

April 10, 2021



Kezar Life Sciences Presents Preclinical Data with IND Candidate KZR-261 at American Association for Cancer Research (AACR) 2021 Virtual Annual Meeting

SOUTH SAN FRANCISCO, Calif.--(BUSINESS WIRE)-- Kezar Life Sciences, Inc. (Nasdaq), a clinical-stage biotechnology company discovering and developing breakthrough treatments for immune-mediated and oncologic disorders, today presented preclinical data on the company's novel protein secretion program during two poster sessions at the American Association for Cancer Research (AACR) 2021 Virtual Annual Meeting.

"The growing body of evidence generated by our team supports the strong therapeutic potential of inhibiting Sec61 and the protein secretion pathway as a way to generate novel therapies to treat multiple tumor indications," said Christopher Kirk, PhD, Kezar's President and Chief Scientific Officer. "These data provide a robust scientific framework for identifying which tumor types might be the most sensitive to inhibition of the Sec61 translocon and the protein secretion pathway."

Kezar examined the activity of KZR-261, a small molecule inhibitor of the Sec 61 translocon, and a closely related representative molecule in hundreds of tumor cell lines. The objective was to compare drug activity and identify sensitivity to gene mutations and impact on gene expression levels. No single gene predicted the activity of KZR-261, consistent with the known impact of KZR-261 on multiple targets. However, representative gene modules identified through mechanism agnostic analysis were associated with sensitivity in tumor cells and show high overlap with key processes involved in protein secretion. Analyses of primary tumor and tissue expression datasets predict that many tumor types will be more sensitive than normal tissues and cells. Data from these analyses will inform selection of tumor types for study in future clinical trials.

Global proteomic profiling of protein secretion in tumor cells and non-transformed cells was also conducted. KZR-261 and the related molecules reduce expression of Sec61 clients, namely secreted and transmembrane proteins. In tumor cells, these compounds reduced expression of approximately 10% of Sec61 clients by at least two-fold. However, in non-transformed cells, KZR-261 inhibited the expression of less than 5% of measured Sec61 clients, many of which can be measured from clinical samples in future clinical trials.

Pending successful completion of drug product manufacturing, submission of an Investigational New Drug (IND) application is anticipated in mid-2021. A first-in-human Phase 1 study to evaluate the safety and anti-tumor activity of KZR-261 in patients with solid tumors is expected to commence shortly thereafter.

Details on Kezar’s poster presentations at AACR are as follows:

Title: Prioritizing tumor types for clinical study of novel Sec61 inhibitors by searching for expression profiles of sensitive cell lines in tumor sample databases

Presenter/s: Eric Lowe, R. Andrea Fan, Henry W. B. Johnson, Christopher J. Kirk, Dustin McMinn, Yu Qian, Brian Tuch

Session: Genomic Profiling of Tumors – Abstract #2226

Date and time: Available on demand [8:30AM ET, Saturday, April 10, 2021]

Title: Quantitative proteomic profiling of novel anti-cancer small molecule inhibitors of Sec61: Mechanistic investigation and biomarker discovery

Presenter/s: Yu Qian, Jennifer Whang, Janet Anderl, Andrea Fan, Henry W. B. Johnson, Christopher J. Kirk, Eric Lowe, Dustin McMinn, Beatriz Millare, Tony Muchamuel and Jinhai Wang; Kezar Life Sciences

Session: Proteomics and Biomarker Discovery – Abstract #2816

Date and time: Available on demand [8:30AM ET, Saturday, April 10, 2021]

The posters are available in the “Our Science” section of kezarlifesciences.com.

About KZR-261

KZR-261, a novel, first-in-class protein secretion inhibitor, is the first clinical candidate to be nominated from Kezar’s research and discovery efforts targeting protein secretion pathways. KZR-261 is a broad-spectrum anti-tumor agent that acts through direct interaction and inhibition of Sec61 activity. The compound was discovered by Kezar through a robust medicinal chemistry campaign in which several scaffolds were progressed through the company’s proprietary platform evaluating Sec61 modulation. As a result, Kezar has established a broad library of protein secretion inhibitors. KZR-261 has demonstrated several encouraging properties that lead to its potential to be an anti-cancer agent for the treatment of solid and hematologic malignancies. An IND submission in solid tumors is expected to be filed in mid-2021.

About Kezar Life Sciences

Kezar Life Sciences is a clinical-stage biopharmaceutical company bringing novel treatments to patients with rare autoimmune diseases and cancer. The company is pioneering first-in-class, small-molecule therapies that harness master regulators of cellular function to inhibit multiple drivers of disease via single, powerful targets. KZR-616, its lead development candidate, is a selective immunoproteasome inhibitor being evaluated in Phase 2 clinical trials in lupus nephritis, dermatomyositis and polymyositis. Additionally, an IND is planned in mid-2021 for KZR-261, the first anti-cancer clinical candidate from the company’s platform targeting the Sec61 translocon and the protein secretion pathway. For more information, visit kezarlifesciences.com.

Cautionary Note on Forward-looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as “may,” “will,” “should,” “could,” “expect,” “believe” and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-

looking statements. These forward-looking statements are based on Kezar's expectations and assumptions as of the date of this press release. Each of these forward-looking statements involves risks and uncertainties that could cause Kezar's clinical development programs, future results or performance to differ materially from those expressed or implied by the forward-looking statements. Forward-looking statements contained in this press release include, but are not limited to, statements about the design, progress, timing, scope and results of clinical trials, plans for initiating future clinical trials, the likelihood data will support future development, the association of data with treatment outcomes, and the discovery and development of new product candidates. Many factors may cause differences between current expectations and actual results, including the impacts of the COVID-19 pandemic on the company's business, clinical trials and financial position, unexpected safety or efficacy data observed during preclinical or clinical studies, changes in expected or existing competition, changes in the regulatory environment, the uncertainties and timing of the regulatory approval process, and unexpected litigation or other disputes. Other factors that may cause actual results to differ from those expressed or implied in the forward-looking statements in this press release are discussed in Kezar's filings with the U.S. Securities and Exchange Commission, including the "Risk Factors" contained therein. Except as required by law, Kezar assumes no obligation to update any forward-looking statements contained herein to reflect any change in expectations, even as new information becomes available.

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