September 12, 2023 Acurx Pharmaceuticals

Acurx Announces Presentation and Update of Its pol IIIC R&D Pipeline at the World Antimicrobial Resistance Scientific Congress

- Ibezapolstat is currently enrolling in a Phase 2b trial for*C. difficile* infection in U.S. centers across the country and nearing its goal to reach a targeted 36 patients at which point an Interim Analysis of the unblinded primary clinical endpoint and safety data will be reviewed by an Independent Data Monitoring Committee
- Ibezapolstat has received FDA QIDP and Fast-Track Designation
- Also presented was an update on the Company's pre-clinical antibiotic program in Lead Optimization stage for systemic gram-positive bacterial infections, including Acute Bacterial Skin and Skin Structure Infections caused by MRSA
- The company's preclinical pipeline also targets systemic infections caused by other gram-positive bacteria such as VRE and DRSP which are expected to be QIDP and Fast-Track eligible as product candidates advance in development

STATEN ISLAND, N.Y., Sept. 12, 2023 /PRNewswire/ -- Acurx Pharmaceuticals, Inc. (NASDAQ: ACXP) ("Acurx" or the "Company"), a clinical stage biopharmaceutical company developing a new class of antibiotics for difficult-to-treat bacterial infections, today announced that a presentation was given by Acurx Executive Chairman, Robert J. DeLuccia, at the World Antimicrobial Resistance Scientific Congress on September 7, 2023. In his presentation at the Innovation Showcase session, he highlighted that the Company anticipates completing enrollment of the 36 patients required for an interim review of the Phase 2b data by the Independent Data Monitoring Committee (IDMC) in the coming months.

Mr. DeLuccia also presented an update on the Company's preclinical GPSS™ (Gram Positive Selective Spectrum) program for systemic oral and IV treatment of other gram-positive infections including MRSA, VRE and DRSP. Mr. DeLuccia summarized the progress stating that "Our potential lead compound meets Theurezbacher's criteria for antibiotic innovation in that it is a new chemical class, has novel mechanism and bacterial target, and has not shown cross-resistance in early in vitro microbiology studies." He further stated: "Having established clinical validation of the pol IIIC bacterial target in a Ph2a proof-of-principal trial showing 100% cure of *C. difficile* Infection, with no recurrence after 30 days' follow up, we have made substantial progress toward lead compound selection of our gram-positive IV and oral compounds. We've made significant improvements in invitro and invivo safety and have demonstrated oral and IV efficacy in a number of mouse infection models. Our current focus is to prioritize the oral form for acute bacterial skin and skin structure staph infections, including MRSA, to speed lead product selection and advancement to the clinic."

The presentation is available on the Company's website www.acurxpharma.com.

About Ibezapolstat
Ibezapolstat is a novel, orally administered antibiotic being developed as a Gram-Positive Selective Spectrum (GPSS™) antibacterial. It is the first of a new class of DNA polymerase IIIC inhibitors under development by Acurx to treat bacterial infections. Ibezapolstat's unique spectrum of activity, which includes *C. difficile* but spares other Firmicutes and the important Actinobacteria phyla, appears to contribute to the maintenance of a healthy gut microbiome.

The Company currently is enrolling patients in a Ph2b clinical trial of ibezapolstat to treat patients with *C. difficile* infection (CDI). The Company successfully completed Phase 1 and Phase 2a clinical trials of ibezapolstat. The Phase 2a trial demonstrated 100% clinical cure and 100% sustained clinical cure in patients with CDI, along with beneficial microbiome changes during treatment including overgrowth of Actinobacteria and Firmicutes phylum species while on therapy and new findings which demonstrate potentially beneficial effects on bile acid metabolism. The Ph2b clinical trial is designed to enroll 64 patients and is a randomized (1:1), non-inferiority, double-blind trial of oral ibezapolstat compared to oral vancomycin, a standard of care to treat CDI.

The FDA has accepted the Company's plan to have an Independent Data Monitoring Committee (IDMC) conduct an interim review of clinical outcome from the ongoing Ph2b clinical trial of patients with *C. difficile* Infection (CDI). The interim review will be conducted upon reaching enrollment of 36 patients in total. FDA's acceptance was based on the Company's filing of a protocol amendment to its Investigational New Drug Application (IND) with FDA in January 2023. The Company's filing and intention for the IDMC to conduct an interim review of data was based on the observed blinded data to date from the ongoing Ph2b clinical trial at that time. Upon conducting the interim review, the IDMC will determine and recommend to the Company whether the most appropriate course of action is to terminate the Ph2b clinical trial early due to success, as the Company had done with the Ph2a clinical trial, or to continue patient enrollment. The Company intends to report available data promptly after the IDMC conducts this interim review. The IDMC initial organizational meeting was conducted in March 2023 and it has completed all organizational matters required to ensure readiness for data review.

In June 2018, ibezapolstat was designated by the U.S. Food and Drug Administration (FDA) as a Qualified Infectious Disease Product (QIDP) for the treatment of patients with CDI and will be eligible to benefit from the incentives for the development of new antibiotics established under the Generating New Antibiotic Incentives Now (GAIN) Act. In January 2019, FDA granted "Fast Track" designation to ibezapolstat for the treatment of patients with CDI. The CDC has designated *C. difficile* as an urgent threat highlighting the need for new antibiotics to treat CDI.

About the World Antimicrobial Resistance Congress

Since 2015, the World Antimicrobial Resistance Congress has attracted top thought leaders, hospitals, companies, and policymakers as the annual, go-to event in the Antimicrobial Resistance (AMR) space. It has grown into the most impactful event in advancing solutions to combat current and future pressing global health crises. Diagnostic developers, antibiotic biotechs & pharmaceutical companies, stewardship technologies, access firms, and many more, rely on our event for business development opportunities, networking and showcasing of new products and solutions. Over 1,300 attendees were expected to attend with over 200 speakers presenting over the two-day conference held in Philadelphia, PA on September 7-

8, 2023.

About *Clostridioides difficile* Infection (CDI). According to the 2017 Update (published February 2018) of the Clinical Practice Guidelines for C. difficile Infection by the Infectious Diseases Society of America (IDSA) and Society or Healthcare Epidemiology of America (SHEA), CDI remains a significant medical problem in hospitals, in long-term care facilities and in the community. *C. difficile* is one of the most common causes of health care-associated infections in U.S. hospitals (Lessa, et al, 2015, New England Journal of Medicine). Recent estimates suggest *C. difficile* approaches 500,000 infections annually in the U.S. and is associated with approximately 20,000 deaths annually. (Guh, 2020, New England Journal of Medicine). Based on internal estimates, the recurrence rate of two of the three antibiotics currently used to treat CDI is between 20% and 40% among approximately 150,000 patients treated. We believe the annual incidence of CDI in the U.S. approaches 600,000 infections and a mortality rate of approximately 9.3%.

About the Microbiome in *Clostridioides difficile* Infection (CDI) and Bile Acid Metabolism

C. difficile can be a normal component of the healthy gut microbiome, but when the microbiome is thrown out of balance, the *C. difficile* can thrive and cause an infection. After colonization with *C. difficile*, the organism produces and releases the main virulence factors, the two large clostridial toxins A (TcdA) and B (TcdB). (Kachrimanidou, Microorganisms 2020, 8, 200; doi:10.3390/microorganisms8020200.) TcdA and TcdB are exotoxins that bind to human intestinal epithelial cells and are responsible for inflammation, fluid and mucous secretion, as well as damage to the intestinal mucosa.

Bile acids perform many functional roles in the GI tract, with one of the most important being maintenance of a healthy microbiome by inhibiting *C. difficile* growth. Primary bile acids, which are secreted by the liver into the intestines, promote germination of *C. difficile* spores and thereby increase the risk of recurrent CDI after successful treatment of an initial episode. On the other hand, secondary bile acids, which are produced by normal gut microbiota through metabolism of primary bile acids, do not induce *C. difficile* sporulation and therefore protect against recurrent disease. Since ibezapolstat treatment leads to minimal disruption of the gut microbiome, bacterial production of secondary bile acids continues which may contribute to an anti-recurrence effect. Beneficial effects of bile acids include a decrease in primary bile acids and an increase in secondary bile acids in patients with CDI, which was observed in the Company's Ph2a trial results and previously reported. (CID, 2022)

About the Ibezapolstat Phase 2 Clinical Trial

The multicenter, open-label single-arm segment of this study (Phase 2a) is to be followed by a double- blind, randomized, active-controlled segment (Phase 2b) which, together, comprise the Phase 2 clinical trial. The Phase 2 clinical trial is designed to evaluate ibezapolstat in the treatment of CDI. Phase 2a of this trial is completed and was an open-label cohort of up to 20 subjects from study centers in the United States. In this cohort, 10 patients with diarrhea caused by *C. difficile* were treated with ibezapolstat 450 mg orally, twice daily for 10 days. All patients were followed for recurrence for 28± 2 days. Per protocol, after 10 patients of the projected 20 Phase 2a patients completed treatment, the Trial Oversight Committee assessed the safety and tolerability and made its recommendation regarding early termination of the Phase 2a study. Based on the recommendation of Acurx's

Scientific Advisory Board (SAB) and Trial Oversight Committee, we terminated enrollment in Phase 2a early and are now advancing to Phase 2b. The SAB unanimously supported the early termination of the Phase 2a trial after 10 patients were enrolled in the trial instead of 20 patients as originally planned. The early termination was based on the evidence of meeting the primary and secondary endpoints of eliminating the infection (100%), with no recurrences of infection (100%), and with an acceptable adverse event profile. In the Phase 2b, approximately 64 additional patients with CDI will be enrolled and randomized in a 1:1 ratio to either ibezapolstat 450 mg every 12 hours or vancomycin 125mg orally every 6 hours, in each case, for 10 days and followed for 28 ± 2 days following the end of treatment for recurrence of CDI. The two treatments will be identical in appearance, dosing times, and number of capsules administered to maintain the blind. This Phase 2 clinical trial also will evaluate pharmacokinetics (PK) and microbiome changes and continue to test for anti-recurrence microbiome properties, including the change from baseline in alpha diversity and bacterial abundance, especially overgrowth of healthy gut microbiota Actinobacteria and Firmicute phylum species during and after therapy.

About Acurx Pharmaceuticals, Inc.
Acurx Pharmaceuticals is a clinical stage biopharmaceutical company focused on developing new antibiotics for difficult to treat infections. The Company's approach is to develop antibiotic candidates that target the DNA polymerase IIIC enzyme and its R&D pipeline includes antibiotic product candidates that target Gram-positive bacteria, including *Clostridioides difficile*, methicillin-resistant Staphylococcus aureus (MRSA), vancomycin resistant Enterococcus (VRE) and drug-resistant Streptococcus pneumoniae (DRSP).

To learn more about Acurx Pharmaceuticals and its product pipeline, please visit www.acurxpharma.com.

Forward-Looking Statements

Any statements in this press release about our future expectations, plans and prospects, including statements regarding our strategy, future operations, prospects, plans and objectives, and other statements containing the words "believes," "anticipates," "plans," "expects," and similar expressions, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. Actual results may differ materially from those indicated by such forward-looking statements as a result of various important factors, including: whether ibezapolstat will benefit from the QIDP designation; whether ibezapolstat will advance through the clinical trial process on a timely basis; whether the results of the clinical trials of ibezapolstat will warrant the submission of applications for marketing approval, and if so, whether ibezapolstat will receive approval from the FDA or equivalent foreign regulatory agencies where approval is sought; whether, if ibezapolstat obtains approval, it will be successfully distributed and marketed; and other risks and uncertainties described in the Company's annual report filed with the Securities and Exchange Commission on Form 10-K for the year ended December 31, 2022, and in the Company's subsequent filings with the Securities and Exchange Commission. Such forward-looking statements speak only as of the date of this press release, and Acurx disclaims any intent or obligation to update these forward-looking statements to reflect events or circumstances after the date of such statements, except as may be required by law.

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