UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 14A
(Rule 14a-101)

INFORMATION REQUIRED IN PROXY STATEMENT

SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the Securities Exchange Act of 1934

Filed by the Registrant ☒

Filed by a Party other than the Registrant ☐

Check the appropriate box:

☐ Preliminary Proxy Statement

☐ **Confidential, For Use of the Commission Only (as permitted by 14a-6(e)(2))**

☐ Definitive Proxy Statement

☒ Definitive Additional Materials

☐ Soliciting Material Pursuant to §240.14a-12

BENITEC BIOPHARMA INC.
(Name of Registrant as Specified in Its Charter)

N/A
(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of filing fee (Check all boxes that apply):

☒ No fee required

¨ Fee paid previously with preliminary materials

¨ Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11

BENITEC BIOPHARMA INC.
SUPPLEMENT TO PROXY STATEMENT
FOR 2026 ANNUAL MEETING OF STOCKHOLDERS
To be held at 1:00 p.m., Pacific Time, on December 3, 2026

This proxy statement supplement, dated November 23, 2026 (this "Supplement"), supplements the definitive proxy statement on Schedule 14A of Benitec Biopharma Inc. (the "Company", "we", "us" or "our"), dated October 20, 2026 (the "Proxy Statement"), for the Company's 2026 Annual Meeting of Stockholders to be held on December 3, 2026 (the "Annual Meeting"). The Company is providing this Supplement solely to reference the previously disclosed change in the Company's fiscal year end from June 30 to December 31 and to update the description of Proposal 2, the ratification of the appointment of Ernst & Young LLP ("EY") as the Company's independent registered public accounting firm, to reflect that change. Except as specifically supplemented or amended by the information contained in this Supplement, all information set forth in the Proxy Statement remains unchanged. This Supplement should be read in conjunction with the Proxy Statement. Capitalized terms used but not defined in this Supplement have the meanings given to them in the Proxy Statement.

Change in Fiscal Year End

On November 12, 2026, the Board of Directors of the Company approved a resolution changing the Company's fiscal year-end date from June 30 to December 31 of each calendar year, effective as of the same date, as previously reported in the Company's Current Report on Form 8-K filed with the U.S. Securities and Exchange Commission on November 13, 2026. As a result, the Company will report operating results covering the six-month transition period from July 1, 2026 through December 31, 2026 (the "Transition Period") in a Transition Report on Form 10-K. Following the Transition Period, the Company will report its operating results on a calendar-year basis, beginning with the fiscal year commencing January 1, 2027 and ending December 31, 2027.

Supplemental Disclosure Regarding Proposal 2 – Ratification of Appointment of Independent Registered Public Accounting Firm

The Proxy Statement, the Notice of Annual Meeting of Stockholders and the proxy card describe Proposal 2 as the ratification of the appointment of EY as the Company's independent registered public accounting firm for the fiscal year ending June 30, 2027. Because the Company's current fiscal year will now end on December 31, 2026, there will be no fiscal year ending June 30, 2027. The Audit Committee of the Board (the "Audit Committee") approved the engagement of EY as the Company's independent registered public accounting firm to audit the Company's consolidated financial statements for the Transition Period.

Accordingly, each reference in the Notice of Annual Meeting of Stockholders and in the Proxy Statement and related Proxy Card to the ratification of the appointment of EY as the Company's independent registered public accounting firm "for the fiscal year ending June 30, 2027," including under "Information Concerning Solicitation and Voting—Voting and Solicitation", "Information Concerning Solicitation and Voting—Quorum and Voting Requirements", and "Proposal 2—Ratification of Appointment of Independent Registered Public Accounting Firm", is hereby amended to refer to the ratification of the appointment of EY as the Company's independent registered public accounting firm for the Transition Period. Each other reference in the Proxy Statement to the engagement of EY for the fiscal year ending June 30, 2027, including in the "Audit Committee Report," is likewise amended to refer to the Transition Period.

The change in the Company's fiscal year end does not change the Audit Committee's selection of EY, the vote required to approve Proposal 2, or the Board's recommendation. Proposal 2 continues to be considered a "routine" matter on which brokers have discretionary authority to vote uninstructed shares. As described in the Proxy Statement, if stockholders do not ratify the appointment of EY, the Audit Committee will reconsider the appointment. **The Board continues to recommend that stockholders vote "FOR" Proposal 2.**

Your vote is important to us, and we appreciate your attention to this matter. Whether or not you plan to attend the Annual Meeting, we hope you will vote as soon as possible.

Voting Information

Proxies received since the mailing date of the Proxy Statement will continue to be voted as instructed unless otherwise revoked or changed by a subsequent proxy in the manner described under “Revocability of Proxies” in the “Information Concerning Solicitation and Voting” section of the Proxy Statement. **If you have already submitted a proxy to vote your shares at the Annual Meeting and you do not wish to change your vote, you do not need to submit a new proxy.**