the clinical benefit of DCC-2618 with more patients continuing on therapy out to 12 and 24 weeks. The data showed that in heavily pretreated patients with GIST, treatment with DCC-2618 at ≥100 mg daily resulted in disease control rates of 76% at 12 weeks and 57% at 24 weeks.

"The clinical activity observed to date, which includes durable responses in patients who were resistant to other kinase inhibitors, supports the planned evaluation of DCC-2618 in a placebo-controlled randomized, pivotal Phase 3 trial in patients with GIST who have previously received approved therapies," said Michael D. Taylor, Ph.D., President and Chief Executive Officer of Deciphera Pharmaceuticals. "In addition to this initial Phase 3 trial in fourth-line GIST patients, where there are no approved therapies, we plan to initiate a second pivotal Phase 3 trial in second-line GIST patients comparing DCC-2618 to sunitinib."

"DCC-2618 continues to demonstrate good tolerability and clinical activity in heavily pretreated patients with GIST," said Oliver Rosen, M.D., Chief Medical Officer of Deciphera Pharmaceuticals. "The extensive reductions in KIT mutant allele frequencies observed across the spectrum of exons 9, 11, 13, 14, 17 and 18 mutations supports the pan-KIT activity of DCC-2618 in these patients."

In an oral presentation, titled "Encouraging activity of novel pan-KIT and PDGFRα inhibitor DCC-2618 in patients (pts) with gastrointestinal stromal tumor (GIST)," Filip Janku, M.D., Ph.D., The University of Texas MD Anderson Cancer Center, presented data from 57 heavily pretreated GIST patients. As of July 28, 2017, data showed:

- At daily doses of 100 mg or greater, GIST patients with KIT or PDGFRα driven disease on DCC-2618 showed a disease control rate (DCR) of 76% at 12 weeks (n=25) and a DCR of 57% at 24 weeks (n=21). DCR is defined as patients with stable disease, partial response or complete response as assessed by Response Evaluation Criteria in Solid Tumors, or RECIST.
- Treatment with DCC-2618 resulted in reductions in cfDNA KIT mutant allele frequencies (MAF) compared to baseline values (n=19), suggesting pan-KIT activity across the spectrum of exons 9, 11, 13, 14, 17 and 18 mutations.
- DCC-2618 was generally well-tolerated at all dose levels studied, and a dose of 150 mg once per day was selected for the expansion cohorts and planned Phase 3 pivotal trials.

Details for the presentation are as follows:

Title: Encouraging activity of novel pan-KIT and PDGFRα inhibitor DCC-2618 in

patients (pts) with gastrointestinal stromal tumor (GIST).

Author: Filip Janku, M.D., Ph.D., The University of Texas MD Anderson Cancer Center

Session: Sarcoma: Proffered Paper Sarcoma Session

Chair: Sebastian Bauer, M.D., West German Cancer Center, University of Essen

Abstract #: 14730

Date and Time: Saturday, September 9, 2017, 11:00 AM - 12:30 PM (CEST)

About DCC-2618

DCC-2618 is currently in a first-in-human Phase 1 clinical trial. DCC-2618 is a pan-KIT and PDGFRα kinase switch control inhibitor in clinical development for the treatment of KIT and/or PDGFRα-driven cancers, including gastrointestinal stromal tumors, glioblastoma multiforme and systemic mastocytosis.

About Deciphera Pharmaceuticals

Deciphera Pharmaceuticals is a clinical-stage biopharmaceutical company focused on improving the lives of cancer patients by tackling key mechanisms of drug resistance that limit the rate and/or durability of response to existing cancer therapies. Our small molecule drug candidates are directed against an important family of enzymes called kinases, known to be directly involved in the growth and spread of many cancers. We use our deep understanding of kinase biology together with a proprietary chemistry library to purposefully design compounds that maintain kinases in a "switched off" or inactivated conformation. These investigational therapies comprise tumor-targeted agents designed to address therapeutic resistance causing mutations and immunotargeted agents designed to control the activation of immunokinases that suppress critical immune system regulators, such as macrophages. We have used our platform to develop a diverse pipeline of tumor-targeted and immuno-targeted drug candidates designed to improve outcomes for patients with cancer by improving the quality, rate and/or durability of their responses to treatment.

Contacts:

Media:

Gina Nugent, The Yates Network gina@theyatesnetwork.com

617-460-3579

Investor Relations:

Laura Perry or Sam Martin, Argot Partners

<u>Laura@argotpartners.com</u> or <u>Sam@argotpartners.com</u>

212-600-1902

Company:

Christopher J. Morl, Chief Business Officer Deciphera Pharmaceuticals, LLC cmorl@deciphera.com 781-209-6418