Solexa, Inc.
Form 424B3
September 01, 2005

Table of Contents

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Registration No. 333-127460

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 31, 2005, the last reported sales price for our common stock was $5.43 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 September 1, 2005.

TABLE OF CONTENTS

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.

Table of Contents

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 refers to 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.

Table of Contents

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 year since our inception, including a net loss for the three months and six months ended June 30, 2005. As of June 30, 2005, we had an accumulated deficit of approximately $37.3 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 sales, 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 through 2006.

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 Lynx.

The integration of Solexa Limited and Lynx has been and will be 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. These challenges include the timely, efficient and successful execution of a number of tasks related generally to the transaction and in particular to product development programs.

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

Table of Contents

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

As of June 30, 2005, the 60 employees of Solexa Limited, our UK subsidiary, are based near Cambridge, UK and our 57 U.S. employees are based in Hayward, California. As a result we face challenges inherent in efficiently managing and coordinating the activities of our increased number of employees located in different countries, 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. Several additional senior staff members have been hired as well. While Mr. West has experience managing private scientific instrument companies and large genomics teams within a public U.S. company, 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 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 August 11, 2005, our company s executive officers, directors and entities affiliated with them, in the aggregate, beneficially own approximately 58% of the combined company, including warrants exercisable within 60 days of August 11, 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 genetic analysis instruments and future sales of reagents and other consumables and services to support customers in their use of that equipment. Our historical 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

Table of Contents

agreement. There is no assurance that we will be successful in changing the emphasis of our business model from providing genomics services to selling instruments, consumables 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 DNA sequencing technologies and we are now using those technologies to develop new instruments, consumables 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 genetic analysis 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;
- our ability to establish an instrument manufacturing capability, or to obtain instruments from another manufacturer; and
- our 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 systems 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 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 genomics services customers and will need to find additional genetic analysis customers in the future.

Table of Contents

Our strategy for the development and commercialization of our technologies and potential genetic analytical instrument systems includes entering into customer agreements in which we provide genomics services to research institutes and pharmaceutical, biotechnology and agricultural companies. At present, our genomics services business 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 genomics services business, which operate based on our MPSS technology. If we are successful in commercializing our genetic analysis instrument systems, we anticipate continuing to provide genomics services after the commercial launch in order to meet particular customer requirements and, 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 genomics services business will generate positive cash flow or become profitable.

Prior to our business combination with Solexa Limited, Lynx derived substantially all of its revenues from customer agreements, collaborations and licenses related to our genomics services business. This continues to be the case for Solexa since the business combination. A significant portion of our revenues comes from a small number of customers. Thus, unless and until we are able to commercialize our new genetic analysis instrument systems under development, we will be dependent on a small number of customers to continue our current genomics services 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 genomics services 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, among others, 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.

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, some of our competitors have, and others 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 obsolete or noncompetitive.

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

Table of Contents

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 genomics services 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 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 genomics services business is typically lengthy, up to approximately nine months, because we need to educate our potential customers and sell the benefits of our products to a variety of constituencies within such entities. In addition, we may be required to negotiate agreements containing terms unique to each 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 May 25, 2006. 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;
- 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.

Table of Contents

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 genetic analysis instrument, consumables and other reagents sales and services companies and other biotechnology 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 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 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 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

Table of Contents

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.

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 period from April 1, 2004 to June 30, 2005, the closing sales price of our common stock as quoted on the Nasdaq SmallCap Market fluctuated from a low of $2.96 to a high of $19.99 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 customers; 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.

Table of Contents

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 to 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;

- we have been unable to obtain coverage of our company by securities analysts; 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 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.

Table of Contents

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.

Table of Contents

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		

Table of Contents

* 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.

Table of Contents

(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,

Table of Contents

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.

Table of Contents

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 June 30, 2005, filed on August 22, 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

Table of Contents

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.

Table of Contents

WE HAVE NOT AUTHORIZED ANY DEALER, SALESPERSON OR OTHER PERSON TO GIVE ANY INFORMATION OR REPRESENT ANYTHING NOT CONTAINED IN THIS PROSPECTUS. YOU SHOULD RELY ONLY ON THE INFORMATION PROVIDED OR INCORPORATED BY REFERENCE IN THIS PROSPECTUS. YOU SHOULD NOT RELY ON ANY UNAUTHORIZED INFORMATION. THIS PROSPECTUS DOES NOT OFFER TO SELL OR BUY ANY SHARES IN ANY JURISDICTION IN WHICH IT IS UNLAWFUL. THE INFORMATION IN THIS PROSPECTUS IS CURRENT AS OF THE DATE ON THE COVER.

13,657,101 SHARES
SOLEXA, INC.
COMMON STOCK
PROSPECTUS
September 1, 2005