

OMB APPROVAL
EXPIRES: October 31, 1994
ESTIMATED AVERAGE BURDEN
HOURS PER RESPONSE 14.90

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934

(Amendment No. 2)*

Applied Bioscience International, Inc.

(Name of Issuer)

Common Stock

(Title of Class of Securities)

03791710

(CUSIP NUMBER)

Check the following box if a fee is being paid with this statement. [] (A fee is not required only if the filing person: (1) has a previous statement on file reporting beneficial ownership of more than five percent of the class of securities described in Item 1; and (2) has filed no amendment subsequent thereto reporting beneficial ownership of five percent or less of such class.) (See Rule 13d-7).

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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CUSIP NO. 03791710 13G

1. NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Merrill Lynch & Co., Inc.

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* Joint Filing

(a) []
(b) []

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

NONE

6. SHARED VOTING POWER

2,901,600

7. SOLE DISPOSITIVE POWER

NONE

8. SHARED DISPOSITIVE POWER

2,901,600

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,901,600

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

10.3%

12. TYPE OF REPORTING PERSON*

HC, CO

*SEE INSTRUCTION BEFORE FILING OUT!

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CUSIP NO. 03791710 13G

1. NAME OF REPORTING PERSON

S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Merrill Lynch Group, Inc.

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* Joint Filing

(a) []

(b) []

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

NONE

6. SHARED VOTING POWER

2,898,400

7. SOLE DISPOSITIVE POWER

NONE

8. SHARED DISPOSITIVE POWER

2,898,400

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,898,400

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

10.3%

12. TYPE OF REPORTING PERSON*

HC, CO

*SEE INSTRUCTION BEFORE FILING OUT!

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CUSIP NO. 03791710 13G

1. NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Princeton Services, Inc.

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* Joint Filing

(a) []
(b) []

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

NONE

6. SHARED VOTING POWER

2,896,900

7. SOLE DISPOSITIVE POWER

NONE

8. SHARED DISPOSITIVE POWER

2,896,900

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,896,900

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

10.2%

12. TYPE OF REPORTING PERSON*

HC, CO

*SEE INSTRUCTION BEFORE FILING OUT!

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CUSIP NO. 03791710 13G

1. NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Fund Asset Management, L.P.

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* Joint Filing

(a) []
(b) []

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

NONE

6. SHARED VOTING POWER

2,286,200

7. SOLE DISPOSITIVE POWER

NONE

8. SHARED DISPOSITIVE POWER

2,286,200

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,286,200

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

8.1%

12. TYPE OF REPORTING PERSON*

HC, CO

*SEE INSTRUCTION BEFORE FILING OUT!

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CUSIP NO. 03791710 13G

1. NAME OF REPORTING PERSON

S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Merrill Lynch Phoenix Fund, Inc.

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* Joint Filing

(a) []

(b) []

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH

5. SOLE VOTING POWER

NONE

6. SHARED VOTING POWER

1,694,800

7. SOLE DISPOSITIVE POWER

NONE

8. SHARED DISPOSITIVE POWER

1,694,800

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,694,800

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9

6.0%

12. TYPE OF REPORTING PERSON*

HC, CO

*SEE INSTRUCTION BEFORE FILING OUT!

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ITEM 1 (a) Name of Issuer:

Applied Bioscience International, Inc.

ITEM 1 (b) Address of Issuer's Principal Executive Offices:

4350 North Fairfax Drive
Arlington, VA 22203-1627

ITEM 2 (a) Name of Persons Filing:

Merrill Lynch & Co., Inc.
Merrill Lynch Group, Inc..
Princeton Services, Inc.
Fund Asset Management, L.P.
Merrill Lynch Phoenix Fund, Inc.

ITEM 2 (b) Address of Principal Business Office or, if none, Residence:

Merrill Lynch & Co., Inc.
World Financial Center, North Tower
250 Vesey Street
New York, New York 10281

Merrill Lynch Group, Inc.
World Financial Center, North Tower
250 Vesey Street
New York, New York 10281

Princeton Services, Inc.
800 Scudders Mill Road
Plainsboro, New Jersey 08536

Fund Asset Management, L.P.
800 Scudders Mill Road
Plainsboro, New Jersey 08536

Merrill Lynch Phoenix Fund, Inc.
800 Scudders Mill Road
Plainsboro, New Jersey 08536

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ITEM 2 (c) Citizenship:

See Item 4 of Cover Pages

ITEM 2 (d) Title of Class of Securities:

Common Stock

ITEM 2 (e) CUSIP NUMBER:

03791710

ITEM 3

Merrill Lynch & Co., Inc. ("ML&Co."), Merrill Lynch Group, Inc. ("ML Group") and Princeton Services, Inc. ("PSI") are parent holding companies, in accordance with (S) 240.13d-1(b) (ii) (G). Fund Asset Management, L.P. d/b/a Fund Asset Management ("FAM") is an investment adviser registered under (S) 203 of the Investment Company Act of 1940. Merrill Lynch Phoenix Fund, Inc. (the "Fund") is an investment company registered under Section 8 of the Investment Company Act of 1940.

ITEM 4 Ownership

(a) Amount Beneficially Owned:

See Item 9 of Cover Pages. Pursuant to (S) 240.13d-4, ML&Co., ML Group, PSI, FAM and the Fund (the "Reporting Persons") disclaim beneficial ownership of the securities of Applied Bioscience International, Inc. (the "Company")

referred to herein, and the filing of this Schedule 13G shall not be construed as an admission that the Reporting Persons are, for the purposes of Section 13(d) or 13(g) of the Securities Exchange Act of 1934, the beneficial owner of any securities of the Company covered by this statement.

(b) Percent of Class:

See Item 11 of Cover Pages

(c) Number of shares as to which such person has:

(i) sole power to vote or to direct the vote:

See Item 5 of Cover Pages

(ii) shared power to vote or to direct the vote:

See Item 6 of the Cover Pages

(iii) sole power to dispose of or to direct the disposition of:

See Item 7 of Cover Pages

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(iv) share power to dispose of or direct the disposition of:

See Item 8 of Cover Pages

ITEM 5 Ownership of Five Percent or Less of a Class.

Not Applicable

ITEM 6 Ownership of More than Five Percent on Behalf of Another Person.

FAM is an investment adviser registered under Section 203 of the Investment Advisers Act of 1940 and acts as an investment adviser to investment companies registered under Section 8 of the Investment Company Act of 1940. With respect to securities held by those investment companies, several persons have the right to receive, or the power to direct the receipt of dividends from, or the proceeds from the sale of, such securities. Merrill Lynch Phoenix Fund, Inc., a reporting person on this Schedule 13G for which FAM serves as investment adviser, has an interest that relates to more than 5% of the class of securities reported herein. No other person has an interest that relates to more than 5% of the class of securities reported herein.

ITEM 7 Identification and Classification of the Subsidiary Which

Acquired the Security Being Reported on by the Parent Holding Company.

See Exhibit A

ITEM 8 Identification and Classification of Members of the Group.

Not Applicable

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ITEM 9 Notice of Dissolution of Group.

Not Applicable

ITEM 10 Certification

By signing below each of the undersigned certifies that, to the best of their knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purpose or effect.

Signature.

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After reasonable inquiry and to the best of my knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Date: June 9, 1995

Merrill Lynch & Co, Inc.

/s/ David L. Dick

Name: David L. Dick
Title: Assistant Secretary

Merrill Lynch Group, Inc.

/s/ David L. Dick

Name: David L. Dick
Title: Secretary

Princeton Services, Inc.

/s/ David L. Dick

Name: David L. Dick
Title: Attorney-In-Fact*

* Signed pursuant to a power of attorney, dated February 10, 1994, included as an Exhibit to Schedule 13G filed with the Securities and Exchange Commission by Merrill Lynch Group, Inc. et. al. on February 14, 1994 with respect to Dial REIT Inc.

Fund Asset Management, L.P

/s/ David L. Dick

Name: David L. Dick
Title: Attorney-In-Fact**

Merrill Lynch Phoenix Fund, Inc.

/s/ David L. Dick

Name: David L. Dick
Title: Attorney-In-Fact**

** Signed pursuant to a power of attorney, dated February 10, 1994, included as an Exhibit to Schedule 13G filed with the Securities and Exchange Commission by Merrill Lynch Group, Inc. et. al. on February 14, 1994 with respect to Matrix Services Company.

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EXHIBIT A TO SCHEDULE 13G

ITEM 7 DISCLOSURE RESPECTING SUBSIDIARIES

Three of the persons filing this report, Merrill Lynch & Co., Inc., a Delaware corporation with its principal place of business at World Financial Center, North Tower, 250 Vesey Street, New York, New York ("ML&Co."), Merrill Lynch Group, Inc., a Delaware corporation with its principal place of business at World Financial Center, North Tower, 250 Vesey Street, New York, New York ("ML Group"), and Princeton Services, Inc. a Delaware corporation with its principal place of business at 800 Scudders Mill Road, Plainsboro, New Jersey, ("PSI") are parent holding companies pursuant to (S)240 13d-1(b) (1) (ii) (G). Pursuant to the instructions in Item 7 of Schedule 13G, the relevant subsidiaries of Merrill Lynch & Co. are Merrill Lynch Pierce, Fenner & Smith Incorporated, a Delaware Corporation with its principal place of business at 250 Vesey Street, New York, New York ("MLPF&S"), ML Group and PSI, which is

the general partner of Merrill Lynch Asset Management, L.P. (d/b/a) Merrill Lynch Asset Management ("MLAM") and Fund Asset Management, L.P. (d/b/a) Fund Asset Management ("FAM"). The relevant subsidiary of Merrill Lynch Group is PSI.

MLPF&S, a wholly-owned direct subsidiary of ML&Co. and a broker-dealer, may be deemed to be the beneficial owner of securities of Applied Biosciences International, Inc. (the "Company") held in customer accounts over which MLPF&S has discretionary power or held by unit investment trusts for which MLPF&S is the sponsor.

Merrill Lynch Bank Suisse, S.A., a bank organized and existing under the laws of Switzerland, is an indirect wholly-owned subsidiary of ML Group and is traded, pursuant to a "no action" letter issued to ML&Co. dated November 24, 1993 from the staff of the Division of Corporation Finance of the Securities and Exchange Commission, as an institutional investor within the meaning of (S)240.13d-1(b)(1)(ii)(A)(G) for purposes of Schedule 13G reporting. Bank Suisse may be deemed to beneficially own certain of the securities reported herein.

ML Group, a wholly-owned direct subsidiary of ML&Co., may be deemed to be the beneficial owner of 10.3% of the common stock of the Company by virtue of its control of its PSI, a wholly-owned direct subsidiary of ML Group and Merrill Lynch Bank (Suisse) S.A. ("Bank Suisse"), an indirect wholly-owned subsidiary of ML Group and a bank organized and existing under the laws of Switzerland, which is treated, pursuant to a "no action" letter issued to ML&Co. dated November 24, 1993 from the staff of the Division of Corporation Finance of the Securities and Exchange Commission, as an institutional investor within the meaning of Section 240.13d-1(b)(1)(ii)(A)-(G) for purposes of Schedule 13G reporting.

PSI may be deemed to be the beneficial owner of 10.2% of the common stock of the Company by virtue of its being the general partner of Merrill Lynch Asset Management, L.P. (d/b/a) Merrill Lynch Asset Management ("MLAM") and Fund Asset Management, L.P. (d/b/a) Fund Asset Management ("FAM").

MLAM, a Delaware limited partnership with its principal place of business at 800 Scudders Mill Road, Plainsboro, New Jersey, is an investment adviser registered under Section 203 of the Investment Advisers Act of 1940. MLAM may be deemed to be the beneficial owner of less than 5% of the common stock of the Company by virtue of its acting as investment adviser to investment companies registered under Section 8 of the Investment Company Act of 1940.

FAM, a Delaware limited partnership with its principal place of business at 800 Scudders Mill Road, Plainsboro, New Jersey, is an investment adviser registered under Section 203 of the Investment Advisers Act of 1940. FAM may be deemed to be the beneficial owner of 8.1% of the common stock of the Company by virtue of its acting as investment adviser to certain investment companies registered under Section 8 of the Investment Company Act of 1940.

One registered investment company advised by FAM, Merrill Lynch Phoenix Fund, Inc. (the "Fund"), is the beneficial owner of 6.0% of the common stock of the company.

Pursuant to (S)240.13d-4, ML & Co., MLPF&S, ML Group, Bank Suisse, PSI, MLAM, FAM and the Fund disclaim beneficial ownership of the securities of the Company, and the filing of this Schedule 13G shall not be construed as an admission that any such entity is, for the purposes of Section 13(d) or 13(g) of the Securities Exchange Act of 1934, the beneficial owner of any securities of the Company.