

Prospectus Supplement  
Dated October 24, 2000

This document supplements and amends the prospectus dated May 12, 2000, relating to the offer of Common Stock issuable upon exercise of options and warrants, Common Stock issuable upon exercise of Class A Warrants and Class B Warrants issued in a private placement in 1995 and Common Stock underlying Unit Purchase Options issued to the underwriter in Cytoclonal's initial public offering in November 1995. This prospectus supplement is incorporated by reference into the prospectus and should be read in conjunction with, and may not be delivered or utilized without, the prospectus dated May 12, 2000. The information in this prospectus supplement replaces and supercedes the information set forth under the heading "Selling Security Holders" in the prospectus dated May 12, 2000.

ADDITIONAL SELLING SECURITYHOLDERS

The information in the table appearing under the heading "Selling Securityholders" on pages 12-15 in the prospectus is hereby amended by adding the information below with respect to certain selling shareholders not previously listed in the prospectus. The following table which sets forth information regarding the beneficial ownership of shares of Cytoclonal common stock by the selling shareholders as of October 13, 2000, and the number of shares of common stock being offered, has been updated from the table contained in the prospectus dated May 12, 2000, to (a) include as selling shareholders certain transferees of (1) the Unit Purchase Options previously owned by Roan/Meyers Associates, L.P. (formerly known as Janssen-Meyers Associates, L.P.) and (2) the warrants held by Gruntal & Co., L.L.C. and (b) reflect the transfer of Unit Purchase Options and warrants that took place prior to the date of this prospectus supplement.

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Name of Selling Securityholder	Common Stock Beneficially Owned Before This Offering(1)	Common Stock Which May Be Sold Pursuant to This Prospectus	Common Stock Beneficially Owned After Offering(2)	Percentage (%) of Common Stock Owned After Offering(3)
<S> Roan/Meyers Associates, L.P.(4)	<C> 2,413,258	<C> 262,180	<C> 2,151,078	12.2%
Bruce Meyers(5)	2,071,058	102,814	1,968,244	11.1
D.H. Blair Investment Banking Corp.(6)	333,500	202,500	131,000	*

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<S> Gruntal & Co., L.L.C.(7)	<C> 135,000	<C> 135,000	<C> 0	0
Jeffrey Kraws(8)	49,500	49,500	0	0
Roger Kahn(8)	45,000	45,000	0	0

Craig Pierson(8)	30,000	30,000	0	0
Karen Feinberg(8)	12,600	12,600	0	0
Joseph Russo(8)	9,000	9,000	0	0
Howard Bochner(8)	9,000	9,000	0	0
Gary Parton(8)	5,400	5,400	0	0
Peter Fry(8)	2,700	2,700	0	0
Jack Suggs(8)	1,800	1,800	0	0
John Acierno, Jr.(9)	348	348	0	0
Lea Adar(9)	348	348	0	0

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<S> American Stock Transfer & Trust Co./George Karfunkle(9)	<C> 700	<C> 700	<C> 0	<C> 0
Eugene Applebaum(9)	104	104	0	0
Lisa S. Applebaum(9)	104	104	0	0
Edward Atkins(9)	176	176	0	0
Frederick J. Bailey(9)	524	524	0	0
David Barone(9)	348	348	0	0
Michael Bates(9)	348	348	0	0
Robert Bauers(9)	348	348	0	0
Bruce MacNaught Trust(9)	700	700	0	0
Edward Burkhardt (9)	700	700	0	0
Brian Burns(9)	700	700	0	0
David Burr(9)	348	348	0	0
Burt C. Faure(9)	176	176	0	0
C.L.F.S., Ltd.(9)	176	176	0	0
Douglas Colbert(9)	176	176	0	0
Martin Cooper(9)	348	348	0	0

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<S> Andrew Stillman IRA Delaware Charter Guarantee & Trust Co.(9)	<C> 700	<C> 700	<C> 0	<C> 0
Robert Davimos(9)	348	348	0	0
Delaware Charter Guarantee & Trust Co./Dean Gestel(9)	488	488	0	0
Delaware Charter Guarantee & Trust Co./Barry Yeskel(9)	176	176	0	0
Dr. Neil & Susan Friedman(9)	700	700	0	0
Dr. George Jordan(9)	348	348	0	0
Dr. Phillip Rosett(9)	176	176	0	0
Dr. Robert & Linda Schmier(9)	176	176	0	0
Gary Duncan(9)	348	348	0	0
Elliot Lang(9)	700	700	0	0
Robert Eramo(9)	176	176	0	0
Douglas & Beverly Feurring(9)	176	176	0	0
John Friede(9)	348	348	0	0

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<S> Douglas Friedenberg(9)	<C> 176	<C> 176	<C> 0	<C> 0
Robert B. Gay(9)	348	348	0	0
Anthony & Valarie Gentile(9)	348	348	0	0
Dean Gestal(9)	208	208	0	0

Joseph Giamanco(9)	1048	1048	0	0
James P. Gierczyk(9)	176	176	0	0
John Gimbel(9)	700	700	0	0
Mark P. Greenstein(9)	176	176	0	0
Robert Grossman(9)	66	66	0	0
James T. Guida(9)	700	700	0	0
Richard Haughwout(9)	700	700	0	0
Gerald Holmes(9)	700	700	0	0
Robert Johnson(9)	700	700	0	0
William Kolb, Jr.(9)	700	700	0	0
Lebanon Valley Auto Racing(9)	348	348	0	0
Herbert Lerman(9)	348	348	0	0

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Name of Selling Securityholder	Common Stock Beneficially Owned Before This Offering(1)	Common Stock Which May Be Sold Pursuant to This Prospectus	Common Stock Beneficially Owned After Offering(2)	Percentage (%) of Common Stock Owned After Offering(3)
<S>	<C>	<C>	<C>	<C>
Robert Maxon(9)	348	348	0	0
Meyers Janssen(9)	700	700	0	0
Nathan E. Nachlas(9)	176	176	0	0
Denis Nayden(9)	700	700	0	0
Joyce Nelson(9)	524	524	0	0
Omnitek, Inc.(9)	700	700	0	0
Ross H. Partrich(9)	36	36	0	0
Jerry Peterson(9)	348	348	0	0
Charles Potter(9)	176	176	0	0
Sylvia Potter(9)	176	176	0	0
Louis Phillip(9)	348	348	0	0
Randalea Investments, Inc.(9)	700	700	0	0
Arthur Rauch(9)	176	176	0	0
Richard Davimos Trust(9)	348	348	0	0
Claudia C.	140	140	0	0

Rouhana(9)

William Rouhana, Jr.(9)	140	140	0	0
Mark & Amy Schlosser(9)	176	176	0	0
Harlan Smith(9)	176	176	0	0

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Name of Selling Securityholder	Common Stock Beneficially Owned Before This Offering(1)	Common Stock Which May Be Sold Pursuant to This Prospectus	Common Stock Beneficially Owned After Offering(2)	Percentage (%) of Common Stock Owned After Offering(3)
Thames Investment Services, Inc.(9)	348	348	0	0
Frederick E. Von Stange(9)	68	68	0	0
Lee Vosburgh(9)	176	176	0	0
Melvyn I. Weiss(9)	700	700	0	0
Carol N. Wyett(9)	104	104	0	0
Christopher A. Wyett(9)	104	104	0	0
Pamela A. Wyett(9)	104	104	0	0
Todd A. Wyett(9)	152	152	0	0
Brent Zanini(9)	348	348	0	0

\* Less than 1%

- (1) Assumes the exercise of the Unit Purchase Options, Class C Warrants, Class D Warrants, Class A Warrants, Class B Warrants and other options and warrants held by the Selling Securityholders, but does not include shares of common stock that may be acquired by the Selling Securityholders upon exercise of options which have not vested within 60 days of this prospectus which shares, if any, will be added to the number of shares listed by one or more supplements to this prospectus. Furthermore, the inclusion in this prospectus of the stated number of shares does not constitute a commitment to sell any or all of such shares. The number of shares of common stock offered shall be determined from time to time by each Selling Securityholder at his or her sole discretion.

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- (2) Assume all of the shares of Common Stock offered by this prospectus are sold.
- (3) Based on an aggregate of 17,677,304 common stock that will be

issued and outstanding upon the completion of this offering, consisting of 15,797,064 shares of common stock issued and outstanding as of October 13, 2000 and the 1,880,240 to which this prospectus relates.

- (4) Mr. Bruce Meyers is a 100% stockholder and an officer and director of the corporate general partner of RMA. Includes (i) 262,180 shares of Common Stock issuable upon the exercise of 65,545 Unit Purchase Options and underlying Class C and Class D Warrants to RMA for underwriting services in connection with the Company's initial public offering in November 1995 (the "IPO"), (ii) 81,530 shares of Common Stock issuable upon the exercise of a unit purchase option and underlying Class E Warrants granted to RMA for placement agent services in connection with the Company's April 1998 private placement (the "April 1998 Private Placement") and (iii) the aggregate amount of shares of Common Stock and Series A Preferred Stock beneficially owned by Mr. Meyers. See (5) below.
- (5) Consists of (i) 1,865,095 shares of Common Stock, (ii) 102,814 shares of Common Stock issuable upon the exercise of 25,703.5 Unit Purchase Options and underlying Class C and Class D Warrants originally granted to RMA for underwriting services in connection with the IPO, (iii) 33,986 shares of Common Stock issuable upon the exercise of a currently exercisable unit purchase option and underlying Class E Warrants granted to RMA for placement agent services in connection with the April 1998 Private Placement, (iv) 30,563 shares of Common Stock issuable upon the exercise of currently exercisable Class E Warrants directly held by Mr. Meyers and (v) 38,600 shares of Common Stock held by The Meyers Foundation of which Mr. Meyers has voting control. See note (4) above. Does not include 26,620 shares of Common Stock issuable upon the conversion of 26,620 shares of Series A Preferred Stock.

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- (6) Includes 202,500 shares of Common Stock issuable upon exercise of warrants at \$3.75 per share.
- (7) Represents warrants to purchase 300,000 shares of Common Stock at \$15.00 per share, of which 100,000 are currently exercisable, 100,000 will vest in May 2000 and 100,000 will vest in August, 2000. The warrants were issued to Gruntal & Co., L.L.C. in consideration for general investment banking services provided by Gruntal & Co., L.L.C. to the Company.
- (8) Represents shares of Common Stock issuable upon exercise of warrants transferred by Gruntal & Co., L.L.C.
- (9) Represents shares of Common Stock issuable upon exercise of Unit Purchase Options and the underlying Class C Warrants and Class D Warrants in connection with transfer of Unit Purchase Options from RMA on September 18, 2000.

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