

FORM 3

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

OMB APPROVAL

OMB Number: 3235-0104
Estimated average burden
hours per response... 0.5

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of
the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person Merrill Lynch Ventures LP 2001	2. Date of Event Requiring Statement (Month/Day/Year) 06/21/2004	3. Issuer Name and Ticker or Trading Symbol SENOMYX INC [SNMX]
(Last) (First) (Middle) 4 WORLD FINANCIAL CENTER, 23RD FLOOR		4. Relationship of Reporting Person(s) to Issuer (Check all applicable) ____ Director ____ 10% Owner ____ Officer (give title below) ____ Other (specify below)
(Street) NEW YORK, NY 10080		5. If Amendment, Date Original Filed(Month/Day/Year)
(City) (State) (Zip)	6. Individual or Joint/Group Filing(Check Applicable Line) ____ Form filed by One Reporting Person ____ Form filed by More than One Reporting Person	

Table I - Non-Derivative Securities Beneficially Owned			
1. Title of Security (Instr. 4)	2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownership Form: Direct (D) or Indirect (I) (Instr. 5)	4. Nature of Indirect Beneficial Ownership (Instr. 5)

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

SEC 1473 (7-02)

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 4)	2. Date Exercisable and Expiration Date (Month/Day/Year)		3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise Price of Derivative Security	5. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 5)	6. Nature of Indirect Beneficial Ownership (Instr. 5)
	Date Exercisable	Expiration Date	Title	Amount or Number of Shares			
Series E Preferred	(1)	(2)	Common Stock	3,448,394 (3)	\$ (3)	D (4)	

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Merrill Lynch Ventures LP 2001 4 WORLD FINANCIAL CENTER, 23RD FLOOR NEW YORK, NY 10080		X		
Merrill Lynch Group, Inc 4 WORLD FINANCIAL CENTER, 23RD FLOOR NEW YORK, NY 10080		X		
MERRILL LYNCH & CO INC 4 WORLD FINANCIAL CENTER, 23RD FLOOR NEW YORK, NY 10080		X		

Signatures

Frank Marinaro, VP, Merrill Lynch Ventures, LLC, its general partner	06/21/2004
**Signature of Reporting Person	Date
Frank Marinaro, attorney in fact	06/21/2004
**Signature of Reporting Person	Date
Frank Marinaro, attorney-in-fact	06/21/2004
**Signature of Reporting Person	Date

Explanation of Responses:

* If the form is filed by more than one reporting person, *see* Instruction 5(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

(1) Immed.

(2) N/A

(3) The number of shares listed in column 3 is the number of preferred shares held by the Reporting Person as of the date hereof. These shares are convertible at any time at the option of the holder, and will automatically convert upon the closing of the Issuer's initial public offering, in each case into the number of shares of common stock obtained by multiplying by the conversion rate listed in column 4 (.40798874).

(4) The Reporting Person is a partnership of which Merrill Lynch Ventures, LLC is the general partner, which is a wholly owned subsidiary of Merrill Lynch Group, Inc., which is a wholly-owned subsidiary of Merrill Lynch & Co., Inc. Each of the reporting owners disclaims beneficial ownership of these securities.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *See* Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

POWER OF ATTORNEY

To Prepare and Execute Documents Pursuant to Sections 13 and 16

Of the Securities Exchange Act of 1934, as Amended,

and Rules Thereunder, by and on Behalf of

MERRILL LYNCH GROUP, INC.

Know all by these presents, that the undersigned hereby constitutes and appoints Frank J. Marinaro and Katherine Hudson Zrike each individually its true and lawfully attorney-in-fact to:

(1) prepare and execute, for and on behalf of the undersigned, any and all forms, schedules, reports and other documents relating to Merrill Lynch Group, Inc. s direct or indirect ownership

(2) do and perform any and all acts for and on behalf of the undersigned which may be necessary or desirable to comply with the requirements of Sections 13 and 16 of the Exchange Act includ

(3) take any other action of any type whatsoever in connection with the foregoing which, in the opinion of each such attorney-in-fact, may be of benefit to, in the best interest of, or lega

The undersigned hereby grants to each such attorney-in-fact full power and authority to do and perform all and every act and thing whatsoever requisite, necessary and proper to be done in t

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 7th day of February 2001.

MERRILL LYNCH GROUP, INC.

By: /s/ Stanley Schaefer

Vice President

No Trailer - DO NOT delete

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The undersigned hereby grants to each such attorney-in-fact full power and authority to do and perform all and every act and thing whatsoever requisite, necessary and proper to be done in t

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 6th day of February 2001.

MERRILL LYNCH & CO., INC.

By: /s/ Barry S. Friedberg

Executive Vice President