Atossa Therapeutics to Present Poster Describing the Discovery of Molecules Synergistic with (Z)-endoxifen for the Treatment of Breast Cancer at the 2024 San Antonio Breast Cancer Symposium

December 12, 2024 1:15 PM EST

Insilico and Chemical Screening Identified Compounds that Synergize with (Z)-endoxifen to Induce Cell Death in MCF-7 Cells, Suggesting Potential Combination Therapies as Breast Cancer Treatments

SEATTLE, Dec. 12, 2024 (GLOBE NEWSWIRE) -- Atossa Therapeutics, Inc. (Nasdaq: ATOS) ("Atossa" or the "Company"), a clinical stage biopharmaceutical company developing innovative medicines in areas of significant unmet medical need in oncology with a focus on breast cancer, today announced data describing the discovery of compounds that may be synergistic with (Z)-endoxifen and that could potentially be used in combinations for the treatment of breast cancer. The data is being presented in a poster at the 2024 San Antonio Breast Cancer Symposium (SABCS) on December 13, 2024.

The poster, titled, "Discovery of molecules synergistic with (Z)-endoxifen for the treatment of breast cancer," describes the use of two independent approaches, insilico and chemical screening, which led to the identification of compounds that may be used to inhibit enzymes and proteins which play a role in, among other things, uncontrolled cell proliferation and tumor survival (e.g., DNA topoisomerase, CDK, mTOR/PI3K and AKT) and which may synergize with (Z)-endoxifen. The combination of these newly discovered compounds was shown to induce cell death in MCF-7 cells, a widely used human breast cancer cell line in scientific research, at levels greater than with either agent alone. In particular, several inhibitors of MEK, PI3K and AKT showed synergistic potential in reducing MCF-7 cell viability. Together, these data suggest that combination therapies with (Z)-endoxifen and agents targeting topoisomerase, CDK, mTOR/PI3K and AKT have potential in the treatment of breast cancer but require further study.

"The discovery of new, synergistic compounds that could potentially complement the cancer preventing and fighting mechanism of (Z)-endoxifen showcases our continuing mission to transform the breast cancer paradigm," said Steven Quay, M.D., Ph.D., Atossa's President and Chief Executive Officer. "I congratulate our research team and collaborators on these discoveries as we continue to enlist advanced techniques to bring novel compounds and combinations with significant anti-cancer properties to the treatment of these challenging cancers."

Poster Details
Title: P4-05-22 Discovery of Molecules Synergistic with (Z)-endoxifen for the Treatment of Breast Cancer

- **Description:** Presents findings from a study exploring synergistic combinations of (Z)-endoxifen with other compounds for enhanced treatment efficacy.
- **Presentation Details:** Daniela Hühn, 5:30-7:00 pm, December 13, 2024

A link to the poster presentation will be made available on Atossa Therapeutics' website at the time of the presentation. For additional information, please visit the SABCS website: https://sabcs.org.

About (Z)-Endoxifen
(Z)-endoxifen is the most potent Selective Estrogen Receptor Modulator (SERM) for estrogen receptor inhibition and also causes estrogen receptor degradation. It has also been shown to have efficacy in the setting of patients with tumor resistance to other hormonal treatments. In addition to its potent anti-estrogen effects, (Z)-endoxifen has been shown to target PKCβ1, a known oncogenic protein, at clinically attainable blood concentrations. Finally, (Z)-endoxifen appears to deliver similar or even greater bone agonistic effects while resulting in little or no endometrial proliferative effects compared with standard treatments, like tamoxifen.

Atossa is developing a proprietary oral formulation of (Z)-endoxifen that does not require liver metabolism to achieve therapeutic concentrations and is encapsulated to bypass the stomach, as acidic conditions in the stomach convert a significant proportion of (Z)-endoxifen to the inactive (E)-endoxifen. Atossa's (Z)-endoxifen has been shown to be well tolerated in Phase 1 studies and in a small Phase 2 study of women with breast cancer. (Z)-endoxifen is currently being studied in four Phase 2 trials: one in healthy women with measurable breast density, one in women diagnosed with ductal carcinoma in situ, and two other studies including the EVANGELINE study in women with ER+/HER2- breast cancer. Atossa's (Z)-endoxifen is protected by four issued U.S. patents and numerous pending patent applications.

About Atossa Therapeutics

Atossa Therapeutics, Inc. is a clinical-stage biopharmaceutical company developing innovative medicines in areas of significant unmet medical need in oncology with a focus on using (Z)-endoxifen to prevent and treat breast cancer. For more information, please visit www.atossatherapeutics.com.

FORWARD LOOKING STATEMENTS
This press release contains certain information that may constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. We may identify these forward-looking statements by the use of words such as "expect," "potential," "continue," "may," "will," "should," "could," "would," "seek," "intend," "plan," "estimate," "anticipate," "believe," "design," "predict," "future," or other comparable words. All statements made in this press release that are not statements of historical fact, including statements regarding data related to the (Z)-endoxifen program, the safety, tolerability and efficacy of (Z)-endoxifen, the potential of (Z)-endoxifen as a breast cancer prevention and treatment agent, the expected design and enrollment of trials and timing of data and related publications, and the potential milestones and growth opportunities for the Company, are forward-looking statements. Forward-looking statements in this press release are subject to risks and uncertainties that may cause

actual results, outcomes, or the timing of actual results or outcomes, to differ materially from those projected or anticipated, including risks and uncertainties associated with: macroeconomic conditions and increasing geopolitical instability; the expected timing of releasing data; any variation between interim or preliminary and final clinical results or analysis; actions and inactions by the FDA and foreign regulatory bodies; the outcome or timing of regulatory approvals needed by Atossa, including those needed to continue our planned (Z)-endoxifen trials; our ability to satisfy regulatory requirements; our ability to remain compliant with the continued listing requirements of the Nasdaq Stock Market; our ability to successfully develop and commercialize new therapeutics; the success, costs and timing of our development activities, including our ability to successfully initiate or complete our clinical trials, including our (Z)-endoxifen trials; our anticipated rate of patient enrollment; our ability to contract with third-parties and their ability to perform adequately; our estimates on the size and characteristics of our potential markets; our ability to successfully defend litigation and other similar complaints and to establish and maintain intellectual property rights covering our products; whether we can successfully complete our clinical trial of oral (Z)-endoxifen in women with mammographic breast density and our trials of (Z)-endoxifen in women with breast cancer, and whether the studies will meet their objectives; our expectations as to future financial performance, expense levels and capital sources, including our ability to raise capital; our ability to attract and retain key personnel; our anticipated working capital needs and expectations around the sufficiency of our cash reserves; and other risks and uncertainties detailed from time to time in Atossa's filings with the Securities and Exchange Commission, including without limitation its Annual Reports on Form 10-K and Quarterly Reports on 10-Q. Forward-looking statements are presented as of the date of this press release. Except as required by law, we do not intend to update any forward-looking statements, whether as a result of new information, future events or circumstances or otherwise.

Contact:

Michael Parks
VP, Investor and Public Relations
484-356-7105
michael.parks@atossainc.com