Acrivon Therapeutics Presents Data Demonstrating Capabilities of its AP3 Platform and ACR-368 OncoSignature Assay for Patient Responder Identification at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics

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Data presented on the application of Acrivon Predictive Precision Proteomics (AP3) for the successful development and extensive evaluation of the ACR-368-tailored, proteomics-based OncoSignature assay for the prediction of patients, as well as tumor types, most likely to respond to the CHK1/2 inhibitor ACR-368

ACR-368 OncoSignature assay being utilized in the registrational-intent Phase 2 trial of ACR-368 for patients with ovarian, endometrial, or bladder cancer

WATERTOWN, Mass., Oct. 16, 2023 (GLOBE NEWSWIRE) -- Acrivon Therapeutics, Inc. ("Acrivon" or "Acrivon Therapeutics") (Nasdaq: ACRV), a clinical stage biopharmaceutical company developing precision oncology medicines that it matches to patients whose tumors are predicted to be sensitive to each specific medicine by utilizing its proprietary proteomics-based patient responder identification platform, announced data highlighting its AP3 approach to identify and evaluate biomarkers for its OncoSignature assay designed specifically to predict sensitivity to ACR-368, the company's selective small molecule inhibitor targeting CHK1 and CHK2, currently in registrational-intent Phase 2 clinical trials. The data were presented in two posters at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics in Boston this past week.

"Our AP3 platform is designed to directly measure the activity state of the drug-regulated, disease-driving proteins and drug-induced compensatory resistance mechanisms to enable an exact match with drug mechanism-of-action, independent of genetic alterations," said Peter Blume-Jensen, M.D., Ph.D., chief executive officer, president, and founder of Acrivon Therapeutics. "We leverage this distinctive capability to create drug-tailored OncoSignature assays as a companion diagnostic aiming to identify and treat patients most likely to benefit from treatment. We are excited to have presented some key data supporting these pioneering technologies and their application in the clinical development of ACR-368 at this year's AACR-NCI-EORTC conference."

Acrivon Posters Presented at This Year's AACR-NCI-EORTC Conference

The poster (#C002) titled "Identification of Biomarkers Predictive of Sensitivity to the CHK1/2 Inhibitor ACR-368 Using High-Resolution Phosphoproteomics and Development of an ACR-368-Tailored Patient Responder Identification 3-Marker Test, ACR-368 OncoSignature" showed data leveraging the company's AP3 approach, including ultra-high resolution, quantitative mass spectrometry-based phosphoproteomics profiling combined with proprietary approaches to identify three classes of functionally orthogonal candidate biomarkers specifically predictive of sensitivity to ACR-368. Biomarker candidates were initially evaluated through pathway reconstitution and in cellular functional assays, after which they were assembled into the ACR-368 OncoSignature assay for further functional validation. The quantitative multiplex in situ ACR-368 OncoSignature assay was used to provide a direct readout of the activity state of the drug target signaling axis regulated by ACR-368 and that the tumor depends on for dysregulated CHK1/2-driven DNA repair and replication stress. The company's ACR-368-specific OncoSignature assay accurately predicted sensitivity to ACR-368 in genetically non-modified ovarian cancer patient-derived xenograft (PDX) models with an area under the curve (AUC) of 0.9 (95% confidence interval: 0.71 to 1; p-value = 0.025). These data support the use of the company's ACR-368 OncoSignature assay in its ongoing registrational-intent Phase 2 clinical trials, and demonstrate the distinctive, practical application of the company's AP3 platform.

The poster (#B012) titled "Validation of the OncoSignature Assay, an ACR-368-Tailored Response-Predictive Quantitative Multiplexed Immunofluorescent Assay for Prediction of Sensitivity to the CHK1/2 Inhibitor ACR-368 in Individual Patients with Cancer" provided data validating the ability of the AP3-derived ACR-368-specific OncoSignature assay to predict tumor response to ACR-368 in multiple blinded, prospectively-designed preclinical studies, including two separate studies on pretreatment tumor biopsies from past Phase 2 clinical trials in patients with ovarian cancer and in tumor types predicted sensitive to ACR-368, including endometrial cancer. In the two pretreatment tumor biopsy studies, the ACR-368 OncoSignature test was overall able to segregate responders from non-responders with high accuracy and enrich for responders, achieving an overall response rate of 47% and 58% with strong statistical significance. Endometrial and bladder cancers were identified as new tumor types predicted sensitive to ACR-368 in 30-40% of cases. Data in the poster confirmed the predicted efficacy in genetically non-modified, PDX models of endometrial cancer, and further demonstrated that the ACR-368 OncoSignature assay could predict sensitive from insensitive models with an AUC of 0.88 in blinded studies. The data presented in this poster, along with other confidential data not disclosed in the poster, were previously submitted to and reviewed by the FDA to support the Investigational New Drug Application clearance of the registrational-intent design of the ongoing monotherapy ACR-368 Phase 2 trials.

The posters can be viewed at www.acrivon.com in the publications section using this link.

About Acrivon Therapeutics

Acrivon is a clinical stage biopharmaceutical company developing precision oncology medicines that it matches to patients whose tumors are predicted to be sensitive to each specific medicine by utilizing Acrivon's proprietary proteomics-based patient responder identification platform, Acrivon Predictive Precision Proteomics, or AP3. The AP3 platform is engineered to measure compound-specific effects on the entire tumor cell protein signaling network and drug-induced resistance mechanisms in an unbiased manner. These distinctive capabilities enable AP3's direct application for drug design optimization for monotherapy activity, the identification of rational drug combinations, and the creation of drug-specific proprietary OncoSignature companion diagnostics that are used to identify the patients most likely to benefit from Acrivon's drug candidates. Acrivon is currently advancing its lead candidate, ACR-368, a selective small molecule inhibitor targeting CHK1 and CHK2 in a potentially registrational Phase 2 trial

across multiple tumor types. The company has received Fast Track designation from the Food and Drug Administration, or FDA, for the investigation of ACR-368 as monotherapy based on OncoSignature-predicted sensitivity in patients with platinum-resistant ovarian or endometrial cancer. Acrivon's ACR-368 OncoSignature test, which has not yet obtained regulatory approval, has been extensively evaluated in preclinical studies, including in two separate, blinded, prospectively-designed studies on pretreatment tumor biopsies collected from past third-party Phase 2 trials in patients with ovarian cancer treated with ACR-368. In addition to ACR-368, Acrivon is also leveraging its proprietary AP3 precision medicine platform for developing its internally-discovered preclinical stage pipeline programs, consisting of its development candidate, ACR-2316, a selective, dual WEE1/PKMYT1 inhibitor, and additional programs targeting these two critical nodes in the DNA Damage Response, or DDR, pathways.

Forward-Looking Statements

This press release includes certain disclosures that contain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 about us and our industry that involve substantial risks and uncertainties. All statements other than statements of historical facts contained in this press release, including statements regarding our future results of operations or financial condition, business strategy and plans and objectives of management for future operations, are forward-looking statements. In some cases, you can identify forward-looking statements because they contain words such as "anticipate," "believe," "contemplate," "continue," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "target," "will," or "would" or the negative of these words or other similar terms or expressions. Forward-looking statements are based on Acrivon's current expectations and are subject to inherent uncertainties, risks and assumptions that are difficult to predict. Factors that could cause actual results to differ include, but are not limited to, risks and uncertainties that are described more fully in the section titled "Risk Factors" in our reports filed with the Securities and Exchange Commission. Forward-looking statements contained in this press release are made as of this date, and Acrivon undertakes no duty to update such information except as required under applicable law.

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