Bolt Biotherapeutics, Inc. Provides Update on Global Cancer Immunotherapy Co-Development with Toray Industries, Inc.

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-- Targeting Unmet Needs for Treating Solid Tumors--

REDWOOD CITY, Calif., Feb. 11, 2025 (GLOBE NEWSWIRE) -- Bolt Biotherapeutics, Inc., announced today that the target of their worldwide co-development collaboration with Toray Industries, Inc. is Caprin-1, a novel cancer target discovered by Toray. The collaborators are developing a Boltbody™ Immune-Stimulating Antibody Conjugate (ISAC) targeting Caprin-1, which is applicable to multiple solid tumor types. Under the existing Joint Development and License Agreement, Toray supplies its proprietary antibodies targeting Caprin-1, such as the antibody TRK-950, and Bolt contributes proprietary linker-payloads from its Boltbody™ ISAC platform technology. Bolt plans to co-develop and jointly commercialize the resulting ISAC product candidate with Toray.

Caprin-1 is a tumor-specific antigen that is strongly expressed on the cell membrane surface of most solid tumors, with minimal expression on the surface of normal tissues. Caprin-1 has also been shown to contribute to tumor growth and metastases. Toray's asset TRK-950 is a monoclonal antibody targeting Caprin-1 that is in Phase 2 development for Gastric cancer, providing validation for this antigen as a promising ISAC target.

The connection between Toray and Bolt relationship dates back to 2002, when Dr. Fumiyoshi Okano, Senior Director of Toray, worked to enhance cancer immunotherapy techniques in Professor Ed Engleman's lab at Stanford University. After returning to Japan, Dr. Okano discovered the novel cancer therapeutic target Caprin-1 and created an anti Caprin-1 monoclonal antibody TRK-950. Toray later decided to collaborate with Bolt in order to maximize the potential of TRK-950 with the Boltbody ™ISAC technology.

"On a personal note, it is gratifying to see a collaboration that has roots in my Stanford lab. I've been exchanging ideas with Dr. Okano for over 20 years and we have tremendous respect for each other. Bolt's technology also came from my lab, and we are excited to combine Bolt's technology with Toray's proprietary antibodies such as TRK-950, which targets a novel tumor-specific antigen expressed on a high percentage of solid tumors," stated Ed Engleman, M.D., Bolt co-founder and co-director of the Immunology and Immunotherapy Research Program at the Stanford Cancer Institute. "Toray's commitment to research and technology development is inspiring, and the combination of these two technologies has great potential to provide significant benefit for patients with many different types of cancer who are not adequately managed with current therapies."

"Working with my mentor Professor Engleman on this collaboration is a career highlight for me," said Dr. Okano. "Bolt is taking the lead in ISAC development with their Boltbody™ ISAC technology platform. We are excited about our collaboration with Bolt exploring the complementary combination of our technologies. In recent years Toray has increasingly focused on "life innovation", hastening improvements in medical technology and disease prevention. Our goal is to reduce the burden on medical professionals while helping people live longer, healthier lives. We have prioritized oncology as one of the important areas for Toray and are working to create industry-leading therapies that have the potential to significantly improve outcomes for patients. This collaboration is consistent with Toray's mission to achieve a healthy society through development of innovative drugs."

About the Boltbody™ Immune-Stimulating Antibody Conjugate (ISAC) Platform
Bolt Biotherapeutics' Boltbody ™ISAC platform harnesses the precision of antibodies with the power of the innate and adaptive immune system to reprogram the tumor microenvironment to generate a productive anti-cancer response. Each Boltbody ™ISAC candidate comprises a tumor-targeting antibody, a non-cleavable linker, and a proprietary immune stimulant. The antibody is designed to target one or more markers on the surface of a tumor cell and the immune stimulant is designed to recruit and activate myeloid cells. Activated myeloid cells initiate a positive feedback loop by releasing cytokines and chemokines, chemical signals that attract other immune cells and lower the activation threshold for an immune response. This increases the population of activated immune system cells in the tumor microenvironment and promotes a robust immune response with the goal of generating durable therapeutic responses for patients with cancer.

About Toray's Multi-cancer Antibody TRK-950
TRK-950 is a monoclonal antibody that binds to and attacks cancer cells by targeting Caprin-1, a novel cancer therapeutic target discovered by Toray. Caprin-1 is strongly expressed on the cell membrane surfaces of gastric cancer and most other solid tumors and far less so on the cell membrane surfaces of normal tissues. It is also highly expressed on the cell membrane surfaces of metastatic cancer cells and cancer stem cells, which cause cancers to metastasize and recur. Toray has worked on TRK-950 development to inhibit cancer cell growths and metastases and cancer recurrences while minimizing side effects for many solid tumors. TRK-950 began Phase 1 studies in the United States and France in 2017 and in Japan in 2022, and has been administered to more than 155 cancer patients. It has been observed that the combination of TRK-950 with anticancer drugs is more effective. The clinical trials were expanded to include South Korea in 2023, and a Phase 2 clinical trial in patients with gastric cancer is currently ongoing.

About Toray Industries, Inc.
Toray is a leading global company in innovative technologies and advanced materials. Since its foundation in 1926, the Company has contributed to society through the creation of new value and addressed global challenges by delivering high value-added products including fibers and textiles, resins and films, and carbon fiber composite materials. It operates in 26 countries and regions with about 48,000 employees worldwide.

For more information, please visit www.toray.com.

About Bolt Biotherapeutics, Inc.
Bolt Biotherapeutics is a clinical-stage biopharmaceutical company developing novel immunotherapies for the treatment of cancer. Bolt Biotherapeutics' pipeline candidates are built on the Company's deep expertise in myeloid biology and cancer drug development. The Company's pipeline includes BDC-3042, a first-in-class agonist antibody that activates macrophages by targeting Dectin-2, and BDC-4182, a next-generation Boltbody™ Immune-Stimulating Antibody Conjugate (ISAC) clinical candidate targeting claudin 18.2. BDC-3042 is currently in a Phase 1 dose escalation trial that includes patients with any of seven different solid tumor types. BDC-4182 is supported by strong in vitro and in vivo data demonstrating potent anti-tumor activity, and activities are underway to support the initiation of clinical trials in 2025. Bolt Biotherapeutics is also developing multiple Boltbody™ ISACs in strategic collaborations with leading biopharmaceutical companies. For more information, please visit https://www.boltbio.com/.

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