

AC Immune Reports Progress for Therapeutic Programs Targeting the NLRP3 Inflammasome Pathway

Highly potent in vivo anti-inflammatory activity demonstrated for novel small molecule NLRP3 inhibitors

High-affinity antibodies against extracellular components of the inflammasome pathway show inhibition of target inflammatory responses

Lausanne, Switzerland, January 29, 2021 – AC Immune SA (NASDAQ: ACIU), a Swiss-based, clinical-stage biopharmaceutical company with a broad pipeline focused on neurodegenerative diseases, today announced recent advancements in its small molecule- and antibody-based therapeutic programs targeting the (NOD)-like receptor protein 3 (NLRP3) inflammasome, a multi-protein complex that activates downstream inflammatory pathways leading to neuronal damage. The inflammasome is a highly valued therapeutic target implicated in a wide range of neurodegenerative disorders including Alzheimer’s disease (AD), as well as in non-central nervous system (CNS) indications, such as autoimmune and infectious diseases, as well as certain cancers.

Leveraging the know-how of its proprietary Morphomer™ platform, which generated AC Immune’s clinical stage small molecule Tau aggregation inhibitors, the Company has successfully identified, and filed patent applications for, various chemical series of potent small molecule NLRP3 inhibitors. AC Immune has established biological activity for these compounds in multiple functional assays, and initial animal studies show highly potent target inhibition in a model of peripheral inflammation, providing the first evidence of *in vivo* activity. AC immune is currently evaluating potential lead compounds for further *in vivo* efficacy and CNS delivery. The Company expects to initiate *in vivo* proof-of-concept studies for a CNS-optimized lead compound for development in AD and other key neurodegenerative diseases by year end, as well as evaluate the potential of a second lead molecule in a clinically relevant non-CNS disease model.

A critical component of the NLRP3 pathway is ASC (apoptosis-associated speck-like protein containing a C-terminal caspase recruitment domain), which is released by immune cells following NLRP3 inflammasome activation. ASC interacts with amyloid beta (Abeta) in Alzheimer’s disease, not only increasing aggregation but also inducing seeding and spreading of Abeta pathology. AC Immune’s SupraAntigen™ platform has successfully generated high-affinity antibodies binding extracellular human ASC and potently inhibiting ASC-mediated inflammatory responses *in vitro*. Selected antibodies will be further evaluated in *in vivo* proof-of-concept studies using animal models of human disease, which AC Immune expects to start by year end.

Prof. Andrea Pfeifer, CEO of AC Immune SA, commented: “Accelerating our complementary programs targeting the NLRP3 pathway intra- and extracellularly is a core element of our growth execution strategy in 2021 and beyond. These critical pipeline advancements represent substantial potential value, as the inflammasome has become an important target in both CNS and non-CNS indications. As we continue to develop our small molecule and antibody candidates, I would like to

recognize the talent and dedication of our team for establishing a viable development path and enabling us to reach these milestones. Advancing multiple high-value assets targeting the inflammasome pathway further demonstrates AC Immune's ambition to shape a comprehensive pipeline addressing key targets in neurodegeneration. We look forward to providing further updates as our NLRP3 programs progress towards clinical development."

About AC Immune SA

AC Immune SA is a Nasdaq-listed clinical-stage biopharmaceutical company, which aims to become a global leader in precision medicine for neurodegenerative diseases. The Company utilizes two proprietary platforms, SupraAntigen™ and Morphomer™, to design, discover and develop small molecule and biological therapeutics as well as diagnostic products intended to diagnose, prevent and modify neurodegenerative diseases caused by misfolding proteins. The Company's pipeline features nine therapeutic and three diagnostic product candidates, with six currently in clinical trials. It has collaborations with major pharmaceutical companies including Genentech, a member of the Roche Group, Eli Lilly and Company and Janssen Pharmaceuticals.

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Forward looking statements

This press release contains statements that constitute "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are statements other than historical fact and may include statements that address future operating, financial or business performance or AC Immune's strategies or expectations. In some cases, you can identify these statements by forward-looking words such as "may," "might," "will," "should," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "projects," "potential," "outlook" or "continue," and other comparable terminology. Forward-looking statements are based on management's current expectations and beliefs and involve significant risks and uncertainties that could cause actual results, developments and business decisions to differ materially from those contemplated by these statements. These risks and uncertainties include those described under the captions "Item 3. Key Information – Risk Factors" and "Item 5. Operating and Financial Review and Prospects" in AC Immune's Annual Report on Form 20-F and other filings with the Securities and Exchange Commission. These include: the impact of Covid-19 on our business, suppliers, patients and employees and any other impact of Covid-19. Forward-looking statements speak only as of the date they are made, and AC Immune does not undertake any obligation to update them in light of new information, future developments or otherwise, except as may be required under applicable law. All forward-looking statements are qualified in their entirety by this cautionary statement.