Late-Breaking Phase 1 Liver Metastasis Data from TriSalus Presented at SITC 2023 Supports Development of Innovative Immuno-oncology Approach for Liver and Pancreas Indications

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– New data from PERIO-01 clinical trial indicates PEDD™ method resulted in modulation of the tumor microenvironment by enabling performance of the TLR9 agonist, SD-101, in metastatic uveal melanoma, consistent with an earlier presentation from pancreatic adenocarcinoma trial –

– Median Progression-Free Survival was 11.7 months, with an 81% Disease Control Rate with the optimal biologic dose of SD-101 (2 mg) in combination with nivolumab –

DENVER & SAN DIEGO--(BUSINESS WIRE)--Nov. 4, 2023-- TriSalus Life Sciences® Inc., (Nasdaq: TLSI), an oncology company integrating its novel delivery technology with immunotherapy to transform treatment for patients with liver and pancreatic tumors, today presented additional Phase 1 clinical data during the late-breaker oral presentation session at the Society of Immunotherapy for Cancer (SITC) 2023 Annual Meeting.

The PERIO-01 Phase 1 study for uveal melanoma with liver metastases (UMLM), studied SD-101 delivered via PEDD with the TriNav® Infusion System in combination with intravenous checkpoint inhibitors. The data presented today at SITC demonstrate that SD-101 is well tolerated when given by the PEDD method and is associated with immunologic effects both within the liver and systemically, which may enable better outcomes with systemic checkpoint inhibition. The Progression-Free Survival (PFS), Disease Control Rate (DCR), and ctDNA molecular response data in PERIO-01 patients in combination with nivolumab are encouraging for UMLM and for other indications under development. At the optimal biologic dose of SD-101 (2 mg) in combination with nivolumab (n=7), the median PFS was 11.7 months with an 81% DCR.

“We are encouraged to see that SD-101 is well tolerated when given by PEDD, in association with immunologic effects within the liver and systemically, which may enable better outcomes with systemic checkpoint inhibition,” said Steven C. Katz, M.D., FACS, Chief Medical Officer at TriSalus. “The PFS and ctDNA molecular response data in PERIO-01 patients in combination with nivolumab are promising for UMLM and as well as for other indications that we are pursuing.”

“The results of PERIO-01 highlight the importance of getting the biology right and not just pushing a drug to its maximum tolerated dose. The biological effects of SD-101 are best at the lowest dose tested, revealing tumor microenvironment reprogramming and inflammatory cell trafficking from normal to metastatic liver tumors,” said Sapna Patel, M.D., director of the uveal melanoma program at The University of Texas MD Anderson Cancer Center. “This is not seen at higher doses of SD-101, and these findings ensure we are entering the next phase with the optimal dose in combination with checkpoint inhibition, for patients with metastatic uveal melanoma.”

PERIO-01 is an open-label, first-in-human Phase 1 trial of SD-101, administered by hepatic arterial infusion with TriNav using PEDD in UMLM. The study consists of dose-escalation cohorts of SD-101 (2, 4, or 8 mg) alone or with immune checkpoint inhibition. At the data cutoff as of September 29, 2023, 56 patients were enrolled, with each having received at least one dose of SD-101. Of the patients with available data, 16 patients (29%) were treatment-naïve and 40 (71%) had failed at least one prior line of therapy, including 8 patients (14%) on 3rd or greater line of treatment. SD-101 infused via PEDD in combination with systemic checkpoint inhibition was well tolerated, with an overall serious grade 3/4 adverse event rate related to treatment of 11% (n=56), and no such events at the optimal SD-101 dose level of 2 mg in combination with nivolumab (n=7). The most common adverse events overall were gastrointestinal (41%), fatigue (30%), and skin toxicity (27%), with the majority being minor.

Encouraging early efficacy signals were noted in the UMLM patients treated in PERIO-01. Overall, the ctDNA molecular response rate was 65% using specified time points (n=20), and 82% when analyzing the best on-treatment response (n=26). Clearance of ctDNA was noted in 59% of subjects when assessing the best on-treatment response. There was an 81% disease control rate at 2 mg SD-101 via PEDD with nivolumab (n=7). Across all subjects, two partial responses (≥30% decrease) and five minor responses (10-29% decrease) were documented as the best on-treatment response. The median progression free survival at the optimal dose of SD-101 via PEDD (2 mg) in combination with nivolumab was 11.7 months with a 1-year overall survival rate of 86% (n=7).

Among PERIO-01 patients who received SD-101 via PEDD in combination with intravenous nivolumab, there was evidence of increases in CD8+ T cells, CD4+ T cells, and natural killer cells within their liver metastases. Gene expression analysis by Nanostring revealed increased TLR signaling, interferon signaling, cytokine signaling, Th1 T cell activation, and lymphocyte activation. At the optimal SD-101 dose of 2 mg in combination with nivolumab, decreases in monocytic myeloid derived suppressor cells (MDSC), M2 macrophages, and regulatory T cells were found in liver metastases. Along with predicted immune changes within liver metastases, encouraging peripheral immune signals were detected. Increases in IFNγ, soluble IL2-receptor, IL-15, IL-18, T cell activation, and NK cell proliferation were found in the blood.

Dr. Katz added, “These data reflect additional validation of our innovative immunotherapy approach for liver and pancreas tumors. SD-101 was selected based on its mechanism of action, which has the potential to reverse immunosuppression in the liver and pancreas through depletion of MDSC in concert with broad stimulation of immune cells in the tumor microenvironment. TriSalus delivery systems, which use the PEDD method, are designed to overcome mechanical barriers to immunotherapy success, which may be underappreciated factors in limiting performance of TLR agonists in liver and pancreas tumors.”

Overall, the data emerging from the PERIO-01 and PERIO-03 also presented at SITC indicate immunologic changes are occurring within the liver and pancreas, with favorable safety profiles. Patients with liver metastases in the PERIO-01 study have had favorable outcomes despite pre-treatment.

All TriSalus presentations from SITC is available here following their respective sessions.

About Pressure-Enabled Regional Immuno-Oncology (PERIO) clinical trials

The Pressure-Enabled Regional Immuno-Oncology (PERIO) clinical trials are studying an investigational class C toll-like receptor-9 agonist, SD-101, delivered intravascularly by TriSalus’ TriNav ® Infusion System (TriNav) using the Company’s proprietary Pressure-Enabled Drug Delivery™ (PEDD™) method of administration in three Phase 1 trials.

The PERIO-01 Phase 1 clinical study for uveal melanoma with liver metastases (UMLM), is studying SD-101 delivered via PEDD with the TriNav in combination with intravenous checkpoint inhibitors.

The PERIO-02 trial is evaluating whether this same platform approach (PERIO-01) with SD-101 and PEDD can improve the performance of systemic checkpoint inhibitors in treating patients with hepatocellular carcinoma or intrahepatic cholangiocarcinoma.

The PERIO-03 study is an open-label, Phase 1/1b study of the pressure-enabled intrapancreatic infusion of SD-101, a TLR 9 agonist, alone or in combination with intravenous checkpoint blockade in adults with locally advanced pancreatic cancer.

About TriSalus Life Sciences

TriSalus Life Sciences® is an oncology company integrating novel delivery technology with immunotherapy to transform treatment for patients with liver and pancreatic tumors.

The Company's platform includes devices that utilize a proprietary drug delivery technology and a clinical stage investigational immunotherapy. The Company's two FDA-cleared devices use its proprietary Pressure-Enabled Drug Delivery™ (PEDD™) approach to deliver a range of therapeutics: the TriNav® Infusion System for hepatic arterial infusion of liver tumors and the Pancreatic Retrograde Venous Infusion System™ for pancreatic tumors. PEDD is a novel delivery approach designed to address the anatomic limitations of arterial infusion for the pancreas. The PEDD approach modulates pressure and flow in a manner that delivers more therapeutic to the tumor and is designed to reduce undesired delivery to normal tissue, bringing the potential to improve patient outcomes. SD-101, the Company's investigational immunotherapeutic candidate, is designed to improve patient outcomes by treating the immunosuppressive environment created by many tumors and that can make current immunotherapies ineffective in the liver and pancreas. Patient data generated during Pressure-Enabled Regional Immuno-Oncology™ (PERIO) clinical trials support the hypothesis that SD-101 delivered via PEDD may have favorable immune effects within the liver and systemically. The target for SD-101, TLR9, is expressed across cancer types and the mechanical barriers addressed by PEDD are commonly present as well. SD-101 delivered by PEDD will be studied across several indications in an effort to address immune dysfunction and overcome drug delivery barriers in the liver and pancreas.

In partnership with leading cancer centers across the country – and by leveraging deep immuno-oncology expertise and inventive technology development – TriSalus is committed to advancing innovation that improves outcomes for patients. Learn more at trisaluslifesci.com and follow us on Twitter and LinkedIn.

For Patients
To learn more about the clinical trial treatment protocol and enrollment, visit http://www.periotrial.com or http://www.clinicaltrials.gov and search NCT04935229, NCT05220722, and NCT05607953.

Forward Looking Statements
Statements made in this press release regarding matters that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Because such statements are subject to risks and uncertainties, actual results may differ materially from those expressed or implied by such forward-looking statements. Such statements include, but are not limited to, statements regarding the benefits and potential benefits of the Company's PEDD drug delivery technology and SD-101 investigational immunotherapy. Risks that could cause actual results to differ from those expressed in these forward-looking statements include risks associated with clinical development and regulatory approval of drug delivery and pharmaceutical product candidates, including that future clinical results may not be consistent with patient data generated during the Company's PERIO clinical trials, and other risks described in the Company's filings with the Securities and Exchange Commission under the heading "Risk Factors." All forward-looking statements contained in this press release speak only as of the date on which they were made and are based on management's assumptions and estimates as of such date. The Company undertakes no obligation to update such statements to reflect events that occur or circumstances that exist after the date on which they were made except as required by law.

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For Media and Investor Inquiries:
Argot Partners
212.600.1902
TriSalus@argotpartners.com

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