Deciphera Pharmaceuticals Presents Data on Altiratinib (DCC-2701) that Demonstrated Inhibition of Tumor Growth and Invasion in Bevacizumab Resistant Glioblastoma

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Preclinical Data Presented at Society for Neuro-Oncology with Altiratinib, the Company's Advanced MET/TIE2/VEGFR2/TRK Kinase Inhibitor

Deciphera Pharmaceuticals, a clinical stage biotechnology company focused on improved kinase inhibitor treatments targeting the tumor cell and the tumor microenvironment, today announced the presentation of preclinical data that demonstrated that altiratinib (DCC-2701) inhibited tumor growth and invasion in a bevacizumab resistant glioblastoma mouse model. Altiratinib, a kinase inhibitor that targets multiple selected kinases MET, TIE2, VEGFR2 and TRK, is currently in Phase 1 clinical development for the treatment of invasive solid tumors and received Orphan Drug Status from the U.S. Food and Drug Administration for the treatment of glioblastoma. The data on altiratinib were presented at the 19th Annual Scientific Meeting and Education Day of The Society for Neuro-Oncology held November 13-16, 2014, in Miami.

"Altiratinib is differentiated in its ability to inhibit MET and TRK kinases while also providing balanced inhibition of the tumor microenvironment within a single oral therapeutic," said Michael D. Taylor, PhD, Deciphera's President and Chief Executive Officer. "This balanced inhibitory profile demonstrates the power of Deciphera's switch

pocket technology to design advanced kinase inhibitor therapies to simultaneously block multiple cancer signaling mechanisms in the tumor cell and the tumor microenvironment to prevent growth and spread of cancer."

"These data demonstrated that altiratinib inhibited tumor growth and invasion both in vitro and in vivo. Based on these results, we believe the combination of altiratinib and anti-VEGF therapy may provide a new strategy to overcome antiangiogenic therapy resistance and prolong overall survival in patients with glioblastoma," said John F. de Groot MD, Associate Professor, Department of Neuro-Oncology, The University of Texas MD Anderson Cancer Center and presenting author. "We look forward to further exploring the potential of altiratinib in refractory glioblastoma, an area of significant unmet medical need."

In an oral presentation titled, "The Novel c-MET inhibitor altiratinib (DCC-2701) inhibits tumor growth and invasion in a bevacizumab resistant glioblastoma mouse model," John F. de Groot, MD and colleagues from the Brain Tumor Center at MD Anderson Cancer Center described data that demonstrated altiratinib, either alone or in combination with anti-VEGF therapy (bevacizumab), inhibited tumor growth, epithelial-mesenchymal transition (EMT) progression and invasion both in vitro and in vivo, compared with anti-VEGF therapy alone:

• Altiratinib, alone or in combination with bevacizumab treatment, dramatically suppressed EMT and tumor invasion in vivo. This anti-invasive effect correlated with decreased N-cadherin and vimentin levels.

• In vivo, microvascular density associated with evasive revascularization induced by bevacizumab, was significantly inhibited in the groups treated with altiratinib and altiratinib plus bevacizumab, compared with control or the group treated with bevacizumab alone.

• Similarly, F4/80+ bone marrow derived macrophage cell infiltration was significantly suppressed in the groups treated with altiratinib and altiratinib plus bevacizumab, compared to control or the group treated with bevacizumab alone.

About Altiratinib (DCC-2701)

Altiratinib is a MET/TIE2/VEGFR2/TRK (A,B,C) kinase inhibitor in Phase 1 clinical

development for the treatment of invasive solid tumors including glioblastoma. The U.S. Food and Drug Administration has granted altiratinib Orphan Drug Designation for glioblastoma. Altiratinib has pharmaceutical properties amenable to oral administration and also exhibits substantial blood-brain-barrier penetration, making altiratinib a promising candidate for the treatment of glioblastoma. The discovery and development of altiratinib was based on the rationale of inhibiting MET and TRK kinases as cancer driver mutations while also incorporating balanced inhibition of the tumor microenvironment via MET, TIE2, and VEGFR2 kinases within a single therapeutic. With its balanced potency, altiratinib can inhibit three major tumor vascularization pathways (HGF, VEGF, ANG), thus overcoming the problem of tumor evasive vascularization, allowing for durable MET or TRK inhibition in tumors and overcoming HGF/MET mediated drug resistance. Other potential indications in which altiratinib may be active include MET-driven cancers, such as melanoma, pancreatic cancer, gastric tumors, renal cell carcinoma and BRAF-mutated melanoma as well as TRK-driven cancers such as non-small cell lung cancer, acute myeloid leukemia, colorectal cancer, ovarian cancer and thyroid cancer.

About Glioblastoma

Glioblastoma is the most common primary malignant brain tumor, with an incidence rate in the USA of 3.19 per 100,000 person-years. Glioblastoma is highly lethal, with an overall US 1-year survival rate from 1995 to 2007 of only 34.6%, decreasing to less than 5% of patients surviving 5 years after diagnosis. There are two types of glioblastoma, primary, which is the most common form and is very aggressive, and secondary, which comprises about 5-10% of glioblastomas and has a longer and slower growth pattern.

Relatively healthy glioblastoma patients younger than 70 years of age who receive an aggressive multimodal treatment approach have a median survival of approximately 15–20 months compared with 12 months if they receive radiation therapy only and 3 months with no treatment [Wen 2008, Grossman 2010].

About Deciphera Pharmaceuticals

Deciphera Pharmaceuticals is inspired to improve treatment for patients with cancer by designing kinase inhibitor therapies that target the hallmarks of cancer biology. Our small-molecule drugs are specifically engineered to simultaneously block multiple

cancer signaling mechanisms in the tumor cell and the tumor microenvironment to prevent growth and spread. Deciphera's unique approach represents an important advance over current therapies in the durability of kinase inhibition and resiliency to genetic mutations to provide greater benefit across a range of cancers. Deciphera's business strategy is to advance its drug candidates for genetically-defined cancers and cancers that target the tumor microenvironment through both proprietary and partnered programs.

Deciphera's internal product pipeline includes altiratinib (DCC-2701) a MET/TIE2 /VEGFR2/TRK kinase inhibitor currently in Phase 1 clinical development, DCC-2618, a pan-KIT inhibitor currently in preclinical development and rebastinib, a TIE2/VEGFR1 kinase inhibitor currently in Phase 1 clinical development. Partnered programs include LY3009120 (DP-4978), a pan-RAF inhibitor developed in collaboration with Eli Lilly. Additional research-stage programs are also in development.

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