

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 (AMENDMENT NO. )

Filed by the Registrant /X/  
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 Rule  
14a-6(e)(2))  
/X/ Definitive Proxy Statement  
/ / Definitive Additional Materials  
/ / Soliciting Material Pursuant to Rule 14a-11(c) or Rule 14a-12

ENZO BIOCHEM, INC.

(Name of Registrant as Specified in Its Charter)

-----  
(Name of Person(s) Filing Proxy Statement, if other than Registrant)

Payment of Filing Fee (Check the appropriate box):

/X/ No fee required.  
/ / Fee computed on table below per Exchange Act Rules 14a-6(i)(4) and 0-11.

(1) Title of each class of securities to which transaction applies:  
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(2) Aggregate number of securities to which transaction applies:  
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(3) Per unit price or other underlying value of transaction computed pursuant  
to Exchange Act Rule 0-11 (set forth the amount on which the filing fee  
is calculated and state how it was determined):  
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(4) Proposed maximum aggregate value of transaction:  
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(5) Total fee paid:  
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/ / Fee paid previously with preliminary materials:  
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/ / Check box if any part of the fee is offset as provided by Exchange Act Rule  
0-11(a)(2) and identify the filing for which the offsetting fee was paid  
previously. Identify the previous filing by registration statement number,  
or the Form or Schedule and the date of its filing.

(1) Amount previously paid:  
-----

(2) Form, Schedule or Registration Statement No.:  
-----

(3) Filing Party:  
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(4) Date Filed:  
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ENZO BIOCHEM, INC.  
60 EXECUTIVE BOULEVARD  
FARMINGDALE, NEW YORK 11735  
(516) 755-5500

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NOTICE OF ANNUAL MEETING OF SHAREHOLDERS  
TO BE HELD ON WEDNESDAY, JANUARY 13, 1999  
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To the Shareholders of Enzo Biochem, Inc.:

NOTICE IS HEREBY GIVEN that the Annual Meeting of Shareholders of Enzo

Biochem, Inc., a New York corporation (the "Company"), will be held at The American Stock Exchange, 86 Trinity Place, 13th Floor Board Room, New York, New York 10006-1881, on Wednesday, January 13, 1999, 10:00 a.m. local time (the "Annual Meeting"), for the following purposes:

1. To elect Barry W. Weiner and John J. Delucca each as Class II Directors for a term of three (3) years or until their respective successors are elected and qualified;
2. To approve the Company's 1999 Stock Option Plan under which the Company's Board of Directors (or appointed committee) may grant incentive stock options and nonqualified stock options to purchase up to 950,000 shares of common stock, par value \$.01 per share (the "Common Stock"), of the Company to employees, executive officers, directors, consultants and advisors;
3. To ratify the appointment of Ernst & Young LLP as the independent auditors for the Company for the Company's fiscal year ending July 31, 1999; and
4. To transact such other business as may properly come before the Annual Meeting or any adjournment thereof.

The close of business on Tuesday, November 24, 1998 has been fixed as the record date for the determination of shareholders entitled to notice of and to vote at the Annual Meeting. The transfer books of the Company will not be closed.

All shareholders are cordially invited to attend the Annual Meeting. Whether or not you expect to attend, you are requested to sign, date and return the enclosed proxy promptly. Shareholders who execute proxies retain the right to revoke them at any time prior to the voting thereof by filing written notice of such revocation with the Secretary of the Company, by submission of a duly executed proxy bearing a later date or by voting in person at the Annual Meeting of Shareholders. Attendance at the Annual Meeting will not in and of itself constitute revocation of a proxy. Any written notice revoking a proxy should be sent to Enzo Biochem, Inc., 60 Executive Boulevard, Farmingdale, New York 11735, Attention: Shahram K. Rabbani, Secretary. A return envelope which requires no postage if mailed in the United States is enclosed for your convenience.

By Order of the Board of Directors  
Shahram K. Rabbani, SECRETARY

Farmingdale, New York  
November 27, 1998

ENZO BIOCHEM, INC.  
60 EXECUTIVE BOULEVARD  
FARMINGDALE, NEW YORK 11735  
(516) 755-5500

-----  
PROXY STATEMENT  
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ANNUAL MEETING OF SHAREHOLDERS  
TO BE HELD ON WEDNESDAY, JANUARY 13, 1999

This Proxy Statement is furnished in connection with the solicitation, by the Board of Directors of Enzo Biochem, Inc., a New York corporation (the "Company"), of proxies in the enclosed form for the Annual Meeting of Shareholders to be held at The American Stock Exchange, 86 Trinity Place, 13th Floor Board Room, New York, New York 10006-1881, on Wednesday, January 13, 1999, at 10:00 a.m. local time (the "Annual Meeting"), and for any adjournment or adjournments thereof, for the purposes set forth in the preceding Notice of Annual Meeting of Shareholders. The persons named in the enclosed proxy form will vote the shares for which they are appointed in accordance with the directions of the shareholders appointing them. In the absence of such directions, such shares will be voted FOR Proposals 1, 2 and 3 listed below and, in their best judgment, will be voted on any other matters as may come before the Annual Meeting. Any shareholder giving a proxy has the power to revoke the same at any time before it is voted by filing written notice of such revocation with the Secretary of the Company, by submission of a duly executed proxy bearing a later date or by voting in person at the Annual Meeting. Attendance at the Annual Meeting will not in and of itself constitute revocation of a proxy. Any written notice revoking a proxy should be sent to Enzo Biochem, Inc., 60 Executive Boulevard, Farmingdale, New York 11735, Attn.: Shahram K. Rabbani, Secretary. A return envelope which requires no postage if mailed in the United States is enclosed for your convenience.

The principal executive offices of the Company are located at 60 Executive Boulevard, Farmingdale, New York 11735. The approximate date on which this Proxy Statement and the accompanying form of proxy will first be sent or given to the Company's shareholders is Friday, November 27, 1998.

VOTING SECURITIES

Only holders of shares of common stock, par value \$.01 per share (the "Common Stock"), of the Company of record as of the close of business on Tuesday, November 24, 1998 are entitled to vote at the Annual Meeting (the "Record Date"). On the Record Date there were issued and outstanding 24,899,391 shares of Common Stock. Each outstanding share of Common Stock is entitled to one (1) vote upon all matters to be acted upon at the Annual Meeting. The holders of a majority of the outstanding shares of Common Stock as of the Record Date shall constitute a quorum.

The election of a nominee for director requires a plurality (i.e., an excess of votes over those cast for an opposing candidate) if in the event that more than one candidate is running for a vacancy. An affirmative vote of the majority of the votes cast is required for approval of Proposals 2 and 3 and all other matters submitted to the shareholders at the Annual Meeting. Abstentions and broker non-votes are not counted as votes cast on any matter to which they relate and will have no effect on the outcome of the vote. A broker non-vote occurs when a broker or other nominee does not have discretionary authority and has not received instructions with respect to a particular proposal. Proxy ballots are received and tabulated by the Company's transfer agent and certified by the inspector of election.

STOCK OWNERSHIP OF PRINCIPAL SHAREHOLDERS AND MANAGEMENT

Set forth below is information concerning stock ownership of all persons known by the Company to own beneficially 5% or more of the shares of Common Stock of the Company, the executive officers named under "Executive Compensation of Directors and Executive Officers," all directors, and all directors and executive officers of the Company as a group based upon the number of outstanding shares of Common Stock as of the close of business on the Record Date. Except as otherwise indicated, each of the persons named has sole voting and investment power with respect to the shares shown.

<TABLE>  
<CAPTION>

NAME AND ADDRESS OF BENEFICIAL OWNER	AMOUNT AND NATURE OF BENEFICIAL OWNERSHIP (1)	PERCENT OF CLASS (2)
-----		
<S>	<C>	<C>
Elazar Rabbani, Ph.D.....	1,785,286 (3)	7.1%
Shahram K. Rabbani.....	1,787,564 (4)	7.1%
Barry W. Weiner.....	1,061,608 (5)	4.2%
J. Morton Davis.....	1,721,140 (6)	6.9%
John B. Sias.....	113,063 (7)	*
John J. Delucca.....	20,888 (8)	*
Dean Engelhardt, Ph.D.....	188,054 (9)	*
Norman Kelker, Ph.D.....	122,122 (10)	*
All directors and executive officers as a group (10 persons).....	5,241,846 (11) (12)	20.1%

</TABLE>

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\* Less than 1%.

- (1) Except as otherwise noted, all shares of Common Stock are beneficially owned and the sole investment and voting power is held by the persons named, and such persons' address is c/o Enzo Biochem, Inc., 60 Executive Boulevard, Farmingdale, New York 11735.
- (2) Based upon 24,899,391 shares of Common Stock of the Company outstanding as of the close of business on the Record Date.
- (3) Includes (i) 286,793 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof, (ii) 2,998 shares of Common Stock held in the name of Dr. Rabbani as custodian for certain of his children and (iii) 1,784 shares of Common Stock held in the name of Dr. Rabbani's wife as custodian for certain of their children. Does not include 116,282 shares of Common Stock issuable upon the exercise of options which are not exercisable within 60 days from the date hereof.
- (4) Includes (i) 286,793 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof, (ii) 779 shares of Common Stock held in the name of Mr. Rabbani's son and (iii) 1,444 shares of Common Stock that Mr. Rabbani holds as custodian for certain of his nephews. Does not include 116,282 shares of Common Stock issuable upon the exercise of options which are not exercisable within 60 days from the date hereof.
- (5) Includes (i) 249,716 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof and (ii) 2,998 shares of Common Stock which Mr. Weiner holds as custodian for certain of his children. Does not include 116,282 shares of Common Stock issuable

upon the exercise of options which are not exercisable within 60 days from the date hereof.

(6) Mr. Davis' address is c/o D.H. Blair Investment Banking Corp., 44 Wall Street, New York, New York 10005. Includes (i) 1,233,178 shares of Common Stock owned by D.H. Blair Investment Banking Corp. of which Mr. Davis is the Chairman of the Board of Directors and sole shareholder and (ii) 487,962 shares of Common Stock owned by Engex, Inc., a close-end registered investment company of which Mr. Davis is the Chairman of the Board of Directors.

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- (7) Includes 54,852 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof. Does not include 16,851 shares of Common Stock issuable upon the exercise of options which are not exercisable within 60 days from the date hereof.
- (8) Includes 20,888 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof. Does not include 16,813 shares of Common Stock issuable upon the exercise of options which are not exercisable within 60 days from the date hereof.
- (9) Includes 109,354 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof. Does not include 15,582 shares of Common Stock issuable upon the exercise of options which are not exercisable within 60 days from the date hereof.
- (10) Includes 85,375 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof. Does not include 11,447 shares of Common Stock issuable upon the exercise of options which are not exercisable within 60 days from the date hereof.
- (11) Includes 1,175,805 shares of Common Stock issuable upon the exercise of options which are exercisable within 60 days from the date hereof. Does not include 469,826 shares of Common Stock issuable upon the exercise of options held by such individuals which are not exercisable within 60 days from the date hereof.
- (12) The total number of directors and executive officers includes three (3) executive officers who were not named under "Executive Compensation."

PROPOSAL 1  
ELECTION OF DIRECTORS

The Company has three (3) staggered classes of Directors, each of which serves for a term of three (3) years. At the Annual Meeting, the Company's Class II Directors will be elected to hold office for a term of three (3) years or until their respective successors are elected and qualified. Unless otherwise instructed, the accompanying form of proxy will be voted for the election of the below-listed nominees, who currently serve as Class II Directors, to continue such service as Class II Directors. Management has no reason to believe that the nominees will not be candidates or will be unable to serve as directors. However, in the event that any of the nominees should become unable or unwilling to serve as directors, the form of proxy will be voted for the election of such persons as shall be designated by the Class I and Class III Directors.

CLASS II DIRECTOR NOMINEES TO SERVE UNTIL  
THE 2001 ANNUAL MEETING, IF ELECTED:  
NOMINEES  
CLASS II: NEW TERM TO EXPIRE IN 2002

<TABLE>  
<CAPTION>

NAME	AGE	YEAR FIRST BECAME A DIRECTOR
<S>	<C>	<C>
Barry W. Weiner.....	48	1976
John J. Delucca.....	55	1982

</TABLE>

THE BOARD OF DIRECTORS OF THE COMPANY RECOMMENDS A VOTE "FOR" THE ELECTION OF THE ABOVE-NAMED NOMINEES. PROXIES SOLICITED BY THE BOARD OF DIRECTORS WILL BE SO VOTED UNLESS SHAREHOLDERS SPECIFY IN THEIR PROXIES A CONTRARY CHOICE.

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DIRECTORS WHO ARE CONTINUING IN OFFICE:  
CLASS I: TERM TO EXPIRE IN 2001

<TABLE>  
<CAPTION>

NAME	AGE	YEAR FIRST BECAME A DIRECTOR
<S>	<C>	<C>
Shahram K. Rabbani.....	46	1976

</TABLE>

CLASS III: TERM TO EXPIRE IN 2000

NAME	AGE	YEAR FIRST BECAME A DIRECTOR
Elazar Rabbani, Ph.D.....	54	1976
John B. Sias.....	71	1982

DIRECTORS AND EXECUTIVE OFFICERS

The directors and executive officers of the Company are identified in the table below. Each executive officer of the Company serves at the pleasure of the Board of Directors.

NAME	AGE	YEAR BECAME AN EXECUTIVE OFFICER	POSITION
Elazar Rabbani, Ph.D.....	54	1976	Chairman of the Board of Directors and Chief Executive Officer
Shahram K. Rabbani.....	46	1976	Chief Operating Officer, Treasurer, Secretary and Director
Barry W. Weiner.....	48	1977	President and Director
Norman E. Kelker, Ph.D.....	59	1981	Senior Vice President
Dean Engelhardt, Ph.D.....	58	1981	Senior Vice President
Herbert B. Bass.....	50	1995	Vice President of Finance
Barbara E. Thalenfeld, Ph.D.....	58	1995	Vice President, Corporate Development
David C. Goldberg.....	41	1995	Vice President, Business Development
John J. Delucca.....	55	1982	Director
John B. Sias.....	71	1982	Director

BIOGRAPHICAL INFORMATION REGARDING DIRECTORS AND EXECUTIVE OFFICERS

ELAZAR RABBANI, PH.D. (age 54) has served as Chairman of the Board of Directors and Chief Executive Officer of the Company since the Company's inception in 1976 and has served as the Company's President from its inception to November 1996. Dr. Rabbani currently serves as a Class III Director whose term expires in 2000. Dr. Rabbani received his B.A. degree from New York University in Chemistry and his Ph.D. degree in Biochemistry from Columbia University. He is a member of the American Society for Microbiology. Elazar Rabbani is Shahram K. Rabbani's brother and Barry W. Weiner's brother-in-law.

SHAHRAM K. RABBANI (age 46) has served as Chief Operating Officer and Secretary of the Company since November 1996, as Executive Vice President from September 1981 to November 1996 and as Vice President, Treasurer and a Director since the Company's inception in 1976. Mr. Shahram K. Rabbani currently serves as a Class I Director whose term expires in 2001. Mr. Shahram K. Rabbani received a B.A. degree in Chemistry from Adelphi University. Shahram Rabbani is Elazar Rabbani's brother and Barry W. Weiner's brother-in-law.

BARRY W. WEINER (age 48), a Class II Director nominee, has served as President of the Company since November 1996 and as a Director of the Company since its inception in 1976. Mr. Weiner has served as Executive Vice President of the Company from September 1981 to November 1996, as a Vice President of the Company from the Company's inception to November 1996 and as Secretary of the Company from

March 1980 to November 1996. He was employed by Colgate-Palmolive Company, New York, New York from August 1974 until March 1980, when he joined the Company on a full-time basis. Mr. Weiner received his B.A. degree in Economics from New York University and an M.B.A. from Boston University. Barry W. Weiner is the brother-in-law of Elazar Rabbani and Shahram K. Rabbani, both of whom are brothers.

NORMAN E. KELKER, PH.D. (age 59) has been a Vice President of the Company since September 1981. Effective January 1, 1989, he was promoted to Senior Vice President. From 1975 until he joined the Company, Dr. Kelker was an Associate Professor in the Department of Microbiology of the New York University School of Medicine. He holds a Ph.D. from Michigan State University.

DEAN ENGELHARDT, PH.D. (age 58) has been Vice President since September 1981. Effective January 1, 1989, he was promoted to Senior Vice President. Prior to joining the Company, he was an Associate Professor of Microbiology at Columbia University College of Physicians and Surgeons. He obtained his Ph.D.

from Rockefeller University.

HERBERT B. BASS (age 50) is Vice President of Finance and has been with the Company since 1986. Prior to his position as Vice President of Finance, Mr. Bass was the Corporate Controller of the Company. From 1979 to 1986, Mr. Bass held various positions at Danziger & Friedman, Certified Public Accountants, the most recent of which was audit manager. For the preceding seven (7) years, he held various positions at Berenson & Berenson, C.P.A. Mr. Bass holds a Bachelor degree in Business Administration from Baruch College.

BARBARA E. THALENFELD, PH.D. (age 58) is Vice President of Corporate Development and has been with the Company since 1982. Prior to joining the Company, she held an NIH research fellowship at Columbia University. She received a Ph.D. from Hebrew University-Hadassah Medical Center and an M.S. from Yale University.

DAVID C. GOLDBERG (age 41) is Vice President of Business Development. Prior to joining the Company in 1985, he was employed at DuPont NEN Products. He received an M.S. from Rutgers University and an M.B.A. from New York University.

JOHN J. DELUCCA (age 55), a Class II Director Nominee, has been a Director of the Company since January 1982. Since October 1993, Mr. Delucca has been Senior Vice President and Treasurer of RJR Nabisco, Inc. From January 1992 until October 1993, he was the Chief Financial Officer and Managing Director of Hasco Associates, Inc. From October 1, 1990 until January 1992, he served as President and Chief Financial Officer of The Lexington Group, Ltd. From September 1988 until September 1990, he has served as Senior Vice President-Finance of The Trump Group. From May 1986 until August 1988, he served as Senior Vice President-Finance at International Controls Corp. From February 1985 until May 1986, he was a Vice President and Treasurer of Textron, Inc. Prior to that he was a Vice President and Treasurer of the Avco Corporation, which was acquired by Textron.

JOHN B. SIAS (age 71) is currently a Class III Director whose term expires in 2000 and has been a Director of the Company since January 1982. Since April 1993, Mr. Sias has been President and Chief Executive Officer of Chronicle Publishing Company. From January 1986 until December 1992, Mr. Sias served as President of ABC Television Network Division and Executive Vice President, Capital Cities/ ABC, Inc. From 1977 until January 1986 he was the Executive Vice President, President of the Publishing Division (which includes Fairchild Publications) of Capital Cities Communications, Inc.

#### MEETINGS OF THE BOARD OF DIRECTORS

During the fiscal year ended July 31, 1998, there were four (4) formal meetings of the Board of Directors, several actions by unanimous consent and several informal meetings. The Board of Directors has an Audit Committee and Stock Option Committee, each of which was organized in November 1982. During the fiscal year ended July 31, 1998, there were several informal meetings of the Audit Committee

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and the Stock Option Committee. Each director of the Company attended at least 75% of all Board meetings during the fiscal year ended July 31, 1998.

#### COMMITTEES OF THE BOARD OF DIRECTORS

The Audit Committee is authorized to review proposals of the Company's auditors regarding annual audits, recommend the engagement or discharge of the auditors, review recommendations of such auditors concerning accounting principles and the adequacy of internal controls and accounting procedures and practices, to review the scope of the annual audit, to approve or disapprove each professional service or type of service other than standard auditing services to be provided by the auditors, and to review and discuss the audited financial statements with the auditors. Its members are Shahram K. Rabbani, John B. Sias and John J. Delucca (a Class II Director nominee).

The Stock Option Committee has the plenary authority in its discretion to determine the purchase price of the Common Stock issuable upon the exercise of each option, to determine the employees to whom, and the time or times at which options shall be granted and the number of shares to be issuable upon the exercise of each option, to interpret the plans, to prescribe, amend and rescind rules and regulations relating to them, to determine the term and provisions of the respective option agreements and to make all other determinations deemed necessary or advisable for the administration of the plans. Its members are John B. Sias and John J. Delucca (a Class II Director Nominee).

The Company does not have a formal Compensation Committee, Nominating Committee or Executive Committee of the Board of Directors.

#### SECTION 16(A) REPORTING UNDER THE SECURITIES EXCHANGE ACT OF 1934

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires the Company's executive officers, directors and persons who beneficially own more than 10% of a registered class of the Company's equity securities

(collectively, "Reporting Persons") to file with the Securities and Exchange Commission initial reports of ownership and reports of changes in ownership of common stock and other equity securities of the Company. Such executive officers, directors and greater than 10% beneficial owners are required by Securities and Exchange Commission regulation to furnish the Company with copies of all Section 16(a) forms filed by such reporting persons.

Based solely on the Company's review of such forms furnished to the Company and written representations from certain reporting persons, the Company believes that the Reporting Persons have complied with all applicable filing requirements.

CERTAIN RELATIONSHIP AND RELATED TRANSACTIONS

Enzo Clinical Labs, Inc. ("Enzolabs"), a subsidiary of the Company, leases a facility located in Farmingdale, New York from Pari Management Corporation ("Pari"). Pari is owned equally by Elazar Rabbani, Ph.D., Shahram Rabbani and Barry Weiner and his wife, the officers and directors of Pari. The lease which commenced on December 20, 1989 and terminates on November 30, 2004 provides for a minimum net annual rent of \$515,000 through December 31, 1996 and \$818,250 for the period beginning January 1, 1997, subject to annual cost of living adjustments. During fiscal 1998, Enzolabs paid \$924,000 (including \$127,100 in real estate taxes) to Pari with respect to such facility. The Company, which has guaranteed Enzolabs' obligations to Pari under the lease, believes that the lease terms are as favorable to the Company as would be available from an unaffiliated party.

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EXECUTIVE COMPENSATION OF DIRECTORS AND EXECUTIVE OFFICERS

The following summary compensation table sets forth the aggregate compensation paid by the Company to its chief executive officer and to the Company's four other most highly compensated executive officers whose annual compensation exceeded \$100,000 for the fiscal year ended July 31, 1998 (each, a "Named Executive Officer") for services during the fiscal years ended July 31, 1998, 1997 and 1996:

SUMMARY COMPENSATION TABLE

<TABLE>  
<CAPTION>

NAME AND PRINCIPAL POSITION	YEAR	ANNUAL COMPENSATION		LONG TERM COMPENSATION AWARDS
		SALARY (\$)	BONUS (\$)	SECURITIES UNDERLYING OPTIONS/SARS (#)
<S>	<C>	<C>	<C>	<C>
Elazar Rabbani, Ph.D., CHAIRMAN OF THE BOARD OF DIRECTORS AND CEO	1998	271,043	145,000	52,500
	1997	256,088	120,000	-- 55,125
	1996	250,228	120,000	
Shahram K. Rabbani, CHIEF OPERATING OFFICER, TREASURER, SECRETARY AND DIRECTOR	1998	235,783	120,000	52,500
	1997	211,156	100,000	-- 55,125
	1996	207,636	100,000	
Barry W. Weiner, PRESIDENT AND DIRECTOR	1998	235,783	120,000	52,500
	1997	211,156	100,000	-- 55,125
	1996	207,636	100,000	
Dean Engelhardt, Ph.D., SENIOR VICE PRESIDENT	1998	156,731	25,000	--
	1997	152,306	20,000	-- 15,750
	1996	145,949	20,000	
Norman Kelker, Ph.D., SENIOR VICE PRESIDENT	1998	140,540	15,000	--
	1997	142,155	15,000	--
	1996	139,996	15,000	--

</TABLE>

The Company does not have a Compensation Committee or other board committee performing equivalent functions. During the fiscal year ended July 31, 1998, deliberations concerning executive officer compensation were made by the Company's Board of Directors, which board includes Elazar Rabbani, Ph.D. (Chairman of the Board and Chief Executive Officer of the Company), Shahram K. Rabbani (Chief Operating Officer, Secretary and Treasurer of the Company), Barry W. Weiner (President of the Company and Class II Director nominee), John J. Delucca (a Class II Director nominee) and John B. Sias.

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OPTION/SAR GRANTS IN LAST FISCAL YEAR

<TABLE>  
<CAPTION>

POTENTIAL

REALIZABLE

VALUE

AT

ASSUMED

INDIVIDUAL GRANTS

ANNUAL OF PRICE APPRECIATION OPTION

----- RATES STOCK FOR

PERCENT OF

NUMBER OF TOTAL

SECURITIES OPTIONS/SARS

UNDERLYING GRANTED TO EXERCISE OF TERM

OPTION/SARS EMPLOYEES IN BASE PRICE EXPIRATION -----

NAME (\$)

GRANTED (#) FISCAL YEAR (\$ / SH) DATE 5%

<S>	<C>	<C>	<C>	<C>	<C>
Elazar Rabbani, Ph.D., 440,116 CHAIRMAN OF THE BOARD OF DIRECTORS AND CHIEF EXECUTIVE OFFICER	52,500	19.23%	\$ 13.33	12/29/07	\$
Shahram K. Rabbani, 440,116 CHIEF OPERATING OFFICER, TREASURER, SECRETARY AND DIRECTOR	52,500	19.23%	\$ 13.33	12/29/07	\$
Barry W. Weiner, 440,116 PRESIDENT AND DIRECTOR	52,500	19.23%	\$ 13.33	12/29/07	\$

<CAPTION>

NAME	10% (\$)
<S>	<C>
Elazar Rabbani, Ph.D., CHAIRMAN OF THE BOARD OF DIRECTORS AND CHIEF EXECUTIVE OFFICER	\$ 1,115,341
Shahram K. Rabbani, CHIEF OPERATING OFFICER, TREASURER, SECRETARY AND DIRECTOR	\$ 1,115,341
Barry W. Weiner, PRESIDENT AND DIRECTOR	\$ 1,115,341

</TABLE>

AGGREGATED OPTION EXERCISES IN LAST FISCAL YEAR AND FISCAL YEAR-END OPTION VALUES

The following table sets forth certain information with respect to stock option exercises by the Named Executive Officers and Messrs. John B. Sias and John J. Delucca (both of whom serve as Outside Directors of the Company's Board of Directors) during the fiscal year ended July 31, 1998 and the value of unexercised options held by them at fiscal year-end.

<TABLE>

UNEXERCISED OPTIONS AT END (\$ (1))	NUMBER OF UNEXERCISED OPTIONS AT FISCAL YEAR END#		VALUE OF IN-THE-MONEY FISCAL YEAR	
	EXERCISABLE	UNEXERCISABLE	EXERCISABLE	UNEXERCISABLE
<S>	<C>	<C>	<C>	<C>
NAME	SHARES OF COMMON STOCK ACQUIRED ON EXERCISE (#)	VALUE REALIZED (\$)	EXERCISABLE	UNEXERCISABLE
UNEXERCISABLE				
Elazar Rabbani, Ph.D.	--	--	286,793	66,281
				790,248



Shahram K. Rabbani.....	--	--	286,793	66,281	790,248
--					
Barry W. Weiner.....	68,386	209,945	249,716	66,281	873,377
--					
Dean Engelhardt, Ph.D.....	49,833	152,987	109,354	5,581	866,832
4,971					
Norman Kelker, Ph.D.....	33,847	103,910	85,375	1,447	829,561
4,971					
John B. Sias.....	--	--	50,616	11,852	115,952
--					
John J. Delucca.....	--	--	20,888	11,813	16,703
--					

</TABLE>

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(1) Market value of the underlying securities at fiscal year end minus the exercise price.

#### EMPLOYMENT AGREEMENTS

Each of Mr. Barry Weiner, Mr. Shahram Rabbani and Dr. Elazar Rabbani (the "Executives") are parties to an employment agreement effective May 4, 1994 (the "Employment Agreement(s)") with the Company. Pursuant to the terms of their respective Employment Agreements, Messrs. Weiner and Rabbani and Dr. Rabbani are currently compensated at a base annual salary of \$250,000, \$250,000 and \$280,000, respectively. Each Executive will also receive an annual bonus, the amount of which shall be determined by the Board of Directors in their discretion. Each Employment Agreement provides that, in

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the event of termination of the Executive for good reason or without cause (or, additionally, in the case of Dr. Rabbani, a nonrenewal), as such terms are defined therein, each Executive shall be entitled to receive: (a) a lump sum in an amount equal to three (3) years of the Executive's base annual salary; (b) a lump sum in an amount equal to the annual bonus paid by the Company to the Executive for the last fiscal year of the Company ending prior to the date of termination multiplied by three (3); (c) insurance coverage for the Executive and his dependents, at the same level and at the same charges to the Executive as immediately prior to his termination, for a period of three (3) years following his termination from the Company; (d) all accrued obligations, as defined therein; and (e) with respect to each incentive pay plan (other than stock option or other equity plans) of the Company in which the Executive participated at the time of termination, an amount equal to the amount the Executive would have earned if he had continued employment for three (3) additional years. If the Executive is terminated by reason of his disability, he shall be entitled to receive, for three (3) years after such termination, his base annual salary less any amounts received under a long term disability plan. If the Executive is terminated by reason of his death, his legal representatives shall receive the balance of any remuneration due him. The term of each of the Executive's Employment Agreement is three (3) years from the date of execution of the Employment Agreement with a renewal period of two (2) years, such renewal to occur automatically unless either the Company or the Executive terminates the Employment Agreement upon six (6) months written notice.

#### COMPENSATION OF DIRECTORS

Each director who is not otherwise an officer or an employee (such director being classified as an "Outside Director") of the Company received \$18,000 in compensation for the fiscal year ended July 31, 1998. Under the Company's 1994 Plan, on the date persons are first elected to serve as Outside Directors of the Company's Board of Directors, such persons shall receive options ("Initial Director Options") to purchase 15,000 shares of Common Stock of the Company, and will automatically receive options ("Automatic Director Options" and together with the Initial Director Options, the "Director Options") to purchase 7,500 shares of the Company's Common Stock immediately following the date of each annual meeting of the Company's shareholders, provided, however, that such persons did not receive Initial Director Options since the most recent grant of Automatic Director Options and continue to serve as directors of the Company's Board of Directors. The exercise price for each share subject to a Director Option shall be equal to the fair market value of the Company's Common Stock on the date of grant. Director Options shall become exercisable at the discretion of the Board of Directors, subject to acceleration in certain circumstances, and shall expire the earlier of ten (10) years after the date of grant or ninety (90) days after the termination of the director's service on the Board of Directors. During fiscal year 1998, each Outside Director received an option to purchase 7,500 shares of Common Stock.

The Company strives to apply a uniform philosophy to compensation for all of its employees, including the members of its senior management. This philosophy is based on the premise that the achievements of the Company result from the combined and coordinated efforts of all employees working toward common goals and objectives.

The goals of the Company's compensation program are to align remuneration with business objectives and performance, and to enable the Company to retain and competitively reward executive officers who contribute to the long-term success of the Company. The Company's compensation program for executive officers is based on the following principles, which are applicable to compensation decisions for all employees of the Company. The Company attempts to pay its executive officers competitively in order that it will be able to retain the most capable people in the industry. Information with respect to levels of compensation being paid by comparable companies is obtained from various publications and surveys.

During the last fiscal year, the compensation of executive officers consisted principally of salary and bonus and the Company granted stock options to its executive officers, additional grants of which may be

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made in the future. The cash portion of such program includes base salary and annual bonuses, which are awarded in the discretion of the Board of Directors. Salary levels have been set based upon historical levels, amounts being paid by comparable companies and performance. The Company's equity-based compensation consists of the award of discretionary stock options, which are designed to provide additional incentives to executive officers to maximize shareholder value. Through the use of extended vesting periods, the option program is designed to encourage executive officers to remain in the employ of the Company. In addition, because the exercise prices of such options are typically set at or above the fair market value of the stock on the date the option is granted, executive officers can only benefit from such options if the trading price of the Company's shares of Common Stock increases, thus aligning their financial interests directly with those of the shareholders.

In consideration for Dr. Elazar Rabbani's services as Chairman of the Board of Directors and Chief Executive Officer of the Company for the fiscal year ended July 31, 1998, the Company paid Dr. Rabbani an annual salary of \$271,043 and a bonus of \$145,000 and granted Dr. Rabbani stock options to purchase 52,500 shares of the Company's Common Stock. Such compensation was determined pursuant to the Company's employment agreement, dated May 4, 1994, with Dr. Rabbani and was based on the Board's view of Dr. Rabbani's successful performance as Chief Executive Officer. See "Employment Agreements."

#### 401(K) PLAN

The Company has adopted a salary reduction profit sharing plan which is generally available to employees of the Company and any subsidiary of the Company. Officers and directors who are employees of the Company participate in the Plan on the same basis as other employees.

The Plan permits voluntary contributions by employees in varying amounts up to 15% of annual earnings (not to exceed the maximum allowable in any calendar year which is \$10,000 for 1998). Employee contributions are made by salary reduction under Section 401(k) of the Internal Revenue Code of 1986, as amended (the "Code"), and are excluded from taxable income of the employee. The Company may also contribute additional discretionary amounts as it may determine.

All employees of the Company who are twenty-one (21) years or older and have been employed by the Company for a minimum of six (6) months are eligible to participate in the Plan. Employees who have more than 500 hours of service per service year, but less than 1,000 hours per service year, are still considered members of the Plan, but contribution allocations and vesting will not increase during such time.

A participant's account is distributed to him upon retirement or termination of employment for any reason and in certain other limited situations. The amount of the Plan allocation attributable to the Company's discretionary contributions will vest in accordance with a schedule. To date, the Company has made no discretionary contributions to the Plan.

#### 1993 STOCK OPTION PLAN

Under the Company's 1993 Stock Option Plan (the "1993 Plan"), the Company's Board of Directors may grant incentive stock options ("ISOs") and non-qualified stock options ("NQSOs"), as those terms are defined by Section 422 of the Code, to selected key employees, directors, officers, consultants and advisors of the Company to purchase the Company's Common Stock. Options granted under the 1993 Plan generally vest no earlier than six (6) months after the date of grant and cannot be exercised later than the tenth (10th) anniversary date of the date of grant. When the optionee, however, holds more than 10% of all combined voting stock of the Company, ISOs granted under the 1993 Plan cannot be exercised later than the fifth (5th) anniversary date of the date of grant. The exercise prices

of options granted under the 1993 Plan are set by the Board of Directors of the Company, or designated committee. In any event, however, ISOs granted under the 1993 Plan may not be exercisable at a price lower than the fair market value of the Company's Common Stock on the date such options are granted, and, when the optionee

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holds more than 10% of all combined voting stock of the Company, the exercise prices such options may not be less than 110% of the fair market value of the Common Stock of the Company on the date of grant. ISOs granted under the 1993 Plan to any optionee which become exercisable for the first time in any one calendar year for shares of Common Stock of the Company with an aggregate fair market value, as of the respective date or dates of grant, of more than \$100,000 shall be treated as NQSOS. In October 1998, the Company granted options to certain officer-directors of the Company to purchase up to an aggregate of 150,000 shares of Common Stock. As of the Record Date, of the 1,736,438 shares reserved for issuance upon the exercise of options authorized for grant under the 1993 Plan, 33,000 shares of the Company's Common Stock remain available for issuance upon the exercise of options authorized for grant under the 1993 Plan.

#### 1994 STOCK OPTION PLAN

Under the Company's 1994 Stock Option Plan (the "1994 Plan"), the Company's Board of Directors may grant ISOs and NQSOS to selected key employees, directors, executive officers, consultants and advisors of the Company to purchase the Company's Common Stock. ISOs and NQSOS granted under the 1994 Plan generally vest no earlier than six (6) months after the date of grant and can be exercised no later than the tenth (10th) anniversary date of the date of grant. When the optionee, however, holds more than 10% of all combined voting stock of the Company, ISOs granted under the 1994 Plan can not be exercised later than the fifth (5th) anniversary date of the date of grant. The exercise prices of options granted under the 1994 Plan are set by the Board of Directors of the Company, or designated committee. In any event, however, ISOs granted under the 1994 Plan may not be exercisable at a price lower than the fair market value of the Company's Common Stock on the date such options are granted, and, when the optionee holds more than 10% of all combined voting stock of the Company, the exercise prices such options may not be less than 110% of the fair market value of the Common Stock of the Company on the date of grant. ISOs granted under the 1994 Plan to any optionee which become exercisable for the first time in any one calendar year for shares of Common Stock of the Company with an aggregate fair market value, as of the respective date or dates of grant, of more than \$100,000 shall be treated as NQSOS. The awards under the 1994 Plan are subject to restrictions on transferability, are forfeitable in certain circumstances and are exercisable at such time or times and during such period as shall be set forth in the option agreement evidencing such option. During the fiscal year ended July 31, 1998, options to purchase up to 273,000 shares of the Company's Common Stock were awarded under the 1994 Plan. In October 1998, the Company granted options to certain directors, officers and employees of the Company to purchase up to an aggregate of 113,000 shares of Common Stock of the Company. As of the Record Date, of the 1,099,744 shares of the Company's Common Stock reserved for issuance upon the exercise of options authorized for grant under the 1994 Plan, 87,000 shares of the Company's Common Stock remain available for issuance upon the exercise of options authorized for grant under the 1994 Plan.

#### INSURANCE FOR INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Company has in effect, with Zurich Insurance Group under a policy effective January 20, 1998, and expiring on January 21, 1999, insurance covering all of its directors and officers and certain other employees of the Company against certain liabilities and reimbursing the Company for obligations which it incurs as a result of its indemnification of such directors, officers and employees. Such insurance has been obtained in accordance with the provisions of Section 726 of the Business Corporation Law of the State of New York. The annual premium is \$64,260.

This report has been provided by the Board of Directors of the Company.

<TABLE>	
<S>	<C>
Elazar Rabbani, Ph.D.	
Shahram K. Rabbani	John J. Delucca
Barry W. Weiner	John B. Sias
</TABLE>	

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The compensation report shall not be deemed to be incorporated by reference in any filing by the Company under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent the Company specifically incorporates such report.

#### PERFORMANCE GRAPH

The graph below compares the five-year cumulative shareholder total return based upon an initial \$100 investment (assuming the reinvestment of dividends) for Enzo Biochem, Inc. shares of Common Stock with the comparable return for the

American Stock Exchange Market Value Index and two peer issuer indices selected on an industry basis. The two peer group indices include: (i) 67 biotechnology companies engaged in the research and development of diagnostic substances and (ii) 26 companies engaged in the medical laboratories business. All of the indices include only companies whose common stock has been registered under Section 12 of the Securities Exchange Act of 1934 for at least the time frame set forth in the graph.

The total shareholder returns depicted in the graph are not necessarily indicative of future performance. The Performance Graph and related disclosure shall not be deemed to be incorporated by reference in any filing by the Company under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent that the Company specifically incorporates the graph and such disclosure by reference.

COMPARE 5-YEAR CUMULATIVE TOTAL RETURN  
AMONG ENZO BIOCHEM, INC.,  
AMEX MARKET INDEX AND SIC CODE INDEX

EDGAR REPRESENTATION OF DATA POINTS USED IN PRINTED GRAPHIC

<TABLE>  
<CAPTION>  
DOLLARS

<S>	<C>	ENZO BIOCHEM INC	<C>	MEDICAL LABORATORIES	<C>	AMEX MARKET INDEX	<C>	BIOTECHNOLOGY
PEERS								
1993		\$100.00		\$100.00		\$100.00		
\$100.00								
1994		\$97.44		\$105.99		\$102.49		
\$87.04								
1995		\$181.80		\$110.62		\$124.30		
\$128.26								
1996		\$156.22		\$82.44		\$127.22		
\$151.67								
1997		\$169.68		\$69.84		\$151.19		
\$160.82								
1998		\$132.97		\$58.34		\$165.02		
\$135.37								

ASSUMES \$100 INVESTED ON AUG. 1, 1993  
ASSUMES DIVIDEND REINVESTED  
FISCAL YEAR ENDING JULY 31, 1998

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PROPOSAL 2  
TO APPROVE THE COMPANY'S 1999 STOCK OPTION PLAN

As described under "Executive Compensation-Board of Directors Compensation Report," the Company maintains the 1993 Plan and 1994 Plan. The Board of Directors believes that the availability of stock incentives is an important factor in the Company's ability to not only attract and maintain key employees, directors, executive officers and consultants but also to give them an added incentive to exert their best efforts on behalf of the Company. As of the Record Date, options to purchase 33,000 and 87,000 shares of the Company's Common Stock remained available for grant under the Company's 1993 Plan and 1994 Plan, respectively. The Board of Directors believes that additional shares are needed to provide option grants to key persons during the next two to three years. Accordingly, the Board of Directors adopted the Company's 1999 Stock Option Plan (the "1999 Plan"), subject to stockholder approval, and reserved 950,000 shares of the Company's Common Stock for issuance pursuant to the exercise of options granted under such 1999 Plan.

DESCRIPTION OF THE 1999 PLAN

At the Annual Meeting, the shareholders entitled to vote will be asked to approve the 1999 Plan, as adopted by the Board of Directors. The 1999 Plan will provide for the grant of ISOs and NQSOs in compliance with the Code to employees (approximately 190 as of the Record Date), officers (8 as of the Record Date) and directors (5 as of the Record Date) of, and consultants and advisors (approximately 10 as of the Record Date) to, the Company who are expected to contribute to the Company's future growth and success. As of the date of this Proxy Statement, of the 950,000 shares of Common Stock to be reserved for issuance upon the exercise of options under the 1999 Plan, the Company has not yet determined the number of options allocated to any of the foregoing intended recipients under the 1999 Plan nor is such number yet determinable.

The 1999 Plan shall provide that options granted under such plan generally shall vest no earlier than six (6) months after the date of grant and that the exercise prices of such options shall be determined by the Board of Directors (or authorized committee) at the time of grant. However, in the case of ISOs, the exercise price shall be no less than the fair market value of the Company's Common Stock on the date of grant (110% in the case of stockholders owning more

than 10% of the Company's voting securities), and shall expire no later than the tenth (10th) anniversary of the date of grant (the fifth (5th) anniversary in the case of stockholders owning more than 10% of the Company's voting securities). Generally, ISOs, to the extent such options are vested, may be exercised within a period of (i) sixty (60) days in the event an optionee ceases to be an employee of the Company, (ii) three (3) months if the optionee dies while in the employ of the Company and (iii) one (1) year if the optionee becomes disabled within the meaning of Section 22(e)(3) of the Code. Generally, NQSOs, to the extent such options are vested, will expire immediately upon the termination of the optionee's employment with the Company; provided, however, such termination is for cause or is otherwise attributable to a breach by the optionee of an employment or confidentiality or not-disclosure agreement. Notwithstanding, an NQSO, to the extent such options are vested, will be exercisable within a period of (i) three (3) months if the optionee dies while in the employ of the Company and (ii) one (1) year if the optionee becomes disabled within the meaning of Section 22(e)(3) of the Code. Pursuant to the 1999 Plan and in compliance with the Code, to the extent that the aggregate fair market value, determined by the date or dates of grant, for which ISOs are first exercisable by an optionee during any calendar year exceeds \$100,000, such options shall be treated as NQSOs.

Under the Company's 1999 Plan, on the date persons, who are not otherwise employees or executive officers of the Company, are first elected as directors (each director being classified as an "Outside Director") of the Company's Board of Directors, such persons shall receive options ("Initial Director Options") to purchase 15,000 shares of Common Stock of the Company and will automatically receive options ("Automatic Director Options" and together with the Initial Director Options, the "Director Options") to purchase 7,500 shares of the Company's Common Stock immediately following the date of

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each annual meeting of the Company's shareholders, provided, however, that such persons did not receive Initial Director Options since the most recent grant of Automatic Director Options and continue to serve as directors of the Company's Board of Directors. The exercise price for each share of Common Stock issuable upon the exercise of a Director Option shall be equal to the fair market value of the Company's Common Stock on the date of grant. Director Options granted under the 1999 Plan shall be exercisable either in full or installments as shall be set forth at the discretion of the Board of Directors, subject to acceleration in certain circumstances, and shall expire the earlier of ten (10) years after the date of grant or ninety (90) days after the termination of the director's service on the Board of Directors. No Director Option granted to a Reporting Person for purposes of the Securities Exchange Act of 1934, however, shall be exercisable during the first six (6) months after the date of grant. To the extent that any shares of Common Stock issuable upon the exercise of Director Options granted under the 1994 Plan exceed the number which remain available for grant under the 1994 Plan, such grant shall be deemed to be under the 1999 Plan. See "Executive Compensation of Directors and Executive Officers-Compensation of Directors."

#### CERTAIN FEDERAL TAX INFORMATION

The following is a summary of the U.S. federal income tax consequences that generally will arise with respect to options granted pursuant to the 1999 Plan and with respect to the shares of Common Stock of the Company issuable upon the exercise thereof.

#### ISOS.

In general, an optionee will not recognize regular income upon the grant or exercise of an ISO. The basis of shares transferred to an optionee pursuant to the exercise of an ISO is the price paid for such shares (i.e., the exercise price). Instead, an optionee will recognize taxable income upon the sale of Common Stock issuable upon the exercise of an ISO. Notwithstanding, the exercise of an ISO may subject the optionee to the alternative minimum tax.

In general, the tax consequences of selling Common Stock issuable upon the exercise of an ISO will vary with the length of time that the optionee holds such Common Stock prior to such sale. An optionee will recognize long-term capital gain or loss equal to the difference between the sale price of the Common Stock and the exercise price if the optionee sells the Common Stock after having had owned it for at least (i) two (2) years from the date the option was granted (the "Grant Date") and (ii) one (1) year from the date the option was exercised (the "Exercise Date").

However, an optionee will recognize ordinary compensation income and capital gain (if the sale price is greater than exercise price) or loss (if the sale price is less than the exercise price), if the optionee sells the Common Stock issuable upon the exercise of an ISO prior to having had owned it for less than (i) two (2) years from the Grant Date and (ii) one (1) year from the Exercise Date. The capital gain or loss will be treated as long-term capital gain or loss if the optionee has held the Common Stock for more than one (1) year prior to the date of sale.

#### NQSOs.

As in the case of ISOs, an optionee will recognize no income tax upon the grant of an NQSO. Unlike an ISO, however, an optionee exercising an NQSO will recognize ordinary income tax equal to the excess of the fair market value of the Company's Common Stock on the Exercise Date over the exercise price.

With respect to the Common Stock issuable upon the exercise of an NQSO, a optionee generally will have a tax basis equal to the fair market value of the stock on the Exercise Date. Upon the subsequent sale of Common Stock issuable upon the exercise of an NQSO, an optionee will recognize a capital gain or loss, assuming the stock was a capital asset in the optionee's hands, equal to the difference between the tax basis

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of the Common Stock and the amount realized upon disposition; provided, however, that the optionee has owned the Common Stock for a period of one (1) year.

#### TAX CONSEQUENCES TO THE COMPANY.

The grant of ISOs and NQSOs under the 1999 Plan will have no tax consequences to the Company. Furthermore, in the case of ISOs, the Company will not experience any tax consequences relating to the exercise of ISOs granted under the 1999 Plan nor the exercise thereof. Notwithstanding, the Company generally will be entitled to a business-expense deduction with respect to any ordinary compensation income, including a Disqualifying Disposition or a Section 83(b) Election, upon the exercise of an NQSO; provided, however, that such deduction will be subject to the limitation of Section 162(m) promulgated under the Code.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" PROPOSAL 2 ADOPTING THE COMPANY'S 1999 PLAN TO GRANT UP TO AN AGGREGATE OF 950,000 INCENTIVE STOCK OPTIONS AND NON-QUALIFIED STOCK OPTIONS TO PURCHASE SHARES OF THE COMPANY'S COMMON STOCK TO KEY EMPLOYEES, DIRECTORS, EXECUTIVE OFFICERS AND CONSULTANTS.

#### PROPOSAL 3 APPROVAL OF INDEPENDENT AUDITORS

The Board of Directors has appointed Ernst & Young LLP, as independent auditors, to audit the accounts of the Company for the fiscal year ending July 31, 1999. The Board of Directors approved the reappointment of Ernst & Young LLP (the firm resulting from the merger of Ernst & Whinney and Arthur Young & Company, which has been engaged as the Company's independent auditors since 1983). Ernst & Young LLP has advised the Company that neither the firm nor any of its members or associates has any direct financial interest in the Company or any of its affiliates other than as auditors. Although the selection and appointment of independent auditors is not required to be submitted to a vote of shareholders, the Directors deem it desirable to obtain the shareholders' ratification and approval of this appointment.

Representatives of Ernst & Young LLP are expected to be present at the Annual Meeting with the opportunity to make a statement if they desire to do so and are expected to be available to respond to appropriate questions.

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" PROPOSAL 3 RELATING TO THE RATIFICATION OF THE APPOINTMENT OF THE AUDITORS. PROXIES SOLICITED BY THE BOARD OF DIRECTORS WILL BE SO VOTED UNLESS SHAREHOLDERS SPECIFY IN THEIR PROXIES A CONTRARY CHOICE.

#### GENERAL

The Management of the Company does not know of any matters other than those stated in this Proxy Statement which are to be presented for action at the meeting. If any other matters should properly come before the meeting, it is intended that proxies in the accompanying form will be voted on any such matters in accordance with the judgment of the persons voting such proxies. Discretionary authority to vote on such matters is conferred by such proxies upon the persons voting them.

The Company will bear the cost of preparing, assembling and mailing the Proxy, Proxy Statement and other material which may be sent to the shareholders in connection with this solicitation. In addition to the solicitation of proxies by use of the mails, officers and regular employees may solicit the return of proxies. The Company may reimburse persons holding stock in their names or in the names of other nominees for their expense in sending proxies and proxy material to principals. In addition, Continental Stock Transfer

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& Trust Company, 2 Broadway, New York, New York 10004, the Company's transfer agent, has been engaged to solicit proxies on behalf of the Company for a fee, excluding expenses, of approximately \$3,500. Proxies may be solicited by mail, personal interview, telephone and telegraph.

THE COMPANY WILL PROVIDE WITHOUT CHARGE TO EACH PERSON BEING SOLICITED BY THIS PROXY STATEMENT, UPON THE WRITTEN REQUEST OF ANY SUCH PERSON, A COPY OF THE ANNUAL REPORT OF THE COMPANY ON FORM 10-K FOR THE YEAR ENDED JULY 31, 1998 (AS

FILED WITH THE SECURITIES AND EXCHANGE COMMISSION) INCLUDING THE FINANCIAL STATEMENTS AND THE SCHEDULES THERETO. ALL SUCH REQUESTS SHOULD BE DIRECTED TO SHAHRAM K. RABBANI, SECRETARY, ENZO BIOCHEM, INC., 60 EXECUTIVE BOULEVARD, FARMINGDALE, NEW YORK 11735.

STOCKHOLDER PROPOSALS TO BE PRESENTED  
AT THE NEXT ANNUAL MEETING

STOCKHOLDER PROPOSALS. Proposals of stockholders intended to be presented at the Company's 2000 Annual Stockholder Meeting (i) must be received by the Company at its offices no later than August 30, 1999 (91 days preceding the one year anniversary of the Mailing Date), (ii) may not exceed 500 words and (iii) must otherwise satisfy the conditions established by the Securities and Exchange Commission for stockholder proposals to be included in the Company's Proxy Statement for that meeting.

DISCRETIONARY PROPOSALS. Stockholders intending to commence their own proxy solicitations and present proposals from the floor of the 2000 Annual Stockholder Meeting in compliance with Rule 14a-4 promulgated under the Exchange Act of 1934, as amended, must notify the Company of such intentions before October 13, 1999 (45 days preceding the one year anniversary of the Mailing Date). After such date, the Company's proxy in connection with the 2000 Annual Stockholder Meeting may confer discretionary authority on the Board to vote.

By Order of the Board of Directors  
Shahram K. Rabbani, Secretary

Dated: November 27, 1998

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ENZO BIOCHEM, INC.

1999 STOCK OPTION PLAN

1. PURPOSE.

The purpose of this plan (the "Plan") is to secure for Enzo Biochem, Inc. (the "Company") and its shareholders the benefits arising from capital stock ownership by employees, officers and directors of, and consultants or advisors to, the Company and its subsidiary corporations who are expected to contribute to the Company's future growth and success. Those provisions of the Plan which make express reference to Section 422 shall apply only to Incentive Stock Options (as that term is defined in the Plan).

2. TYPE OF OPTIONS AND ADMINISTRATION.

(a) TYPES OF OPTIONS. Options granted pursuant to the Plan shall be authorized by action of the Board of Directors of the Company (or a Committee designated by the Board of Directors) and may be either incentive stock options ("Incentive Stock Options") meeting the requirements of Section 422 of the Internal Revenue Code of 1986, as amended or replaced from time to time (the "Code") or non-statutory options which are not intended to meet the requirements of Section 422 of the Code.

(b) ADMINISTRATION. The Plan will be administered by a committee (the "Committee") appointed by the Board of Directors of the Company, whose construction and interpretation of the terms and provisions of the Plan shall be final and conclusive. The Committee shall consist solely of two or more persons, each of whom shall qualify as (i) a "Non-Employee Director," as that term is defined in subparagraph (b) (3) (i) of Rule 16b-3 ("Rule 16b-3") promulgated under the Securities Exchange Act of 1934 (the "Exchange Act"), and (ii) an "outside director," within the meaning of Section 162(m) of the Code. The delegation of powers to the Committee shall be consistent with applicable laws or regulations (including, without limitation, applicable state law and Rule 16b-3). The Committee may in its sole discretion grant options to purchase shares of the Company's Common Stock, \$.01 par value per share ("Common Stock") and issue shares upon exercise of such options as provided in the Plan. The Committee shall have authority, subject to the express provisions of the Plan, to construe the respective option agreements and the Plan, to prescribe, amend and rescind rules and regulations relating to the Plan, to determine the terms and provisions of the respective option agreements, which need not be identical, and to make all other determinations in the judgment of the Committee necessary or desirable for the administration of the Plan. The Committee may correct any defect or supply any omission or reconcile any inconsistency in the Plan or in any option agreement in the manner and to the extent it shall deem expedient to carry the Plan into effect and it shall be the sole and final judge of such expediency. No director or person acting pursuant to authority delegated by the Board of Directors shall be liable for any action or determination under the Plan made in good faith. Subject to adjustment as provided in Article 15 below, the aggregate number of shares of Common Stock that may be subject to options

granted to any person in a calendar year shall not exceed 20% of the maximum number of shares which may be issued and sold under the Plan, as set forth in Article 4 hereof, as such Article may be amended from time to time.

(c) APPLICABILITY OF RULE 16B-3. Those provisions of the Plan which make express reference to Rule 16b-3 shall apply to the Company only at such time as the Company's Common Stock is registered under the Exchange Act, subject to the last sentence of Section 3(b), and then only to such persons as are required to file reports under Section 16(a) of the Exchange Act (a "Reporting Person").

### 3. ELIGIBILITY.

(a) GENERAL. Options may be granted to persons who are, at the time of grant, employees, officers or directors of, or consultants or advisors to, the Company or any subsidiaries of the Company as defined in Sections 424(e) and 424(f) of the Code ("Participants") PROVIDED, that Incentive Stock Options may only be granted to individuals who are employees of the Company (within the meaning of Section 3401(c) of the Code). A person who has been granted an option may, if he or she is otherwise eligible, be granted additional options if the Committee shall so determine.

(b) GRANT OF OPTIONS TO REPORTING PERSONS. The selection of a director or an officer who is a Reporting Person (as the terms "director" and "officer" are defined for purposes of Rule 16b-3) as a recipient of an option, the timing of the option grant, the exercise price of the option and the number of shares subject to the option shall be determined either (i) by the Board of Directors, (ii) by the Committee or (iii) pursuant to provisions for automatic grants set forth in Article 3(c) below.

(c) DIRECTORS OPTIONS. Persons, who are not otherwise employees or executive officers of the Company ("Eligible Directors"), are first elected or appointed to serve as directors on the Company's Board of Directors, such persons shall receive options to purchase 15,000 shares of the Company's Common Stock on the date such persons are first elected or appointed, and will automatically receive options ("Automatic Director Options" and together with the Initial Director Options, the "Director Options") to purchase 7,500 shares of the Company's Common Stock immediately following the date of each annual meeting of the Company's shareholders, PROVIDED, HOWEVER, that such persons did not receive Initial Director Options since the most recent grant of Automatic Director Options and continue to serve as directors of the Company's Board of Directors. The exercise price for each share subject to a Director Option shall be equal to the fair market value of the Company's Common Stock on the date of grant. Each Director Option granted under the Plan shall be exercisable either in full or in installments at such time or times and during such period as shall be set forth in the option agreement evidencing such Director Option, subject to the provisions of the Plan. No Director Option granted to a Reporting Person for purposes of the Exchange Act, however, shall be exercisable during the first six (6) months after the date of grant. Directors Options shall expire the earlier of ten (10) years after the date of grant or ninety (90) days after the termination of the director's service on the Board of Directors unless such Director Options are Incentive Stock Options in which case such Director Options shall be subject to the additional terms and conditions set forth in Articles 6 and 11 hereof.

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### 4. STOCK SUBJECT TO PLAN.

The stock subject to options granted under the Plan shall be shares of authorized but unissued or reacquired Common Stock. Subject to adjustment as provided in Article 15 below, the maximum number of shares of Common Stock of the Company which may be issued and sold under the Plan is 950,000 shares of Common Stock. If an option granted under the Plan shall expire, terminate or is canceled for any reason without having been exercised in full, the unpurchased shares subject to such option shall again be available for subsequent option grants under the Plan.

### 5. FORMS OF OPTION AGREEMENTS.

As a condition to the grant of an option under the Plan, each recipient of an option shall execute an option agreement in such form not inconsistent with the Plan as may be approved by the Board of Directors. Such option agreements may differ among recipients.

### 6. PURCHASE PRICE.

(a) GENERAL. The purchase price per share of stock deliverable upon the exercise of an option shall be determined by the Board of Directors at the time of grant of such option; PROVIDED, HOWEVER, that in the case of an Incentive Stock Option, the exercise price shall not be less than 100% of the Fair Market Value (as hereinafter defined) of such stock, at the time of grant



of such option, or less than 110 % of such Fair Market Value in the case of options described in Article 11 (b). "Fair Market Value" of a share of Common Stock of the Company as of a specified date for the purposes of the Plan shall mean the closing price of a share of the Common Stock on the principal securities exchange (including the Nasdaq National Market) on which such shares are traded on the day immediately preceding the date as of which Fair Market Value is being determined, or on the next preceding date on which such shares are traded if no shares were traded on such immediately preceding day, or if the shares are not traded on a securities exchange, Fair Market Value shall be deemed to be the average of the high bid and low asked prices of the shares in the over-the-counter market on the day immediately preceding the date as of which Fair Market Value is being determined or on the next preceding date on which such high bid and low asked prices were recorded. If the shares are not publicly traded, Fair Market Value of a share of Common Stock (including, in the case of any repurchase of shares, any distributions with respect thereto which would be repurchased with the shares) shall be determined in good faith by the Board of Directors. In no case shall Fair Market Value be determined with regard to restrictions other than restrictions which, by their terms, will never lapse.

(b) PAYMENT OF PURCHASE PRICE. Options granted under the Plan may provide for the payment of the exercise price by delivery of cash or a check to the order of the Company in an amount equal to the exercise price of such options, or by any other means which the Board of Directors determines are consistent with the purpose of the Plan and with applicable laws and regulations (including, without limitation, the provisions of Rule 16b-3 and Regulation T promulgated by the Federal Reserve Board).

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7. OPTION PERIOD.

Subject to earlier termination as provided in the Plan, each option and all rights thereunder shall expire on such date as determined by the Board of Directors and set forth in the applicable option agreement, provided, that such date shall not be later than (10) ten years after the date on which the option is granted.

8. EXERCISE OF OPTIONS.

Each option granted under the Plan shall be exercisable either in full or in installments at such time or times and during such period as shall be set forth in the option agreement evidencing such option, subject to the provisions of the Plan. No option granted to a Reporting Person for purposes of the Exchange Act, however, shall be exercisable during the first six months after the date of grant. Subject to the requirements in the immediately preceding sentence, if an option is not at the time of grant immediately exercisable, the Board of Directors may (i) in the agreement evidencing such option, provide for the acceleration of the exercise date or dates of the subject option upon the occurrence of specified events, and/or (ii) at any time prior to the complete termination of an option, accelerate the exercise date or dates of such option.

9. NONTRANSFERABILITY OF OPTIONS.

No option granted under this Plan shall be assignable or otherwise transferable by the optionee except by will or by the laws of descent and distribution or pursuant to a qualified domestic relations order as defined in the Code or Title I of the Employee Retirement Income Security Act, or the rules thereunder. An option may be exercised during the lifetime of the optionee only by the optionee. In the event an optionee dies during his employment by the Company or any of its subsidiaries, or during the three-month period following the date of termination of such employment, his option shall thereafter be exercisable, during the period specified in the option agreement, by his executors or administrators to the full extent to which such option was exercisable by the optionee at the time of his death during the periods set forth in Article 10 or 11(d).

10. EFFECT OF TERMINATION OF EMPLOYMENT OR OTHER RELATIONSHIP.

Except as provided in Article 11(d) with respect to Incentive Stock Options and except as otherwise determined by the Committee at the date of grant of an option, and subject to the provisions of the Plan, an optionee may exercise an option at any time within three (3) months following the termination of the optionee's employment or other relationship with the Company or within three (3) months if such termination was due to the death or disability of the optionee or within one (1) year if such termination was due to the disability of the optionee but, except in the case of the optionee's death, in no event later than the expiration date of the option. If the termination of the optionee's employment is for cause or is otherwise attributable to a breach by the optionee of an employment or confidentiality or non-disclosure agreement, the option shall expire immediately upon such termination. The Board of Directors shall have the power to determine what constitutes a termination for cause or a breach of an employment or confidentiality or non-disclosure agreement, whether an optionee has been terminated for cause or has breached such an agreement,

and the date upon which such termination for cause or breach occurs. Any such determinations shall be final and conclusive and binding upon the optionee.

11. INCENTIVE STOCK OPTIONS.

Options granted under the Plan which are intended to be Incentive Stock Options shall be subject to the following additional terms and conditions:

(a) EXPRESS DESIGNATION. All Incentive Stock Options granted under the Plan shall, at the time of grant, be specifically designated as such in the option agreement covering such Incentive Stock Options.

(b) 10% SHAREHOLDER. If any employee to whom an Incentive Stock Option is to be granted under the Plan is, at the time of the grant of such option, the owner of stock possessing more than 10% of the total combined voting power of all classes of stock of the Company (after taking into account the attribution of stock ownership rules of Section 424(d) of the Code), then the following special provisions shall be applicable to the Incentive Stock Option granted to such individual:

(i) The purchase price per share of the Common Stock subject to such Incentive Stock Option shall not be less than 110 % of the Fair Market Value of one share of Common Stock at the time of grant; and

(ii) the option exercise period shall not exceed five years from the date of grant.

(c) DOLLAR LIMITATION. For so long as the Code shall so provide, options granted to any employee under the Plan (and any other incentive stock option plans of the Company) which are intended to constitute Incentive Stock Options shall not constitute Incentive Stock Options to the extent that such options, in the aggregate, become exercisable for the first time in any one calendar year for shares of Common Stock with an aggregate Fair Market Value, as of the respective date or dates of grant, of more than \$100,000.

(d) TERMINATION OF EMPLOYMENT, DEATH OR DISABILITY. No Incentive Stock Option may be exercised unless, at the time of such exercise, the optionee is, and has been continuously since the date of grant of his or her option, employed by the Company, except that:

(i) an Incentive Stock Option may be exercised within the period of ninety (90) days after the date the optionee ceases to be an employee of the Company (or within such lesser period as may be specified in the applicable option agreement), PROVIDED, that the agreement with respect to such option may designate a longer exercise period and that the exercise after such ninety (90) day period shall be treated as the exercise of a non-statutory option under the Plan;

(ii) if the optionee dies while in the employ of the Company, or within three months after the optionee ceases to be such an employee, the Incentive Stock

Option may be exercised by the person to whom it is transferred by will or the laws of descent and distribution within the period of three (3) months after the date of death (or within such lesser period as may be specified in the applicable option agreement); and

(iii) if the optionee becomes disabled (within the meaning of Section 22(e)(3) of the Code or any successor provisions thereto) while in the employ of the Company, the Incentive Stock Option may be exercised within the period of one (1) year after the date the optionee ceases to be such an employee because of such disability (or within such lesser period as may be specified in the applicable option agreement).

For all purposes of the Plan and any option granted hereunder, "employment" shall be defined in accordance with the provisions of Section 1.421-7(h) of the Income Tax Regulations (or any successor regulations). Notwithstanding the foregoing provisions, no incentive Stock Option may be exercised after its expiration date.

12. ADDITIONAL PROVISIONS.

(a) ADDITIONAL OPTION PROVISIONS. The Board of Directors may, in its sole discretion, include additional provisions in option agreements covering options granted under the Plan, including without limitation restrictions on transfer, repurchase rights, rights of first refusal, commitments to pay cash bonuses, to make, arrange for or guaranty loans or to transfer other property to

optionees upon exercise of options, or such other provisions as shall be determined by the Board of Directors; provided, that such additional provisions shall not be inconsistent with any other term or condition of the Plan and such additional provisions shall not cause any Incentive Stock Option granted under the Plan to fail to qualify as an Incentive Stock Option within the meaning of Section 422 of the Code.

(b) ACCELERATION, EXTENSION, ETC. The Board of Directors may, in its sole discretion, (i) accelerate the date or dates on which all or any particular option or options granted under the Plan may be exercised or (ii) extend the dates during which all, or any particular, option or options granted under the Plan may be exercised; provided, however, that no such extension shall be permitted if it would cause the Plan to fail to comply with Section 422 of the Code or with Rule 16b-3 (if applicable).

13. GENERAL RESTRICTIONS.

(a) INVESTMENT REPRESENTATIONS. The Company may require any person to whom an option is granted, as a condition of exercising such option, to give written assurances in substance and form satisfactory to the Company to the effect that such person is acquiring the Common Stock subject to the option, for his or her own account for investment and not with any present intention of selling or otherwise distributing the same, and to such other effects as the Company deems necessary or appropriate in order to comply with federal and applicable state securities laws, or with

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covenants or representations made by the Company in connection with any public offering of its Common Stock, including any "lock-up" or other restriction on transferability.

(b) COMPLIANCE WITH SECURITIES LAW. Each option shall be subject to the requirement that if, at any time, counsel to the Company shall determine that the listing, registration or qualification of the shares subject to such option upon any securities exchange or automated quotation system or under any state or federal law, or the consent or approval of any governmental or regulatory body, or that the disclosure of non-public information or the satisfaction of any other condition is necessary as a condition of, or in connection with the issuance or purchase of shares thereunder, such option may not be exercised, in whole or in part, unless such listing, registration, qualification, consent or approval, or satisfaction of such condition shall have been effected or obtained on conditions acceptable to the Board of Directors. Nothing herein shall be deemed to require the Company to apply for or to obtain such listing, registration or qualification, or to satisfy such condition.

14. RIGHTS AS A SHAREHOLDER.

The holder of an option shall have no rights as a shareholder with respect to any shares covered by the option (including, without limitation, any rights to receive dividends or non-cash distributions with respect to such shares) until the date of issue of a stock certificate to him or her for such shares. No adjustment shall be made for dividends or other rights for which the record date is prior to the date such stock certificate is issued.

15. ADJUSTMENT PROVISIONS FOR RECAPITALIZATIONS, REORGANIZATIONS AND RELATED TRANSACTIONS.

(a) RECAPITALIZATIONS AND RELATED TRANSACTIONS. If, through or as a result of any recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar transaction, (i) the outstanding shares of Common Stock are increased, decreased or exchanged for a different number or kind of shares or other securities of the Company, or (ii) additional shares or new or different shares or other non-cash assets are distributed with respect to such shares of Common Stock or other securities, an appropriate and proportionate adjustment shall be made in (x) the maximum number and kind of shares reserved for issuance under or otherwise referred to in the Plan, (y) the number and kind of shares or other securities subject to any then outstanding options under the Plan, and (z) the price for each share subject to any then outstanding options under the Plan, without changing the aggregate purchase price as to which such options remain exercisable. Notwithstanding the foregoing, no adjustment shall be made pursuant to this Article 15 if such adjustment (i) would cause the Plan to fail to comply with Section 422 of the Code or with Rule 16b-3 or (ii) would be considered as the adoption of a new plan requiring stockholder approval.

(b) REORGANIZATION, MERGER AND RELATED TRANSACTIONS. All outstanding options under the Plan shall become fully exercisable for a period of sixty (60) days following the occurrence of any Trigger Event, whether or not such options are then exercisable under the provisions of the applicable agreements relating thereto. For purposes of the Plan, a "Trigger Event" is any one of the following events:

(i) the date on which shares of Common Stock are first purchased pursuant to a tender offer or exchange offer (other than such an offer by the Company, any Subsidiary, any employee benefit plan of the Company or of any Subsidiary or any entity holding shares or other securities of the Company for or pursuant to the terms of such plan), whether or not such offer is approved or opposed by the Company and regardless of the number of shares purchased pursuant to such offer;

(ii) the date the Company acquires knowledge that any person or group deemed a person under Section 13(d)-3 of the Exchange Act (other than the Company, any Subsidiary, any employee benefit plan of the Company or of any Subsidiary or any entity holding shares of Common Stock or other securities of the Company for or pursuant to the terms of any such plan or any individual or entity or group or affiliate thereof which acquired its beneficial ownership interest prior to the date the Plan was adopted by the Board), in a transaction or series of transactions, has become the beneficial owner, directly or indirectly (with beneficial ownership determined as provided in Rule 13d-3, or any successor rule, under the Exchange Act), of securities of the Company entitling the person or group to 30% or more of all votes (without consideration of the rights of any class or stock to elect directors by a separate class vote) to which all shareholders of the Company would be entitled in the election of the Board of Directors were an election held on such date;

(iii) the date, during any period of two consecutive years, when individuals who at the beginning of such period constitute the Board of Directors of the Company cease for any reason to constitute at least a majority thereof, unless the election, or the nomination for election by the shareholders of the Company, of each new director was approved by a vote of at least two-thirds of the directors then still in office who were directors at the beginning of such period; and

(iv) the date of approval by the shareholders of the Company of an agreement (a "reorganization agreement") providing for:

(A) The merger or consolidation of the Company with another corporation where the shareholders of the Company, immediately prior to the merger or consolidation, do not beneficially own, immediately after the merger or consolidation, shares of the corporation issuing cash or securities in the merger or consolidation entitling such shareholders to 80% or more of all votes (without consideration of the rights of any class of stock to elect directors by a separate class vote) to which all shareholders of such corporation would be entitled in the election of directors or where the members of the Board of Directors of the Company, immediately prior to the merger or consolidation, do not, immediately after the merger or consolidation, constitute a majority of the Board of Directors of the corporation issuing cash or securities in the merger or consolidation; or

(B) The sale or other disposition of all or substantially all the assets of the Company.

(c) BOARD AUTHORITY TO MAKE ADJUSTMENTS. Any adjustments under this Article 15 will be made by the Board of Directors, whose determination as to what adjustments, if any, will be made and the extent thereof will be final, binding and conclusive. No fractional shares will be issued under the Plan on account of any such adjustments.

#### 16. MERGER, CONSOLIDATION, ASSET SALE, LIQUIDATION, ETC.

(a) GENERAL. In the event of any sale, merger, transfer or acquisition of the Company or substantially all of the assets of the Company in which the Company is not the surviving corporation, and provided that after the Company shall have requested the acquiring or succeeding corporation (or an affiliate thereof), that equivalent options shall be substituted and such successor corporation shall have refused or failed to assume all options outstanding under the Plan or issue substantially equivalent options, then any or all outstanding options under the Plan shall accelerate and become exercisable in full immediately prior to such event. The Committee will notify holders of options under the Plan that any such options shall be fully exercisable for a period of fifteen (15) days from the date of such notice, and the options will terminate upon expiration of such notice.

(b) SUBSTITUTE OPTIONS. The Company may grant options under the Plan in substitution for options held by employees of another corporation who become

employees of the Company, or a subsidiary of the Company, as the result of a merger or consolidation of the employing corporation with the Company or a subsidiary of the Company, or as a result of the acquisition by the Company, or one of its subsidiaries, of property or stock of the employing corporation. The Company may direct that substitute options be granted on such terms and conditions as the Board of Directors considers appropriate in the circumstances.

17. NO SPECIAL EMPLOYMENT RIGHTS.

Nothing contained in the Plan or in any option shall confer upon any optionee any right with respect to the continuation of his or her employment by the Company or interfere in any way with the right of the Company at any time to terminate such employment or to increase or decrease the compensation of the optionee.

18. OTHER EMPLOYEE BENEFITS.

Except as to plans which by their terms include such amounts as compensation, the amount of any compensation deemed to be received by an employee as a result of the exercise of an option or the sale of shares received upon such exercise will not constitute compensation with respect to which any other employee benefits of such employee are determined, including, without limitation, benefits under any bonus, pension, profit-sharing, life insurance or salary continuation plan, except as otherwise specifically determined by the Board of Directors.

19. AMENDMENT OF THE PLAN.

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(a) The Board of Directors may at any time, and from time to time, modify or amend the Plan in any respect; PROVIDED, HOWEVER, that if at any time the approval of the shareholders of the Company is required under Section 422 of the Code or any successor provision with respect to Incentive Stock Options, or under Rule 16b-3, the Board of Directors may not effect such modification or amendment without such approval; and provided, further, that the provisions of Article 3(c) hereof shall not be amended more than once every six months, other than to comport with changes in the Code, the Employer Retirement Income Security Act of 1974, as amended, or the rules thereunder.

(b) The modification or amendment of the Plan shall not, without the consent of an optionee, affect his or her rights under an option previously granted to him or her. With the consent of the optionee affected, the Board of Directors may amend outstanding option agreements in a manner not inconsistent with the Plan. The Board of Directors shall have the right to amend or modify (i) the terms and provisions of the Plan and of any outstanding Incentive Stock Options granted under the Plan to the extent necessary to qualify any or all such options for such favorable federal income tax treatment (including deferral of taxation upon exercise) as may be afforded incentive stock options under Section 422 of the Code and (ii) the terms and provisions of the Plan and of any outstanding option to the extent necessary to ensure the qualification of the Plan under Rule 16b-3.

20. WITHHOLDING.

(a) The Company shall have the right to deduct from payments of any kind otherwise due to the optionee any federal, state or local taxes of any kind required by law to be withheld with respect to any shares issued upon exercise of options under the Plan. Subject to the prior approval of the Company, which may be withheld by the Company in its sole discretion, the optionee may elect to satisfy such obligations, in whole or in part, (i) by causing the Company to withhold shares of Common Stock otherwise issuable pursuant to the exercise of an option or (ii) by delivering to the Company shares of Common Stock already owned by the optionee. The shares so delivered or withheld shall have a Fair Market Value equal to such withholding obligation as of the date that the amount of tax to be withheld is to be determined. An optionee who has made an election pursuant to this Article 20(a) may only satisfy his or her withholding obligation with shares of Common Stock which are not subject to any repurchase, forfeiture, unfulfilled vesting or other similar requirements.

(b) The acceptance of shares of Common Stock upon exercise of an Incentive Stock Option shall constitute an agreement by the optionee (i) to notify the Company if any or all of such shares are disposed of by the optionee within two years from the date the option was granted or within one year from the date the shares were issued to the optionee pursuant to the exercise of the option, and (ii) if required by law, to remit to the Company, at the time of and in the case of any such disposition, an amount sufficient to satisfy the Company's federal, state and local withholding tax obligations with respect to such disposition, whether or not, as to both (i) and (ii), the optionee is in the employ of the Company at the time of such disposition.

(c) Notwithstanding the foregoing, in the case of a Reporting Person whose options have been granted in accordance with the provisions of Article 3(b) herein, no election to use shares for the payment of withholding taxes shall be effective unless made in compliance with any applicable requirements of Rule 16b-3.

21. CANCELLATION AND NEW GRANT OF OPTIONS, ETC.

The Board of Directors shall have the authority to effect, at any time and from time to time, with the consent of the affected optionees, (i) the cancellation of any or all outstanding options under the Plan and the grant in substitution therefor of new options under the Plan covering the same or different numbers of shares of Common Stock and having an option exercise price per share which may be lower or higher than the exercise price per share of the canceled options or (ii) the amendment of the terms of any and all outstanding options under the Plan to provide an option exercise price per share which is higher or lower than the then-current exercise price per share of such outstanding options.

22. EFFECTIVE DATE AND DURATION OF THE PLAN.

(a) EFFECTIVE DATE. The Plan shall become effective when adopted by the Board of Directors, but no Incentive Stock Option granted under the Plan shall become exercisable unless and until the Plan shall have been approved by the Company's shareholders. If such shareholder approval is not obtained within twelve months after the date of the Board's adoption of the Plan, no options previously granted under the Plan shall be deemed to be Incentive Stock Options and no Incentive Stock Options shall be granted thereafter. Amendments to the Plan not requiring shareholder approval shall become effective when adopted by the Board of Directors; amendments requiring shareholder approval (as provided in Article 21) shall become effective when adopted by the Board of Directors, but no Incentive Stock Option granted after the date of such amendment shall become exercisable (to the extent that such amendment to the Plan was required to enable the Company to grant such Incentive Stock Option to a particular optionee) unless and until such amendment shall have been approved by the Company's shareholders. If such shareholder approval is not obtained within twelve months of the Board's adoption of such amendment, any Incentive Stock Options granted on or after the date of such amendment shall terminate to the extent that such amendment to the Plan was required to enable the Company to grant such option to a particular optionee. Subject to this limitation, options may be granted under the Plan at any time after the effective date and before the date fixed for termination of the Plan.

(b) TERMINATION. Unless sooner terminated in accordance with Article 16, the Plan shall terminate upon the earlier of (i) the close of business on the day next preceding the tenth anniversary of the date of its adoption by the Board of Directors, or (ii) the date on which all shares available for issuance under the Plan shall have been issued pursuant to the exercise or cancellation of options granted under the Plan. If the date of termination is determined under (i) above, then options outstanding on such date shall continue to have force and effect in accordance with the provisions of the instruments evidencing such options.

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23. PROVISION FOR FOREIGN PARTICIPANTS.

The Board of Directors may, without amending the Plan, modify awards or options granted to participants who are foreign nationals or employed outside the United States to recognize differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

24. GOVERNING LAW.

The provisions of this Plan shall be governed and construed in accordance with the laws of the State of New York without regard to the principles of conflicts of laws.

Adopted by the Board of Directors on November 20, 1998.

PROXY

ENZO BIOCHEM, INC.  
60 EXECUTIVE BOULEVARD  
FARMINGDALE, NEW YORK 11735

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned hereby appoints Elazar Rabbani, Ph.D. and Shahram K. Rabbani as Proxies, each with the power to appoint his substitute, and hereby authorizes them to represent and to vote, as designated below, all the shares of the Common

Stock of Enzo Biochem, Inc. held of record by the undersigned on November 24, 1998, at the Annual Meeting of Shareholders to be held on January 13, 1999 or any adjournment thereof.

<TABLE>  
<S> <C> <C>  
PROPOSAL 1. ELECTION OF BARRY W. WEINER AND JOHN J. DELUCCA AS CLASS II DIRECTORS.

// FOR all nominees // WITHHOLDING AUTHORITY  
(except as marked to the contrary below) as to all nominees

(INSTRUCTION: To withhold authority to vote for any individual nominee, print that nominee's name on the line provided below.)  
Withheld for:

</TABLE>

(CONTINUED ON BACK)  
(CONTINUED FROM FRONT)

<TABLE>  
<S> <C> <C> <C>  
PROPOSAL 2. APPROVAL OF THE COMPANY'S 1999 STOCK OPTION PLAN.  
// FOR // AGAINST // ABSTAIN  
PROPOSAL 3. RATIFICATION OF THE APPOINTMENT OF ERNST & YOUNG LLP AS INDEPENDENT  
AUDITORS FOR THE FISCAL YEAR ENDING JULY 31, 1999.  
// FOR // AGAINST // ABSTAIN

</TABLE>

In their discretion, the Proxies are authorized to vote upon such other business as may properly come before the Annual Meeting. This proxy, when properly executed, will be voted in the manner directed herein by the undersigned shareholder. If no direction is made, this proxy will be voted FOR Proposals 1, 2 and 3.

PLEASE SIGN EXACTLY AS NAME APPEARS BELOW. WHEN SHARES OF COMMON STOCK ARE HELD BY JOINT TENANTS, BOTH SHOULD SIGN.

DATED: \_\_\_\_\_, 199\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature if held jointly

(WHEN SIGNING AS ATTORNEY, AS EXECUTOR, AS ADMINISTRATOR, TRUSTEE OR GUARDIAN, PLEASE GIVE FULL TITLE AS SUCH. IF A CORPORATION, PLEASE SIGN IN FULL CORPORATE NAME BY PRESIDENT OR OTHER AUTHORIZED OFFICER. IF A PARTNERSHIP, PLEASE SIGN IN PARTNERSHIP NAME BY AUTHORIZED PERSON.)