Compass Therapeutics Announces Publication in the Journal Science of Preclinical Data Supporting the Potential of CTX-2026, a Novel Antibody to the Butyrophilin BTN3A1, in Ovarian Cancer Tumor Models

August 24, 2020

Data Demonstrate Overexpression of BTN3A1 is Associated with a Poor Prognosis in Ovarian Cancer and the Ability of CTX-2026 to Engage both Gamma Delta and Alpha Beta T Cells to Overcome the Immunosuppressive Tumor Microenvironment

CAMBRIDGE, Mass., August 24th, 2020 —Compass Therapeutics, Inc. a clinical-stage biotechnology company developing proprietary antibody therapeutics intended to engage the immune system to treat both solid tumors and hematological malignancies, today announced the publication in the journal *Science* of preclinical data supporting CTX-2026, the Company's novel anti-CD277 antibody product candidate. The paper describes the discovery and preclinical characterization of CTX-2026, a fully human antibody that binds to the CD277 antigen expressed on members of the butyrophilin family, including BTN3A1, and has been shown to engage two T cell subsets, gamma delta and alpha beta, to overcome the immunosuppressive tumor microenvironment associated with ovarian cancer.

The paper entitled "BTN3A1 Governs Antitumor Responses by Coordinating Alpha Beta and Gamma Delta T-Cells," was co-authored by Jose R. Conejo-Garcia, M.D., Ph.D., and other researchers at Moffitt Cancer Center, researchers from The Wistar Institute, and Compass Therapeutics scientists.

"Ovarian cancer has been one of the most difficult cancers to treat, with a significant unmet need in the United States and around the world. I am encouraged by these data which not only suggest that BTN3A1 may play an important role in ovarian cancer but also demonstrate that CTX-2026 binding to BTN3A1 overcame the immunosuppressive microenvironment of ovarian cancer and delayed malignant progression in preclinical tumor models," said Thomas Schuetz, M.D., Ph.D., co-founder and chief executive officer at Compass Therapeutics. "We are excited about this program and its potential to deliver a novel, immune-oncology therapeutic candidate."

"This research demonstrates that targeting BTN3A1 orchestrates cooperative killing of established tumors by alpha beta and gamma delta T cells, and could enable novel interventions for malignancies resistant to existing immunotherapies," said Dr. Conejo-Garcia, Co-Leader of the Immunology Program and Chair of the Department of Immunology, Moffitt Cancer Center.

Highlights from the publication include:

- BTN3A1 is overexpressed in malignant ovarian cancers, compared to benign ovarian tumors and normal tissues. Consistent with its immunosuppressive role, higher average BTN3A1 expression in samples from 200 ovarian cancer patients with clinical data was associated with significant reduction in patient survival.
- CTX-2026, an anti-CD277 antibody, elicited coordinated alpha beta and gamma delta T cell responses, preventing alpha beta T cell inhibition while inducing gamma delta T cell activation to suppress the growth of established ovarian tumors in preclinical models.
- CTX-2026 antibodies transform BTN3A1 from an immunosuppressive to an immunostimulatory mediator, restoring pre-existing anti-tumor immune responses in immunocompetent syngeneic mouse models.
- Targeting CD277 by CTX-2026 was associated with greater activity than a PD-1 blocker in the orthotopic xenograft and syngeneic models of ovarian cancer.

About Compass Therapeutics

Compass Therapeutics is a clinical-stage biopharmaceutical company developing proprietary antibody therapeutics intended to engage the immune system to treat both solid tumors and hematologic malignancies. Compass is leveraging its proprietary StitchMabs^{TM} and common light-chain based multispecific platforms to empirically identify multispecifics and combinations of antibody therapeutics that synergistically modulate key nodes in the immune system. The company's lead product candidate, CTX-471, is a fully human agonistic antibody of CD137, and is currently being evaluated in a Phase 1 study in patients who were previously treated with PD-1/PD-L1 checkpoint inhibitors and who subsequently relapsed or progressed after a period of stable disease. Compass is also progressing several preclinical assets including a novel class of NK cell engaging bispecifics targeting NKp30 and multiple bispecific checkpoint programs. The company's offices and labs are based in Kendall Square in Cambridge, Mass.

Forward-Looking Statements

This press release contains forward-looking statements. Statements in this press release that are not purely historical are forward-looking statements. Such forward-looking statements include, among other things, references to our product candidates, including CTX-2026, and the development and therapeutic potential thereof, the therapeutic potential of targeting BTN3A1, our technologies for identifying additional product candidates, and our business and development plans. Actual results could differ from those projected in any forward-looking statements due to numerous factors. Such factors include, among others, our ability to raise the additional funding we will need to continue to pursue our business and product development plans, the inherent uncertainties associated with developing product candidates and operating as a development stage company, our ability to identify additional product candidates for development, our ability to develop, complete clinical trials for, obtain approvals for and commercialize any of our

product candidates, and competition in the industry in which we operate and market conditions. These forward-looking statements are made as of the date of this press release, and Compass assumes no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those projected in the forward-looking statements, except as required by law. Investors should consult all of the information set forth herein and should also refer to the risk factor disclosure set forth in the reports and other documents we file with the SEC available at www.sec.gov, including without limitation our Current Report on Form 8-K filed on June 23, 2020.

Media Contacts

Compass Therapeutics, Inc.
Samuel Perry
Senior Director, Operations
media@compasstherapeutics.com
Phone: 617-500-8099

Moffitt Cancer Center
Kim Polacek
Kim.Polacek@Moffitt.org
Phone: 813-745-7408

The Wistar Institute
Darien Sutton
Associate Director, Communications & Marketing
dsutton@wistar.org
Phone: 215- 898-3988