Solexa, Inc.
Form S-3
August 11, 2005

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As filed with the Securities and Exchange Commission on August 11, 2005
Registration No. 333-

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Form S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933
Solexa, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**94-3161073**
(State or Other Jurisdiction of Incorporation or Organization)	*(I.R.S. Employer Identification Number)*

25861 Industrial Blvd.
Hayward, California 94545
(510) 670-9300
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant s Principal Executive Offices)
John West
Chief Executive Officer
Solexa, Inc.
25861 Industrial Blvd.
Hayward, California 94545
(510) 670-9300
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)
Copy to:
James C. Kitch
Cooley Godward LLP
Five Palo Alto Square
3000 El Camino Real
Palo Alto CA 94306
(650) 843-5000

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. o

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. þ

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement

for the same offering. o

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. o

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price per Unit (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee
Common Stock, $0.01 par value per share	13,657,101	$4.83	$65,963,797.83	$7,763.94

(1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this Registration Statement shall also cover any additional shares of Registrant s Common Stock that become issuable by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration.

(2) Estimated solely for purposes of calculation of the registration fee in accordance with Rule 457(c) of the Securities Act of 1933, as amended. The price per share of common stock is based on the average of the high and low sale prices of Solexa common stock on August 5, 2005 as reported on the Nasdaq SmallCap Market.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission acting pursuant to said Section 8(a) may determine.

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THE INFORMATION IN THIS PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. THE SECURITY HOLDERS IDENTIFIED IN THIS PROSPECTUS MAY NOT SELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PROSPECTUS IS NOT AN OFFER TO SELL THESE SECURITIES AND IT IS NOT SOLICITING AN OFFER TO BUY THESE SECURITIES IN ANY STATE WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION, DATED AUGUST 11, 2005

PRELIMINARY PROSPECTUS

13,657,101 Shares of Common Stock

SOLEXA, INC.

This prospectus relates to the offer and sale, from time to time, of up to 13,657,101 shares of our common stock, by the selling stockholders listed in the section beginning on page 10 of this prospectus. The shares of common stock offered under this prospectus by the selling stockholders were issued in connection with our acquisition of Solexa Limited, a private company registered in England and Wales. We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of shares by the selling stockholders.

The selling stockholders may sell the shares of common stock described in this prospectus in a number of different ways and at varying prices. We provide more information about how the selling stockholders may sell their shares of common stock in the section titled Plan of Distribution on page 13. We will not be paying any underwriting discounts or commissions in this offering.

Our common stock is currently traded on the Nasdaq SmallCap Market under the symbol SLXA. On August 10, 2005, the last reported sales price for our common stock was $5.19 per share.

Investment in our common stock involves a high degree of risk. See Risk Factors beginning on page 2 of this prospectus.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OR ACCURACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this prospectus is , 2005.

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This prospectus is part of a registration statement we filed with the Securities and Exchange Commission, or SEC. You should rely only on the information we have provided or incorporated by reference in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. The selling stockholders are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus is accurate only as of the date on the

front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of our common stock.

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PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere in this prospectus or incorporated by reference. While we have included what we believe to be the most important information about the company and this offering, the following summary may not contain all the information that may be important to you. You should read this entire prospectus carefully, including the risks of investing discussed under Risk Factors beginning on page 2, the financial statements and related notes, and the information to which we refer you and the information incorporated into this prospectus by reference, for a complete understanding of our business and this offering. References in this prospectus to our company, we, our, Solexa and us refer to Solexa, Inc. Reference to selling stockholders refe those stockholders listed herein under Selling Stockholders, who may sell shares from time to time as described in this prospectus.

Solexa, Inc.

We are in the business of developing and commercializing genetic analysis technologies. We are currently developing and preparing to commercialize a novel instrumentation system for genetic analysis based on our Sequencing-by-Synthesis, or SBS, chemistry and the DNA cluster technology we acquired in 2004. This platform is expected to support many types of genetic analysis, including DNA sequencing, gene expression, genotyping and micro-RNA analysis. We believe that this technology, which can potentially generate over a billion bases of DNA sequence from a single experiment with a single sample preparation, will dramatically reduce the cost, and improve the practicality, of human re-sequencing relative to conventional technologies. We anticipate launching our first generation whole-genome sequencing system by the end of 2005. We believe our new DNA sequencing system will enable us to implement a new business model based primarily on the sales of genomic sequencing equipment, reagents and services to end user customers. Our longer-term goal is to further reduce the cost of human re-sequencing to a few thousand dollars for use in a wide range of applications from basic research through clinical diagnostics.

We incorporated in the state of Delaware in February 1992. In March 2005, we completed the combination of our company with Solexa Limited, a company registered in England and Wales, and changed our name from Lynx Therapeutics, Inc. to Solexa, Inc. Our principal executive offices are located at 25861 Industrial Blvd., Hayward, CA 94545. Our telephone number is (510) 670-9300.

ACQUISITION OF SOLEXA LIMITED

On March 4, 2005, we completed a business combination with Solexa Limited. Solexa Limited develops systems for the comprehensive and economical analysis of individual genomes. Solexa Limited has become a wholly owned subsidiary of the Company as a result of the transaction. Because Solexa Limited s shareholders own approximately 80% of the shares of our common stock after the transaction, Solexa Limited s designees to the combined company s board of directors represent a majority of the combined company s directors and Solexa Limited s senior management represent a majority of the senior management of the combined company, Solexa Limited is deemed to be the acquiring company for accounting purposes. We issued approximately 14.75 million shares or options to purchase shares of our common stock in exchange for all of the outstanding share capital and outstanding share options of Solexa Limited.

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RISK FACTORS

Investment in our shares involves a high degree of risk. In addition to the other information in this prospectus, you should carefully consider the risks described below, which we believe are the material risks we face, before purchasing our common stock. If any of the following risks actually occurs, our business could be materially harmed, and our financial condition and results of operations could be materially and adversely affected. As a result, the trading price of our common stock could decline, and you might lose all of your investment. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties, not presently known to us, or that we currently see as immaterial, may also harm our business. If any of these additional risks and uncertainties occurs, the trading price of our common stock could decline, and you might lose all or part of your investment.

We have a history of net losses, expect to continue to incur net losses and may not achieve or maintain profitability.

We have incurred net losses each years since our inception in 1992. In addition, Solexa Limited, a wholly owned subsidiary, has incurred net losses each year since its inception in 1998, including a net loss for the three months ended March 31, 2005. As of December 31, 2004 we had an accumulated deficit of approximately $28.0 million. Net losses for the combined company may continue for the next several years as the combined company proceeds with the development and commercialization of its technologies. The presence and size of these potential net losses will depend, in part, on the rate of growth, if any, in revenues and on the level of expenses. Research and development expenditures and general and administrative costs have exceeded revenues to date, and these expenses may increase in the future. We will need to generate significant revenues to achieve profitability, and even if we are successful in achieving profitability, there is no assurance we will be able to sustain profitability.

We will need to raise additional funding, which may not be available on favorable terms, if at all.

We will need to raise additional capital through public or private equity or debt financings in order to satisfy our projected capital needs.

The amount of additional capital we will need to raise depends on many factors, including:

- the progress and scope of research and development programs;
- the progress of efforts to develop and commercialize new products and services, and
- the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims and other intellectual property rights.

We cannot be certain that additional capital will be available when and as needed or that our actual cash requirements will not be greater than anticipated. If we require additional capital at a time when investment in biotechnology companies or in the marketplace in general is limited due to the then prevailing market or other conditions, we may not be able to raise such funds at the time that we desire or any time thereafter. If we are unable to obtain financing on terms favorable to us, we may be unable to execute our business plan and may be required to cease or reduce development or commercialization of our products, to sell some of all of our technology or assets or to merge with another entity.

We may not realize the benefits we expect from the combination of Solexa Limited and Solexa.

The integration of Solexa Limited and Solexa has been complex, time consuming and expensive, and may disrupt our business. We will need to overcome significant challenges in order to realize any benefits or synergies from the combination of Solexa Limited and Solexa, Inc. These challenges include the timely, efficient and successful execution of a number of post-transaction events.

We may not succeed in addressing these risks or any other problems encountered in connection with the combination. The inability to successfully integrate the operations, technology and personnel of Solexa Limited

and Solexa, or any significant delay in achieving integration, could hurt our business and, as a result, the market price of our common stock.

If management is unable to effectively manage the increased size and complexity of the combined company, our operating results will suffer.

On March 4, 2005, Solexa Limited s 60 employees based outside of Cambridge, U.K. were added to our existing 75 employees based in Hayward, California. As a result we will face challenges inherent in efficiently managing an increased number of employees over large geographic distances, including the need to implement appropriate systems, financial controls, policies, standards and benefits and compliance programs. The inability to successfully manage the substantially larger and internationally diverse organization, or any significant delay in achieving successful management, could hurt our business.

We have a new management team that may not be able to define or execute on our business plan.

Effective March 4, 2005, John West was named our chief executive officer. Mr. West has been the chief executive officer of Solexa Limited since August 2004. Effective March 10, 2005, Peter Lundberg was named our vice president and chief technical officer. Effective March 31, 2005, Linda Rubinstein was named our vice president and chief financial officer. In addition we anticipate hiring during 2005 to fill executive positions in marketing and manufacturing. While Mr. West has experience managing private genomics companies and large genomics teams within public U.S. companies, he has not previously been chief executive of a public company in the U.S. Mr. West anticipates dividing his time between our operations in California and our operations in the U.K. for the foreseeable future. These executives are new to our company and may not be effective, individually or as a group, in executing our business plan, and our operating results may suffer as a result.

We could lose key personnel, which could materially affect our business and require us to incur substantial costs to recruit replacements for lost personnel.

As a result of the combination, current and prospective employees of the combined company could experience uncertainty about their future roles within the combined company. Any of our key personnel could terminate their employment, sometimes without notice, at any time. People key to the operation and management of the combined company are John West, our chief executive officer; Peter Lundberg, our vice president and chief technical officer, Linda Rubinstein, our vice president and chief financial officer, and Tony Smith, our vice president and chief scientific officer. We are also highly dependent on the principal members of our scientific staff. The loss of any of these persons services might adversely impact the achievement of our objectives and the continuation of existing customer, collaborative and license agreements. In addition, recruiting and retaining qualified scientific personnel to perform future research and development work will be critical to our success. There is currently a shortage of skilled executives and employees with technical expertise, and this shortage is likely to continue. As a result, competition for skilled personnel is intense and turnover rates are high. Competition for experienced scientists from numerous companies, academic and other research institutions may limit our ability to attract and retain such personnel.

Our company s officers, and directors and their affiliated entities have substantial control over the company.

As of July 12, 2005, our company s executive officers, directors and entities affiliated with them, in the aggregate, beneficially own approximately 72.4% of the combined company, including warrants not currently exercisable within 60 days of July 12, 2005. These stockholders, if acting together, would be able to influence significantly all matters requiring approval by our stockholders, including the election of directors and the approval of mergers or other changes in corporate control.

We intend to implement a business model that is unproven and different from our former business model.

Our current business model is based primarily on the planned sales of genomic sequencing equipment and future sales of reagents and services to support customers in their use of that equipment. Our historical

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business model was based on providing genomics services using our MPSS technology and supplying customers with DNA sequences and other information that result from experiments. A change in emphasis from our former business model may cause our current customers to delay, defer or cancel any purchasing decisions with respect to new or existing agreements. To date, we have not been contacted by any current customer with respect to any such delay, deferral or cancellation of any existing agreement. There is no assurance that we will be successful in changing the emphasis of our business model from providing sequencing services to selling equipment, reagents and support services to new or existing customers.

It is uncertain whether we will be able to successfully develop and commercialize our new products or to what extent we can increase our revenues or become profitable.

We set out to develop new genomics sequencing technologies and we are now using those technologies to develop new equipment, reagents and services. If our strategy does not result in the development of products that we can commercialize, we will be unable to generate significant revenues. Although we have developed DNA sequencing machines and provide gene expression services to customers with our machines, these were based on the MPSS technology that we previously developed rather than the new technologies under development. We cannot be certain that we can successfully develop any new products or that they will receive commercial acceptance, in which case we may not be able to recover our investment in the product development.

We will need to develop manufacturing capacity by ourselves or with a partner.

If we are successful in achieving market acceptance for our new DNA analytical instruments, we will need either to build internal manufacturing capacity or to contract with a manufacturing partner. There is no assurance that we will be able to build manufacturing capacity internally, or to find a manufacturing partner, to meet both the volume and quality requirements necessary to be successful in the market. Any delay in establishing or inability to expand our manufacturing capacity could hurt our business.

Our technology platform is at the development stage and is unproven for market acceptance.

While some of our gene expression technology has been commercialized and is currently in use, we are developing additional technologies to generate information about gene sequences that may enable scientists to better understand complex biological processes. These technologies are still in development, and we may not be able to successfully complete development of these technologies or to commercialize them. Our success depends on many factors, including:

technical performance of our technologies in relation to competing technologies;

the acceptance of our technology in the market place;

the ability to establish an instrument manufacturing capability, or to obtain instruments from another manufacturer; and

the ability to manufacture reagents and other consumables, or obtain licenses to resell reagents and other consumables.

You must evaluate us in light of the uncertainties and complexities affecting an early stage genetic analysis company. The application of our technologies is in too early a stage to determine whether they can be successfully implemented. Our technologies also depend on the successful integration of independent technologies, each of which has its own development risks. Furthermore, we are anticipating that, if our technology is able to successfully reduce the cost of genetic analysis relative to existing providers, our technology may be able to displace current technology as well as to expand the market for genetic analysis to include new applications that are not practical with current technology. There is no guarantee, even if our technology is able to successfully reduce the cost of genetic analysis relative to existing providers, that we will be able to induce customers with installed bases of conventional genetic analysis instruments to purchase our system or to expand the market for genetic analysis to include new applications. Furthermore, if we are able to

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successfully commercialize our genetic analysis systems only as a replacement for existing technology, we may face a much smaller market.

We are dependent on our genetic analysis service customers and collaborators and will need to find additional genetic analysis customers and collaborators in the future.

Our strategy for the development and commercialization of our technologies and potential genetic analytical instrument systems includes entering into customer agreements and collaborations in which we provide genetic analytical services to research institutes and pharmaceutical, biotechnology and agricultural companies. At present, our services business constitutes generates substantially all of our revenues. After we have developed our new genetic analytical instrument systems, it is our intention to deploy these systems over time to replace the instruments currently used in our services business, which operate based on our MPSS technology. If we are successful in commercializing our genetic analytical instrument systems, we anticipate continuing to provide genetic analysis services after the commercial launch of our genetic analysis instrument systems to meet particular customer requirements, but also to support the marketing of our instruments by, for example, allowing potential systems customers to understand how our instrumentation performs on their samples of interest. There is no guarantee, however, that our service business will generate positive cash flow or become profitable. Furthermore, unless and until we are able to commercialize our new genetic analytical instrument systems under development, we will be dependent on a small number of customers to continue our current services business, and the loss of one or more of those customers could harm our results of operations.

Prior to our business combination with Solexa Limited, we derived substantially all of our revenues from customer agreements related to our services business. A significant portion of our revenues came from a small number of collaborators, customers and licensees. Thus, until we are able to commercialize our new products under development, we will be dependent on a small number of customers to continue our current business, and the loss of one or more of those customers could harm our results of operations.

We operate in an intensely competitive industry with rapidly evolving technologies, and our competitors may develop products and technologies that make ours obsolete.

The biotechnology industry is highly fragmented and is characterized by rapid technological change. In particular, the areas of genetic analysis platforms and genomics research are rapidly evolving fields. Competition among entities developing genetic analysis systems is intense. Many of our competitors have substantially greater research and product development capabilities and financial, scientific and marketing resources than we do.

In our genetic analysis systems business, we face, and will continue to face, competition primarily from biotechnology companies, such as Affymetrix, Inc., Celera Genomics Group, Gene Logic, Inc., and Agencourt Biosciences, academic and research institutions and government agencies, both in the United States and abroad. We are aware that certain entities are using a variety of gene expression analysis methodologies, including chip-based systems, to attempt to identify disease-related genes and to perform clinical diagnostic tests. A number of large companies offer DNA sequencing equipment including Applera Corporation, Beckman Coulter, Inc., and the Amersham Biosciences business of General Electric. A number of other smaller companies are also in the process of developing novel techniques for DNA sequencing. These companies include 454 Corporation, Helicos Biosciences, Nanofluidics, Visigen and Genovoxx. In order to successfully compete against existing and future technologies, we will need to demonstrate to potential customers that our technologies and capabilities are superior to those of our competitors. Some of our competitors may be:

attempting to identify and patent randomly sequenced genes and gene fragments and proteins;

pursuing a gene identification, characterization and product development strategy based on positional cloning, which uses disease inheritance patterns to isolate the genes that are linked to the transmission of disease from one generation to the next; and

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using a variety of different gene and protein expression analysis methodologies, including the use of chip-based systems, to attempt to identify disease-related genes and proteins.

In addition, numerous pharmaceutical, biotechnology and agricultural companies are developing genomics research programs, either alone or in partnership with our competitors. Our future success will depend on our ability to maintain a competitive position with respect to technological advances. Rapid technological development by others may make our technologies and future products obsolete.

Any products developed through our technologies will compete in highly competitive markets. Our competitors may be more effective at using their technologies to develop commercial products. Moreover, our competitors may introduce novel genetic analysis platforms before we do so, which, if adopted by customers, could eliminate the market for our new genetic analysis systems. Further, our competitors may obtain intellectual property rights that would limit the use of our technologies or the commercialization of diagnostic or therapeutic products using our technologies. As a result, our competitors products or technologies may render our technologies and products, and those of our collaborators, obsolete or noncompetitive.

We have limited experience in sales and marketing and thus may be unable to further commercialize our genetic analytical instruments systems and services.

Our ability to achieve profitability depends on attracting customers for our genetic analysis instrument systems and services. There are a limited number of research institutes and pharmaceutical, biotechnology and agricultural companies that are potential customers for our products and services. To market our products, we intend to develop a sales and marketing group with the appropriate technical expertise. We may not successfully build such a sales force. In addition, we may seek to enlist a third party to assist with sales and distribution globally or in certain regions of the world. There is no guarantee, if we do seek to enter into such an arrangement, that we will be successful in attracting a desirable sales and distribution partner, or that we will be able to enter into such an arrangement on favorable terms. If our sales and marketing efforts, or those of any third-party sales and distribution partner, are not successful, our technologies and products may not to gain market acceptance.

Our sales cycle for our service business is lengthy, and we may spend considerable resources on unsuccessful sales efforts or may not be able to enter into agreements on the schedule we anticipate.

Our ability to obtain customers and collaborators for our technologies and products depends in significant part upon the perception that our technologies and products can help accelerate their drug discovery and genomics efforts. Our sales cycle for our service business is typically lengthy, up to approximately nine months, because we need to educate our potential customers and collaborators and sell the benefits of our products to a variety of constituencies within such companies. In addition, we may be required to negotiate agreements containing terms unique to each collaborator or customer. We may expend substantial funds and management effort without any assurance that we will successfully sell our technologies and products. Actual and proposed consolidations of pharmaceutical companies have negatively affected, and may in the future negatively affect, the timing and progress of our sales efforts.

We currently utilize a single supplier to purchase PacI, an enzyme used in our MPSS service.

PacI is a restriction enzyme used to digest the PCR product that is loaded onto 5-micron beads prior to MPSS sequencing. We currently purchase PacI from New England BioLabs under a supply agreement, the term of which is scheduled to expire on August 15, 2005. Our reliance on a sole vendor involves several risks, including:

the inability to obtain an adequate supply due to manufacturing capacity constraints, a discontinuance of a product by a third-party manufacturer or other supply constraints;

the potential lack of leverage in contract negotiations with the sole vendor;

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reduced control over quality and pricing of components; and

delays and long lead times in receiving materials from vendors.

We do not believe, however, that our business is dependent substantially on PacI or the intellectual property associated with PacI. We believe that we would be able to purchase alternative enzymes from other providers without incurring significant additional expenses or time delays should the need arise. In addition, if we are able to successfully implement new SBS sequencing technologies under development in our genetic services business, we will no longer require PacI or an alternative enzyme. We intend to seek to extend or renew our contract with New England Biolabs and believe we can extend or renew the contract without unreasonable effort or expense.

We use hazardous chemicals and radioactive and biological materials in our business. Any claims relating to improper handling, storage or disposal of these materials could be time consuming and costly.

Our research and development processes involve the controlled use of hazardous materials, including chemicals and radioactive and biological materials. Our operations produce hazardous waste products. We cannot eliminate the risk of accidental contamination or discharge and any resultant injury from these materials. We may be sued for any injury or contamination that results from our use or the use by third parties of these materials, and our liability may exceed our insurance coverage and our total assets. Federal, state and local laws and regulations govern the use, manufacture, storage, handling and disposal of hazardous materials. Compliance with environmental laws and regulations may be expensive, and current or future environmental regulations may impair our research, development and production efforts.

If we fail to adequately protect our proprietary technologies, third parties may be able to use our technologies, which could prevent us from competing in the market.

Our success depends in part on our ability to obtain patents and maintain adequate protection of the intellectual property related to our technologies and products. The patent positions of biotechnology DNA sequencing instrument, regent sales and services companies, including us, are generally uncertain and involve complex legal and factual questions. We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that our proprietary technologies are covered by valid and enforceable patents or are effectively maintained as trade secrets. The laws of some foreign countries do not protect proprietary rights to the same extent as the laws of the U.S., and many companies have encountered significant problems in protecting and defending their proprietary rights in foreign jurisdictions. We have applied and will continue to apply for patents covering our technologies, processes and products, as and when we deem appropriate. However, third parties may challenge these applications, or these applications may fail to result in issued patents. Our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products. Furthermore, others may independently develop similar or alternative technologies or design around our patents. In addition, our patents may be challenged or invalidated or fail to provide us with any competitive advantage.

We also rely on trade secret protection for our confidential and proprietary information. However, trade secrets are difficult to protect. We protect our proprietary information and processes, in part, with confidentiality agreements with employees, collaborators and consultants. However, third parties may breach these agreements, we may not have adequate remedies for any such breach or our trade secrets may still otherwise become known by our competitors. In addition, our competitors may independently develop substantially equivalent proprietary information.

Litigation or third-party claims of intellectual property infringement could require us to spend substantial time and money and adversely affect our ability to develop and commercialize our technologies and products.

Our commercial success depends in part on our ability to avoid infringing patents and proprietary rights of third parties and not breaching any licenses that we have entered into with regard to our technologies. Other parties have filed, and in the future are likely to file, patent applications covering imaging, image analysis, fluid

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delivery, DNA arrays on solid surfaces, chemical and biological reagents for DNA sequencing, genes, gene fragments, proteins, the analysis of gene sequence, gene expression and protein expression and the manufacture and use of DNA chips or microarrays, which are tiny glass or silicon wafers on which tens of thousands of DNA molecules can be arrayed on the surface for subsequent analysis. If patents covering technologies required by our operations are issued to others, we may have to rely on licenses from third parties, which may not be available on commercially reasonable terms, or at all.

Third parties may accuse us of employing their proprietary technology without authorization. In addition, third parties may obtain patents that relate to our technologies and claim that use of such technologies infringes these patents. Regardless of their merit, such claims could require us to incur substantial costs, including the diversion of management and technical personnel, in defending ourselves against any such claims or enforcing our patents. In the event that a successful claim of infringement is brought against us, we may need to pay damages and obtain one or more licenses from third parties. We may not be able to obtain these licenses at a reasonable cost, or at all. Defense of any lawsuit or failure to obtain any of these licenses could adversely affect our ability to develop and commercialize our technologies and products and thus prevent us from achieving profitability.

Ethical, legal and social issues may limit the public acceptance of, and demand for, our technologies and products.

Our collaborators and customers may seek to develop diagnostic products based on genes or proteins. The prospect of broadly available gene-based diagnostic tests raises ethical, legal and social issues regarding the appropriate use of gene-based diagnostic testing and the resulting confidential information. It is possible that discrimination by third-party payors, based on the results of such testing, could lead to the increase of premiums by such payors to prohibitive levels, outright cancellation of insurance or unwillingness to provide coverage to individuals showing unfavorable gene or protein expression profiles. Similarly, employers could discriminate against employees with gene or protein expression profiles indicative of the potential for high disease-related costs and lost employment time. Finally, government authorities could, for social or other purposes, limit or prohibit the use of such tests under certain circumstances. These ethical, legal and social concerns about genetic testing and target identification may delay or prevent market acceptance of our technologies and products.

Although our technology does not depend on genetic engineering, genetic engineering plays a prominent role in our approach to product development. The subject of genetically modified food has received negative publicity, which has aroused public debate. Adverse publicity has resulted in greater regulation internationally and trade restrictions on imports of genetically altered agricultural products. Claims that genetically engineered products are unsafe for consumption or pose a danger to the environment may influence public attitudes and prevent genetically engineered products from gaining public acceptance. The commercial success of our future products may depend, in part, on public acceptance of the use of genetically engineered products, including drugs and plant and animal products.

Our facilities in Hayward, California are located near known earthquake fault zones, and the occurrence of an earthquake or other catastrophic disaster could cause damage to our facilities and equipment, which could require us to cease or curtail operations.

Our facilities in Hayward, California are located near known earthquake fault zones and are vulnerable to damage from earthquakes. We are also vulnerable to damage from other types of disasters, including fire, floods, power loss, communications failures and similar events. If any disaster were to occur, our ability to operate our business at our facilities would be seriously, or potentially completely, impaired. In addition, the unique nature of our research activities could cause significant delays in our programs and make it difficult for us to recover from a disaster. The insurance we maintain may not be adequate to cover our losses resulting from disasters or other business interruptions. Accordingly, an earthquake or other disaster could materially and adversely harm our ability to conduct business.

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Our stock price may be extremely volatile.

We believe that the market price of our common stock will remain highly volatile and may fluctuate significantly due to a number of factors. The market prices for securities of many publicly-held, early-stage biotechnology companies have in the past been, and can in the future be expected to be, especially volatile. For example, during the two-year period from April 1, 2004 to June 30, 2005, the closing sales price of our common stock as quoted on the Nasdaq National Market and Nasdaq SmallCap Market fluctuated from a low of $2.96 to a high of $17.00 per share. In addition, the securities markets have from time to time experienced significant price and volume fluctuations that may be unrelated to the operating performance of particular companies. The following factors and events may have a significant and adverse impact on the market price of our common stock:

fluctuations in our operating results;

announcements of technological innovations or new commercial products by us or our competitors;

release of reports by securities analysts;

developments or disputes concerning patent or proprietary rights;

developments in our relationships with current or future collaborators, customers or licensees; and

general market conditions.

Many of these factors are beyond our control. These factors may cause a decrease in the market price of our common stock, regardless of our operating performance.

Our common stock is listed on the Nasdaq SmallCap Market, which subjects us to various statutory requirements and may have adversely affected the liquidity of our common stock, and a failure by us to meet the listing maintenance standards of the Nasdaq SmallCap Market could result in delisting from the Nasdaq SmallCap Market.

Effective May 22, 2003, a Nasdaq Qualifications Panel terminated our Nasdaq National Market Listing and transferred our securities to the Nasdaq SmallCap Market. In order to maintain the listing of our securities on the Nasdaq SmallCap Market, we must be able to demonstrate compliance with all applicable listing maintenance requirements. In the event we are unable to do so, our securities will be delisted from the Nasdaq Stock Market.

With our securities listed on the Nasdaq SmallCap Market, we face a variety of legal and other consequences that will likely negatively affect our business including, without limitation, the following:

we may have lost our exemption from the provisions of Section 2115 of the California Corporations Code, which imposes aspects of California corporate law on certain non-California corporations operating within California. As a result, (i) our stockholders may be entitled to cumulative voting and (ii) we may be subject to more stringent stockholder approval requirements and more stockholder-favorable dissenters rights in connection with certain strategic transactions;

the state securities law exemptions available to us are more limited, and, as a result, future issuances of our securities may require time-consuming and costly registration statements and qualifications;

due to the application of different securities law exemptions and provisions, we have been required to amend our stock option plan, suspend our stock purchase plan and must comply with time-consuming and costly administrative procedures;

the coverage of our company by securities analysts may decrease or cease entirely; and

we may lose current or potential investors.

In addition, we are required to satisfy various listing maintenance standards for our common stock to be quoted on the Nasdaq SmallCap Market. If we fail to meet such standards, our common stock would likely be delisted from the Nasdaq SmallCap Market and trade on the over-the-counter bulletin board. This alternative

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is generally considered to be a less efficient market and would seriously impair the liquidity of our common stock and limit our potential to raise future capital through the sale of our common stock, which could materially harm our business.

Anti-takeover provisions in our charter documents and under Delaware law may make it more difficult to acquire us or to effect a change in our management, even though an acquisition or management change may be beneficial to our stockholders.

Under our certificate of incorporation, our board of directors has the authority, without further action by the holders of our common stock, to issue 2,000,000 additional shares of preferred stock from time to time in series and with preferences and rights as it may designate. These preferences and rights may be superior to those of the holders of our common stock. For example, the holders of preferred stock may be given a preference in payment upon our liquidation or for the payment or accumulation of dividends before any distributions are made to the holders of common stock.

Any authorization or issuance of preferred stock, while providing desirable flexibility in connection with financings, possible acquisitions and other corporate purposes, could also have the effect of making it more difficult for a third party to acquire a majority of our outstanding voting stock or making it more difficult to remove directors and effect a change in management. The preferred stock may have other rights, including economic rights senior to those of our common stock, and, as a result, an issuance of additional preferred stock could lower the market value of our common stock. Provisions of Delaware law may also discourage, delay or prevent someone from acquiring or merging with us.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements in this prospectus and the documents incorporated by reference are forward-looking statements. These statements are based on our current expectations, assumptions, estimates and projections about our business and our industry, and involve known and unknown risks, uncertainties and other factors that may cause our industry s results, levels of activity, performance or achievement to be materially different from any future results, performance or achievements expressed or implied in or contemplated by the forward-looking statements. Words such as believe, anticipate, expect, intend, plan, will, may, should, estimate, predict, potential, cor such terms or other similar expressions, identify forward-looking statements. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements. Our actual results could differ materially from those anticipated in such forward-looking statements as a result of several factors more fully described under the caption Risk Factors above and in the documents incorporated by reference. The forward-looking statements made in this prospectus relate only to events as of the date on which the statements are made. We do not undertake any obligation to update forward-looking statements. The risks contained in this prospectus, among other things, should be considered in evaluating our prospects and future financial performance.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the shares by the selling stockholders. All proceeds from the sale of the shares will be for the accounts of the selling stockholders.

SELLING STOCKHOLDERS

The shares of our common stock offered under this prospectus by the selling stockholders were issued in connection with our acquisition of Solexa Limited. Pursuant to the Acquisition Agreement, dated as of September 28, 2004, by and between Solexa Limited and the Company, we agreed to prepare and file with the SEC a registration statement covering the resale of the shares of our common stock issuable to the selling stockholders in the acquisition of Solexa Limited.

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The following table presents information regarding the selling stockholders and the shares that they may offer and sell from time to time under this prospectus.

This table is prepared based on information supplied to us by the listed selling stockholders, and reflects holdings as of August 8, 2005. The term selling stockholders includes the stockholders listed below and their transferees, pledgees, donees or other successors. The number of shares in the column Number of Shares Being Offered represents all of the shares that a selling stockholder may offer under this prospectus. The selling stockholders may sell some, all or none of their shares. We do not know how long the selling stockholders will hold the shares before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholders regarding the sale of any of the shares. The shares offered by this prospectus may be offered from time to time by the selling stockholders.

Beneficial ownership is determined in accordance with Rule 13d-3(d) promulgated by the SEC under the Securities Exchange Act of 1934, as amended. Unless otherwise noted, none of the share amounts set forth below represents more than 1% of our outstanding stock as of August 8, 2005, adjusted as required by the rules promulgated by the SEC. The percentages of shares beneficially owned prior to the offering are based on 26,092,488 shares of our common stock outstanding as of August 8, 2005.

	Shares of Common Stock Beneficially Owned Prior to Offering(1)			Shares of Common Stock Shares Beneficially Owned After Offering(1)	
Security Holders	**Number**	**Percent**	**Number of Shares Being Offered**	**Number**	**Percent**
Abingworth Bioventures II S.I.C.A.V.	2,266,436	*	2,266,436	0	*
Abingworth Bioventures II A LP(2)	613,278	2.3%	363,278	250,000	1.0%
Abingworth Bioventures III A LP(3)	1,226,769	4.7%	935,791	290,978	1.1%
Abingworth Bioventures III B LP(4)	748,869	2.9%	571,244	177,625	*
Abingworth Bioventures III C LP(5)	448,578	1.7%	342,179	106,399	*
Abingworth Bioventures III Executives LP(6)	19,550	*	14,913	4,637	*
Schroder Ventures International Life Sciences Fund II L.P. 1(7)(8)	2,120,920	8.1%	1,790,190	330,730	1.3%
Schroder Ventures International Life Sciences Fund II L.P. 2(7)(9)	903,290	3.5%	762,433	140,857	*
Schroder Ventures International Life Sciences Fund II L.P. 3(7)(10)	240,722	*	203,184	37,538	*
SITCO Nominees Ltd. VC 01903 as nominee for Schroder Ventures International Life Sciences Fund II group Co-Investment Scheme(7)(11)	60,993	*	51,482	9,511	*
SV (Nominees) Limited as nominee for Schroder Ventures Investments Limited(7)(12)	261,232	1.0%	220,496	40,736	*
Schroder Ventures International Life Sciences Fund II Strategic Partners L.P.(7)(13)	32,720	*	27,618	5,102	*
Oxford Bioscience Partners IV L.P.(14)(15)	3,015,488	11.6%	2,470,952	544,536	2.1%
mRNA Fund II L.P.(14)(16)	30,255	*	24,791	5,464	*

Amadeus II A LP(17)(18)	1,916,772	7.3%	1,570,609	346,163	1.3%
Amadeus II B LP(17)(19)	1,277,849	4.9%	1,047,074	230,775	*
Amadeus II C LP(17)(20)	894,495	3.4%	732,952	161,543	*
Amadeus II D GmbH & Co KG(17)(21)	42,596	*	34,903	7,693	*
Amadeus II Affiliates Fund LP(17)(22)	127,784	*	104,706	23,078	*
Timothy Rink	17,889	*	17,889	0	*
Nick McCooke	8,944	*	8,944	0	*
Dr. Shankar Balasubramaniam	95,037	*	95,037	0	*
Total Number of Shares Offered			13,657,101		

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* Represents beneficial ownership of less than 1%.

(1) Does not include 1,356,683 shares of common stock issuable upon exercise of warrants held by certain selling stockholders that are not exercisable until 180 days after July 12, 2005.

(2) Excludes 125,000 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(3) Excludes 145,489 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(4) Excludes 88,812 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(5) Excludes 53,200 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(6) Excludes 2,319 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(7) Tom Daniel, a former director of the Company, was formerly a General Partner of Schroder Ventures Life Sciences Advisors (UK) Limited which is an advisor to Schroder Venture Managers, Inc., the General Partner of the entities collectively known as Schroder Ventures International Life Sciences Fund II. Mr. Daniel has no beneficial ownership of the shares owned by Schroder Ventures International Life Sciences Fund II, except to the extent of his pecuniary interest therein.

(8) Excludes 165,365 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(9) Excludes 70,428 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(10) Excludes 18,769 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(11) Excludes 4,756 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(12) Excludes 20,368 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(13) Excludes 2,551 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(14) OBP Management IV L.P. is the general partner for Oxford Bioscience Partners IV L.P. and mRNA Fund II L.P. Mark Carthy, a former director of the Company, is a General Partner of OBP Management IV L.P. and may be deemed to share voting and investment power over the shares held by Oxford Bioscience Partners IV L.P. and mRNA Fund II L.P. Mr. Carthy disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein. Dr. Fambrough, a director of the Company, is affiliated with Oxford Bioscience

Partners IV, L.P. and mRNA Fund II L.P. and does not possess voting and/or investment power of the shares held by these entities. Dr. Fambrough disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein.

(15) Excludes 272,268 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(16) Excludes 2,732 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(17) Hermann Hauser, a director of the Company, shares the power to vote and control the disposition of shares held by Amadeus II A LP, Amadeus II B LP, Amadeus II C LP, Amadeus II D GmbH & Co KG and Amadeus II Affiliates LP. Dr. Hauser disclaims beneficial ownership of such shares, except to the extent of his pecuniary interest therein.

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(18) Excludes 173,081 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(19) Excludes 115,387 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(20) Excludes 80,772 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(21) Excludes 3,847 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

(22) Excludes 11,539 shares of common stock issuable upon exercise of a warrant not currently exercisable within 60 days but that will become exercisable 180 days after July 12, 2005.

PLAN OF DISTRIBUTION

The selling stockholders may, from time to time, sell any or all of their shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholders may use any one or more of the following methods when selling shares:

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

short sales;

broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;

a combination of any such methods of sale; and

any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

The selling stockholders may also engage in short sales against the box, puts and calls and other transactions in our securities or derivatives of our securities and may sell or deliver shares in connection with these trades.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved. Any profits on the resale of shares of common stock by a broker-dealer acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. Discounts, concessions, commissions and similar selling expenses, if any, attributable to the sale of shares will be borne by a selling stockholder. The selling stockholders may agree to

indemnify any agent, dealer or broker-dealer that participates in transactions involving sales of the shares if liabilities are imposed on that person under the Securities Act.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations,

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the pledgees or secured parties may offer and sell the shares of common stock from time to time under this prospectus after we have filed an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933 amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealers or agents that are involved in selling the shares of common stock may be deemed to be underwriters within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares of common stock purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

We are required to pay all fees and expenses incident to the registration of the shares. We have agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

The selling stockholders have advised us that they have not entered into any agreements, understandings or arrangements with any underwriters or broker-dealers regarding the sale of their shares of common stock, nor is there an underwriter or coordinating broker acting in connection with a proposed sale of shares of common stock by any selling stockholder. If we are notified by any selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of shares of common stock, if required, we will file a supplement to this prospectus. If the selling stockholders use this prospectus for any sale of the shares of common stock, they will be subject to the prospectus delivery requirements of the Securities Act.

The anti-manipulation rules of Regulation M under the Securities Exchange Act of 1934 may apply to sales of our common stock and activities of the selling stockholders.

LEGAL MATTERS

Cooley Godward LLP, Five Palo Alto Square, 3000 El Camino Real, Palo Alto, California 94304 will pass upon the validity of the common stock being offered by this prospectus.

EXPERTS

The financial statements of Solexa, Inc. appearing in Solexa, Inc. s Annual Report on Form 10-K for the year ended December 31, 2004, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon included therein and incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

The financial statements of Solexa Limited appearing in Solexa, Inc. s Amendment No. 1 to Current Report on Form 8-K/ A, filed with the SEC on May 20, 2005, have been audited by Ernst & Young LLP, Independent Auditors, as set forth in their report thereon included therein and incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

You should rely only on the information provided or incorporated by reference in this prospectus. We have authorized no one to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of the document.

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We are a reporting company and we file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a resale registration statement on Form S-3 under the Securities Act to register the shares of common stock offered by this prospectus. However, this prospectus does not contain all of the information contained in the registration statement and the exhibits and schedules to the registration statement. For further information with respect to us and the securities offered under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the SEC s public reference rooms at 450 Fifth Street, N.W., in Washington, DC. You can request copies of these documents by contacting the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for further information about the operation of the public reference rooms. Our SEC filings are also available at the SEC s website at www.sec.gov. In addition, you can read and copy our SEC filings at the office of the National Association of Securities Dealers, Inc. at 1735 K Street, N.W., Washington, D.C. 20006.

The SEC allows us to incorporate by reference the information contained in documents that we file with them, which means that we can disclose important information to you by referring to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below, any filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 after the date we filed the registration statement of which this prospectus is a part and before the effective date of the registration statement and any future filings we will make with the SEC under those sections.

The following documents are incorporated by reference into this document:

1. Our Annual Report on Form 10-K for the fiscal year ended December 31, 2004, filed on March 31, 2005;
2. Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2005, filed on May 23, 2005;
3. Our Current Report on Form 8-K, filed on January 3, 2005;
4. Our Current Report on Form 8-K, filed on January 10, 2005;
5. Our Current Report on Form 8-K, filed on March 7, 2005;
6. Our Current Report on Form 8-K, filed on March 29, 2005;
7. Our Current Report on Form 8-K, filed on April 8, 2005;
8. Our Current Report on Form 8-K, filed on April 26, 2005;
9. Our Current Report on Form 8-K, filed on May 11, 2005;

10. Our Current Report on Form 8-K/ A, filed on May 20, 2005;

11. Our Current Report on Form 8-K, filed on May 23, 2005;

12. Our Current Report on Form 8-K, filed on June 9, 2005;

13. Our Current Report on Form 8-K, filed on June 28, 2005;

14. Our Current Report on Form 8-K, filed on July 15, 2005; and

15. The description of our common stock set forth in our registration statement on Form 10, as amended, filed on October 5, 1993.

We also incorporate by reference into this prospectus all documents filed by us with the Securities and Exchange Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement and prior to effectiveness of the registration statement, and all documents

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filed by us with the Securities and Exchange Commission pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act from the date of this prospectus but prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

Documents incorporated by reference are available from us, without charge. You may obtain documents incorporated by reference in this prospectus by requesting them in writing or by telephone at the following address:

Solexa, Inc.
25861 Industrial Blvd.
Hayward, California 94545
(510) 670-9300
Attn: Investor Relations

Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement.

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PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. ***Other Expenses of Issuance and Distribution***

The following table sets forth all expenses payable by the registrant in connection with the sale of the common stock being registered. The security holders will not bear any portion of such expenses. All the amounts shown are estimates except for the registration fee.

SEC Registration Fee	$	7,764
Legal fees and expenses	$	20,000
Accounting fees and expenses	$	10,000
Miscellaneous	$	4,000
Total	$	41,764

Item 15. ***Indemnification of Officers and Directors***

As permitted by Delaware law, our amended and restated certificate of incorporation provides that no director of ours will be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability:

for any breach of duty of loyalty to us or to our stockholders;

for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;

for unlawful payment of dividends or unlawful stock repurchases or redemptions under Section 174 of the Delaware General Corporation Law; or

for any transaction from which the director derived an improper personal benefit.

Our bylaws, as amended, further provides that we must indemnify our directors and executive officers and may indemnify our other officers and employees and agents to the fullest extent permitted by Delaware law. We believe that indemnification under our bylaws, as amended, covers negligence and gross negligence on the part of indemnified parties.

We have entered into indemnification agreements with each of our directors and certain officers. These agreements, among other things, require us to indemnify each director and officer for certain expenses including attorneys fees, judgments, fines and settlement amounts incurred by any such person in any action or proceeding, including any action by or in the right of Solexa, Inc., arising out of the person s services as our director or officer, any subsidiary of ours or any other company or enterprise to which the person provides services at our request.

At present, there is no pending litigation or proceeding involving a director or officer of Solexa as to which indemnification is being sought nor are we aware of any threatened litigation that may result in claims for indemnification by any officer or director.

Item 16. ***Exhibits***

Exhibit Number	Description
2.2	Acquisition Agreement, dated as of September 28, 2004, by and between Solexa Limited and Lynx Therapeutics, Inc., incorporated by reference to the indicated exhibit in the Company s Registration Statement on Form S-4 filed on October 29, 2004.
2.2.1	Amendment and Waiver, dated March 3, 2005, by and between Solexa Limited and Lynx Therapeutics, Inc., incorporated by reference to the indicated exhibit in the Company s

Current Report on Form 8-K filed on March 7, 2005.

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Exhibit Number	Description
3.1	Amended and Restated Certificate of Incorporation of the Company, incorporated by reference to the indicated exhibit of the Company s Form 10-Q for the period ended June 30, 2000.
3.1.1	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company, incorporated by reference to the indicated exhibit of the Company s Form 10-K for the period ended December 31, 2002.
3.1.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company, incorporated by reference to the indicated exhibit of the Company s Current Report on Form 8-K filed on March 7, 2005.
3.2	Bylaws of the Company, as amended, incorporated by reference to the indicated exhibit of the Company s Form 10-Q for the period ended June 30, 2000.
3.3	Certificate of Ownership and Merger of Lynx Therapeutics, Inc., incorporated by reference to the indicated exhibit of the Company s Current Report on Form 8-K filed on March 7, 2005.
4.1	Specimen Certificate of Common Stock, incorporated by reference to the similar exhibit of the Company s Form 10-Q for the period ended March 31, 2005.
5.1+	Opinion of Cooley Godward LLP.
23.1+	Consent of Independent Registered Public Accounting Firm.
23.2+	Consent of Ernst & Young LLP, Independent Auditors.
23.3+	Consent of Cooley Godward LLP (included in Exhibit 5.1).
24.1+	Power of Attorney is contained on the signature pages.

+ Being filed herewith; all other exhibits previously filed.

Item 17. ***Undertakings***

1. The undersigned registrant hereby undertakes:

(a) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated

maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) (§ 230.424(b) of this chapter) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement.

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a)(i) and (a)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the issuer pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference herein.

(b) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered

herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

2. The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant s annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan s annual report pursuant to section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

3. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Hayward, State of California, on August 11, 2005.

Solexa, Inc.
By: /s/ John West

John West
Chief Executive Officer and Director

POWER OF ATTORNEY

Know All Persons By These Presents, that each person whose signature appears below constitutes and appoints John West and Linda M. Rubinstein, and each or any one of them, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ John West John West	Chief Executive Officer and Director (*Principal Executive Officer*)	August 11, 2005
/s/ Linda M. Rubinstein Linda M. Rubinstein	Vice President and Chief Financial Officer (*Principal Financial and Accounting Officer*)	August 11, 2005
/s/ Craig C. Taylor Craig C. Taylor	Chairman of the Board	August 11, 2005
/s/ Genghis Lloyd-Harris Genghis Lloyd-Harris	Director	August 11, 2005
Stephen D. Allen	Director	August , 2005

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Signature	Title	Date
/s/ H. Hauser Hermann Hauser	Director	August 11, 2005
/s/ G. Mason Morfit G. Mason Morfit	Director	August 11, 2005
/s/ Douglas M. Fambrough Douglas M. Fambrough	Director	August 11, 2005

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INDEX TO EXHIBITS

Exhibit Number	Description
2.2	Acquisition Agreement, dated as of September 28, 2004, by and between Solexa Limited and Lynx Therapeutics, Inc., incorporated by reference to the indicated exhibit in the Company s Registration Statement on Form S-4 filed on October 29, 2004.
2.2.1	Amendment and Waiver, dated March 3, 2005, by and between Solexa Limited and Lynx Therapeutics, Inc., incorporated by reference to the indicated exhibit in the Company s Current Report on Form 8-K filed on March 7, 2005.
3.1	Amended and Restated Certificate of Incorporation of the Company, incorporated by reference to the indicated exhibit of the Company s Form 10-Q for the period ended June 30, 2000.
3.1.1	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company, incorporated by reference to the indicated exhibit of the Company s Form 10-K for the period ended December 31, 2002.
3.1.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation of the Company, incorporated by reference to the indicated exhibit of the Company s Current Report on Form 8-K filed on March 7, 2005.
3.2	Bylaws of the Company, as amended, incorporated by reference to the indicated exhibit of the Company s Form 10-Q for the period ended June 30, 2000.
3.3	Certificate of Ownership and Merger of Lynx Therapeutics, Inc., incorporated by reference to the indicated exhibit of the Company s Current Report on Form 8-K filed on March 7, 2005.
4.1	Specimen Certificate of Common Stock, incorporated by reference to the similar exhibit of the Company s Form 10-Q for the period ended March 31, 2005.
5.1+	Opinion of Cooley Godward LLP.
23.1+	Consent of Independent Registered Public Accounting Firm.
23.2+	Consent of Ernst & Young LLP, Independent Auditors.
23.3+	Consent of Cooley Godward LLP (included in Exhibit 5.1).
24.1+	Power of Attorney is contained on the signature pages.

+ Being filed herewith; all other exhibits previously filed.