Kalaris Therapeutics Reports Positive Initial Phase 1a Data for TH103 in Treatment-Naïve Neovascular AMD

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TH103 showed mean 10-letter gain in visual acuity and rapid, robust anatomic improvement at Month 1, following a single injection

TH103 was generally well tolerated, supporting further dose escalation beyond 2.5 mg

TH103 showed a 27 to 51-fold lower plasma Cmax by pharmacokinetic analysis compared with current leading agents, indicative of increased intraocular retention

Accelerating enrollment in ongoing Phase 1b/2 multi ascending dose-finding study; preliminary efficacy and safety data expected 2H 2026

Kalaris conference call today at 4:30 pm EST

BERKELEY HEIGHTS, N.J., Dec. 17, 2025 (GLOBE NEWSWIRE) -- Kalaris Therapeutics, Inc. (NASDAQ: KLRS), a clinical-stage biopharmaceutical company dedicated to the development and commercialization of treatments for prevalent retinal diseases, today announced positive initial data from its Phase 1a single ascending dose (SAD) trial of TH103, a fully humanized, recombinant fusion protein that acts against VEGF as a decoy receptor, in treatment-naïve patients with neovascular age-related macular degeneration (nAMD). The data demonstrate that TH103's engineered molecular properties translated into clinically meaningful improvements in vision and retinal anatomy, with early signals suggesting the potential for extended treatment durability. The initial data will be presented at 4:30 pm EST today via webcast.

TH103 was Engineered for Enhanced Potency and Intraocular Retention

Invented by Dr. Napoleone Ferrara, Kalaris' scientific co-founder and current board member, whose pioneering research led to the development of the anti-VEGF class of therapies for retinal and oncology diseases, TH103 is an investigational anti-VEGF therapy specifically engineered to achieve extended intraocular retention with enhanced VEGF inhibition. Dr. Ferrara designed the molecule with specific structural characteristics intended to prolong residence time in the eye. In preclinical studies, TH103 demonstrated significantly enhanced binding to heparan sulfate proteoglycans (HSPG) and slower systemic clearance compared to aflibercept, supporting the hypothesis that these molecular characteristics could translate to extended durability.

Initial Phase 1a Data Support Molecular Hypothesis with Strong Clinical Activity

The Phase 1a trial evaluated a single intravitreal injection of TH103 at three dose levels (0.5 mg, 1.5 mg, 2.5 mg) in treatment-naïve nAMD patients (N=13) who completed 6 months of follow-up. Results demonstrated robust visual and anatomic improvements that support TH103's molecular design and preclinical profile.

Rapid, Robust Response in BCVA and OCT Parameters Across Dose Levels at 1 Month

- Mean 10-letter best corrected visual acuity (BCVA) improvement
- Mean 129 µm improvement in central subfield thickness (CST)
- Mean ~95% reduction in central subfield intraretinal fluid (IRF)

"These initial Phase 1a data are highly encouraging and validate the molecular engineering approach we pursued in developing TH103," said Dr. Ferrara. "We believe the rapid visual and anatomic improvements we observed are consistent with potent VEGF inhibition."

TH103 Generally Well Tolerated, Supporting Exploration of Further Dose Escalation

- No dose-limiting toxicities (DLTs) observed
- No TH103-related serious adverse events (SAEs) observed
- No instances of TH103-related retinal vascular occlusive disease, retinal vasculitis, cataracts, or elevated intraocular pressure observed

Two cases of transient, mild-moderate intraocular inflammation (IOI) were observed at Day 4 in two subjects dosed at 2.5 mg,

which were attributed to levels of host cell protein in the drug product. Additional processing steps were implemented into the manufacturing process, significantly reducing host cell protein levels. Subsequently, six additional subjects were enrolled and treated with new, further purified material at the 2.5 mg dose level and there have been zero new instances of IOI (≥1 week follow-up). Based on these results, Kalaris plans to use the drug product produced with the updated manufacturing process in its ongoing and planned clinical trials.

Initial Phase 1a Data Provides Evidence TH103 May Offer Extended Treatment Durability

Pharmacokinetic Profile - Plasma levels of TH103 dose adjusted mean Cmax were 27 to 51-fold lower compared to current leading anti-VEGF agents, consistent with enhanced intraocular retention and reduced systemic exposure. This pharmacokinetic profile aligns with the molecule's engineered properties and preclinical data demonstrating prolonged intraocular residence time.

Retreatment Analysis - Following only a single TH103 injection, 31% of patients received no additional anti-VEGF treatment during the entire six-month follow-up period. These single-dose findings suggest the potential for extended durability outcomes after a standard four-dose loading regimen.

"These data are consistent with what was observed in preclinical studies and reinforce what we would expect based on TH103's molecular design," added Andrew Oxtoby, Chief Executive Officer of Kalaris. "The pharmacokinetic profile and retreatment data provide early signals that the enhanced intraocular retention designed into the molecule may translate to extended clinical durability and reduce the treatment burden for patients."

Next Steps in Clinical Development

Based on these positive initial Phase 1a data, Kalaris is accelerating its clinical development program. Kalaris continues to enroll patients in an ongoing Phase 1b/2, multi-ascending dose, dose-finding study evaluating four monthly loading injections of TH103 to identify the optimal dose and regimen for potential Phase 3 development. Kalaris expects to share preliminary data from the ongoing Phase 1b/2 study in the second half of 2026.

Conference Call & Webcast Information

Members of the Kalaris management team, along with Joel Pearlman, MD, PhD and Donald J. D'Amico, MD, will host a live conference call and webcast today at 4:30 pm Eastern Time to review the initial Phase 1a data. Interested parties should dial 1-877-407-0784 or register for the webcast via this link https://viavid.webcasts.com/starthere.jsp?ei=1743701&tp_key=9a6798b828. An accompanying slide presentation for the event, updated corporate presentation, and a replay of the webcast will be available via the investor section of the Kalaris' website at investors.kalaristx.com/events-presentations.

About Neovascular Age-Related Macular Degeneration

Neovascular AMD is a leading cause of vision loss in individuals over 50, affecting millions of people worldwide. The disease is characterized by abnormal blood vessel growth beneath the retina, leading to fluid leakage, retinal damage, and progressive vision loss. While anti-VEGF therapies have transformed outcomes for nAMD patients, many require frequent injections for extended periods, leading to suboptimal adherence and compromised outcomes.

About Kalaris Therapeutics

Kalaris Therapeutics is a clinical-stage biopharmaceutical company dedicated to the development and commercialization of treatments for prevalent retinal diseases. Founded by renowned scientist Dr. Napoleone Ferrara, whose pioneering research led to the development of anti-VEGF therapy, Kalaris Therapeutics is committed to advancing novel therapeutic approaches for patients with sight-threatening retinal conditions with major unmet medical needs. For more information, visit www.kalaristx.com.

Forward-Looking Statements

This press release contains "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995 and Section 21E of the Securities Exchange Act of 1934, as amended, that involve substantial risk and uncertainties. All statements, other than statements of historical fact, contained in this press release, including statements regarding the strategy, future operations, prospects, plans and objectives of management of Kalaris, including the therapeutic potential of TH103 for nAMD and other exudative and neovascular retinal diseases, the anticipated timelines for reporting clinical data from the Phase 1a and Phase 1b/2 clinical trials of TH103, plans to advance TH103 into Phase 3 clinical trials and to develop TH103 for additional indications and the sufficiency of Kalaris' cash resources for the period anticipated, are forward-looking statements. The words "anticipate," "believe," "continue," "could," "estimate," "expect," "intend," "may," "might," "plan," "potential," "predict," "project," "should," "target," "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These statements are based on current expectations and beliefs of the management of Kalaris as well as assumptions made by, and information currently available to, the management of Kalaris and are subject to risks and uncertainties. There can be no assurance that future developments affecting Kalaris will be those that it has anticipated. Actual results or events could differ materially from the plans, intentions and expectations disclosed in these forward-looking statements as a result of various important factors, including: risks associated with the clinical development and regulatory approval of TH103, including potential delays in the completion of clinical trials; expectations regarding the therapeutic benefits, clinical potential and clinical development of TH103; the timing of and Kalaris' ability to enroll patients in clinical trials; whether results from preclinical studies and initial data from early clinical trials will be predictive of the final results of the clinical

trials or future trials; risks related to the inability of Kalaris to obtain sufficient additional capital to continue to advance its product candidate; uncertainties in obtaining successful clinical results for product candidates and unexpected costs that may result therefrom; risks related to the failure to realize any value from any product candidates being developed and anticipated to be developed in light of inherent risks and difficulties involved in successfully bringing product candidates to market; the ability to obtain, maintain, and protect intellectual property rights related to product candidates; changes in regulatory requirements and government incentives; Kalaris' competitive position and expectations regarding developments and projections relating to its competitors and any competing therapies that are or become available; the risk of involvement in current and future litigation; and such other factors as are set forth in Kalaris' public filings with the SEC, including, but not limited to, those described under the heading "Risk Factors". Kalaris may not actually achieve the plans, intentions or expectations disclosed in its forward-looking statements, and you should not place undue reliance on its forward-looking statements. The forward-looking statements contained in this press release are made as of the date of this press release, and Kalaris does not assume any obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

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