Repertoire Immune Medicines Presents First Clinical Data on PRIME IL-15 Cell Therapy in Advanced Metastatic Cancers at Society for Immunotherapy of Cancer (SITC) Annual Meeting

- *Disease stabilized in 10 of 17 patients with relapsed or refractory metastatic solid tumors*
- *First-in-human study showed persistence of T cells in blood and increases in T cell infiltrates in solid tumors*
- *Phase 1/2 study remains ongoing with further dose escalation planned*

CAMBRIDGE, Mass. – November 9, 2020 – Repertoire Immune Medicines, a clinical-stage biotech company creating a new category of immune therapies for cancer, autoimmunity and infectious disease, today revealed preliminary clinical and biomarker data of a Phase 1/2 clinical study for its PRIME IL-15 cell therapy (RPTR-147) in patients with advanced metastatic solid tumors. Preliminary results from the ongoing study will be available on the SITC Virtual Poster Hall, November 11 - 14, from 9 a.m. to 5 p.m. EST. The poster is titled "*PRIME™ IL-15 (RPTR-147): Preliminary clinical results and biomarker analysis from a first-in-human Phase 1 study of IL-15 loaded peripherally-derived autologous T cell therapy in solid tumor patients*" (#801).

This first-in-human, multi-center Phase 1/2 study is designed to characterize the safety, tolerability, pharmacokinetics, pharmacodynamics, and preliminary antitumor activity in patients with relapsed or refractory metastatic solid tumors. Following administration of PRIME IL-15, 10 of 17 patients with advanced metastatic disease had stable disease, of which four were stable for more than six months.

Clinical biomarker data also provided evidence of PRIME IL-15 biological activity. Persistence of T cell clones derived from RPTR-147 was observed in both the blood and within the tumor. Further analysis using Repertoire's DECODE™ platform is underway to determine the antigen specificity of those cells. Matched evaluable biopsies were obtained in seven patients. Increases in tumor-infiltrating T cell lymphocytes in solid tumor biopsies were observed post treatment in five of seven patients for CD8+ T cells and in four of seven patients for CD4+ T cells.

No dose-limiting toxicities, nor evidence of cytokine-release syndrome, neurotoxicity or other serious immune-related toxicity were observed. The Phase 1/2 study is ongoing and further dose escalation is planned.

"These preliminary PRIME IL-15 clinical results, showing that disease in 10 of 17 patients with aggressive cancers has stabilized, is encouraging," said Harriet Kluger, M.D., Professor of Medicine and Deputy Section Chief of Medical Oncology at the Yale School of Medicine. "Additional study of this new potential therapeutic modality is certainly warranted, and we look forward to continuing to evaluate PRIME IL-15, including at higher doses and in combination with other immune therapies."

PRIME IL-15 is a novel autologous, non-genetically modified multi-clonal T cell product loaded with an IL-15Fc nanogel designed to release this cytokine in a local and sustained manner, limiting systemic exposure and thus improving tolerability. The highest dose of PRIME IL-15 administered in the study to date contained approximately three times more IL-15Fc than the maximum tolerated dose of systemically administered IL-15Fc, but produced less than one tenth of the systemic exposure to free IL-15Fc.

"We are encouraged to see both CD4+ and CD8+ T cells infiltrating into solid tumors following the administration of PRIME IL-15. The use of our proprietary IL-15 nanogel technology coupled with antigen-activated T cells supports a favorable safety profile and our ability to increase dosing going forward**,**" said Anthony Coyle, Ph.D., Repertoire's President of Research and Development. "PRIME IL-15 is the first T cell investigational therapy with a cytokine nanogel payload and represents a novel class of immune medicines, which we will evaluate in a variety of cancer types. We will build on this research and expand Repertoire's DECODE and DEPLOY platforms for the creation of targeted immune medicines."

About PRIME IL-15

PRIME IL-15 (RPTR-147) is Repertoire's first investigational therapy, bringing together the company's DECODE and DEPLOY technologies in an investigational treatment for a variety of solid tumor. While IL-15 is a cytokine known to regulate the activation and proliferation of T cells, systemic administration is hindered by tolerability. PRIME IL-15 is a novel autologous, non-genetically modified multi-clonal T cell product loaded with an IL-15Fc nanogel designed to release IL-15 in a local and sustained manner, limiting systemic exposure and thus improving tolerability. The product, derived from rare peripherally-derived anti-tumor T cell clones, is a repertoire of immune-enhanced T cells primed against a multi-antigen cassette containing tumor associated antigens (TAA), known to be over-expressed in specific tumor types. PRIME T cells stands for Primed Repertoire of Immune Encoded T cells.

About Repertoire Immune Medicines

Repertoire Immune Medicines, is a clinical stage biotechnology company working to unleash the remarkable power of the human immune system to prevent, treat or cure cancer, autoimmune conditions and infectious diseases. The company is founded on the premise that the repertoire of T cell receptor-antigen codes that drive health and disease represents one of the greatest opportunities for innovation in medical science. The company harnesses and deploys the intrinsic ability of T cells to prevent and cure disease. Repertoire scientists created and developed a suite of technologies for its DECODE discovery and DEPLOY product platforms that allow in-depth characterization of the immune synapse and the ability to rationally design, and clinically develop, multi-clonal immune medicines. The company is currently conducting experimental medicine clinical trials using autologous T cells primed against cancer antigens and tethered to IL-15. To learn more about Repertoire Immune Medicines, please visit our website: www.repertoire.com and follow us on LinkedIn and Twitter.

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