SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

SCHEDULE 13D/A (Rule 13d-101)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO §240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO §240.13d-2(a)

(Amendment No. 4)

ENZO BIOCHEM, INC. (Name of Issuer)

Common Stock, \$.01 par value

(Title of Class of Securities)

294100102 (CUSIP Number)

JAMES G. WOLF 105, Flyway Drive

Kiawah Island, SC 29455

914-325-9929

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

November 23, 2022

(Date of Event Which Requires Filing of this Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D and is filing this schedule because of §§240.13d-1(e), 240.13(d)-1(f) or 240.13d-1(g), check the following box.

(Continued on following pages)

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CUSIP No. 294100102 13D Page 2 of 11 Pages 1. NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY): James G. Wolf CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* 2. (a) 🗖 (h) П 3. SEC USE ONLY SOURCE OF FUNDS * 4. PF CHECK IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) 5. CITIZENSHIP OR PLACE OF ORGANIZATION: U.S.A. 6. NUMBER OF SOLE VOTING POWER 7. SHARES 4,471,900(1) BENEFICIALLY 8. SHARED VOTING POWER OWNED BY 470,500(1) EACH SOLE DISPOSITIVE POWER 9. REPORTING 4,471,200(1) PERSON SHARED DISPOSITIVE POWER 10. WITH 470.500(1) 11. AGGREGATE AMOUN T BENEFICIALLY OWNED BY EACH REPORTING PERSON: 4,942,400 (1) 12. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* 13. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 11: 10.14% (2) 14. TYPE OF REPORTING PERSON IN

- 1. Consists of (i) 4,078,200 shares of Common Stock, par value \$0.01 per share ("<u>Common Stock</u>") of Enzo Biochem, Inc. (the "<u>Issuer</u>") held by Mr. Wolf directly, (ii) 116,000 shares held in qualified retirement accounts in the name, and for the benefit of, Mr. Wolf, (iii) 22,000 shares held in a qualified retirement account in the name, and for the benefit, of Mr. Wolf's, (iii) 22,000 shares held in equilified retirement account in the name, and for the benefit of, Mr. Wolf, (iii) 22,000 shares held in a qualified retirement account in the name, and for the benefit, of Mr. Wolf's spouse; (iv) 110,000 shares held directly by Mr. Wolf's sibling, (v) 170,500 shares held directly by three of Mr. Wolf's children, (vi) 190,000 shares held by a charitable organization qualified under 501(c)(3) controlled by Mr. Wolf and (vii) 255,700 shares that Mr. Wolf has the right to purchase under certain long call options that are exercisable currently. Mr. Wolf has dispositive and voting control over the Common Stock contained in his spouse's retirement account, and Mr. Wolf maintains a power of attorney granted by Mr. Wolf's sibling and three children with respect their respective shares, including voting and dispositive control over the Common Stock held by Mr. Wolf's spouse, sibling and three children and thus to share beneficial ownership of such securities. Mr. Wolf has no pecuniary interest in such shares of Common Stock and disclaims beneficial ownership of the securities held by his spouse, sibling, three children and charitable foundation.
- Calculated based on 48,720,454 shares of Common Stock of the Issuer issued and outstanding as of December 5, 2022 as reported in the Issuer's Form 10-Q filed with the Securities and Exchange Commission (the "SEC") on December 12, 2022.

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13D EXPLANATORY NOTE

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This Amendment No. 4 (this "<u>Amendment</u>") amends certain items of the Schedule 13D originally filed with the Securities and Exchange Commission (the "<u>SEC</u>") by James G. Wolf (the "<u>Reporting Person</u>") on October 1, 2021, as amended by Amendment No. 1 filed with the SEC on November 15, 2021, Amendment No. 2 filed with the SEC on October 26, 2022 and Amendment No. 3 filed with the SEC on November 23, 2022 (as amended to the date of this Amendment, the "<u>Original 13D</u>"). Except as set forth below, all previous Items are unchanged.

Item 1. Security and Issuer

The class of equity securities to which this Schedule 13D relates is the Common Stock, \$0.01 par value, (the " <u>Common Stock</u>") of Enzo Biochem, Inc., a New York corporation (the " <u>Issuer</u>"). The principal executive offices of the Issuer are located at 81 Executive Blvd., Suite 3, Farmingdale, New York 11735.

Item 2. Identity and Background

- a. Name: James G. Wolf
- b. Present employment: Self-employed.
- c. During the past five years, James G. Wolf has not been convicted in any criminal proceeding.
- d. During the past five years, James G. Wolf has not been a party to any civil proceeding of a judicial or administrative body of competent jurisdiction as a result of which he was subject to any judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.
- e. Citizenship: U.S.A.

Item 3. Source and Amount of Funds or Other Consideration.

The cash used to acquire the common equity shares held as of the date of this filing (excluding any cost of call options or income receive from put options) totaled \$14,016,159 The cash used to acquire the call options outstanding as of the date of this filing totaled \$87,819. All funds was sourced from the personal funds of the Reporting Person, along with additional funds of \$128,910 received from the sale of put options by the Reporting Person, and with respect to the securities held by the Reporting Person's family members in which the Reporting Person maintains voting and dispositive power over through a power of attorney, from the personal funds of such family members.

Item 4. Purpose of Transaction.

Except as described herein, all Common Stock and derivative securities with respect to Common Stock have been acquired by the Reporting Person for investment purposes. The Reporting Person has no plan or proposal which relates to or would result in any of the actions or transactions described in paragraphs (a) through (j) of the instructions to Item 4 of Schedule 13D, except that the Reporting Person, has in the past and, may nominate himself for election as a director of the Company at the next annual meeting of shareholders if he is not nominated or approved by the Board of Directors.

Item 5. Interest in Securities of the Issuer.

(a)-(b). Consists of (i) 4,078,200 shares of Common Stock of the Issuer held by Mr. Wolf directly, (ii) 116,000 shares held in qualified retirement accounts in the name, and for the benefit, of Mr. Wolf, (iii) 22,000 shares held in a qualified retirement account in the name, and for the benefit, of Mr. Wolf's spouse; (iv) 110,000 shares held directly by Mr. Wolf's sibling, (v) 170,500 shares held directly by three of Mr. Wolf's children, (vi) 190,000 shares held by a charitable organization qualified under 501(c)(3) controlled by Mr. Wolf and (vii) 255,700 shares that Mr. Wolf has the right to purchase under certain long call options that are exercisable currently. Mr. Wolf has dispositive and voting control over the Common Stock contained in his spouse's retirement account, and Mr. Wolf maintains a power of attorney granted by Mr. Wolf's sibling and three children with respect their respective shares, including voting and dispositive power over the chares. Consequently, Mr. Wolf may be deemed to share voting and dispositive control over the Common Stock and disclaims beneficial ownership of such securities. Mr. Wolf has no pecuniary interest in such shares of Common Stock and disclaims beneficial ownership of the securities held by his spouse, sibling, three children and charitable foundation.

Items 7-11, inclusive, set forth on the cover page to this Schedule 13D are hereby incorporated by reference in this Item 5.

(c) Schedule A annexed hereto lists all transactions in securities of the Issuer by the Reporting Person since August 2, 2022. All such transactions were effected in the open market.

(d) The right to receive dividends and to receive the proceeds of the sale of the securities is held, as to 470,500 of the shares, by persons other than the Reporting Person.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships

There are no contracts, arrangements, understandings or relationships (legal or otherwise) between the Reporting Person named in Item 2 hereof and any person with respect to any securities of the Company, including but not limited to transfer or voting of any other securities, finder's fees, joint ventures, loan or option arrangements, puts or calls, guarantees of profits, divisions of profits or loss, or the giving or withholding of proxies, except as follows:

The Reporting Person owns 2,557 exchange-listed American-style call options to purchase 255,700 shares of the Common Stock. The options expire in April 2023 and have strike prices ranging from \$2.50 to \$7.50.

The Reporting Person has sold 1,413 exchange-listed, American-style put options pursuant to which a total of 141,300 shares of the Common Stock may be sold to him. The options expire in April 2023 and have an exercise price of \$2.50

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Item 7. Material to be Filed as Exhibits.

None.

SIGNATURE

James G. Wolf

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SCHEDULE A

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Transactions in the Securities of the Issuer Since August 2, 2022

All Transactions were made in the open market.

Unless otherwise indicated, the transactions below were made by, and for the benefit of, the Reporting Person directly.

		1			
Nature of Transaction	<u>Amount of</u> <u>Securities</u> <u>Purchased or</u> <u>Sold</u>	Amount of Securities Underlying Put or Call Option	<u>Average Price</u> (<u>\$) Per Share</u>	Date of Purchase or Sale	Account/Beneficiary (if other than Reporting Person)
Purchase of Common Stock	18,100	n/a	2.50	8/2/2022	
Sale of Oct. 2022 Put Option (\$5.00 Exercise Price)	64	6,400	2.45	8/2/2022	
Purchase of Common Stock	21,000	n/a	2.89	8/4/2022	
Sale of Sept. 2022 Call Option (\$2.50 Exercise Price)	500	50,000	0.20	8/4/2022	
Purchase of Common Stock	9,900	n/a	2.53	8/5/2022	
Purchase of Jan. 2023 Call Option (\$5.00 Exercise Price)	500	50,000	0.20	8/5/2022	
Sale of Oct. 2022 Put Option (\$5.00 Exercise Price)	216	21,600	2.40	8/5/2022	
Sale of Jan. 2023 Put Option (\$5.00 Exercise Price)	639	63,900	2.38	8/8/2022	
Purchase of Common Stock	6,400	n/a	2.51	8/9/2022	1,000 of the 6,400 shares were under the Reporting Person's Spouse's qualified retirement plan
Purchase of Sept. 2022 Call Option (\$2.50 Exercise Price)	350	35,000	0.255	8/9/2022	
Purchase of Aug. 2022 Put Option (\$2.50 Exercise Price)	173	17,300	0.105	8/9/2022	
Purchase of Common Stock	17,933	n/a	2.57	8/10/2022	733 and 200 of the 17,933 shares were under the Reporting Person's and the Reporting Person's Spouse's, respectively, qualified retirement plans

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Purchase of Sept. 2022 Call Option (\$2.50 Exercise Price)	150	15,000	0.30	8/10/2022	
Purchase of Oct. 2022 Put Options (\$5.00 Exercise Price)	67	6,700	0.10	8/10/2022	
Sale of Jan. 2023 Put Option (\$5.00 Exercise Price)	161	16,100	7.19	8/10/2022	
Sale of October 2022 Put Options (\$5.00 Exercise Price)	275	27,500	2.45	8/10/2022	
Purchase of Common Stock	2,100	n/a	2.69	8/12/2022	
Sale of Oct. 2022 Put Option (\$5.00 Exercise Price)	125	12,500	2.30	8/12/2022	
Sale of Oct. 2022 Put Option (\$5.00 Exercise Price)	100	10,000	2.25	8/16/2022	
Purchase of Common Stock	2,800	n/a	2.67	8/17/2022	
Purchase of Oct. 2022 Call Option (\$5.00 Exercise Price)	25	2,500	0.05	8/17/2022	
Purchase of Common Stock	2,200	n/a	2.55	8/18/2022	
Purchase of Aug. 2022 Put Option (\$2.50 Exercise Price)	250	25,000	0.05	8/18/2022	
Purchase of Common Stock	19,827	n/a	2.59	8/19/2022	
Purchase of Apr. 2023 Call Option (\$7.50 Exercise Price)	750	75,000	0.25	8/19/2022	
Purchase of Jan 2023 Call Option (\$5.00 Exercise Price)	500	50,000	\$0.25	8/19/2022	
Purchase of Sept. 2022 Call Options (\$5.00 Exercise Price)	48	4,800	0.05	8/19/2022	
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Purchase of Oct. 2022 Call Options (\$5.00 Exercise Price)	475	47,500	0.10	8/19/2022	
Sale of Oct. 2022 Put Option (\$5.00 Exercise Price)	250	25,000	2.35	8/19/2022	
Purchase of Sep. 2022 Put Option (\$2.50 Exercise Price)	151	15,100	0.20	8/23/2022	
Purchase of Common Stock	1,267	n/a	2.57	8/24/2022	Reporting Person's qualified retirement account
Purchase of Common Stock	38,673	n/a	4.55	8/25/2022	
Purchase of Common Stock	97	n/a	2.55	8/25/2022	
Purchase of Jan. 2023 Call Option (\$2.50 Exercise Price)	300	30,000	0.15	8/30/2022	
Purchase of Common Stock	12,500	n/a	2.47	8/31/2022	
Purchase of Common Stock	1,300	n/a	5.00	9/1/2022	
Purchase of Common Stock	6,200	n/a	2.445	9/2/2022	

Purchase of Common Stock	35,390	n/a	4.18	9/6/2022	
Purchase of Common Stock	8,804	n/a	2.22	9/7/2022	
Purchase of Common Stock	11,869	n/a	2.23	9/8/2022	1,000 and 63 of the 11,869 shares were under the Reporting Person's and the Reporting Person's Spouse's, respectively, qualified retirement plans
Purchase of Common Stock	2,500	n/a	2.24	9/8/2022	Reporting Person's Adult Child
Purchase of Common Stock	5,000	n/a	2.30	9/9/2022	
Purchase of Jan. 2023 Call Option (\$2.50 Exercise Price)	500	50,000	0.45	9/9/2022	
Purchase of April 2023 Call Option (2.50 Exercise Price)	500	50,000	0.65	9/9/2022	

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Sale of Oct. 2022 Put	750	75,000	0.30	9/9/2022	
Option (\$2.50 Exercise Price)					
Purchase of Common Stock	3,737	n/a	2.22	9/15/2022	2,000 and 1,737 of the shares were under the Reporting Person's and the Reporting Person's Spouse's, respectively, qualified retirement plans
Purchase of Common Stock	500	n/a	7.50	9/16/2022	
Purchase of Common Stock	9,351	n/a	2.49	9/19/2022	
Purchase of Common Stock	195	n/a	2.25	9/20/2022	Reporting Person's Adult Child
Purchase of Common Stock	289	n/a	2.28	9/20/2022	
Purchase of Common Stock	1,860	n/a	2.27	9/21/2022	
Purchase of Common Stock	2,305	n/a	2.25	9/22/2022	Reporting Person's Adult Child
Purchase of Common Stock	429	n/a	2.25	9/22/2022	
Purchase of Common Stock	26,571	n/a	3.182	9/23/2022	
Purchase of Common Stock	10,700	n/a	5.00	9/26/2022	
Purchase of Common Stock	300	n/a	2.18	9/28/2022	
Purchase of Common Stock	25,000	n/a	2.19	9/29/2022	
Sale of Oct. 2022 Put Option (\$2.50 Exercise Price)	67	6,700	0.35	9/30/2022	
Purchase of Common Stock	20,000	n/a	2.29	10/6/2022	
Sale of Oct. 2022 Put Option (\$5.00 Exercise Price)	171	17,100	2.75	10/6/2022	
Purchase of Common Stock	3,000	n/a	5.00	10/7/2022	
Purchase of Common Stock	2,000	n/a	2.10	10/11/2022	
Purchase of Common Stock	11,700	n/a	5.00	10/12/2022	
Sale of Apr. 2023 Put Option (\$2.50 Exercise Price)	51	5,100	0.70	10/12/2022	

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Purchase of Common Stock	26,900	n/a	2.49	10/14/2022	
Purchase of Common Stock	1,000	n/a	2.10	10/17/2022	Indirect
Purchase of Apr. 2023 Call Option (\$5.00 Exercise Price)	707	70,700	0.122	10/17/2022	
Purchase of Jan. 2023 Call Option (\$5.00 Exercise Price)	200	20,000	0.05	10/17/2022	
Sale of Oct. 2022 Put Option (\$2.50 Exercise Price)	41	4,100	0.40	10/17/2022	
Purchase of Common Stock	17,632	n/a	2.172	10/18/2022	
Purchase of Jan. 2023 Call Option (\$2.50 Exercise Price)	500	50,000	0.305	10/18/2022	
Purchase of Jan. 2023 Call Option (\$5.00 Exercise Price)	100	10,000	0.15	10/18/2022	
Sale of Jan. 2023 Put Option (\$2.50 Exercise Price)	750	75,000	0.39	10/18/2022	
Sale of Oct. 2022 Put Option (\$2.50 Exercise Price)	4	400	0.35	10/18/2022	
Sale of Nov. 2022 Put Option (\$2.50 Exercise Price)	139	13,900	0.35	10/18/2022	
Purchase of Common Stock	81,150	n/a	4.916	10/19/2022	
Purchase of Jan. 2023 Call Option (\$2.50 Exercise Price)	183	18,300	0.359	10/19/2022	
Sale of Jan. 2023 Put Option (\$2.50 Exercise Price)	183	18,300	0.54	10/19/2022	
Purchase of Common Stock	30,778	n/a	2.477	10/20/2022	
Purchase of Apr. 2023 Call Option (\$2.50 Exercise Price)	417	41,700	0.447	10/20/2022	
Sale of Apr. 2023 Put Option (\$2.50 Exercise Price)	416	41,600	0.53	10/20/2022	

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104,224 3.631 10/21/2022 Purchase of Common n/a Stock Purchase of Common 10/24/2022 4,116 2.217 n/a Stock Purchase of Jan. 2023 Call Option (\$2.50 Exercise 150 15,000 0.311 10/25/2022 Price) Sale of Jan. 2023 Put 150 15,000 0.455 10/25/2022 Option (\$2.50 Exercise Price) Purchase of Jan. 2023 Call 750 75,000 0.342 10/26/2022 Option (\$2.50 Exercise Price) Sale of Jan. 2023 Put 750 75,000 0.57 10/26/2022 Option (\$2.50 Exercise Price)

Purchase of Jan. 2023 Call Option (\$2.50 Exercise Price)	12	1,200	0.279	10/27/2022	
Sale of Jan. 2023 Put Option (\$2.50 Exercise Price)	12	1,200	0.629	10/27/2022	
Purchase of Jan. 2023 Call Option (\$2.50 Exercise Price)	488	48,800	0.289	10/28/2022	
Sale of Jan. 2023 Put Option (\$2.50 Exercise Price)	488	48,800	0.589	10/28/2022	
Purchase of Common	21,000	n/a	2.14	10/31/2022	5,000 purchased by Charitable Organization
Stock					16,000 purchased by Reporting Person's Adult Children
Purchase of Common Stock	2,601	n/a	2.14	11/1/2022	Reporting Person's Sibling
Purchase of Apr. 2023 Call Option (\$2.50 Exercise Price)	1,000	100,000	0.65	11/1/2022	
Sale of Apr. 2023 Put Option (\$2.50 Exercise Price)	1,000	100,000	0.80	11/1/2022	
Purchase of Common Stock	2,399	n/a	2.14	11/3/2022	Reporting Person's Sibling
Purchase of Apr. 2023 Call Option (\$2.50 Exercise Price)	450	45,000	0.434	11/3/2022	

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Sale of Apr. 2023 Put Option (\$2.50 Exercise Price)	461	46,100	0.62	11/3/2022	
Purchase of Common Stock	300	n/a	2.50	11/16/2022	
Purchase of Common Stock	24,700	n/a	2.50	11/18/2022	
Sale of Apr. 2023 Call Option (\$2.50 Exercise Price)	257	25,700	0.24	12/5/2022	
Sale of Apr. 2023 Call Option (\$2.50 Exercise Price)	443	44,300	0.15	12/6/2022	
Purchase of Common Stock	136,200	n/a	2.50	12/13/2022	
Purchase of Common Stock	85,100	n/a	2.50	12/14/2022	
Purchase of Common Stock	33,700	n/a	2.50	12/15/2022	
Sale of Apr. 2023 Put Option (\$2.50 Exercise Price)	500	50,000	1.29	12/15/2022	
Sale of Jan. 2023 Call Option (\$2.50 Exercise Price)	6	600	0.05	12/30/2022	
Purchase of Common Stock	228,700	n/a	2.50	01/23/2023	
Purchase of Common Stock	34,500	n/a	5.00	01/23/2023	