Principia Biopharma Announces Positive Data from Phase 2 Pemphigus Vulgaris Trial at 2019 American Academy of Dermatology Annual Meeting in Late-Breaking Presentation

March 2, 2019

-- Reached primary endpoint of Control of Disease Activity at four weeks in 54 percent of patients on low dose corticosteroids --
-- Median Anti-DSG antibodies reduced by up to 65 percent with 12 weeks of treatment --
-- Complete Response rate of 25 percent with 12 weeks of treatment --
-- Results suggest a favorable risk-benefit profile in pemphigus patients; Principia looks to confirm these results in ongoing Phase 3 PEGASUS study --

SOUTH SAN FRANCISCO, Calif., March 02, 2019 (GLOBE NEWSWIRE) -- Principia Biopharma Inc. (Nasdaq: PRNB), a late-stage biopharmaceutical company dedicated to bringing transformative oral therapies to patients with significant unmet medical needs in immunology and oncology, today announced Phase 2 clinical data from the Believe-PV study for PRN1008 as part of the Late-breaking Research: Clinical Trials program at the American Academy of Dermatology (AAD) annual meeting in Washington D.C. PRN1008 is being developed for the potential treatment of pemphigus, including pemphigus vulgaris (PV) and pemphigus foliaceus (PF). Confirming interim clinical results previously reported, the Phase 2 study reached the primary efficacy measurement of control of disease activity (CDA) on low dose corticosteroids.

“The primary goal of treating patients with pemphigus is to control the disease and heal the skin, however a significant challenge is to avoid adverse events associated with the prolonged use of corticosteroids that are typically required to achieve clinical improvement,” stated Dr. Dedee Murrell, Professor and Head of the Department of Dermatology at The St. George Hospital Clinical School, University of New South Wales in Sydney, Australia and the lead principal investigator. “PRN1008 has the potential to rapidly and effectively treat patients’ disease, while significantly reducing the exposure to moderate to high corticosteroid doses.”

The open-label Phase 2 study enrolled 27 patients with newly diagnosed and relapsed, mild to severe pemphigus (including both PV and PF). Twenty-four patients were treated with oral PRN1008 and low dose corticosteroids (LDCS; <0.5mg/kg/day) for twelve weeks, with twelve weeks of follow-up. The primary endpoint was CDA (where new lesions cease to form, and existing lesions begin to heal) at Week 4. Other secondary endpoints included complete remission rates and reduction in anti-desmoglein autoantibody levels.

Key findings include:

- The study achieved the primary endpoint of CDA on low dose corticosteroids (CS) at 4 weeks in 54 percent of patients. The CDA results were generally consistent across all major subgroups;
- At Week 12, CDA occurred in 73 percent of patients;
- Of 24 patients who completed the study after 12 weeks of treatment, 17 percent achieved a complete response by Week 12 and 25 percent by Week 24; and
- PRN1008 was generally well-tolerated. The most frequently reported treatment-related adverse events were nausea, abdominal pain (upper), and headache in 15, 11, and 11 percent of patients, respectively. There was one treatment-related serious adverse event in a patient with a localized patch of leg cellulitis, whose treatment with PRN1008 resumed after three days for a further eight weeks without event recurrence.

“We are encouraged by the results from the Phase 2 trial and the impact this treatment may have for patients suffering with pemphigus, a debilitating disease with high unmet need. We are actively enrolling patients into a Phase 3 pivotal trial to confirm the potential benefit of this novel therapy for patients in need,” said Martin Babler, Chief Executive Officer of Principia.

The Company has an ongoing global, randomized, double-blind, placebo-controlled, pivotal, Phase 3 clinical trial, the PEGASUS study, with planned enrollment of approximately 120 patients to evaluate PRN1008 versus placebo, using a background treatment of tapering doses of CS. PRN1008 has been granted orphan drug designation by the U.S. Food and Drug Administration for the treatment of patients with PV and by the European Commission for treatment of patients with pemphigus. Principia has initiated a Phase 2 extension to the Believe-PV clinical trial by increasing the active treatment period from 12 to 24 weeks, with a post-treatment follow-up period of four weeks. The top-line results from the Phase 2 extension are anticipated in the fourth quarter of 2019.

About Tailored Covalency®
The Tailored Covalency platform was developed to create therapies that are optimized for residence time, the duration of time that a drug binds to its target. Principia believes that its Tailored Covalency technology platform enables the Company to design and develop small molecule inhibitors of enzymes and receptor ligands with potencies and selectivities that rival those of injectable biologics, yet maintain the convenience of a pill. Tailored Covalency can produce either reversible covalent compounds or irreversible covalent compounds. In reversible covalent compounds, the covalent bond between the inhibitor molecule and the target protein is fully reversible and, thus, does not permanently modify the target protein. By contrast, irreversible covalent compounds are designed to provide maximal target engagement by permanently inhibiting the target protein.

BTK Inhibitors
Bruton’s tyrosine kinase (BTK) is present in the signaling pathways of most types of white blood cells, except for T cells and plasma cells. Principia’s inhibitors selectively target BTK inside these cells, and inhibition of this enzyme results in the immediate blockade and down-regulation of several cellular activities that drive autoimmunity and inflammation. The ability to impact both early and later processes of autoimmunity halts multiple propagators of the autoimmune cascade without depleting B cells. Inhibition of BTK results in rapid anti-inflammatory effects, neutralization of pathogenic autoantibodies, and blocks the production of new autoantibodies. Inflammation and autoantibodies are the key drivers in autoimmune

diseases like pemphigus and ITP. The action of BTK inhibition has the potential to offer broad activity compared to other agents in the treatment of autoimmune diseases without the long-term impact of B cell depletion or the inconvenience of injectable therapies.

About Principia Biopharma

Principia is a late-stage biopharmaceutical company dedicated to bringing transformative oral therapies to patients with significant unmet medical needs in immunology and oncology. Principia's proprietary Tailored Covalency ® platform enables Principia to design and develop reversible and irreversible covalent, small molecule inhibitors with potencies and selectivities that have the potential to rival those of injectable biologics yet maintain the convenience of a pill. PRN1008, a reversible covalent BTK inhibitor, is being evaluated in a Phase 3 clinical trial in patients with pemphigus, an orphan autoimmune disease, and in a Phase 2 clinical trial in patients with immune thrombocytopenic purpura, a rare hematological disease. PRN2246, a covalent BTK inhibitor which crosses the blood-brain barrier, has completed a Phase 1 clinical trial in healthy volunteers, and has been partnered with Sanofi for development in multiple sclerosis and, potentially, for other diseases of the central nervous system. PRN1371, a covalent inhibitor of Fibroblast Growth Factor Receptor (FGFR) is being evaluated in a Phase 1 trial in patients with bladder cancer. For more information, please visit www.principiabio.com.

Forward-Looking Statements

This press release contains forward-looking statements. All statements other than statements of historical fact contained herein are forward-looking statements reflecting the current beliefs and expectations of management made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995, including, but not limited to, Principia's expectations regarding the Principia pipeline of product candidates, the potential of PRN1008 to rapidly and effectively treat pemphigus while significantly reducing the exposure to moderate to high CS doses, the safety and efficacy of PRN1008, the planned patient enrollment for the Phase 3 PEGASUS study, and the timing of the results from the Phase 2 extension. Such forward-looking statements involve known and unknown risks, uncertainties, and other important factors that may cause Principia's 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 risks and uncertainties include, among others, the risks and uncertainties of the clinical development process and of clinical trial recruitment; risks and uncertainties about the efficacy, safety and tolerability of our product candidates; risks that early research or clinical results may be materially different from future clinical results; risks and uncertainties regarding Principia's reliance on third-party organizations, such as contract research organizations, contract manufacturing organizations, and partners such as Sanofi; risks of third party claims alleging infringement of patents and proprietary rights or seeking to invalidate Principia's patents or proprietary rights; and the risk that Principia's proprietary rights may be insufficient to protect its technologies and product candidates. For a further description of the risks and uncertainties that could cause actual results to differ from those expressed in these forward-looking statements, as well as risks relating to the Principia's business in general, see the risk factors set forth in Principia's reports filed with the Securities and Exchange Commission, including its Quarterly report on form 10-Q for the period ending September 30, 2018. Any forward-looking statements contained in this press release speak only as of the date hereof, and Principia specifically disclaims any obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

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