Talaris Therapeutics Provides FREEDOM-1 Phase 3 Clinical Update

June 30, 2022

- *All three FREEDOM-1 patients treated with FCR001 who are more than 12 months post-transplant have been successfully weaned off chronic anti-rejection drugs*
- *All FREEDOM-1 patients who received FCR001 at least three months prior to the data cutoff date have achieved and maintained >50% T-cell chimerism, a potential biomarker predictive of achieving tolerance*
- *Conference call scheduled for today at 8:00 a.m. ET*

BOSTON and LOUISVILLE, Ky., June 30, 2022 (GLOBE NEWSWIRE) -- Talaris Therapeutics, Inc. (Nasdaq: TALS), a late-clinical stage cell therapy company developing therapies with the potential to transform the standard of care in solid organ transplantation and severe immune and blood disorders, today provided a clinical update on its ongoing Phase 3 FREEDOM-1 study in living donor kidney transplant (LDKT) recipients.

To date, Talaris has enrolled 22 donor-recipient pairs in the Phase 3 FREEDOM-1 study (NCT# 03995901) of FCR001. Seven patients have been successfully dosed at five different trial sites. All three patients who were dosed more than 12 months prior to the data cutoff date have been successfully weaned off all chronic anti-rejection drugs without evidence of rejection and with stable kidney function. All of these patients, including the first patient who is now 24 months post-transplant, continue to remain off all anti-rejection drugs. Furthermore, all patients treated with FCR001 at least three months prior to the data cutoff date have achieved and maintained T-cell chimerism levels >50% at each of the 3-, 6- and 12-month timepoints post-transplant. The safety profile observed was generally consistent with that expected in patients receiving a kidney transplant and an allo-HSCT. Three cases of low-grade acute graft-versus-host disease (aGvHD) were reported, all of which were treatment-responsive and have since resolved. One of these patients is more than 12 months post-transplant and has been successfully weaned off all anti-rejection drugs. As a result of an internal review triggered by the GvHD cases, Talaris has modified its mobilization protocol and added a second post-transplant dose of cyclophosphamide for GvHD prophylaxis. Trial enrollment continues.

Phase 3 FREEDOM-1 Highlights[1]

- **Enrollment, demographics and degree of HLA mismatching.** A total of 22 LDKT donor-recipient pairs have been enrolled to date in the FREEDOM-1 study at 10 different clinical sites. Of these, 13 were randomized to receive FCR001, 8 were randomized to the control arm and 1 failed final screening criteria. Currently, 7 of those randomized to FCR001 have received their kidney transplant and have been dosed with FCR001. The clinical trial continues to enroll donor/recipient pairs across all degrees of HLA mismatch. Figure 1 shows the distribution of all FCR001 recipients dosed to date, by the number of HLA mismatches between the donor and the recipient.
- **Efficacy data in FCR001-dosed patients.** As shown in Figure 2, a total of 7 patients have been dosed and all patients dosed at least three months prior to the cutoff date have achieved and maintained T-cell chimerism levels >50% at each of the 3-, 6- and 12-month timepoints post-transplant. All 3 of the patients dosed more than 12 months prior to the data cutoff date have been successfully weaned off all chronic anti-rejection drugs. The longest of these has been followed for 24 months post-transplant.

In the context of transplantation, chimerism refers to a state wherein both the donor's and the recipient's hematopoietic stem cells (HSCs) coexist in the recipient's bone marrow. Talaris believes chimerism to be an important potential study biomarker, predictive of inducing a state of allogeneic tolerance in the recipient, whereby the recipient tolerates the donated organ without the need for chronic anti-rejection drugs. Achieving high levels of durable donor T-cell chimerism in the LDKT recipient is one of the goals of the Company's Facilitated Allo-HSCT Therapy. In the Company's Phase 2 study, establishment and maintenance of >50% donor T-cell chimerism in an LDKT recipient at 3, 6 and 12 months after administration of FCR001 all correlated strongly with the patient's ability to durably discontinue chronic anti-rejection drugs approximately one year after transplant, without subsequent graft rejection.

- **Safety profile in FCR001-dosed patients.** Adverse events (AEs) and serious adverse events (SAEs) observed in FCR001-dosed patients are consistent with those generally expected in someone receiving both a kidney transplant and an allogeneic stem cell transplant involving non-myeloablative conditioning. Three cases of low-grade (grade II) aGvHD were reported, all of which responded to treatment and resolved. One of these patients is more than 12 months post-transplant and, notwithstanding their treatment-responsive aGvHD, has been weaned off all anti-rejection drugs. One of the three aGvHD patients was subsequently diagnosed with moderate chronic GvHD and is also responding to treatment. No trial

stopping rules were triggered by the GvHD cases, and trial screening and enrollment continued. However, to investigate these aGvHD cases, Talaris conducted an internal review of all GvHD cases in Phase 2 and 3. Through this review, a correlation was identified between these cases and the use of plerixafor as a donor mobilizing agent, the use of which has been higher to date under the Phase 3 mobilization protocol compared with the Phase 2.

Based on this analysis, the Company has modified the FREEDOM-1 trial protocol to eliminate plerixafor from the donor mobilization regimen in all but exceptional cases, and has also added a second dose of post-transplant cyclophosphamide (PTCy) for the FCR001 recipient. The revised mobilization protocol better aligns with current customary donor mobilization practices and the additional dose of PTCy reflects the current standard of care for GvHD prophylaxis in HLA-mismatched allogeneic stem cell transplants. All findings and recommendations were reviewed and endorsed by a panel of external scientific advisors as well as the FREEDOM-1 data monitoring committee (DMC), which supported continuation of the trial with these modifications.

"Today, organ transplant recipients must take lifelong immunosuppression to avoid rejecting their transplanted organ. These immunosuppressive regimens have significant morbidities, risks and quality of life challenges," said Scott Requadt, Chief Executive Officer of Talaris. "A treatment alternative for these patients is greatly needed. The interim update presented today from our FREEDOM-1 study continues to support our prior data and belief that patients who achieve >50% T cell chimerism at 3, 6 and 12 months after the administration of FCR001 may be durably weaned from chronic immunosuppression without rejecting their transplanted organ. Overall, we are pleased with the continued progress of our FREEDOM-1 trial, with seven study patients now successfully dosed and 100% engraftment across all dosed patients, at multiple trial sites. These interim results continue to give us confidence that FCR001 has the potential to transform the standard of care in solid organ transplantation."

Figure 1:

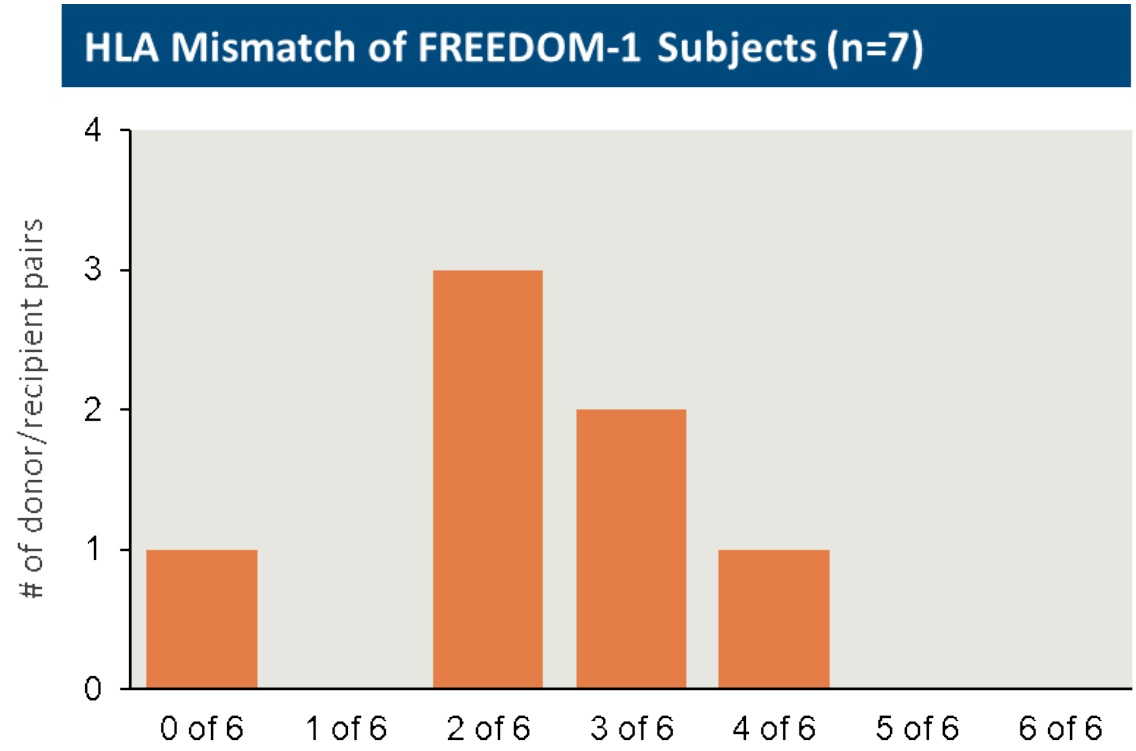
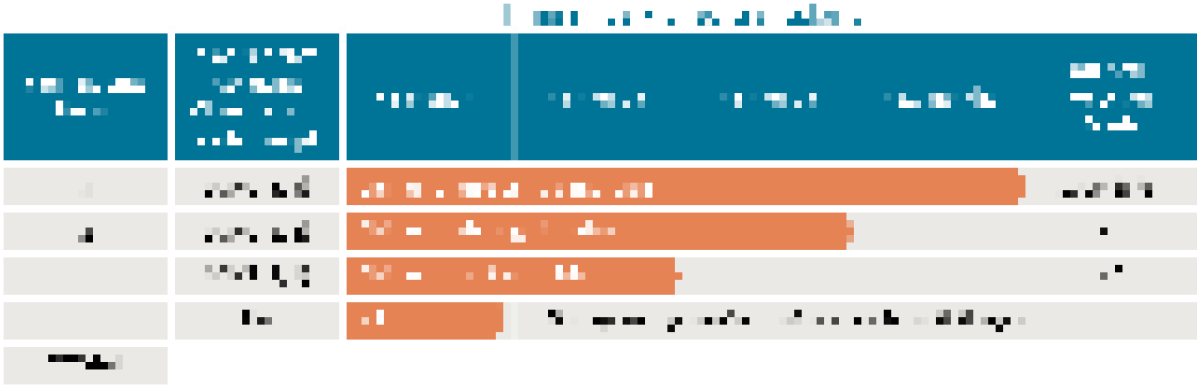


Figure 2:



Conference Call & Webcast Information

Talaris will host an investor webcast and conference call today at 8:00 a.m. ET to discuss its presentations at the American Transplant Congress (ATC) and provide a data update from its ongoing Phase 3 FREEDOM-1 study in living donor kidney transplant (LDKT) recipients. To access the conference

call, the dial-in numbers are 1-855-605-1739 for domestic callers and 1-914-987-7955 for international callers. The conference ID number for the live call will be 6249115. A live webcast and replay of the conference call will also be available under "Events & Presentations" in the Investors section of the Company's website at **www.talaristx.com**.

About Talaris Therapeutics
Talaris Therapeutics, Inc. is a late-clinical stage cell therapy company developing therapies with the potential to transform the standard of care in solid organ transplantation and severe immune and blood disorders. Talaris maintains corporate offices in Boston, MA, its cell processing facility in Louisville, KY, and additional research operations in Houston, TX.

About the FREEDOM-1 Study
FREEDOM-1 is a randomized, controlled, open-label Phase 3 registrational study of FCR001 in 120 adult LDKT recipients in the United States. The primary endpoint of FREEDOM-1 is the proportion of kidney transplant recipients treated with FCR001 who are free from chronic IS, without biopsy-proven acute rejection (BPAR), at month 24 post-transplant.

Cautionary Note Regarding Forward-Looking Statements
This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, including, without limitation, implied and express statements regarding Talaris Therapeutics, Inc.'s ("Talaris," the "Company," "we," or "our") strategy, business plans and focus; the progress and timing of the preclinical and clinical development of Talaris' programs, including FCR001. The words "may," "might," "will," "could," "would," "should," "expect," "plan," "anticipate," "intend," "believe," "expect," "estimate," "seek," "predict," "future," "project," "potential," "continue," "target" or the negative of these terms and similar words or expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words.

Any forward-looking statements in this press release are based on management's current expectations and beliefs and are subject to a number of risks, uncertainties and important factors that may cause actual events or results to differ materially from those expressed or implied by any forward-looking statements contained in this press release, including, without limitation, risks associated with: the impact of the ongoing COVID-19 pandemic on countries or regions in which the Company has operations or does business, as well as on the timing and anticipated timing and results of its clinical trials, strategy and future operations, including the expected timing and results from FREEDOM-1, the risk that the results of Talaris' prior clinical trials may not be predictive of or consistent with future and/or final results in connection with the Company's ongoing or future clinical trials; the therapeutic benefits expected from FCR001 and the Company's ability to successfully demonstrate its safety and efficacy. These and other risks and uncertainties are described in greater detail in the section entitled "Risk Factors" in the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2022, as well as any subsequent filings with the Securities and Exchange Commission. In addition, any forward-looking statements represent Talaris' views only as of today and should not be relied upon as representing its views as of any subsequent date. Talaris explicitly disclaims any obligation to update any forward-looking statements. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

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[1] All data reported is as of the June 15, 2022 data cutoff date

Photos accompanying this announcement are available at:

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