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Sonnet BioTherapeutics Announces That Its Proprietary Antibody Drug Conjugate (ADC) Platform is Available for Drug Discovery Partnerships with Potential for Producing Multiple Pipeline Drug Candidates

Building on proven targeting of the F_HAB domain, Sonnet's ADC platform offers flexible payload capacity and controllable drug-antibody ratios (DAR)

An epidermal growth factor receptor 2 (HER2) ADC construct designated – SON-5010 showed similar activities as compared with Kadcyla® and also trastuzumab-MMAE, in a preclinical study

Company's ADC Platform offers the potential for novel ADCs with homogeneous structural integrity, tumor targeting domain, interchangeability of toxin payloads and flexible conjugation site usage

Management releases "What This Means" segment discussing its ADC platform;Access here

PRINCETON, N.J., Feb. 19, 2025 (GLOBE NEWSWIRE) -- Sonnet BioTherapeutics Holdings, Inc. (the "Company" or "Sonnet") (NASDAQ: SONN), a clinical-stage company developing targeted immunotherapeutic drugs, today announced its plans to advance the development of its proprietary Antibody Drug Conjugate (ADC) platform which was designed to circumvent many of the technical challenges associated with ADCs. Additionally, the Company announced the release of a Virtual Investor "What This Means" segment to discuss plans for its ADC platform, which is now available here.

"In order to increase our value proposition to cancer patients, in addition to our existing F_HAB platform we have developed a bolt-on ADC platform that takes advantage of our F_HAB targeting domain and flexible docking peptides, which offer controllable DAR capacity," commented Pankaj Mohan, Ph.D., Founder and Chief Executive Officer of Sonnet. "Further, we believe our ADC platform is differentiated from other ADCs by stable structural integrity, extended conjugation site flexibility, potential for enhanced tumor penetration and retention with the F_HAB domain, and potential to select and conjugate one of several possible payloads having different mechanisms of action (MOA) for killing cancer cells. With a plug-and-play ADC platform, we could generate a number of ADC candidates, and thus, we are seeking value-driven discovery partnerships."

The initial proof-of-concept (POC) construct was designated as SON-5010, which is produced through a two-step process whereby the targeting scaffold and payload domains are either expressed and purified from mammalian cells or chemically synthesized, respectively, and then joined to create the final ADC conjugate using a chemical linkage process. The SON-5010 ADC construct is comprised of an anti-HER2-F_HAB-anti-HER2 targeting scaffold linked to a docking peptide that has 3 equally spaced lysine residues which serve as conjugation sites for monomethyl auristatin E (MMAE), a synthetic antineoplastic agent that disrupts the microtubule network and suppresses cell proliferation and mitosis, including G2/M arrest. This initial SON-5010 ADC was used in a head-to-head comparison with an approved product, Kadcyla®, which has a very similar anti-HER2 targeting domain and linker chemistry but is conjugated with a different toxin payload known as mertansine (DM1) and a trastuzumab-MMAE complex, consisting of a humanized anti-HER2 receptor monoclonal antibody with the same linker chemistry and 3x MMAE DAR payload as SON-5010.

John Cini, Ph.D., Co-Founder and Chief Scientific Officer commented, “Sonnet is excited about the early POC data shown by this novel plug-and-play, non-IgG ADC format that incorporates Sonnet’s albumin binding scFv into the targeting scaffold. The binding of albumin in this particular ADC format provides the differentiated potential for accumulation of the F_HAB-ADC complex into the tumor. The SON-5010 ADC was produced with the same linker chemistry and MMAEx3 as in trastuzumab (Herceptin®) and has shown *in vitro* human serum stability at 37^{o}C and similar cellular cytotoxicity results. In a direct *in vivo* comparison with Kadcyla and Herceptin® at 10mg/kg in the BT-474 HER2+ carcinoma breast tumor mouse model, SON-5010 demonstrated similar tumor reduction activity and no detectable toxicity. The potential diverse application of Sonnet’s ADC platform could be applied with a wide variety of linkers and toxins, resulting in complete controllable DAR. Further, Sonnet’s ADC platform has the ability to show bispecific or tri-specific tumor targeting capability when associated with the F_HAB scFv, which could potentially improve its ADC clinical efficiency.”

Dr. Stephen McAndrew, Ph.D., Chief Business Officer commented, “We believe this ADC platform differentiates itself by offering the potential for flexibility around multiple targeting scaffolds, controllable DARs and choice of payload. We plan to continue global prosecution of our intellectual property around this ADC platform while we seek discovery partnership opportunities aimed at developing proprietary ADC drug candidates.”

About Sonnet BioTherapeutics Holdings, Inc.

Sonnet is an oncology-focused biotechnology company with a proprietary platform for developing targeted biologic drugs with single or bifunctional action. Known as F_HAB (Fully Human Albumin-Binding), the technology utilizes a fully human single chain antibody fragment (scFv) that binds to and "hitch-hikes" on human serum albumin (HSA) for transport to target tissues. Sonnet's F_HAB was designed to specifically target tumor and lymphatic tissue, with an improved therapeutic window for optimizing the safety and efficacy of immune modulating biologic drugs. F_HAB platform is the foundation of a modular, plug-and-play construct for potentiating a range of large molecule therapeutic classes, including cytokines, peptides, antibodies, and vaccines.

Sonnet’s lead program, SON-1010, or IL-12-F_HAB, is in development for the treatment of

advanced solid tumors, certain types of sarcoma, and platinum-resistant ovarian cancer (PROC). SON-1010 is being evaluated in an ongoing Phase 1/2a study through a Master Clinical Trial and Supply Agreement with Roche in combination with atezolizumab (Tecentriq®) for the treatment of PROC. The Company is also evaluating its second product candidate, SON-1210, an IL12-F_HAB-IL15 for solid tumors, in collaboration with the Innovative Immuno-Oncology Consortium (IIOC), and plans to commence an investigator-initiated and funded Phase 1/2a study for the treatment of locally-advanced or metastatic pancreatic ductal adenocarcinoma (PDAC).

The Company's SON-080 program is a low dose of rhIL-6 in development for Chemotherapy-Induced Peripheral Neuropathy (CIPN) and Diabetic Peripheral Neuropathy (DPN). SON-080 demonstrated encouraging results in a Phase 1b/2a clinical trial, being well tolerated with no evidence of a pro-inflammatory cytokine response. In October 2024, Sonnet announced a license agreement with Alkem Laboratories, Inc. who will assume responsibility for advancing development of the SON-080 program into a Phase 2 study in DPN in India.

Forward-Looking Statements

This press release contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section21E of the Securities Exchange Act of 1934 and Private Securities Litigation Reform Act, as amended, including those relating to, the Company's product development, the Company's cash runway clinical and regulatory timelines, market opportunity, competitive position, possible or assumed future results of operations, business strategies, potential growth opportunities and other statements that are predictive in nature. These forward-looking statements are based on current expectations, estimates, forecasts and projections about the industry and markets in which we operate and management's current beliefs and assumptions.

These statements may be identified by the use of forward-looking expressions, including, but not limited to, "expect," "anticipate," "intend," "plan," "believe," "estimate," "potential," "predict," "project," "should," "would" and similar expressions and the negatives of those terms. These statements relate to future events or our financial performance and involve known and unknown risks, uncertainties, and other factors which may cause actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such factors include those set forth in the Company's filings with the Securities and Exchange Commission. Prospective investors are cautioned not to place undue reliance on such forward-looking statements, which speak only as of the date of this press release. The Company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

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