# ARENA PHARMACEUTICALS INC

Form S-1/A June 21, 2001

AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON JUNE 21, 2001

REGISTRATION STATEMENT NO. 333-62268

SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

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AMENDMENT NO. 2 TO FORM S-1

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

ARENA PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

DELAWARE 2834 23-2908305 (State or other jurisdiction of (Primary standard industrial incorporation or organization) classification code no.) identification number)

6166 NANCY RIDGE DRIVE SAN DIEGO, CA 92121 (858) 453-7200

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

JACK LIEF
PRESIDENT AND CHIEF EXECUTIVE OFFICER
ARENA PHARMACEUTICALS, INC.
6166 NANCY RIDGE DRIVE
SAN DIEGO, CA 92121
(858) 453-7200

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC: AS SOON AS PRACTICABLE AFTER THE EFFECTIVE DATE OF THIS REGISTRATION STATEMENT.

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, check the following box. /

If this form is filed to register additional securities for an offering pursuant to Rule  $462\,(b)$  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. / /

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. / /

If this form is a post-effective amendment filed pursuant to Rule  $462\,(d)$  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. / /

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box.  $/\ /$ 

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, AS AMENDED, OR UNTIL THIS REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE 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. We 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 JUNE 20, 2001

PROSPECTUS

[THOMAS WEISEL PARTNERS LLC BANNER]

[ARENA PHARMACEUTICALS LOGO]

5,000,000 Shares Common Stock

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Arena Pharmaceuticals is selling 4,000,000 shares of common stock and the selling stockholders identified in this prospectus are selling an additional 1,000,000 shares. We will not receive any of the proceeds from the sale of the shares sold by the selling stockholders. We have granted the underwriters a 30-day option to purchase up to an additional 750,000 shares from us to cover over-allotments, if any.

Our common stock is listed on the Nasdaq National Market under the symbol "ARNA." The last reported sale price on June 20, 2001 was \$29.00 per share.

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INVESTING IN OUR COMMON STOCK INVOLVES RISKS. SEE "RISK FACTORS" BEGINNING ON PAGE 6.

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|  | Per S | Share Total |
|--|-------|-------------|
| Public offering price                                  | \$    | \$          |
| Underwriting discount                                  | \$    | \$          |
| Proceeds, before expenses, to us                       | \$    | \$          |
| Proceeds, before expenses, to the selling stockholders | \$    | \$          |

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

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THOMAS WEISEL PARTNERS LLC

DAIN RAUSCHER WESSELS

ABN AMRO ROTHSCHILD LLC

LAZARD

The date of this prospectus is June , 2001

#### TABLE OF CONTENTS

|   | PAGE |
|---|------|
|   |      |
| Prospectus Summary                                | 1    |
| Risk Factors                                      | 6    |
| Special Note Regarding Forward Looking Statements | 15   |
| Use of Proceeds                                   | 16   |
| Price Range of Common Stock                       | 16   |
| Dividend Policy                                   | 16   |
| Capitalization                                    | 17   |
| Dilution  | 18   |
| Selected Financial Data                           | 19   |

| Management's Discussion and Analysis of Financial Condition |     |
|---|-----|
| and Results of Operations                                   | 20  |
| Business  | 26  |
| Management  | 45  |
| Relationships and Related Party Transactions                | 54  |
| Principal and Selling Stockholders                          | 55  |
| Description of Capital Stock                                | 58  |
| Underwriting  | 61  |
| Legal Matters   | 64  |
| Experts   | 64  |
| Where You Can Find More Information                         | 64  |
| Index to Consolidated Financial Statements                  | F-1 |

i

#### PROSPECTUS SUMMARY

THIS SUMMARY HIGHLIGHTS INFORMATION CONTAINED ELSEWHERE IN THIS PROSPECTUS. YOU SHOULD READ THIS ENTIRE PROSPECTUS CAREFULLY, INCLUDING THE "RISK FACTORS" SECTION. UNLESS THE CONTEXT REQUIRES OTHERWISE, THE TERMS "ARENA," "WE," "US" AND "OUR" AS USED IN THIS PROSPECTUS REFER TO ARENA PHARMACEUTICALS, INC. AND ITS SUBSIDIARIES.

#### OUR COMPANY

We are an emerging biopharmaceutical company focused principally on discovering drugs that act on an important class of drug targets called G protein-coupled receptors, or GPCRs. We have developed a technology called Constitutively Activated Receptor Technology, or CART, that can be applied to GPCRs and other classes of receptors to identify drug leads. We believe that CART is a more efficient drug discovery technique than traditional drug discovery techniques. Using CART, we have discovered new drug leads in the areas of obesity and schizophrenia. In both of these programs, drug leads were discovered within 18 months, which is substantially less time than might be required to discover a drug lead using traditional drug discovery techniques. Based on our success using CART, we have established collaborative drug discovery programs with a number of pharmaceutical and biotechnology companies, which in some cases have already resulted in revenues to us related to milestone payments and research and development fees.

GPCRs are an important part of the pharmaceutical and biotechnology industries' drug discovery efforts. Of the leading 100 pharmaceutical products, based on 2000 revenues, 39 wholly or in part act on GPCRs. In 2000, these GPCR-based pharmaceutical products represented over \$42.6 billion in sales and included Claritin-Registered Trademark- for allergies, Zantac-Registered Trademark- for gastric ulcers, Imitrex-Registered Trademark- for migraines and Cozaar-Registered Trademark- for hypertension.

Based upon the recent completion of the mapping of the human genome, scientists estimate that there are approximately 40,000 genes in the human genome, and of these, approximately 2%, or 800, are GPCRs with potential pharmaceutical applications. Because of the limitations associated with traditional drug discovery techniques, only a fraction of these GPCRs have been used to discover drugs. We believe that our technologies provide us with a significant advantage in the market for GPCR based drug development, as well as a substantial intellectual property position that we expect will establish a barrier to entry by potential competitors.

THE DRUG DISCOVERY PROBLEM

Scientists are using advances in genomics research to identify new drug targets. These new drug targets form the basis of drug discovery for the treatment of disease. Abnormal cell function causes diseases in humans. The function of a cell changes when a natural substance, which scientists call a ligand, is released from a cell and binds to the surface of that cell or another cell through a receptor such as a GPCR. This binding triggers the initiation of various signals within the cell, resulting in changes in biological activity. Drugs work by imitating or inhibiting the binding of the ligand to the cell, thereby affecting cellular function to regulate the disease process.

Traditional drug discovery techniques for drugs that target receptor drug targets such as GPCRs require scientists to identify the ligand that naturally binds to the drug target. This identification process is very uncertain and, even when successful, typically takes four to five years and costs millions of dollars per drug target. To our knowledge, only a limited number of examples exist where a ligand for a GPCR has been intentionally discovered. Therefore, this identification process is usually the major bottleneck in the drug discovery process, limiting the rate at which drugs are discovered at GPCR drug targets.

1

#### OUR TECHNOLOGY SOLUTIONS

CART provides us and our collaborators with an efficient and cost effective drug discovery technique that avoids this major bottleneck in receptor drug discovery efforts. Because of CART, we and our collaborators do not use, and therefore do not need to identify, the receptor's native ligand for our drug discovery efforts. Instead, we use CART to genetically alter, or activate, GPCRs and other receptors to mimic the biological response that occurs when the ligand binds to the drug target. We use these activated drug targets as screening tools to identify chemical compounds that alter this biological response. These chemical compounds, known as drug leads, are the basis for drug discovery.

Our Melanophore Technology is a unique screening technique that we believe complements CART. Melanophore Technology provides a broadly applicable, simple and sensitive means to detect biological responses and eliminates the need for radioactive or fluorescent screening techniques. In combination, we believe that CART and Melanophore Technology enhance our drug discovery efforts at all of the estimated 800 GPCR drug targets.

## THERAPEUTIC APPLICATIONS OF CART

We have successfully identified drug leads that inhibit or activate the function of a number of GPCRs. In the past four years, we have obtained the full-length gene sequences of 407 human GPCRs and made them available for activation and screening. We have selected and applied CART to a number of GPCR targets that we believe have high potential value for the discovery of therapeutics to treat diseases such as obesity, cancer, cardiovascular disease, diabetes, inflammation and Alzheimer's Disease. Obesity affects approximately 22 million adults in the United States. We have identified a drug lead that we believe may be the basis for the development of drug candidates, and ultimately drugs, for use in the treatment of obesity. Schizophrenia affects more than two million people in the United States in a given year. We have also discovered drug leads that may be useful in the treatment of diseases resulting from the overactivity of a GPCR which is associated with psychiatric disorders such as schizophrenia. We discovered these obesity and schizophrenia drug leads within approximately 18 months from the initial application of CART to these drug targets.

#### OUR COLLABORATORS

In April 2000, we entered into a significant collaborative agreement with Eli Lilly and Company. This collaboration focuses principally on diseases of the central nervous system and endocrine system, as well as cardiovascular diseases, and may be expanded to other diseases, including cancer. In May 2000, we entered into a collaborative agreement with Taisho Pharmaceutical Co., Ltd. This collaboration focuses on a specified number of drug targets of interest to Taisho for its drug discovery efforts. In January 2000, we entered into a collaborative agreement with Fujisawa Pharmaceutical Co., Ltd. to validate up to 13 drug targets. We have also entered into a collaborative agreement with Lexicon Genetics, Inc. Under the terms of some of these agreements, we have received various payments, including payments related to milestones that have been achieved and assay development fees. Some of our agreements also entitle us to other milestone payments and royalties based on sales, if any.

#### PROJECT GENESIS

We recently began Project Genesis, a broad, internal program to discover drug leads and develop drug candidates that target all of the estimated 800 therapeutically relevant human GPCRs. Key discrete elements of Project Genesis include:

 obtaining genetic sequence information on the estimated 800 GPCRs from both public and proprietary sources

2

- determining the location of all of the estimated 800 GPCRs within the body and functions associated with these GPCRs
- cloning and demonstrating CART-activation of all of the estimated 800  $_{
  m CRCR}$
- using Melanophore Technology and other techniques to screen all of the GPCRs that demonstrate CART-activation against our library of chemical compounds
- selecting the most promising drug leads obtained from our screening efforts for development and optimization as drug candidates

We expect to complete all of the discrete elements of Project Genesis within the next three to five years. At any stage of Project Genesis, we may enter into collaborative arrangements for any of the GPCR drug targets, drug leads or drug candidates that we may discover.

#### OUR STRATEGY

Our goal is to become a leader in the discovery of novel, proprietary drugs that target human GPCRs. The major elements of our strategy to achieve this goal are:

- execute Project Genesis to accelerate drug discovery at all therapeutically relevant GPCRs
- enter into strategic collaborations
- use CART to identify novel, proprietary drug leads that have unique mechanisms of action

- continue to protect and expand our intellectual property rights
- invest in or acquire complementary technologies

We are also applying CART to other human receptors and non-human receptors for human therapeutic, agricultural and other applications.

#### RECENT DEVELOPMENTS

The following summarizes recent events that have occurred since the completion of our initial public offering in July 2000. These events are described in greater detail elsewhere in this prospectus:

- We received our first four milestone payments from Eli Lilly in September 2000, October 2000, December 2000 and March 2001. The milestone payments were related to Eli Lilly's acceptance of CART-activated versions of three GPCRs in August 2000 and September 2000 and its acceptance of six additional GPCRs in December 2000.
- In October 2000, we received our first milestone payment from Taisho. The milestone payment was related to Taisho's acceptance of a CART-activated version of a GPCR selected by Taisho and Taisho's request that we screen the CART-activated version of this GPCR using our chemical library. In January 2001, we licensed our 18F program to Taisho, including the 18F obesity orphan receptor target and drug leads discovered using the 18F receptor, for a one-time payment and future milestones and royalties. In March 2001, we entered into a receptor discovery collaboration with Taisho under which Taisho has paid us a one-time research and development fee for the first phase of the collaboration.
- In February 2001, we acquired Bunsen Rush Laboratories, Inc. and its proprietary and patented Melanophore Technology for \$15.0 million in cash.
- In April 2001, we entered into a binding letter of intent with Axiom Biotechnologies Inc. Under the terms of the letter of intent, we will identify the location and expression of GPCRs contained in Axiom's human cell lines. In addition, we have paid \$2.0 million to Axiom in connection with the letter of intent, which provides that we will purchase approximately 570,000 shares of Axiom's preferred stock.

3

#### THE OFFERING

working capital, research and development, clinical testing, expansion of our facilit and potentially for acquisitions of complementary businesses or technologies.

should read the discussion under the headi "Use of Proceeds" for more information.

Nasdaq National Market symbol..... ARNA

The number of shares of common stock to be outstanding after this offering is based on the number of shares outstanding as of March 31, 2001, including 470,562 shares issued upon exercise of unvested options that are subject to repurchase by us until vested, and excluding:

- 1,000,000 shares of common stock that are reserved for issuance under our 2001 Arena Employee Stock Purchase Plan
- 850,750 shares of common stock issuable upon the exercise of outstanding options under our 2000 Equity Compensation Plan at a weighted average exercise price of \$21.60 per share
- 493,500 shares of common stock issuable upon the exercise of outstanding options under our 1998 Equity Compensation Plan at a weighted average exercise price of \$0.66 per share

You should read the discussion under the heading "Capitalization" for more information regarding the outstanding shares of our common stock and options to purchase our common stock.

Generally, the information in this prospectus, unless otherwise noted, assumes that the over-allotment option granted to the underwriters to purchase up to 750,000 additional shares of common stock is not exercised.

#### OTHER INFORMATION

We were incorporated on April 14, 1997 in Delaware and commenced operations in July 1997. Our corporate headquarters is located at 6166 Nancy Ridge Drive, San Diego, California 92121. Our telephone number is (858) 453-7200.

CART-TM-, Arena-TM-, Aressa-TM-, ChemNavigator-TM- and BRL Screening-TM- are our trademarks. Arena Pharmaceuticals-Registered Trademark- and our logo are our registered trademarks. Trade names and trademarks of other companies appearing in this prospectus are the property of their respective holders.

4

#### SUMMARY FINANCIAL DATA

The following table summarizes our financial data. The summary financial data for the period from April 14, 1997 (inception) to December 31, 1997 and for the years ended December 31, 1998, 1999 and 2000 are derived from our audited financial statements. We have also included data from our unaudited financial statements for the three months ended March 31, 2000 and 2001 and as of March 31, 2001. The as adjusted balance sheet data reflects the sale by us of 4,000,000 shares of common stock in this offering at an assumed offering price of \$29.00 per share. You should read this data together with our financial statements and related notes included elsewhere in this prospectus.

PERIOD FROM APRIL 14, 1997

|   | (INCEPTION)<br>THROUGH |                        |    | YEAI              |     | D DECEMBER          | R 31, |                   |
|---|------------------------|------------------------|----|-------------------|-----|---------------------|-------|-------------------|
|   | DECEMBER               | 31, 1997               | 1  |                   |     |                     |       | 2000              |
| STATEMENT OF OPERATIONS DATA:                           |                        |                        |    |                   |     |                     |       |                   |
| Revenues  | \$                     |                        | \$ |                   | \$  |                     | \$    | 7,683,3           |
| Operating expenses:                                     |                        |                        |    |                   |     |                     |       |                   |
| Research and development                                | 44                     | 7,038                  | 2, | 615,526           | 8   | ,336,483            | 1     | 2,080,2           |
| General and administrative  Amortization of deferred    | 23                     | 4,614                  |    | 728,806           | 1   | ,814,023            |       | 2,678,9           |
| compensation  |                        |                        |    |                   |     | 378,109             |       | 4,342,8           |
| intangibles   |                        | <br>                   |    |                   |     |                     |       |                   |
| Total operating expenses                                | 68                     | 1,652                  | 3. | 344.332           | 1.0 | ,528,615            | 1     | 9,102,0           |
| Interest and other, net                                 | (1                     | 3,113)                 |    |                   |     | 290,665             |       |                   |
| Net income (loss)                                       |                        | 4,765)                 |    |                   |     | ,237,950)           |       |                   |
| Non-cash preferred stock charge                         |                        | <br>                   |    |                   |     |                     |       | 2,391,0           |
| Net income (loss) applicable to                         |                        |                        |    |                   |     |                     |       |                   |
| common stockholders                                     |                        | 4,765)<br>=====        |    | 396 <b>,</b> 318) |     | ,237,950)<br>====== |       | 8,753,0<br>====== |
| Net income (loss) per share:                            |                        |                        |    |                   |     |                     |       |                   |
| Basic and diluted                                       | ·                      | (0.73)<br>=====        |    | (3.51)            |     | (10.05)             | \$    | (2.               |
| Shares used in calculating net income (loss) per share: |                        |                        |    |                   |     |                     |       |                   |
| Basic   |                        | 5,000                  |    |                   |     | ,018,359            |       | 0,139,7           |
| Diluted   |                        | ====<br>5 <b>,</b> 000 |    | 966,799           |     | ,018,359            |       | 0,139,7           |
|   |                        | =====                  |    |                   |     |                     |       |                   |

|  | AS OF MARCH 31, 2001 |               |  |
|--|----------------------|---------------|--|
|  | ACTUAL               | AS ADJUSTED   |  |
| BALANCE SHEET DATA:                    |                      |               |  |
| Cash and cash equivalents              | \$125,503,323        | \$234,713,323 |  |
| Total assets                           | 156,621,158          | 265,831,158   |  |
| Long-term debt, net of current portion | 832,314              | 832,314       |  |
| Deferred compensation                  | (6,916,624)          | (6,916,624)   |  |
| Accumulated deficit                    | (19,606,009)         | (19,606,009)  |  |
| Total stockholders' equity             | 151,177,620          | 260,387,620   |  |

5

## RISK FACTORS

AN INVESTMENT IN OUR COMMON STOCK INVOLVES SIGNIFICANT RISKS. YOU SHOULD CAREFULLY CONSIDER THE FOLLOWING RISK FACTORS BEFORE YOU BUY OUR COMMON STOCK.

RISKS RELATED TO OUR BUSINESS

WE HAVE A HISTORY OF LOSSES AND LIMITED REVENUES.

We were formed in April 1997. We had losses of \$3.4 million for the year ended December 31, 1998, \$10.2 million for the year ended December 31, 1999 and \$6.4 million for the year ended December 31, 2000. For the three months ended March 31, 2001, we had revenues of \$5.4 million and operating expenses, excluding non-cash items, of \$4.9 million. Through March 31, 2001, we had an accumulated deficit of \$19.6 million. Our losses have resulted in large part from the significant research and development expenditures required to identify and validate new drug targets and new drug leads. We rely on our collaboration and license agreements for our revenues, and we may experience operating losses even if we or our collaborators successfully identify potential drug targets and drug leads. If the time required to generate revenues and to achieve sustained profitability is longer than we anticipate, or if we are unable to obtain necessary funds, we may never achieve sustained profitability and may have to discontinue our operations.

MOST OF OUR REVENUES ARE CONTINGENT UPON COLLABORATIVE AND LICENSE AGREEMENTS AND WE MAY NOT RECEIVE SUFFICIENT REVENUES FROM THESE AGREEMENTS TO SUSTAIN PROFITABILITY.

Our strategy is to use our technologies to generate meaningful revenues from our collaborative and license agreements. Through March 31, 2001, substantially all of our revenues have been derived from two of our collaborators, Eli Lilly and Taisho. We expect substantially all of our revenues for the near term to be derived from these collaborators. Our ability to generate revenues depends on our ability to enter into additional collaborative and license agreements with third parties and to maintain the agreements we currently have in place. We will receive little or no revenues under our agreements if we or our collaborators' research, development or marketing efforts are unsuccessful, or if our agreements are terminated early. Additionally, if we do not enter into new collaborative agreements, we will not receive revenues from new sources.

Our receipt of revenues from collaborative arrangements will be significantly affected by the amount of time and effort expended by our collaborators, the timing of the identification of useful drug targets and the timing of the discovery of drug leads and the development of drug candidates. Under our existing agreements, we may not earn significant milestone payments until our collaborators have advanced products into clinical testing, which may not occur for many years, if at all. We do not control the amount and timing of resources that our collaborators devote to our collaborative programs, potential products or product rights. Furthermore, we lack sales and marketing experience and will depend on our collaborators to market any drugs that we develop with them.

Conflicts may arise between us and our collaborators, such as conflicts concerning ownership rights to particular drug leads or drug candidates. While our existing collaborative agreements typically provide that we receive milestone and royalty payments with respect to drugs developed from our collaborative programs, disputes may arise over the application of payment provisions to these drugs and any royalty payments may be at reduced rates. If any of our collaborators were to breach, terminate or fail to renew their collaborative agreements with us, the pre-clinical or clinical development or commercialization of the affected drug candidates or research programs could be delayed or terminated. Our collaborative agreements generally allow either party to terminate the agreements with advance written notice of that party's intent to terminate. In addition, our collaborators have the right to terminate the collaborative agreements under some circumstances in

6

which we do not. In some circumstances, our collaborators can continue to use our technology after our agreements are terminated.

Our collaborators may choose to use alternative technologies or develop alternative drugs either on their own or with other collaborators, including our competitors, in order to treat diseases that are targeted by collaborative arrangements with us. Our collaborative agreements typically do not prohibit these activities.

Consolidation in the pharmaceutical or biotechnology industry could have an adverse effect on us by reducing the number of potential collaborators or jeopardizing our existing relationships. We may not be able to enter into any new collaborative agreements.

IF PROBLEMS ARISE IN THE TESTING AND APPROVAL PROCESS, OUR TECHNOLOGIES MAY NOT LEAD TO SUCCESSFUL DRUG DEVELOPMENT EFFORTS AND WE WILL NOT RECEIVE REVENUES.

In order to receive some of the milestone payments under our collaborative agreements, we or our collaborators must successfully complete pre-clinical and clinical trials of drug candidates discovered using our technologies. To date, we have identified only a few drug leads, all of which are in the very early stages of development and none of which have completed the development process.

Developing drug leads, drug candidates and drugs is highly uncertain and subject to significant risks. Our access to and use of some human or other tissue samples in our research and development efforts is subject to government regulation, both in the United States and abroad. United States and foreign government agencies may also impose restrictions on the use of data derived from human or other tissue samples. We or our collaborators will rely on third-party clinical investigators at medical institutions to conduct our clinical trials, and may rely on other third-party organizations to perform data collection and analysis. As a result, we may face delays outside of our control. It may take us or our collaborators many years to complete any pre-clinical or clinical trials, and failure can occur at any stage of testing. Interim results of trials do not necessarily predict final results, and acceptable results in early trials may not be repeated in later trials. Moreover, if and when our programs reach clinical trials, we or our collaborators may decide to, or be required to, discontinue development of any or all of these projects at any time for commercial, scientific or other reasons.

In order to receive royalty payments from our collaborators, we or our collaborators must receive approval from regulatory agencies to market drugs discovered using our technologies. A new drug may not be sold in the United States until the United States Food and Drug Administration, or FDA, has approved a new drug application, or an NDA. When a drug receives an approved NDA, this approval is limited to those disease states and conditions for which the drug candidate has been demonstrated through clinical trials to be safe and effective. Drug candidates developed by us or our collaborators may not prove to be safe and effective in clinical trials and may not meet all of the applicable regulatory requirements necessary to receive marketing approval. We do not expect any drugs resulting from our or our collaborators' research to be commercially available for many years, if at all.

DRUG DISCOVERY AND DEVELOPMENT IS AN INTENSELY COMPETITIVE BUSINESS THAT COULD RENDER OUR TECHNOLOGIES OBSOLETE OR NONCOMPETITIVE.

An important focus of our efforts is GPCRs. Because GPCRs are an important target class for drug discovery efforts, we believe that most pharmaceutical companies, several biotechnology companies, and other organizations have

internal drug discovery programs focused on GPCRs. Another company or organization may have, or may develop, a technology using GPCRs to discover and develop drug leads or drug candidates more effectively, more quickly or at a lower cost than our technologies. Such a technology could render our technologies, and in particular, CART, obsolete or noncompetitive.

7

Many of the drugs that we or our collaborators are attempting to discover and develop would compete with existing therapies. In addition, many companies are pursuing the development of drugs that target the same diseases and conditions that we are targeting such as cancer, obesity, cardiovascular disease, diabetes and Alzheimer's Disease. Our competitors may use discovery technologies and techniques or partner with collaborators in order to develop drug leads, drug candidates and drugs more rapidly or successfully, or with less cost, than we or our collaborators are able to do. Many of our competitors, particularly large pharmaceutical companies, have substantially greater development capabilities and greater financial, scientific and human resources than we do. Companies that complete clinical trials, obtain required regulatory agency approvals and commence commercial sale of their drugs before we do may achieve a significant competitive advantage, including certain patent and FDA marketing exclusivity rights. So far, we have not achieved any of these competitive advantages. Any results from our research and development efforts, or from our joint efforts with our existing or any future collaborators, might not compete successfully with existing products or therapies.

OUR SUCCESS IS DEPENDENT ON INTELLECTUAL PROPERTY RIGHTS HELD BY US AND THIRD PARTIES AND OUR INTEREST IN THESE RIGHTS IS COMPLEX AND UNCERTAIN.

Our success will depend in large part on our own and, to some extent, on our collaborators' abilities to obtain, secure and defend patents. We have numerous United States and international patent applications pending for our technologies, including patent applications on drug lead discovery techniques using CART, genetically altered GPCRs, GPCRs that we have discovered, compounds discovered using CART, and Melanophore Technology. Currently, four patents have been issued to us and we own two issued patents directed to Melanophore Technology. The procedures for obtaining an issued patent in the United States and in most foreign countries are complex. These procedures require an analysis of the scientific technology related to the invention and many legal issues. We believe CART represents an entirely new way to discover drug leads. Because of this, we expect that the analysis of our patent applications will be complex and time-consuming. Therefore, our patent position is very uncertain and we do not know when, or if, we will obtain additional issued patents for our technologies.

When we activate a receptor, we change the way that the receptor would otherwise naturally function. We believe that our activated receptors are patentable. A third party may obtain an issued patent on a natural version of a receptor that we activate. We believe that an activated version of the natural receptor should not infringe a patent on the natural receptor. However, a third party who owns a patent on a natural version of a receptor may not agree with our position. We could be sued for patent infringement, and we do not know how a court would rule in such a case.

No consistent policy regarding the breadth of claims allowed in biotechnology patents has emerged to date. For example, on January 5, 2001 the United States Patent and Trademark Office issued finalized Utility Examination Guidelines to its patent examiners that focus on what can be patented under United States patent law. These guidelines are expected to primarily impact the procedures that are used in determining the types of inventions that can be patented in the fields of biotechnology and chemistry. We do not know how, if at all, these guidelines may affect our patent applications on CART, genetically altered GPCRs, GPCRs that we have discovered or chemical compounds that we

discover using CART.

We also rely on trade secrets to protect our technologies. However, trade secrets are difficult to protect. We require all of our employees to agree not to improperly use our trade secrets or disclose them to others, but we may be unable to determine if our employees have conformed or will conform with their legal obligations under these agreements. We also require collaborators and consultants to enter into confidentiality agreements, but we may not be able to adequately protect our trade secrets or other proprietary information in the event of any unauthorized use or disclosure or the lawful

8

development by others of this information. Many of our employees and consultants were, and many of our consultants may currently be, parties to confidentiality agreements with other pharmaceutical and biotechnology companies, and the use of our technologies could violate these agreements. In addition, third parties may independently discover our trade secrets or proprietary information.

Technology licensed to us by others, or in-licensed technology, is important to some aspects of our business. We generally do not control the patent prosecution, maintenance or enforcement of in-licensed technology. Accordingly, we are unable to exercise the same degree of control over this intellectual property as we do over our internally developed technologies. Moreover, some of our academic institution licensors, research collaborators and scientific advisors have rights to publish data and information to which we have rights. If we cannot maintain the confidentiality of our technologies and other confidential information in connection with our collaborations, then our ability to receive patent protection or protect our proprietary information will be impaired.

A DISPUTE REGARDING THE INFRINGEMENT OR MISAPPROPRIATION OF OUR PROPRIETARY RIGHTS OR THE PROPRIETARY RIGHTS OF OTHERS COULD BE COSTLY AND RESULT IN DELAYS IN OUR RESEARCH AND DEVELOPMENT ACTIVITIES.

Our success depends, in part, on our ability to operate without infringing on or misappropriating the proprietary rights of others. There are many issued patents and patent applications filed by third parties relating to products or processes that could be determined to be similar or identical to ours or our licensors, and others may be filed in the future. Our activities, or those of our licensors or collaborators, may infringe patents owned by others. Although the government sponsored project to sequence the human genome has made genomics information freely available to the public, other organizations and companies are seeking proprietary positions on genomics information that overlap with the government sponsored project. Our activities, or those of our licensors or collaborators, could be affected by conflicting positions that may exist between any overlapping genomics information made available publicly as a result of the government sponsored project and genomics information that other organizations and companies consider to be proprietary.

We believe that there may be significant litigation in our industry regarding patent and other intellectual property rights. Any legal action against us, or our collaborators, claiming damages or seeking to enjoin commercial activities relating to the affected products or our methods or processes could:

- require us, or our collaborators, to obtain a license to continue to use, manufacture or market the affected products, methods or processes, which may not be available on commercially reasonable terms, if at all
- prevent us from making, using or selling the subject matter claimed in patents held by others and subject us to potential liability for damages

- consume a substantial portion of our managerial and financial resources
- result in litigation or administrative proceedings that may be costly, whether we win or lose

In addition, third parties may infringe on or misappropriate our proprietary rights, and we may have to institute costly legal action to protect our intellectual property rights. We may not be able to afford the costs of enforcing our intellectual property rights against third parties.

WE MAY NOT BE ABLE TO PROTECT OUR INTELLECTUAL PROPERTY RIGHTS OUTSIDE THE UNITED STATES.

Patent law outside the United States is uncertain and in many countries is currently undergoing review and revision. The laws of some countries do not protect our intellectual property rights to the same extent as United States laws. It may be necessary or useful for us to participate in proceedings to

9

determine the validity of our, or our competitors', foreign patents, which could result in substantial cost and divert our efforts and attention from other aspects of our business.

One of our United States patent applications relating to some aspects of our technology that we filed internationally was not timely filed in the designated foreign countries. We have taken remedial actions in an attempt to file the patent application in a number of these foreign countries. We cannot assure you that any of these remedial actions will be successful, or that patents based upon this patent application will be issued to us in any of these foreign countries. In particular, we failed to timely file this patent application in Japan and, as a result, no patent will be issued to us in Japan based upon this particular patent application. Based upon other patent applications that relate to CART that we have filed in the United States and internationally, we believe that there will be no material adverse effect on our business or operating results if we fail to obtain a patent based on the subject matter of this particular patent application.

OUR QUARTERLY OPERATING RESULTS MAY FLUCTUATE AND MAY CAUSE OUR STOCK PRICE TO DECLINE.

Our revenues and results of operations may fluctuate significantly from quarter to quarter, depending on a variety of the factors described in this section, including:

- the timing of and receipt by us of milestone and royalty payments  $% \left( 1\right) =\left( 1\right) +\left( 1\right)$
- the timing of discovery of drug leads and the development of drug candidates, if any
- changes in the research and development budgets of our existing collaborators or potential collaborators
- others introducing new drug discovery techniques or new drugs that target the same diseases and conditions that we and our collaborators target
- regulatory actions
- expenses related to, and the results of, litigation and other proceedings relating to intellectual property rights or other matters

We are not able to control many of these factors and we believe that period-to-period comparisons of our financial results are not necessarily indicative of our future performance. If our revenues in a particular period do not meet expectations, we may not be able to adjust our expenditures in that period, which could cause our operating results to suffer.

WE MAY HAVE DIFFICULTY IN COMBINING CART WITH MELANOPHORE TECHNOLOGY.

We have not yet fully incorporated Melanophore Technology into our drug discovery process. Melanophore Technology may have limited applicability to the drug discovery process that focuses on CART-activated GPCRs. If this is the case, our drug discovery programs may be delayed or otherwise impacted and our business could be harmed.

WE MAY NEED ADDITIONAL CAPITAL IN THE FUTURE TO SUFFICIENTLY FUND OUR OPERATIONS AND RESEARCH, AND IF NEEDED, WE MAY NOT BE ABLE TO OBTAIN ADDITIONAL CAPITAL ON TERMS FAVORABLE TO US.

We have consumed substantial amounts of capital to date and we expect to increase our operating expenses over the next several years as we expand our facilities, infrastructure and research and development activities. We also expect that Project Genesis will consume significant amounts of our research and development funds. Based upon our current and our anticipated activities, we believe that our current funds will be sufficient to support our current operating plan through at least the next two years. However, if this plan changes, we may require additional financing sooner. For example, we may use a portion of our funds to acquire complementary businesses or technologies. Financing may not be

10

available or may not be available on terms favorable to us. To the extent that we raise additional funds through collaboration and licensing arrangements, we may be required to relinquish some rights to our technologies or drug leads, or grant licenses on terms that are unfavorable to us. We may also raise additional funds through the incurrence of debt, and the holders of any debt we may issue would have rights superior to your rights. If adequate funds are not available, we will not be able to continue our development.

OUR RESEARCH AND DEVELOPMENT EFFORTS WILL BE SERIOUSLY JEOPARDIZED IF WE ARE UNABLE TO ATTRACT AND RETAIN KEY EMPLOYEES.

We have less than 160 employees. Our success depends, in part, on the continued contributions of our principal management and scientific personnel, and we face intense competition for such personnel. In particular, our research programs depend on our ability to attract and retain highly skilled scientists. If we lose the services of any of our key personnel, in particular Jack Lief, Dominic P. Behan or Derek T. Chalmers, as well as other principal members of our scientific or management staff, our research and development or management efforts could be interrupted or significantly delayed. For example, Eli Lilly has the right to terminate our collaboration agreement if they do not approve suitable replacements for key employees who leave us. We do not have employment agreements with any of our key employees and any of our employees could terminate his or her employment with us at any time. We may also encounter increasing difficulty in attracting enough qualified personnel as our operations expand and the demand for these professionals increases, and this difficulty could impede the attainment of our research and development objectives.

OUR BUSINESS MAY BE HARMED BY HIGHER ENERGY COSTS AND INTERRUPTED POWER SUPPLIES RESULTING FROM THE ELECTRICAL POWER SHORTAGES CURRENTLY AFFECTING THE STATE OF CALIFORNIA.

Our corporate headquarters and laboratories are located in San Diego, California. Electrical power is vital to our operations and we rely on a continuous power supply to conduct our operations. California is in the midst of a power crisis and has recently experienced significant power shortages. In the event of an acute power shortage, the California system operator has on some occasions implemented, and may in the future continue to implement, rolling blackouts throughout California.

For this type of contingency, we have acquired a stand-by electrical generator to provide power to our laboratories and offices. However, there can be no assurances that our stand-by generator will be able to provide sufficient power to our laboratories and offices in the event of sustained interruptions to our power supply. If blackouts interrupt our power supply frequently or for more than a few days we may have to reduce or temporarily discontinue our normal operations. In addition, the cost of our research and development efforts may increase because of the disruption to our operations. Any such reduction or disruption of our operations at our facilities could harm our business.

IF WE USE BIOLOGICAL AND HAZARDOUS MATERIALS IN A MANNER THAT CAUSES INJURY OR VIOLATES LAWS, OUR BUSINESS AND OPERATIONS MAY SUFFER.

Our research and development activities involve the controlled use of potentially harmful biological materials as well as hazardous materials, chemicals and various radioactive compounds. For example, we use radioactive phosphorous-32 on a daily basis and sodium cyanide on a regular basis. We cannot completely eliminate the risk of accidental contamination, which could cause:

- an interruption of our research and development efforts
- injury to our employees resulting in the payment of damages
- liabilities under federal, state and local laws and regulations governing the use, storage, handling and disposal of these materials and specified waste products

11

ANTI-TAKEOVER PROVISIONS IN OUR CERTIFICATE OF INCORPORATION AND DELAWARE LAW COULD PREVENT A POTENTIAL ACQUIROR FROM BUYING US.

Provisions of our certificate of incorporation and Delaware law could make it more difficult for a third party to acquire us, even if the acquisition would be beneficial to our stockholders. Our amended and restated certificate of incorporation gives our board of directors the authority to issue up to 7,500,000 shares of preferred stock and to determine the price, rights, preferences and privileges and restrictions, including voting rights, of those shares without any further vote or action by our stockholders. Some of the rights of the holders of common stock may be subject to, and may be harmed by, the rights of the holders of any shares of preferred stock that may be issued in the future. The issuance of preferred stock could potentially prevent us from consummating a merger, reorganization, sale of substantially all of our assets, liquidation or other extraordinary corporate transaction without the approval of the holders of the outstanding shares of preferred stock. These provisions could prevent the consummation of a transaction in which our stockholders could receive a substantial premium over the current market price for their shares.

OUR EQUITY INTEREST IN CHEMNAVIGATOR.COM MAY HAVE NO VALUE.

We have licensed certain Internet-related technologies to ChemNavigator.com in exchange for shares of ChemNavigator.com stock. We currently have a 33% equity interest in ChemNavigator.com. Since it was formed in May 1999, ChemNavigator.com has incurred net operating losses and negative cash flows from

operating activities, and we expect ChemNavigator.com to incur increasing net operating losses and negative cash flows for the foreseeable future. ChemNavigator.com has received only limited revenues to date, and it may not be able to generate sufficient revenues or obtain financing to offset its losses.

ChemNavigator.com faces intense competition from established companies that provide Internet-based products to the same customers as ChemNavigator.com. Some of these companies have greater financial, technical and human resources than ChemNavigator.com has, have a longer operating history and are more well-known to ChemNavigator.com's target customers. If ChemNavigator.com is not able to compete successfully, it will not achieve profitability and may have to discontinue operations.

OUR EQUITY INTEREST IN ARESSA PHARMACEUTICALS MAY HAVE NO VALUE.

We currently have an 83% equity interest in Aressa. Since it was formed in August 1999, Aressa has incurred net operating losses and negative cash flows from operating activities, and we expect Aressa to incur increasing net operating losses and negative cash flows for the foreseeable future. Aressa has not received any revenues to date, and it may never generate any revenues or obtain financing to offset its losses and may have to discontinue operations.

WE MAY ENGAGE IN STRATEGIC TRANSACTIONS WHICH COULD HARM OUR BUSINESS.

From time to time we consider strategic transactions, such as the acquisition of Bunsen Rush Laboratories. These additional potential transactions may include a variety of different business arrangements, including spin-offs, acquisitions, strategic partnerships, joint ventures, restructurings, divestitures, business combinations and investments. We cannot assure you that any such transactions will be consummated on favorable terms or at all or will not harm our business. Any such transaction may require us to incur non-recurring or other charges and may pose significant integration challenges or disrupt our management or business, which could harm our business and financial results.

12

#### RISKS RELATED TO THIS OFFERING

OUR COMMON STOCK HAS BEEN PUBLICLY TRADED FOR LESS THAN ONE YEAR AND DURING THIS PERIOD THE PRICE OF OUR COMMON STOCK HAS BEEN HIGHLY VOLATILE.

Prior to this offering, our common stock has been publicly traded for less than one year. During the past 10 months, the market price of our common stock fluctuated from a low of \$11.75 during the first quarter of 2001 and a high of \$46.25 during the third quarter of 2000. We expect the market price of our stock to continue to fluctuate in response to many factors, including:

- changes in financial estimates or recommendations by securities analysts regarding us or our common stock
- announcements about the biotechnology or pharmaceutical areas in which we and our collaborators operate
- the impact of regulatory developments in the United States and foreign countries on us or our collaborators
- public concern as to safety and effectiveness of research and products developed by us, our collaborators or our competitors

The market price for securities of biotechnology companies has been increasingly volatile. In the past, following periods of volatility in the

market price of a particular company's securities, securities class action litigation has often been brought against the company. We may become involved in this type of litigation in the future. Litigation of this type is often extremely expensive and diverts management's attention and resources.

IF OUR STOCKHOLDERS SELL SUBSTANTIAL AMOUNTS OF OUR COMMON STOCK AFTER THIS OFFERING, THE MARKET PRICE OF OUR COMMON STOCK MAY DECLINE.

If our stockholders sell substantial amounts of our common stock after this public offering, including shares issued upon the exercise of outstanding options, the market price of our common stock may decline. These sales also might make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem appropriate. Upon the closing of this offering, based upon the number of shares of our common stock outstanding as of March 31, 2001, we will have outstanding an aggregate of 26,743,038 shares of common stock. Of these shares, the 5,000,000 shares of common stock to be sold in this offering, the 6,900,000 shares of common stock sold in our initial public offering and the shares sold to date by our stockholders pursuant to Rule 144 and Rule 701 under the Securities Act will be freely tradable without restriction or further registration under the Securities Act, unless the shares are held by our "affiliates" as such term is defined in Rule 144 of the Securities Act. Two of our stockholders, who hold an aggregate of 3,477,332 shares of our common stock, may sell their shares on the public market at any time, subject to applicable limitations under Rule 144. All remaining shares held by our existing stockholders were issued and sold by us in private transactions and are eligible for public sale if registered under the Securities Act or sold in accordance with Rule 144 or Rule 701 thereunder, except for shares held by our officers and directors that are subject to lock-up agreements under which these individuals have agreed not to offer or sell any of these shares of common stock for a period of 90 days from the date of this prospectus without the prior written consent of the underwriters. In addition, the underwriters will require agreements from:

- one of our selling stockholders, who after this offering will beneficially own 1,915,840 shares of our common stock, not to offer or sell any of the shares of our common stock that it holds for a period of 90 days after the date of this prospectus

13

- the other selling stockholder, who after this offering will beneficially own 3,112,149 shares of our common stock, not to offer or sell any of the shares of our common stock that it holds for 60 days, 90 days and 120 days after the date of this prospectus, in each case with respect to one-third of the shares owned by that stockholder immediately after this offering

without the prior written consent of the underwriters.

On September 7, 2000, we filed registration statements on Form S-8 to register all of the shares of common stock which could be purchased upon the exercise of stock options outstanding on that date, and all of the shares of common stock reserved for issuance, pursuant to our 1998 Equity Compensation Plan and 2000 Equity Compensation Plan. On June 13, 2001, we filed a registration statement on Form S-8 to register all of the shares of common stock which are reserved for issuance under the 2001 Arena Employee Stock Purchase Plan. Accordingly, shares issued upon exercise of such options are, and shares issued under the 2001 Arena Employee Stock Purchase Plan will be, freely tradable by holders who are not our affiliates and, subject to the volume and other limitations of Rule 144, by holders who are our affiliates.

THE INTERESTS OF OUR LARGEST STOCKHOLDERS MAY CONFLICT WITH OUR INTERESTS AND THE INTERESTS OF OUR OTHER STOCKHOLDERS.

Immediately upon the completion of this offering, our current four largest stockholders will beneficially own approximately 8.5 million shares, or approximately 31.8% of our outstanding common stock. If these stockholders act together, they could exert considerable influence over us, including with respect to the election of directors and the approval of actions submitted to our stockholders. In addition, without the consent of these stockholders, we may be prevented from entering into transactions that could be beneficial to us, such as acquisition proposals from third parties.

1 4

#### SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS

This prospectus contains statements about our future that involve the risks and uncertainties described above and elsewhere in this prospectus. These forward looking statements are subject to certain risks and uncertainties, which could cause actual results to differ materially from such statements. These statements include, without limitation, statements about market opportunity, our growth strategy and our expectations, plans and objectives. The words "believe," "expect," "anticipate," "estimate," "optimistic," "intend," "plan," "project," "target," "aim," "will," and similar expressions identify forward looking statements. These words and statements may be found in the sections of this prospectus entitled "Prospectus Summary," "Risk Factors," "Use of Proceeds," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business," and in this prospectus generally. Our actual results will differ, perhaps materially, from those anticipated in these statements as a result of various factors, including all the risks discussed above in the "Risk Factors" section and elsewhere in this prospectus. Because of these uncertainties, you should not place undue reliance on these statements. Except to the extent required by applicable laws or rules, we do not intend to update any of these factors or to publicly announce the result of any revisions to any of these statements, whether as a result of new information, future events or otherwise.

15

#### USE OF PROCEEDS

We estimate that our net proceeds from the sale of the 4,000,000 shares of common stock we are offering will be approximately \$109.2 million (or approximately \$129.8 million if the underwriters' over-allotment option is exercised in full), at an assumed public offering price of \$29.00 per share and after deducting estimated underwriting discounts and commissions and offering expenses payable by us. We will not receive any of the proceeds from the sale of shares by the selling stockholders.

We intend to use the net proceeds from this offering for general corporate purposes, including working capital, research and development expenses, discovery, development and clinical testing of drug leads, drug candidates and drugs derived from GPCR targets, and other research and development and clinical testing activities. The amounts and timing of our actual expenditures for each purpose may vary significantly depending upon numerous factors. In addition, we expect to use a portion of the net proceeds to expand our facilities and may use a portion of the net proceeds to acquire complementary businesses or technologies.

As of the date of this offering, we cannot specify with certainty all of the particular uses for the net proceeds of this offering. Accordingly, we will retain broad discretion in the allocation of the net proceeds of this offering. Pending the use of the net proceeds as described above, we intend to invest the net proceeds of this offering in short-term, investment-grade, interest-bearing securities.

#### PRICE RANGE OF COMMON STOCK

Our common stock has traded on the Nasdaq National Market under the symbol "ARNA" since our initial public offering on July 28, 2000. Prior to that time, there was no public market for our common stock. The following table sets forth, for the periods indicated, the high and low closing prices per share of our common stock as reported on the Nasdaq National Market since July 28, 2000.

| PERIOD                                    | HIGH    | LOW     |
|---|---------|---------|
|   |         |         |
|   |         |         |
| July 28, 2000 through September 30, 2000  | \$46.25 | \$23.63 |
| October 1, 2000 through December 31, 2000 | \$42.56 | \$14.06 |
| January 1, 2001 through March 31, 2001    | \$25.31 | \$11.75 |
| April 1, 2001 through June 20, 2001       | \$33.00 | \$17.73 |

On June 20, 2001, the last reported sale price on the Nasdaq National Market for our common stock was \$29.00 per share.

#### DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock and do not anticipate paying any cash dividends in the foreseeable future. We currently intend to retain future earnings, if any, to fund the expansion and growth of our business. Payments of future dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs, plans for expansion and other factors that our board deems relevant.

16

#### CAPITALIZATION

The following table sets forth our capitalization as of March 31, 2001:

- on an actual basis derived from our unaudited financial statements
- on an as adjusted basis to also give effect to the sale of 4,000,000 shares of common stock offered by us hereby at an assumed public offering price of \$29.00 per share, after deducting underwriting discounts and commissions and estimated offering expenses

You should read this table in conjunction with the financial statements and the notes to those statements and the other financial information included

elsewhere in this prospectus.

|  | AS OF MARCH 31, 2001     |                      |  |
|--|--------------------------|----------------------|--|
|  |                          | AS ADJUSTED          |  |
| Long-term debt, net of current portion   | \$ 832,314               | \$ 832,314           |  |
| Common stock, \$.0001 par value: 67,500,000 shares authorized, 22,743,038 shares issued and outstanding, actual; 67,500,000 shares authorized, 26,743,038 shares |                          |                      |  |
| issued and outstanding, as adjusted  | 2,274<br>177,697,979     | 2,674<br>286,907,579 |  |
| Deferred compensation  |                          | (6,916,624)          |  |
| Total stockholders' equity   | 151,177,620              | 260,387,620          |  |
| Total capitalization   | \$152,009,934<br>======= | \$261,219,934        |  |

The number of shares of common stock to be outstanding after this offering is based on the number of shares outstanding as of March 31, 2001, including 470,562 shares issued upon exercise of unvested options that are subject to repurchase until vested, and excluding:

- 1,000,000 shares of common stock reserved for issuance under our 2001 Arena Employee Stock Purchase Plan
- 850,750 shares of common stock issuable upon the exercise of outstanding options under our 2000 Equity Compensation Plan at a weighted average exercise price of \$21.60 per share
- 493,500 shares of common stock issuable upon the exercise of outstanding options under our 1998 Equity Compensation Plan at a weighted average exercise price of \$0.66 per share

17

## DILUTION

The net tangible book value of our common stock at March 31, 2001 was \$135.9 million, or \$5.98 per share. Net tangible book value per share represents the amount of our total tangible assets less total liabilities, divided by the number of shares of common stock outstanding. After giving effect to the sale of the 4,000,000 shares of common stock offered by us hereby at an assumed public offering price of \$29.00 per share and after deducting the estimated underwriting discounts and commissions and offering expenses, our pro forma net tangible book value at March 31, 2001 would have been approximately \$245.1 million, or \$9.17 per share. This represents an immediate increase in net tangible book value of \$3.19 per share to existing stockholders and an immediate dilution of \$19.83 per share to new investors purchasing shares of common stock in this offering. The following table illustrates this dilution:

| Assumed public offering price per share                     |        | \$29.00 |
|---|--------|---------|
| Net tangible book value per share as of March 31, 2001      | \$5.98 |         |
| Increase per share attributable to the sale of common stock |        |         |
| in this offering  | 3.19   |         |
|   |        |         |
| Pro forma net tangible book value per share after this      |        |         |
| offering  |        | 9.17    |
|   |        |         |
| Dilution in net tangible book value per share to new        |        |         |
| investors in this offering                                  |        | \$19.83 |
|   |        | ======  |

If the underwriters' over-allotment option is exercised in full, the as adjusted net tangible book value per share after this offering would be \$9.67 per share, the increase in net tangible book value per share to existing stockholders would be \$3.69 per share and the dilution in net tangible book value to new investors would be \$19.33 per share.

The previous table includes 470,562 shares of common stock subject to repurchase by us as of March 31, 2001. The shares that are subject to repurchase by us were issued upon the exercise of options that were granted under our 1998 Equity Compensation Plan and our 2000 Equity Compensation Plan, but that had not vested as of March 31, 2001. The exercise of these unvested options was permitted by the option agreements under which these options were granted. In the event that an employee leaves our employ prior to full vesting, we have the right to repurchase any unvested shares at the original purchase price.

The table assumes that none of the stock options outstanding as of March 31, 2001 are exercised. As of March 31, 2001, there were 1,344,250 shares of common stock issuable upon exercise of outstanding stock options at a weighted average exercise price of \$13.91 per share.

18

#### SELECTED FINANCIAL DATA

Our selected statement of operations data for the period April 14, 1997 (inception) through December 31, 1997 and our balance sheet data as of December 31, 1997 and 1998 have been derived from our financial statements which have been audited by Ernst & Young LLP, independent auditors, and are not included in this prospectus. Our selected statement of operations data for the years ended December 31, 1998, 1999 and 2000 and our balance sheet data as of December 31, 1999 and 2000 have been derived from our consolidated financial statements, which have been audited by Ernst & Young LLP, independent auditors, and are included elsewhere in this prospectus. We have also included our statement of operations data from our unaudited consolidated financial statements for the three months ended March 31, 2000 and 2001 and our balance sheet data as of March 31, 2001 from our unaudited financial statements included in this prospectus. The unaudited consolidated financial statements include all adjustments, consisting of normal recurring accruals, which we consider necessary for a fair presentation of the financial position and the results of operations for these periods. You should read the data set forth below together with "Management's Discussion and Analysis of Financial Condition and Results of

Operations" and our consolidated financial statements and related notes included elsewhere in this prospectus.

PERIOD FROM APRIL 14, 1997

|  | (INCEPTION)                           | YEAR ENDED DECEMBER 31, |              |                               |  |
|--|---------------------------------------|-------------------------|--------------|-------------------------------|--|
|  | THROUGH DECEMBER 31, 1997             | 1998<br>                | 1999<br>     | 2000                          |  |
| STATEMENT OF OPERATIONS  |                                       |                         |              |                               |  |
| DATA: Revenues   | \$                                    | \$                      | \$           | \$ 7,683,396                  |  |
| Revenues<br>Operating expenses:  | Ş                                     | ş                       | Ą            | ۶ / <b>,</b> ۵۵۵ <b>,</b> ۵۶۵ |  |
| Research and development   | 447,038                               | 2,615,526               | 8,336,483    | 12,080,204                    |  |
| General and  | •                                     | ,                       | •            | •                             |  |
| administrative   | 234,614                               | 728,806                 | 1,814,023    | 2,678,980                     |  |
| Amortization of deferred   |                                       |                         |              |                               |  |
| compensation   |                                       |                         | 378,109      | 4,342,896                     |  |
| Amortization of acquired   |                                       |                         |              |                               |  |
| technology and other   |                                       |                         |              |                               |  |
| purchased intangibles  |                                       |                         |              |                               |  |
| T-1-1ting  |                                       |                         |              |                               |  |
| Total operating expenses   | 681,652                               | 3 344 332               | 10,528,615   | 10 102 080                    |  |
| Interest and other, net  | (13, 113)                             | (51,986)                | 290,665      | 5,056,714                     |  |
| interest and dener, nee  | (13,113)                              | (51, 566)               |              |                               |  |
| Net income (loss)  | (694,765)                             |                         |              | (6,361,970)                   |  |
| Non-cash preferred stock   | , , , , , , , , , , , , , , , , , , , | · · · · ·               | V ,          |                               |  |
| charge   |                                       |                         |              | (22,391,068)                  |  |
|  |                                       |                         |              |                               |  |
| Net income (loss)  |                                       |                         |              |                               |  |
| applicable to common   |                                       |                         |              |                               |  |
| stockholders   | \$(694,765)                           | \$(3,396,318)           |              |                               |  |
|  | =======                               | ========                | ========     | ========                      |  |
| Net income (loss) per share:   | ^ (0.72)                              | ^ /2 F1)                | ^ (10 05)    | ÷ (0.04)                      |  |
| Basic and diluted  | \$ (0.73)<br>======                   | \$ (3.51)               | \$ (10.05)   | \$ (2.84)                     |  |
| Shares used in calculating   | =======                               | =======                 | ========     | ========                      |  |
| net income (loss) per  |                                       |                         |              |                               |  |
| share:   |                                       |                         |              |                               |  |
| Basic  | 955,000                               | 966,799                 | 1,018,359    | 10,139,755                    |  |
| Data Control C | =======                               | ========                | =========    | ========                      |  |
| Diluted  | 955,000                               | 966,799                 | 1,018,359    | 10,139,755                    |  |
|  | ======                                |                         | =======      |                               |  |
|  |                                       | AS OF                   | DECEMBER 31, |                               |  |
|  |                                       |                         |              |                               |  |

BALANCE SHEET DATA:

Long-term debt, net of current

Redeemable convertible preferred

960,517

| stock                                | 2,193,356 | 2,598,643   | 18,251,949         |              |
|--------------------------------------|-----------|-------------|--------------------|--------------|
| Deferred compensation                |           |             | (625 <b>,</b> 955) | (7,899,970)  |
| Accumulated deficit                  | (694,765) | (4,091,083) | (14,329,033)       | (20,691,003) |
| Total stockholders' equity (deficit) | (694,665) | (4,068,283) | (13,899,549)       | 148,784,325  |

19

# MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

YOU SHOULD READ THE FOLLOWING DISCUSSION IN CONJUNCTION WITH OUR CONSOLIDATED FINANCIAL STATEMENTS, THE RELATED NOTES AND OTHER FINANCIAL INFORMATION APPEARING ELSEWHERE IN THIS PROSPECTUS.

#### OVERVIEW

We are an emerging biopharmaceutical company focused principally on discovering drugs that target GPCRs. We use CART, a new technology that we developed, to identify drug leads more efficiently than traditional drug discovery techniques.

In April 2000, we entered into a significant collaborative agreement with Eli Lilly focusing on the application of CART to GPCRs of interest to Eli Lilly. We have received, and expect to continue to receive, research funding from Eli Lilly for our internal resources committed to these tasks, which will be augmented by substantial resource commitments by Eli Lilly. We may receive milestone payments of up to \$1.25 million per receptor for successful application of CART and up to an additional \$6.0 million of clinical development milestone payments for each drug candidate discovered using CART. We may also receive additional milestone and royalty payments associated with the commercialization of drugs discovered using CART, if any. In addition, we have entered into other collaborative agreements, including with Taisho and Fujisawa, regarding the application of CART to GPCRs. We have recognized revenues of approximately \$6.3 million from our collaboration with Eli Lilly and approximately \$6.6 million from our collaboration with Taisho.

Our receipt of revenues from collaborative arrangements will be significantly affected by the amount of time and effort expended by our collaborators, the timing of the identification of useful drug targets, the timing of the discovery of drug leads and the development of drug candidates. Under our existing agreements, we may not earn significant milestone payments until our collaborators have advanced products into clinical testing, which may not occur for many years, if at all.

In February 2001, we acquired Bunsen Rush Laboratories for \$15.0 million in cash. Substantially all of the purchase price has been assigned to acquired technology, which we currently amortize over ten years.

We plan to pursue several specific objectives during the remainder of 2001, namely:

- establishing additional collaborations with pharmaceutical and biotechnology companies
- expanding the number of receptors available for activation by CART through internal research efforts and, potentially, external licensing agreements
- increasing our internally funded drug discovery efforts, including expansion of our chemistry and screening efforts
- pursue these and other objectives as part of Project Genesis

We incur significant research and development expenses. As of March 31, 2001, all of our research and development costs have been expensed as incurred. We believe that continued investment in research and development is critical to attaining our strategic objectives. We expect that the implementation of Project Genesis will significantly increase our research and development expenses.

In connection with the grant of stock options to employees, we recorded deferred stock compensation totaling \$226,000 during the three months ended March 31, 2001 and \$11.6 million during the year ended December 31, 2000. The deferred stock compensation represents the difference on the date such stock options were granted between the exercise price and the estimated market value of our common stock as determined by our management, or after July 28, 2000, the quoted market value. Deferred compensation is included as a reduction of stockholders' equity and is amortized to

20

expense over the vesting period of the options in accordance with FASB Interpretation No. 28, which permits an accelerated amortization methodology. We recorded amortization of deferred compensation expense of approximately \$1.3 million during the three months ended March 31, 2001 and \$409,000 during the three months ended March 31, 2000. As of March 31, 2001, we anticipate that total charges to be recognized in future periods from amortization of deferred stock compensation will be \$3.0 million for the remaining nine months of 2001, \$2.7 million for the year ending December 31, 2003 and \$119,000 for the year ending December 31, 2004.

Our ability to achieve our identified goals or objectives is dependent upon many factors, some of which are out of our control, and we may not achieve our identified goals or objectives.

Our quarterly operating results will depend upon many factors, including the expiration or termination of research contracts with our collaborators, the size of future collaborations, the success rate of our technology collaborations leading to milestones and royalties, and general and industry-specific economic conditions which may affect research and development expenditures. As a consequence, our revenues in future periods are likely to fluctuate significantly from period to period.

THREE MONTHS ENDED MARCH 31, 2001 COMPARED TO THE THREE MONTHS ENDED MARCH 31, 2000

REVENUES. We recorded revenues of \$5.4 million during the three months ended March 31, 2001, compared to no revenue during the three months ended March 31, 2000. The revenues for the three months ended March 31, 2001 were primarily attributable to our collaborations with Eli Lilly and Taisho, both significant customers, which included research funding, milestone payments, and technology access and development fees. Research funding is recognized as revenue when the services are rendered. Revenues from technology access and development fees are recognized over the term of the collaboration. Revenues from non-refundable research and development fees are recognized as the services are performed. Revenues from milestone payments are recognized when the milestone is achieved. Our collaborators often pay us before we recognize the revenue, and these payments are deferred until earned. As of March 31, 2001, we had deferred revenues totaling approximately \$1.6 million.

RESEARCH AND DEVELOPMENT EXPENSES. Research and development expenses increased \$1.5 million to \$3.9 million for the three months ended March 31, 2001 from \$2.4 million for the three months ended March 31, 2000. The increase was due primarily to increased personnel expenses of \$784,000, related

infrastructure expenses of \$444,000 and lab supply expenses of \$272,000 to support the personnel in order to expand the application of our technology. As of March 31, 2001, all research and development costs have been expensed as incurred. We believe that continued investment in research and development is critical to attaining our strategic objectives and we expect these expenses to continue and to increase.

GENERAL AND ADMINISTRATIVE EXPENSES. General and administrative expenses increased \$576,000 to \$1.0 million for the three months ended March 31, 2001 from \$424,000 for the three months ended March 31, 2000. The increase was a result of increased personnel added to support a growing company as well as supporting the needs of a public company. General and administrative expenses consist primarily of salaries and related personnel expenses for executive, finance and administrative personnel, professional fees, and other general corporate expenses. We expect that our general and administrative expenses will increase to support our growth and requirements as a public company.

AMORTIZATION OF DEFERRED COMPENSATION. Deferred compensation for options granted to employees has been determined as the difference between the exercise price and the fair value of our common stock, as estimated by us for financial reporting purposes, or quoted market value after July 28, 2000, on the date options were granted. Deferred compensation for options granted to consultants was

21

determined in accordance with Statement of Financial Accounting Standards No. 123 as the fair value of the equity instruments issued and is periodically remeasured as the underlying options vest in accordance with EITF 96-18.

For the three months ended March 31, 2001, we recorded amortization of deferred compensation of approximately \$1.3 million, compared to \$409,000 for the three months ended March 31, 2000.

INTEREST INCOME. Interest income increased to \$2.0 million for the three months ended March 31, 2001 from \$157,000 for the three months ended March 31, 2000, due to higher average cash balances primarily due to our initial public offering in July 2000 through which we raised net cash proceeds of \$113.9 million.

INTEREST EXPENSE. Interest expense decreased \$20,000 to \$40,000 for the three months ended March 31, 2001 from \$60,000 for the three months ended March 31, 2000. This decrease is due to the convertible note to a related party that was converted into common stock in July 2000.

OTHER INCOME. Other income increased \$84,000 to \$97,000 for the three months ended March 31, 2001 from \$13,000 for the three months ended March 31, 2000. This increase is due primarily to the rental income we earned in 2001 related to the lease with a tenant we assumed when we acquired a facility we had been leasing.

YEAR ENDED DECEMBER 31, 2000 COMPARED TO THE YEAR ENDED DECEMBER 31, 1999

REVENUES. We recorded revenues of \$7.7 million for the year ended December 31, 2000, as compared to no revenue for the year ended December 31, 1999. The revenues for the year ended December 31, 2000 were primarily attributable to our collaborations with Eli Lilly and Taisho, which included research funding, milestone achievements, and technology access and development fees. Research funding is recognized as revenue when the services are rendered. Revenues from technology access and development fees are recognized ratably over the term of the collaboration. Revenues from milestones are recognized when the

milestone is achieved. If our collaborators pay us before we recognize the revenues, we defer revenue recognition of these payments until earned. As of December 31, 2000 we had deferred revenues totaling approximately \$705,000.

RESEARCH AND DEVELOPMENT EXPENSES. Our research and development expenses increased \$3.8 million to \$12.1 million for the year ended December 31, 2000, from \$8.3 million for the year ended December 31, 1999. This increase was primarily due to increased personnel expenses of \$2.4 million, related infrastructure costs of \$1.1 million and lab supply expenses of \$1.4 million in order to expand the application of our technology. The increase was offset by reduced expenses of \$1.1 million related to the development of T-82 for which we initiated our first Phase I clinical trial in early 1999, and which was completed in late 1999.

GENERAL AND ADMINISTRATIVE EXPENSES. Our general and administrative expenses increased \$900,000 to \$2.7 million for the year ended December 31, 2000, from \$1.8 million for the year ended December 31, 1999. This increase was primarily due to increased personnel expenses related to additional personnel hired in the accounting, legal and general administration departments. This increased staffing was necessary to manage and support our continued growth as well as to accommodate the demands associated with operating as a public company.

AMORTIZATION OF DEFERRED COMPENSATION. We recorded amortization of deferred compensation of approximately \$4.3 million for the year ended December 31, 2000 as compared to \$378,000 for the year ended December 31, 1999.

INTEREST INCOME. Interest income increased \$4.2 million to \$4.6 million for the year ended December 31, 2000, from \$447,000 for the year ended December 31, 1999. The increase was primarily

22

attributable to higher average levels of cash and cash equivalents in the year ended December 31, 2000, as a result of our initial public offering in  $July\ 2000$ .

INTEREST EXPENSE. Interest expense increased \$54,000 to \$220,000 for the year ended December 31, 2000 from \$166,000 for the year ended December 31, 1999. This increase represents interest incurred on our equipment leases.

GAIN ON INVESTMENT. For the year ended December 31, 2000 we recorded a gain on the sale of liquid short-term investments in the amount of \$576,000.

OTHER INCOME. Other income increased \$48,000 to \$57,000 for the year ended December 31, 2000 from \$9,000 for the year ended December 31, 1999. This increase represents rental income received from subleasing office space.

NON-CASH PREFERRED STOCK CHARGE. We recorded a non-cash preferred stock charge of \$22.4 million for the year ended December 31, 2000. This non-cash preferred stock charge related to the issuance of our Series E preferred stock in January 2000, our Series F preferred stock in March 2000 and our Series G preferred stock in April 2000, which were converted into shares of our common stock upon the closing of our initial public offering. We recorded the non-cash preferred stock charge at the dates of issuance by increasing the net loss applicable to common stockholders, without any effect on total stockholders' equity. The amount increased our net loss per share applicable to common stockholders for the year ended December 31, 2000.

YEAR ENDED DECEMBER 31, 1999 COMPARED TO THE YEAR ENDED DECEMBER 31, 1998

RESEARCH AND DEVELOPMENT EXPENSES. Our research and development expenses increased \$5.7 million to \$8.3 million for the year ended December 31, 1999, from \$2.6 million for the year ended December 31, 1998. This increase was primarily due to increased personnel related expenses of \$2.5 million and lab supply expenses of \$1.3 million in order to expand the application of our technology, expenses of \$1.5 million associated with our first Phase I clinical trial of T-82 which was initiated in early 1999, and facility related expenses of \$358,000 as a result of our facility expansion.

GENERAL AND ADMINISTRATIVE EXPENSES. Our general and administrative expenses increased \$1.1 million to \$1.8 million for the year ended December 31, 1999, from \$729,000 for the year ended December 31, 1998. This increase was primarily related to five additional personnel hired during 1999 to help support the growing responsibilities of the accounting, legal and general administration departments.

AMORTIZATION OF DEFERRED COMPENSATION. We recorded amortization of deferred compensation of approximately \$378,000 for the year ended December 31, 1999. There was no amortization of deferred compensation in the year ended December 31, 1998.

INTEREST INCOME. Interest income increased \$405,000 to \$447,000 for the year ended December 31, 1999, from \$42,000 for the year ended December 31, 1998. The increase was primarily attributable to higher levels of cash and cash equivalents in 1999 from the proceeds of the sale of our Series D convertible preferred stock in January 1999.

INTEREST EXPENSE. Interest expense increased \$72,000 to \$166,000 for the year ended December 31, 1999 from \$94,000 for the year ended December 31, 1998. This increase represents interest incurred on our equipment leases as well as interest accrued on our other debt.

OTHER INCOME. Other income was \$9,000 for the year ended December 31, 1999, compared to none for the year ended December 31, 1998. The other income reported in 1999 represents rental income received from subleasing office space.

23

#### LIQUIDITY AND CAPITAL RESOURCES

At March 31, 2001, we had an accumulated deficit of \$19.6 million. Our accumulated deficit is the result of expenses incurred in connection with our research and development activities and general and administrative expenses. Although we have historically funded our operations primarily through public and private equity financings, for the three months ended March 31, 2001, the cash we received from our collaborators, together with our interest income from our investments, was sufficient to fund our operations.

As of March 31, 2001, we had \$125.5 million in cash and cash equivalents compared to \$144.4 million in cash and cash equivalents as of December 31, 2000. The decrease of \$18.9 million is primarily attributable to our acquisition of Bunsen Rush Laboratories for \$15.0 million in cash in February 2001, the purchase of our facility for \$5.4 million in cash in January 2001 as well as other equipment purchases totaling \$2.8 million. This was partially offset by cash provided by operations of \$4.4 million.

Net cash provided by operating activities was approximately \$4.4 million during the three months ended March 31, 2001. The primary source of cash for the three months ended March 31, 2001 was net income in the period, adjusted for

non-cash expenses, including amortization of deferred compensation, amortization of acquired technology and other purchased intangibles, and changes in operating assets and liabilities. Net cash used in operating activities was approximately \$4.1 million during the year ended December 31, 2000, \$8.7 million during the year ended December 31, 1999 and \$2.4 million during the year ended December 31, 1998. The primary use of cash was to fund our net losses for these periods, adjusted for non-cash expenses, including \$4.3 million in non-cash amortization of deferred compensation during the year ended December 31, 2000, and changes in operating assets and liabilities.

Net cash used in investing activities was approximately \$23.2 million during the three months ended March 31, 2001. Net cash used in investing activities for the three months ended March 31, 2001 was primarily the result of the acquisition of Bunsen Rush Laboratories, our facility purchase and the acquisition of laboratory and computer equipment, leasehold improvements and furniture and fixtures. Net cash used in investing activities was approximately \$2.2 million during the year ended December 31, 2000, \$2.1 million during the year ended December 31, 1999 and \$593,000 during the year ended December 31, 1998. Net cash used in investing activities was primarily the result of the acquisition of laboratory and computer equipment, leasehold improvements and furniture and fixtures.

Net cash used in financing activities was approximately \$75,000 during the three months ended March 31, 2001. The net cash used in financing activities for the three months ended March 31, 2001 was primarily from principal payments on our capital leases offset by proceeds from issuances of our common stock. Net cash proceeds from financing activities was approximately \$145.3 million during the year ended December 31, 2000, \$16.0 million during the year ended December 31, 1999 and \$1.7 million during the year ended December 31, 1998. The net cash proceeds from financing activities during the year ended December 31, 2000 was primarily from net proceeds of \$113.9 million from our initial public offering in July 2000 as well as \$30.1 million from the issuance of preferred stock. The net cash proceeds from financing activities for the years ended December 31, 1999 and 1998 were primarily from the issuance of preferred stock.

We lease a corporate research and development facility under a lease which expires in April 2013. The lease provides us with options to extend for two additional five-year periods. We have also entered into capital lease agreements for various lab and office equipment. The terms of these capital lease agreements range from 48 to 60 months. At December 31, 2000 current total minimum annual payments under these capital leases were approximately \$614,000 in 2001, \$614,000 in 2002, \$480,000 in 2003 and \$45,000 in 2004.

24

In January 2001, we purchased a facility we were previously leasing, as well as the adjoining building, at 6138-6150 Nancy Ridge Drive in San Diego for cash of \$5.4 million. Of the 52,000 square foot facility, 26,000 square feet is leased to a tenant until August 2001.

In February 2001, we acquired all of the outstanding capital stock of Bunsen Rush Laboratories, a privately-held research-based company, for cash of \$15.0\$ million.

Based on the research collaborations we already have in place and our current internal business plan, we expect to hire an additional 30 to 50 employees, primarily scientists, by the end of 2001. While we believe that our current capital resources and anticipated cash flows from collaborations will be sufficient to meet our capital requirements for at least the next two years, we cannot assure you that we will not require additional financing before such time. Our funding requirements may change at any time due to technological advances or competition from other companies. Our future capital requirements

will also depend on numerous other factors, including scientific progress in our research and development programs, additional personnel costs, progress in pre-clinical testing, the time and cost related to proposed regulatory approvals, if any, and the costs of filing and prosecution of patent applications and enforcing patent claims. We cannot assure you that adequate funding will be available to us or, if available, that such funding will be available on acceptable terms. Any shortfall in funding could result in the curtailment of our research and development efforts.

#### INCOME TAXES

As of December 31, 2000, we had approximately \$12.2 million of net operating loss carryforwards and \$1.6 million of research and development tax credit carryforwards for federal income tax purposes. These carryforwards expire on various dates beginning in 2012. These amounts reflect different treatment of expenses for tax reporting than are used for financial reporting. United States tax law contains provisions that may limit our ability to use net operating loss and tax credit carryforwards in any year, or if there has been a significant ownership change. Any future significant ownership change may limit the use of our net operating loss and tax credit carryforwards.

#### QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our exposure to market risk for changes in interest rates relates primarily to our cash equivalents. We do not use derivative financial instruments in our investment portfolio. Our cash and investment policy emphasizes liquidity and preservation of principal over other portfolio considerations. We select investments that maximize interest income to the extent possible within these guidelines. If market interest rates were to decrease by 1% from March 31, 2001, we would expect future interest income from our portfolio to decline by less than \$1.3 million over the next 12 months. The modeling technique used measures the change in fair values arising from an immediate hypothetical shift in market interest rates and assumes ending fair values include principal plus earned interest.

#### ACCOUNTING PRONOUNCEMENTS

In December 1999, the SEC issued Staff Accounting Bulletin No. 101, Revenue Recognition. SAB 101 provides guidance in applying generally accepted accounting principles to various revenue recognition issues and specifically addresses revenue recognition for upfront, non-refundable fees earned in connection with research collaboration arrangements. Under SAB 101, these fees should generally be recognized over the term of the agreement. We believe our revenue recognition policy is in compliance with SAB 101 and we will continue to apply this accounting principle to our future collaborations.

25

#### BUSINESS

#### OUR COMPANY

We are an emerging biopharmaceutical company focused principally on discovering drugs that target G protein-coupled receptors, called GPCRs. GPCRs are an important part of the pharmaceutical and biotechnology industries' drug discovery efforts. Of the leading 100 pharmaceutical products, based on 2000 revenues, 39 wholly or in part act on GPCRs. In 2000, these GPCR-based pharmaceutical products represented over \$42.6 billion in sales, and included Claritin-Registered Trademark- for allergies, Zantac-Registered Trademark- for gastric ulcers, Imitrex-Registered Trademark- for migraines and Cozaar-Registered Trademark- for hypertension.

We have developed CART, a new technology that we use to identify drug leads more efficiently than traditional drug discovery techniques. We use CART to discover drug leads by genetically altering GPCRs and other receptors to mimic the biological response that occurs when the native ligand binds to the receptor. We refer to these genetically altered receptors as CART-activated receptors. We use CART-activated receptors as a screening tool to identify drug leads that alter the biological response of the receptor. These drug leads are optimized and tested to develop drug candidates. Using CART, we have discovered drug leads that have demonstrated pharmacological activity in pre-clinical, or animal, studies through our own internal research and drug development efforts, as well as through those of our collaborators. Additionally, we believe that CART is applicable to other human receptor classes, such as tyrosine kinase receptors, or TKRs, as well as to non-human receptors for the discovery of animal therapeutics and agricultural products.

We enter into drug discovery and development collaborative arrangements with leading life science industry participants. To date, we have entered into collaborative relationships with a number of pharmaceutical and biotechnology companies, including Eli Lilly and Company, Taisho Pharmaceutical Co., Ltd., Fujisawa Pharmaceutical Co., Ltd. and Lexicon Genetics, Inc. As of March 31, 2001, we have recognized aggregate revenues totaling \$12.9 million from our collaborative partners.

We recently initiated Project Genesis, an internal drug discovery program that focuses on all GPCRs of therapeutic interest in the human genome. Project Genesis will use CART, Melanophore Technology, a recently acquired screening technology that we believe is highly complementary to CART, and customized gene expression microarrays developed for us by an outside vendor. We believe Project Genesis will generate a significant advantage for us in the field of GPCR drug discovery and will provide us with substantial intellectual property that we expect will establish a barrier to entry by potential competitors.

#### THE DRUG DISCOVERY PROBLEM

Diseases in humans are caused by the abnormal function of cells. Both normal and abnormal cellular function is principally the result of communication between cells. This cellular communication occurs when a ligand is released from a cell and binds to a receptor on the surface of that cell or another cell. This binding triggers the initiation of various signals within that cell, resulting in changes in cellular function. By interacting with the receptor to mimic or block ligand-receptor binding, drugs affect abnormal cellular function and thereby regulate the disease process.

Receptors are classified into categories based upon similarities in their biochemical and structural properties. They are located in various tissues throughout the body and affect a variety of cellular functions. There are four principal classes of human receptors: GPCRs; TKRs; ligand-gated ion channel receptors; and intracellular receptors. We focus primarily on GPCRs because they are the predominant class of receptors involved in cellular function.

The ligand that naturally binds to a receptor and activates or inhibits a biological response is referred to as a receptor's native ligand. A receptor for which the native ligand has been discovered is called a known receptor, while a receptor for which the native ligand has not been identified is called

26

an orphan receptor. With the recent completion of the sequencing of the human genome, scientists now believe that there are about 40,000 genes within the human genome. Genomics researchers estimate that approximately 2%, or

approximately 800, of these genes are therapeutically relevant GPCRs, the majority of which are orphans.

Traditional receptor-based drug discovery techniques seek drug leads that imitate or inhibit ligand binding to the receptor. These traditional techniques cannot be applied to orphan GPCRs until the native ligands for these orphan GPCRs are identified. The process of identifying native ligands is very uncertain, generally involving many stages of tissue extraction and extensive purification. To our knowledge, of the hundreds of orphan GPCRs that have been identified, only a limited number of examples exist where a novel native ligand has been discovered by intentionally targeting an orphan GPCR. Even when successful, identifying the native ligand typically requires four to five years and costs millions of dollars per GPCR. For example, a GPCR called GPR 14 was discovered in 1995, but its native ligand, urotensin II, was not identified until 1999. The process of identifying native ligands is typically the step that limits the rate at which drugs are discovered at receptor targets.

#### OUR TECHNOLOGY SOLUTIONS

CART

We do not use, and therefore do not need to identify, the receptor's native ligand for our drug discovery efforts. We use CART to discover drug leads by CART-activating receptors to mimic the biological response that occurs when the native ligand binds to the receptor. Therefore, CART avoids a major bottleneck in drug discovery efforts at orphan receptors.

CART can be applied broadly to GPCRs because all GPCRs have highly similar structural elements, consisting of:

- three extracellular loops on the outside of the cell
- three intracellular loops on the inside of the cell
- seven regions that cross through the cell surface, or membrane, and connect the extracellular and intracellular loops

When a ligand binds to the extracellular portion of the GPCR, changes occur to the intracellular portion of the GPCR that permit a signaling molecule located within the cell, called a G protein, to bind to the intracellular portion of the GPCR. This leads to further intracellular changes, resulting in a biological response within the cell.

27

#### [DIAGRAM DEPICTING GPCR-MEDIATED BIOLOGICAL RESPONSE]

Under normal physiological conditions, a GPCR exists in equilibrium between two different states: an inactive state and an active state. When the GPCR's equilibrium shifts to an active state, the GPCR is able to link to a G protein, thus producing a biological response. When the GPCR's equilibrium shifts to an inactive state, the receptor is typically unable to link to a G protein, and therefore unable to produce a biological response. When a native ligand binds to the GPCR, the GPCR's equilibrium shifts and the GPCR is stabilized in the active state.

#### [DIAGRAM DEPICTING LIGAND-DEPENDENT GPCR ACTIVATION]

28

By altering the genetic structure of a GPCR, CART stabilizes the GPCR in the active state in the absence of the native ligand.

#### [DIAGRAM DEPICTING CART-ACTIVATED GPCR]

Drug screening and discovery targeting GPCRs using CART is comprised of four stages:

- altering the molecular structure of an intracellular loop or intracellular portion of the GPCR to generate a CART-activated form of the GPCR
- introducing the CART-activated form of the receptor into mammalian cells, which, in turn, manufacture the CART-activated form of these receptors at the cell surface
- analyzing the cells containing the CART-activated GPCR to detect biological responses that result from the linking of the CART-activated GPCR to a G protein
- screening chemical libraries of small molecule compounds against the cell membranes containing the CART-activated GPCR to identify compounds that interact with the GPCR

Screening using CART allows us to simultaneously identify drug leads that act as receptor inhibitors to decrease the detected biological responses, or act as receptor activators to increase the detected responses. Therefore, CART allows us to discover drug leads that either inhibit or enhance biological activity.

CART is also useful for identifying drug leads that reduce cellular responses resulting from ligand-independent activity of receptors. Drugs that reduce cellular responses, termed inverse agonists, are the preferred drugs for treating diseases in which ligand-independent receptor activity may be important, such as schizophrenia. In general, traditional ligand-based drug screening techniques can only be used to identify neutral antagonists, which do not affect the ligand-independent activity of the receptor. We can directly identify inverse agonists using CART by screening for ligand-independent receptor activity. We believe the inverse agonists that we identify will possess improved properties over neutral antagonists because they inhibit both ligand-induced as well as ligand-independent activity.

In addition, because CART does not require the use of the native ligand, we are not limited to finding compounds that bind to a receptor at the receptor's ligand binding site. Instead, CART exposes the entire receptor surface to potential drug leads, allowing for the detection of drug leads which bind at any point on the receptor surface. We believe that this feature of CART is important not only with respect to orphan receptors, but to known receptors as well, because this feature of CART provides us with the ability to discover new drugs with unique mechanisms of action.

29

In summary, we believe that CART offers several key advantages for drug discovery over other screening techniques. Screening CART-activated receptors:

- $\mbox{-}$  does not require prior identification of the native ligand for an orphan receptor
- enhances the detection of, and simultaneously identifies, both receptor inhibitor and receptor activator drug leads
- allows for the identification of drug leads that inhibit both ligand-induced and ligand-independent activity

- provides the ability to discover novel and improved therapeutics at known receptor targets

#### MELANOPHORE TECHNOLOGY

Melanophore Technology is a unique screening technique based upon the use of pigment bearing cells called melanophores. Melanophores undergo a color change in response to light or stimulation by chemicals. Melanophore Technology can be used to identify compounds that interact with cell surface receptors, including known and orphan GPCRs and TKRs. Melanophore Technology provides a broadly applicable, simple and sensitive means to detect cellular signals and eliminates the need for radioactive or fluorescent screening techniques. We use Melanophore Technology to identify both inverse agonists and agonists to CART-activated GPCRs.

While we currently, and anticipate that we will continue to, primarily use Melanophore Technology in combination with CART-activated receptors, Melanophore Technology can also be used independent of CART. We believe that this will provide us with the opportunity to license Melanophore Technology to other biotechnology and pharmaceutical companies for use in their drug discovery efforts.

#### PROJECT GENESIS

We recently initiated Project Genesis, an internal drug discovery program using a combination of CART, Melanophore Technology and other technologies that we believe will allow us to discover a substantial number of unique small molecule drug leads and drug candidates. With the recent completion of the sequencing of the human genome, we view Project Genesis as a logical extension of our scientific and business capabilities. Indeed, to the extent that the human genome project has identified all of the genes within humans, we believe that Project Genesis will allow us to discover new drug leads at all of the estimated 800 therapeutically relevant GPCRs.

Project Genesis is comprised of the following processes:

- ACQUIRING ALL OF THE ESTIMATED 800 THERAPEUTICALLY RELEVANT GPCRS. We expect to acquire these GPCRs through our own internal research efforts as well as from outside sources. To date, we have secured more than half of the estimated 800 therapeutically relevant GPCRs through our own research efforts. We expect to complete this portion of Project Genesis by the end of 2001.
- DETERMINING THE LOCATION AND RELATIVE EXPRESSION LEVELS OF GPCRS. An outside vendor is creating customized GPCR probe microarrays for us using our proprietary sequence information. We intend to use these probe microarrays to determine the location of GPCRs and their relative expression levels in normal and diseased tissues. This will allow us to prioritize GPCRs of therapeutic interest for drug discovery screening.
- PREPARING THE GPCRS FOR SCREENING. We will build a library of full-length GPCRs that we will CART-activate and clone in preparation for expression and high throughput screening.
- SCREENING THE CART-ACTIVATED GPCRS. We will use Melanophore Technology and other techniques to screen all of the GPCRs that demonstrate CART-activation using our library of chemical compounds to identify potential drug leads.

30

- IDENTIFYING POTENTIAL DRUG CANDIDATES. We will use medicinal chemistry to

develop drug candidates for animal testing and potential clinical development.

We may enter into collaborative arrangements at any stage of Project Genesis with respect to any CART-activated receptor, drug leads or drug candidates that we discover.

#### OUR STRATEGY

Our goal is to become a leader in the discovery of novel, proprietary drugs that target human and non-human GPCRs. We also apply CART to other human and non-human receptors. The major elements of our strategy to achieve this goal are:

EXECUTE PROJECT GENESIS TO ACCELERATE DRUG DISCOVERY AT ALL THERAPEUTICALLY RELEVANT GPCRS

We view Project Genesis as the next logical scientific and business extension of the sequencing of the human genome that will allow us to use our technologies to rapidly discover novel drug leads that target therapeutically relevant GPCRs. We believe that Project Genesis will focus and accelerate our internal research efforts to enable us to become the leader in the discovery of drug candidates that target GPCRs.

#### ENTER INTO STRATEGIC COLLABORATIONS

We have entered into collaborations with Eli Lilly, Taisho and Fujisawa under which we CART-activate a significant number of GPCR targets and may receive additional revenues in the form of development fees, milestone payments and royalties on products, if any, developed to target these GPCRs. We intend to enter into additional strategic collaborations using CART and Melanophore Technology.

USE CART TO IDENTIFY NOVEL, PROPRIETARY DRUG LEADS THAT HAVE UNIQUE MECHANISMS OF ACTION

CART allows us to identify drug leads that act as receptor inhibitors to reduce biological activity, or receptor activators to increase biological activity. Therefore, CART provides the opportunity to simultaneously discover multiple drug leads with unique mechanisms of action for each receptor target.

APPLY CART TO OTHER HUMAN RECEPTORS AND NON-HUMAN RECEPTORS FOR HUMAN THERAPEUTIC, AGRICULTURAL AND OTHER APPLICATIONS

We believe CART can also be applied to other types of human receptors, such as TKRs, which are often implicated as important factors in various diseases, such as breast cancer. We are also applying CART to non-human receptors for a variety of applications including plant receptors to discover chemical growth factors, insect receptors to discover insect control agents and viral receptors to discover novel anti-viral drug leads. We have CART-activated a number of these other types of receptors and intend to pursue opportunities developed from these receptors.

### CONTINUE TO PROTECT AND EXPAND OUR INTELLECTUAL PROPERTY RIGHTS

A substantial byproduct of Project Genesis will be the intellectual property that results from CART-activation of all therapeutically relevant GPCRs and the small molecule drug leads that we may discover. We have filed approximately 136 independent patent applications with the United States Patent and Trademark Office, and are filing some of these patent applications worldwide. Four United States patents have been issued to us and we also own two issued patents for Melanophore Technology. We believe that we will be issued additional patents on

CART, chemical compounds that we discover using CART-activated receptors and on our CART-activated receptors because our technology

31

genetically modifies these receptors and changes their function. We intend to continually seek ways to vigorously protect and enforce our rights with respect to our intellectual property.

#### INVEST IN OR ACQUIRE COMPLEMENTARY TECHNOLOGIES

We recently acquired Bunsen Rush Laboratories and through it, Melanophore Technology. We will continue to evaluate investment or acquisition opportunities in new technologies that complement our existing technology.

#### THERAPEUTIC APPLICATIONS OF CART

Over the past four years, we have obtained the full-length gene sequences of 407 human GPCRs and made them available for CART-activation and screening. Through the use of CART, we have successfully identified compounds that inhibit or activate a number of known and orphan receptor targets.

#### ORPHAN GPCRS

An important element of CART involves using the gene sequences of orphan GPCRs to understand and define the tissue and cellular distribution of these GPCRs. The gene sequences provide us with the necessary tools to locate the orphan receptors in tissues. Once we have identified the location of an orphan receptor in tissues, we can determine the normal function of the orphan receptor and compare that function to the function of the orphan GPCR in diseased tissues. We then use CART to screen the targeted receptor for compounds that can be employed to verify the proposed receptor function.

We have prioritized and applied CART to orphan GPCRs as having high potential value as drug discovery targets against specific diseases or indications, based upon the distribution of the GPCR in specified tissues. Examples of some of our more advanced CART programs are summarized below.

OBESITY. National Institutes of Health statistics indicate that approximately 100 million adults in the United States are overweight and that 22% of these are considered clinically obese. The few currently approved drugs for the treatment of obesity in the United States act as either appetite suppressants or blockers of fat absorption. However, cardiovascular or gastrointestinal side effects may limit the long-term effectiveness of these drugs. Consequently, more effective therapeutics are urgently needed for this major health problem.

We have an ongoing program directed towards the development of novel anti-obesity drugs. We have identified a number of orphan GPCRs on brain cells related to the control of feeding and metabolism, including the 18F, 19U, 19X and 19NY GPCRs. For example, we have discovered an over-abundance of the 18F GPCR in brain metabolism centers of genetically obese rats. We believe that this discovery indicates that overactivity of this GPCR may be associated with obesity.

We are using CART to identify drug leads that inhibit the activity of the 18F GPCR. Repeated administration of the drug leads we have identified has resulted in reduced food intake and sustained weight loss in normal laboratory animals. Similar results were also obtained in a diet-induced animal model of human obesity. In this diet-induced animal model, these drug leads also

increased fat metabolism and resulted specifically in a loss of fat mass. We have found that the 18F GPCR is also located on human fat cells. Therefore, we believe that these drug leads may provide the basis for a novel approach to the treatment of human obesity by simultaneously reducing food intake and increasing fat metabolism.

32

Our anti-obesity drug program demonstrates the advantages of CART for rapid drug lead discovery. The process of discovering promising drug leads took approximately 18 months beginning from our initial discovery of the over-abundance of the 18F GPCR in genetically obese animals to the animal testing of the drug leads that we discovered using CART. In January 2001, we licensed our 18F program to Taisho. Our 18F program includes the 18F receptor as well as several drug leads that we discovered using the 18F receptor.

CANCER. We have identified several orphan GPCRs, including the 18AD, 20WW, 20PO and 19Y GPCRs, which we believe represent therapeutic targets for the treatment of a variety of cancers. These orphan GPCRs are attractive therapeutic targets because they have been shown to be present in abnormally high levels in ovarian, colorectal, gastrointestinal and uterine cancer cells and cause unwanted proliferation of cells in laboratory experiments.

CARDIOVASCULAR DISEASE. We have identified several orphan GPCRs, including the 19L and 20RH GPCRs, that are located within the cardiovascular system, such as on heart tissues and blood vessel walls. The 19L receptor has been localized to the smooth muscle cells of blood vessel walls and is regulated under conditions associated with vessel damage and artherosclerotic damage. The 20RH receptor has been localized to heart myocytes and is regulated in both IN VITRO and IN VIVO models associated with cardiomyopathy. Using CART, we aim to identify small molecule drug leads which may have potential to treat diseases related to aberrant cardiovascular function.

DIABETES. One of the orphan GPCRs that we discovered, the 19AJ GPCR, is specifically located on insulin producing beta cells in the pancreas. Normally, glucose stimulates the beta cell to produce insulin, but in diabetes the beta cell often becomes less sensitive to glucose and the ability of the beta cell to produce insulin is impaired. The 19AJ GPCR appears to make the beta cells more responsive to glucose concentrations, resulting in enhanced insulin release. By applying CART to the 19AJ GPCR, we will seek to discover drug candidates to treat diabetes, which, according to the National Institutes of Health, affected approximately 15.7 million people in the United States in 1997.

INFLAMMATION. We have identified several orphan GPCRs, including the 18AF and 19W GPCRs, that may mediate inflammatory responses in various locations of the body. Our preliminary data suggest that the 18AF GPCR may regulate brain cells related to inflammation. Based upon its sequence structure, the 18AF GPCR appears to be related to a group of GPCRs called chemoattractant receptors. Chemoattractant and chemokine receptors are known to be involved in the inflammation process, and brain inflammation is involved in a number of neurodegenerative disorders, including stroke. The number of 19W GPCRs is increased in dying cells during inflammation, suggesting that the 19W GPCR may be involved in controlling the process of cell death. We have CART-activated the 19W GPCR and have developed an assay for screening of chemical compounds against this GPCR. Drug leads that modulate the activity of these GPCRs may provide a unique therapeutic approach to the treatment or mediation of inflammatory responses. According to the National Institutes of Health, diseases involving inflammation afflict over 25 million people in the United States.

ALZHEIMER'S DISEASE. Several of our orphan GPCR targets are located on

cells within the central nervous system, including the 18L GPCR. The 18L GPCR is located on nerve cells in an area of the brain called the hippocampus, which is responsible for controlling memory function. In Alzheimer's Disease, normal memory processes in the hippocampus are severely impaired. We believe drug leads that modulate the 18L GPCR could be useful for controlling memory function and for the treatment of symptoms of Alzheimer's Disease, which, according to the National Institutes of Health, affects four million people in the United States.

33

#### KNOWN GPCRS

Although we focus on orphan GPCRs, we also apply CART to known GPCRs. We believe that the application of CART to known GPCRs will identify novel classes of drug candidates that may be more effective and may have fewer side effects than existing drugs that target known GPCRs.

Our principal advantage in applying CART to known GPCRs is our ability to directly identify drug leads that act as inverse agonists, which cannot be directly identified using traditional ligand-based screening techniques. Inverse agonists are particularly relevant in treating diseases in which ligand-independent GPCR activity, or overactivity, is implicated.

We have identified drug leads that are capable of inhibiting both ligand-independent and ligand-dependent activity at selected known GPCR targets. We are currently developing drug leads and drug candidates that target these overactive known GPCRs to treat the related diseases. Our most advanced program targets the serotonin 5HT2A GPCR for potential treatment of schizophrenia and other psychiatric disorders.

According to the National Institutes of Health, approximately 1% of the population develops schizophrenia during their lifetime. More than two million Americans suffer from schizophrenia in a given year. We have tested currently available anti-psychotic drugs and have found that they act as inverse agonists at a known GPCR, referred to as the 5HT2A GPCR. Using CART, we have discovered and are developing a number of new drug leads that act as inverse agonists at the 5HT2A GPCR. One such drug lead, which we refer to as AR116081, is the subject of several issued United States patents. This drug lead has displayed activities in tests involving laboratory animals indicating that AR116081 could be useful in treating psychiatric disorders such as schizophrenia and depression. Moreover, AR116081 possesses a higher degree of receptor selectivity than currently marketed anti-psychotics, which suggests that this compound may be more effective than these other drugs. To date, AR116081 exhibits no evidence of side effects in laboratory animals. In addition to developing AR116081 as a single therapy for possible use in the treatment of chronic schizophrenia, we have been exploring the further utility of this drug lead as a combination product with presently approved therapeutics to treat acute psychosis. In this approach, AR116081 is being analyzed to determine if it can impact dopamine circuits, which are overactive in schizophrenic patients. This could allow lower dosages of currently approved anti-psychotics to be administered in combination with AR116081, which may avoid the locomotor side-effects which are frequently observed with higher, clinically effective, dosages of typical anti-psychotics. We have already confirmed the ability of AR116081 to act synergistically with clinically approved anti-psychotics in animal models.

Our anti-psychotic drug program also demonstrates the advantages of CART for rapid drug lead discovery. The process of discovering promising drug leads took approximately 18 months beginning from the application of CART to the 5HT2A GPCR to the animal testing of the candidates that we discovered using CART. We intend to either enter into a collaboration to further expand our anti-psychotic drug program with the goal of selecting one or more of our novel anti-psychotic drug leads that target the 5HT2A GPCR, for future clinical development, or to pursue

the clinical development of these potential anti-psychotic drug leads such as AR116081 by ourselves.

NON-THERAPEUTIC APPLICATIONS OF CART

Over the past four years, we have also obtained the full-length gene sequences of 334 olfactory and taste GPCRs. We have also obtained five non-human receptors, including plant, viral and insect receptors.

OLFACTORY AND TASTE GPCRS. A specialized multigene family of GPCRs has been identified in the nasal membrane and is responsible for the sense of smell. Another family of GPCRs has recently been discovered in the tongue and is believed to be responsible for the perception of taste. We are applying

34

CART to a number of olfactory and taste GPCRs to identify novel compounds that we believe will be of potential commercial value in the fragrance and food additive industries.

PLANT GPCRS. Plants respond to a variety of environmental and internal signals that regulate their growth and development. GPCRs have recently been identified in a variety of plants and have been implicated in the action of a variety of plant hormones. We are presently applying CART to plant GPCRs in an attempt to identify novel regulators of the life cycle of plants that may affect crop growth and development.

VIRAL GPCRS. GPCRs are involved in either replication or infection in a number of viruses. Some herpes viruses, including the Kaposi's sarcoma-associated virus, have GPCRs within their genome which are important for replication. Other GPCRs appear necessary for primary infection. For example, HIV infects cells by binding to a GPCR that transports the virus into cells. A number of orphan GPCRs have been identified which appear to act in a similar manner for other viruses. Our goal is to identify novel anti-viral drugs using CART.

INSECT GPCRS. Insect genomes also include GPCRs, and we have begun the process of applying CART to insect GPCRs in an attempt to identify compounds that may offer the potential for improved and environmentally safer insect control agents. Our goal is to use CART-activated insect GPCRs to find compounds that selectively reduce pest reproduction and feeding behavior.

TYROSINE KINASE RECEPTORS. In addition to applying CART to orphan GPCRs, we are also applying CART to other human receptor classes, including orphan TKRs. A number of orphan TKRs have been located on cancerous tissues and may be involved in excessive cell proliferation and growth. As with GPCRs, CART allows us to activate orphan TKRs in the absence of native ligands and screen the activated TKRs to identify novel inhibitors of TKR activity. We are currently evaluating orphan TKRs for drug screening.

GENETIC "KNOCK-IN" MODELS. We are collaborating with Lexicon Genetics to develop mice that produce CART-activated GPCRs, or GPCR knock-ins, by using state-of-the-art molecular genetic techniques. By producing CART-activated orphan GPCRs in animals, we believe that we will gain valuable insight into the functionality of individual GPCRs, as well as indications of human disease for which drugs that target these GPCRs may be useful. In addition, we expect that these knock-in animals will provide an animal model that can be used to test the potency of drug leads discovered using CART-activated GPCRs. The first knock-in GPCR animals developed based upon this collaboration were born in February 2001.

OUR GPCR COLLABORATORS

Our success will depend in large part upon our ability to enter into successful collaborations with other pharmaceutical and biotechnology companies. We are active in the scientific community and within the industry and regularly make presentations regarding our research and development programs and the applications of CART at scientific conferences and industry conventions. We believe that our participation at these events has led, and will continue to lead, to contacts with existing and potential collaborators. We have entered into a number of strategic collaborations in the recent past to discover novel drug leads using CART, and we expect to enter into additional collaborations and expand our existing collaborations in the future.

ELI LILLY

In April 2000, we entered into a research collaboration with Eli Lilly, one of the world's leading pharmaceutical companies. Our collaboration with Eli Lilly is principally focused on the central nervous system and endocrine therapeutic fields. We will also focus on the cardiovascular field and may expand our collaboration to other therapy classes, including cancer.

35

During our collaboration, we will pursue an agreed upon research plan with Eli Lilly that has several objectives. During the term of our collaboration, we will mutually review and select GPCRs that will become subject to the collaboration. These GPCRs may be provided either by us or by Eli Lilly. All of our pre-existing CART-activated GPCRs were excluded from the collaboration. We and Eli Lilly will each share our respective knowledge of the GPCRs that become subject to the collaboration to validate and CART-activate selected receptors. We will jointly select a number of proprietary central nervous system, endocrine and cardiovascular GPCRs for CART-activation, and we will then provide Eli Lilly with enabled high-throughput screens for use at their screening facilities. During the term of the agreement, we will continue to receive research funding from Eli Lilly for our internal resources committed to the collaboration, which will be augmented by substantial resource commitments by Eli Lilly. Eli Lilly will be responsible for screening its chemical compound library using selected CART-activated receptors, for identifying drug leads and for the pre-clinical and clinical testing and development of drug candidates. We may receive up to \$1.25 million per receptor based upon milestone payments in connection with the successful application of CART to each receptor, and up to an additional \$6.0 million based upon clinical development milestone payments for each drug candidate discovered using CART. We may also receive additional milestone and royalty payments associated with the commercialization of drugs discovered using CART, if any.

Once the assay development fee has been paid for a CART-activated GPCR, Eli Lilly will have exclusive rights to screen chemical libraries, discover drug leads that target that GPCR, and to develop, register and sell any resulting products worldwide. We retain rights to partner or independently develop GPCRs that do not become subject to the collaboration.

The term of our collaboration agreement with Eli Lilly is five years. Either party can terminate the agreement with or without cause effective three years after the date of the agreement by giving written notice prior to the conclusion of the 33rd month after the date of the agreement. In addition, either party can terminate the agreement at any time if the other party commits a material breach, and Eli Lilly can terminate the agreement at any time if, among other reasons, Eli Lilly does not approve suitable replacements for key employees who leave us. The parties will continue to have various rights and obligations under the agreement after the agreement is terminated. The extent of these continuing rights and obligations depends on many factors, such as when the agreement is terminated, by which party and for what reason. These continuing obligations may

include further research and development efforts by us and a variety of payments by Eli Lilly.

Eli Lilly is a significant customer and the loss of such customer would have a material adverse effect on our business and future revenue stream.

Revenues recognized under the Eli Lilly collaboration were approximately \$1.2 million for the three months ended March 31, 2001, consisting of research funding of approximately \$1.1 million and amortization of the upfront payment of \$25,000, and \$5.2 million for the year ended December 31, 2000 consisting of research funding of approximately \$2.9 million, milestone achievements related to the activation of nine selected GPCRs for approximately \$2.2 million, and amortization of an upfront payment of \$75,000.

#### TAISHO

In May 2000, we entered into a research collaboration with Taisho focused on several GPCRs selected by Taisho in therapeutic areas of interest. Under the terms of the agreement, Taisho will receive exclusive, worldwide rights to the selected GPCR targets and to any drug leads discovered using the CART-activated versions of these receptors. We may receive up to a total of \$2.3 million in revenues per receptor associated with research, development and screening fees. We may also receive clinical development milestones, regulatory approval milestones and royalties on drug sales, if any.

36

Taisho is a significant customer and the loss of such customer would have a material adverse effect on our business and future revenue stream.

Revenues recognized under the Taisho collaboration were approximately \$4.2 million for the three months ended March 31, 2001, consisting of approximately \$3.9 million related to receptor activation selection, screening assay fees and research and development fees, \$286,000 related to research funding and amortization of the upfront payment of \$30,000, and \$2.4 million for the year ended December 31, 2000, consisting of milestone achievements of approximately \$2.3 million related to receptor activation selection and screening assay fees and amortization of the upfront payment of \$80,000.

In January 2001, we signed an amendment to our original agreement with Taisho whereby Taisho was granted world-wide rights to our 18F program which includes the 18F receptor, a GPCR that we believe represents an obesity orphan receptor target, and small molecule modulators discovered using this receptor. In accordance with the amendment, Taisho made a payment in February 2001 to us for the 18F program based upon work completed by us through the date of the amendment. In addition, we may receive additional milestone and research funding payments and royalties on drug sales, if any.

In March 2001, we entered into a receptor discovery agreement with Taisho. Under the terms of the agreement, we will identify the receptor that binds with a ligand that Taisho provided to us. If we are successful in identifying and cloning this receptor, we will CART-activate this receptor and provide a screening assay to Taisho. In connection with this agreement, Taisho paid us a one-time non-refundable research and development fee which is being recognized as revenue as the services are being performed. In addition, we may receive additional milestone payments and royalties on drug sales, if any.

### FUJISAWA

In January 2000, we entered into a collaborative agreement with Fujisawa, a leading Japan-based pharmaceutical company with significant drug discovery research efforts. During the collaboration, we will jointly validate up to 13

orphan GPCRs as drug screening targets. We will be responsible for receptor identification, location and regulation, and will apply CART to GPCRs selected by Fujisawa. We will also seek to validate screening assays based on the selected GPCRs. Fujisawa will be entitled to screen selected assays against its chemical compound library to identify drug leads. Fujisawa will also be responsible for the pre-clinical and clinical development of any drug candidates that we or Fujisawa discover. We may also screen the selected GPCRs using our in-house chemical library. When Fujisawa selects its first receptor, we will be entitled to receive a one-time initiation fee of \$500,000. If we and Fujisawa then achieve various milestones, we may receive up to a maximum of \$3.5 million per selected receptor for assay transfer, screening and exclusivity fees, and up to a maximum of \$2.0 million per selected receptor based upon the filing of one or more investigational new drug applications for each drug candidate discovered using a CART-activated receptor. We may also receive clinical development milestones, regulatory approval milestones and royalties on drug sales, if any. We and Fujisawa may never achieve research, development or commercialization milestones under the agreement.

Our collaborative agreement with Fujisawa will terminate upon the expiration of Fujisawa's obligation to make royalty payments under the agreement, if any. Fujisawa may terminate the agreement at any time by providing us with written notice of their intention to do so and by returning any proprietary rights they have acquired under the agreement. Additionally, either party may terminate the agreement for a material breach of the agreement by the other party. The termination or expiration of the agreement will not affect any rights that have accrued to the benefit of either party prior to the termination or expiration.

37

#### LEXICON GENETICS

In April 2000, we signed a binding letter of intent and memorandum of agreement with Lexicon Genetics, a genomics company that uses a proprietary technology to clone mice, enabling large-scale functional genomics. The agreement establishes a research collaboration with Lexicon Genetics using their proprietary technology to clone gene-targeted mice whose genomes have been altered using specified CART-activated orphan GPCRs. Our collaboration with Lexicon Genetics consists of a feasibility phase to determine both the utility of this novel approach and the scope of any resulting licensing alliance. If we proceed beyond the feasibility stage, the agreement establishes a licensing alliance in which we and Lexicon Genetics will each contribute up to ten unique GPCRs to clone mice containing CART-activated GPCRs for use as drug discovery tools, and to discover drug leads using these GPCRs. We will share equally in the fees, milestones and royalties generated from any licensing agreement with a third-party involving GPCRs developed through our licensing alliance.

### OTHER AGREEMENTS

Our practice is to meet with pharmaceutical and biotechnology companies on an on-going basis to discuss the possibility of collaborating with them on projects of mutual interest. At present, we are in the early stages of discussing with other companies the possibility of a number of such arrangements. There can be no assurance that we will be successful in consummating any such arrangement.

### RESEARCH COLLABORATION

On April 15, 2001, we signed a binding letter of intent with Axiom Biotechnologies, Inc. for a collaborative research program involving Axiom's proprietary RHACE-TM- Technology and Human Cell Bank, as well as the purchase by us of \$2.0 million of Axiom's preferred stock. Axiom's unique assets include the

Axiom Human Cell Bank, a large pharmacologically and genetically characterized collection of human cells. We have already initiated the scientific collaboration, and expect to complete the purchase of Axiom's stock in July 2001. Under the scientific collaboration, we will jointly develop and share information related to the localization of known GPCRs within human cell lines owned by Axiom. Axiom will also profile several thousand of our small molecule compounds using its technologies and we will have exclusive rights to these data. We will exclusively own the information related to the localization of orphan GPCRs within these cell lines.

#### CHEMNAVIGATOR.COM

In 1999, we developed an Internet-based search engine that allows scientists to search for chemical compounds based primarily on the similarity of chemical structures. We believe this is important for drug discovery purposes because chemical similarity can be used as an indicator of biological activity. ChemNavigator.com was formed in May 1999 and subsequently obtained independent third-party financing. We licensed the search engine's underlying technology and related intellectual property to ChemNavigator.com in exchange for stock. Our carrying value for our investment in ChemNavigator.com is zero because we have made no financial contribution to ChemNavigator.com in exchange for our ownership interest. In addition, we are not required to reimburse the outside investors for any losses ChemNavigator.com incurs. We currently beneficially own approximately 33% of the outstanding common stock of ChemNavigator.com.

#### ARESSA PHARMACEUTICALS

In August 1999, we formed Aressa Pharmaceuticals, Inc. as our wholly-owned subsidiary to take advantage of opportunities to in-license and develop niche products from other pharmaceutical or biotechnology companies. In November 1999, Aressa entered into a licensing agreement with respect to a patented anti-fungal compound. In October 2000, Aressa received gross proceeds of \$1.0 million from

38

the sale of its stock to an outside investor. Our carrying value for our investment in Aressa is zero because we have made no financial contribution to Aressa in exchange for our ownership interest. In addition, we are not required to reimburse the outside investor for any losses Aressa incurs. We currently beneficially own approximately 83% of the outstanding common stock of Aressa.

T-82

We licensed T-82 from SSP Co., Ltd. in 1998 as a novel drug candidate to treat Alzheimer's Disease. We intended to develop T-82 through completion of Phase II clinical studies, and, based upon the results of these studies, to seek a partner to conduct the more expensive Phase III clinical efficacy studies. Our Phase I safety studies of T-82 began in 1999. We have completed four Phase I studies of T-82 through 2000 and have been assessing the data in conjunction with SSP. These four Phase I safety-based studies evidenced results that we believe establish the safety of T-82 in the tested parameters. However, our analysis of all of the data for T-82, in conjunction with the extensive costs associated with conducting Phase II and Phase III clinical studies of T-82, the types and number of potential new treatments for Alzheimer's Disease that are in more advanced stages of clinical testing and regulatory review, as well as our ability to receive regulatory approval for commercialization of T-82 or to successfully license T-82 to a third party, have prompted us to consider if continuation of the T-82 program is warranted. Although a final decision has not yet been made, we cannot assure you that we will continue development of T-82. In the event that we decide to continue our T-82 development program, we may be

unable to license T-82 to another party as we had originally intended, or we may be unable to secure regulatory approval for the commercialization of T-82.

#### INTELLECTUAL PROPERTY

Our success depends in large part on our ability to protect our proprietary technology and information, and operate without infringing on the proprietary rights of third parties. We rely on a combination of patent, trade secret, copyright and trademark laws, as well as confidentiality agreements, licensing agreements and other agreements, to establish and protect our proprietary rights. Since our inception, we have filed approximately 136 patent applications in the United States regarding:

- CART
- orphan receptors and CART-activated orphan receptors
- CART-activated known receptors
- small molecule chemical compounds
- web-based search engine technologies

The term of all of our current and future patents, if any are issued, will commence on the date of issuance and terminate 20 years from the earliest effective filing date of the patent application. Because the time from filing to issuance of biotechnology patent applications is often more than three years, our patent protection, if any, on our products and technologies may be substantially less than 20 years.

To date, we have received four issued United States patents, and we also own two issued United States patents related to Melanophore Technology.

We seek patent protection for all of our key inventions, including CART, new receptors that we discover, genetically-altered receptors, and drug leads identified by CART. It has been possible to obtain broad, composition-of-matter patents on novel chemical compounds, such as the drug leads, if any, that we identify using CART. It has also been possible to obtain broad method patents for techniques and procedures for screening and drug-identification technologies, such as those embodied by CART. It has generally not been possible to obtain broad composition-of-matter patents for nucleic acid and amino acid sequences. However, it has been possible to obtain patents that protect specific

39

sequences and functional equivalents of those sequences. Furthermore, intellectual property law allows for separate and distinct patents for altered genetic sequences over previously disclosed sequences. We believe that we can obtain patents on our CART-activated receptor sequences because they are not functional equivalents of the natural version of the receptor. We have filed and will continue to file patent applications on these types of technologies. We believe that CART does not infringe on third-party claims related to any aspect of our proprietary technology.

As a general matter, obtaining patents in the biotechnology and pharmaceutical fields is highly uncertain and involves complex legal, scientific and factual matters. Obtaining a patent in the United States in the biotechnology and pharmaceutical fields can be expensive and can, and often does, require several years to complete. Failure to receive patents pursuant to the applications referred to herein and any future applications could be harmful to us. Our patent filings in the United States may be subject to interference or reexamination proceedings. The defense and prosecution of interference and

reexamination proceedings and related legal and administrative proceedings in the United States involve complex legal and factual questions. We also file patent applications outside of the United States. The laws of some foreign countries may not protect our proprietary rights to the same extent as do the laws of the United States. Third parties may attempt to oppose the issuance of our patents in foreign countries by way of opposition proceedings. Additionally, if an opposition proceeding is initiated against any of our patent filings in a foreign country, that proceeding could have an adverse effect on the corresponding patents that are issued or pending in the United States. If we become involved in any interference, reexamination, opposition or litigation proceedings in the United States or foreign countries regarding patent or other proprietary rights, those proceedings may result in substantial cost to us, regardless of the outcome, and may have a material adverse affect on our ability to develop, manufacture, market or license our technologies or products, or to maintain or form strategic alliances.

Although we plan to aggressively prosecute our patent applications and defend our patents against third-party infringement, we cannot assure you that any of our patent applications will result in the issuance of patents or that, if issued, such patents will not be challenged, invalidated or circumvented. Moreover, we cannot assure you that our patents, to the extent they are or will be issued, will provide us protection against competitors with other technologies. Our technologies and potential products may conflict with patents that have been or may be granted to competitors, universities or others. As the biotechnology industry expands and more patents are issued, the risk increases that our technologies and potential products may give rise to claims that they infringe the patents of others. Third parties claiming infringement of their proprietary rights could bring legal actions against us claiming damages and seeking to enjoin our use or commercialization of a product or our use of a technology. In particular, patent applications or patents for innovative and broadly applicable technologies, such as CART, are sometimes challenged by third parties as obvious, or as obvious extensions of technologies previously developed by those third parties. We cannot assure you that such claims will not be brought against us in the future. If any actions based on these claims are successful, in addition to any potential liability for damages, we could be required to obtain a license in order to continue to use a technology or to manufacture or market a product, or could be required to cease using those products or technologies. Any claim, with or without merit, could result in costly litigation and divert the efforts and attention of our scientific and management personnel. We cannot assure you that we would prevail in any action or that any license required under any patent would be made available or would be made available on acceptable terms.

In addition to patent protection, we rely upon trade secrets, proprietary know-how and continuing technological advances to develop and maintain our competitive position. To maintain the confidentiality of our trade secrets and proprietary information, all of our employees are required to enter into and adhere to an employment-confidentiality and invention-assignment agreement, laboratory notebook policy, and invention disclosure protocol, as a condition of employment. Additionally, our

40

employment-confidentiality and invention-assignment agreement requires that our employees do not bring to Arena, or use without proper authorization, any third-party proprietary technology. We also require all of our consultants and collaborators that have access to proprietary property to execute confidentiality and invention rights agreements in our favor before beginning their relationship with us. While such arrangements are intended to enable us to better control the use and disclosure of our proprietary property and provide for our ownership of proprietary technology developed on our behalf, they may not provide us with meaningful protection for such property and technology in

the event of unauthorized use or disclosure.

We have entered into a research agreement with the University of Glasgow to jointly develop screening strategies using our CART-activated GPCRs, combined with techniques claimed in a patent application owned by the University. Under this agreement, we have an option to take an exclusive license to this patent application, as well as techniques that are developed during the course of the research agreement.

#### COMPETITION

A major focus of our scientific and business strategy involves GPCRs. Most major pharmaceutical companies, as well as several biotechnology companies, have drug discovery programs based upon GPCRs, including orphan GPCRs. In addition, other companies have attempted to overcome the problems associated with traditional drug screening by embarking upon a variety of alternative strategies. Although some of these approaches are indicated as being based upon ligand-independent strategies, like CART, we believe that all of these approaches have relied upon indirect measures of receptor activity, which we believe provide a limited possibility of assessing receptor-drug interaction and increase the possibility of false positive results.

Several of our existing and potential competitors have substantially greater product development capabilities and financial, scientific and marketing resources than we do. As a result, they may be able to adapt more readily to technological advances than we can, or to devote greater resources than we can to the research, development, marketing and promotion of drug discovery techniques or therapeutic products. Additionally, the technologies being developed by these companies may be more readily accepted or widely used than CART. Our future success will depend in large part on our ability to maintain our competitive position. The biotechnology industry is undergoing rapid and significant change and we may not be able to compete successfully with newly emerging technologies.

We will rely on our collaborators for support of our development programs for our drug candidates and intend to rely on our collaborators for the manufacturing and marketing of these products. Our collaborators may be conducting multiple product development efforts within the same disease areas that are the subjects of their agreements with us. Generally, our agreements with our collaborators do not preclude them from pursuing development efforts using a different approach from that which is the subject of our agreement with them. Any of our drug candidates therefore, may be subject to competition with a drug candidate under development by a collaborator.

#### GOVERNMENT REGULATION

Our and our collaborators' on-going drug development activities are subject to the laws and regulations of governmental authorities in the United States and other countries in which these products may be marketed. Specifically, in the United States, the FDA and comparable regulatory agencies in state and local jurisdictions impose substantial requirements on new product research and the clinical development, manufacture and marketing of pharmaceutical products, including testing and clinical trials to establish the safety and effectiveness of these products. Our and our collaborators' drug products will require regulatory approval before commercialization. Governments in other countries have similar requirements for testing, approval and marketing. In the United States, in addition to

41

meeting FDA regulations, we are also subject to other federal, state and local environmental and safety laws and regulations, including regulation of the use

and care of laboratory animals.

We do not plan to commercialize most of our drug candidates by ourselves, but intend to rely on our collaborators to develop and commercialize our drug candidates or those that our collaborators discover through the use of our technology. Before marketing in the United States, any pharmaceutical or therapeutic products developed by us or our collaborators must undergo rigorous pre-clinical testing and clinical trials and an extensive regulatory approval process implemented by the FDA under the federal Food, Drug and Cosmetic Act. The FDA regulates, among other things, the development, testing, manufacture, safety and effectiveness standards, record keeping, labeling, storage, approval, export, advertising, promotion, sale and distribution of pharmaceutical products. The regulatory review and approval process, which includes pre-clinical testing and clinical trials of each product candidate is lengthy, and uncertain. Securing FDA approval requires the submission of extensive pre-clinical and clinical data and supporting information to the FDA for each indication to establish a product candidate's safety and effectiveness. Additional animal studies, other pre-clinical tests or clinical trials may be requested by the FDA which may delay marketing approval. The approval process takes many years, requires the expenditure of substantial resources and may involve ongoing requirements for post-marketing studies.

Before commencing clinical investigations in humans, we or our collaborators must submit an investigational new drug, or IND, application to the FDA. We generally intend to rely on our collaborators to file IND applications and direct the regulatory approval process for the products they develop using CART. Clinical trials are typically conducted in three sequential phases, although the phases may overlap or be combined. Phase I represents the initial administration of the drug to a small group of humans, either healthy volunteers or patients, to test for safety, dosage tolerance, absorption, metabolism, excretion and clinical pharmacology. Phase II involves studies in a relatively small number of patients to begin to assess the effectiveness of the product, to ascertain dose tolerance and the optimal dose range and to gather additional data relating to safety and potential adverse effects. Once a drug is found to have some effectiveness and an acceptable safety profile in the targeted patient population, Phase III studies are initiated to establish safety and effectiveness in an expanded patient population and multiple clinical study sites. The FDA may require further post-marketing studies, referred to as Phase IV studies. The FDA reviews both the clinical plans and the results of the trials and may require that we discontinue the trials at any time if the FDA identifies any significant safety issues. Clinical testing must meet requirements for institutional review board oversight, informed consent, good clinical practices and FDA oversight.

The length of time necessary to complete clinical trials varies significantly and is difficult to predict. Clinical results are frequently susceptible to varying interpretations that may delay, limit or prevent regulatory approvals. Additional factors that can cause delay or termination of our clinical trials, or those of our collaborators, or may increase the cost of those trials, include, among other factors:

- lack of effectiveness of the product being tested
- adverse medical effects or side effects in treated patients
- slow patient enrollment in the clinical trial
- ${\mathord{\text{--}}}$  inadequately trained or insufficient personnel at the study site to assist in overseeing and monitoring the clinical trial
- delays in approval from a study site's review board

 longer treatment time required to demonstrate effectiveness or determine the appropriate product dose

42

- lack of sufficient supplies of the product candidate

If pre-clinical and clinical studies are successful, the results, together with other information about the product and its manufacture, are submitted to the FDA in the form of an New Drug Application, or NDA, to request marketing approval. Before receiving FDA approval to market a product, we or our collaborators must demonstrate that the product is safe and effective through clinical trials on the patient population that will be treated. The approval process is likely to require substantial time and effort and there can be no assurance that any approval will be granted on a timely basis, if at all. Additional animal studies or clinical trials may be requested during the FDA review period that may delay marketing approval. As part of the approval process, each manufacturing facility must be inspected by the FDA. Among the conditions of approval is the requirement that a manufacturer's quality control and manufacturing procedures conform with federally mandated current good manufacturing practices, or GMPs. Both before and after approval, manufacturers must expend time, money and effort to ensure compliance with current GMPs and the FDA conducts periodic inspections to certify compliance. Violations may result in restrictions on the product or manufacturer, including costly recalls or withdrawal of the product from the market, or other enforcement action.

If regulatory approval of a product is granted by the FDA, this approval will be limited to those specific conditions for which the product is approved, as demonstrated through clinical studies. After FDA approval for the initial indications, further clinical trials will be necessary to gain approval for the use of the product for additional indications. Marketing or promoting a drug for an unapproved indication is prohibited. The FDA requires that adverse effects be reported to the FDA and may also require post-marketing testing to monitor for adverse effects, which can involve significant expense. Even after FDA approvals are obtained, a marketed product is subject to continual review. Later discovery of previously unknown problems or failure to comply with the applicable regulatory requirements may result in restriction on the marketing of a product or withdrawal of the product from the market as well as possible civil or criminal sanctions. Furthermore, failure to obtain reimbursement coverage from governmental or third party insurers may adversely impact successful commercialization.

Our access to and use of human or other tissue samples in our research and development efforts are subject to government regulation, both in the United States and abroad. United States and foreign government agencies may also impose restrictions on the use of data derived from human or other tissue samples. If our access to or use of human tissue samples, or our collaborator's use of data derived from such samples, is restricted, our business could suffer. Additionally, if we continue to develop our plant or insect programs, we may become subject to different government regulations relating to agricultural and industrial biotechnology products.

In addition to regulations enforced by the FDA, we are also subject to regulation under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act, the Controlled Substances Act and other present and potential future federal, state or local regulations. Our research and development programs involve the controlled use of hazardous materials, chemicals, biological materials and various radioactive compounds. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by state and federal regulations, the risk of accidental contamination or injury from these materials cannot be completely

eliminated. In the event of such an accident, we could be held liable for any damages that result, and the extent of that liability could exceed our resources.

#### RESEARCH

Research activities are important to our business. Research expenses related to the development of our technology and services and the improvement of our existing technology totaled \$12.1 million for the year ended December 31, 2000, \$8.3 million for the year ended December 31, 1999 and

43

\$2.6 million for the year ended December 31, 1998. For the three months ended March 31, 2001, our research expenses totaled \$3.9 million.

#### COMPLIANCE WITH ENVIRONMENTAL REGULATIONS

We believe that our operations comply in all material respects with the applicable environmental laws and regulations. Our compliance with these requirements did not and is not expected to have a material effect upon our capital expenditures, earnings or competitive position.

### SOURCES AND AVAILABILITY OF RAW MATERIALS

In general, we purchase raw materials and supplies on the open market. Substantially all such materials are obtainable from a number of sources so that the loss of any one source of supply would not have a material adverse effect upon us.

#### OUR DATABASE

We have developed a web-based database that can be used to access relevant information and data generated from our research and development programs. Our database has a number of characteristics which we believe are unique. Our database allows individual users to obtain information on specific GPCR targets, including gene sequence information, data developed by us from GPCR tissue and cellular distribution studies, the results of drug screening and the results of our animal studies. In developing this database, we focused on the magnitude of data that we would generate based upon the number of GPCRs available to us, and the number of chemical compounds that would be screened in our assays. Our database, which is the subject of a pending patent application that we own, has a number of proprietary features that allow us to efficiently organize, store and access these data and information. Using this database, we and our collaborators can search for compounds by structure and assay results, and can search for genes by sequence and tissue or disease expression. One of our collaborators is currently using our database, and we believe our database will be a resource for collaborators who have a specific interest in diseases that affect certain tissues.

#### **EMPLOYEES**

As of May 31, 2001, we employed 151 people, including 131 in research and development and 20 in administration. Thirty-seven of our employees hold doctoral degrees and an additional 22 hold other advanced degrees. None of our employees is covered by any collective bargaining agreement. We consider our relationship with our employees to be good.

#### OUR FACILITIES

Our facilities consist of approximately 63,000 square feet of research and office space located at 6150 and 6166 Nancy Ridge Drive, San Diego, California. At our 6166 Nancy Ridge Drive facility, we currently lease approximately 37,000 square feet of space, of which 23,000 square feet is laboratory space and 14,000 square feet is office space. In 2000, we began leasing additional facilities located at 6150 Nancy Ridge Drive consisting of approximately 26,000 square feet. In January 2001, we purchased the 6150 Nancy Ridge Drive facility as well as the adjoining facility at 6138 Nancy Ridge Drive. The 6138 Nancy Ridge Drive facility, consisting of approximately 26,000 square feet, is currently occupied by a tenant whose lease expires on August 31, 2001. After the lease expires, we will use the additional space primarily for additional laboratory and office space. We believe these facilities will be adequate to meet our near-term space requirements. On June 15, 2001, we entered into a letter of intent to purchase property located at 6154 Nancy Ridge Drive for \$5.1 million. The building located on the property totals approximately 48,000 square feet of space suitable for office and laboratory expansion. We intend to complete this purchase by August 1, 2001, and expect to occupy the building in 2002. However, the completion of the purchase is subject to a number of conditions, including the negotiation of a purchase agreement satisfactory to us and the seller and our due diligence of the property.

#### LEGAL PROCEEDINGS

We are not currently a party to any material legal proceedings.

44

#### MANAGEMENT

### EXECUTIVE OFFICERS AND DIRECTORS

The following table shows information about our executive officers and directors as of May 31, 2001.

| NAME                         | AGE | POSITION   |
|------------------------------|-----|--|
| Jack Lief                    | 55  | President, Chief Executive Officer and               |
| Dominic P. Behan, Ph.D       | 37  | Vice President, Research and Director                |
| Derek T. Chalmers, Ph.D      | 37  | Vice President, Research and Director                |
| Robert Hoffman, CPA          | 35  | Vice President, Finance                              |
| Joyce H. Williams, R.A.C     | 55  | Vice President, Drug Development                     |
| Richard P. Burgoon, Jr       | 40  | Senior Vice President, Operations, Gene<br>Secretary |
| Nigel R.A. Beeley, Ph.D      | 50  | Vice President, Chief Chemical Officer               |
| Elaine Alexander, M.D., Ph.D | 48  | Vice President, Experimental and Clinic              |
| Louis J. Scotti              | 45  | Vice President, Business Development                 |
| Joseph F. Mooney             | 53  | Chief Financial Officer                              |

| John P. McAlister, | III, Ph.D | 52 | Director |
|--------------------|-----------|----|----------|
| Michael Steinmetz, | Ph.D      | 53 | Director |
| Stefan Ryser, Ph.D |           | 41 | Director |

JACK LIEF is our co-founder and has served as our director, President and Chief Executive Officer since April 1997. Mr. Lief is also currently serving as a director, Chief Executive Officer and President of Aressa Pharmaceuticals, Inc. and of BRL Screening, Inc. Mr. Lief also serves as a director of ChemNavigator.com, one of our affiliates. From 1995 until April 1997, Mr. Lief served as an advisor and consultant to numerous biopharmaceutical organizations. From 1989 to 1994, he served as Senior Vice President, Corporate Development and Secretary of Cephalon, Inc. From 1983 to 1989, Mr. Lief served as Director of Business Development and Strategic Planning for Alpha Therapeutic Corporation. Mr. Lief joined Abbott Laboratories in 1972 where he served until 1983, most recently as the head of International Marketing Research. Mr. Lief holds a B.A. from Rutgers University and a M.S. in Psychology (Experimental and Neurobiology) from Lehigh University.

DOMINIC P. BEHAN, PH.D. is our co-founder and has served as our Vice President, Research since April 1997 and our director since April 2000. From 1993 to January 1997, Dr. Behan directed various research programs at Neurocrine Biosciences. From 1990 until 1993, he was engaged in research at the Salk Institute. Dr. Behan holds a Ph.D. in Biochemistry from Reading University, England.

DEREK T. CHALMERS, PH.D. is our co-founder and has served as our Vice President, Research since April 1997 and as our director since April 2000. From 1994 to December 1996, Dr. Chalmers directed various research programs at Neurocrine Biosciences. From 1990 until 1994, he was engaged in research at the University of Michigan. Dr. Chalmers holds a Ph.D. in Neuroscience and Neuropharmacology from the University of Glasgow, Scotland.

ROBERT HOFFMAN, CPA has served as our Vice President, Finance since April 2000 and served as our Controller from August 1997 until April 2000. Mr. Hoffman also serves as the Chief Financial Officer

45

of ChemNavigator.com and as Vice President, Finance of BRL Screening, Inc. From 1994 to 1997, he served as Assistant Controller for Document Sciences Corporation. Mr. Hoffman holds a B.B.A. from St. Bonaventure University in New York and is licensed as a CPA in the State of California.

JOYCE H. WILLIAMS, R.A.C., has served as our Vice President, Drug Development since February 1998. Ms. Williams began serving as Vice President, Regulatory & Clinical Affairs of Aressa Pharmaceuticals, Inc. in October 2000. From January 1997 to February 1998, Ms. Williams served as Regulatory Consultant for ProFocus Regulatory Solutions. From 1995 to 1996, she served as Executive Director, Regulatory Affairs at Advanced Sterilization Products, a division of Johnson & Johnson. Ms. Williams has over 20 years of experience in regulatory affairs with pharmaceutical and medical technology firms. Ms. Williams holds a B.A. from Case Western Reserve University and an M.B.A. from Pepperdine University. Ms. Williams has earned the designation Regulatory Affairs Certified, or R.A.C.

RICHARD P. BURGOON, JR. joined us in April 1998 and serves as our Senior Vice President, Operations, General Counsel and Secretary. Mr. Burgoon is also currently serving as a director, Chief Operating Officer and Secretary of Aressa Pharmaceuticals, Inc. and as director and Secretary of ChemNavigator.com and as

a director of BRL Screening, Inc. From 1997 to 1998, Mr. Burgoon was an attorney for Reed, Smith, Shaw & McClay. From 1994 to 1997, Mr. Burgoon served as Senior Director and Patent Counsel at Cephalon, Inc. From 1992 to 1994, he served as Intellectual Property Counsel to IDEC Pharmaceuticals Corporation. From 1990 to 1992, he served as Staff Attorney at Beckman Instruments, Inc. Mr. Burgoon holds B.S. and B.A. degrees from the University of California, Irvine. He received his J.D. from the Franklin Pierce Law Center.

NIGEL R.A. BEELEY, PH.D. has served as our Vice President and Chief Chemical Officer since March 1999. From 1994 to 1998, he was Senior Director of Chemistry at Amylin Pharmaceuticals, Inc. and from 1988 to 1994, he served as Head of Oncology-Chemistry for Celltech. From 1980 to 1988, he held positions of increasing seniority in the cardiovascular group at Synthelabo Recherche, and from 1978 to 1980 he was a CNS Medicinal Chemist for Reckitt and Coleman. From 1976 to 1978, Dr. Beeley held a Royal Society Overseas Research Fellow at ETH, Zurich, Switzerland. Dr. Beeley has a B.Sc. Honours (Class 1) degree in Chemistry from the University of Liverpool, U.K. and a Ph.D. in Chemistry from the University of Manchester, U.K.

ELAINE ALEXANDER, M.D., PH.D. has served as our Vice President, Experimental and Clinical Research since May 1999. From 1998 to 1999, she served as a consultant to biotechnology companies and the National Institutes of Health. From 1993 to 1997, she served as Director of Experimental and Exploratory Research for Cephalon, Inc. Dr. Alexander holds a Ph.D. and M.D. from the University of California, Los Angeles.

LOUIS J. SCOTTI has served as our Vice President, Business Development since August 1999. From June 1998 until July 1999, Mr. Scotti served as President and Chief Executive Officer for ProtoMed, Inc. From April 1996 to June 1998, he served as Executive Director of Licensing for Ligand Pharmaceuticals, Inc. From 1986 to 1995, he served in various positions at Reed & Carnrick Pharmaceuticals, most recently as Vice President of Marketing and Business Development.
Mr. Scotti holds a B.S.E. in Biomedical Engineering from the University of Pennsylvania.

JOSEPH F. MOONEY has served as our Chief Financial Officer since September 2000. Mr. Mooney also serves as a director and as Treasurer of BRL Screening, Inc. From 1995 to 2000, he was a Managing Principal of Liquidity Sources LLC. From 1987 to 1993, he was with Tucson Resources, Inc., a subsidiary of Tucson Electric Power, most recently as the Vice President, Securities and Treasurer. Mr. Mooney holds an M.B.A. from the Graduate School of Business at the University of Chicago and an M.Sc. from the London School of Economics and Political Science, as well as degrees in pure mathematics from Boston College and Brandeis University.

46

JOHN P. MCALISTER, III, PH.D. has served as our director since July 1997. Dr. McAlister joined Tripos, Inc., a provider of discovery research software and services to the life sciences industry, in 1982, and since 1988, has served as President and Chief Executive Officer of Tripos. Dr. McAlister holds a Ph.D. in Biochemistry and X-Ray Crystallography from the University of Wisconsin, Madison. He currently also serves as a director of Tripos.

MICHAEL STEINMETZ, PH.D. has served as our director since May 1999. Since 1997, he has held the title of General Partner at MPM Capital, a venture capital firm focusing on investments in the biotechnology industry, and he is a Managing Director of MPM Asset Management LLC. From 1991 to 1997, he served as Vice President Preclinical Research and Development of various divisions of F. Hoffmann-La Roche Ltd. Dr. Steinmetz holds a Ph.D. in Natural Sciences from the University of Munich, Germany. He currently serves as Chairman at Coelacanth

Corporation. Dr. Steinmetz also currently serves as director of Acorda Therapeutics, Atugen, Cellular Genomics, Epigenomics, MacroGenics and Xcyte.

STEFAN RYSER, PH.D. has served as our director since January 1999. In April 2000, Dr. Ryser became a Managing Director of Bear Stearns and founding Managing Partner of Bear Stearns Health Innoventures Management LLC, a company that manages venture capital investments in the health care industry. From January 1998 to April 2000, Dr. Ryser served as Chief Executive Officer of International Biomedicine Management Partners Inc., a Swiss company that manages investments in the biotechnology industry. From January 1985 to December 1997, Dr. Ryser held various positions at Hoffman-La Roche Inc., including Head of Global Research Staff and Scientific Assistant to the President of Global Research and Development. Dr. Ryser holds a Ph.D. in Molecular Biology from the University of Basel, Switzerland. He currently also serves as a director of Telik, Inc. and Cytokinetics, Inc.

Our executive officers are appointed annually by our board of directors and serve at the discretion of the board of directors. At our annual stockholders meeting held on May 8, 2001, all of our directors were nominated and elected to continue their terms. The term for each of our directors expires upon our next annual stockholders meeting.

#### BOARD COMMITTEES

In 2000, we established an audit committee, a compensation committee and a stock option committee. We do not have a nominating committee or a committee that performs the functions of a nominating committee.

AUDIT COMMITTEE. The audit committee reviews the financial information to be provided to stockholders, monitors the integrity of our internal controls and monitors the independence and performance of our independent auditors. The audit committee currently consists of the outside directors, Dr. McAlister, Dr. Ryser and Dr. Steinmetz.

COMPENSATION COMMITTEE. The compensation committee reviews and approves the compensation and benefits for directors and the executive officers, and makes recommendations to the board of directors regarding these matters. The compensation committee currently consists of Mr. Lief, Dr. Ryser and Dr. Steinmetz.

STOCK OPTION COMMITTEE. The stock option committee authorizes and approves stock option grants under our 1998 Equity Compensation Plan and 2000 Equity Compensation Plan. The stock option committee currently consists of the outside directors, Dr. McAlister, Dr. Ryser and Dr. Steinmetz.

47

#### DIRECTOR COMPENSATION

Other than expenses in connection with attendance at meetings and other customary expenses, we currently do not compensate any non-employee members of our board of directors. Directors who are also employees do not receive additional compensation for serving as directors.

Under our 2000 Equity Compensation Plan, non-employee directors are also eligible to receive option grants to purchase shares of our common stock, as determined by the stock option committee. Non-employee directors will also be eligible to receive direct stock issuances.

#### EXECUTIVE COMPENSATION

The following table sets forth information concerning the compensation paid or accrued by us for services rendered to us in all capacities for the years ended December 31, 2000 and December 31, 1999 by our Chief Executive Officer and our four other highest paid executive officers.

#### SUMMARY COMPENSATION TABLE

|  |              | ANNUAL C           | LONG TERM<br>COMPENSATION<br>AWARDS |                                       |
|--|--------------|--------------------|-------------------------------------|---------------------------------------|
| NAME AND PRINCIPAL POSITION  | YEAR         | SALARY(\$)(1)      | OTHER ANNUAL COMPENSATION(\$)       | SECURITIES UNDERLYING OPTIONS/SARS(#) |
| Jack Lief  President and Chief Executive Officer                                 |              | •                  | \$<br>                              | 300,000<br>12,500                     |
| Dominic P. Behan, Ph.D Vice President, Research                                  | 2000<br>1999 | 200,000<br>137,500 | 55,000(2)<br>                       | 200,000<br>12,500                     |
| Derek T. Chalmers, Ph.D<br>Vice President, Research                              | 2000<br>1999 | 200,000<br>137,500 | 55,000(2)<br>                       | 200,000<br>12,500                     |
| Richard P. Burgoon, Jr<br>Senior Vice President, Operations<br>& General Counsel | 2000<br>1999 | /                  |                                     | 100,000<br>22,500                     |
| Nigel R.A. Beeley, Ph.D Vice President, Chief Chemical Officer                   | 2000<br>1999 | 175,000<br>118,750 |                                     | 25,000<br>25,000                      |

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- (2) During the year 2000, Dr. Behan and Dr. Chalmers each received an advance on their salary in the amount of \$80,000. Dr. Behan and Dr. Chalmers have each offset their advances by \$25,000 in the form of salary reductions through December 31, 2000. This has resulted in a net advance of \$55,000 to each of Dr. Behan and Dr. Chalmers during 2000.
- (3) Pursuant to a four year consulting agreement with ChemNavigator.com, Mr. Lief was awarded 200,000 shares of common stock of ChemNavigator.com in May 1999. The shares vest at a rate of 50,000 shares per year beginning in May 2000, provided that Mr. Lief remains employed by us.

<sup>(1)</sup> In accordance with the rules of the SEC, the compensation described in this table does not include medical, group life insurance or other benefits received by the executive officers which are available generally to all of our salaried employees and certain perquisites and other personal benefits received by the executive officers which do not exceed the lesser of \$50,000 or 10% of any such officer's salary and bonus disclosed in this table. Amounts earned during the years 1999 and 2000 but deferred at the election of the executive officer pursuant our 401(k) plan are included in the Salary column.

48

Pursuant to a four year consulting agreement with ChemNavigator.com, Mr. Burgoon was awarded 175,000 shares of common stock of ChemNavigator.com in May 1999. The shares vest at a rate of 43,750 shares per year beginning in May 2000, provided that Mr. Burgoon remains employed by us. Dr. Beeley was awarded 3,200 options to purchase shares of common stock of ChemNavigator.com for consulting services rendered in 1999. The options vest at the rate of 800 options per year beginning in October 2000, provided he continues to provide services to ChemNavigator.com. Currently, we do not assign any value to the shares of ChemNavigator.com stock.

(4) After their annual anniversary hire date, each of our employees may elect to be paid for unused vacation time in the form of additional salary. Dr. Behan elected to be paid in the form of additional salary for one week of unused vacation time in the year ended December 31, 1999. Dr. Chalmers elected to be paid in the form of additional salary for two weeks unused vacation time in the year ended December 31, 1999 and one week of unused vacation time in the year ended December 31, 2000. Mr. Burgoon elected to be paid in the form of additional salary for one week of unused vacation time in the year ended December 31, 1999 and six weeks of unused vacation time in the year ended December 31, 2000.

#### OPTION/SAR GRANTS IN LAST FISCAL YEAR

The following table sets forth certain information regarding options granted during the year ended December 31, 2000 by us to our Chief Executive Officer and our four other highest paid executive officers:

|                         | INDIVIDUAL GRANTS   |  |                                       |  |                   |
|-------------------------|---|--|---------------------------------------|--|-------------------|
| NAME<br>                | NUMBER OF<br>SECURITIES<br>UNDERLYING<br>OPTIONS/SARS<br>GRANTED(#) | PERCENT OF TOTAL OPTIONS/SARS GRANTED TO EMPLOYEES IN FISCAL YEAR(%) | EXERCISE<br>PRICE PER<br>SHARE(\$/SH) | MARKET<br>PRICE ON<br>DATE OF<br>GRANT(\$) | EXPIRATIC<br>DATE |
| Jack Lief               | 100,000   | 8.3%   | \$ 0.60                               | \$18.00                                    | 3/3/10            |
|                         | 200,000   | 16.5   | 24.23                                 | 28.50                                      | 8/22/10           |
| Dominic P. Behan, Ph.D  | 100,000   | 8.3  | 0.60                                  | 18.00                                      | 3/3/10            |
|                         | 100,000   | 8.3  | 24.23                                 | 28.50                                      | 8/22/10           |
| Derek T. Chalmers, Ph.D | 100,000   | 8.3  | 0.60                                  | 18.00                                      | 3/3/10            |
|                         | 100,000   | 8.3  | 24.23                                 | 28.50                                      | 8/22/10           |
| Richard P. Burgoon, Jr  | 50,000  | 4.1  | 0.60                                  | 18.00                                      | 3/3/10            |
|                         | 50,000  | 4.1  | 24.23                                 | 28.50                                      | 8/22/10           |
| Nigel R.A. Beeley, Ph.D | 6,250   | 0.5  | 0.60                                  | 18.00                                      | 3/1/10            |
|                         | 18,750  | 1.6  | 0.60                                  | 18.00                                      | 4/4/10            |

POTENTIAL REALIZABLE VALUE AT ASSUMED ANNUAL RATES OF STOCK PRICE

| APPRECIATION | FOR | OPTION | TERM(1) |
|--------------|-----|--------|---------|
|--------------|-----|--------|---------|

| NAME                    | 5%(\$)      | 10%(\$)     | 0%(\$)           |
|-------------------------|-------------|-------------|------------------|
|                         |             |             |                  |
| Jack Lief               | \$2,872,010 | \$4,608,736 | \$               |
|                         | 4,438,700   | 9,938,332   | 854 <b>,</b> 000 |
| Dominic P. Behan, Ph.D  | 2,872,010   | 4,608,736   |                  |
|                         | 2,219,350   | 4,969,166   | 427,000          |
| Derek T. Chalmers, Ph.D | 2,872,010   | 4,608,736   |                  |
|                         | 2,219,350   | 4,969,166   | 427,000          |
| Richard P. Burgoon, Jr  | 1,436,005   | 2,304,368   |                  |
|                         | 1,109,675   | 2,484,583   | 213,500          |
| Nigel R.A. Beeley, Ph.D | 179,501     | 288,046     |                  |
|                         | 538,502     | 864,138     |                  |

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(1) The potential realizable value is based on the form of the option at its time of grant. It is calculated by assuming that the stock price on the date of grant appreciates at the indicated annual rate, compounded annually for the entire term of the option, and the option is exercised and sold on the last day of its term for the appreciated stock price. Pursuant to SEC guidelines, for options granted prior to our initial public offering, the stock price on the date of grant is deemed to be equal to the initial public offering price of \$18.00 per share. The 5% and 10% assumed rates of appreciation are mandated by the rules of the SEC and do not represent our estimate or projection of the future price of our common stock.

We do not provide assurance to any executive officer or any other holder of our securities that the actual stock price appreciation over the ten year option term will be at the assumed 5% and 10% levels or at any other defined level. Unless the market price of the common stock does in fact appreciate over the option term, no value will be realized from the option grants made to the executive officers.

49

Pursuant to stock option agreements between us and our employees, our employees are entitled to exercise their options prior to vesting. If they exercise their options prior to vesting, they will receive restricted shares which will vest in accordance with the normal vesting schedule set forth in their stock option agreement. These stock options are subject to repurchase by us if they cease to be employed by us.

AGGREGATED OPTION/SAR EXERCISES IN LAST FISCAL YEAR AND FISCAL YEAR-END OPTION/SAR VALUES

The following table sets forth information regarding options exercised by, and held as of December 31, 2000 by, our Chief Executive Officer and our four other highest paid executive officers:

|          | NUMBER OF<br>SHARES         |                          | UNDERLYING<br>OPTION: | SECURITIES UNEXERCISED S/SARS AT 1, 2000(#)(2) |
|----------|-----------------------------|--------------------------|-----------------------|--|
| NAME<br> | ACQUIRED ON<br>EXERCISE (#) | VALUE<br>REALIZED(\$)(1) | EXERCISABLE           | UNEXERCISABLE                                  |

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| Jack Lief               | 162,500 | \$20,000 |       | 200,000 |
|-------------------------|---------|----------|-------|---------|
| Dominic P. Behan, Ph.D  | 50,000  | 20,000   | 6,250 | 206,250 |
| Derek T. Chalmers, Ph.D | 50,000  | 20,000   | 6,250 | 206,250 |
| Richard P. Burgoon, Jr  | 53,750  | 45,250   |       | 98,750  |
| Nigel R.A. Beeley, Ph.D | 50,000  |          |       |         |

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- (1) Value realized is based on the fair market value of our common stock on the date of exercise minus the exercise price, without taking into account any taxes that may be payable in connection with the transaction.
- (2) Pursuant to stock option agreements between us and our employees, each of our employees are entitled to exercise their options prior to vesting. Therefore, all of the exercisable options are vested, but have not yet been exercised, and all of the unexercisable options may be exercised, but have not yet vested and will only vest subject to the terms of the stock option agreements.
- (3) Based on the fair market value of our common stock at December 31, 2000 of \$15.50 per share, minus the exercise price of the options.

#### EMPLOYMENT AGREEMENTS

We do not have any written employment agreements or any change-of-control plans or arrangements with any of our executive officers or our other employees.

### COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

The compensation committee consists of Jack Lief, Michael Steinmetz, Ph.D. and Stefan Ryser, Ph.D. None of our executive officers serves as a member of the board of directors or compensation committee of any other entity that has one or more executive officers serving as members of our board of directors or compensation committee.

Mr. Lief, who is a member of our compensation committee, is also our President and Chief Executive Officer and serves as a director of ChemNavigator.com and as the President and Chief Executive Officer and a director of Aressa Pharmaceuticals, Inc. and BRL Screening, Inc. Mr. Lief has entered into a four-year service agreement with ChemNavigator.com in which he agrees to provide up to 200 hours of service per year. As compensation for his services he has received 200,000 shares of common stock of ChemNavigator.com, which vest over a period of four years, subject to Mr. Lief remaining in our employ. We own 33% of the outstanding capital stock of ChemNavigator.com.

50

### COMPENSATION PLANS

The purpose of our equity compensation plans is to provide our designated employees, certain consultants and advisors who perform services for us, and non-employee members of our board of directors, with the opportunity to receive grants of incentive stock options, non-qualified stock options and restricted stock. Our plans permit the compensation committee to select eligible persons to receive awards and to determine the terms and conditions of such awards. The compensation committee will also set the vesting schedule and exercise price of

the options, provided that the option exercise price may not be less than 85% of the fair market value per share of our common stock on the date of grant. In addition, no participant may be granted incentive stock options that are first exercisable in any one calendar year with a fair market value in excess of \$100,000. The options and restricted stock granted under our equity compensation plans generally vest ratably over a four-year vesting period from the date of grant and are exercisable up to ten years from the date of grant.

#### 1998 EOUITY COMPENSATION PLAN

Our 1998 Equity Compensation Plan was adopted by our board of directors in June 1998 and later approved by our stockholders. We have reserved 1,500,000 shares of our common stock for issuance under the plan. As of March 31, 2001, we had granted incentive stock options and non-qualified stock options to purchase 1,523,025 shares of common stock at a weighted average price of \$0.54 per share under this plan, of which options for 998,025 shares of our common stock had been exercised, 31,500 had been canceled and 106,200 were vested. Pursuant to stock option agreements between us and some option holders for option grants under this plan, some of our option holders are entitled to exercise their options prior to vesting. All of the unexercisable options granted under this plan may be exercised immediately, but will vest subject to the terms of the particular stock option agreement.

### 2000 EQUITY COMPENSATION PLAN

Our 2000 Equity Compensation Plan was adopted by our board of directors in April 2000 and was approved by our stockholders in May 2000. We have reserved 2,000,000 shares of our common stock for issuance pursuant to this plan. As of March 31, 2001, we had granted incentive stock options and non-qualified stock options to purchase 850,750 shares of our common stock at a weighted average price of \$21.60 per share under this plan, none of which have been exercised, canceled or vested. Pursuant to stock option agreements between us and some option holders for option grants under this plan, some of our option holders are entitled to exercise their options prior to vesting. All of the unexercisable options granted under this plan may be exercised immediately, but will vest subject to the terms of the particular stock option agreement.

#### 401(K) PLAN

We have established a tax-qualified employee savings and retirement plan, or 401(k) plan, which our full-time employees may participate in if they choose to do so. Pursuant to the plan, eligible employees may elect to reduce their current compensation by up to the lesser of 14% of their annual compensation and the statutorily prescribed limit, which is \$10,500 in 2000, and have the amount of such reduction contributed to the plan. The trustees of the plan, at the direction of each participant, invest the contributions to the plan in designated investment options. The plan is intended to qualify under Section 401 of the Internal Revenue Code, so that contributions to the plan and income earned on the plan contributions are not taxable until withdrawn, and so that the contributions we make will be deductible when made. Employees are eligible to participate in the plan on the first day of their employment. Our matching contributions, which totaled approximately \$282,000 for the year ended December 31, 2000, \$149,000 for the year ended December 31, 1999 and \$27,000 for the year ended December 31, 1999, vest over a five year period.

51

### 2001 ARENA EMPLOYEE STOCK PURCHASE PLAN

Our 2001 Arena Employee Stock Purchase Plan, which will become effective on July 1, 2001, was adopted by our board of directors in March 2001 and approved by our stockholders in May 2001. The aggregate number of shares of our common

stock that may be issued pursuant to this plan is 1,000,000 shares.

The plan provides our employees with an opportunity to purchase our common stock through accumulated payroll deductions. Participation in the plan is voluntary and is dependent on each eligible employee's election to participate and his or her determination as to the level of payroll deductions. The plan is administered by our board of directors or a committee appointed by our board of directors. Each of our employees, including our officers and the officers and employees of our subsidiaries, whose customary employment with us is at least 20 hours per week, is eligible to participate in an offering period.

Each participant in the plan is automatically granted options to purchase shares of our common stock. The number of shares subject to the option may not exceed 625 shares of our common stock in each purchase period. The option expires at the end of the offering period or upon termination of employment, whichever is earlier. The option granted to each participant will be exercised at the end of each purchase period to the extent that the payroll deductions accumulated during a purchase period permit a participant to purchase shares.

Shares of common stock may be purchased under the plan at a price not less than 85% of the lesser of the fair market value of the common stock on the first trading day of each offering period or the last trading day of each purchase period. The fair market value of our common stock on any relevant date will generally be the closing price per share as reported on the Nasdaq National Market, or the mean of the closing bid and asked prices, if no sales were reported, as quoted on the Nasdaq National Market or reported in THE WALL STREET JOURNAL. If the fair market value of our common stock on any exercise date in an offering period is lower than the fair market value of our common stock on the first day of that offering period, all participants in that offering period will be automatically withdrawn from that offering period immediately after the exercise of their options and automatically re-enrolled on the first day of the new offering period.

An employee may not participate in the plan if, immediately after the grant to be made under the plan, that employee would own sufficient shares of our capital stock or hold outstanding options to purchase shares of our capital stock representing five percent or more of the voting power or value of our outstanding shares of capital stock, or if his or her rights to purchase stock under all of our employee stock purchase plans accrue at a rate exceeding \$25,000 worth of stock for each calendar year, based on the fair market value of the shares at the time the option is granted.

#### LIMITATION ON LIABILITY AND INDEMNIFICATION

#### LIMITATION ON LIABILITY

Our certificate of incorporation provides that the liability of our directors will be limited to the fullest extent permitted by Delaware law. Our directors will not be personally liable to us or our stockholders for monetary damages resulting from a breach of fiduciary duty except for:

- any breach of the duty of loyalty to us or our stockholders
- acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law
- liability under Section 174 of the Delaware General Corporation Law
- any transaction from which the director derived an improper personal benefit

This limitation of liability does not apply to the responsibility or liability of our directors pursuant to any criminal statute nor does it relieve our directors from payment of taxes pursuant to federal, state or local law.

#### INDEMNIFICATION

Our by-laws provide that we will indemnify our directors and executive officers and may indemnify our other corporate agents, to the fullest extent permitted by Delaware law. Section 145 of the Delaware corporate laws provides a corporation with the power to indemnify any officer or director acting in his capacity as the corporation's representative who was, is or is threatened to be made, a party to any action or proceeding for expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action or proceeding. The indemnity provisions apply whether the action was instituted by a third-party or arose by or in our right. Generally, the only limitation on our ability to indemnify our officers and directors is if their actions violate a criminal statute or if their actions or failures to act are finally determined by a court to have constituted willful misconduct or recklessness.

We currently have directors' and officers' liability insurance to provide our directors and officers with insurance coverage for losses arising from claims based on breaches of duty, negligence, errors and other wrongful acts.

53

#### RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Dr. McAlister, a member of our board of directors, is also the Chief Executive Officer and President of Tripos, Inc. Prior to this offering, Tripos was the beneficial owner of approximately 8.9% of our common stock. We have entered into a drug research collaboration agreement and a software license agreement with Tripos, and we may enter into additional agreements with Tripos for the joint development of drug leads using CART-activated receptors and Tripos' chemical library. We will share expenses and any proceeds resulting from the collaboration with Tripos and will pay Tripos a fee for services they provide outside of the collaboration.

Dr. Steinmetz, a member of our board of directors, is also a Managing Director for MPM Capital L.P. Prior to this offering, MPM Capital L.P. was the beneficial owner of approximately 17.7% of our common stock. In January 2000, entities controlled by MPM Capital L.P. purchased 1,141,033 shares of our Series E preferred stock for an aggregate purchase price of \$4,564,132. In March 2000, entities controlled by MPM Capital L.P. purchased 865,385 shares of our Series F preferred stock for an aggregate purchase price of \$4,500,002. Dr. Steinmetz is the holder of record of 50,000 shares of ChemNavigator.com's Series A preferred stock, 13,296 shares of its Series B preferred stock and holds a warrant to purchase 3,324 shares of the common stock of ChemNavigator.com for which he paid an aggregate purchase price of \$80,315.

Prior to this offering, International BM Biomedicine Holdings, Inc. was the beneficial owner of approximately 8.5% of our common stock. In January 2000, International BM Biomedicine Holdings purchased 500,000 shares of our Series E preferred stock for an aggregate purchase price of \$2,000,000.

Dr. Michael E. Lewis, one of our co-founders, served as our director until April 2000. Dr. Lewis is a principal in BioDiligence Partners, Inc. We paid BioDiligence Partners, Inc. \$150,000 during the year ended December 31, 2000, for consulting services rendered to us.

Mr. Lief, our President and Chief Executive Officer, is also the President and Chief Executive Officer of Aressa Pharmaceuticals, Inc. and BRL Screening, Inc. and a member of the board of directors of Aressa Pharmaceuticals, Inc., ChemNavigator.com and BRL Screening, Inc.

Mr. Burgoon, our Senior Vice President, Operations, General Counsel and Secretary, is also the Secretary of Aressa Pharmaceuticals, Inc. and ChemNavigator.com, and is a member of the board of directors of Aressa Pharmaceuticals, Inc., ChemNavigator.com and of BRL Screening, Inc. Mr. Burgoon has entered into a four-year service agreement with ChemNavigator.com in which he agrees to provide up to 200 hours of service per year. As compensation for his services he has received 175,000 shares of common stock of ChemNavigator.com, which vest over a period of four years, subject to Mr. Burgoon remaining in our employ.

Mr. Hoffman, our Vice President, Finance, is also the Vice President, Finance of BRL Screening, Inc. Mr. Hoffman has entered into a four-year service agreement with ChemNavigator.com in which he agrees to provide up to 200 hours of service per year. As compensation for his services he has received 100,000 shares of common stock of ChemNavigator.com, which vest over a period of four years, subject to Mr. Hoffman remaining in our employ.

In April 2000, Mr. Scotti, our Vice President, Business Development, purchased 10,000 shares of our Series G preferred stock for an aggregate purchase price of \$73,000.

Dr. Beeley, our Vice President and Chief Chemical Officer has provided consulting services to ChemNavigator.com and has received 3,200 options to purchase shares of common stock of ChemNavigator.com as compensation for services rendered. The options vest over a period of four years, provided he continues to provide services to ChemNavigator.com.

We also sublease office space to ChemNavigator.com at a fair market rate. We believe that all of the transactions described above were made and are on terms no less favorable to us than those that could be obtained from independent third parties in arms-length negotiations.

54

## PRINCIPAL AND SELLING STOCKHOLDERS

The following table sets forth information known to us with respect to the beneficial ownership of our common stock as of April 30, 2001 and as adjusted to give effect to the sale of 4,000,000 shares of common stock in this offering by us and the sale of 1,000,000 shares of common stock in this offering by the selling stockholders, by:

- each person, group or entity who is the beneficial owner of 5% or more of our common stock
- each selling stockholder
- each director and nominee for director
- our Chief Executive Officer and our four other highest paid executive officers
- all of our current directors and executive officers as a group

The following table is based on information supplied by our officers, directors, principal stockholders, and Schedules 13D and 13G filed with the SEC.

The number of shares beneficially owned by each 5% stockholder, director or executive officer is determined under the rules of the SEC. Under the SEC rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power and also includes any shares which the individual or entity has the right to acquire on or before June 29, 2001 through the exercise of stock options, and any reference in the footnotes to this table to shares subject to stock options refers only to stock options that are so exercisable. For purposes of computing the percentage of outstanding shares of common stock held by each person or entity, any shares which that person or entity has the right to acquire on or before June 29, 2001 are deemed to be outstanding, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, we believe that the stockholders named in this table have sole voting and investment power with respect to the shares indicated as beneficially owned. The inclusion in the table of any shares deemed beneficially owned does not constitute an admission of beneficial ownership of those shares. Unless otherwise indicated in the footnotes below, the address for the beneficial owners listed in this table is care of Arena Pharmaceuticals, Inc., 6166 Nancy Ridge Drive, San Diego CA 92121.

|                                      | BENEFICIA<br>PRIOR TO | L OWNERSHIP<br>OFFERING |                         | BENEFICIAL C<br>AFTER THE C |            |
|--------------------------------------|-----------------------|-------------------------|-------------------------|-----------------------------|------------|
| NAME AND ADDRESS OF BENEFICIAL OWNER | SHARES                | PERCENTAGE              | SHARES<br>TO BE<br>SOLD | SHARES                      | <br>P<br>- |
| MPM Capital L.P.(1)                  | 4,012,149             | 17.6%                   | 900,000                 | 3,112,149                   |            |
| Inc.(2)                              | 1,932,665             | 8.5                     |                         | 1,932,665                   |            |
| Tripos, Inc.(3)                      | 2,015,840             | 8.8                     | 100,000                 | 1,915,840                   |            |
| The TCW Group, Inc.(4)               | 1,544,667             | 6.8                     |                         | 1,544,667                   |            |
| Jack Lief(5)                         | 715,500               | 3.1                     |                         | 715,500                     |            |
| Dominic P. Behan, Ph.D.(6)           | 447,500               | 1.9                     |                         | 447,500                     |            |
| Derek T. Chalmers, Ph.D.(7)          | 452 <b>,</b> 500      | 2.0                     |                         | 452,500                     |            |
| Richard P. Burgoon, Jr.(8)           | 153 <b>,</b> 000      | *                       |                         | 153,000                     |            |
| Nigel R.A. Beeley, Ph.D.(9)          | 50,000                | *                       |                         | 50,000                      |            |
| Michael Steinmetz, Ph.D.(1)          | 10 <b>,</b> 942       | *                       |                         | 10,942                      |            |
| Stefan Ryser, Ph.D.(10)              | 17,000                | *                       |                         | 17,000                      |            |
| John P. McAlister, III, Ph.D.(3)     | 2,032,840             | 8.9                     |                         | 1,932,840                   |            |
| group (13 persons) (11)              | 8,121,431             | 34.4                    |                         | 7,121,431                   |            |

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55

(1) Includes shares held through interests in MPM Capital L.P. and in entities directly or indirectly controlled by it. MPM Capital L.P. is a direct and indirect parent or a control person of MPM Asset Management LLC and funds managed and advised by it, and the general partners of such funds. Also includes shares held through interests in Medical Portfolio Management, LLC, the general partner of MPM Capital L.P. Reflects 3,473,112 shares held

<sup>\*</sup> Less than one percent

of record prior to this offering by BB BioVentures LP, 497,310 shares held of record prior to this offering by MPM BioVentures Parallel Fund, L.P., and 41,727 shares held of record prior to this offering by MPM Asset Management Investors 1999 LLC, according to a Schedule 13G filed in February 2001. MPM Capital L.P. and each of the entities controlled by it disclaims beneficial ownership of shares not directly held by it. According to Schedule 13Gs filed in February 2001, Drs. Ansbert S. Gadicke and Luke B. Evnin each hold sole voting and dispositive power over the shares beneficially owned by MPM Capital L.P. Drs. Gadicke and Evnin each disclaims beneficial ownership of shares not held directly by him. Dr. Steinmetz is a Managing Director of MPM Asset Management LLC, which is the advisor of BB BioVentures LP and MPM BioVentures Parallel Fund L.P. Dr. Steinmetz owns 10,942 shares of our common stock directly and may be deemed to beneficially own the shares owned by BB BioVentures LP, MPM BioVentures Parallel Fund L.P., and MPM Asset Management Investors 1999 LLC, but disclaims beneficial ownership of shares that he does not hold directly. Dr. Steinmetz is also the holder of record of 50,000 shares of ChemNavigator.com's Series A preferred stock, 13,296 shares of its Series B preferred stock and holds a warrant to purchase 3,324 shares of the common stock of ChemNavigator.com. The address of MPM Capital L.P., the entities controlled by it and Drs. Gadicke, Evnin and Steinmetz is One Cambridge Center, 9th Floor, Cambridge, Massachusetts 02142.

- (2) Represents shares beneficially owned by International BM Biomedicine Holdings, Inc. according to a Schedule 13G dated December 31, 2000. The address for International BM Biomedicine Holdings is House of Commerce, Nauenstrasse 41, P.O. Box 136, CH-4002, Basel, Switzerland.
- (3) Represents 2,015,840 shares beneficially owned by Tripos, Inc.
  Dr. McAlister is the President, Chief Executive Officer and director of
  Tripos. Dr. McAlister owns 2,000 shares of our common stock directly and is
  not selling any shares in this offering. Shares beneficially owned by
  Dr. McAlister also include 15,000 shares issuable upon the exercise of
  stock options. The address for Tripos is 1699 South Hanley Road, St. Louis,
  Missouri 63144. Dr. McAlister disclaims beneficial ownership of shares in
  which he does not have a pecuniary interest.
- (4) Represents shares benefically owned by The TCW Group, Inc. according to a Schedule 13F-HR filed by The TCW Group for the quarter ended March 31, 2001. Reflects 809,840 shares held of record by TCW Asset Management Company, 64,550 shares held of record by Trust Company of the West and 670,277 shares held of record by TCW Investment Management Company for the benefit of their clients and affiliated advisors. Based upon the Schedule 13F-HR, The TCW Group and Robert Day share voting and dispositive power with respect to these shares. The address for The TCW Group, Inc. is 865 South Figueroa Street, Los Angeles, California 90017.
- (5) Includes 300,000 shares issuable upon the exercise of stock options. Also includes 93,750 shares that were issued to Mr. Lief upon the exercise of unvested stock options. Shares issued upon the exercise of unvested stock options will vest over the four-year term of the underlying stock option agreement, subject to repurchase by us if Mr. Lief leaves our employ. Mr. Lief also owns 200,000 shares of the common stock of ChemNavigator.com, subject to repurchase by ChemNavigator.com if Mr. Lief is no longer employed by us.
- (6) Includes 212,500 shares issuable upon the exercise of stock options. Also includes 12,500 shares that were issued to Dr. Behan upon the exercise of unvested stock options. Shares issued upon the exercise of unvested stock

options will vest over the four-year term of the underlying stock option agreement, subject to repurchase by us if Dr. Behan is no longer employed by us.

56

- (7) Includes 181,250 shares issuable upon the exercise of stock options. Also includes 12,500 shares that were issued to Dr. Chalmers upon the exercise of unvested stock options. Shares issued upon the exercise of unvested stock options will vest over the four-year term of the underlying stock option agreement, subject to repurchase by us if Dr. Chalmers is no longer employed by us.
- (8) Includes 62,500 shares issuable upon the exercise of stock options. Also includes 46,250 shares that were issued to Mr. Burgoon upon the exercise of unvested stock options. Shares issued upon the exercise of unvested stock options will vest over the four-year term of the underlying stock option agreement, subject to repurchase by us if Mr. Burgoon is no longer employed by us. Mr. Burgoon also owns 175,000 shares of the common stock of ChemNavigator.com subject to repurchase by ChemNavigator.com if Mr. Burgoon is no longer employed by us.
- (9) Includes 31,250 shares that were issued to Dr. Beeley upon the exercise of unvested stock options. Shares issued upon the exercise of unvested stock options will vest over the four-year term of the underlying stock option agreement, subject to repurchase by us if Dr. Beeley is no longer employed by us.
- (10) Includes 15,000 shares issuable upon the exercise of stock options.
- (11) Includes 801,250 shares issuable upon the exercise of stock options held by our directors and executive officers. None of our directors or executive officers are selling shares in this offering.

57

### DESCRIPTION OF CAPITAL STOCK

### AUTHORIZED AND OUTSTANDING CAPITAL STOCK

Our authorized capital stock as of March 31, 2001 consisted of 67,500,000 shares of common stock and 7,500,000 shares of preferred stock, and as of this date there were 22,743,038 shares of common stock and no shares of preferred stock outstanding.

As of March 31, 2001, an aggregate of 1,157,725 shares of our common stock were available for grant under our 1998 Equity Compensation Plan and our 2000 Equity Compensation Plan. As of that date, we had outstanding options to purchase 1,344,250 shares of our common stock. In addition, we have reserved 1,000,000 shares of our common stock for issuance under our 2001 Arena Employee Stock Purchase Plan.

After giving effect to the sale of the common stock in this offering, we will have a total of 26,743,038 shares of common stock and no shares of preferred stock outstanding, assuming that the underwriters do not exercise their over-allotment option.

#### COMMON STOCK

Our common stock has the following characteristics and rights:

#### VOTING:

- one vote for each share held of record on all matters submitted to a vote of our stockholders
- no cumulative voting rights
- election of directors by plurality of votes cast
- all other matters by majority of votes cast

#### DIVIDENDS:

- subject to preferential dividend rights of outstanding preferred stock, if any
- common stockholders are entitled to receive ratably declared dividends
- our board of directors may only declare dividends out of legally available funds

#### ADDITIONAL RIGHTS:

- subject to the preferential liquidation rights of outstanding shares of preferred stock, if any, common stockholders are entitled to receive ratably net assets, available after the payment of all debts and liabilities, upon our liquidation, dissolution or winding up
- no preemptive rights
- no subscription rights
- no redemption rights
- no sinking fund rights
- no conversion rights

The rights and preferences of our common stockholders, including the right to elect directors, are subject to the rights of any series of preferred stock we may issue in the future.

58

### PREFERRED STOCK

Our amended and restated certificate of incorporation provides that we may, by resolution of our board of directors, and without any further vote or action by our stockholders, authorize and issue, subject to limitations prescribed by law, up to an aggregate of 7,500,000 shares of preferred stock. The preferred stock may be issued in one or more series. With respect to any series, our board of directors may determine the designation and the number of shares, preferences, limitations and special rights, including dividend rights, conversion rights, voting rights, redemption rights and liquidation preferences. Because of the rights that may be granted, the issuance of preferred stock may delay, defer or prevent a change of control.

#### REGISTRATION RIGHTS

Following completion of this offering, three holders who beneficially own an

aggregate of 6,960,654 shares of our common stock will have the right to have their shares registered under the Securities Act of 1933. These rights are provided under the terms of agreements between us and the holders of these shares. Under these agreements, the holders of these shares have the right, subject to specific conditions, to require us to file up to four registration statements on their behalf and, when we become eligible to use Form S-3 under the Securities Act, to require us to file up to six additional registration statements on Form S-3 on their behalf. The holders of these securities are also entitled to require us to include their common stock in future registration statements we file under the Securities Act. Under these agreements, we are also required to pay the expenses associated with the registration of these holders' shares.

Once a holder can sell all of its shares under Rule 144 of the Securities Act during any 90 day period, the holder cannot require us to register his shares under these agreements. Additionally, any remaining registration rights will terminate on July 28, 2006. Registration of shares of common stock pursuant to the exercise of these registration rights would result in such shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of such registration and may adversely affect our stock price.

ANTI-TAKEOVER EFFECTS OF PROVISIONS OF OUR CHARTER DOCUMENTS AND DELAWARE LAW

Our certificate of incorporation provides that our board of directors may establish the rights of, and cause us to issue, substantial amounts of preferred stock without the need for stockholder approval. Further, our board may determine the terms, conditions, rights, privileges and preferences of the preferred stock. Our board is required to exercise its business judgment when making such determinations. Our board's use of its discretion to issue preferred stock may inhibit the ability of third parties to acquire us. Additionally, our board may issue the preferred stock in an attempt to dilute the common stock held by entities seeking to obtain control of us. Some of the rights of the holders of common stock will be subject to, and may be adversely affected by, any preferred stock that may be issued in the future. Our preferred stock provides desirable flexibility in connection with possible acquisitions, financings and other corporate transactions. However, it may also have the effect of discouraging, delaying or making it more difficult for third parties to acquire or attempt to acquire control of us or substantial amounts of our common stock.

Section 203 of the Delaware General Corporation Law, which applies to us, generally prohibits certain business combinations between a Delaware corporation and an interested stockholder. An interested stockholder is generally defined as a person who beneficially owns, or within three years of the date of the business combination did own, directly or indirectly, 15% or more of the outstanding

59

voting shares of a Delaware corporation, or is an affiliate or associate of a person who meets these criteria. The statute broadly defines business combinations to include:

- mergers
- consolidations
- sales or other dispositions of assets having an aggregate value equal to, or in excess of 10% of the aggregate market value of, the consolidated assets of the corporation or aggregate market value of all outstanding

stock of the corporation

- certain transactions that would increase the interested stockholder's proportionate share ownership in the corporation

The statute prohibits any such business combination for a period of three years commencing on the date the interested stockholder becomes an interested stockholder, unless one of the following occurs:

- the business combination is approved by the corporation's board of directors prior to the date the interested stockholder becomes an interested stockholder
- the interested stockholder acquired at least 85% of the voting stock of the corporation (other than stock held by directors who are also officers or by certain employee stock plans) in the transaction in which it becomes an interested stockholder
- the business combination is approved by the board of directors and by the affirmative vote of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder

The Delaware General Corporation Law contains provisions enabling a corporation to avoid Section 203's restrictions if the corporation's stockholders vote to approve an amendment to the corporation's certificate of incorporation or by-laws to avoid the restrictions. In addition, the restrictions contained in Section 203 are not applicable to any of our existing stockholders. We have not and do not currently intend to "elect out" of the application of Section 203 of the Delaware General Corporation Law.

#### TRANSFER AGENT

The transfer agent and registrar for our common stock is Computershare Trust Company, Inc.

60

#### UNDERWRITING

#### GENERAL

Subject to the terms and conditions set forth in an underwriting agreement, each of the underwriters named below has severally agreed to purchase from us the aggregate number of shares of common stock set forth opposite its name below:

| UNDERWRITERS               | NUMBER   | OF  | SHARES |
|----------------------------|----------|-----|--------|
|                            |          |     |        |
| Thomas Weisel Partners LLC |          |     |        |
| Total                      | <br>5,00 | 0,0 | 000    |

Of the 5,000,000 shares to be purchased by the underwriters, 4,000,000 shares will be purchased from us and 1,000,000 shares will be purchased from the

selling stockholders.

The underwriting agreement provides that the obligations of the several underwriters are subject to various conditions, including approval of legal matters by counsel. The nature of the underwriters' obligations commits them to purchase and pay for all of the shares of common stock listed above if any are purchased.

The underwriting agreement provides that we and the selling stockholders will indemnify the underwriters against liabilities specified in the underwriting agreement under the Securities Act or will contribute to payments that the underwriters may be required to make relating to these liabilities.

Thomas Weisel Partners LLC expects to deliver the shares of common stock to purchasers on June  $\,$  , 2001.

#### OVER-ALLOTMENT OPTION

We have granted a 30-day over-allotment option to the underwriters to purchase up to a total of 750,000 additional shares of our common stock from us at the public offering price, less the underwriting discounts and commissions payable by us, as set forth on the cover page of this prospectus. If the underwriters exercise this option in whole or in part, then each of the underwriters will be separately committed, subject to conditions described in the underwriting agreement, to purchase the additional shares of our common stock in proportion to their respective commitments set forth in the table above.

#### COMMISSIONS AND DISCOUNTS

The underwriters propose to offer the shares of common stock directly to the public at the public offering price set forth on the cover page of this prospectus, and at this price less a concession not in excess of \$ per share of common stock to other dealers specified in a master agreement among underwriters who are members of the National Association of Securities Dealers, Inc. The underwriters may allow, and the other dealers specified may reallow, concessions, not in excess of \$ per share of common stock to these other dealers. After this offering, the offering price, concessions and other selling terms may be changed by the underwriters. Our common stock is offered subject to receipt and acceptance by the underwriters and to other conditions, including the right to reject orders in whole or in part.

61

The following table summarizes the compensation to be paid to the underwriters by us and the expenses payable by us:

|                                  |           | TOTA                    | L                    |
|----------------------------------|-----------|-------------------------|----------------------|
|                                  | PER SHARE | WITHOUT OVER- ALLOTMENT | WITH OVE<br>ALLOTMEN |
| Public offering price            | \$        | \$                      | \$                   |
| Proceeds, before expenses, to us |           |                         |                      |

INDEMNIFICATION OF UNDERWRITERS

We and the selling stockholders will indemnify the underwriters against some civil liabilities, including liabilities under the Securities Act and liabilities arising from breaches of our representations and warranties contained in the underwriting agreement. If we are unable to provide this indemnification, we will contribute to payments the underwriters may be required to make in respect of those liabilities.

#### NO SALES OF SIMILAR SECURITIES

The underwriters will require our directors, officers and selling stockholders to agree, subject to specified exceptions, not to offer, sell, agree to sell, directly or indirectly, or otherwise dispose of any shares of common stock or any securities convertible into or exchangeable for shares of common stock without the prior written consent of Thomas Weisel Partners LLC for a period of 90 days after the date of this prospectus, except that, in the case of shares beneficially owned by MPM Capital L.P., such period will be 60 days, 90 days and 120 days after the date of this prospectus, in each case with respect to one-third of the shares owned by that stockholder immediately after this offering.

We have agreed that for a period of 90 days after the date of this prospectus we will not, without the prior written consent of Thomas Weisel Partners LLC, offer, sell or otherwise dispose of any shares of common stock, except for the shares of common stock offered in this offering, the shares of common stock issuable upon exercise of outstanding options and warrants on the date of this prospectus and the shares of our common stock that are issued under our 2001 Arena Employee Stock Purchase Plan.

### INFORMATION REGARDING THOMAS WEISEL PARTNERS LLC

Due to the fact that Thomas Weisel Partners LLC, one of the underwriters, was organized within the last three years, we are providing you the following information. Thomas Weisel Partners LLC was organized and registered as a broker-dealer in December 1998. Since December 1998, Thomas Weisel Partners LLC has been named as a lead or co-manager of, or as a syndicate member in, numerous public offerings of equity securities. Thomas Weisel Partners LLC does not have any material relationship with us or any of our officers, directors or other controlling persons, except with respect to its contractual relationship with us pursuant to the underwriting agreement entered into in connection with this offering.

#### NASDAQ NATIONAL MARKET LISTING

Our common stock is quoted on the Nasdaq National Market under the symbol "ARNA."  $\,$ 

62

### DISCRETIONARY ACCOUNTS

The underwriters do not expect sales of shares of common stock offered by this prospectus to any accounts over which they exercise discretionary authority to exceed five percent of the shares offered.

### SHORT SALES, STABILIZING TRANSACTIONS AND PENALTY BIDS

In order to facilitate this offering, persons participating in this offering may engage in transactions that stabilize, maintain or otherwise affect the price of our common stock during and after this offering. Specifically, the

underwriters may engage in the following activities in accordance with the rules of the SEC.

SHORT SALES. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. Covered short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares from us in this offering. The underwriters may close out any covered short position by either exercising their option to purchase shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option. Naked short sales are any sales in excess of such over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering.

STABILIZING TRANSACTIONS. The underwriters may make bids for or purchases of the shares for the purpose of pegging, fixing or maintaining the price of the shares, so long as stabilizing bids do not exceed a specified maximum.

PENALTY BIDS. If the underwriters purchase shares in the open market in a stabilizing transaction or syndicate covering transaction, they may reclaim a selling concession from the underwriters and selling group members who sold those shares as part of this offering. Stabilization and syndicate covering transactions may cause the price of the shares to be higher than it would be in the absence of these transactions. The imposition of a penalty bid might also have an effect on the price of the shares if it discourages resales of the shares.

The transactions above may occur on the Nasdaq National Market or otherwise. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of the shares. If these transactions are commenced, they may be discontinued without notice at any time.

63

### LEGAL MATTERS

Morgan, Lewis & Bockius LLP, Los Angeles, California will provide us with an opinion relating to the validity of the common stock issued in this offering. The validity of the shares of common stock issued in this offering will be passed upon for the underwriters by Pillsbury Winthrop LLP, New York, New York.

### EXPERTS

Ernst & Young LLP, independent auditors, have audited our consolidated financial statements as of December 31, 1999 and 2000, and for each of the three years in the period ended December 31, 2000, as set forth in their report. We have included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

#### WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other documents with the SEC. You may read and copy any document we file at the SEC's public reference room at Judiciary Plaza Building, 450 Fifth Street, N.W., Room 1024, Washington, D.C. 20549. You should call 1-800-SEC-0330 for more information on the public

reference room. Our SEC filings are also available to you on the SEC's internet site at http://www.sec.gov.

This prospectus is part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus regarding us and our common stock, including exhibits and schedules which are part of the registration statement. You should read the registration statement and the related exhibits and schedules for further information regarding us and our common stock. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's internet site.

64

# ARENA PHARMACEUTICALS, INC. INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

|   | PAGE |
|---|------|
|   |      |
| Report of Ernst & Young LLP, Independent Auditors         | F-2  |
| Consolidated Balance Sheets                               | F-3  |
| Consolidated Statements of Operations                     | F-4  |
| Consolidated Statements of Stockholders' Equity (Deficit) | F-5  |
| Consolidated Statements of Cash Flows                     | F-6  |
| Notes to Consolidated Financial Statements                | F-7  |

F-1

### REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

The Board of Directors and Stockholders Arena Pharmaceuticals, Inc.

We have audited the accompanying consolidated balance sheets of Arena Pharmaceuticals, Inc. as of December 31, 1999 and 2000, and the related consolidated statements of operations, stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2000. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Arena Pharmaceuticals, Inc. at December 31, 1999 and 2000 and the consolidated results

of its operations and its cash flows for each of the three years in the period ended December 31, 2000, in conformity with accounting principles generally accepted in the United States.

/s/ ERNST & YOUNG LLP

San Diego, California January 15, 2001 except for the seventh

and eighth paragraphs of Note 7 and Note 12

as to which the date is March 23, 2001

F-2

### ARENA PHARMACEUTICALS, INC.

### CONSOLIDATED BALANCE SHEETS

|  | DECEMBER 31, |               | MARC   |
|--|--------------|---------------|--------|
|  |              | 2000          | 2      |
|  |              |               | (UNAU  |
| ASSETS   |              |               |        |
| Current assets:  |              |               |        |
| Cash and cash equivalents                                | . ,          | \$144,413,176 | \$125, |
| Accounts receivable                                      |              | 2,116,146     | 2,     |
| Prepaid expenses   |              |               | 1,     |
| Total current assets                                     | 5,573,560    | 148,214,444   | 128,   |
| Property and equipment, net                              | 2 773 392    | 4,265,260     | 12,    |
| Acquired technology and other purchased intangibles, net | 2,773,362    |               | 15,    |
|  |              | 88,016        | ± J ,  |
| Other assets   |              | 144,209       |        |
| Other assets   |              |               |        |
| Total assets   |              |               | \$156, |
| LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)           |              | ========      | =====  |
| Current liabilities:                                     |              |               |        |
| Accounts payable and accrued expenses                    | \$ 700.383   | \$ 615,201    | \$ 1,  |
| Accrued compensation                                     |              | 300,339       | Y +/   |
| Current portion of deferred revenues                     |              | 220,000       | 1,     |
| Current portion of obligations under capital leases      |              | 480,538       | ±,     |
| current portron or obrigations under capital reases      | 333,119      |               |        |
| Total current liabilities                                |              |               | 3,     |
| Convertible note payable to related party, less current  |              |               |        |
| portion  | 934,312      |               |        |
| Obligations under capital leases, less current portion   | 1,224,472    | 960,517       |        |
| Deferred rent  | 793,123      |               |        |
| Deferred revenues, less current portion                  |              | ,             |        |
| berefred revenues, responding poreron                    |              | 100,000       |        |

### Commitments

Redeemable convertible preferred stock, \$.0001 par value: 7,792,533 shares authorized at December 31, 1999, no shares authorized at December 31, 2000 and at March 31, 2001; 6,908,593 shares issued and outstanding at

| December 31, 1999; no shares issued and outstanding at      |                    |              |                |
|---|--------------------|--------------|----------------|
| December 31, 2000 and at March 31, 2001                     | 18,251,949         |              | l              |
| Stockholders' equity (deficit):                             |                    |              |                |
| Preferred stock, \$.0001 par value: no shares authorized at |                    |              |                |
| December 31, 1999, 7,500,000 shares authorized at           |                    |              |                |
| December 31, 2000 and March 31, 2001; no shares issued      |                    |              |                |
| and outstanding at December 31, 1999 and 2000 and at        |                    |              |                |
| March 31, 2001  |                    |              |                |
| Common stock, \$.0001 par value: 25,000,000, 67,500,000 and |                    |              |                |
| 67,500,000 shares authorized at December 31, 1999 and       |                    |              |                |
| 2000 and at March 31, 2001, respectively; 1,116,375,        |                    |              |                |
| 22,688,313 and 22,743,038 shares issued and outstanding     |                    |              |                |
| at December 31, 1999 and 2000 and at March 31, 2001,        |                    |              | P              |
| respectively  | 111                | 2,268        | P              |
| Additional paid-in capital                                  | 1,055,328          | 177,373,030  | 177,           |
| Deferred compensation                                       | (625 <b>,</b> 955) | (7,899,970)  | (6,            |
| Accumulated deficit   | (14,329,033)       | (20,691,003) | (19 <b>,</b>   |
| Total stockholders' equity (deficit)                        |                    | 148,784,325  | 151 <b>,</b>   |
| Total liabilities and stockholders' equity (deficit)        |                    |              | \$156 <b>,</b> |
|   |                    |              | =====          |

See accompanying notes.

F-3

## ARENA PHARMACEUTICALS, INC.

## CONSOLIDATED STATEMENTS OF OPERATIONS

|  | YEA: | R ENDED DECEMBEI | R 31,        | THREE MONTHS<br>MARCH 31 |
|--|------|------------------|--------------|--------------------------|
|  | 1998 | 1999             | 2000         | 2000                     |
|  |      |                  |              | (UNAUDITED) (            |
| Revenues   | \$   | \$               | \$ 7,683,396 | \$ \$                    |
| Operating expenses: Research and development General and administrative Amortization of deferred compensation (\$264,419, \$3,018,623, \$285,398 and \$851,081 related to research and development expenses and \$113,690, \$1,324,273, \$124,081, and \$417,585 related to general and administrative expenses for the years ended December 31, 1999 and 2000 and for the three |      |                  |              | · ·                      |
| months ended March 31, 2000 and 2001, respectively)  Amortization of acquired technology and other purchased   |      | 378,109          | 4,342,896    | 409,479                  |
| intangibles  |      |                  |              |                          |

| Total operating expenses              | 3,344,332            | 10,528,615     | 19,102,080     | 3,232,665                               |
|---------------------------------------|----------------------|----------------|----------------|---|
| Interest income                       | 42,266               | 446,848        | 4,644,471      | 157 <b>,</b> 461                        |
| Interest expense                      | (94,252)             | (165,603)      | (220,483)      | (59 <b>,</b> 579)                       |
| Gain on sale of investment            |                      |                | 575,855        | · · · · · · · · · · · · · · · · · · ·   |
|                                       |                      |                | •              | 10 500                                  |
| Other income                          |                      | 9,420          | 56,871         | 12,583                                  |
| Net income (loss)                     | (3 396 318)          | (10,237,950)   | (6 361 970)    | (3,122,200)                             |
|                                       | (3,330,3±0)          |                |                |   |
| Non-cash preferred stock charge       |                      |                | (22,391,068)   | (14, 187, 563)                          |
|                                       |                      |                |                |   |
| Net income (loss) applicable to       |                      |                |                |   |
| common stockholders                   | \$(3,396,318)        | \$(10,237,950) | \$(28,753,038) | \$(17,309,763) \$                       |
|                                       | ========             | =========      | =========      |   |
| Net income (loss) per share:          |                      |                |                |   |
| Basic and diluted                     | \$ (3.51)            | \$ (10.05)     | \$ (2.84)      | s (15 92) s                             |
| babic and diluced                     | ~ (3.31)<br>======== | · (10.00)      | · (2:01)       |   |
| Shares used in calculating net        |                      |                |                |   |
| income (loss) per share:              |                      |                |                |   |
| * * * * * * * * * * * * * * * * * * * | 0.66                 | 1 010 050      | 10 100 555     | 1 006 000                               |
| Basic                                 | 966 <b>,</b> 799     | 1,018,359      | 10,139,755     | 1,086,988                               |
|                                       |                      |                |                | ======================================= |
| Diluted                               | 966 <b>,</b> 799     | 1,018,359      | 10,139,755     | 1,086,988                               |
|                                       | ========             | =========      | ========       | ======================================= |

See accompanying notes.

F-4

## ARENA PHARMACEUTICALS, INC.

## CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)

|   | COMMON STOCK        |        | COMMON STOCK ADDITIONAL |                          |
|---|---------------------|--------|-------------------------|--------------------------|
|   | SHARES              | AMOUNT |                         | DEFERRED<br>COMPENSATION |
| Balance at December 31, 1997  | 1,000,000           | \$ 100 | \$                      | \$                       |
| connection with technology agreement  Issuance of common stock upon exercise of |                     |        | 14,000                  |                          |
| options Net loss  | 43 <b>,</b> 500<br> | 4      | 8,696<br>               |                          |
| Balance at December 31, 1998 Issuance of common stock upon exercise of          | 1,043,500           | 104    | 22 <b>,</b> 696         |                          |
| options  Deferred compensation related to stock                                 | 72 <b>,</b> 875     | 7      | 28,568                  |                          |
| options   |                     |        | 1,004,064               | (1,004,064)              |
| Amortization of deferred compensation   |                     |        |                         | 378,109                  |
| Net loss  |                     |        |                         |                          |
| Balance at December 31, 1999  Issuance of common stock upon exercise of         | 1,116,375           | 111    | 1,055,328               | (625,955)                |
| options, net of repurchases  Issuance of common stock upon exercise of          | 808,300             | 81     | 360,044                 |                          |
| warrants  Conversion of convertible note into                                   | 410,060             | 41     | 1,123,925               |                          |
| common stock  | 755 <b>,</b> 000    | 75     | 975 <b>,</b> 499        |                          |

| public offering, net of offering costs of \$10,274,000  | , ,             | 690              | , .              |                |
|---|-----------------|------------------|------------------|----------------|
| offering  Deferred compensation related to stock  | 12,698,578      | 1,270            | 48,316,013       |                |
| options   |                 |                  | 11,616,911       | (11,616,911)   |
| Amortization of deferred compensation   |                 |                  |                  | 4,342,896      |
| Net loss  |                 |                  |                  |                |
| Balance at December 31, 2000  Issuance of common stock upon exercise of options, net of repurchases | 22,688,313      | 2,268            | 177,373,030      | (7,899,970)    |
| (unaudited)   | 54 <b>,</b> 725 | 6                | 39,629           |                |
| options (unaudited)   |                 |                  | 285 <b>,</b> 320 | (285,320)      |
| (unaudited)   |                 |                  |                  | 1,268,666      |
| Net income (unaudited)  |                 |                  |                  |                |
| Balance at March 31, 2001 (unaudited)   | 22,743,038      | \$2 <b>,</b> 274 | \$177,697,979    | \$ (6,916,624) |
|   |                 | ======           |                  |                |

See accompanying notes.

F-5

## ARENA PHARMACEUTICALS, INC.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

| YEAR ENDED DECEMBER 31, |   |   |  |
|-------------------------|---|---|--|
| 1998                    |   |   |  |
|                         |   |   |  |
|                         |   |   |  |
| \$ (3,396,318)          | \$(10,237,950)  | \$ (6,361,970   |  |
|                         |   |   |  |
| 171,942                 | 399,278   | 787,829   |  |
| ·                       | ·   | ·   |  |
|                         |   |   |  |
|                         | 378 <b>,</b> 109  | 4,342,896   |  |
|                         |   |   |  |
| 83 <b>,</b> 896         | 80,635  | 41,262  |  |
| 1.4.000                 |   |   |  |
| ·                       |   |   |  |
| •                       | •   | 72 <b>,</b> 886   |  |
| (150,711)               | 150,711   |   |  |
|                         |   |   |  |
|                         |   | (2,116,146  |  |
| (18,793)                | (110,071)   | (1,657,279  |  |
|                         |   | 705,000   |  |
|                         |   |   |  |
| 110,170                 | 624,195   | 49,126  |  |
|                         | \$ (3,396,318)<br>171,942<br><br>83,896<br>14,000<br>747,424<br>(150,711)<br><br>(18,793) | \$ (3,396,318) \$ (10,237,950)  171,942 399,278  378,109  83,896 80,635  14,000 47,424 45,699 (150,711) 150,711  (18,793) (110,071) |  |

| Net cash provided by (used in) operating activities   | (2,438,390)           | (8,669,394)             | (4,136,396         |
|---|-----------------------|-------------------------|--------------------|
| INVESTING ACTIVITIES  |                       |                         |                    |
| Acquisition of Bunsen Rush  Purchases of property and equipment  Deposits, restricted cash and other assets | (558,933)<br>(34,171) | (2,007,020)<br>(98,383) | 90,882             |
| Net cash used in investing activities   | (593,104)             | (2,105,403)             |                    |
| FINANCING ACTIVITIES  |                       |                         |                    |
| Advances under capital lease obligations  | 148,299               | 1,562,690               | 377,015            |
| Principal payments on capital leases  | (14,971)              | (116,427)               | (515 <b>,</b> 551  |
| Prepaid financing proceeds  Proceeds from issuance of redeemable preferred                                  |                       |                         |                    |
| stock   | 405,287               | 14,132,224              | 30,065,334         |
| Proceeds from issuance of common stock  Proceeds from convertible note payable to related                   | 8,700                 | 28,575                  | 115,410,091        |
| party   | 1,125,000             | 375 <b>,</b> 000        |                    |
| Net cash provided by (used in) financing  |                       |                         |                    |
| activities  | 1,672,315             | 15,982,062              | 145,336,889        |
| Net increase (decrease) in cash and cash  |                       |                         |                    |
| equivalents   | (1,359,179)           | 5,207,265               | 139,011,668        |
| Cash and cash equivalents at beginning of period  | 1,553,422             |                         | 5,401,508          |
| Cash and cash equivalents at end of period  | •                     | \$ 5,401,508            | \$144,413,176      |
| SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:   | ========              | =======                 | ========           |
| Interest paid   | \$ 10,356             |                         |                    |
| Conversion of convertible note to related party   | ========              |                         | ========           |
| into common stock   | \$                    | \$                      | φ 3/3 <b>,</b> 3/1 |
| Conversion of convertible note to related party into redeemable preferred stock                             | \$                    |                         |                    |
| •   | ========              | ========                | ========           |

See accompanying notes.

F-6

## ARENA PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

(1) THE COMPANY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

## THE COMPANY

Arena Pharmaceuticals, Inc. (the "Company") was incorporated on April 14, 1997 and commenced operations in July 1997. The Company operates in one business segment and has developed a broadly applicable technology that is used to identify drug candidates in a more efficient manner than traditional drug discovery approaches.

#### PRINCIPLES OF CONSOLIDATION

The Company's financial statements include the activity of its wholly-owned subsidiary, BRL Screening, Inc. since its formation in February 2001. The financial statements do not include the accounts of its majority-owned subsidiary, Aressa Pharmaceuticals, Inc. ("Aressa") which was formed in August 1999. Management believes that majority ownership and control of Aressa is temporary in accordance with Statement of Financial Accounting Standard ("SFAS") No. 94 "Consolidation of All Majority Owned Subsidiaries," and has therefore not consolidated Aressa's activity, which has been minimal. The Company's carrying value for its investment in Aressa is zero because it made no financial contribution to Aressa in exchange for its ownership interest.

#### USE OF ESTIMATES

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

#### INTERIM FINANCIAL INFORMATION

The financial information as of March 31, 2001 and for the three months ended March 31, 2000 and 2001, is unaudited and includes all adjustments, consisting only of normal recurring adjustments, that the Company's management considers necessary for a fair presentation of the Company's operating results and cash flows for such periods. Results for the three month period ended March 31, 2001 are not necessarily indicative of results to be expected for the full fiscal year of 2001 or any future period.

#### CASH AND CASH EQUIVALENTS

Cash and cash equivalents consist of cash and investments with original maturities of less than three months when purchased.

#### FAIR VALUE OF FINANCIAL INSTRUMENTS

The carrying value of cash and cash equivalents, accounts payable, accrued expenses and obligations under capital leases approximates fair value, unless the fair value is not practicably determinable.

F-7

#### ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

(1) THE COMPANY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED) CONCENTRATION OF CREDIT RISK AND MAJOR CUSTOMERS

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist primarily of cash and cash equivalents. The Company limits its exposure to credit loss by placing its cash with high credit quality financial institutions.

Two collaborative partners individually accounted for 67.6% and 31.0% of total revenues during the year ended December 31, 2000 and 21.3% and 78.1% of total revenues during the three months ended March 31, 2001. The same collaborative partners accounted for all accounts receivables as of December 31, 2000 and March 31, 2001.

#### PROPERTY AND EQUIPMENT

Property and equipment are stated at cost and depreciated over the estimated useful lives of the assets (generally three to seven years) using the straight-line method. Amortization of leasehold improvements is computed over the shorter of the lease term or the estimated useful life of the related assets.

#### INTANGIBLE ASSETS

Acquired technology and other purchased intangibles from the Company's acquisition of Bunsen Rush Laboratories, Inc. ("Bunsen Rush") is being amortized over the estimated useful life of 10 years using the straight-line method.

#### LONG-LIVED ASSETS

In accordance with SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of," if indicators of impairment exist, the Company assesses the recoverability of the affected long-lived assets by determining whether the carrying value of such assets can be recovered through the undiscounted future operating cash flows. If impairment is indicated, the Company measures the amount of such impairment by comparing the carrying value of the asset to the present value of the expected future cash flows associated with the use of the asset. While the Company's current and historical operating and cash flow losses are indicators of impairment, the Company believes the future cash flows to be received from the long-lived assets will exceed the carrying value of the assets. To date, no such impairments have occurred.

#### DEFERRED RENT

Rent expense is recorded on a straight-line basis over the term of the lease. The difference between rent expense and amounts paid under the lease agreements is recorded as deferred rent in the accompanying balance sheets.

## STOCK OPTIONS

SFAS No. 123, "Accounting for Stock-Based Compensation," establishes the use of the fair value based method of accounting for stock-based compensation arrangements, under which compensation cost is determined using the fair value of stock-based compensation determined as of the grant date, and is recognized over the periods in which the related services are rendered. SFAS No. 123 also

F-8

## ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

(1) THE COMPANY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED) permits companies to elect to continue using the current intrinsic value accounting method specified in Accounting Principles Board ("APB") Opinion

No. 25 to account for stock-based compensation. The Company has elected to retain the intrinsic value based method, and has disclosed the pro forma effect of using the fair value based method to account for its stock-based compensation (Note 8).

Options and warrants issued to non-employees are recorded at fair value as prescribed by SFAS No. 123 and EITF 96-18 and periodically remeasured and expensed over the period services are provided.

#### REVENUES

Upfront fees under the Company's collaborations are deferred and recognized over the period the related services are provided. Amounts received for research funding for a specified number of full time researchers are recognized as revenue as the services are provided, as long as the amounts received are not refundable regardless of the results of the research project. Amounts received for research funding are recognized as revenue as the services are performed. Assay development fees are recognized upon completion of the screen and acceptance by the collaborators. Milestone and royalty payments will be recognized upon completion of specified milestones pursuant to the collaborative agreements.

#### RESEARCH AND DEVELOPMENT COSTS

Costs incurred in connection with the development of new products and changes to existing products are charged to operations as incurred.

#### PATENT COSTS

Costs related to filing and pursuing patent applications are expensed as incurred as recoverability of such expenditures is uncertain.

#### INCOME TAXES

In accordance with SFAS No. 109, "Accounting for Income Taxes," a deferred tax asset or liability is determined based on the difference between the financial statement and tax basis of assets and liabilities as measured by the enacted tax rates which will be in effect when these differences reverse. The Company provides a valuation allowance against net deferred tax assets unless, based upon the available evidence, it is more likely than not that the deferred tax assets will be realized.

#### COMPREHENSIVE INCOME (LOSS)

In accordance with SFAS No. 130, "Reporting Comprehensive Income," all components of comprehensive income (loss), including net income (loss), are reported in the financial statements in the period in which they are recognized. Comprehensive income (loss) is defined as the change in equity during a period from transactions and other events and circumstances from non-owner sources. Net income (loss) and other comprehensive income (loss), including unrealized gains and losses on investments, is reported net of their related tax effect, to arrive at comprehensive income (loss). For the years ended December 31, 1998, 1999 and 2000 and for the three months ended March 31, 2000 and 2001, comprehensive income (loss) equals the net income (loss) as reported.

F-9

## ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

(1) THE COMPANY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED) EARNINGS (LOSS) PER SHARE

Basic and diluted earnings (loss) per common share are presented in conformity with SFAS No. 128, "Earnings per Share" for all periods presented. Under the provisions of SAB 98, common stock and convertible preferred stock that has been issued or granted for nominal consideration prior to the anticipated effective date of the initial public offering must be included in the calculation of basic and diluted net earnings (loss) per common share as if these shares had been outstanding for all periods presented. To date, the Company has not issued or granted shares for nominal consideration.

In accordance with SFAS No. 128, basic and diluted earnings (loss) per share has been computed using the weighted-average number of shares of common stock outstanding during the period, less shares subject to repurchase. Pro forma basic and diluted net loss per common share, as presented below, has been computed for the years ended December 31, 1999 and 2000 and for the three months ended March 31, 2001 as described above, and also gives effect to the assumed conversion of preferred stock which automatically converted to common stock immediately prior to the completion of the initial public offering of the Company's common stock (using the "as if converted" method) from the original date of issuance.

The following table presents the calculation of net loss per share:

|   |                  | R ENDED DECEMBER          | •                       | THREE MONTHS<br>MARCH 31, |
|---|------------------|---------------------------|-------------------------|---------------------------|
|   |                  | 1999                      | 2000                    | 2000                      |
|   |                  |                           |                         | (UNAUDITED) (U            |
| Net income (loss)   |                  | \$(10,237,950)<br>======= |                         |                           |
| Basic and diluted net income (loss) per share   |                  | \$ (10.05)                | \$ (2.84)               | \$ (15.92) \$             |
| Weighted-average shares used in computing net income (loss) per share, basic  |                  | 1,018,359                 | 10,139,755              | 1,086,988 2               |
| Weighted-average shares used in computing net income (loss) per share, diluted                                      | 966 <b>,</b> 799 | 1,018,359                 | 10,139,755              |                           |
| Pro forma net loss per share, basic and diluted   |                  |                           | \$ (1.65)               | \$ (1.76)                 |
| Shares used above  Pro forma adjustment to reflect assumed weighted-average effect of conversion of preferred stock |                  | 1,018,359                 | 10,139,755<br>7,271,273 | 1,086,988                 |
| Shares used in computing pro forma net loss per share, basic and diluted  |                  | 7,926,952                 | 17,411,028              |                           |

F-10

#### ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

(1) THE COMPANY AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

The Company has excluded all outstanding stock options and warrants, and shares subject to repurchase from the calculation of diluted loss per common share because all such securities are antidilutive for the years ended December 31, 1998, 1999 and 2000. The total number of shares excluded from the calculation of diluted net loss per share, prior to application of the treasury stock method for stock options, was 61,625, 81,000 and 509,850 for the years ended December 31, 1998, 1999 and 2000, respectively. Such securities, had they been dilutive, would have been included in the computation of diluted net loss per share.

#### SEGMENT REPORTING

SFAS No. 131, "Disclosures About Segments of an Enterprise and Related Information," requires the use of a management approach in identifying segments of an enterprise. Management has determined that the Company operates in one business segment.

#### EFFECT OF NEW ACCOUNTING STANDARDS

In June 1998, the Financial Accounting Standards Board issued SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities," which was effective January 1, 2001. SFAS No. 133 establishes accounting and reporting standards requiring that every derivative instrument, including certain derivative instruments imbedded in other contracts, be recorded in the balance sheet as either an asset or liability measured at its fair value. The statement also requires that changes in the derivative's fair value be recognized in earnings unless specified hedge accounting criteria are met. Management believes the adoption of SFAS No. 133 will not have an effect on the financial statements, as the Company does not engage in the activities covered by SFAS No. 133.

In December 1999, the Securities and Exchange Commission ("SEC") issued Staff Accounting Bulletin No. 101, Revenue Recognition ("SAB 101"). SAB 101 provides the SEC Staff's views in applying generally accepted accounting principles to various revenue recognition issues and specifically addresses revenue recognition for upfront, non-refundable fees earned in connection with research collaboration arrangements. It is the SEC's position that such fees should generally be recognized over the term of the agreement. The Company expects to apply this accounting to its future collaborations. The Company believes its revenue recognition policy is in compliance with SAB 101.

## (2) INVESTMENT IN CHEMNAVIGATOR.COM

In January 1999, the Company began development of an Internet-based search engine that allows scientists to search for compounds based primarily on the similarity of chemical structures. In May 1999, ChemNavigator.com was incorporated and in June 1999, the Company licensed to ChemNavigator.com a website, the trademark ChemNavigator and goodwill associated with the trademark,

intellectual property related to the search engine, as well as technology needed to perform chemical similarity searches. In return, the Company received 2,625,000 shares of preferred stock in ChemNavigator.com valued at approximately \$2.6 million based on independent investors' participation in ChemNavigator.com's Series A preferred round of financing. However, the Company's historical cost basis in the licensed technology was zero and the Company therefore recorded its investment in ChemNavigator.com at zero. As of December 31, 2000 and March 31, 2001, the Company's equity ownership represented approximately 34% and 33%, (unaudited), respectively, of the outstanding

F-11

## ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

(2) INVESTMENT IN CHEMNAVIGATOR.COM (CONTINUED) voting equity securities of ChemNavigator.com. ChemNavigator.com has an accumulated deficit and since the Company is under no obligation to reimburse the other ChemNavigator.com stockholders for its share of ChemNavigator.com's losses, the Company has not included any equity in the net loss of ChemNavigator.com in the Company's Consolidated Statements of Operations.

The Company subleases office space to ChemNavigator.com. The current sublease payment of \$5,592 per month can be adjusted monthly based upon changes in the number of ChemNavigator.com employees.

Jack Lief, the Company's President and Chief Executive Officer, is also the Chairman of the Board of ChemNavigator.com. Richard P. Burgoon, Jr., the Company's Senior Vice President, Operations, General Counsel and Secretary, is also the Secretary of ChemNavigator.com and a member of its board of directors.

## (3) INVESTMENT IN ARESSA PHARMACEUTICALS, INC.

In August 1999, the Company formed Aressa Pharmaceuticals, Inc. to take advantage of opportunities to use the knowledge and skills of its personnel and funding to be obtained from unaffiliated third parties to in-license and develop niche products from other pharmaceutical or biotechnology companies. In October 2000, the Company received shares of preferred stock in Aressa that constitute approximately 83% of the presently outstanding voting equity securities of Aressa, valued at \$5.0 million based on the participation of a independent investor in Aressa's Series A preferred round of financing raising gross proceeds of \$1.0 million. The Company's carrying value for its investment in Aressa is zero because it made no financial contribution to Aressa in exchange for its ownership interest. In addition, the Company is not required to reimburse the outside investor for any losses Aressa incurs. Through March 31, 2001 Aressa has had minimal activity and the amounts of its assets and liabilities are currently immaterial to the Company's consolidated financial statements. Therefore, the Company has not included the accounts of Aressa in its consolidated financial statements.

Jack Lief, the Company's President and Chief Executive Officer, is also the Chief Executive Officer and President of Aressa. Richard P. Burgoon, Jr., the Company's Senior Vice President, Operations, General Counsel and Secretary, is also the Chief Operating Officer and Secretary of Aressa. Joyce Williams, the Company's Vice President, Drug Development is also the Vice President, Regulatory and Clinical Affairs of Aressa.

F-12

#### ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

#### (4) PROPERTY AND EQUIPMENT

Property and equipment consists of the following:

|   | DECEMBER 31,                  |                        | MARCH 31                |
|---|-------------------------------|------------------------|-------------------------|
|   | 1999                          | 2000                   | 2001                    |
|   |                               |                        | (UNAUDITED)             |
| Laboratory and computer equipment  Furniture and fixtures  Land, building and capital | \$2,641,072<br>185,220        | \$3,659,632<br>267,841 | \$ 4,661,142<br>301,873 |
| improvements  | <br>536 <b>,</b> 096          | <br>1,714,622          | 7,542,499<br>1,383,107  |
| Less accumulated depreciation and   | 3,362,388                     | 5,642,095              | 13,888,621              |
| amortization  | (589,006)                     | (1,376,835)            | (1,668,742)             |
|   | \$2 <b>,</b> 773 <b>,</b> 382 | \$4,265,260<br>======  | \$12,219,879<br>======= |

Cost and accumulated amortization of equipment under capital leases totaled approximately \$1.9 million and \$331,000, and approximately \$2.3 million and \$810,000 at December 31, 1999 and 2000, respectively.

#### (5) CONVERTIBLE NOTES PAYABLE TO RELATED PARTY

In 1997, the Company issued a convertible note payable to Tripos, Inc. ("Tripos"), a significant stockholder, for the principal amount of \$755,000 at an annual interest rate of 9.5%. In 2000, upon the closing of the Company's initial public offering, all outstanding principal and accrued interest under this convertible note was converted into 755,000 shares of common stock. Interest expense for the years ended December 31, 1998, 1999 and 2000 was approximately \$72,000, \$72,000 and \$41,000, respectively.

In 1998, the Company issued a convertible note payable to Tripos, for a principal amount of up to \$1.5 million at an annual interest rate of 9.5%. The Company received proceeds of approximately \$1.1 million on this note payable in 1998, and \$375,000 in 1999. In 1999, all outstanding principal and accrued interest under this convertible note payable was converted into 435,840 shares of Series D redeemable convertible preferred stock. Upon the closing of the Company's initial public offering, these shares converted into common stock of the Company.

At the date each note was entered into, the note was convertible into stock at the then-current fair value of such stock, and therefore there is no beneficial conversion feature associated with the notes.

#### (6) COMMITMENTS

#### LEASES

In 1997, the Company leased its facilities located at 6166 Nancy Ridge Drive in San Diego, California under an operating lease that had an expiration date in 2004. The Company had an option to buy the facilities during the first 12 months of the lease term for approximately \$2.1 million. In 1998, the Company assigned the option to a publicly traded Real Estate Investment Trust ("REIT") in exchange for \$733,322 in cash. The \$733,322 in cash is being recognized on a straight-line basis as a reduction in the rent expense on the underlying lease. In addition, the Company signed a new lease

F-13

#### ARENA PHARMACEUTICALS, INC.

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

#### MARCH 31, 2000 AND 2001 IS UNAUDITED)

## (6) COMMITMENTS (CONTINUED)

with the REIT, which expires in 2013. The lease provides the Company with an option to extend the lease term via two five-year options. Under the terms of the new lease, effective April 30, 1998, monthly rental payments will be increased on April 30, 2000 and annually thereafter by 2.75%. In accordance with the terms of the new lease, the Company is required to maintain restricted cash balances totaling \$79,955 on behalf of the landlord as rent deposits throughout the term of the lease.

In 2000, the Company leased additional facilities located at 6150 Nancy Ridge Drive in San Diego, California under an operating lease which expires in 2013. In January 2001, the Company purchased this facility for approximately \$5.4 million in cash.

Rent expense was \$366,505, \$598,903, \$728,369, \$147,939 and \$136,889 for the years ended December 31, 1998, 1999 and 2000 and for the three months ended March 31, 2000 and 2001, respectively.

Annual future minimum lease obligations as of December 31, 2000 are as follows:

| YEAR ENDING DECEMBER 31,                   | OPERATING LEASES | CAPITAL LEASES      |
|--|------------------|---------------------|
|  |                  |                     |
| 2001                                       | \$ 663,017       | \$ 613 <b>,</b> 883 |
| 2002                                       | 678 <b>,</b> 528 | 613,883             |
| 2003                                       | 694,465          | 480,289             |
| 2004                                       | 611,866          | 44,875              |
| 2005                                       | 628,691          |                     |
| Thereafter                                 | 5,693,571        |                     |
| Total minimum lease payments               | \$8,970,138      | 1,752,930           |
| Less amount representing interest          |                  | (311,875)           |
| Present value of minimum lease obligations |                  | 1,441,055           |

| Less current portion               | (480,538)  |
|------------------------------------|------------|
|                                    |            |
| Long-term portion of capital lease |            |
| obligations                        | \$ 960,517 |
|                                    |            |

The table above representing annual future minimum operating lease obligations is exclusive of the 6150 Nancy Ridge Drive facility which the Company purchased in January 2001.

Future minimum rentals to be received under non-cancelable subleases as of December 31, 2000 totaled approximately \$36,000.

#### (7) COLLABORATIONS

#### COLLABORATIVE AGREEMENT WITH ELI LILLY

In April 2000, the Company entered into a research alliance with Eli Lilly and Company ("Eli Lilly"). The collaboration with Eli Lilly will principally focus on the central nervous system and endocrine therapeutic fields. The collaboration will also focus on the cardiovascular field and may expand into other therapy classes, including cancer.

During the collaboration, the Company will pursue an agreed upon research plan with Eli Lilly that has several objectives. During the term of the collaboration, the Company and Eli Lilly will mutually review and select G-protein coupled receptors ("GPCRs") that will become subject to the

F-14

#### ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

#### (7) COLLABORATIONS (CONTINUED)

collaboration. These GPCRs may be provided either by the Company or by Eli Lilly. All of the Company's CART-activated GPCRs existing as of the effective date of the agreement are excluded from the collaboration. The Company and Eli Lilly will each share their respective knowledge of the GPCRs that become subject to the collaboration to validate and CART-activate selected receptors. The Company and Eli Lilly will jointly select a number of proprietary central nervous system, endocrine and cardiovascular GPCRs for CART-activation, and the Company will then provide Eli Lilly with enabled high-throughput screens for use at their screening facilities. During the term of the agreement, the Company will continue to receive research funding from Eli Lilly for internal resources committed to the collaboration, which will be augmented by resource commitments by Eli Lilly. Eli Lilly will be responsible for screening its chemical compound library using selected CART-activated receptors, for identifying drug candidates and for the pre-clinical and clinical testing and development of drug candidates. The Company may receive \$1.25 million per receptor based upon milestone payments in connection with the successful application of CART to each receptor, and up to an additional \$6.0 million based upon clinical development milestone payments for each drug candidate discovered using CART. The Company may also receive additional milestone and royalty payments associated with the commercialization of drugs discovered using CART, if any. The Company and Eli Lilly may never achieve the discovery, development or commercialization milestones.

Once the assay development fee has been paid for a CART-activated GPCR, Eli Lilly will have exclusive rights to screen chemical libraries, discover drug candidates that target that GPCR, and to develop, register and sell any resulting products worldwide. The Company retains rights to partner or independently develop GPCRs that do not become subject to the collaboration.

The term of the collaboration agreement with Eli Lilly is five years. Either Eli Lilly or the Company can terminate the agreement with or without cause effective three years after the date of the agreement by giving written notice prior to the conclusion of the 33rd month after the date of the agreement. In addition, either party can terminate the agreement at any time if the other party commits a material breach, and Eli Lilly can terminate the agreement at any time if, among other reasons, Eli Lilly does not approve suitable replacements for key employees who leave the Company. The parties will continue to have various rights and obligations under the agreement after the agreement is terminated. The extent of these continuing rights and obligations depends on many factors, such as when the agreement is terminated, by which party and for what reason. These continuing obligations may include further research and development efforts by the Company and a variety of payments by Eli Lilly.

Revenues recognized under the Eli Lilly collaboration were approximately \$5.2 million for the year ended December 31, 2000 consisting of research funding of approximately \$2.9 million, milestone achievements of approximately \$2.2 million, and amortization of the upfront payment of \$75,000. For the three month period ended March 31, 2001, the Company recognized approximately \$1.2 million in revenues under the Eli Lilly collaboration consisting of research funding of approximately \$1.1 million and amortization of the upfront payment of \$25,000.

#### COLLABORATIVE AGREEMENTS WITH TAISHO

In May 2000, the Company entered into an agreement with Taisho Pharmaceutical Co., Ltd. ("Taisho") to initiate a research collaboration focused on several GPCRs selected by Taisho in

F-15

## ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

## (7) COLLABORATIONS (CONTINUED)

therapeutic areas of interest to Taisho. Under the terms of the agreement, Taisho will receive exclusive, worldwide rights to the selected GPCR targets and to any drug candidates discovered using the activated versions of these receptors. The Company may receive up to a total of \$2.3 million in revenues per receptor associated with research, development and screening fees. The Company may also receive clinical development milestones, regulatory approval milestones and royalties on drug sales, if any.

In January 2001, the Company signed an amendment to the May 2000 agreement whereby Taisho was granted world-wide rights to the Company's 18-F Program, an obesity orphan receptor target and small molecule modulators. In accordance with the amendment, Taisho made a payment in April 2001 to the Company for the 18-F Program based upon work completed by the Company through the date of the amendment. In addition, the Company may receive additional milestone and research funding payments and royalties on drug sales, if any.

In March 2001, the Company entered into a receptor discovery agreement with Taisho. Under the terms of the agreement, the Company will identify the receptor that binds with a ligand that Taisho provided. If the Company is successful in identifying and cloning this receptor, the Company will CART-activate this receptor and provide a screening assay to Taisho. In connection with this agreement, Taisho paid the Company a one-time non-refundable research and development fee which is being recognized as revenue as the services are being performed. In addition, the Company may receive additional milestone payments and royalties on drug sales, if any.

Revenues recognized under the Taisho collaborations were approximately \$2.4 million for the year ended December 31, 2000 consisting of milestone achievements of approximately \$2.3 million and amortization of the upfront payment of \$80,000. Revenues recognized under the Taisho collaborations were approximately \$4.2 million for the three months ended March 31, 2001 consisting of milestone achievements and research and development fees of approximately \$3.9 million, research funding of \$286,000 and amortization of the upfront payment of \$30,000.

#### COLLABORATIVE AGREEMENT WITH FUJISAWA

In January 2000, the Company entered into a collaborative agreement with Fujisawa Pharmaceutical, Co., Ltd. ("Fujisawa"). During the collaboration, the Company will jointly validate up to 13 orphan GPCRs as drug screening targets. The Company will be responsible for receptor identification, location and regulation, and will apply CART to GPCRs selected by Fujisawa. The Company will also seek to validate screening assays based on the selected GPCRs. Fujisawa will be entitled to screen selected assays against its chemical compound library to identify drug candidates. Fujisawa will also be responsible for the pre-clinical and clinical development of any drug candidates that the Company or Fujisawa discover. The Company may also screen the selected GPCRs using its in-house chemical library. When Fujisawa selects its first receptor, the Company will be entitled to receive a one-time initiation fee of \$500,000. If the Company and Fujisawa then achieve various milestones, the Company may receive up to a maximum of \$3.5 million per selected receptor in assay transfer, screening and exclusivity fees, and up to a maximum of \$2.0 million per selected receptor based upon the filing of one or more investigational new drug applications for each drug candidate discovered using a CART-activated receptor. The Company may also receive clinical development milestones, regulatory approval milestones and royalties on drug sales, if any. The Company and

F-16

#### ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

#### (7) COLLABORATIONS (CONTINUED)

Fujisawa may never achieve research, development or commercialization milestones under the agreement. The Company's collaborative agreement with Fujisawa will terminate upon the expiration of Fujisawa's obligation to make royalty payments under the agreement, if any. Fujisawa may terminate the agreement at any time by providing the Company with written notice of their intention to do so and by returning any proprietary rights they have acquired under the agreement. Additionally, either party may terminate the agreement for a material breach of the agreement by the other party. The termination or expiration of the agreement will not affect any rights that have accrued to the benefit of either party

prior to the termination or expiration. To date, the Company has not recognized any revenue under the Fujisawa collaboration.

#### (8) STOCKHOLDERS' EQUITY

#### PREFERRED STOCK

In January 2000, March 2000 and April 2000, the Company sold Shares of Series E Convertible Redeemable Preferred Stock, Series F Convertible Redeemable Preferred Stock, respectively at what management believed was fair value. Subsequent to the commencement of the initial public offering process, the Company re-evaluated the fair value of its common stock as of January 2000, March 2000 and April 2000 and determined it to be \$4.68, \$13.50 and \$13.50, respectively. In accordance with EITF 98-5, the Company recorded a non-cash preferred stock charge of \$22.4 million for the year ended December 31, 2000. The Company recorded the charge at the date of issuance by offsetting charges and credits to preferred stock, without any effect on total stockholders' equity. The non-cash preferred stock charge increases the loss applicable to common stockholders in the calculation of basic net loss per share for the year ended December 31, 2000.

Concurrent with the closing of the Company's initial public offering in July 2000, all outstanding shares of the Company's preferred stock converted into 12,698,578 shares of common stock. Following the conversion, the Company's certificate of incorporation was amended and restated. Under the restated certificate, the Board has the authority, without further vote or action by stockholders, to issue up to 7,500,000 shares of preferred stock in one or more series and to fix the rights, preferences, privileges, qualifications and restrictions granted to or imposed upon such preferred stock, including dividend rights, conversion rights, voting rights, rights and terms of redemption, liquidation preference, any or all of which may be greater than the rights of the common stock.

#### COMMON STOCK

In June 1997, a total of 1,000,000 shares of common stock were issued to the founders of the Company at a price of \$.0001 per share under founder stock purchase agreements. The Company issued 50,000 of these shares to an outside founder, which vest ratably over 50 months. Unvested shares are subject to repurchase by the Company, at the original purchase price, if the relationship between the Company and the outside founder terminates. In 1999, 17,500 shares were repurchased.

## WARRANTS

During the year ended December 31, 2000, all outstanding warrants were converted into 410,060 shares of common stock of the Company. At December 31, 2000, no warrants are outstanding.

F - 17

ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

(8) STOCKHOLDERS' EQUITY (CONTINUED) INCENTIVE STOCK PLANS

The Company's Amended and Restated 1998 Equity Compensation Plan (the "1998 Plan") provides designated employees of the Company, certain consultants and advisors who perform services for the Company, and non-employee members of the Company's Board of Directors with the opportunity to receive grants of incentive stock options, nonqualified stock options and restricted stock. The options and restricted stock generally vest 25% a year for four years and are immediately exercisable up to ten years from the date of grant. At December 31, 2000 and March 31, 2001, 1,500,000 shares of common stock were authorized for issuance under the 1998 Plan.

In 2000, the Board of Directors adopted and stockholders approved the 2000 Equity Compensation Plan (the "2000 Plan") which provides designated employees of the Company, certain consultants and advisors who perform services for the Company, and non-employee members of the Company's Board of Directors with the opportunity to receive grants of incentive stock options, nonqualified stock options and restricted stock. The options and restricted stock generally vest 25% a year for four years and are immediately exercisable up to ten years from the date of grant. At December 31, 2000 and March 31, 2001, 2,000,000 shares of common stock were authorized for issuance under the 2000 Plan.

Unvested shares issued to our employees, consultants, advisors and non-employee members of the Company's Board of Directors pursuant to the exercise of options are subject to repurchase, at the original purchase price, in the event of termination of employment or engagement. In the event the Company elects not to buy back any such unvested shares, the unvested options will be expensed at their fair value at that point in time. At December 31, 2000 and March 31, 2001, 509,850 and 470,562 shares of common stock, respectively, issued pursuant to the exercise of options were subject to repurchase by the Company. In accordance with FAS 128, the Company has excluded unvested common stock arising from exercised options in its basic loss per share calculations.

F-18

#### ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

(8) STOCKHOLDERS' EQUITY (CONTINUED) Following is a summary of stock option activity:

|                              | OPTIONS           | WEIGHTED-<br>AVERAGE<br>EXERCISE PRICE |
|------------------------------|-------------------|--|
|                              |                   |  |
| Balance at December 31, 1997 | 91,000            | \$ 0.20                                |
| Granted                      | 360,000           | \$ 0.20                                |
| Exercised                    | (43,500)          | \$ 0.20                                |
| Balance at December 31, 1998 | 407,500           | \$ 0.20                                |
| Granted                      | 373 <b>,</b> 100  | \$ 0.60                                |
| Exercised                    | (90 <b>,</b> 375) | \$ 0.33                                |
| Canceled                     | (5,625)           | \$ 0.47                                |
| Balance at December 31, 1999 | 684,600           | \$ 0.40                                |
| Granted                      | 1,215,175         | \$11.07                                |

| ExercisedCanceled                     | , ,       | \$ 0.46<br>\$ 1.66            |
|---------------------------------------|-----------|-------------------------------|
|                                       |           |                               |
| Balance at December 31, 2000          | 334,500   | \$12.44<br>\$16.41<br>\$ 0.58 |
| Balance at March 31, 2001 (unaudited) | 1,344,250 | \$13.91                       |

At December 31, 1998, 1999, and 2000 and at March 31, 2001, options to purchase 67,000, 159,500, 53,625, and 106,200 shares were vested. The weighted-average remaining contractual life of options outstanding at December 31, 1998, 1999 and 2000 was 8.75, 8.50 and 9.22 years, respectively. At December 31, 1998, 1999 and 2000, 32,625, 63,500 and 509,850 shares of common stock issued upon the exercise of options were subject to repurchase at the original purchase price at a weighted-average price of \$.20, \$.23 and \$.51, respectively. At December 31, 2000 and March 31, 2001, 1,492,233 and 1,157,725 shares, respectively, were available for future grant. The 1,064,475 options not exercised at December 31, 2000 have exercise prices ranging from \$.20 to \$36.88 and can be exercised at any time; however, unvested shares are subject to repurchase at the original purchase price if a grantee terminates prior to vesting.

In 2000, the Company granted 516,250 stock options to employees at less than the market price of the stock on the date of grant. These options had a weighted average exercise price of \$24.95 and a weighted average grant date fair value of \$22.12. For options granted at the market value, the weighted average exercise price and weighted average grant date fair value were \$0.72 and \$0.23, respectively.

Pro forma information regarding net income is required by SFAS No. 123 and has been determined as if the Company had accounted for its employee stock options under the fair value method of that Statement. For options granted through July 27, 2000, the fair value of options granted were estimated at the date of grant using the minimum value pricing model with the following weighted-average assumptions: risk free interest rate of 6.5%, dividend yield of 0%, and weighted-average expected life of the option of five years. For options granted from July 28, 2000 to December 31, 2000 the fair value of the options was estimated at the date of grant using the Black-

F-19

#### ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

#### (8) STOCKHOLDERS' EQUITY (CONTINUED)

Scholes method for option pricing with the following weighted-average assumptions: risk free interest rate of 6.5%, dividend yield of 0%, expected volatility of 90% and weighted-average expected life of the option of five years.

For purposes of pro forma disclosures, the estimated fair value of the options is amortized to expense over the options' vesting period. The Company's adjusted pro forma information is as follows:

|                               |        | YEAR    | R ENDED | ) DECEMBER | 31,     |          | I   | E MONTHS<br>ENDED<br>RCH 31, |
|-------------------------------|--------|---------|---------|------------|---------|----------|-----|------------------------------|
|                               | 19     | 98      | 1       | .999       | 20      | 000      |     | 2001                         |
| Adjusted pro forma net income |        |         |         |            |         |          |     |                              |
| (loss)                        | \$(3,3 | 98,000) | \$(10,  | 250,000)   | \$(29,8 | 889,840) | \$1 | 62 <b>,</b> 250              |
| (loss) per share              | \$     | (3.51)  | \$      | (10.07)    | \$      | (2.95)   | \$  | 0.01                         |

The effects of applying SFAS No. 123 for providing pro forma disclosures are not likely to be representative of the effect on reported net income (loss) for future years.

During the years ended December 31, 1999 and 2000 and the three months ended March 31, 2001, in connection with the grant of various stock options to employees, the Company recorded deferred stock compensation totaling approximately \$1.0 million, \$11.6 million and \$226,000, respectively, representing the difference on the date such stock options were granted between the exercise price and the estimated market value of the Company's common stock as determined by the Company's management, or after July 28, 2000, the quoted market value. Deferred compensation is included as a reduction of stockholders' equity and is being amortized to expense over the vesting period of the options in accordance with FASB Interpretation No. 28, which permits an accelerated amortization methodology. During the years ended December 31, 1999 and 2000 and the three months ended March 31, 2001, the Company recorded amortization of deferred compensation expense of approximately \$378,000, \$4.3 million and \$1.3 million, respectively. At March 31, 2001, total charges to be recognized in future periods from amortization of deferred stock compensation are anticipated to be approximately \$3.0 million, \$2.7 million, \$1.1 million and \$119,000 for the remaining nine months of 2001 and for the years ending December 31, 2002, 2003 and 2004, respectively.

For the year ended December 31, 2000 and for the three months ended March 31, 2001 the Company recorded expenses related to the options granted to our consultants of approximately \$323,000 and \$70,000, respectively,

#### COMMON SHARES RESERVED FOR ISSUANCE

At December 31, 2000 and March 31, 2001, 2,556,708 and 2,501,975, respectively, shares of common stock are reserved for issuance upon exercise of common stock options and future option grants.

#### (9) EMPLOYEE BENEFIT PLAN

The Company established a defined contribution employee retirement plan (the "401(k) Plan") effective January 1, 1998, conforming to Section 401(k) of the Internal Revenue Code ("IRC"). All eligible employees may elect to have a portion of their salary deducted and contributed to the 401(k)

F-20

## ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

#### (9) EMPLOYEE BENEFIT PLAN (CONTINUED)

Plan up to the maximum allowable limitations of the IRC. Through March 31, 1999, the Company matched 50% of each participant's contribution up to the first 6% of annual compensation.

Effective April 1, 1999, the Company amended the 401(k) Plan, increasing the Company match to 100% of each participant's contribution up to the first 6% of annual compensation for all contributions made after April 1, 1999. The Company's matching portion, which totaled \$27,065, \$148,784, \$281,595, \$61,723 and \$107,198 for the years ended December 31, 1998, 1999 and 2000 and for the three months ended March 31, 2000 and 2001, respectively, vests over a five-year period.

## (10) INCOME TAXES

At December 31, 2000, the Company had federal and California tax net operating loss carryforwards of approximately \$12.2 million and approximately \$12.8 million, respectively.

Significant components of the Company's deferred tax assets at December 31, 1999 and 2000 are shown below. A valuation allowance of \$5.7 million and \$7.5 million has been recognized to offset the deferred tax assets as of December 31, 1999 and 2000, respectively, as realization of such assets is uncertain.

|  | DECEMBER 31,   |                  |  |
|--|----------------|------------------|--|
|  | 1999           | 2000             |  |
|  |                |                  |  |
| Deferred tax assets:                                 |                |                  |  |
| Net operating loss carryforwards                     | \$ 4,787,000   | \$ 4,991,000     |  |
| Research and development credits                     | 928,000        | 2,089,000        |  |
| Other, net   | 129,000        | 597 <b>,</b> 000 |  |
| Net deferred tax assets                              | 5,844,000      | 7,677,000        |  |
| Valuation allowance for deferred tax assets          | (5,713,000)    | (7,509,000)      |  |
| Total deferred tax assets  Deferred tax liabilities: | 131,000        | 168,000          |  |
| Depreciation   | (131,000)      | (168,000)        |  |
| Net deferred tax assets                              | \$<br>======== | \$<br>=======    |  |

The federal and California tax net operating loss carryforwards will begin to expire in 2012 and 2005, respectively, unless previously utilized. The Company also has federal and California research tax credit carryforwards of approximately \$1.6 million and \$529,000, respectively, which will begin to expire in 2012 unless previously utilized.

Pursuant to Sections 382 and 383 of the Internal Revenue Code, annual use of the Company's net operating loss and credit carryforwards could be limited in the event of cumulative changes in ownership of more than 50%. Such a change occurred in prior years. However, the Company does not believe such limitation will have a material effect upon the Company's ability to utilize the

carryforwards.

F-21

#### ARENA PHARMACEUTICALS, INC.

#### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

2000 FOR QUARTER ENDED MARCH 31 JUNE 30 SEPT 30 DEC. 31

MARCH 31, 2000 AND 2001 IS UNAUDITED)

## (11) QUARTERLY FINANCIAL DATA (UNAUDITED)

| Revenues  | \$                                   | \$ 1,289,271                 | \$ 2,314,126                                   | \$ 4,079,999                                    | \$ 7,683,        |
|---|--------------------------------------|------------------------------|--|---|------------------|
| deferred compensation                             | 409,479                              | 1,419,565                    | 1,123,358                                      | 1,390,494                                       | 4,342,           |
| Net income (loss) Non-cash preferred stock        | (3,122,200)                          | (2,886,082)                  | (1,418,594)                                    | 1,064,906                                       | (6,361,          |
| charge  Net income (loss) applicable              | (14, 187, 563)                       | (8,203,505)                  |  |   | (22,391,         |
| to common stockholders Basic and diluted earnings | (17,309,763)                         | (11,089,587)                 | (1,418,594)                                    | 1,064,906                                       | (28,753,         |
| (loss) per share  Pro forma earnings (loss)       | (15.92)                              | (8.47)                       | (0.09)   | 0.05  | (2               |
| per share   | (1.76)                               | (0.81)                       | (0.07)   |   | (1               |
|   |                                      |                              |  |   |                  |
| 1999 FOR QUARTER ENDED                            | MARCH 31                             | JUNE 30                      | SEPT 30  | DEC. 31   | YEAR             |
| Revenues  |                                      |                              |  | DEC. 31   | YEAR             |
| Revenues  | \$                                   | \$                           | \$   | \$  | \$               |
| Revenues  | \$                                   |                              | \$<br>97,628                                   | \$<br>101,095                                   | \$<br>378,       |
| Revenues  | \$                                   | \$<br>179,386                | \$<br>97,628                                   | \$<br>101,095                                   | \$<br>378,       |
| Revenues  | \$<br>(1,998,235)                    | \$<br>179,386<br>(2,526,550) | \$<br>97,628<br>(2,734,105)                    | \$<br>101,095<br>(2,979,060)                    | \$ 378, (10,237, |
| Revenues  | \$<br>(1,998,235)<br><br>(1,998,235) | \$<br>179,386<br>(2,526,550) | \$<br>97,628<br>(2,734,105)<br><br>(2,734,105) | \$<br>101,095<br>(2,979,060)<br><br>(2,979,060) | \$ 378, (10,237, |

## (12) RECENT EVENTS

## 2001 EMPLOYEE STOCK PURCHASE PLAN

The 2001 Arena Employee Stock Purchase Plan was adopted by the Company's Board of Directors in March 2001. The aggregate number of shares of the Company's common stock that may be issued pursuant to the 2001 Arena Employee Stock Purchase Plan is 1,000,000 shares. The 2001 Arena Employee Stock Purchase Plan will become effective on July 1, 2001.

BUILDING PURCHASE

YEAR

In January 2001, the Company purchased a facility it was leasing along with an adjoining building that is currently leased to a tenant at 6138-6150 Nancy Ridge Drive in San Diego, California. The Company paid cash of \$5.4 million and will amortize the cost over the building's useful life, estimated to be 20 years. The Company assumed the lease with the tenant, the term of which runs through August 31, 2001. The tenant has paid all rents through the expiration of the lease.

F-22

#### ARENA PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (CONTINUED)

(INFORMATION AS OF MARCH 31, 2001 AND FOR THE THREE MONTHS ENDED

MARCH 31, 2000 AND 2001 IS UNAUDITED)

# (12) RECENT EVENTS (CONTINUED) ACQUISITION

On February 15, 2001 the Company completed its acquisition of Bunsen Rush pursuant to an Agreement and Plan of Merger dated February 15, 2001. Bunsen Rush was a privately held research-based company that provides receptor screening for the pharmaceutical and biotechnology industries using its proprietary and patented melanophore technology. The purchase price was \$15.0 million in cash.

The acquisition was accounted for as a purchase. Costs related to the acquisition, which were nominal, have been expensed. The purchase price was preliminarily allocated as follows:

| Existing technology | \$15,378,000 |
|---------------------|--------------|
| Assembled workforce | 47,000       |
| Non-current assets  | 5,000        |
| Current liabilities | (430,000)    |
|                     |              |
|                     | \$15,000,000 |
|                     |              |

The acquired technology is being amortized over its estimated useful life of ten years. The estimated useful life of ten years was determined based on an analysis, as of the acquisition date, of conditions in, and the economic outlook for the pharmaceutical and biotechnology industries, the patent life of the technology and the history, current state and planned future operations of Bunsen Rush.

The acquisition was effected in the form of a merger of Bunsen Rush into BRL Screening, Inc., ("BRL") a newly formed wholly-owned subsidiary of the Company. BRL's results from operations have been included in the Company's results from operations since February 15, 2001. If the acquisition would have occurred on January 1, 2000, pro forma unaudited financial information would have been as follows:

THREE MONTHS ENDED

|                                     | YEAR ENDED           | MARCH 31,          |                     |  |  |
|-------------------------------------|----------------------|--------------------|---------------------|--|--|
|                                     | DECEMBER 31,<br>2000 | 2000               | 2001                |  |  |
|                                     |                      |                    |                     |  |  |
| Revenues                            | \$ 8,027,301         | \$ 85 <b>,</b> 976 | \$ 5,392,335        |  |  |
| Net (loss) income                   | \$(8,673,198)        | \$(3,725,007)      | \$ 799 <b>,</b> 019 |  |  |
| Basic net (loss) income per share   | \$ (3.06)            | \$ (16.48)         | \$ 0.04             |  |  |
| Diluted net (loss) income per share | \$ (3.06)            | \$ (16.48)         | \$ 0.03             |  |  |

F-23

PROSPECTUS JUNE , 2001

[THOMAS WEISEL PARTNERS LLC BANNER]

[ARENA PHARMACEUTICALS LOGO]

5,000,000 SHARES COMMON STOCK

THOMAS WEISEL PARTNERS LLC

DAIN RAUSCHER WESSELS

ABN AMRO ROTHSCHILD LLC

LAZARD

\_\_\_\_\_

Neither we nor any of the underwriters have authorized anyone to provide information different from that contained in this prospectus. When you make a decision about whether to invest in our common stock, you should not rely upon any information other than the information in this prospectus. Neither the delivery of this prospectus nor the sale of our common stock means that information contained in this prospectus is correct after the date of this prospectus. This prospectus is not an offer to sell or solicitation of an offer to buy these shares of common stock in any circumstances under which the offer or solicitation is unlawful.

## PART II

## INFORMATION NOT REQUIRED IN PROSPECTUS

## ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the expenses, other than underwriting discounts and commissions, payable by us in connection with this offering. We are paying all of the expenses incurred on behalf of the selling stockholders, other than underwriting discounts and commissions. All expenses are estimated except for the SEC registration fee and the NASD filing fee.

| SEC registration fee            |            |
|---------------------------------|------------|
| Printing and engraving expenses | 175,000.00 |

| Blue Sky fees                                  | 5,000.00     |
|--|--------------|
| Transfer agent and registrar fees and expenses | 15,000.00    |
| Miscellaneous                                  | 122,215.25   |
|  |              |
| Total  | \$700,000.00 |
|  | ========     |

#### ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 145 of the General Corporation Law of the State of Delaware permits a corporation, under specified circumstances, to indemnify its directors, officers, employees or agents against expenses (including attorney's fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by them in connection with any action, suit or proceeding brought by third parties by reason of the fact that they were or are directors, officers, employees or agents of the corporation or were or are serving at the request of the corporation as a director, officer, employee or agent of another corporation, if such directors, officers, employees or agents acted in good faith and in a manner they reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe their conduct was unlawful. In a derivative action, i.e., one by or in the right of the corporation, indemnification may be made only for expenses actually and reasonably incurred by directors, officers, employees or agents in connection with the defense or settlement of an action or suit, and only with respect to a matter as to which they shall have acted in good faith and in a manner they reasonably believed to be in or not opposed to the best interests of the corporation, unless and only to the extent that the court in which the action or suit was brought shall determine upon application that the defendant directors, officers, employees, or agents are fairly and reasonably entitled to indemnification for such expenses in view of all of the circumstances of the case, despite such adjudication of liability.

Our by-laws provide that we shall, to the full extent authorized or permitted by applicable law, indemnify any current or former director or officer. Subject to applicable law, we may indemnify an employee or agent of ours to the extent that our board of directors or our stockholders may determine in its or their discretion.

Article IV of our Certificate of Incorporation, as amended, provides that a director of ours shall not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (a) for any breach of the director's duty of loyalty to us or our stockholders, (b) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (c) pursuant to Section 174 of the General Corporation Law of the State of Delaware, or (d) for any transaction from which a director derived an improper personal benefit.

II-1

Our directors and officers are covered by insurance policies indemnifying them against some civil liabilities, including liabilities under the federal securities laws, which might be incurred by them in such capacity.

#### ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

Since June 1998, we have sold and issued unregistered securities as follows. We believe that each of the transactions identified below was exempt from the

registration requirements of the Securities Act by virtue of Section 4(2) or Rule 701 for offers and sales of our securities pursuant to compensatory benefit plans.

In October 1998, we issued a convertible note to Tripos, Inc. in the amount of \$1,500,000.

In December 1998, we issued warrants to purchase 100,000 shares of common stock, at an exercise price of \$0.70 per share to Tripos, Inc. in connection with cooperative technology agreement that we entered into with Tripos.

In August 1998, we issued 3 1/3 units to various investors for total cash consideration of \$200,000. The units represented an aggregate of 40,000 shares of Series C preferred stock and warrants to purchase an aggregate of 13,333 shares of common stock at an exercise price of \$5.75 per share.

In January 1999, we issued 4,871,060 shares of Series D preferred stock to various investors for consideration consisting of cash consideration of \$15,478,918 and the conversion of the note that we issued to Tripos in October 1998. We received net cash proceeds of \$14,132,224 after payment of fees of \$1,346,694. Additionally, in connection with the offering, we issued a warrant to our placement agent in consideration of services rendered to us by them, for 280,086 shares of common stock at an exercise price of \$3.49 per share.

In April 1999, we issued a warrant for 18,000 shares of Series D preferred stock at an exercise price of \$3.49 per share to Silicon Valley Bank in connection with a lease line of credit.

In January 2000, we issued 2,000,000 shares of Series E preferred stock to some of our previous investors for total cash consideration of \$8,000,000.

In March 2000, we issued 2,466,839 shares of Series F preferred stock to various investors for total cash consideration of \$12,827,563.

In April 2000, we issued 1,323,146 shares of Series G preferred stock to various investors, including a member of our management, for total cash consideration of \$9,658,966.

Pursuant to our 1998 Equity Compensation Plan, during 1998 through 2000, we granted options to some of our employees, directors, officers and advisors, to purchase a total of 1,462,600 shares of common stock at a weighted average exercise price of \$0.48, of which options for 611,225 shares have been exercised.

Pursuant to our 2000 Equity Compensation Plan, in 2000 and through March 31, 2001, we granted options to some of our employees, directors, officers and advisors, to purchase a total of 850,750 shares of common stock at a weighted average exercise price of \$21.60 per share. None of these options have been exercised.

II-2

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(A) EXHIBITS:

1.1 Form of underwriting agreement

| 3.1   | Amended and restated certificate of incorporation of Arena Pharmaceuticals, Inc. (filed as Exhibit 3.1 to Arena's registration statement on Form S-1, as amended, as filed on July 25, 2000 and incorporated by reference herein)   |
|-------|---|
| 3.2   | Amended and restated by-laws of Arena (filed as Exhibit 3.2 to Arena's registration statement on Form S-1, as amended, as filed on July 19, 2000 and incorporated by reference herein)  |
| 4.2   | Form of common stock certificates (filed as Exhibit 4.2 to Arena's registration statement on Form S-1, as amended, as filed on July 19, 2000 and incorporated by reference herein)  |
| 4.3   | Investor Rights Agreements (filed as Exhibit 4.3 to Arena's registration statement on Form S-1, as amended, as filed on July 25, 2000 and incorporated by reference herein)   |
| 5.1   | Opinion of Morgan, Lewis & Bockius LLP  |
| 10.1  | 1998 Equity Compensation Plan (filed as Exhibit 10.1 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated by reference herein)   |
| 10.2  | 2000 Equity Compensation Plan (filed as Exhibit 10.2 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated by reference herein)   |
| 10.3  | Services Agreement, dated May 26, 1999, by and between ChemNavigator.com, Inc. and Jack Lief (filed as Exhibit 10.3 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated by reference herein)  |
| 10.4  | Services Agreement, dated of May 26, 1999, by and between ChemNavigator.com, Inc. and Richard P. Burgoon, Jr. (filed as Exhibit 10.4 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated by reference herein)                                       |
| 10.5  | Services Agreement, dated May 26, 1999, by and between ChemNavigator.com, Inc. and Robert Hoffman (filed as Exhibit 10.5 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated by reference herein)   |
| 10.6  | Lease, dated as of March 1998, by and between ARE 1666 Nancy Ridge, LLC and Arena, as amended by First Amendment to Lease dated as of June 30, 1998 (filed as Exhibit 10.6 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated by reference herein) |
| 10.7+ | Agreement, effective May 29, 2000, by and between Arena and Taisho Pharmaceutical Co., Ltd. (filed as Exhibit 10.7 to Arena's report on Form 10-K for the year ended December 31, 2000 and incorporated by reference herein)  |
| 10.8+ | First Amendment effective January 24, 2001 by and between Arena and Taisho Pharmaceuticals, Co., Ltd. (filed as Exhibit 10.8 to Arena's report on Form 10-K for the year ended December 31, 2000 and incorporated by reference herein)  |

| 10.9+  | License Agreement, effective as of January 23, 1998 by and between Arena and SSP Co., Ltd., as amended by Addendum No. 1, dated April 5, 1999 (filed as Exhibit 10.8 to Arena's registration statement on Form S-1 filed on April 28, 2000 and incorporated by reference herein)   |
|--------|--|
|        | II-3   |
| 10.10+ | Research Collaboration and License Agreement, effective as of April 14, 2000, by and between Arena and Eli Lilly and Company (filed as Exhibit 10.9 to Arena's registration statement on Form S-1, as amended, as filed on July 19, 2000 and incorporated by reference herein)   |
| 10.11+ | Agreement, dated effective as of January 24, 2000, by and between Arena and Fujisawa Pharmaceutical Co., Ltd. (filed as Exhibit 10.10 to Arena's registration statement on Form S-1, as amended, as filed on July 19, 2000 and incorporated by reference herein)   |
| 10.12  | Binding Letter of Intent & Memorandum of Agreement, dated as of April 3, 2000, between Arena and Lexicon Genetics, Inc. (filed as Exhibit 10.11 to Arena's registration statement on Form S-1, as amended, as filed on July 19, 2000 and incorporated by reference herein)   |
| 10.13  | Agreement, effective as of September 15, 1999, by and between Arena and Neurocrine Biosciences, Inc. (filed as Exhibit 10.12 to Arena's registration statement on Form S-1, as amended, as filed on July 19, 2000 and incorporated by reference herein)  |
| 10.14  | Purchase and Sale Agreement effective December 1, 2000 by and between Arena and Limar Realty Corp. #13 (incorporated by reference to Arena's report on Form 10-K for the year ended December 31, 2000 and incorporated by reference herein)  |
| 10.15  | Agreement and Plan of Merger, dated February 15, 2001 by and among Arena, BRL Screening, Inc., Bunsen Rush Laboratories, Inc., and Ethan A. Lerner, Michael R. Lerner, Peter M. Lerner, David Unett and Alison Roby-Shemkovitz (incorporated by reference to Arena's report on Form 8-K, as filed on February 20, 2001 and incorporated by reference herein) |
| 10.16  | Binding letter of Intent & Memorandum of Agreement dated as of April 15, 2001 regarding purchase of preferred stock of Axiom Biotechnologies Inc. by Arena (incorporated by reference to Arena's report on Form 8-K as filed on April 30, 2001 and incorporated by reference herein)   |
| 10.17+ | Agreement effective as of March 21, 2001 by and between Arena and Taisho Pharmaceutical, Co., Ltd. (incorporated by reference to Arena's report on Form 10-Q for the quarter ended March 31, 2001 and incorporated by reference herein)  |

| 10.18 | 2001 Arena Employee Stock Purchase Plan (incorporated by reference to Exhibit B of Arena's Proxy Statement regarding Arena's May 8, 2001 Annual Stockholders Meeting, filed on March 29, 2001) |
|-------|--|
| 21.1  | Subsidiaries of the registrant   |
| 23.1  | Consent of Ernst & Young LLP, independent auditors   |
| 23.2  | Consent of Morgan, Lewis & Bockius LLP (contained in the opinion filed as exhibit $5.1$ )  |
| 24.1  | Power of attorney (contained in signature page)  |
|       |  |

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+ Confidential treatment has been granted for portions of this document.

#### (B) FINANCIAL STATEMENT SCHEDULES

All information for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission is either included in our financial statements or is not required under the related instructions or are inapplicable, and therefore have been omitted.

II-4

#### ITEM 17. UNDERTAKINGS

- (a) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 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 Act and will be governed by the final adjudication of such issue.
- (b) The undersigned registrant hereby undertakes that:
  - (1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it

was declared effective.

NAME

-----Michael Steinmetz

(2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

II-5

#### SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this amendment to be signed on its behalf by the undersigned, thereunto duly authorized, in San Diego, California, on June 21, 2001.

ARENA PHARMACEUTICALS, INC.

TITLE

| By: | /s/ JACK LIEF* |
|-----|----------------|
|     |                |
|     | Jack Lief      |

PRESIDENT AND CHIEF EXECUTIVE OFFICE

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.

| /s/ JACK LIEF*              | Director, President and Chief Executive Officer (principal executive officer) | June 21, 2 |
|-----------------------------|---|------------|
| Jack Lief                   |   |            |
| /s/ DOMINIC P. BEHAN*       | Director and Vice President, Research   | June 21, 2 |
| Dominic P. Behan            |   |            |
| /s/ DEREK T. CHALMERS*      | Director and Vice President, Research   | June 21, 2 |
| Derek T. Chalmers           |   |            |
| /s/ ROBERT HOFFMAN*         | Vice President, Finance (principal financial and accounting officer)          | June 21, 2 |
| Robert Hoffman              |   |            |
| /s/ JOHN P. MCALISTER, III* | Director  | June 21, 2 |
| John P. McAlister, III      |   |            |
| /s/ MICHAEL STEINMETZ*      | Director  | June 21, 2 |

DATE

/s/ STEFAN RYSER\*
-----Stefan Ryser

Director

June 21, 2

\*By: /s/ RICHARD P. BURGOON, JR.

Richard P. Burgoon, Jr.
ATTORNEY-IN-FACT

II-6

## EXHIBIT INDEX

| 1.1  | Form of underwriting agreement   |
|------|--|
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| 10.2 | 2000 Equity Compensation Plan (filed as Exhibit 10.2 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated by reference herein)  |
| 10.3 | Services Agreement, dated May 26, 1999, by and between ChemNavigator.com, Inc. and Jack Lief (filed as Exhibit 10.3 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated by reference herein) |
| 10.4 | Services Agreement, dated of May 26, 1999, by and between ChemNavigator.com, Inc. and Richard P. Burgoon, Jr. (filed as Exhibit 10.4 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated     |

by reference herein)

| 10.5   | Services Agreement, dated May 26, 1999, by and between ChemNavigator.com, Inc. and Robert Hoffman (filed as Exhibit 10.5 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated by reference herein)   |
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| 10.6   | Lease, dated as of March 1998, by and between ARE 1666 Nancy Ridge, LLC and Arena, as amended by First Amendment to Lease dated as of June 30, 1998 (filed as Exhibit 10.6 to Arena's registration statement on Form S-1, as amended, as filed on June 22, 2000 and incorporated by reference herein) |
| 10.7+  | Agreement, effective May 29, 2000, by and between Arena and Taisho Pharmaceutical Co., Ltd. (filed as Exhibit 10.7 to Arena's report on Form 10-K for the year ended December 31, 2000 and incorporated by reference herein)  |
| 10.8+  | First Amendment effective January 24, 2001 by and between Arena and Taisho Pharmaceuticals, Co., Ltd. (filed as Exhibit 10.8 to Arena's report on Form 10-K for the year ended December 31, 2000 and incorporated by reference herein)  |
| 10.9+  | License Agreement, effective as of January 23, 1998 by and between Arena and SSP Co., Ltd., as amended by Addendum No. 1, dated April 5, 1999 (filed as Exhibit 10.8 to Arena's registration statement on Form S-1 filed on April 28, 2000 and incorporated by reference herein)                      |
| 10.10+ | Research Collaboration and License Agreement, effective as of April 14, 2000, by and between Arena and Eli Lilly and Company (filed as Exhibit 10.9 to Arena's registration statement on Form S-1, as amended, as filed on July 19, 2000 and incorporated by reference herein)                        |
| 10.11+ | Agreement, dated effective as of January 24, 2000, by and between Arena and Fujisawa Pharmaceutical Co., Ltd. (filed as Exhibit 10.10 to Arena's registration statement on Form S-1, as amended, as filed on July 19, 2000 and incorporated by reference herein)                                      |
| 10.12  | Binding Letter of Intent & Memorandum of Agreement, dated as of April 3, 2000, between Arena and Lexicon Genetics, Inc. (filed as Exhibit 10.11 to Arena's registration statement on Form S-1, as amended, as filed on July 19, 2000 and incorporated by reference herein)                            |
| 10.13  | Agreement, effective as of September 15, 1999, by and between Arena and Neurocrine Biosciences, Inc. (filed as Exhibit 10.12 to Arena's registration statement on Form S-1, as amended, as filed on July 19, 2000 and incorporated by reference herein)   |
| 10.14  | Purchase and Sale Agreement effective December 1, 2000 by   |

|        | and between Arena and Limar Realty Corp. #13 (incorporated by reference to Arena's report on Form 10-K for the year ended December 31, 2000 and incorporated by reference herein)  |
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| 10.15  | Agreement and Plan of Merger, dated February 15, 2001 by and among Arena, BRL Screening, Inc., Bunsen Rush Laboratories, Inc., and Ethan A. Lerner, Michael R. Lerner, Peter M. Lerner, David Unett and Alison Roby-Shemkovitz (incorporated by reference to Arena's report on Form 8-K, as filed on February 20, 2001 and incorporated by reference herein) |
| 10.16  | Binding letter of Intent & Memorandum of Agreement dated as of April 15, 2001 regarding purchase of preferred stock of Axiom Biotechnologies Inc. by Arena (incorporated by reference to Arena's report on Form 8-K as filed on April 30, 2001 and incorporated by reference herein)   |
| 10.17+ | Agreement effective as of March 21, 2001 by and between Arena and Taisho Pharmaceutical, Co., Ltd. (incorporated by reference to Arena's report on Form 10-Q for the quarter ended March 31, 2001 and incorporated by reference herein)  |
| 10.18  | 2001 Arena Employee Stock Purchase Plan (incorporated by reference to Exhibit B of Arena's Proxy Statement regarding Arena's May 8, 2001 Annual Stockholders Meeting, filed on March 29, 2001)   |
| 21.1   | Subsidiaries of the registrant   |
| 23.1   | Consent of Ernst & Young LLP, independent auditors   |
| 23.2   | Consent of Morgan, Lewis & Bockius LLP (contained in the opinion filed as exhibit $5.1$ )  |
| 24.1   | Power of attorney (contained in signature page)  |

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<sup>+</sup> Confidential treatment has been granted for portions of this document.