Translational Research Results Confirm The Broad Activity of DCC-2618 in GIST Patients With Difficult to Treat Drug Resistant KIT Mutations

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Translational Data Presented at the 2017 American Association for Cancer Research (AACR) Annual Meeting

Deciphera Pharmaceuticals, a clinical-stage biopharmaceutical company focused on addressing key mechanisms of tumor drug resistance, announced that data confirming the broad spectrum of activity of DCC-2618, the company's pan-KIT and PDGFRα inhibitor, will be presented today at the 2017 American Association for Cancer Research (AACR) Annual Meeting in Washington D.C. Filip Janku, M.D., Ph.D., Assistant Professor, The University of Texas MD Anderson Cancer Center will present translation results from patients with gastrointestinal stromal tumors (GIST) in a late-breaking poster presentation titled "Translational Research in a Phase 1 Proof-of-Concept Study Supports that DCC-2618 is a pan-KIT Inhibitor."

"There are limited treatment options available for heavily pre-treated patients with gastrointestinal stromal tumors. We are extremely encouraged that in these patients DCC-2618 at doses of 30mg or 50mg BID resulted in dramatic reductions or complete clearance from their plasma of cell free (cf) DNA across the spectrum of exons 9, 11, 13, 14, 17 and 18 KIT mutations," said Michael D. Taylor, Ph.D., Deciphera's President and Chief Executive Officer. "By inhibiting even difficult to treat secondary drug resistant KIT mutations, such as exon 13 V654A, DCC-2618 offers the potential for more durable responses in patients where mutations confer resistance to other kinase

inhibitor therapies".

In his poster presentation, Dr. Janku reported data from the ongoing Phase 1, dose escalation study of oral DCC-2618 in advanced solid tumor patients in which objective tumor responses and metabolic PET responses in GIST patients were observed and first reported last year at the 28th EORTC-NCI-AACR Symposium on Molecular Targets and Cancer Therapeutics. The data reported in this poster was from 15 GIST patients, 14 with KIT mutations and one with a PDGFRα mutation, dosed in the ongoing Phase 1 dose-escalation study of DCC-2618 given orally twice-daily in 28-day cycles at doses ranging from 20-150 mg in advanced solid tumor patients. Highlights from the poster include:

- Dramatic reductions compared to baseline values in cfDNA KIT mutant allele frequencies (MAF) were observed across the spectrum of exons 9, 11, 13, 14, 17 and 18 mutations in KIT at starting doses as low as 30 mg BID.
- MAF values for exon 13 V654A and multiple exon 17 mutations were reduced dramatically or to undetectable levels in patients receiving 30mg or 50mg BID.
- Levels of circulating tumor cells (CTCs) were collected throughout the study and assessed using a viral telomerase promoter-driven GFP expression assay. The data provide initial evidence that supports a hypothesis that assessing CTCs in GIST patients may represent a potential future marker for tumor control in KIT or PDGFRα mutant GIST.

About DCC-2618

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

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 therapies comprise tumor-targeted agents designed to address therapeutic resistance causing mutations and immuno-targeted 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 response to treatment.

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

Media:Gina Nugent, The Yates Network
gina@theyatesnetwork.com
617-460-3579