Filed by: resTORbio, Inc. Pursuant to Rule 425 under the Securities Act of 1933 and deemed filed pursuant to Rule 14a-12 under the Securities Exchange Act of 1934

Subject Company: resTORbio, Inc. Commission File No.: 001-38359

ADICET BIO RECEIVES \$10 MILLION PRODUCT DEVELOPMENT MILESTONE FROM REGENERON

Menlo Park, CA – August 5, 2020 – Adicet Bio, Inc., a privately-held biopharmaceutical company, today announced that it has received a \$10 million milestone payment from Regeneron associated with ADI-002 meeting key preclinical development goals, in accordance with the terms of its strategic collaboration with Regeneron. ADI-002 is the first of Adicet Bio's allogeneic off-the-shelf gd T cell product candidates to specifically target solid tumors. ADI-002 is being developed and engineered by Adicet to express a GPC3-targeting chimeric antigen receptor and IL-15.

"GPC3 is an important target which is differentially expressed on a broad range of solid tumors, with limited expression levels on normal tissues. We believe that the intrinsic and engineered properties of Adicet's gd T cells make them particularly well-suited to effectively treat solid tumors and preclinical research with ADI-002 indicates dose dependent anti-tumor activity that warrants additional study," said Stewart Abbot, Ph.D., Chief Operating and Scientific Officer at Adicet Bio, Inc. "We intend to initiate a Phase 1 study in 2021 for solid tumors associated with high GPC3 expression such as hepatocellular carcinoma, the most prevalent form of liver cancer."

About the Collaboration with Regeneron

In August 2016, Adicet entered into a collaboration and licensing agreement with Regeneron to develop next-generation engineered immune-cell therapeutics using Adicet's gamma delta T cell allogeneic platform technology. Under the terms of the agreement, Regeneron and Adicet will collaborate to identify and validate appropriate targets and work together to develop a pipeline of engineered immune-cell therapeutics for the selected targets. Regeneron has the option to obtain development and commercial rights for a certain number of the product candidates, and Adicet has an option to participate in the development and commercialization on these potential products or is entitled to royalty payments by Regeneron. Immune-cell therapy product candidates developed and commercialized by Adicet under the agreement will be subject to payment of royalties to Regeneron. Regeneron will have the right to leverage targeting moieties generated by Adicet by its use of Regeneron's proprietary mice to develop and commercialize non-immune-cell therapy products.

About the Proposed Merger with resTORbio

On April 29, 2020, Adicet and resTORbio, Inc. (Nasdaq: TORC) announced that they entered into a definitive merger agreement to create a combined publicly-traded biotechnology company focused on the development of Adicet's off-the-shelf allogeneic gamma delta T cell therapies for oncology and other indications. The merger is expected to close in the second half of 2020, subject to approvals of each company's stockholders and other customary closing conditions. Upon completion of the merger, the combined company will operate under the name Adicet Bio and is expected to trade on the Nasdaq Global Market under the ticker symbol ACET.

About Adicet Bio, Inc.

Adicet Bio, Inc. is a privately held, pre-clinical stage biotechnology company founded in 2015 by Aya Jakobovits, Ph.D. to develop novel off-the-shelf universal immune cell therapies based on gamma delta T cells engineered with chimeric antigen receptors. Adicet is also focused on identifying and validating cancer specific targets derived from the intracellular proteome and then generating T Cell Receptor-Like (TCRL) monoclonal antibodies directed to these cancer-specific peptide targets presented by MHC Class I complexes. These TCRLs are being used to arm T cells or as T cell engagers in solid tumors. For more information, please visit our website at http://www.adicetbio.com.

Cautionary Statement Regarding Forward-Looking Statements

This press release contains "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, including, but not limited to, statements regarding: the expected structure, timing and completion of the merger, future product development plans and projected timelines for the initiation and completion of preclinical and clinical trials; the potential for the results of ongoing preclinical or clinical trials and the efficacy of Adicet's drug candidates; future product development and regulatory strategies, including with respect to specific indications; and future Nasdaq listing. The use of words such as, but not limited to, "believe," "expect," "estimate," "project," "intend," "future," "potential," "continue," "may," "might," "plan," "will," "should," "seek," "anticipate," or "could" and other similar words or expressions are intended to identify forward-looking statements. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on Adicet's current beliefs, expectations and assumptions regarding the future of Adicet's business, future plans and strategies, clinical results and other future conditions. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements. There can be no assurance that the parties will be able to complete the merger on the anticipated terms, or at all.

Such forward-looking statements are subject to a number of material risks and uncertainties including but not limited to: (i) risks associated with resTORbio's ability to obtain the stockholder approval required to consummate the merger and the timing of the closing of the merger, including the risks that a condition to closing would not be satisfied within the expected timeframe or at all or that the closing of the merger will not occur; (ii) the outcome of any legal proceedings that may be instituted against the parties and others related to the merger agreement; (iii) unanticipated difficulties or expenditures relating to the merger, the response of business partners and competitors to the announcement of the merger, and/or potential difficulties in employee retention as a result of the announcement and pendency of the merger; (iv) the length of time necessary to consummate the merger may be longer than anticipated; (v) resTORbio's continued listing on the Nasdaq Global Market until closing of the merger; (vi) the combined company's listing on the

Nasdaq Global Market after closing of the merger; (vii) the adequacy of the combined company's capital to support its future operations and its ability to successfully initiate and complete clinical trials; (viii) the nature, strategy and focus of the combined company; (ix) the difficulty in predicting the time and cost of development of resTORbio's and Adicet's product candidates; (x) the executive management and board structure of the combined company; (xi) Adicet's plans to develop and commercialize its product candidates, including ADI-002; (xii) the timing of initiation of Adicet's planned clinical trials; (xiii) the timing of the availability of data from Adicet's clinical trials; (xiv) the timing of any planned investigational new drug application or new drug application; (xv) Adicet's plans to research, develop and commercialize its current and future product candidates; (xvi) Adicet's ability to enter into new collaborations, and to fulfill its obligations under any such collaboration agreements; (xvii) the clinical utility, potential benefits and market acceptance of Adicet's product candidates; (xviii) Adicet's commercialization, marketing and manufacturing capabilities and strategy; (xix) Adicet's ability to identify additional products or product candidates with significant commercial potential; (xx) developments and projections relating to Adicet's competitors and its industry; (xxi) the impact of government laws and regulations; (xxii) Adicet's ability to protect its intellectual property position; (xxiii) Adicet's estimates regarding future revenue, expenses, capital requirements and need for additional financing following the merger; and (xxiv) those risks detailed in resTORbio's preliminary proxy statement/prospectus/information statement filed with the SEC on July 29, 2020 (and, when available, resTORbio's definitive proxy statement/prospectus/information statement), as well as discussions of potential risks, uncertainties, and other important factors in resTORbio's subsequent filings with the SEC. Any forward-looking statement speaks only as of the date on which it was made. None of resTORbio, Adicet, nor their affiliates, advisors or representatives, undertake any obligation to publicly update or revise any forward-looking statement, whether as result of new information, future events or otherwise, except as required by law.

Important Additional Information About the Merger and Where to Find It

This communication relates to the proposed merger transaction involving resTORbio and Adicet and may be deemed to be solicitation material in respect of the proposed merger transaction. In connection with the proposed merger transaction, resTORbio has filed with the SEC a registration statement on Form S-4 (the "Form S-4") that contains a preliminary proxy statement/prospectus/information statement. The Form S-4 has not yet become effective. After the Form S-4 is declared effective, a definitive proxy statement/prospectus/information statement will be mailed to the stockholders of resTORbio and Adicet. This communication is not a substitute for the Form S-4, the definitive proxy statement/prospectus/information statement or for any other document that resTORbio may file with the SEC and or send to resTORbio's stockholders in connection with the proposed merger transaction. BEFORE MAKING ANY VOTING DECISION, INVESTORS AND SECURITY HOLDERS OF RESTORBIO ARE URGED TO READ THE FORM S-4, THE DEFINITIVE PROXY STATEMENT/ PROSPECTUS/INFORMATION STATEMENT AND OTHER DOCUMENTS FILED WITH THE SEC CAREFULLY AND IN THEIR ENTIRETY WHEN THEY BECOME AVAILABLE BECAUSE THEY WILL CONTAIN IMPORTANT INFORMATION ABOUT RESTORBIO, THE PROPOSED MERGER TRANSACTION AND RELATED MATTERS. Investors and security holders will be able to obtain free copies of the Form S-4, the definitive proxy statement/prospectus/information statement and other documents filed by resTORbio with the SEC through the website maintained by the SEC at http://www.sec.gov. Copies of the documents filed by resTORbio with the SEC will also be available free of charge on resTORbio's website at www.restorbio.com, or by contacting resTORbio's Investor Relations at 212-362-1200.

Participants in the Solicitation

resTORbio, Adicet and their respective directors and certain of their executive officers may be considered participants in the solicitation of proxies from resTORbio's stockholders with respect to the proposed merger transaction under the rules of the SEC. Information about the directors and executive officers of resTORbio is set forth in the preliminary proxy statement/prospectus/information statement, which was filed with the SEC on July 29, 2020, and in subsequent documents filed with the SEC. Additional information regarding the persons who may be deemed participants in the proxy solicitations and a description of their direct and indirect interests, by security holdings or otherwise, will also be included in the Form S-4, the definitive proxy statement/prospectus/information statement and other relevant materials to be filed with the SEC when they become available. You may obtain free copies of this document as described above.

No Offer or Solitication

This communication does not constitute an offer to sell or the Solicitation of an offer to buy any securities nor a solicitation of any vote or approval with respect to the merger or otherwise. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the U.S. Securities Act of 1933, as amended, and otherwise in accordance with applicable law.

Adicet Bio., Inc.
Investor and Media Contact
Anne Bowdidge
abowdidge@adicetbio.com