Solexa, Inc. Form SC 13D/A December 15, 2006

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549

SCHEDULE 13D/A (RULE 13d-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULE 13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO RULE 13d-2(a)

(Amendment No. 1) *

SOLEXA, INC.

(Name of Issuer)

COMMON STOCK

(Title of Class of Securities)

83420X10 5

(CUSIP Number)

James Abell
c/o Abingworth Management Limited
Princess House
38 Jermyn Street
London, England SW1Y 6DN
(+44 (0)20 7534 1500)

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

December 1, 2006

(Date of Event Which Requires Filing of This Statement)

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

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See Rule 13d-7 for other parties to whom copies are to be sent.

*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 disclosures provided in a prior cover page.

The information required on 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 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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1	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSON (ENTITIES ONLY) Abingworth Management Limited				
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a)[] (b)[]				
3	SEC USE ONLY				
4	SOURCE OF FUNDS AF				
5	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEMS 2(d) or 2(e) N/A []				
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NAME OF REPORTING PERSONS
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSON (ENTITIES ONLY)
Abingworth Bioventures III B L.P.

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1	NAME OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSON (ENTITIES ONLY) Abingworth Bioventures III Executives L.P.					
2	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a)[] (b)[]					
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SCHEDULE 13D/A

This Schedule 13D/A (the "Amendment") amends the Schedule 13D, filed by the Reporting Persons (as defined below) on February 13, 2006.

ITEM 1. SECURITY AND ISSUER.

- (a) The class of equity securities to which this statement relates is common stock, par value \$0.01 per share (the "Common Stock"), of Solexa, Inc., a Delaware corporation (the "Issuer" or "SLXA").
- (b) The principal executive offices of the Issuer are located at 25861 Industrial Blvd., Hayward, California, 94545.

ITEM 2. IDENTITY AND BACKGROUND.

(a) This Statement is being filed on behalf of: (i) Abingworth Management Limited ("Abingworth Management"), (ii) Abingworth Bioventures II SICAV ("ABV II SICAV"), (iii) Abingworth Bioventures II A L.P. ("ABV II A"), (iv) Abingworth Bioventures III A L.P. ("ABV III B"), (vi) Abingworth Bioventures III B L.P. ("ABV III B"), (vi) Abingworth Bioventures III C L.P. ("ABV III C"), and (vii) Abingworth Bioventures III Executives L.P. ("ABV III Executives", together with ABV II SICAV, ABV II A, ABV III A, ABV III B and ABV III C the "Funds").

The Funds share a manager, Abingworth Management, and are affiliated funds, and, on this basis, may be deemed to beneficially own the shares held by one another. Each of the Funds disclaims beneficial ownership of such shares of Common Stock except for the shares, if any, such Fund holds of record. Abingworth Management may be deemed to beneficially own the shares of Common Stock held of record by the Funds and Abingworth Bioequities Master Fund Limited ("ABE") for which Abingworth Management is the manager. The persons named in this paragraph (other than ABE) are referred to individually herein as a "Reporting Person" and collectively as the "Reporting Persons."

- (b) The address of the principal business office of Abingworth Management, ABV II SICAV, ABV II A, ABV III A, ABV III B, ABV III C, and ABV III Executives is c/o Abingworth Management Limited, Princess House, 38 Jermyn Street, London, England SW1Y 6DN.
- (c) The principal business of the Funds is to invest in and assist growth-oriented businesses in the life science and biomedical industries. The principal business of Abingworth Management is to manage the affairs of the Funds.
- (d) During the five years prior to the date hereof, none of the Reporting Persons has been convicted in a criminal proceeding.
- (e) During the five years prior to the date hereof, none of the Reporting Persons has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction ending in a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, Federal or State securities laws or finding any violation with respect to such laws.
 - (f) Abingworth Management is a corporation organized under the laws of

England. ABV II SICAV is a corporation organized under the laws of Luxembourg.

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Each of ABV II A, ABV III A, ABV III B, and ABV III C is a limited partnership organized under the laws of England. ABV III Executives is a limited partnership organized under the laws of the State of Delaware.

ITEM 3. SOURCE AND AMOUNT OF FUNDS OR OTHER CONSIDERATION.

Not applicable.

ITEM 4. PURPOSE OF TRANSACTION.

Depending on market conditions and the market price of the Issuer's Common Stock, the Reporting Persons may dispose of additional shares of the Issuer. Except as set forth above, none of the Reporting Persons has any present plans which relate to or would result in:

- (a) The acquisition by any person of additional securities of the Issuer, or the disposition of securities of the Issuer;
- (b) An extraordinary corporate transaction, such as a merger, reorganization or liquidation, involving the Issuer or any of its subsidiaries;
- (c) A sale or transfer of a material amount of assets of the Issuer or any of its subsidiaries;
- (d) Any change in the present board of directors or management of the Issuer, including any plans or proposals to change the number or term of directors or to fill any existing vacancies on the board;
- (e) Any material change in the present capitalization or dividend policy of the Issuer;
- (f) any other material change in the Issuer's business or corporate structure;
- (g) Changes in the Issuer's charter, bylaws or instruments corresponding thereto or other actions which may impede the acquisition of control of the Issuer by any person;
- (h) Causing a class of securities of the Issuer to be delisted from a national securities exchange or to cease to be authorized to be quoted in an inter-dealer quotation system of a registered national securities association;
- (i) A class of equity securities of the Issuer becoming eligible for termination of registration pursuant to Section 12(g)(4) of the Securities Exchange Act of 1934; or
 - (j) Any action similar to any of those enumerated above.
- ITEM 5. INTEREST IN SECURITIES OF ISSUER.
- (a) As of the filing of this Amendment, (i) ABV II SICAV is the owner of record of 1,203,341 shares of the Common Stock of the Issuer, (ii) ABV II A is the owner of record of 325,618 shares of the Common Stock of the Issuer and immediately exercisable warrants to purchase 125,000 shares of Common Stock, (iii) ABV III A is the owner of record of 649,852 shares of the Common Stock of

the Issuer and immediately exercisable warrants to purchase 145,489 shares of Common Stock, (iv) ABV III B is the owner of record of 396,687 shares of the Common Stock of the Issuer and immediately exercisable warrants to purchase 88,812 shares of Common Stock, (v) ABV III C is the owner of record of 237,621

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shares of the Common Stock of the Issuer and immediately exercisable warrants to purchase 53,200 shares of Common Stock, (vi) ABV III Executives is the owner of record of 10,360 shares of the Common Stock of the Issuer and immediately exercisable warrants to purchase 2,319 shares of Common Stock and (vii) ABE is the owner of record of 307,700 shares of the Common Stock of the Issuer and immediately exercisable warrants to purchase 107,695 shares of Common Stock. The Funds, collectively, may be deemed to beneficially own 3,238,300 shares of Common Stock (which includes the immediately exercisable warrants to purchase 414,820 shares of Common Stock held by the Funds), comprising 7.7% of the outstanding Common Stock of the Issuer. Abingworth Management, as the manager of each of the Funds and ABE, may be deemed to beneficially own 3,653,695 shares of Common Stock (which includes the immediately exercisable warrants to purchase 414,820 shares of Common Stock held by the Funds and the immediately exercisable warrants to purchase 107,695 shares of Common Stock held by ABE), comprising 8.6% of the outstanding Common Stock of the Issuer. These numbers are based on a total of 41,819,832 shares of Common Stock of the Issuer outstanding as of December 6, 2006, as reported by the Issuer in a communication to the Reporting Persons.

- (b) Number of shares as to which each person named in paragraph (a) above has:
 - (i) sole power to vote or to direct the vote: see line 7 of cover sheets.
 - (ii) shared power to vote or to direct the vote: see line 8 of cover sheets.
 - (iii) sole power to dispose or to direct the disposition: see line 9 of cover sheets.
 - (iv) shared power to dispose or to direct the disposition: see line 10 of cover sheets.
 - (c) Between November 24, 2006 and December 4, 2006,
 - (i) ABV II SICAV sold an aggregate of 213,097 shares of Common Stock on the open market for an aggregate consideration of \$2,603,847 (10,716 shares were sold on November 24, 2006; 46,456 shares were sold on November 28, 2006; 42,619 shares were sold on November 29, 2006; 42,619 shares were sold on November 30, 2006; 42,619 shares were sold on December 1, 2006; and 28,068 shares were sold on December 4, 2006);
 - (ii) ABV II A sold an aggregate of 57,661 shares of Common Stock on the open market for an aggregate consideration of \$704,552 (2,900 shares were sold on November 24, 2006; 12,570 shares were sold on November 28, 2006; 11,532 shares were sold on November 29, 2006; 11,532 shares were sold on November 30, 2006; 11,532 shares were sold on December 1, 2006; and 7,595 shares were sold on December 4, 2006);

(iii) ABV III A sold an aggregate of 115,079 shares of Common Stock on the open market for an aggregate consideration of \$1,478,834.56 (5,787 shares were sold on November 24, 2006; 25,087 shares were sold on November 28, 2006; 23,016 shares were sold on November 29, 2006; 23,016 shares were sold on November 30, 2006; 23,016 shares were sold on December 1, 2006; and 15,157 shares were sold on December 4, 2006);

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- (iv) ABV III B sold an aggregate of 70,249 shares of Common Stock on the open market for an aggregate consideration of \$858,389 (3,532 shares were sold on November 24, 2006; 15,314 shares were sold on November 28, 2006; 14,050 shares were sold on November 29, 2006; 14,050 shares were sold on November 30, 2006; 14,050 shares were sold on December 1, 2006; and 9,253 shares were sold on December 4, 2006);
- (v) ABV III C sold an aggregate of 42,079 shares of Common Stock on the open market for an aggregate consideration of \$514,166.28 (2,116 shares were sold on November 24, 2006; 9,173 shares were sold on November 28, 2006; 8,416 shares were sold on November 29, 2006; 8,416 shares were sold on November 30, 2006; 8,416 shares were sold on December 1, 2006; and 5,542 shares were sold on December 4, 2006;
- (vi) ABV III Executives sold an aggregate of 1,835 shares of Common Stock on the open market for an aggregate consideration of \$62,889.91 (92 shares were sold on November 24, 2006; 400 shares were sold on November 28, 2006; 367 shares were sold on November 29, 2006; 367 shares were sold on November 30, 2006; 367 shares were sold on December 1, 2006; and 242 shares were sold on December 4, 2006.

All of the Reporting Persons sold the above shares on the open market. The average price per share for shares of Common Stock sold by each of the above Reporting Persons on the dates specified above was as follows: \$12.56 on November 24, 2006; \$12.15 on November 28, 2006; \$12.25 on November 29, 2006; \$12.29 on November 30, 2006; \$12.07 on December 1, 2006; and \$12.22 on December 4, 2006.

- (d) No other person is known to have the right to receive or the power to direct the receipt of dividends from, or any proceeds from the sale of the shares beneficially owned by any of the Reporting Persons.
 - (e) Not applicable.

ITEM 6. CONTRACTS, ARRANGEMENTS, UNDERSTANDINGS OR RELATIONSHIPS WITH RESPECT TO SECURITIES OF THE ISSUER.

Not applicable.

- ITEM 7. MATERIAL TO BE FILED AS EXHIBITS.
 - A. Agreement regarding filing of joint Schedule 13D/A.

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SIGNATURES

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

Dated: December 15, 2006

ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

ABINGWORTH BIOVENTURES II SICVA IN LIQUIDATION

By: /s/ Genevieve Blauen

Name: Genevieve Blauen
Title: Liquidator

By: /s/ Fernand Heim

Name: Fernand Heim Title: Mandatory

ABINGWORTH BIOVENTURES II A L.P. BY ITS MANAGER, ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

ABINGWORTH BIOVENTURES III A L.P. BY ITS MANAGER, ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

ABINGWORTH BIOVENTURES III B L.P.

BY ITS MANAGER, ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

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Title: Executive Director

ABINGWORTH BIOVENTURES III C L.P. BY ITS MANAGER, ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

ABINGWORTH BIOVENTURES III EXECUTIVES L.P. BY ITS MANAGER, ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

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EXHIBIT INDEX

A. Agreement regarding filing of joint Schedule 13D/A.

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Exhibit A

JOINT FILING UNDERTAKING

Pursuant to Rule 13d-1(k) (1) promulgated under the Securities Exchange Act of 1934, as amended, each of the undersigned agree that the Schedule 13D/A, and any amendments thereto, filed with respect to the beneficial ownership by the undersigned of the equity securities of Solexa, Inc., is being filed on behalf of each of the undersigned.

Dated: December 15, 2006

ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

ABINGWORTH BIOVENTURES II SICVA IN LIQUIDATION

By: /s/ Genevieve Blauen

Name: Genevieve Blauen Title: Liquidator

By: /s/ Fernand Heim

Name: Fernand Heim Title: Mandatory

ABINGWORTH BIOVENTURES II A L.P. BY ITS MANAGER, ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

ABINGWORTH BIOVENTURES III A L.P.

BY ITS MANAGER, ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

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ABINGWORTH BIOVENTURES III B L.P. BY ITS MANAGER, ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

ABINGWORTH BIOVENTURES III C L.P. BY ITS MANAGER, ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

ABINGWORTH BIOVENTURES III EXECUTIVES L.P. BY ITS MANAGER, ABINGWORTH MANAGEMENT LIMITED

By: /s/ James Abell

Name: James Abell

Title: Executive Director

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