Shuttle Pharma Advances Prostate Cancer Predictive Biomarker Program Through Exclusive License Agreement

ROCKVILLE, Md., Oct. 31, 2023 — Shuttle Pharmaceuticals Holdings, Inc. (Nasdaq: SHPH), a discovery and development stage specialty pharmaceutical company focused on improving the outcomes of cancer patients treated with radiation therapy (RT), today announced it has entered into an exclusive agreement to license certain intellectual property (IP) from Georgetown University to advance Shuttle Pharma's predictive biomarker program for prostate cancer.

The intellectual property was originally developed through a collaboration of Shuttle Pharma scientists with investigators from Georgetown University. The intellectual property consists of patent applications prepared and filed by Georgetown University titled: "Predictive Biomarkers for Adverse Effects of Radiation Therapy."

Shuttle Pharma's predictive marker strategy is to develop a predictive diagnostic test for prostate cancer patients who are considering elective radiation therapy which will allow them to assess their risk for treatment success or failure, while informing therapeutic decision making and follow-up management. Shuttle Pharma believes a predictive diagnostic test for the effects of radiation therapy would be a cost-effective approach to inform clinicians in their treatment choices and provide patients with a better understanding of the benefits and risks of radiation therapy.

Anatoly Dritschilo, M.D., CEO of Shuttle Pharma, commented, "Prostate cancers vary in their aggressiveness and in their responses to treatment. Some prostate cancers spread quickly to other parts of the body, while others grow slowly and can be effectively managed by radiation therapy or other conservative medical measures. While diagnostic tests are

available, presently there are no predictive diagnostics tests to identify potential outcomes of available therapies. The key unmet need of the diagnostic market is having a predictive, minimally invasive blood test that provides the clinician and patient with a measurement of the potential success of radiation therapy for their cancer treatment. This unmet need in the market is what Shuttle's predictive biomarker program looks to address."

The American Cancer Society estimates that 1 in 8 men will be diagnosed with prostate cancer during his lifetime. The National Cancer Institute of the National Institutes of Health (NIH) Surveillance, Epidemiology, and End Results (SEER) database estimated that approximately 268,000 men were diagnosed with prostate cancer in the U.S. in 2022 and approximately 30% of prostate cancer patients (~66,000) with localized disease received radiation therapy for cancer treatment.

Dr. Dritschilo expanded, "Our mission is to accelerate investigation of the prostate cancer metabolite-based predictive assay to improve outcomes of radiation therapy. Shuttle Pharma aims to change the way that clinicians select patients for radiation therapy and provide informed consent. The potential market for these predictive assays includes clinicians offering radiation therapy for prostate cancer treatment in the initial selection process and in personalizing follow up management of patients by considering anticipated late effects."

Shuttle Pharma scientists have collaborated with investigators from Georgetown University to complete Phase I and Phase II NIH SBIR contracts to develop predictive biomarkers of radiation therapy outcomes and late effects. Shuttle Pharma will also seek to leverage eligibility to apply for project bridge funding via an NIH Phase IIb SBIR mechanism.

About Shuttle Pharmaceuticals

Founded in 2012 by faculty members of Georgetown University, Shuttle Pharma is a discovery and development stage specialty pharmaceutical company focused on improving the outcomes for cancer patients treated with radiation therapy (RT). Our mission is to improve the lives of cancer patients by developing therapies that are designed to maximize the effectiveness of RT while limiting the side effects of radiation in cancer treatment. Although RT is a proven modality for treating cancers, by developing radiation sensitizers, we aim to increase cancer cure rates, prolong patient survival and improve quality of life when used as a primary treatment or in combination with surgery, chemotherapy and immunotherapy. For more information, please visit our website at www.shuttlepharma.com.

Safe Harbor Statement

Statements in this press release about future expectations, plans and prospects, as well as any other statements regarding matters that are not historical facts, may constitute "forward-looking statements." These statements include, but are not limited to, statements concerning the development of our company. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project,"

“should,” “target,” “will,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including factors discussed in the “Risk Factors” section of Shuttle Pharma’s Annual Report on Form 10-K for the year ended December 31, 2022, filed with the SEC on March 15, 2023, and its Quarterly Reports on Form 10-Q for the quarters ended March 31, 2023 and June 30, 2023, filed with the SEC on May 25, 2023 and August 14, 2023, respectively, as well other SEC filings. Any forward-looking statements contained in this press release speak only as of the date hereof and, except as required by federal securities laws, Shuttle Pharmaceuticals specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

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