PRESS RELEASE

ASLAN PHARMACEUTICALS ANNOUNCES POSITIVE INTERIM DATA FROM THE MULTIPLE ASCENDING DOSE STUDY OF ASLAN004 IN ATOPIC DERMATITIS

- 74% average reduction in EASI from baseline at therapeutic doses after 8 weeks. 89% of patients achieved EASI-50 and 56% achieved EASI-90

- Data supportive of ASLAN004's potential as a novel, first-in-class antibody targeting IL-13R with differentiated efficacy and safety profile in atopic dermatitis

- Management to host conference call and webcast today, 1 March, at 8am ET / 9pm SGT

Singapore, 1 March, 2021 – ASLAN Pharmaceuticals (Nasdaq:ASLN), a clinical-stage immunology focused biopharmaceutical company developing innovative treatments to transform the lives of patients, today announced positive interim unblinded data from the three dose cohorts of its ongoing randomised, double-blind placebo controlled multiple ascending dose study of ASLAN004 for the treatment of moderate to severe atopic dermatitis (AD). ASLAN004 was shown to be well tolerated across all doses and showed improvements compared to placebo in all efficacy endpoints, supporting its potential as a differentiated, novel treatment for AD.

The Phase 1 study evaluated three doses of ASLAN004 (200mg, 400mg and 600mg) delivered subcutaneously and is now recruiting a fourth (expansion) cohort (600mg). Patients were dosed weekly for eight weeks to determine the safety and tolerability of ASLAN004 as well as a number of secondary efficacy outcome measures. The first three cohorts randomised 25 patients from the United States, Australia and Singapore. Three patients discontinued study due to restrictions imposed in response to COVID-19. Of the remaining 22 patients, 18 completed at least 29 days of dosing and assessment and were evaluable for efficacy.

- The average baseline Eczema Area Severity Index (EASI) score of patients was 32.5 and the average Investigators Global Assessment (IGA) score was 3.4 (n=18).
- At week 8, the average reduction in EASI from baseline at therapeutic doses (400mg and 600mg cohorts) was 74% (n=9) compared to 42% (n=5) for patients on placebo.
    - 89% achieved EASI-50 versus 40% on placebo;
    - 67% achieved EASI-75 versus 0% on placebo;
    - 56% achieved EASI-90 versus 0% on placebo.
- 22% of patients achieved IGA of 0 or 1 at therapeutic doses versus 0% on placebo.
- Peak pruritus improved after just one dose and continued to improve by an average of 46% relative to baseline at 8 weeks compared to 16% for patients on placebo.
- The proportion of patients with adverse events and treatment-related adverse events were similar across treatment and placebo arms. There were no treatment-related adverse events in the active arm that led to discontinuation.

Dr Ken Kobayashi, Chief Medical Officer, ASLAN Pharmaceuticals, commented: *"These data are very encouraging and provide a strong foundation to confidently advance our plans for the global Phase 2b study we intend to initiate later this year. A robust and differentiated safety and efficacy profile is emerging for ASLAN004 and we look forward to reporting the full, unblinded data from approximately 50 patients in mid-2021. We believe the interim data demonstrate ASLAN004's potential as a first-in-class therapeutic targeting the IL-13 receptor with a differentiated approach to treating atopic dermatitis."*

Conference call and webcast

ASLAN's management will host a webcast and conference call at 8am ET / 9pm SGT today, 1 March 2021, to discuss these interim data. The live call may be accessed by dialing +1 855 548 1217 for domestic callers and +1 409 217 8810 for international callers and entering the conference code: 9199389. A live webcast of the call will be available using this link: https://edge.media-server.com/mmc/p/o2mdjnyx. It will also be available from the News and Events page of the Company's website at https://ir.aslanpharma.com/webcasts-presentations and will be archived there after the live event.

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About ASLAN Pharmaceuticals

ASLAN Pharmaceuticals (Nasdaq:ASLN) is a clinical-stage immunology focused biopharmaceutical company developing innovative treatments to transform the lives of patients. Led by a senior management team with extensive experience in global development and commercialisation, ASLAN has a clinical portfolio comprised of a potential first-in-class monoclonal therapy, ASLAN004, that is being developed in atopic dermatitis and other immunology indications, and ASLAN003, that it plans to develop for autoimmune disease. For additional information please visit www.aslanpharma.com.

About ASLAN004

ASLAN004 is a potential first-in-class human monoclonal antibody that binds to the IL-13 receptor α1 subunit (IL-13Rα1), blocking signalling of two pro-inflammatory cytokines, IL-4 and IL-13, which are central to triggering symptoms of atopic dermatitis (AD), such as redness and itching of the skin. AD is a chronic, inflammatory skin condition which severely impacts quality of life for millions of children and adults globally. ASLAN004 is the only IL-13Rα1 receptor in clinical development for the treatment of AD.

About the study

The data are from the three dose cohorts of 200mg, 400mg and 600mg of ASLAN004 in adults aged 18 or older, with an EASI score of ≥16 and history of inadequate response to a stable (≥1 month) regimen of topical corticosteroids or calcineurin inhibitors as treatment for AD within 3 months before the screening visit. The study is designed to enrol approximately 50 patients and recruitment into the expansion cohort (600mg) is underway in the United States, Australia and Singapore.

Forward looking statements

This release contains forward-looking statements. These statements are based on the current beliefs and expectations of the management of ASLAN Pharmaceuticals Limited and/or its affiliates (the "Company"). These forward-looking statements may include, but are not limited to, statements regarding the Company's business

strategy, the Company's plans to develop and commercialise ASLAN004, the safety and efficacy of ASLAN004, ASLAN004's potential as a novel, first-in-class antibody targeting IL-13R with differentiated efficacy and safety profile in atopic dermatitis, and the Company's plans and expected timing with respect to enrolment in its clinical trials for ASLAN004 and clinical trial results for ASLAN004. The Company's estimates, projections and other forward-looking statements are based on management's current assumptions and expectations of future events and trends, which affect or may affect the Company's business, strategy, operations or financial performance, and inherently involve significant known and unknown risks and uncertainties. Actual results and the timing of events could differ materially from those anticipated in such forward-looking statements as a result of these risks and uncertainties, which include, without limitation the risk factors described in the Company's U.S. Securities and Exchange Commission (the "SEC") filings and reports (Commission File No. 001-38475), including the Company's Form 20-F filed with the SEC on April 16, 2020.

All statements other than statements of historical fact are forward-looking statements. The words "believe," "may," "might," "could," "will," "aim," "estimate," "continue," "anticipate," "intend," "expect," "plan," or the negative of those terms, and similar expressions that convey uncertainty of future events or outcomes are intended to identify estimates, projections and other forward-looking statements. Estimates, projections and other forward-looking statements speak only as of the date they were made, and, except to the extent required by law, the Company undertakes no obligation to update or review any estimate, projection or forward-looking statement.