Landos Biopharma to Present Two Late-Breaking Presentations on Therapeutic Potential of Omilancor and PX-69 at the 2021 American Association of Immunologists (AAI) Annual Meeting

April 26, 2021

- *Robust preclinical data supports breadth and growth of Landos' autoimmune-focused pipeline*
- *Company expects to submit an IND for omilancor as a topical treatment for psoriasis in 2H 2021*
- *Company expects to submit an IND for PX-69 as an oral treatment for rheumatoid arthritis in 1H 2022*

BLACKSBURG, Va., April 26, 2021 (GLOBE NEWSWIRE) -- Landos Biopharma (NASDAQ: LABP), a clinical-stage biopharmaceutical company focused on the discovery and development of therapeutics for patients with autoimmune diseases, today announced that two late-breaking abstracts on preclinical data of omilancor in psoriasis and proof-of concept preclinical data of PX-69 in rheumatoid arthritis will be presented at the upcoming American Association of Immunologists (AAI) Annual Meeting 2021. The meeting will be held virtually from May 10-15, 2021.

"We have made significant progress in our preclinical and clinical programs this year. The encouraging preclinical data of our first-in-class topical candidate, omilancor, showed its ability to significantly suppress inflammation and reduce disease severity in preclinical models of psoriasis by activating key immunometabolic mechanisms. With these new results in-hand, we are excited to explore omilancor in patients with psoriasis, the candidate's fourth clinical indication, as its mechanism may provide a safer and more effective topical treatment than what is currently available," commented Josep Bassaganya-Riera, Chairman, President and Chief Executive Officer of Landos. "In addition, the PX-69 data generated from our rheumatoid arthritis preclinical development program provides validation of PLXDC2 as a novel target for treating a wide range of autoimmune diseases. The results from both programs underscores the unique capability of our AI-based integrated computational LANCE platform, which is used to identify important new molecular targets that can improve patient lives."

Raquel Hontecillas, Chief Scientific Officer of Landos, added, "The results from the PX-69 preclinical studies support PLXDC2 as a potent immunoregulatory hub with immunometabolic and antiangiogenic properties. Activating the PLXDC2 pathway with oral PX-69 resulted in decreased inflammation and enhanced preservation of joint structure, which can be critical to controlling rheumatoid arthritis. Furthermore, as we examined the preclinical dataset of omilancor in psoriasis animal models, we were pleased to see a significant decrease in skin lesions and downregulation of inflammatory mediators, such as TNF and IL-17, which are often elevated in patients with psoriasis. We look forward to submitting INDs for omilancor in psoriasis and for PX-69 in rheumatoid arthritis in the second half of 2021 and first half of 2022, respectively."

Presentation Details

Title: BT-11 (omilancor), a first-in-class, topical therapeutic for psoriasis, ameliorates disease severity and inflammation through activation of LANCL2 pathway
E-Poster #: 1367
Date/Time: Monday, May 10, 2021 from 6:30 to 8:00 PM EDT
Pre-clinical Results Summary of Omilancor for Psoriasis

- Omilancor significantly decreased the presence of TNF+, IL-17+, IL-6, and IL-21+ cells in the spleen, elements that are critical factors in the pathogenesis of psoriasis
- Omilancor decreased acanthosis and immune cell infiltration in dorsal skin, with no signs of parakeratosis
- LANCL2 activation regulated metabolism of skin cells (keratinocytes), inhibiting the metabolic activation reported in keratinocytes from psoriatic skin, and resulted in over 60% reduction of Psoriasis Area and Severity Index (PASI), a score used to assess severity of the disease

Title: PLXDC2 activation by PX-69 ameliorates rheumatoid arthritis through activation of novel immunometabolic mechanisms
E-Poster #: 1372
Date/Time: Thursday, May 13, 2021 from 9:00 to 10:30 AM EDT
Pre-clinical Results Summary of PX-69 for Rheumatoid Arthritis

- Oral PX-69 ameliorates disease severity, resulting in decreased paw inflammation and size in a rat model of collagen-induced arthritis
- The PX-69 treatment group showed enhanced structure preservation of hind ankles, reduced cartilage damage and decreased immune cell infiltration and number of blood vessels compared to placebo
- PX-69 resulted in a 2-fold decrease of TNFα-producing cells while upregulating the proportion of IL-10+ myeloid cells and regulatory T cells in draining lymph nodes
- Pharmacological activation of PLXDC2 provided greater than 50% reduction in expression of inflammatory mediators (TNFα, IL1β, IL6, Cxcl1) and markers of synoviocyte activation (c-myc, c-fos)

The e-posters will be made available under the "Publications" section of the Company's website at www.landosbiopharma.com concurrent with the live presentations on May 10th and May 13th.

About Psoriasis

Psoriasis is a skin disorder that commonly manifests as plaque psoriasis, in which skin thickens and takes on a scaly appearance due to over-proliferation and dysregulated differentiation of skin cells. This over-proliferation and abnormal differentiation results from the sustained inflammation of the skin, associated with infiltration and activation of key inflammatory subsets, such as dendritic cells, Th17 cells, and neutrophils. This often results in itchy and persistent rashes and has a significant impact on quality of life for patients. In terms of management, typically topical corticosteroids or immunosuppressants are used. For more severe cases or those presenting with psoriatic arthritis, systemic immunosuppressants (methotrexate, cyclosporine) or a biologic targeting TNF or the IL-12/-23 pathway are prescribed. Similar to their usage in other autoimmune diseases, biologics and immunosuppressants require monitoring of liver functions and immunosuppression, as these agents have been linked to increased risks of infections and cancers. There is an urgent need to develop an alternative front-line therapy.

About Rheumatoid Arthritis (RA)
Rheumatoid arthritis (RA) is a chronic disabling disorder caused by excessive inflammation of the joints. Development of RA results from complex interactions between immune cells and synoviocytes that generates inflammatory cascades, dysregulated synoviocyte proliferation, pannus formation, cartilage damage and bone loss. These interactions are exacerbated by increased angiogenesis driven by local insufficient oxygen supply (hypoxia) resulting in chronic pain, loss of mobility and joint deformity. RA requires chronic treatment to maintain remission and, in some cases, requires treatment escalation or add-ons to address flares. Current treatments are categorized into five classes and only approximately 10% of patients will be in remission for a full year. RA affects 1.5 million patients in the United States and the number of new cases of arthritis is expected to increase as the elderly population expands over time. The RA market is fragmented due to no clear advantage in terms of safety and efficacy among the current classes of therapies.

About Omilancor (BT-11)
Omilancor is a novel, orally-active, gut-restricted small molecule investigational drug that targets the Lanthionine Synthetase C-Like 2 (LANCL2) pathway with limited systemic distribution. LANCL2 plays an important role in the immunoregulatory process. By activating the LANCL2 pathway and modulating the interactions between immunological and metabolic signals in immune cells, omilancor is designed to create a favorable regulatory microenvironment, decreasing the production of key inflammatory mediators and increasing anti-inflammatory markers in regulatory T cells (Treg) within the site of inflammation. The Company reported initial Phase 2 results of omilancor evaluating patients with ulcerative colitis in 2021 and expects to initiate a Phase 3 trial in the second half of 2021. Additionally, Landos plans to initiate a Phase 2 trial of omilancor in patients with Crohn's disease in the first half of 2021 and expects to submit an IND for omilancor in psoriasis in the second half of 2021.

About PX-69
PX-69 is a novel, orally-active small molecule investigational drug that targets the novel PLXDC2 pathway. PLXDC2 is a transmembrane receptor with potent immunoregulatory and antiangiogenic functions. Upon activation of this pathway, IL-10 production increases, oxidative stress is reduced, and immune cell infiltration is decreased. The primary immune cell type affected by PLXDC2 activation are macrophages; PLXDC2 pathway regulates cell activation and favors an anti-inflammatory phenotype in macrophages. Landos is developing PX-69 as an oral therapeutic for the treatment of rheumatoid arthritis as well as diabetic nephropathy. The Company expects to submit an IND for PX-69 in rheumatoid arthritis in the first half of 2022.

About Landos Biopharma
Landos Biopharma is a clinical-stage biopharmaceutical company focused on the discovery and development of oral therapeutics for patients with autoimmune diseases that are the first to target new mechanisms of action, including the LANCL2, NLRX1 and PLXDC2 immunometabolic pathways. Landos Biopharma's core expertise is in the development of therapeutic candidates targeting novel pathways at the interface of immunity and metabolism. Lead asset omilancor is a novel, oral, gut-restricted small molecule therapeutic candidate for the treatment of ulcerative colitis, Crohn's disease and Eosinophilic Esophagitis that targets the LANCL2 pathway. NX-13 is a novel, oral, gut-restricted compound for the treatment of inflammatory bowel disease, which targets the NLRX1 pathway. Additional candidates are in development for the treatment of lupus nephritis, rheumatoid arthritis, multiple sclerosis, and diabetes. For more information, please visit www.landosbiopharma.com.

Cautionary Note on Forward-Looking Statements
Any statements in this press release about future expectations, plans and prospects for Landos Biopharma, Inc. (the "Company"), including statements about the Company's strategy, clinical development of the company's therapeutic candidates, the Company's anticipated milestones and future expectations and plans and prospects for the Company and other statements containing the words "subject to", "believe", "anticipate", "plan", "expect", "intend", "estimate", "project", "may", "will", "should", "would", "could", "can", the negatives thereof, variations thereon and similar expressions, or by discussions of strategy constitute forward-looking statements. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: the uncertainties inherent in the initiation and enrollment of future clinical trials, expectations of expanding ongoing clinical trials, availability and timing of data from ongoing clinical trials, expectations for regulatory approvals, other matters that could affect the availability or commercial potential of the Company's product candidates and other similar risks. In addition, the forward-looking statements included in this press release represent the Company's views only as of the date hereof. The Company anticipates that subsequent events and developments will cause the Company's views to change. However, while the Company may elect to update these forward-looking statements at some point in the future, the Company specifically disclaims any obligation to do so, except as may be required by law. These forward-looking statements should not be relied upon as representing the Company's views as of any date subsequent to the date hereof.

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