Asana BioSciences, LLC

For Immediate Release

Asana BioSciences to Present Correlation Between Microbiome Changes and Clinical Efficacy With JAK/SYK Inhibitor ASN002 in the Late-Breaking News Session at the American Academy of Dermatology (AAD) Annual Congress

First demonstration of changes in Staphylococcus aureus in lesional skin, correlating with clinical efficacy

Lawrenceville, NJ, February 18, 2019 – Asana BioSciences, a clinical stage biopharmaceutical company, announced that it will present ASN002 data demonstrating changes in skin microbiome and correlation with clinical efficacy in patients with moderate-to-severe atopic dermatitis. These data will be presented in a late-breaking news session at the AAD Annual Congress in Washington, D.C. to be held March 1-5, 2019. The details of the presentation are as follows:

Abstract: 11189 – Staphylococcus dysbiosis correlates of success of treatment of atopic dermatitis with the JAK/SYK inhibitor ASN002

Date/Time/Location: Saturday, March 02 9:00 AM — 11:00 AM; Room 101

Session: F055 - Late-Breaking Research: Basic Science/Cutaneous Oncology/Pathology

Authors/Investigators: **Avidan U. Neumann**, Matthias Reiger, Madhumita Bhattacharyya, Amedeo de Tomassi, Thomas Nussbaumer, L. Denis, N. Rao, D. Zammit, Claudia Traidl-Hoffmann

Atopic dermatitis (AD) is a severe inflammatory skin disease. Dysregulation of Th2 and Th22 cytokine pathways is implicated in the pathogenesis of atopic dermatitis. The inhibition of JAK and SYK pathways diminishes cytokine production and signaling including those mediated by Th2 and Th22 cytokines. In a recent Phase 1b/2a study, ASN002, a novel oral JAK/SYK inhibitor, demonstrated significant decreases in EASI scores over 4 weeks of treatment and was well tolerated. ASN002 has recently been granted Fast Track designation by the U.S. FDA and is the first oral drug to demonstrate improvement in atopic dermatitis lesional skin phenotype correlating with clinical efficacy.

In AD patients, *Staphylococcus aureus (S. aureus)*-dominated skin microbiome dysbiosis has also been implicated in manifestation of disease severity. However, the impact of inhibition of the JAK-STAT pathway on AD-associated microbiome dysbiosis is unknown. An analysis of the microbiome from the skin biopsies of patients in this study showed higher *S. aureus* frequency in lesional skin was the major cause for microbiome dysbiosis and was associated with higher EASI scores at baseline. ASN002 not only improved clinical scores but also reduced *S. aureus* frequency in lesions and predicted sustained responses after the cessation of treatment with

ASN002. This is the first report demonstrating that a JAK/SYK inhibitor can influence the skin microbiome with corresponding improvements in EASI scores.

Professor Claudia Traidl-Hoffmann, a dermatologist and Director of the Institute of Environmental Medicine (IEM), UNIKA-T, Helmholtz Zentrum Munich and Technical University Munich, Augsburg, Germany stated, “This study opens new avenues in both atopic eczema treatment and personalized medicine on the basis of skin microbiome analysis. This study may pave the way to further unravel the role of *S. aureus* in aggravation of the disease but also in endotyping of different subforms of atopic eczema.”

About Asana BioSciences, LLC

Asana BioSciences is a clinical stage biopharmaceutical company based near Princeton, NJ. Asana is focused on discovery and development of novel targeted investigational medicines in immunology/inflammation and oncology. Multiple assets from Asana’s portfolio besides ASN002 are in clinical development.

Asana’s lead asset for immunology/dermatology indications - ASN002, a novel dual inhibitor of JAK and SYK kinases - is in Phase 2b development in moderate-to-severe atopic dermatitis patients (RADIANT study - NCT03654755). ASN002 is also being evaluated in patients with severe chronic hand eczema in a separate Phase 2b study (NCT03728504).

Asana’s second immunology/dermatology asset ASN008 is a novel, topical Na^+-channel blocker with high functional selectivity for itch and pain sensing neurons. It is being developed for the treatment of chronic itch conditions and pain with rapid onset and long duration of action after a single application. ASN008 is currently being evaluated for the treatment of pruritus associated with atopic dermatitis in a First-in-Human clinical trial.

Asana also has several oncology assets. ASN007 is in Phase 1 clinical development. It is a potent inhibitor of the extracellular-signal-regulated kinases ERK1 and ERK2, which are key players in the RAS/RAF/MEK/ERK (MAPK) signaling pathway. ASN007 is being evaluated in patients with advanced solid tumors, including BRAF- and KRAS-mutant cancers (NCT03415126).

ASN003 is a selective inhibitor of BRAF and PI3 kinases. Dual targeting of RAF and PI3K pathways has the potential to overcome and/or delay acquired resistance to selective RAF inhibitors in patients with BRAFV600 mutated metastatic melanoma, metastatic colorectal and advanced non-small cell lung cancer (NCT02961283).

ASN004 is an Antibody Drug Conjugate (ADC) that targets the 5T4 oncofetal antigen, which is expressed in a wide range of malignant tumors but has very limited expression in normal tissues. ASN004 demonstrates robust and durable antitumor activity after single administration in multiple human tumor xenograft models. A First-in-Human Phase 1 trial is currently planned for initiation in 2019.

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