CLOSER LOOK

MEMORANDUM

SAB BIO announces additional data from the phase 1 trial of SAB-142 in adults with established T1D – April 27, 2026

In established T1D, SAB-142 induces T cell exhaustion and shows C-peptide preservation and improvement in glycemic control

Miami-based SAB BIO announced last week additional data from the phase 1 HUMAN trial (n=6), evaluating SAB-142, a fully human anti-thymocyte globulin designed to modulate the autoimmune response in T1D. The update, presented at the 21st Immunology of Diabetes Society (IDS) Congress, focused on adults with established stage 3 T1D or 28 to 40 months post-diagnosis. Updated results provided new clinical and mechanistic evidence that SAB-142 may preserve beta-cell function and improve glycemic health in patients with T1D who were beyond the "honeymoon" period. These results reinforce SAB-142's potential as a redosable, disease-modifying therapy for T1D.

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SAB-142 preserved C-peptide, exhausted T-cells, and increased mean Time in Range

In the trial, four participants received 2.5 mg/kg of SAB-142, and two received a placebo. One of the placebo participants discontinued early for personal reasons, leaving a single placebo participant evaluable through Day 120.

- **C-peptides.** Among the four treated participants, all maintained C-peptide levels through Day 120. Three participants were "super responders," with C-peptide levels above baseline at the end of the study. The fourth participant showed stable C-peptide levels. The placebo participant experienced an expected decline in C-peptide levels over the same period.
- **Glycemic outcomes.** In the treatment group, the mean Time in Range (TIR) increased from 73% at baseline to 85% at Day 120, which was not associated with an increase in exogenous insulin use.
- **Mechanistically,** the "super responders" group experienced early and sustained increases in T cell exhaustion, as indicated by TIGIT-positive CD4 T cells.[1]

These results on C-peptide preservation and improvement in TIR suggest disease-modifying effects of SAB-142 in people who had T1D for nearly three years since diagnosis.

SAB-142 previously demonstrated a strong safety and immune-modulating profile

Early phase 1 data (n=68), including cohorts with and without T1D, found that SAB-142 delivers targeted immune modulation without the adverse events associated with rabbit ATG (e.g., Sanofi's thymoglobulin). SAB-142 induced an exhausted T-cell response, associated with clinical benefits in prior ATG studies, without causing anti-drug antibodies, serum sickness, or sustained lymphodepletion. Expanded single- and multiple-ascending dose cohort studies further supported safe redosing every six months, with a favorable tolerability profile – mostly consisting of mild, transient infusion-related symptoms – and rapid lymphocyte recovery.

Phase 2b SAFEGUARD trial evaluating SAB-142 in new-onset stage 3 T1D

SAB BIO is continuing to advance SAB-142 in the 52-week phase 2b SAFEGUARD trial (n=159) in pediatric and adult

participants (ages five to 40) with new-onset (<100 days) stage 3 T1D. The first patient was dosed in December 2025. Participants are randomized 1:1:1 to high-dose SAB-142, low-dose SAB-142, or placebo. Dosing includes a 0.5 mg/kg infusion on Day 1, with the remainder given on Day 2 or 3. The primary endpoint is the change in stimulated C-peptide following a two-hour mixed-meal tolerance test compared to baseline. Secondary endpoints include TIR, Time in Tight Range (TITR), Time below Range (TBR), total daily insulin use, A1c, hypoglycemia, and safety.

In July 2025, the company raised $175 million to fund the study, extending its cash runway through 2028. In addition, in March 2026, the company closed an underwritten public offering of $85 million ($97.8 million if the underwriters exercise an option to purchase additional shares after the closing) in gross proceeds, for SAB-142 development.

Close Concerns' Questions

1. What clinical markers or demographics are associated with the "super responder" phenotype?
2. Does the company expect newly diagnosed patients in the SAFEGUARD trial to similarly be "super responders," given that these patients have higher beta-cell function at baseline?
3. How does SAB BIO expect adolescents to respond to SAB-142 compared to adults, particularly in terms of TIGIT-associated exhaustion?
4. If efficacy holds, is SAB-142 positioned for broad use in new-onset T1D or only a select subset?

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[1] TIGIT is a marker associated with T-cell exhaustion, a state in which overactive autoimmune T cells become less aggressive and less capable of attacking beta cells. In this trial, the rise in TIGIT-positive T-conventional cells suggests SAB-142 turned harmful T cells into a fatigued, less destructive state rather than broadly depleting them. This aligns with the intended mechanism of action of the therapy.