SANGAMO BIOSCIENCES INC
Form 10-K
February 23, 2012
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

þ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2011

or

¨ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the transition period from to

Commission file number: 0-30171

SANGAMO BIOSCIENCES, INC.

(Exact name of registrant as specified in its charter)

Delaware	**68-0359556**
(State or other jurisdiction of incorporation or organization)	***(I.R.S. Employer Identification No.)***
501 Canal Boulevard, Suite A	
Richmond, California	**94804**
(Address of principal executive offices)	***(Zip Code)***

(510) 970-6000

(Registrant s telephone number, including area code)

None

(Former name, former address and former fiscal year, if changed since last report)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $0.01 par value per share	Nasdaq Global Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No þ

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ¨ No þ

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes þ No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes þ No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant s knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. þ

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of large accelerated filer, accelerated filer, and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer ¨ Accelerated filer þ Non-accelerated filer ¨ Smaller reporting company ¨

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No þ

The aggregate market value of the voting stock held by non-affiliates of the registrant based upon the closing sale price of the common stock on June 30, 2011 (the last business day of the registrant s most recently completed second fiscal quarter), as reported on the Nasdaq Global Market was $294,045,039. For purposes of this calculation, directors and executive officers of the registrant have been deemed affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

Indicate the number of shares outstanding of each of the issuer s classes of common stock, as of the latest practicable date.

Class	Outstanding at February 1, 2012
Common Stock, $0.01 par value per share	52,554,795 shares

DOCUMENTS INCORPORATED BY REFERENCE

Document	Parts Into Which Incorporated
Proxy Statement for the 2012 Annual Meeting of Stockholders	Part III

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some statements contained in this report are forward-looking with respect to our operations, research, development and commercialization activities, clinical trials, operating results and financial condition. These statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements include, but are not limited to, statements about:

- our strategy;
- product development and commercialization of our products;
- clinical trials;
- partnering;
- revenues from existing and new collaborations;
- our research and development and other expenses;
- sufficiency of our cash resources;
- our operational and legal risks; and
- our plans, objectives, expectations and intentions and any other statements that are not historical facts.

In some cases, you can identify forward-looking statements by terms such as: anticipates, believes, continues, could, estimates, expects, may, plans, seeks, should and will. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements. We discuss many of these risks in greater detail under the headings Risk Factors and Management s Discussion and Analysis of Financial Results of Operations in this Form 10-K. Sangamo undertakes no obligation to publicly release any revisions to forward-looking statements to reflect events or circumstances arising after the date of this report. Readers are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this Annual Report on Form 10-K.

ZFP Therapeutic® is a registered trademark of Sangamo BioSciences, Inc. This report also contains trademarks and trade names that are the property of their respective owners.

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PART I

ITEM 1 BUSINESS

Overview

We are a clinical stage biopharmaceutical company focused on the research, development and commercialization of engineered DNA-binding proteins for the development of novel therapeutic strategies for unmet medical needs. Our current mission is to develop ZFP Therapeutics® through early stage clinical testing and strategically partner with biopharmaceutical companies at key value inflection points to execute late-stage clinical trials and commercial development. In the long term, our goal is to forward integrate to capture the value of late-stage and commercial ZFP Therapeutic products.

We, and our licensed partners, are the leaders in the research, development and commercialization of zinc finger DNA-binding proteins (ZFPs), a naturally occurring class of proteins. We have used our knowledge and expertise to develop a proprietary technology platform. ZFPs can be engineered (see Fig. 1) to make ZFP nucleases (ZFNs), proteins that can be used to modify DNA sequences in a variety of ways and ZFP transcription factors (ZFP TFs), proteins that can be used to turn genes on or off. As ZFPs act at the DNA level, they have broad potential applications in several areas including human therapeutics, plant agriculture, research reagents, as well as production of transgenic animals and cell-line engineering.

The main focus for our company is the development of novel human therapeutics and we are building a pipeline of ZFP Therapeutics. Our lead ZFP Therapeutic, SB-728-T, a ZFN-modified autologous T-cell product for the treatment of HIV/AIDS, is the first therapeutic application of our ZFN technology and is being evaluated in an ongoing Phase 2 and two Phase 1/2 clinical trials. We expect to present preliminary data from this program at appropriate scientific and medical meetings in 2012.

We have preclinical ZFP Therapeutic development programs in hemophilia and Parkinson s disease. In addition, we have research stage programs in other monogenic diseases; genetic conditions that result from a defect in a single gene, including hemoglobinopathies such as sickle cell anemia, lysosomal storage diseases and certain immunodeficiencies. On January 31, 2012, we entered into a collaboration and license agreement with Shire AG (Shire), pursuant to which we will collaborate with Shire to research, develop and commercialize human therapeutics for hemophilia and other monogenic diseases based on our ZFP technology.

We believe the potential commercial applications of ZFPs are broad-based and we have licensed our ZFP platform in fields outside human therapeutics as follows to facilitate the sale or license of ZFNs and ZFP TFs in those fields:

We have a license agreement with the research reagent company Sigma-Aldrich Corporation (Sigma). Sigma has the exclusive rights to develop and market high value laboratory research reagents based upon our ZFP technology as well as ZFP-modified cell lines for commercial production of protein pharmaceuticals and ZFP-engineered transgenic animals. Sigma is marketing ZFN-derived gene editing tools under the trademark CompoZr® and is selling transgenic animals through its SAGE™ Labs business unit.

We have a license agreement with Dow AgroSciences, LLC (DAS), a wholly owned subsidiary of Dow Chemical Corporation. Under the agreement, we have provided DAS with access to our ZFP technology and the exclusive rights to use it to modify the genomes or alter the nucleic acid or protein expression of plant cells, plants, or plant cell cultures. DAS markets our ZFN technology under the trademark EXZACT™ Precision Technology. We have retained rights to use plants or plant-derived products to deliver ZFP TFs or ZFNs into human or animals for diagnostic, therapeutic, or prophylactic purposes.

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We also have license agreements with pharmaceutical and life sciences companies including Genentech Inc. (Genentech), F. Hoffmann La Roche Ltd and Hoffmann-La Roche Inc. (Roche) and Open Monoclonal Technology, Inc. (OMT). Pursuant to these license agreements, we granted non-exclusive rights to use our ZFP technology for protein pharmaceutical production and transgenic animals.

We have a substantial intellectual property position in the design, selection, composition, and use of engineered ZFPs to support all of these commercial activities. As of February 1, 2012, we either own outright or have exclusively licensed the commercial rights to approximately 347 patents issued in the United States and foreign national jurisdictions, and we have 420 patent applications owned and licensed pending worldwide. We continue to license and file new patent applications that strengthen our core and accessory patent portfolio. We believe that our intellectual property position is a critical element in our ability to research, develop, and commercialize products and services based on ZFP technology across our chosen applications.

DNA, Genes, and Transcription Factors

DNA is present in all cells except mature red blood cells, and encodes the inherited characteristics of all living organisms. A cell s DNA is organized in chromosomes as thousands of individual units called genes. Genes encode proteins, which are assembled through the process of transcription whereby DNA is transcribed into ribonucleic acid (RNA) and, subsequently, translation whereby RNA is translated into protein. DNA, RNA, and proteins comprise many of the targets for pharmaceutical drug discovery and therapeutic intervention.

The human body is composed of specialized cells that perform different functions and are thus organized into tissues and organs. All somatic cells in an individual s body contain the same set of genes. However, only a fraction of these genes are turned on, or expressed, in an individual human cell at any given time. Genes are regulated (i.e. turned on or turned off) in response to a wide variety of stimuli and developmental signals. Distinct sets of genes are expressed in different cell types. It is this pattern of gene expression that determines the structure, biological function, and health of all cells, tissues, and organisms. The aberrant expression of certain genes can lead to disease.

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Transcription factors are proteins that bind to DNA and regulate gene expression. A transcription factor recognizes and binds to a specific DNA sequence within or near a particular gene and causes expression of that gene to be turned on (activated) or turned off (repressed). In higher organisms, naturally occurring transcription factors typically comprise two principal domains: the first is a DNA-binding domain, (designated in Figure 1 as the recognition domain) which recognizes a target DNA sequence and thereby directs the transcription factor to the proper chromosomal location; the second is a functional domain that causes the target gene to be activated or repressed (see Figure 1).

Figure 1

Schematic of the Two-Domain Structure of a ZFP Therapeutic

Engineered ZFP Nucleases (ZFNs) for Gene Modification and Engineered Zinc Finger Protein Transcription Factors (ZFP TFs) for Gene Regulation

Zinc finger DNA-binding proteins or ZFPs are the largest class of naturally occurring transcription factors in organisms from yeast to humans. Consistent with the two-domain structure of natural ZFP transcription factors, we take a modular approach to the design of the proteins that we engineer. The ZFP portion, the DNA-recognition domain, is typically composed of three or more zinc fingers. Each individual finger recognizes and binds to a three-four base pair sequence of DNA and multiple fingers can be linked together to recognize longer stretches of DNA, thereby improving specificity. By modifying the amino acids of a ZFP that directly interact with DNA, we can engineer novel ZFPs capable of recognizing pre-selected DNA sequences within, or near, virtually any gene. We use the engineered ZFP DNA-binding domain linked to a functional domain. The ZFP DNA-binding domain brings the functional domain into the proximity of the gene of interest.

Our engineered ZFPs can be attached to a cleavage domain of a restriction endonuclease, an enzyme that cuts DNA, creating a zinc finger nuclease or ZFN. The ZFN is able to recognize its intended gene target through its engineered ZFP DNA-binding domain. When a pair of such ZFNs is bound to the DNA in the correct orientation and spacing, the DNA sequence is cut between the ZFP binding sites. DNA binding by both ZFNs is necessary for cleavage, as both domains of the restriction endonuclease must be present, in the correct orientation, to mediate DNA cutting. This break in the DNA triggers a natural process of DNA repair in the cell. The repair process can be harnessed to achieve one of several outcomes that may be therapeutically useful. If cells are simply treated with ZFNs alone the repair process frequently results in joining together of the two ends of the broken DNA and the consequent loss of a small amount of genetic material that results in disruption of the original DNA sequence. This can result in the generation of a shortened or non-functional protein, i.e. gene

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disruption. We believe that ZFN-mediated gene modification may be used to disrupt a gene that is involved in disease pathology such as disruption of the CCR5 gene to treat HIV infection. In contrast, if cells are treated with ZFNs in the presence of an additional donor DNA sequence that encodes the correct gene sequence, the cell can use the donor as a template to correct the cell s gene as it repairs the break resulting in ZFN-mediated gene correction. ZFN-mediated gene correction enables a corrected gene to be expressed in its natural chromosomal context and may provide a novel approach for the precise repair of DNA sequence mutations responsible for monogenic diseases such as hemophilia, sickle cell anemia or X-linked severe combined immunodeficiency (X-linked SCID). In addition, by making the donor sequence a gene-sized segment of DNA, a new copy of a gene can also be added into the genome at a specific location. The ability to place a gene-sized segment of DNA specifically into a pre-determined location in the genome eliminates the insertional mutagenesis concerns associated with traditional gene replacement approaches, in which insertion of the altered gene typically occurs at random locations in the genome, and broadens the range of mutations of a gene that can be corrected in a single step.

We can also create a ZFP TF which is capable of controlling or regulating the expression of a target gene in the desired manner. For instance, attaching an activation domain to a ZFP will cause a target gene to be turned on. Alternatively, a repression domain causes the gene to be turned off. We have a preclinical ZFP Therapeutic program for Parkinson s disease in which we are evaluating a ZFP TF designed to upregulate the gene for glial cell line-derived neurotrophic factor (GDNF), thus increasing the expression of this potent neurotrophic factor that has shown promise in preclinical testing to slow or stop the progression of Parkinson s. Based on successful studies of a ZFP activator of GDNF in a rat model, the ZFP Therapeutic approach is being evaluated in a non-human primate model of the disease.

To date, we have designed, engineered, and assembled several thousand ZFPs and have tested many of these proteins for their affinity, or tightness of binding to their DNA target as well as their specificity, or preference for their intended DNA target. We have developed methods for the design, selection, and assembly of ZFPs capable of binding to a wide spectrum of DNA sequences and genes. We have linked ZFPs to numerous functional domains to create gene-specific ZFP TFs and have demonstrated the ability of these ZFP TFs to regulate hundreds of genes in dozens of different cell types and in whole organisms, including mice, rats, rabbits, pigs, fruit flies, worms, zebrafish and yeast, and in plant species including canola and maize. We and our collaborators have published data in peer-reviewed scientific journals on the transcriptional function of ZFP TFs, successful gene modification using ZFNs and the resulting changes in the behavior of the target cell, tissue, or organism. Sigma is currently using ZFNs to generate transgenic animals and cell lines that have specific genetic modifications that make them useful models of human disease. These high value biologic tools are being used by academics, and biotechnology and pharmaceutical companies for medical research and drug development. We are currently evaluating the safety and efficacy of ZFNs in human clinical trials.

ZFP Therapeutics Provide the Opportunity to Develop a New Class of Human Therapeutics

With our ability to generate and deliver gene-specific ZFNs for the correction, disruption or addition of target genes and DNA sequences and ZFP TFs for the activation or repression of genes, we are focused on developing a new class of highly differentiated human therapeutics. We believe that as more genes are linked to specific diseases, the clinical breadth and scope of our ZFP Therapeutic applications may be substantial.

We believe that ZFP Therapeutics provide a unique and proprietary approach to drug design and may have differential competitive advantages over small-molecule drugs, protein pharmaceuticals and RNA-based approaches enabling the development of therapies for a broad range of unmet medical needs.

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For example, ZFP Therapeutics can:

Potentially be used to treat a broad range of diseases. ZFP Therapeutics act at the DNA level to regulate gene expression or modify genes. We believe that we can generate ZFPs to recognize virtually any gene target allowing direct modulation of the gene and enabling a potentially broad applicability.

Target non-druggable targets. ZFNs and ZFP TFs act through a mechanism that is unique among biological drugs: direct regulation or modification of the disease-related or therapeutic gene as opposed to the RNA or protein target encoded by that gene. Following the genomics revolution of the 1990s, the sequencing and publication of the human genome, and the industrialization of genomics-based drug discovery, pharmaceutical and biotechnology companies have validated and characterized many new drug targets. Many of these targets have a clear role in disease processes but cannot be bound or modulated for therapeutic purposes by small molecules. Alternative therapeutic approaches may be required to modulate the biological activity of these so-called non-druggable targets. This may create a significant clinical and commercial opportunity for the therapeutic modification or regulation of disease-associated genes using engineered ZFNs or ZFP TFs. Thus, a target which may be intractable to treatment using a small molecule or monoclonal antibody can be modified, turned on or turned off at the DNA level using ZFP technology.

Provide novel activities such as gene modification and regulation of gene expression to address drug targets. Engineered ZFNs enable the disruption, correction or targeted addition of a gene sequence and ZFP TFs enable not just repression of the expression of a therapeutically relevant gene but also its activation in a cell. This gives our technology a degree of flexibility not seen in other drug platforms. Our ZFN gene-editing technology allows the correction of a mutation in a defective gene. This provides a novel therapeutic approach for monogenic diseases, diseases caused by a mutation in a single gene, such as hemophilia and sickle cell anemia. In contrast, direct modification of genes cannot be achieved using antisense RNA, or siRNA, which act by interfering with the expression of cellular RNA, or conventional small molecules, antibodies, or other protein pharmaceuticals that primarily act to block or antagonize the action of a protein.

Provide high specificity and selectivity for targets. ZFP Therapeutics can be designed to act with high specificity and we have published such data (*Proc. Natl. Acad. Sci* (2003) vol:100, 11997-12002; *J Neurosci. (2010) 30(49):16469-74; Nat Biotechnol. (2008) 26(7):808-16 and Nature (2011)478(7369):391-4*). In addition, there are generally only two targets per cell for a ZFP Therapeutic which means that ZFNs and ZFP TFs need to be available in the cell in very low concentrations. In contrast, drugs that act on protein and RNA targets that are naturally present in higher cellular concentrations need to be administered in higher concentrations. Many small molecule and RNA-based approaches either affect multiple targets demonstrating so-called off-target effects or are toxic in the concentrations required to be therapeutically effective.

Be used transiently to obtain a permanent therapeutic effect. Permanent gene disruption, correction or addition requires only brief cellular expression of ZFNs.

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THERAPEUTIC PRODUCT DEVELOPMENT

ZFP Therapeutic Product Development Programs

Product Candidate	Targeted Indication	Stage of Development	Protocol	Milestones
SB-728-T	HIV/AIDS	Phase 2	SB-728-902 Cohort 5	Trial initiated in January 2012
		Phase 1/2	SB-728-1101	Trial initiated in January 2012
		Phase 1/2	SB-728-1002	Trial initiated in October 2010 data in 2012
		Phase 1	SB-728-902	Enrollment completed
		Phase 1	SB-728-T*	Trial ongoing at University of Pennsylvania data in 1Q 2012
SB-313xTZ	Glioblastoma	Phase 1	GRm13Z40-2*	Trial ongoing at City of Hope

Table 1: Summary of ongoing clinical trials evaluating our ZFP Therapeutics.

* Investigator sponsored trial

Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS)

Market Opportunity

HIV infection results in the death of immune system cells, particularly $CD4^+$ T-cells, and thus leads to AIDS, a condition in which the body s immune system is depleted to such a degree that the patient is unable to fight off common infections. Ultimately, these patients succumb to opportunistic infections or cancers. According to UNAIDS/WHO, over 2.7 million people were newly infected with HIV in 2010. An estimated 1.8 million people died of AIDS in the same year. There are now over 34 million people living with HIV and AIDS worldwide. The CDC estimates that, in the United States alone, there are 1.2 million people living with HIV/AIDS, approximately 50,000 new infections each year and more than 16,000 people with AIDS were estimated to have died in 2008.

Current Treatments and Unmet Medical Need

Currently, there are approximately 30 antiretroviral drugs approved by the FDA to treat people infected with HIV. These drugs fall into four major classes: reverse transcriptase inhibitors, protease inhibitors, integrase inhibitors and entry and fusion inhibitors. This latter class also includes a small molecule antagonist of the CCR5 receptor, Selzentry® (maraviroc). This drug is being used in combination with other antiretroviral agents for treatment-experienced adult patients infected with CCR5-tropic HIV-1 strains that are resistant to multiple antiretroviral agents. The drug carries a black box warning of liver toxicity.

As HIV reproduces, variants of the virus emerge, including some that are resistant to antiretroviral drugs. Therefore, doctors recommend that people infected with HIV take a combination of antiretroviral drugs known as highly active antiretroviral therapy, or HAART. This strategy typically combines drugs from at least three different classes of antiretroviral drugs. Currently available drugs do not cure HIV infection or AIDS. They can suppress the virus, even to undetectable levels, but they cannot eliminate HIV from the body. Hence, people with HIV need to take antiretroviral drugs continuously which can have significant side effects over time. There is no therapeutic approach available which protects CD4+ T-cells, reduces viral load and does not require daily dosing.

Sangamo s Therapeutic Approach

Our therapeutic approach aims to use our ZFN-mediated gene editing technology to replicate a naturally occurring human mutation which renders individuals largely resistant to infection with the most common strain

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of HIV. CCR5 is a co-receptor for HIV entry into T-cells and, if CCR5 is not expressed on their surface, HIV infects them with lower efficiency. A population of individuals that is immune to HIV infection, despite multiple exposures to the virus, has been identified and extensively studied. The majority of these individuals have a natural mutation, CCR5 delta-32, resulting in the expression of a shortened, or truncated, and non-functional CCR5 protein. This mutation appears to have no observable deleterious effect. Individuals who carry the CCR5 delta-32 mutation on only one of their two CCR5 gene copies (heterozygotes), so-called long term non-progressors tend to take longer to develop AIDS. In addition, a study published in *Blood* in December 2010 reported an effective cure when an AIDS patient with leukemia received a bone marrow transplant from a matched donor with this CCR5 delta-32 mutation. This approach transferred the hematopoietic stem cells (HSCs) residing in the bone marrow from the delta-32 donor, and provided a self-renewable and potentially lifelong source of HIV-resistant immune cells. After transplantation, the AIDS patient was able to discontinue all anti-HIV drug treatments, CD4 counts increased, and viral load dropped to an undetectable level, demonstrating effective transplantation of protection from HIV infection.

We are using our ZFN-mediated gene disruption technology to disrupt the CCR5 gene in cells of a patient s immune system to make these cells permanently resistant to HIV infection. The aim is to provide a population of HIV-resistant cells that can fight HIV and opportunistic infections mimicking the situation in individuals that carry the natural mutation. In December 2008, in collaboration with scientists at the University of Pennsylvania, an IND application was filed for a Phase 1 trial of our CCR5 ZFP Therapeutic, SB-728-T. This single-dose investigator-sponsored trial began enrolling subjects in February 2009, at the University of Pennsylvania. In September 2009, we filed an IND application and initiated a dose-escalation Phase 1 clinical trial (SB-728-902) of SB-728-T. Both Phase 1 studies were in HIV-infected individuals who were on HAART. The studies were designed primarily to evaluate the safety and tolerability of this ZFP Therapeutic approach; however, subjects CD4 T-cell counts, levels of CCR5-modified T-cells and viral burden were also monitored. Preliminary data from both trials were presented in the first quarter of 2011 and demonstrated that the approach was well-tolerated in these subjects. In addition, we observed durable engraftment and persistence of SB-728-T, the ability of these cells to traffic to the gut mucosa and improvements the overall CD4 T-cell count and the CD4:CD8 ratio in multiple subjects.

In October 2010, we also initiated a new Phase 1/2 study (SB-728-1002) to evaluate SB-728-T in HIV-infected individuals who are not yet on HAART. We have completed accrual of this trial. In January 2012, we announced the initiation of two new studies (SB-728-1101 and SB-728-902, Cohort 5), based on data from our Phase 1 trials that demonstrated a strong correlation between the estimated numbers of engrafted cells in which both copies of the CCR5 gene were modified (biallelic modification) and the reduction in viral load in treated subjects that underwent a HAART treatment interruption (TI). Using different approaches, both studies aim to increase the numbers of biallelically modified engrafted cells in SB-728-T-treated subjects and to evaluate the effect of increasing the numbers of these cells on the immune system and on viral load during a TI.

We also have a preclinical stage program to investigate this approach to treating HIV in hematopoietic stem cells and, with our collaborators at City of Hope and the University of Southern California, have funding for this program from a $14.5 million Disease Team Research Award granted by the California Institute for Regenerative Medicine (CIRM) of which we expect to receive $5.2 million in aggregate during the term of our four year collaboration. In addition, we have an early research stage program to develop our ZFN approach as an *in-vivo* application for which we received a Grand Challenges Explorations grant of $0.1 million from the Bill and Melinda Gates Foundation in 2009.

Glioblastoma Multiforme (GBM)

Clinicians at City of Hope (COH) are evaluating a ZFP Therapeutic that uses our ZFN technology to disrupt the expression of the gene encoding the glucocorticoid receptor in T-cells. Scientists at COH have developed an engineered protein known as an IL-13 zetakine that, when expressed in cytotoxic or killer T-cells, enables them to seek out and destroy glioblastoma cells in the brain. In an investigator-sponsored IND, patients have

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been treated with zetakine-modified T-cells which have shown significant anti-tumor activity. In this clinical protocol, T-cells are modified to express the zetakine. These modified cells are infused into the brain following surgery for the targeted elimination of residual tumor cells. Frequently, however, a glucocorticoid such as Decadron® must be administered to patients post-surgery to control brain swelling. Glucocorticoids inactivate or kill the therapeutic T-cells through a protein known as the glucocorticoid receptor (GR). Cells without a functional GR are drug-resistant and are therefore available to destroy tumor cells. The goal is to generate zetakine positive, GR-negative T-cells, thus enabling the full treatment effect to occur even in the presence of Decadron.

In December 2006, we entered into an exclusive license agreement with COH for use of the zetakine with our technology. We retain commercialization rights and COH receives success-based milestone and downstream payments. In 2009, our collaborators at COH filed an investigator-sponsored IND application for a Phase 1 clinical trial of this therapeutic and have an ongoing Phase 1 trial in subjects with recurrent/refractory GBM. However, due to changes in the standard of care for glioblastoma patients namely the introduction of Avastin subjects with recurrent GBM are not presenting with the same pattern of recurrent tumor as when the trial protocol was conceived. Thus, subjects whose clinical profiles fit the original trial design have been difficult to recruit. We expect that our collaborators will report data if, and when, they have treated an appropriate number of subjects.

Diabetic Neuropathy and Amyotrophic Lateral Sclerosis (ALS)

In October 2011, we announced that our Phase 2b study (SB-509-901) did not meet its primary or secondary clinical endpoints in subjects with moderate severity diabetic neuropathy (DN) as compared to placebo, and thus we ceased all development activities for this drug. SB-509 was an injectable plasmid encoding a ZFP TF designed to upregulate the endogenous expression of the gene encoding vascular endothelial growth factor (VEGF-A) and had been in clinical studies to evaluate its use to treat diabetic neuropathy and Amyotrophic Lateral Sclerosis (ALS) and in preclinical studies in models of stroke, spinal cord injury and traumatic brain injury.

ZFP Therapeutic Pre-Clinical Stage Programs

Hemophilia B

Hemophilia, a rare bleeding disorder in which the blood does not clot normally, is an example of a monogenic disease (a disease that is caused by a genetic defect in a single gene). There are several types of hemophilia caused by mutations in genes that encode factors which help the blood clot and stop bleeding when blood vessels are injured. The most prevalent form of the disease, hemophilia A, is caused by a defect in clotting Factor VIII while defects in clotting Factor IX lead to hemophilia B. The most severe forms of hemophilia affect males. According to the National Hemophilia Foundation, hemophilia A occurs in about one in every 5,000 male births in the US, and hemophilia B in about 1 in every 25,000. The standard treatment for individuals with hemophilia is replacement of the defective clotting factor with regular infusion of concentrates or recombinant factors, which are expensive, carry the risk of transmission of blood-borne diseases such as hepatitis and other viral infections, and sometimes stimulate the body to produce antibodies against the factors that inhibit the benefits of treatment. In these situations, other clotting factors such as Factor VII and X may be used to treat patients.

Using our ZFN-gene editing technology, we have published data demonstrating functional correction of the human factor IX gene in the liver by direct intravenous delivery of ZFNs in a mouse model of the disease *(Nature (2011)475(7355):217-21)*. Further preclinical studies are ongoing to develop a treatment therapy for

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hemophilia B which will provide a permanent correction and reduce or eliminate the need for infusions of clotting factor products.

Parkinson s Disease (PD)

Parkinson s disease is a chronic, progressive disorder of the central nervous system and results from the loss of cells in a section of the brain called the substantia nigra. These cells produce dopamine, a chemical messenger responsible for transmitting signals within the brain. Loss of dopamine causes critical nerve cells, or neurons, in the brain, to fire out of control, leaving patients unable to direct or control their movement in a normal manner. The symptoms of Parkinson s may include tremors, difficulty maintaining balance and gait, rigidity or stiffness of the limbs and trunk and general slowness of movement (also called bradykinesia). Patients may also eventually have difficulty walking, talking, or completing other simple tasks. Symptoms often appear gradually yet with increasing severity and the progression of the disease may vary widely from patient to patient. There is no cure for Parkinson s disease. Drugs have been developed that can help patients manage many of the symptoms; however, they do not prevent disease progression. According to the Parkinson s disease Foundation, approximately 60,000 Americans are diagnosed with PD each year and approximately one million people in the US live with the disease.

Glial cell line-derived neurotrophic factor (GDNF) is a potent neurotrophic factor that has shown promise in preclinical testing to slow or stop the progression of PD. In January 2007, we were awarded a two-year grant of $950,000 by The Michael J. Fox Foundation for Parkinson s Research (MJFF) to support the development of a ZFP TF activator of GDNF to treat PD. We have published positive preclinical studies in a rat model of the disease in collaboration with scientists at the University of California, San Francisco (UCSF) (*J Neurosci. (2010) 30(49):16469-74)*. In July 2010, we were awarded a second round of funding by MJFF to support further studies of ZFP TF activators of GDNF in non-human primates. The $900,000 award will be paid over a period of two years.

ZFP Therapeutic Research Programs

We also have several research stage ZFP Therapeutic programs in progress that use our ZFN-gene editing technology to address monogenic diseases. These include hemophilia A, hemoglobinopathies such as sickle cell anemia, lysosomal storage diseases and immune system disorders such as X-linked severe combined immunodeficiency (X-linked SCID).

CORPORATE RELATIONSHIPS

We are applying our ZFP technology platform to several commercial applications in which our products provide us and our strategic partners and collaborators with potential technical, competitive and economic advantages. Where and when appropriate, we have established and will continue to pursue corporate partnerships in non-therapeutic areas and ZFP Therapeutic strategic partnerships with selected pharmaceutical, biotechnology and chemical companies to fund internal research and development activities and to assist in product development and commercialization.

Collaboration and License Agreement with Shire AG in Human Therapeutics and Diagnostics

On January 31, 2012, we entered into a collaboration and license agreement with Shire AG (Shire), pursuant to which we will collaborate to research, develop and commercialize human therapeutics and diagnostics for hemophilia and other monogenic diseases based on our ZFP technology. Under the agreement, the two companies may develop potential human therapeutic or diagnostic products for seven gene targets. The initial four gene targets are blood clotting Factors VII, VIII, IX and X, and products developed for such initial gene targets would be used for treating or diagnosing hemophilia. Shire has the right, subject to certain limitations, to designate three additional gene targets. Pursuant to the Agreement, we have granted Shire an exclusive, world-

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wide, royalty-bearing license, with the right to grant sublicenses, to use our ZFP technology for the purpose of developing and commercializing human therapeutic and diagnostic products for the gene targets.

The initial research term of the agreement is six years and is subject to extensions upon mutual agreement and under other specified circumstances. We are responsible for all research activities through the submission of an Investigative New Drug Application (IND) or European Clinical Trial Application (CTA), while Shire is responsible for clinical development and commercialization of products generated from the research program from and after the acceptance of an IND or CTA for the product. Shire will reimburse us for our internal and external research program-related costs.

Under the agreement, we received an upfront license fee of $13.0 million. In addition, for each gene target, we are eligible to receive milestone payments upon the achievement of specified research, regulatory, clinical development, commercialization and sales milestones. The total amount of potential milestone payments for each of the seven gene targets, assuming the achievement of all specified milestones in the Agreement, is $213.5 million. The milestone payments for each gene target through the acceptance of an IND or CTA submission total $8.5 million. We will also receive royalty payments that are a tiered double-digit percentage of net sales of products developed under the collaboration.

The agreement may be terminated by (i) us or Shire, in whole or in part, for the uncured material breach of the other party, (ii) us or Shire for the bankruptcy or other insolvency proceeding of the other party and (iii) Shire, in its entirety, beginning 24 months after the effective date of the agreement upon 90 days advance written notice. In addition, Shire may terminate the Agreement with respect to an individual gene target at any time, and under certain circumstances may designate a replacement gene target for a terminated gene target. As a result, actual future milestone payments could be lower than the amounts stated above

Agreement with Sigma-Aldrich Corporation in Laboratory Research Reagents, Transgenic Animal and Commercial Protein Production Cell-line Engineering

In July 2007, we entered into a license agreement with Sigma-Aldrich Corporation (Sigma). Under the license agreement, we agreed to provide Sigma with access to its proprietary ZFP technology and the exclusive right to use the technology to develop and commercialize research reagents products and services in the research field, excluding certain agricultural research uses that we previously licensed to Dow AgroSciences LLC. Under the agreement, we and Sigma agreed to conduct a three-year research program to develop laboratory research reagents using our ZFP technology during which time we assisted Sigma in connection with its efforts to market and sell services employing our technology in the research field. We transferred the ZFP manufacturing technology to Sigma.

In October 2009, we expanded the license agreement with Sigma. In addition to the original terms of the license agreement, Sigma received exclusive rights to develop and distribute ZFP-modified cell lines for commercial production of protein pharmaceuticals and certain ZFP-engineered transgenic animals for commercial applications. Under the terms of the agreement, Sigma made an upfront cash payment of $20.0 million, consisting of a $4.9 million purchase of 636,133 shares of our common stock, valued at $4.9 million, and a $15.1 million upfront license fee. The upfront license fee was recognized on a straight-line basis from the effective date of the expanded license through July 2010, which represents the period over which we were obligated to perform research services for Sigma. We are also eligible to receive commercial license fees of $5.0 million based on a percentage of net sales and sublicensing revenue and thereafter a reduced royalty rate of 10.5% of net sales and sublicensing revenue. During the term of the license agreement, Sigma is obligated to pay us minimum annual payments, a share of certain revenues received by Sigma from sublicensees, and royalty payments on the sale of licensed products and services. Sigma also has the right to sublicense the ZFP technology for research applications and we will receive 50% of any sublicensing revenues in the first two years and 25% of any sublicensing revenues thereafter. We retain the sole right to use and license our ZFP technology for GMP production purposes, for the production of materials used in or administered to humans, and for any other

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industrial commercial use. In addition, upon the achievement of certain cumulative commercial milestones Sigma will make milestone payments to us up to an aggregate of $25.0 million. The agreements may be terminated by Sigma at any time with a 90-day notice or by either party upon an uncured material breach of the other party. As a result, actual future milestone payments could be lower than the amounts stated above. In the event of any termination, all rights to use our ZFP technology will revert to us, and Sigma will no longer be permitted to practice our ZFP technology or to develop or, except in limited circumstances, commercialize any products derived from our ZFP technology. Through December 31, 2011, we have received approximately $43.6 million from Sigma under the collaboration agreement.

Agreement with Dow AgroSciences in Plant Agriculture

We and our collaborators have shown that ZFNs and ZFP TFs can be used to regulate and modify genes in plants. The ability to regulate gene expression with engineered ZFP TFs may lead to the creation of new plants that increase crop yields, lower production costs and are more resistant to herbicides, pesticides, and plant pathogens, which could permit the development of branded agricultural products with unique nutritional and processing characteristics. In addition, ZFNs may be used to facilitate the efficient and reproducible generation of transgenic plants.

In October 2005, we entered into an exclusive commercial license with DAS. Under this agreement, we provide DAS with access to our proprietary ZFP technology and the exclusive right to use the technology to modify the genomes or alter the nucleic acid or protein expression of plant cells, plants, or plant cell cultures. We have retained rights to use plants or plant-derived products to deliver ZFNs and ZFP TFs into humans or animals for diagnostic, therapeutic, or prophylactic purposes. Our agreement with DAS provided for an initial three-year research term. In June 2008, DAS exercised its option under the agreement to obtain a commercial license to sell products incorporating or derived from plant cells generated using our ZFP technology, including agricultural crops, industrial products and plant-derived biopharmaceuticals.

We agreed to supply DAS and its sublicensees with ZFNs and ZFP TFs for both research and commercial use over the initial three year period of the agreement and have amended and extended this provision. The agreement also provides for minimum sublicense fees each year due to us every October, provided the agreement is not terminated by DAS. Annual fees range from $250,000 to $3.0 million and total $25.3 million over 11 years. Furthermore, DAS has the right to sublicense our ZFP technology to third parties for use in plant cells, plants, or plant cell cultures, and we will be entitled to 25% of any cash consideration received by DAS under such sublicenses. We do not have any performance obligations with respect to the sublicensing activities to be conducted by DAS. DAS has the right to terminate the agreement at any time; accordingly, our actual sublicense fees over the term of the agreement could be lower than $25.3 million. In addition, each party may terminate the agreement upon an uncured material breach of the agreement by the other party. In the event of any termination of the agreement, all rights to use our ZFP technology will revert to us, and DAS will no longer be permitted to practice our ZFP technology or to develop or, except in limited circumstances, commercialize any products derived from our ZFP technology. We amended the agreement with DAS to extend the period of reagent manufacturing and research services through December 31, 2012. Through December 31, 2011, we have received approximately $39.8 million from DAS under the collaboration agreement.

Other Programs and Partners

Prior to our agreements with Sigma and DAS we marketed our ZFP TF and ZFN technology and intellectual property in products and areas outside ZFP Therapeutics directly to the pharmaceutical and biotechnology industry and established agreements in cell line engineering for pharmaceutical protein production and the development of transgenic animals.

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Pharmaceutical Protein Production

The production of pharmaceutical proteins, such as therapeutic antibodies, is an important area of commercial growth. We and our collaborators have demonstrated that ZFP-engineered mammalian cells may be used to increase the yield of systems used for pharmaceutical protein production.

We have established several research collaborations in this area, including a research collaboration agreement with Pfizer Inc. (Pfizer) in December 2004 to use our ZFP technology to develop enhanced cell lines for protein pharmaceutical production. Under the terms of the agreement, Pfizer funded research at Sangamo and we provided our proprietary ZFP technology for Pfizer to assess its feasibility for use in mammalian cell-based protein production, and we had received all funding under the agreement in 2009. We also granted Pfizer a worldwide, non-exclusive license for the use of certain ZFN reagents to permanently eliminate the Glutamine Synthetase gene in Chinese Hamster Ovary cell lines and for the use of these ZFN-modified cells for clinical and commercial production of therapeutic proteins. We received a onetime payment of $3.0 million from Pfizer pursuant to this agreement.

In April 2007, we entered into a research and license agreement with Genentech, Inc. pursuant to which we provide Genentech with access to our proprietary ZFN technology for use in mammalian cell-based protein pharmaceutical production. Under this agreement, we developed and delivered to Genentech ZFNs capable of making certain targeted modifications to the genome of an identified Genentech cell line to generate cell lines with novel characteristics for protein pharmaceuticals. We also granted Genentech a non-exclusive, worldwide, sublicensable right to use our ZFNs to generate cell lines with novel characteristics for protein pharmaceutical production purposes and to generate the same targeted modifications in the Genentech cell lines using our ZFN technology. Genentech has paid us a total of $1.3 million under the agreement, which consists of an upfront fee, technology access fees and milestone payments for the achievement of research-based milestones. Genentech has continuing obligations to pay us an annual technology access fee and, for each product developed by Genentech containing a protein expressed by the modified cell line created using our ZFN technology, aggregate milestone payments of up to $5.4 million upon achievement of specified milestones relating to the development and commercialization of such products. The research and license agreement continues until the later of ten years or expiration of specified patents relating to our ZFN technology covered under the agreement. In addition, Genentech may terminate the research and license agreement upon thirty days written notice. Either party may terminate the agreement upon a material breach by the other party.

In February 2008, we expanded the relationship with Genentech by increasing the number of potential targets in the genome of the identified Genentech cell line against which Genentech may use or apply our ZFN technology in mammalian cell-based protein pharmaceutical production. Under this expanded agreement, Genentech paid us an up-front fee, an annual on-going technology access fee, and milestone payments upon achievement of specified milestones relating to the construction and delivery of ZFNs. In addition, for each product developed by Genentech containing a protein expressed by a modified cell line using our ZFN technology, Genentech will make aggregate milestone payments of up to $5.4 million upon the achievement of specified milestones relating to the development and commercialization of such products. Under the second license and research agreement, to date Genentech has paid us $0.4 million for an up-front fee, annual technology access fees and the achievement of research-based milestones. The expanded agreement continues until the later of ten years or expiration of specified patents relating to our ZFN technology covered under the agreement. In addition, Genentech may terminate at any time any research plan or license relating to a designated target. Either party may terminate the agreement upon a material breach by the other party.

Transgenic Animals

In April 2008, we entered into a license agreement with Open Monoclonal Technology, Inc. (OMT), pursuant to which we granted a royalty-bearing, non-exclusive, sublicensable worldwide license to OMT for the commercial use of a transgenic animal generated using our ZFN technology. In consideration of the license and

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rights granted to OMT, OMT paid us an upfront license fee, and will pay us for each product created or developed through use of our ZFN technology aggregate milestone payments of up to $0.9 million upon the achievement of certain specified clinical development milestones, a small percentage royalty on sales of any product developed using our ZFN technology and a low single-digit percentage share of payments received by OMT from sublicensees. For any given OMT product, OMT has the right to buy out its future royalty payment obligations under the license agreement by paying a lump sum fee to us. To date, OMT has paid us $0.3 million under the license agreement. The license agreement shall continue in effect until neither OMT nor we have any further payment obligations. OMT may terminate the license agreement at any time. Either party may terminate the agreement upon a material breach by the other party.

In July 2008, we entered into a research and license agreement with F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc. (collectively, Roche), pursuant to which we provided Roche with access to aspects of our proprietary ZFN technology to generate ZFN-modified cell lines and animals having targeted modifications in a specified gene in a specified species, solely for research purposes. In December 2009, pursuant to the research and license agreement, Roche exercised an option to receive an exclusive, worldwide license to use such animals in the production of therapeutic and diagnostic products. This exclusive commercial license shall continue, on a country-by-country and product-by-product basis, until the later of 10 years after the first commercial sale in such country or the expiration of the last valid patent claim covering such product. Under the research and license agreement, to date Roche has paid us $0.6 million for research milestone payments, quarterly maintenance research fees and an option license fee. Roche has agreed to pay us an additional research fee upon the delivery of the ZFN specified in the research and license agreement, a quarterly ongoing research maintenance fee during the research term and milestone payments upon the achievement of certain clinical development milestones relating to products produced under such commercial license, and low-single digit royalties on sales of such products. The aggregate milestone payments for therapeutic products will not exceed $5.75 million, but the diagnostics milestone payments are not similarly capped. Under the research and license agreement, on a product-by-product basis, Roche has the right to buy out its future royalty payment obligations by paying specified fixed amounts. Roche has the right to terminate this research and license agreement in its entirety or in part (on a country and product basis) upon thirty days advance written notice. Either party may terminate the agreement upon a material breach by the other party.

Funding from Research Foundations

California Institute for Regenerative Medicine

In October 2009, the California Institute for Regenerative Medicine (CIRM), a State of California entity, granted a $14.5 million Disease Team Research Award to develop an AIDS-related lymphoma therapy based on the application of ZFP nuclease (ZFN) gene-editing technology in stem cells. The four year grant supports an innovative research project conducted by a multidisciplinary team of investigators, including investigators from the University of Southern California, City of Hope National Medical Center and Sangamo BioSciences. We expect to receive funding up to $5.2 million from the total amount awarded based on expenses incurred for research and development efforts by us as prescribed in the agreement. The award is intended to substantially fund our research and development efforts related to the agreement. The State of California has the right to receive, subject to the terms and conditions of the agreement, payments from us resulting from sales of a commercial product resulting from research and development efforts supported by the grant, not to exceed two times the amount we receive in funding under the agreement with CIRM. Through December 31, 2011, we have received $2.4 million in funding from CIRM under this agreement.

The Juvenile Diabetes Research Foundation International

In October 2006, we announced a partnership with the Juvenile Diabetes Research Foundation International (JDRF) to provide financial support to one of our Phase 2 human clinical studies (SB-509-601) of SB-509, a ZFP Therapeutic that is in development for the treatment of diabetic neuropathy. Under the agreement with JDRF, and

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subject to its terms and conditions, including our achievement of certain milestones associated with the Phase 2 clinical trial (SB-509-601) of SB-509 for the treatment of mild to moderate diabetic neuropathy, JDRF was obligated to pay us an aggregate amount of up to $3.0 million which was received in full by the end of 2009.

In January 2010, we amended the agreement and subject to its terms and conditions, JDRF agreed to provide additional funding of up to $3.0 million for our Phase 2b trial in diabetic neuropathy (SB-509-901) which partially funded expenses related to the trial. Under the amended agreement, we were obligated to use commercially reasonable efforts to carry out the Phase 2b trial and, thereafter, to develop and commercialize a product containing SB-509 for the treatment of diabetes and complications of diabetes. We were also obligated to cover all costs of the Phase 2b trial that were not covered by JDRF s grant. In October 2011, we announced that the Phase 2b trial had failed to meet both its primary and secondary end-points and further development of SB-509 was discontinued. JDRF has the right, subject to certain limitations, to obtain an exclusive, sublicensable license to the intellectual property generated by us in the course of the Phase 2b trial, to make and commercialize products containing SB-509 for the treatment of diabetes and complications of diabetes. If JDRF obtains such a license, it is obligated to pay us a percentage of its revenues from product sales and sublicensing arrangements. If JDRF fails to satisfy its obligations to develop and commercialize a product containing SB-509 under the agreement, then their license rights will terminate and we will receive a non-exclusive, fully paid license, for any intellectual property developed during JDRF s use of the license, to research, develop and commercialize products containing SB-509 for the treatment of diabetes and complications of diabetes. Through December 31, 2011 we have received $2.0 million in funding under the amended agreement with JDRF.

The Michael J. Fox Foundation

In January 2007, we entered into a partnership with the Michael J. Fox Foundation for Parkinson s Research (MJFF) to provide financial support of our program to develop ZFP TFs to activate the expression of glial cell line-derived neurotrophic factor (GDNF) which has shown promise in preclinical testing to slow or stop the progression of Parkinson s disease. Under the agreement with MJFF and subject to its terms and conditions, MJFF paid us $1.0 million, the total funds due under the agreement, over a period of two years. In June 2010, we received a commitment for renewed funding from MJFF to support further studies of ZFP TF activators of GDNF. Subject to the terms and conditions of the agreement, the $0.9 million award is being paid over a period of two years and is intended to substantially fund our research efforts related to the agreement. Revenue will be recognized based on expenses incurred by us pursuant to the research conducted as set forth in the agreement. Through December 31, 2011 we have received the entire $1.9 million in funding available under the agreements with MJFF.

The Bill and Melinda Gates Foundation

In May 2009, we announced that we were awarded a Grand Challenges Explorations Grant of $0.1 million by the Bill and Melinda Gates Foundation (Gates Foundation) to support research into the use of our ZFNs to develop an *in vivo* treatment of HIV/AIDS. We received the entire grant in 2009.

INTELLECTUAL PROPERTY AND TECHNOLOGY LICENSES

Patents and licenses are important to our business. Our strategy is to file or license patent applications to protect technology, inventions and improvements to inventions that we consider important for the development of our technology. We seek patent protection and licenses that relate to our technology and candidates in our pipeline and/or may be important to our future. We have filed numerous patents and patent applications with the United States Patent and Trademark Office (USPTO) and foreign jurisdictions. This proprietary intellectual property includes methods relating to the design of zinc finger proteins, therapeutic applications and enabling technologies. We rely on a combination of patent, copyright, trademark, proprietary know how, continuing technological innovations, trade secret laws, as well as confidentiality agreements, materials transfer agreements and licensing agreements, to establish and protect our proprietary rights.

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Technology Licenses

We have licensed intellectual property directed to the design, selection, and use of ZFPs, ZFNs and ZFP TFs for gene modification and regulation from the Massachusetts Institute of Technology, Johnson & Johnson, The Scripps Research Institute, The Johns Hopkins University, Harvard University, the Medical Research Council, the California Institute of Technology, City of Hope, and the University of Utah. These licenses grant us rights to make, use, and sell ZFPs, ZFNs, and ZFP TFs under 15 families of patent filings. As of February 1, 2012 these patent filings have resulted in 23 issued U.S. patents and 39 granted foreign patents, with 5 currently pending U.S. patent applications and 30 pending applications in foreign patent offices.

We believe that these in-licensed patents and patent applications include several of the early and important patent filings directed at the design, selection, composition and use of ZFPs, ZFNs and ZFP TFs, particularly the agreements with Johns Hopkins University, the Massachusetts Institute of Technology, Johnson & Johnson and The Scripps Research Institute.

Johns Hopkins University

We entered into a license agreement with the Johns Hopkins University on June 29, 1995, as subsequently amended, whereby Johns Hopkins University granted us a worldwide exclusive license to technology and patents relating to nuclease and gene targeting technology for all fields of use, including the right to sublicense. Under the license agreement, we are obligated to pay low single-digit royalties on licensed product sales, a low single-digit percentage of license fees received from sublicensees and a high single-digit or low teens percentage of sublicense royalties received from sublicensees for sales of products. We are subject to an annual minimum royalty, which we currently pay. The license agreement expires upon the expiration of the last patent covered by the license agreement. Based on currently issued patents, the license agreement will terminate on or about February 10, 2014. Johns Hopkins University may terminate the license agreement upon a material default by us that remains uncured following written notice. We may terminate the license agreement at any time upon six months written notice.

Massachusetts Institute of Technology

We entered into a patent license agreement with the Massachusetts Institute of Technology, or MIT, on May 9, 1996, as subsequently amended, whereby Massachusetts Institute of Technology granted us a worldwide exclusive license to technology and patents relating to the design, selection and use of ZFPs for all fields of use, including the right to sublicense. Under the patent license agreement, we are obligated to pay an annual license fee, low single-digit royalties of product sales, an up-front sublicense and annual sublicense fees, a percentage of its sublicense revenues, and milestone payments upon achievement of certain commercial development milestones. The aggregate milestone payments under the patent license agreement are $450,000, of which $150,000 has been paid. The patent license agreement expires upon the expiration of the last patent covered by the patent license agreement. Based on currently issued patents and currently filed patent applications, the patent license agreement will terminate on or about September 13, 2022. MIT may terminate the license agreement upon a material default by us that remains uncured following written notice. We may terminate the license agreement at any time upon six months written notice.

Johnson & Johnson

We entered into a sublicense agreement with Johnson & Johnson on May 9, 1996, whereby Johnson & Johnson granted us a worldwide exclusive sublicense to technology and patents for the research, development and commercialization of human and animal therapeutic and diagnostic products using engineered ZFPs, including the right to sublicense. These patents were originally exclusively licensed by Johnson & Johnson from The Scripps Research Institute. Under the sublicense agreement, we will pay low single-digit royalty payments based upon sales of license products by us or our sublicensees and a milestone payment upon the achievement of

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a commercial development milestone. The sublicense agreement expires upon the expiration of the last patent covered by the sublicense agreement. Based on currently issued patents and currently filed patent applications, the sublicense agreement will terminate on or about October 3, 2025. Johnson & Johnson has the right to terminate the sublicense agreement upon a breach or default by us that remains uncured following written notice of such default. We may terminate the sublicense agreement at any time upon sixty days written notice.

The Scripps Research Institute

We entered into a license agreement with The Scripps Research Institute on March 14, 2000, as subsequently amended, whereby The Scripps Research Institute granted us a worldwide exclusive license to technology and patents for the research, development and commercialization of products and services using engineered ZFPs, excluding the use of these engineered ZFPs in plant agriculture, therapeutics and diagnostics. Under the license agreement, we are required to pay a low-single digit royalty on sales of licensed products by us and our sublicensees, subject to an annual minimum. The license agreement expires upon the expiration of the last patent covered by the license agreement. Based on currently issued patents and currently filed patent applications, the license agreement will terminate on or about June 5, 2018. Each party may terminate the license agreement upon a material default by the other party that remains uncured following written notice.

Sangamo Intellectual Property

In addition to our in-licensed patent portfolio, as of February 1, 2012, we had 96 families of Sangamo-owned or co-owned patent filings, including 81 issued U.S. patents, 204 granted foreign patents, 96 pending U.S. patent applications and 289 pending foreign patent applications. These patent filings are directed to the design, composition, and use of ZFPs, ZFNs, and ZFP TFs and TALE (Transcription activator-like effector) proteins. The earliest patents in our portfolio are set to begin expiring in 2015, with the majority of our currently issued patents expiring between 2019 and 2021. However, these patents in our estate may be subject to Patent Term Adjustment (due to delays in patent prosecution by the USPTO), Patent Term Extension (due to review of a patented product by a regulatory agency) or terminal disclaimer. Additionally, patents that may be issued from our pending applications will extend the patent exclusivity of our patent estate. Accordingly, all dates given above for patent expirations are estimates and the actual dates of expirations may differ.

We believe that our licensed patents and patent applications, as well as the issued Sangamo patents and pending Sangamo patent applications, in the aggregate, will provide us with a substantial intellectual property position in our commercial development of ZFP technology. In this regard, patents issued to us, applied for by us, or exclusively and non-exclusively licensed to us, cover the following types of inventions, processes and products:

ZFP and ZFN design, engineering and compositions: includes DNA target site selection and zinc finger binding domain design and nuclease domain design (see newly issued US7914796 and US8034598), target site arrays, ZFP libraries (see newly issued US7943553 and US7947469) databases and methods of construction, as well as methods to increase zinc finger binding specificity, linker designs (see newly issued US7928195), and methods of making modified plant zinc finger proteins;

ZFP targeted regulation of endogenous genes: methods relating to activation and inhibition of endogenous cellular genes (see newly issued US7985887), modulation of ZFP-regulated gene expression by small molecules, identification of accessible regions within chromatin, regulation of tocopherol synthesis in plants, and regulation of endogenous plant genes;

ZFP Therapeutics: Treatment of virally or microbially infected cells, cancer therapeutics such as methods to alter tumor growth, activation of endogenous PEDF for treatment of head and neck cancer, glioblastoma, prostate cancer and pancreatic cancer, regulation of angiogenesis (including newly issued US8012946 and US8071564), treatments for ischemic conditions, neuropathic pain, crushed nerves, Parkinson s disease, chronic pain, diabetic neuropathy, peripheral vascular disease, ocular neovascularization including age-related macular degeneration (AMD), diabetic retinopathy (DR) and retinopathy of prematurity, modulation of cardiac contractility and methods to regulate the glucocorticoid receptor;

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ZFN Therapeutics: Treatments for HIV (see newly issued US7951925), sickle cell anemia, and X-linked severe combined immunodeficiency (SCID);

Non-Therapeutic Applications of ZFPs: Methods for linking genes and phenotypes, identification of genes, analysis of gene regulation (see newly issued US7923542), structure and biological function, methods of agricultural biotechnology, methods of altering cellular differentiation state, methods of chromatin modification (see newly issued US8106255, exclusively licensed from University of Utah, and US8071370), and methods of introducing exogenous nucleic acids of interest into a safe harbor locus, and methods of genome editing (see newly issued US7888121 and US7972854);

Non-Therapeutic Applications of ZFNs: Methods for identification of regulatory DNA sequences, prediction of patient response to drug therapeutics, and development of cell lines for improved protein production (see newly issued US7785792); and

TALE protein methods of design and use (see published US application US20110301073).

We have been advised that certain aspects of our technology can give us and our collaborators independence from third party patent claims to gene sequences. In general, under United States patent law, a patent may be obtained for any new and useful process, machine, manufacture, or composition of matter. An underlying theme of United States patent law, as related to biotechnology, is that the sequence of a gene, as it exists in the chromosome, is not new, even when newly discovered, unless it is isolated or modified from its normal chromosomal context. As a result, for over a decade, patent courts have held that a DNA sequence must be purified, isolated or modified to be patentable. Accordingly, U.S. patent claims to DNA sequences can cover only isolated, purified or modified nucleic acid sequences (e.g., a purified DNA fragment or a DNA sequence inserted into a vector). We have been advised that U.S. patent claims to DNA sequences do not, and cannot, cover gene sequences as they exist in their natural chromosomal environment, and international patent law is even more stringent than U.S. patent law in this regard. Most current methods for over-expression of a gene or protein involve the introduction into a cell of a vector containing a DNA encoding the protein to be over-expressed. Since such a vector contains isolated sequences which encode the protein, it would be covered by any patent claims to those sequences. In contrast, our methods for over-expression utilize ZFP TFs that target endogenous genes as they exist in the chromosome. As a result, our methods do not require the use of isolated DNA sequences encoding the protein to be over-expressed and, our counsel has advised us, do not infringe patent claims to such sequences. Notwithstanding this advice, we realize that others could take a contrary position that could result in litigation. While we believe that we would prevail in any such litigation, the uncertainties involved in litigation generally make it impossible to provide assurance as to the ultimate outcome of such matters. See *Risk Factors Because it is difficult and costly to protect our proprietary rights, and third parties have filed patent applications that are similar to ours, we cannot ensure the proprietary protection of our technologies and products.*

The patent positions of pharmaceutical and biotechnology firms, including our patent position, are uncertain and involve complex legal and factual questions for which important legal tenets are largely unresolved. Patent applications may not result in the issuance of patents and the coverage claimed in a patent application may be significantly reduced before a patent is issued. Although we have filed for patents on some aspects of our technology, we cannot provide assurances that patents will be issued as a result of these pending applications or that any patent that has been or may be issued will be upheld. The laws of some foreign countries may not protect our proprietary rights to the same extent as do the laws of the United States. One of our licensed foreign patents, which forms the basis for five European Regional Phase patents, has been revoked as a result of an opposition by a third party. Our licensor, The Johns Hopkins University, appealed the revocation. In April 2007, the European Technical Board of Appeal released its decision dismissing the appeal. As of January 13, 2011, the re-examination of US patent number US6265196, licensed to us from The Johns Hopkins University, was terminated by the USPTO with the publication of a notice of intent to issue a Reexamination Certificate. In addition, in 2008, US5792640, also licensed from Johns Hopkins University, completed a first re-examination process and a re-exam certificate was issued on September 9, 2008. A second re-exam proceeding ordered on

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November 4, 2008 was recently completed and a Reexamination Certificate was issued on January 5, 2011. These re-examination procedures have narrowed the scope of claims provided under the original patent issued. Accordingly, while we have preserved specific protection afforded under the original patent relating to our engineered ZFN technology, we do not have a valid claim over the full scope of the patent as originally issued.

In the future, third parties may assert patent, copyright, trademark, and other intellectual property rights to technologies that are important to our business. Any claims asserting that our products infringe or may infringe proprietary rights of third parties, if determined adversely to us, could significantly harm our business. See *Risk Factors Because it is difficult and costly to protect our proprietary rights, and third parties have filed patent applications that are similar to ours, we cannot ensure the proprietary protection of our technologies and products.*

Estimated Licensing Expenses

If we are successful in the development and commercialization of our products, we will be obligated by our license agreements to make milestone and royalty payments to some or all of the licensors mentioned above. For risks associated with our intellectual property, see *Risk Factors Because it is difficult and costly to protect our proprietary rights, and third parties have filed patent applications that are similar to ours, we cannot ensure the proprietary protection of our technologies and products.* We plan to continue to license and to internally generate intellectual property covering the design, selection, composition, and use of ZFPs; the genes encoding these proteins; and the application of ZFPs, ZFNs, and ZFP TFs in ZFP Therapeutics, and non-therapeutic applications of the technology including applications in research and plant agriculture, and intellectual property relating to TALE design and use.

COMPETITION

We, and our licensed partners, are the leaders in the research, development, and commercialization of DNA binding proteins for the regulation of gene expression and gene modification. We are aware of several companies focused on other methods for regulating gene expression and modifying genes and a limited number of commercial and academic groups pursuing the development of ZFP gene regulation and gene modification technology. The field of applied gene regulation and gene modification is highly competitive and we expect competition to persist and intensify in the future from a number of different sources, including pharmaceutical, agricultural, and biotechnology companies; academic and research institutions; and government agencies that will seek to develop ZFPs as well as technologies that will compete with our ZFP technology platform.

Accordingly, our competitors may succeed in obtaining patent protection, receiving FDA approval, or commercializing ZFP Therapeutics or other competitive products before us. If we commence commercial product sales, we may be competing against companies with greater marketing and manufacturing capabilities, areas in which we have limited or no experience. In addition, any product candidate that we successfully develop may compete with existing products that have long histories of safe and effective use.

Although we are in the clinical development phase of operations and have no current therapeutic product sales, we believe the following companies, products and/or technologies may potentially be competitive with our technology or our products under development:

Small molecules in development from both in-house drug discovery programs of pharmaceutical companies such as Eli Lilly and Company, Merck & Co., Inc., Takeda Pharmaceutical Company Limited and Pfizer, Inc. as well as from biotechnology companies with expertise and capabilities in small molecule discovery and development such as Exelixis Inc., Rigel Pharmaceuticals and Gilead.

Monoclonal antibody companies and product candidates from certain biotechnology firms such as Amgen Inc., Genentech, Inc. and Human Genome Sciences.

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Protein pharmaceuticals under development at pharmaceutical and biotechnology companies such as Amgen Inc., Biogen Idec, Eli Lilly and Company, Genentech, Inc., Johnson & Johnson and numerous other pharmaceutical and biotechnology firms.

Gene therapy companies developing gene-based products in clinical trials. None of these products have yet been approved. Our competitors in this category may include Amsterdam Molecular Therapeutics, GenVec Inc. and VIRxSYS Corporation.

Cell therapy companies developing cell-based products. Our competitors in this category may include Dendreon.

Nuclease technologies. Life Technologies, Inc. and Cellectis SA are developing TALE nucleases and Cellectis SA and Precision BioSciences, Inc. are developing meganucleases to accomplish gene modification.

Antisense therapeutics and RNA interference technology, including RNAi and microRNA, which are technologies that may compete with ZFP Therapeutics in the development of novel therapeutic products acting through the regulation of gene expression. These technologies are being developed by several companies including Alnylam Pharmaceuticals, Inc., Isis Pharmaceuticals, Inc. and Regulus Therapeutics, LLC.

We expect to face intense competition from other companies for collaborative arrangements with pharmaceutical and biotechnology companies; for establishing relationships with academic and research institutions; and for licenses to proprietary technology. These competitors, either alone or with their collaborative partners, may succeed in developing technologies or products that are more effective or less costly than ours.

Our ability to compete successfully will depend, in part, on our ability to:

develop safe and efficacious proprietary products;

obtain access to gene transfer technology on commercially reasonable terms;

obtain required regulatory approvals;

attract and retain qualified scientific and product development personnel;

obtain and enforce patents, licenses or other proprietary protection for our products and technologies;

formulate, manufacture, market and sell any product that we develop; and

develop and maintain products that reach the market first and are technologically superior to or are of lower cost than other products in the market.

GOVERNMENT REGULATION

The research, testing manufacturing and marketing of human therapeutics are extensively regulated in the United States and the rest of the world.

Before marketing in the United States, any therapeutic or pharmaceutical products we develop must undergo rigorous preclinical testing (generally conducted in animals) and clinical trials in humans and an extensive regulatory clearance process implemented by the U.S. Food and Drug Administration (FDA) under the federal Food, Drug and Cosmetic Act. The FDA regulates, among other things, the development, testing, manufacture, safety, efficacy, record keeping, labeling, storage, approval, advertising, promotion, sale, and distribution of biopharmaceutical products. The regulatory review and approval process, which includes preclinical testing and clinical trials of each product candidate, is lengthy, expensive and uncertain. Securing FDA approval requires the submission of extensive preclinical and clinical data and supporting information including manufacturing information and stability data to the FDA for each indication to establish a product candidate s safety and

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efficacy. The approval process takes many years, requires the expenditure of substantial resources, involves post-marketing surveillance and may involve ongoing requirements for post-marketing studies.

Before commencing clinical investigations in humans in the U.S., we must carry out preclinical testing. In addition, our proposed clinical studies require review from the Recombinant DNA Advisory Committee (RAC), which is the advisory board to the National Institutes of Health (NIH), focusing on clinical trials involving gene transfer. We typically submit a proposed clinical protocol and other product-related information to the RAC three to six months prior to the expected IND application filing date.

Preclinical tests include laboratory and animal studies to evaluate product characteristics, potential safety and efficacy. The results of these studies must be submitted to the FDA as part of an Investigational New Drug (IND) Application, which must be reviewed by the FDA before proposed clinical testing in humans can begin. The FDA has 30 days to comment on the application and if the agency has no comments, we or our clinical partner may begin clinical trials.

Clinical trials are lengthy and are typically conducted in three sequential phases, but the phases may overlap or be combined. At each stage of testing, the proposed clinical protocol must be reviewed by the FDA and reviewed and approved by an independent ethics committee or institutional review board of each participating center before it can begin. Phase 1 usually involves the initial introduction of the investigational drug into small numbers of healthy volunteers or patients to evaluate certain factors, including its safety and dose tolerance. Phase 2 usually involves trials in a limited patient population to evaluate dosage tolerance and appropriate dosage, identify possible adverse effects and safety risks, and evaluate preliminary efficacy of the drug for specific indications. Phase 3 trials usually further evaluate clinical efficacy and test further for safety by using the drug in its final form in an expanded patient population. Phase 2 and 3 trials must be registered in a government database of clinical trials. Later clinical trials may fail to support the findings of earlier trials, which can delay, limit or prevent regulatory approvals.

We filed a Phase 1 clinical protocol for review by the RAC in the fourth quarter of 2004, an IND application in January 2005, and Phase 2 protocols for review by the FDA in 2006, 2007 and 2009 for our first product candidate, SB-509, for the potential treatment of diabetic neuropathy. In addition, in 2008 we filed an IND application for SB-509 for the treatment of ALS. We have also filed Phase 1 clinical protocols for review by the RAC for our HIV (SB-728-T) and glioblastoma programs (SB-313). Both of these program protocols received unanimous approval from this committee. In December 2008 and August 2009, we filed IND applications for SB-728-T for the treatment of HIV/AIDS leading to the initiation of Phase 1 studies in February and October 2009. In October 2010 and January 2012 we initiated Phase 1/2 clinical trials and a Phase 2 trial of this ZFP Therapeutic in subjects infected with HIV.

The results of the preclinical and clinical testing of a pharmaceutical product are submitted to the FDA in the form of a New Drug Application (NDA), or a Biologic License Application (BLA), for approval to commence commercial sales. In responding to an NDA or a BLA, the FDA may grant marketing approval, grant conditional approval (such as an accelerated approval), request additional information or deny the application if the FDA determines that the application does not provide an adequate basis for approval. Most research and development projects fail to produce data sufficiently compelling to enable progression through all of the stages of development and to obtain FDA approval for commercial sale. See also *Our potential therapeutic products are subject to a lengthy and uncertain regulatory process, and we may encounter unanticipated toxicity or adverse events or fail to demonstrate efficacy, causing us to delay, suspend or terminate the development of a ZFP Therapeutic. If these potential products are not approved, we will not be able to commercialize those products.* under Risk Factors below in Part I, Item 1A of this Form 10-K.

Outside the United States, our ability to market a product is contingent upon receiving marketing authorization from the appropriate regulatory authorities. The requirements governing the conduct of clinical

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trials, marketing authorization, pricing, and reimbursement vary widely from country to country. At present, foreign marketing authorizations are applied for at a national level; although, within the European Union (EU), registration procedures are available to companies wishing to market a product in more than one EU member state. If the regulatory authority is presented with adequate evidence of safety, quality, and efficacy, they will grant a marketing authorization. This foreign regulatory approval process involves all of the risks associated with FDA clearance discussed above.

We have hired personnel with expertise in preclinical and clinical development of therapeutic programs, clinical manufacturing and products and clinical and regulatory affairs to assist us in developing our programs and obtaining appropriate regulatory approvals as required. We also intend to work with collaborators who have experience in clinical development to assist us in obtaining regulatory approvals for collaborative products. *See Risk Factors Our potential therapeutic products are subject to a lengthy and uncertain regulatory process, and if these potential products are not approved, we will not be able to commercialize those products and Regulatory approval, if granted, may be limited to specific uses or geographic areas which could limit our ability to generate revenues.*

EMPLOYEES

As of February 1, 2012, we had 83 full-time employees, all of whom are located at our headquarters in Richmond, California. None of our employees are represented by a collective bargaining organization or covered by a collective bargaining agreement, nor have we experienced work stoppages. We believe that our relations with our employees are good.

AVAILABLE INFORMATION

We were incorporated in June 1995.

Sangamo can be found on the internet at http://www.sangamo.com. We make available free of charge, on or through our internet site, our annual, quarterly, and current reports and any amendments to those reports filed or furnished pursuant to Section 13(a) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Information contained in our internet site is not part of, nor incorporated by reference into, this report.

ITEM 1A RISK FACTORS

This Form 10-K contains forward-looking information based on our current expectations. Because our actual results may differ materially from any forward-looking statements made by or on our behalf, this section includes a discussion of important factors that could affect our actual future results, including, but not limited to, our revenues, expenses, net loss and loss per share.

Risks Relating to Development, Commercialization and Regulatory Approval of our Products and Technology

ZFP Therapeutics have undergone limited testing in humans and our ZFP Therapeutics may fail safety studies in clinical trials.

In December 2008, in collaboration with scientists at the University of Pennsylvania, we filed an IND application for a Phase 1 trial of our CCR5 ZFN-based therapeutic, SB-728-T, for treatment of HIV/AIDS. In September 2009, we announced the FDA s review and acceptance of our IND application to initiate an open-label, repeat-dosing Phase 1 clinical trial of SB-728-T (SB-728-902). Preliminary data from these studies demonstrated that, to date, treatment of aviremic HIV-infected subjects with SB-728-T has been well-tolerated. We also have an on-going Phase 2 (SB-728-902, Cohort 5) and two Phase 1/2 trials (SB-728-1101 and 1002) for

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this indication. In addition, we have previously completed enrollment and the treatment phase of a Phase 1 and several Phase 2 clinical trials of our ZFP Therapeutic, SB-509, for diabetic neuropathy and ALS and the drug was well tolerated in these studies. However, if one of our ZFP Therapeutic fails one of its safety studies, it could reduce our ability to attract new investors and corporate partners.

All of these studies are designed primarily to evaluate the safety and tolerability of this ZFP Therapeutic approach. Our clinical studies are a highly visible test of our ZFP Therapeutics. Since we have increased our focus on therapeutic research and development, investors increasingly assess the value of our technology based on the continued progress of ZFP Therapeutic products into and through clinical trials. If clinical trials of our ZFP Therapeutic products were halted due to safety concerns, this would negatively affect our operations and the value of our stock.

Our progress in early Phase 1 and Phase 2 trials may not be indicative of long-term efficacy in late stage clinical trials, and we have discontinued our SB-509 programs based on negative results from Phase 2 clinical studies.

The results in early phases of clinical testing are based upon limited numbers of patients and a limited follow-up period. Typically, our Phase 1 clinical trials for indications of safety enroll less than 25 patients. The initial results from the Phase 1 clinical trial of our ZFP Therapeutic product, SB-509, became available in the first half of 2006 and the complete data set was presented in June 2008. The primary end point of the trial was clinical and laboratory safety; however, we collected some preliminary efficacy data that showed trends of clinical improvement in some subjects. Notwithstanding this preliminary efficacy data, the top-line data from our Phase 2b clinical study for SB-509-901 did not meet the key primary or secondary endpoints for the study and as a result we have discontinued development of our SB-509 program.

In September 2011, we announced preliminary data from our Phase 1 clinical program to develop SB-728-T for the treatment of HIV/AIDS. The data demonstrated a statistically significant relationship between SB-728-T and the reduction of HIV/AIDS viral load. In January 2012, we initiated a Phase 2 clinical study (SB-728-902, Cohort 5) and a Phase 1/2 clinical study (SB-728-1101) for the treatment of HIV/AIDS. However, there is no guarantee that these and other future studies of SB-728-T in later stage trials involving larger patient groups may produce positive results.

A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late stage clinical trials even after achieving promising results in earlier stage clinical trials. If a larger population of patients does not experience positive results, or if these results are not reproducible, our products may not receive approval from the FDA. Failure to confirm favorable results from earlier trials by demonstrating the safety and effectiveness of our ZFP Therapeutic products in late stage clinical trials with larger patient populations could have a material adverse effect on our business that would cause our stock price to decline significantly.

Our decision to discontinue the development of SB-509 may subject our business to new risks and challenges.

In October 2011, we reported top-line date from our Phase 2b clinical study (SB-509-901) that did not meet the key primary or secondary endpoints for the study, and based on this data we decided to discontinue development of our SB-509 program. Following the termination of our SB-509 program, our most advanced clinical studies are our Phase 2 clinical trials for the treatment of HIV/AIDS and the Phase 1 trial for a treatment for recurrent glioblastoma multiforme. As a result, we may be perceived as a higher risk company due to the early stage of our development and commercialization of human therapeutics, which may subject us to new risks and challenges, including difficulties in attracting and retaining key employees, maintaining and gaining financial analyst coverage of our company and raising capital for our operations. In addition, the success of our

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business will be heavily dependent upon the results of clinical trials of our lead program for the treatment of HIV/AIDS, and we may not be able to mitigate or offset any negative effect on our operations or financial results due to delays, problems or failures of our HIV/AIDS program through the performance or potential of other preclinical or clinical programs.

We have limited experience in conducting clinical trials.

Our ZFP Therapeutics may fail to show the desired safety and efficacy in initial clinical trials. We have an ongoing Phase 2 trial and two Phase 1/2 studies of a ZFP Therapeutic for HIV/AIDS. However, the FDA will require additional clinical testing which involves significantly greater resources, commitments and expertise that may require us to enter into a collaborative relationship with a pharmaceutical company that could assume responsibility for late-stage development and commercialization. We have limited experience in conducting clinical trials and may not possess the necessary resources and expertise to complete such trials, and there is no guarantee that we will be able to enter into collaborative relationships with third parties that can provide us with the funding and expertise for such trials.

We may not be able to find acceptable patients or may experience delays in enrolling patients for our clinical trials.

We may experience difficulties or delays in recruiting and enrolling a sufficient number of patients to participate in our clinical trials due to a variety of reasons, including competition from other clinical trial programs for the same indication, failure of patients to meet our enrollment criteria and premature withdraws of patients prior to the completion of clinical trials. The FDA and institutional review boards may also require large numbers of patients, and the FDA may require that we repeat a clinical trial. Any delay resulting from our failure to enroll a sufficient number of patients on a timely basis may have a material adverse affect on our business.

Our potential therapeutic products are subject to a lengthy and uncertain regulatory process, and we may encounter unanticipated toxicity or adverse events or fail to demonstrate efficacy, causing us to delay, suspend or terminate the development of a ZFP Therapeutic. If these potential products are not approved, we will not be able to commercialize those products.

The FDA must approve any human therapeutic product before it can be marketed in the United States. The process for receiving regulatory approval is long and uncertain, and a potential product may not withstand the rigors of testing under the regulatory approval processes.

Before commencing clinical trials in humans, we must submit an Investigational New Drug (IND) application to the FDA. The FDA has 30 days to comment on the application and if the agency has no comments, we or our commercial partner may begin clinical trials. While we have stated our intention to file additional IND applications during the next several years, this is only a statement of intent, and we may not be able to do so because the associated product candidates may not meet the necessary preclinical requirements. In addition, there can be no assurance that, once filed, an IND application will result in the actual initiation of clinical trials. Clinical trials are subject to oversight by institutional review boards and the FDA. In addition, our proposed clinical studies require review from the Recombinant DNA Advisory Committee (RAC), which is the advisory board to the National Institutes of Health (NIH), focusing on clinical trials involving gene transfer. We will typically submit a proposed clinical protocol and other product-related information to the RAC three to six months prior to the expected IND application filing date.

Clinical trials:

- must be conducted in conformance with the FDA s good clinical practices, within the guidelines of the International Conference on Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH) and other applicable regulations;

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must meet requirements for Institutional Review Board (IRB) oversight;

must follow Institutional Biosafety Committee (IBC) and NIH RAC guidelines where applicable;

must meet requirements for informed consent;

are subject to continuing FDA oversight;

may require oversight by a Data Safety Monitoring Board (DSMB);

may require large numbers of test subjects; and

may be suspended by a commercial partner, the FDA or us at any time if it is believed that the subjects participating in these trials are being exposed to unacceptable health risks or if the FDA finds deficiencies in the IND application or the conduct of these trials.

As we cannot predict whether or when we will obtain regulatory approval to commercialize our product candidates, we cannot predict the timing of any future revenue from these product candidates.

We cannot commercialize any of our ZFP Therapeutics to generate revenue until the appropriate regulatory authorities have reviewed and approved the applications for the product candidates. We cannot assure that the regulatory agencies will complete their review processes in a timely manner or that we will obtain regulatory approval for any product candidate that we or our collaborators develop. Satisfaction of regulatory requirements typically takes many years, is dependent upon the type, complexity and novelty of the product and requires the expenditure of substantial resources. Regulatory approval processes outside the United States include all of the risks associated with the FDA approval process. In addition, we may experience delays or rejections based upon additional government regulation from future legislation or administrative action or changes in FDA policy during the period of product development, clinical trials and FDA regulatory review.

Regulatory approval, if granted, will be limited to specific uses or geographic areas, which could limit our ability to generate revenues.

Regulatory approval will be limited to the indicated use for which we can market a product. Further, once regulatory approval for a product is obtained, the product and its manufacturer are subject to continual review. Discovery of previously unknown problems with a product or manufacturer may result in restrictions on the product, manufacturer, and manufacturing facility, including withdrawal of the product from the market. In Japan and Europe, regulatory agencies also set or approve prices.

Even if regulatory clearance of a product is granted, this clearance is limited to those specific states and conditions for which the product is useful, as demonstrated through clinical trials. We cannot ensure that any ZFP Therapeutic product developed by us, alone or with others, will prove to be safe and effective in clinical trials and will meet all of the applicable regulatory requirements needed to receive marketing clearance in a given country.

Outside the United States, our ability to market a product is contingent upon receiving a marketing authorization from the appropriate regulatory authorities; therefore we cannot predict whether or when we would be permitted to commercialize our product. These foreign regulatory approval processes include all of the risks associated with FDA clearance described above.

Commercialization of our technologies will depend, in part, on strategic partnering with other companies. If we are not able to find partners in the future or our partners do not diligently pursue product development efforts, we may not be able to develop our technologies or products, which could slow our growth and decrease the value of our stock.

We expect to rely, to some extent, on our strategic partners to provide funding in support of our research and to perform independent research and preclinical and clinical testing. Our technology is broad based, and we do

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not currently possess the resources necessary to fully develop and commercialize potential products that may result from our technologies or the resources or capabilities to complete the lengthy marketing approval processes that may be required for the products. Therefore, we plan to rely on strategic partnerships to help us develop and commercialize ZFP Therapeutic products. If we are unable to find partners or if the partners we find are unable or unwilling to advance our programs, or if they do not diligently pursue product approval, this may slow our progress and defer our revenues. Our partners may sublicense or abandon development programs or we may have disagreements with our partners, which would cause associated product development to slow or cease. There can be no assurance that we will be able to establish strategic collaborations for ZFP Therapeutic product development. We may require significant time to secure collaborations or partners because we need to effectively market the benefits of our technology to these future collaborators and partners, which may direct the attention and resources of our research and development personnel and management away from our primary business operations. Further, each collaboration or partnering arrangement will involve the negotiation of terms that may be unique to each collaborator or partner. These business development efforts may not result in a collaboration or partnership.

The loss of any future partnering agreements would not only delay or terminate the potential development or commercialization of products we may derive from our technologies, but it may also delay or terminate our ability to test ZFP Therapeutic candidates for specific genes. If any partner fails to conduct the collaborative activities successfully and in a timely manner, the preclinical or clinical development or commercialization of the affected product candidates or research programs could be delayed or terminated.

Under typical partnering agreements we would expect to receive revenue for the research and development of a ZFP Therapeutic product based on achievement of specific milestones, as well as royalties based on a percentage of sales of the commercialized products. Achieving these milestones will depend, in part, on the efforts of our partner as well as our own. If we, or any partner, fail to meet specific milestones, then the partnership may be terminated, which could reduce our revenues. For more information on risks relating to our third party collaborative agreements, see Risks Relating to our Collaborative Relationships.

We may be unable to license gene transfer technologies that we may need to commercialize our ZFP technology.

In order to regulate or modify a gene in a cell, the ZFP must be efficiently delivered to the cell. We have licensed certain gene transfer technologies for our ZFP in research. We are evaluating these systems and other technologies that may need to be used in the delivery of ZFP into cells for in vitro and in vivo applications, including ZFP Therapeutics. However, we may not be able to license the gene transfer technologies required to develop and commercialize our ZFP Therapeutics. We have not developed our own gene transfer technologies, and we rely on our ability to enter into license agreements to provide us with rights to the necessary gene transfer technology. Our approach has been to license appropriate technology as required. The inability to obtain a license to use gene transfer technologies with entities which own such technology on reasonable commercial terms, if at all, could delay or prevent the preclinical evaluation, drug development collaborations, clinical testing, and/or commercialization of our therapeutic product candidates.

Our gene regulation and gene modification technology is relatively new, and if we are unable to use this technology in all our intended applications, it would limit our revenue opportunities.

Our technology involves a relatively new approach to gene regulation and gene modification. Although we have generated ZFPs for thousands of gene sequences, we have not created ZFPs for all gene sequences and may not be able do so, which could limit the usefulness of our technology. In addition, while we have demonstrated the function of engineered ZFNs and ZFP TFs in mammalian cells, yeast, insects, plants, and animals, we have not yet demonstrated clinical benefit of this technology in humans, and the failure to do so could restrict our ability to develop commercially viable products. If we, and our collaborators or strategic partners, are unable to

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extend our results to new commercially important genes, experimental animal models, and human clinical studies, we may be unable to use our technology in all its intended applications.

The expected value and utility of our ZFNs and ZFP TFs is in part based on our belief that the targeted modification of genes or specific regulation of gene expression may enable us to develop a new therapeutic approach as well as to help scientists better understand the role of genes in disease, and to aid their efforts in drug discovery and development. We also believe that the targeted gene addition gene regulation will have utility in agricultural applications. There is only a limited understanding of the role of specific genes in all these fields. Life sciences companies have developed or commercialized only a few products in any of these fields based on results from genomic research or the ability to regulate gene expression. We, our collaborators, or our strategic partners, may not be able to use our technology to identify and validate drug targets or to develop commercial products in the intended markets.

Effective delivery of ZFNs and ZFP TFs into the appropriate target cells and tissues is critical to the success of the therapeutic applications of our ZFP technology. In order to have a meaningful therapeutic effect, the ZFP Therapeutic must be delivered to sufficient numbers of cells in the targeted tissue. The ZFN or ZFP TF must be present in that tissue for sufficient time to effect either modification of a therapeutically relevant gene or regulation of its expression. In our current clinical and preclinical programs, we administer our ZFP Therapeutics as a nucleic acid that encodes the ZFN or ZFP TF. We use different formulations to deliver the ZFP Therapeutic depending on the required duration of expression, the targeted tissue and the indication that we intend to treat. In our gene editing technology, a permanent change in the targeted gene requires only a transient exposure to the ZFNs whereas the function of a ZFP TF requires it to be present in the cell in sufficient concentrations for as long as its effect is needed. In the ZFP Therapeutic applications that we are developing, it is not necessary to deliver our ZFP Therapeutic to every cell in a tissue. For example, in a ZFN gene modification approach to a monogenic disease such as hemophilia, in which the secreted Factor IX clotting factor is defective, gene correction in sufficient liver cells to yield circulating levels of corrected Factor IX that are as little as 5% of normal could have a significant benefit to the patient. However, there can be no assurances that we will be able to effectively deliver our ZFNs and ZFP TFs to produce a beneficial therapeutic effect.

We are conducting proprietary research to discover ZFP Therapeutic product candidates. These programs increase our financial risk of product failure, may significantly increase our research expenditures, and may involve conflicts with future collaborators and strategic partners.

Our proprietary research programs consist of research which is funded solely by us or by grant funding and in which we retain exclusive rights to therapeutic products generated by such research. This is in contrast to certain of our research programs that may be funded by corporate partners and in which we may share rights to any resulting products. Conducting proprietary research programs may not generate corresponding revenue and may create conflicts with our collaborators or strategic partners over rights to our intellectual property with respect to our proprietary research activities. Any conflict with our collaborators or strategic partners could reduce our ability to enter into future collaborations or partnering agreements and negatively impact our relationship with existing collaborators and partners which could reduce our revenue and delay or terminate our product development. As we continue to focus our strategy on proprietary research and therapeutic development, we expect to experience greater business risks, expend significantly greater funds and require substantial commitments of time from our management and staff.

Even if our technology proves to be effective, it still may not lead to commercially viable products.

Even if our collaborators or strategic partners are successful in using our ZFP technology in drug discovery, protein production, therapeutic development, or plant agriculture, they may not be able to commercialize the resulting products or may decide to use other methods competitive with our technology. To date, no company has received marketing approval or has developed or commercialized any therapeutic or agricultural products based on our technology. Should our technology fail to provide safe, effective, useful, or commercially viable

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approaches to the discovery and development of these products, this would significantly limit our business and future growth and would adversely affect our value.

Even if our product development efforts are successful and even if the requisite regulatory approvals are obtained, our ZFP Therapeutics may not gain market acceptance among physicians, patients, healthcare payers and the medical community.

A number of additional factors may limit the market acceptance of products including the following:

- rate of adoption by healthcare practitioners;
- rate of a product s acceptance by the target population;
- timing of market entry relative to competitive products;
- availability of alternative therapies;
- price of our product relative to alternative therapies;
- availability of third-party reimbursement;
- extent of marketing efforts by us and third-party distributors or agents retained by us; and
- side effects or unfavorable publicity concerning our products or similar products.

We do not currently have the infrastructure or capability to manufacture, market and sell therapeutic products on a commercial scale.

In order for us to commercialize our therapeutic products directly, we would need to develop, or obtain through outsourcing arrangements, the capability to manufacture, market and sell our products on a commercial scale. Currently we do not have the ability nor the financial resources to establish the infrastructure and organizations needed to execute these functions, including such infrastructure needed for the commercialization of any product from our HIV/AIDS programs, which can be complex and costly. If we are unable to establish adequate manufacturing, sales, marketing and distribution capabilities, we will not be able to directly commercialize our therapeutics products, which would limit our future growth.

Risks Relating to our Industry

If our competitors develop, acquire, or market technologies or products that are more effective than ours, this would reduce or eliminate our commercial opportunity.

Any products that we or our collaborators or strategic partners develop by using our ZFP technology platform will enter into highly competitive markets. Even if we are able to generate ZFP Therapeutics that are safe and effective for their intended use, competing technologies may prove to be more effective or less expensive, which, to the extent these competing technologies achieve market acceptance, will limit our revenue opportunities. In some cases, competing technologies have proven to be effective and less expensive. Competing technologies may include other methods of regulating gene expression or modifying genes. ZFNs and ZFP TFs have broad application in the life sciences industry and compete with a broad array of new technologies and approaches being applied to genetic research by many companies. Competing proprietary technologies with our product development focus include:

For ZFP Therapeutics:

small molecule drugs;

monoclonal antibodies;

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recombinant proteins;

gene therapy/cDNAs;

antisense;

siRNA and microRNA approaches;

TALE (transcription activator-like effector) technology; and

Meganucleases.

For our Non-Therapeutic Applications:

For protein production: gene amplification, meganucleases, TALE technology, insulator technology, mini-chromosomes;

For target validation: antisense, siRNA, TALE technology;

For plant agriculture: recombination approaches, mutagenesis approaches, meganucleases, TALE technology, mini-chromosomes; and

For transgenic animals: somatic nuclear transfer, embryonic stem cell, TALE and transposase technologies.

In addition to possessing competing technologies, our competitors include pharmaceutical and biotechnology companies with:

substantially greater capital resources than ours;

larger research and development staffs and facilities than ours; and

greater experience in product development and in obtaining regulatory approvals and patent protection.

These organizations also compete with us to:

attract qualified personnel;

attract parties for acquisitions, joint ventures or other collaborations; and

license the proprietary technologies of academic and research institutions that are competitive with our technology, which may preclude us from pursuing similar opportunities.

Accordingly, our competitors may succeed in obtaining patent protection or commercializing products before us. In addition, any products that we develop may compete with existing products or services that are well established in the marketplace.

Adverse public perception in the field of gene therapy may negatively impact regulatory approval of, or demand for, our potential products.

Our potential therapeutic products are delivered to patients as gene-based drugs, or gene therapy. The clinical and commercial success of our potential products will depend in part on public acceptance of the use of gene therapy for the prevention or treatment of human diseases. Public attitudes may be influenced by claims that gene therapy is unsafe, and, consequently, our products may not gain the acceptance of the public or the medical community. Negative public reaction to gene therapy in general could result in greater government regulation and stricter labeling requirements of gene therapy products, including any of our products, and could cause a decrease in the demand for any products we may develop.

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Laws or public sentiment may limit the production of genetically modified agricultural products, and these laws could reduce our partner s ability to sell such products.

Genetically modified products are currently subject to public debate and heightened regulatory scrutiny, either of which could prevent or delay production of agricultural products. In October 2005, we entered into a research license and commercial option agreement with DAS. In June 2008, DAS exercised its option for a commercial license to our technology. Under this agreement, we will provide DAS with access to our proprietary ZFP technology and the exclusive right to use our ZFP technology to modify the genomes or alter the nucleic acid or protein expression of plant cells, plants, or plant cell cultures. The field-testing, production, and marketing of genetically modified plants and plant products are subject to federal, state, local, and foreign governmental regulation. Regulatory agencies administering existing or future regulations or legislation may not allow production and marketing of our genetically modified products in a timely manner or under technically or commercially feasible conditions. In addition, regulatory action or private litigation could result in expenses, delays, or other impediments to our product development programs or the commercialization of resulting products.

The FDA currently applies the same regulatory standards to foods developed through genetic engineering as those applied to foods developed through traditional plant breeding. Genetically engineered food products, however, will be subject to pre-market review if these products raise safety questions or are deemed to be food additives. Governmental authorities could also, for social or other purposes, limit the use of genetically modified products created with our gene regulation technology.

Even if the regulatory approval for genetically modified products developed under our agreement with DAS was obtained, our success will also depend on public acceptance of the use of genetically modified products including drugs, plants, and plant products. Claims that genetically modified products are unsafe for consumption or pose a danger to the environment may influence public attitudes. Our genetically modified products may not gain public acceptance. The subject of genetically modified organisms has received negative publicity in the United States and particularly in Europe, and such publicity has aroused public debate. The adverse publicity in Europe could lead to greater regulation and trade restrictions on imports of genetically altered products. Similar adverse public reaction or sentiment in the United States to genetic research and its resulting products could result in greater domestic regulation and could decrease the demand for our technology and products.

Risks Relating to our Finances

We have incurred significant operating losses since inception and anticipate that we will incur continued losses for the foreseeable future.

We have generated operating losses since we began operations in 1995. The extent of our future losses and the timing of profitability are uncertain, and we expect to incur losses for the foreseeable future. We have been engaged in developing our ZFP technology since inception, which has and will continue to require significant research and development expenditures. To date, we have generated our funding from issuance of equity securities, revenues derived from strategic partnering agreements, other collaborations in non-therapeutic applications of our technology, federal government research grants and grants awarded by research foundations. As of December 31, 2011, we had an accumulated deficit of $253.2 million. From 2005 to date, we have generated an aggregate of approximately $157.2 million in net proceeds from the sale of our equity securities. We expect to continue to incur additional operating losses for the next several years as we continue to expand and extend our research and development activities into human therapeutic product development. If the time required to generate significant product revenues and achieve profitability is longer than we currently anticipate or if we are unable to generate liquidity through equity financing or other sources of funding, we may be forced to curtail or suspend our operations.

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We may be unable to raise additional capital, which would harm our ability to develop our technology and products.

We have incurred significant operating losses and negative operating cash flows since inception and have not achieved profitability. We expect capital outlays and operating expenditures to increase over the next several years as we expand our infrastructure and research and ZFP Therapeutic product development activities. While we believe our financial resources will be adequate to sustain our current operations at least through 2013, we may need to seek additional sources of capital through equity or debt financing. Since the financial crisis in 2008, the credit markets have experienced significant upheaval, while the equity market has exhibited a high degree of volatility. These external factors have contributed to the difficulty of emerging biotechnology companies to raise capital through equity or debt financing. While we have observed improvements in the capital market recently, we cannot be certain that this trend will continue or that we will not experience similar difficulties in accessing the capital market in the future. In addition, as we focus our efforts on proprietary human therapeutics, we will need to seek FDA approval of potential products, a process that could cost in excess of hundreds of millions of dollars per product. We cannot be certain that we will be able to obtain financing on terms acceptable to us, or at all. Our failure to obtain adequate and timely funding will materially adversely affect our business and our ability to develop our technology and ZFP Therapeutic products. Furthermore, any sales of additional equity securities may result in dilutions to our stockholders.

We are at the development phase of operations and may not succeed or become profitable.

We began operations in 1995 and are in the early phases of ZFP Therapeutic product development. We have incurred significant losses and our net losses for the three years ended December 31, 2011, 2010 and 2009 were $35.8 million, $24.9 million and $18.6 million, respectively. To date, our revenues have been generated from strategic partners, other collaborations in non-therapeutic applications of our technology, and federal government and research foundation grants. Our focus on higher-value therapeutic product development and related strategic partnerships requires us to incur substantial expenses associated with product development. In addition, the preclinical or clinical failure of any single product may have a significant effect on the actual or perceived value of our shares. Our business is subject to all of the risks inherent in the development of a new technology, which include the need to:

- attract and retain qualified scientific and technical staff and management, particularly scientific staff with expertise to develop our early-stage technology into therapeutic products;
- obtain sufficient capital to support the expense of developing our technology platform and developing, testing, and commercializing products;
- develop a market for our products;
- successfully transition from a company with a research focus to a company capable of supporting commercial activities; and
- attract and enter into research collaborations with research and academic institutions and scientists.

Risks Relating to our Relationships with Collaborators and Strategic Partners

If conflicts arise between us and our collaborators or strategic partners, these parties may act in their self-interest, which may limit our ability to implement our strategies.

If conflicts arise between our corporate or academic collaborators or strategic partners and us, the other party may act in its self-interest, which may limit our ability to implement our strategies. Some of our academic collaborators and strategic partners are conducting multiple product development efforts within each area that is the subject of the collaboration with us. Our collaborators or strategic partners, however, may develop, either alone or with others, products in related fields that are competitive with the products or potential products that are the subject of these collaborations. Competing products, either developed by the collaborators or strategic

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partners or to which the collaborators or strategic partners have rights, may result in the withdrawal of partner support for our product candidates.

Some of our collaborators or strategic partners could also become our competitors in the future. Our collaborators or strategic partners could develop competing products, preclude us from entering into collaborations with their competitors, fail to obtain timely regulatory approvals, terminate their agreements with us prematurely, or fail to devote sufficient resources to the development and commercialization of products. Any of these developments could harm our product development efforts.

Our collaborators and strategic partners may control aspects of our clinical trials, which could result in delays and other obstacles in the commercialization of our proposed products.

For some programs we may be dependent on third party collaborators and strategic partners to design and conduct our clinical trials. As a result, we may not be able to conduct these programs in the manner or on the time schedule we currently contemplate, which may negatively impact our business operations. In addition, if any of these collaborators or strategic partners withdraw support for our programs or proposed products or otherwise impair their development; our business could be negatively affected.

On January 31, 2012, we entered into a research and collaborative agreement with Shire AG (Shire), pursuant to which we are engaging in a joint program with Shire to research, develop and commercialize human therapeutics and diagnostics for hemophilia and other monogenic diseases based on our ZFP technology. Under this agreement, we are responsible for all research activities through the submission of an IND and European Clinical Trial Application (CTA), while Shire is responsible for clinical development and commercialization of products generated from the research program from and after the acceptance of an IND or CTA for the product. Under the agreement, we may be eligible to receive milestone payments upon the achievement of specified clinical development, commercialization and post-commercialization milestones. The total amount of potential milestone payments for each gene target, assuming the achievements of all specified milestones in the agreement, is $213.5 million. We will also receive royalty payments based on specified percentages of net sales of products. Once an IND or CTA is submitted, Shire will have control and broad discretion over all aspects of the clinical development and commercialization of any product developed under the program, and we will have little, if any, influence on how such programs will be conducted. Our lack of control over the clinical development of gene targets in our agreement with Shire could cause delays or other difficulties in the development and commercialization of our product candidates, which may prevent us from receiving any milestone, royalty payments and other benefits under the agreement.

Our collaborators or strategic partners may decide to adopt alternative technologies or may be unable to develop commercially viable products with our technology, which would negatively impact our revenues and our strategy to develop these products.

Our collaborators or strategic partners may adopt alternative technologies, which could decrease the marketability of ZFP technology. Additionally, because many of our collaborators or strategic partners are likely to be working on more than one development project, they could choose to shift their resources to projects other than those they are working on with us. If they do so, this would delay our ability to test our technology and would delay or terminate the development of potential products based on our ZFP technology. Further, our collaborators and strategic partners may elect not to develop products arising out of our collaborative and strategic partnering arrangements or to devote sufficient resources to the development, manufacturing, marketing, or sale of these products. If any of these events occur, we may not be able to develop our technologies or commercialize our products.

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If we do not successfully commercialize ZFP-based research reagents, ZFP-modified cell lines for commercial protein production, or ZFP-engineered transgenic animals under our license agreement with Sigma-Aldrich Corporation or ZFP-based agricultural products with Dow AgroSciences, or if Sigma or Dow AgroSciences terminates our agreements, our ability to generate revenue under these license agreements may be limited.

In July 2007, we entered into a license agreement with Sigma to collaborate in the application and development of ZFP-based products for use in the laboratory research reagents markets. The agreement provides Sigma with access to our ZFP technology and the exclusive right to use our ZFP technology to develop and commercialize products for use as research reagents and to offer services in related research fields. This relationship was expanded in October 2009 when we amended our license agreement with Sigma to provide Sigma with the exclusive rights to develop and distribute ZFP-modified cell lines for commercial production of protein pharmaceuticals and, certain ZFP-engineered transgenic animals for commercial applications. In June 2008, following a research period, Dow AgroSciences (DAS) exercised its commercial license option under a license agreement with us relating to plant agriculture. This agreement provides DAS with the exclusive right to develop agricultural products using our ZFP technology in plant cells, plants, or plant cell cultures. Both companies also have the right to sublicense our technology in their respective areas. In addition to upfront payments, we may also receive additional license fees, shared sublicensing revenues, royalty payments and milestone payments depending on the success of the development and commercialization of the licensed products and services covered under both agreements. The commercial milestones and royalties are typically based upon net sales of licensed products.

We cannot be certain that we or our collaboration partners will succeed in the development of commercially viable products in these fields of use, and there is no guarantee that we or our collaboration partners will achieve the milestones set forth in the respective license agreements. To the extent we or our collaboration partners do not succeed in developing and commercializing products or if we or our collaboration partners fail to achieve such milestones, our revenues and benefits under the license agreements will be limited. In addition, the respective license agreements may be terminated by Sigma and DAS at any time by providing us with a 90-day notice. In the event Sigma or DAS decides to terminate the license agreements, our ability to generate revenue under such license agreements will cease.

Our collaborations with outside scientists may be subject to change, which could limit our access to their expertise.

We work with scientific advisors and collaborators at academic research institutions. These scientists are not our employees and may have other commitments that would limit their availability to us. Although our scientific advisors generally agree not to do competing work, if a conflict of interest between their work for us and their work for another entity arises, we may lose their services. Although our scientific advisors and academic collaborators sign agreements not to disclose our confidential information, it is possible that some of our valuable proprietary knowledge may become publicly known through them, which may cause competitive harm to our business.

Risks Relating to our Intellectual Property and Business Operation

Because it is difficult and costly to protect our proprietary rights, and third parties have filed patent applications that are similar to ours, we cannot ensure the proprietary protection of our technologies and products.

Our commercial success will depend in part on obtaining patent protection of our technology and successfully defending any of our patents that may be challenged. The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and can involve complex legal and factual questions. No consistent policy regarding the breadth of claims allowed in biotechnology patents has emerged to date. Accordingly, we cannot predict the breadth of claims allowed in patents we own or license.

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We are a party to various license agreements that give us rights under specified patents and patent applications. Our current licenses, as our future licenses frequently will, contain performance obligations. If we fail to meet those obligations, the licenses could be terminated. If we are unable to continue to license these technologies on commercially reasonable terms, or at all, we may be forced to delay or terminate our product development and research activities.

With respect to our present and any future sublicenses, since our rights derive from those granted to our sublicensor, we are subject to the risk that our sublicensor may fail to perform its obligations under the master license or fail to inform us of useful improvements in, or additions to, the underlying intellectual property owned by the original licensor.

We are unable to exercise the same degree of control over intellectual property that we license from third parties as we exercise over our internally developed intellectual property. We do not control the prosecution of certain of the patent applications that we license from third parties; therefore, the patent applications may not be prosecuted as we desire or in a timely manner.

The degree of future protection for our proprietary rights is uncertain, and we cannot ensure that:

- we or our licensors were the first to make the inventions covered by each of our pending patent applications;
- we or our licensors were the first to file patent applications for these inventions;
- the patents of others will not have an adverse effect on our ability to do business;
- others will not independently develop similar or alternative technologies or reverse engineer any of our products, processes or technologies;
- any of our pending patent applications will result in issued patents;
- any patents issued or licensed to us or our collaborators or strategic partners will provide a basis for commercially viable products or will provide us with any competitive advantages;
- any patents issued or licensed to us will not be challenged and invalidated by third parties; or
- we will develop additional products, processes or technologies that are patentable.

Others have filed and in the future are likely to file patent applications that are similar to ours. We are aware that there are academic groups and other companies that are attempting to develop technology that is based on the use of zinc finger and other DNA-binding proteins, and that these groups and companies have filed patent applications. Several patents have been issued, although we have no current plans to use the associated inventions. If these or other patents issue, it is possible that the holder of any patent or patents granted on these applications may bring an infringement action against our collaborators, strategic partners, or us claiming damages and seeking to enjoin commercial activities relating to the affected products and processes. The costs of litigating the claim could be substantial. Moreover, we cannot predict whether we, our collaborators, or strategic partners would prevail in any actions. In addition, if the relevant patent claims were upheld as valid and enforceable and our products or processes were found to infringe the patent or patents, we could be prevented from making, using, or selling the relevant product or process unless we could obtain a license or were able to design around the patent claims. We can give no assurance that such a license would be available on commercially reasonable terms, or at all, or that we would be able to successfully design around the relevant patent claims. There may be significant litigation in the genomics industry regarding patent and other intellectual property rights, which could subject us to litigation. If we become involved in litigation, it could consume a substantial portion of our managerial and financial resources.

We rely on trade secrets to protect technology where we believe patent protection is not appropriate or obtainable. Trade secrets, however, are difficult to protect. While we require employees, academic collaborators

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and consultants to enter into confidentiality agreements, we may not be able to adequately protect our trade secrets or other proprietary information or enforce these confidentiality agreements.

Our collaborators, strategic partners, and scientific advisors have rights to publish data and information in which we may have rights. If we cannot maintain the confidentiality of our technology and other confidential information in connection with our collaborations and strategic partnerships, then we may not be able to receive patent protection or protect our proprietary information.

If we use biological and hazardous materials in a manner that causes injury or violates laws, we may be liable for damages.

Our research and development activities involve the controlled use of potentially harmful biological materials as well as hazardous materials, chemicals, and various radioactive compounds typically employed in molecular and cellular biology. We routinely use cells in culture and gene delivery vectors, and we employ small amounts of radioisotopes in trace experiments. Although we maintain up-to-date licensing and training programs, we cannot completely eliminate the risk of accidental contamination or injury from the use, storage, handling, or disposal of these materials. In the event of contamination or injury, we could be held liable for damages that result, and any liability could exceed our resources. We currently carry insurance covering certain claims arising from our use of these materials. However, if we are unable to maintain our insurance coverage at a reasonable cost and with adequate coverage, our insurance may not cover any liability that may arise. We are subject to federal, state, and local laws and regulations governing the use, storage, handling, and disposal of these materials and specified waste products. To date, we have not experienced significant costs in complying with regulations regarding the use of these materials.

Failure to attract, retain, and motivate skilled personnel and cultivate key academic collaborations will delay our product development programs and our research and development efforts.

We are a small company with 83 full-time employees as of February 1, 2012, and our success depends on our continued ability to attract, retain, and motivate highly qualified management and scientific personnel and our ability to develop and maintain important relationships with leading research and academic institutions and scientists. Competition for personnel and academic and other research collaborations is intense. The success of our technology development programs depends on our ability to attract and retain highly trained personnel. We have experienced a rate of employee turnover that we believe is typical of emerging biotechnology companies. If we lose the services of personnel with the necessary skills, it could significantly impede the achievement of our research and development objectives. We are not presently aware of any plans of specific employees to retire or otherwise leave the company. If we fail to negotiate additional acceptable collaborations with academic and other research institutions and scientists, or if our existing collaborations are unsuccessful, our ZFP Therapeutic development programs may be delayed or may not succeed.

Risks Relating to our Common Stock and Corporate Organization

Our stock price has been volatile and may continue to be volatile, which could result in substantial losses for investors.

During the quarter ended December 31, 2011, our common stock price ranged from a low of $2.36 to high of $3.45. During the past two fiscal years our common stock price has fluctuated, ranging from a low of $2.36 to a high of $8.66 during the year ended December 31, 2011, and a low of $2.96 to a high of $7.11 during the year ended December 31, 2010. The market instability caused by the financial crisis of 2008 has contributed to the volatility of our stock price. Volatility in our common stock could cause stockholders to incur substantial losses. An active public market for our common stock may not be sustained, and the market price of our common stock

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may continue to be highly volatile. The market price of our common stock has fluctuated significantly in response to various factors, some of which are beyond our control, including but not limited to the following:

- announcements by us or collaborators providing updates on the progress or development status of ZFP Therapeutics; ;
- data from clinical trials;
- initiation or termination of clinical trials;
- changes in market valuations of similar companies;
- overall market and economic conditions;
- deviations in our results of operations from the guidance given by us or estimates of securities analysts;
- announcements by us or our competitors of new or enhanced products, technologies or services or significant contracts, acquisitions, strategic relationships, joint ventures or capital commitments;
- regulatory developments;
- additions or departures of key personnel;
- future sales of our common stock or other securities by us, management or directors, liquidation of institutional funds that comprised large holdings of our stock; and
- decreases in our cash balances.

Our stock price is also influenced by public perception of gene therapy and government regulation of potential products.

Reports of serious adverse events in a retroviral gene transfer trial for infants with X-linked severe combined immunodeficiency (X-linked SCID) in France and subsequent FDA actions putting related trials on hold in the United States had a significant negative impact on the public perception and stock price of certain companies involved in gene therapy. Stock prices of these companies declined whether or not the specific company was involved with retroviral gene transfer for the treatment of infants with X-linked SCID, or whether the specific company s clinical trials were placed on hold in connection with these events. Other potential adverse events in the field of gene therapy may occur in the future that could result in greater governmental regulation of our potential products and potential regulatory delays relating to the testing or approval of our potential products. These external events may have a negative impact on public perception of our business, which could cause our stock price to decline.

Anti-takeover provisions in our certificate of incorporation and Delaware law could make an acquisition of the Company more difficult and could prevent attempts by our stockholders to remove or replace current management.

Anti-takeover provisions of Delaware law and in our certificate of incorporation and our bylaws may discourage, delay or prevent a change in control of our company, even if a change in control would be beneficial to our stockholders. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. In particular, under our certificate of incorporation our board of directors may issue up to 5,000,000 shares of preferred stock with rights and privileges that might be senior to our common stock, without the consent of the holders of the common stock. Moreover, without any further vote or action on the part of the stockholders, the board of directors would have the authority to determine the price, rights, preferences, privileges, and restrictions of the preferred stock. This preferred stock, if it is ever issued, may have preference over, and harm the rights of, the holders of common stock. Although the issuance of this preferred stock would provide us with flexibility in connection with possible acquisitions and other corporate purposes, this issuance may make it more difficult for a third party to acquire a majority of our outstanding voting stock.

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Similarly, our authorized but unissued common stock is available for future issuance without stockholder approval.

In addition, our bylaws:

- state that stockholders may not act by written consent but only at a stockholders meeting;
- establish advance notice requirements for nominations for election to the board of directors or proposing matters that can be acted upon at stockholders meetings; and
- prohibit stockholders from calling a special meeting of stockholders.

We are also subject to Section 203 of the Delaware General Corporation Law, which provides, subject to certain exceptions, that if a person acquires 15% of our voting stock, the person is an interested stockholder and may not engage in business combinations with us for a period of three years from the time the person acquired 15% or more or our voting stock.

ITEM 1B UNRESOLVED STAFF COMMENTS

None.

ITEM 2 PROPERTIES

We currently lease approximately 27,000 square feet of research and office space located at 501 Canal Boulevard in Richmond, California. The lease expires in August of 2014. We believe such facilities are sufficient for the foreseeable future.

ITEM 3 LEGAL PROCEEDINGS

We are not a party to any material legal proceeding.

ITEM 4 MINE SAFETY DISCLOSURES

Not Applicable.

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PART II

ITEM 5 MARKET FOR THE REGISTRANT S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock has traded on the NASDAQ Global Market under the symbol SGMO since our initial public offering on April 6, 2000.

The high and low closing prices of our common stock for each quarterly period during the last two fiscal years as reported by the NASDAQ Global Market were as follows:

Common Stock

	Price	
	High	**Low**
Year ended December 31, 2011		
First Quarter	$ 8.66	$ 6.77
Second Quarter	$ 8.36	$ 5.59
Third Quarter	$ 6.52	$ 4.18
Fourth Quarter	$ 3.45	$ 2.36
Year ended December 31, 2010		
First Quarter	$ 6.63	$ 4.76
Second Quarter	$ 6.47	$ 3.71
Third Quarter	$ 4.72	$ 2.96
Fourth Quarter	$ 7.11	$ 3.34

Holders

As of February 1, 2012, there were 78 holders of record of Sangamo s common stock. This number does not include street name or beneficial holders, whose shares are held of record by banks, brokers, financial institutions and other nominees.

Dividends

Sangamo has not paid dividends on its common stock, and currently does not plan to pay any cash dividends in the foreseeable future.

Stock Trading Plans

From time to time our directors, executive officers and other insiders, including Edward O. Lanphier II, President and CEO, have adopted stock trading plans pursuant to Rule 10b5-1 of the Securities Exchange Act of 1934, as amended, and made sales pursuant to such plans.

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Stock Performance Graph

The above Stock Performance Graph and related information shall not be deemed soliciting material or to be filed with the Securities and Exchange Commission, nor shall such information be incorporated by reference into any future filing under the Securities Act of 1933 or Securities Exchange Act of 1934, each as amended, except to the extent that the Company specifically incorporates it by reference into such filing.

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ITEM 6 SELECTED FINANCIAL DATA

The following Selected Financial Data should be read in conjunction with Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations and Item 8 Financial Statements and Supplementary Data included elsewhere in this Annual Report on Form 10-K.

Selected Financial Data

	Year Ended December 31,				
	2011	2010	2009	2008	2007
	(In thousands, except per share data)				
Statement of Operations Data:					
Total revenues	$ 10,319	$ 20,805	$ 22,187	$ 16,186	$ 9,098
Operating expenses:					
Research and development	32,098	33,154	28,984	31,229	25,559
General and administrative	14,042	12,586	12,605	10,332	8,310
Total operating expenses	46,140	45,740	41,589	41,561	33,869
Loss from operations	(35,821)	(24,935)	(19,402)	(25,375)	(24,771)
Interest income, net	71	81	547	2,231	3,217
Other (expense)/income			268	(1,158)	74
Net loss	$ (35,750)	$ (24,854)	$ (18,587)	$ (24,302)	$ (21,480)
Basic and diluted net loss per common share	$ (0.71)	$ (0.55)	$ (0.44)	$ (0.60)	$ (0.58)
Shares used in computing basic and diluted net loss per common share	50,512	45,167	42,048	40,825	37,355

	As of December 31,				
	2011	2010	2009	2008	2007
	(In thousands)				
Balance Sheet Data:					
Cash, cash equivalents, marketable securities, and interest receivable	$ 84,463	$ 60,622	$ 85,281	$ 65,025	$ 81,412
Working capital	78,488	54,222	70,116	54,221	72,437
Total assets	87,336	62,999	87,439	67,850	83,900
Accumulated deficit	(253,245)	(217,495)	(192,641)	(174,054)	(149,752)
Total stockholders equity	80,132	55,907	71,782	55,396	72,122

ITEM 7 MANAGEMENT S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The discussion in Management s Discussion and Analysis of Financial Condition and Results of Operations contains trend analysis, estimates and other forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These forward-looking statements include, without limitation, statements containing the words believes, anticipates, expects, continue, and other words of similar import or the negative of those terms or expressions. Such forward-looking statements are subject to known and unknown risks, uncertainties, estimates and other factors that may cause the actual results, performance or achievements of the Company, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Actual results could differ materially from those set forth in such forward-looking statements as a result of, but not limited to, the Risk Factors described in Part I, Item 1A. You should read the following discussion and analysis along with the Selected Financial Data and the financial statements and notes attached to those statements included elsewhere in this report.

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Overview

We are a clinical stage biopharmaceutical company focused on the research, development and commercialization of engineered DNA-binding proteins for the development of novel therapeutic strategies for unmet medical needs. Our scientific and business development endeavors currently focus on the engineering of novel zinc finger DNA-binding proteins (ZFPs) for the regulation and modification of genes. Our strategy is to develop highly specific ZFP nucleases (ZFNs) and ZFP transcription factors (ZFP TFs) through early stage clinical testing and strategically partner with biopharmaceutical companies to execute late-stage clinical trials and commercial development.

We have incurred net losses since inception and expect to incur losses in the future as we continue our research and development activities. To date, we have funded our operations primarily through the issuance of equity securities, borrowings, payments from corporate collaborations and research grants.

For the year ended December 31, 2011, we incurred a consolidated net loss of $35.8 million, or $0.71 per share, compared to a net loss of $24.9 million, or $0.55 per share, for the same period in 2010. As of December 31, 2011, we had cash, cash equivalents, marketable securities and interest receivable totaling $84.5 million compared to $60.6 million as of December 31, 2010. As of December 31, 2011, we had an accumulated deficit of $253.2 million.

Our revenues have consisted primarily of revenues from our corporate partners for ZFNs and ZFP TFs, contractual payments from strategic partners for research programs and research milestones, and research grant funding. We expect revenues will continue to fluctuate from period to period and there can be no assurance that new collaborations or partner funding will continue beyond their initial terms.

In the development of our ZFP technology platform, we are focusing our resources on higher-value ZFP Therapeutic product development and less on our non-therapeutic applications. We are conducting a Phase 2 and two Phase 1/2 clinical trials to evaluate a ZFP Therapeutic for the treatment of HIV/AIDS. Development of novel therapeutic products is costly and is subject to a lengthy and uncertain regulatory process by the FDA. Our future products will be gene-based therapeutics. Adverse events in both our own clinical program and other programs may have a negative impact on regulatory approval, the willingness of potential commercial partners to enter into agreements and the perception of the public.

In January 2012, we entered into a collaboration and license agreement with Shire AG (Shire), pursuant to which we will collaborate with Shire to research, develop and commercialize human therapeutics for hemophilia and other monogenic diseases based on our ZFP technology

The accompanying discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements and the related disclosures, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates, assumptions and judgments that affect the reported amounts in our consolidated financial statements and accompanying notes. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe the following policies to be the most critical to an understanding of our financial condition and results of operations because they require us to make estimates, assumptions and judgments about matters that are inherently uncertain.

Revenue Recognition

Revenue is generally recognized when the four basic criteria of revenue recognition are met: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services have been rendered; (3) the fee is fixed

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and determinable; and (4) collectability is reasonably assured. Determination of criteria (3) and (4) is based on management s judgments regarding the nature of the fee charged for products or services delivered and the collectability of those fees.

Since our inception, a substantial portion of our revenues has been generated from research and licensing agreements. Revenue under such agreements typically includes upfront signing or license fees, cost reimbursements, milestone payments and royalties on future licensee s product sales.

Revenue from research activities made under strategic partnering agreements and collaborations is recognized as the services are provided when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed or determinable, and collectability is reasonably assured. Revenue generated from research and licensing agreements typically includes upfront signing or license fees, cost reimbursements, minimum sublicense fees, milestone payments and royalties on future licensee s product sales.

Multiple Element Arrangements prior to the adoption of ASU No. 2009-13, Revenue Recognition Multiple Deliverable Revenue Arrangements (ASU 2009-13). For revenue arrangements entered into before January 1, 2011, that include multiple deliverables, the elements of such agreement were divided into separate units of accounting if the deliverables met certain criteria, including whether the fair value of the delivered items could be determined and whether there was evidence of fair value of the undelivered items. In addition, the consideration was allocated among the separate units of accounting based on their fair values, and the applicable revenue recognition criteria are considered separately for each of the separate units of accounting. Prior to the adoption of ASU 2009-13, we recognized nonrefundable signing, license or non-exclusive option fees as revenue when rights to use the intellectual property related to the license were delivered and over the period of performance obligations if we had continuing performance obligations. We estimated the performance period at the inception of the arrangement and reevaluated it each reporting period. Changes to these estimates were recorded on a prospective basis.

Multiple Element Arrangements after the adoption of ASU 2009-13. ASU 2009-13 amended the accounting standards for certain multiple element revenue arrangements to:

- provide updated guidance on whether multiple elements exist, how the elements in an arrangement should be separated, and how the arrangement consideration should be allocated to the separate elements;

- require an entity to allocate arrangement consideration to each element based on a selling price hierarchy, also called the relative selling price method, where the selling price for an element is based on vendor-specific objective evidence (VSOE), if available; third-party evidence (TPE), if available and VSOE is not available; or the best estimate of selling price (ESP), if neither VSOE nor TPE is available; and

- eliminate the use of the residual method and require an entity to allocate arrangement consideration using the selling price hierarchy.

Since adoption of ASU 2009-13, we have not entered into new agreements and recognized revenues under this standard as of December 31, 2011. For future revenue agreements with multiple element arrangements, such as license and development agreements, we will allocate revenue to each non-contingent element based on the relative selling price of each element. When applying the relative selling price method, we determine the selling price for each deliverable using VSOE of selling price or TPE of selling price. If neither exists we use ESP for that deliverable. Revenue allocated is then recognized when the basic four revenue recognition criteria are met for each element.

Research and Development Expenses

We expense research and development expenses as incurred. Research and development expenses consist of direct and research-related allocated overhead costs such as facilities costs, salaries and related personnel costs,

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and material and supply costs. In addition, research and development expenses include costs related to clinical trials, validation of our testing processes and procedures and as well as related overhead expenses. Research and development costs incurred in connection with collaborator-funded activities are expensed as incurred. Costs to acquire technologies that are utilized in research and development that have no alternative future use are expensed as incurred. Expenses resulting from clinical trials are recorded when incurred based in part on factors such as estimates of work performed, patient enrollment, progress of patient studies and other events. We make good faith estimates that we believe to be accurate, but the actual costs and timing of clinical trials are highly uncertain, subject to risks and may change depending upon a number of factors, including our clinical development plan.

Share-Based Compensation

We measure and recognize compensation expense for all share-based payment awards made to our employees and directors, including employee stock options, employee stock purchases related to the Employee Share Purchase Plan (ESPP) and restricted stock units (RSUs), on estimated fair values. The fair value of share-based awards is amortized over the vesting period of the award using a straight-line method over the requisite service period.

To estimate the value of a stock option award and purchases related to ESPP, we use the Black-Scholes option pricing model. This model requires inputs such as expected life, expected volatility and risk-free interest rate. These inputs are subjective and generally require significant analysis and judgment to develop. While estimates of expected life and volatility are derived primarily from our historical data, the risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant commensurate with the expected life assumption. To estimate the value of RSUs, we use the closing market value of our common stock on the date the award is issued. Further, we are required to estimate forfeitures at the time of grant and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. If factors change and different assumptions are employed in determining the fair value of stock-based awards, the stock based compensation expense recorded in future periods may differ significantly from what was recorded in the current period.

Results of Operations

Years Ended December 31, 2011, 2010 and 2009

Revenues

	Year Ended December 31,							
	2011	2010	Change	% Change	2010	2009	Change	% Change
	(In thousands, except percentage values)							
Revenues:								
Collaboration agreements	$ 6,110	$ 16,819	$ (10,709)	(64%)	$ 16,819	$ 21,553	$ (4,734)	(22)%
Research grants	4,209	3,986	223	6%	3,986	634	3,352	529%
Total revenues	$ 10,319	$ 20,805	$ (10,486)	(50%)	$ 20,805	$ 22,187	$ (1,382)	(6)%

Total revenues consisted of revenues from collaboration agreements and research grants. We anticipate revenues over the next several years will primarily be derived from our collaboration agreements with Shire, Sigma-Aldrich Corporation (Sigma) and Dow AgroSciences LLC (DAS), a wholly owned subsidiary of Dow Chemical Corporation.

Revenues from our corporate collaboration agreements were $6.1 million in 2011, $16.8 million in 2010, and $21.6 million in 2009. The decrease in 2011 from 2010 was primarily due to the completion in July 2010 of the amortization period of revenues related to the commercial license fee received from Sigma under the

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expanded agreement of October 2009. The decrease in 2010 from 2009 was primarily due to decreased revenues of $4.5 million in connection with our license agreement with DAS which was mainly due to a decrease in amortized revenues associated with the commercial option fee paid by DAS in June 2008.

Research grant revenues were $4.2 million in 2011, $4.0 million in 2010 and $0.6 million in 2009. The increase in 2011 relates to $1.1 million of increased revenues from our agreement with the CHDI Foundation, Inc. (CHDI) to develop a novel therapeutic for Huntington s disease, increased revenues of $0.7 million from the California Institute for Regenerative Medicine (CIRM) and increased revenues of $0.4 million for other research grants, partially offset by decreased revenues of $1.0 million related to funding from the Juvenile Diabetes Research Foundation International (JDRF) to support development of SB-509 for the development of diabetic neuropathy (DN) due to completion of our Phase 2b clinical trial SB-509-901. Additionally, we received $1.0 million in funds awarded and recognized as revenue for four qualifying therapeutic discovery projects under the Patient Protection and Affordable Care Act in 2010. The increase of $3.4 million in 2010 from 2009 was primarily due to an increase of $1.0 million from JDRF, $1.0 million from CIRM as well as $1.0 million for four qualifying therapeutic discovery projects funded under the Patient Protection and Affordable Care Act in 2010.

Operating Expenses

	Year Ended December 31,							
	2011	2010	Change	% Change	2010	2009	Change	% Change
	(In thousands, except percentage values)							
Operating expenses:								
Research and development	$ 32,098	$ 33,154	$ (1,056)	(3%)	$ 33,154	$ 28,984	$ 4,170	14%
General and administrative	14,042	12,586	1,456	12%	12,586	12,605	(19)	0%
Total operating expenses	$ 46,140	$ 45,740	$ 400	1%	$ 45,740	$ 41,589	$ 4,151	10%

Research and Development Expenses

We expect to continue to devote substantial resources to research and development in the future and expect research and development expenses to increase in the next several years if we are successful in advancing our HIV/AIDS program in the clinic and if we are able to progress our earlier stage ZFP Therapeutic product candidates into clinical trials. We also expect that expenses related to research performed under our collaboration and license agreement with Shire will increase our research and development expenses during the term of the agreement. Pursuant to the terms of the agreement with Shire, future expenses related to research activities related to the collaboration will be reimbursed by Shire, including employee and external research costs. The reimbursement funds received from Shire will be recognized as revenue as the costs are incurred and collection is assured.

Research and development expenses were $32.1 million in 2011 compared to $33.2 million in 2010 and $29.0 million in 2009. The decrease of $1.1 million in 2011 from 2010 was primarily due to decreased clinical and manufacturing expenses related to our SB-509 program, specifically our Phase 2b study in diabetic neuropathy, offset partially by increased spending on our HIV/AIDS program. The increase of $4.2 million in 2010 from 2009 was primarily due to increased clinical expenses related to diabetic neuropathy (DN), specifically our Phase 2b study. In October 2011, we announced that the SB-509-901 trial did not meet its primary or secondary clinical endpoints in subjects with moderate severity DN as compared to placebo and we decided not to pursue additional clinical development of the SB-509 program.

The main focus of our resources is on the development of ZFP therapeutics, and we have a novel therapeutic for HIV/AIDS in Phase 2 clinical trials. We also have preclincal projects in hemophilia and Parkinson s disease as well as monogenic rare diseases. Additionally, under the collaboration and license agreement with Shire we

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are being funded by Shire to carry out all research activities through the submission of an Investigative New Drug Application or European Clinical Trial Application for the development of seven gene targets for potential human therapeutic products. The initial four gene targets are blood clotting Factors VII, VIII, IX and X, and products developed for such initial gene targets would be used for treating hemophilia. Shire has the right, subject to certain limitations, to designate three additional gene targets.

We also have two collaborations in non-therapeutic applications of our technology. Under the terms of the collaboration agreement with DAS, we provide manufacturing and research assistance for our ZFP technology through 2012. In addition, to the extent we receive royalties pursuant to these collaborations, we will incur fees related to certain technologies that we have in-licensed.

Drug development is inherently uncertain and the successful completion of our development programs is subject to numerous technological challenges and risks and we cannot presently estimate anticipated completion dates for any of our programs. Material cash inflows associated with the sale of products, if any, which result from our research efforts are not expected for at least five years. See Risk Factors *Our potential therapeutic products are subject to a lengthy and uncertain regulatory process, and if these potential products are not approved, we will not be able to commercialize these products* and *Our gene regulation and gene modification technology is relatively new, and if we are unable to use this technology in all our intended applications, it would limit our revenue opportunities*.

The table below shows research and development expenses for our two primary clinical development programs, SB-728-T and SB-509, as well as expenses associated with all other projects in our research and development pipeline. Other projects consist primarily of numerous pre-clinical research projects and activity associated with various research collaborations.

	Year Ended December 31, (In thousands)		
Programs	**2011**	**2010**	**2009**
SB-728-T	$ 13,535	$ 7,079	$ 4,705
SB-509[1]	5,567	12,904	9,677
Other research and development projects	12,996	13,171	14,602
Total research and development expenses	$ 32,098	$ 33,154	$ 28,984

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and personnel related expenses for executive, finance and administrative personnel, stock-based compensation expenses, professional fees, allocated facilities expenses, patent prosecution expenses and other general corporate expenses. As we pursue commercial development of our therapeutic leads we expect the business aspects of the Company to become more complex. We may be required in the future to add personnel and incur additional costs related to the maturity of our business.

General and administrative expenses were $14.0 million in 2011, $12.6 million in 2010 and $12.6 million in 2009. The increase of $1.4 million in 2011 from 2010 was primarily due to increased professional services, including legal fees, and higher salaries and personnel related expenses due to higher headcount. There were no significant changes in general and administrative expenses in 2010 from 2009.

[1] Program terminated in October 2011.

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Interest income, net

Interest income, net, was $0.1 million in 2011 and 2010, compared to $0.5 million in 2009. The decrease in 2010 from 2009 was due to lower investment yields and lower average investment balances.

Other income

There was no other income in 2011 or 2010. Other income for 2009 was $0.3 million. Other income in 2009 was primarily comprised of net foreign currency remeasurement gains related to the cash balance held by our wholly-owned UK subsidiary, Gendaq Limited. The cash balance was transferred to our U.S. investment account in the third quarter of 2009.

Liquidity and Capital Resources

Liquidity

Since inception, we have incurred significant annual net losses and we have funded our operations primarily through the issuance of equity securities, payments from corporate collaborators and strategic partners and research grants.

As of December 31, 2011, we had cash, cash equivalents, marketable securities and interest receivable totaling $84.5 million compared to $60.6 million as of December 31, 2010. The increase was primarily attributable to the completion of an underwritten public offering of our common stock in April 2011, in which 6,700,000 shares of our common stock were sold at a public offering price of $7.70 per share. The net proceeds to us from the sale of shares in this offering, after deducting underwriting discounts and commissions and other offering expenses, were approximately $50.2 million. This was partially offset by the use of capital required to fund our continuing operations, including the advancement of our ZFP Therapeutic programs. Our most significant use of capital pertains to salaries and benefits for our employees and external development expenses, such as manufacturing and clinical trial activity, related to our ZFP Therapeutic programs. Our cash and investment balances are held in a variety of interest bearing instruments, including obligations of U.S. government agencies, U.S. treasury debt securities, corporate debt securities and money market funds. Cash in excess of immediate requirements is invested in accordance with our investment policy with a view toward capital preservation and liquidity.

In January, 2012, we entered into a collaboration and license agreement with Shire AG (Shire), pursuant to which we will collaborate with Shire to research, develop and commercialize certain gene targets in human therapeutics and diagnostics for hemophilia and other monogenic diseases based on our ZFP technology. Under the Agreement, we received an upfront license fee of $13.0 million. We are also eligible to receive milestone payments upon the achievement of specified research, regulatory, clinical development, commercialization and sales milestones. The total amount of potential milestone payments for each gene target, assuming the achievement of all specified milestones, is $213.5 million. The milestone payments for each gene target through the acceptance of an IND or CTA submission total $8.5 million. We will also receive royalty payments that are a tiered double-digit percentage of net sales of products developed under the collaboration.

Cash Flow

Net cash used in operating activities was $25.9 million in 2011, $23.9 million in 2010 and $6.1 million in 2009. For all periods, net cash used in operating activities primarily reflects our net operating losses. The increase in net cash used in operating activities in 2011 compared to 2010 was primarily the result of decreased cash received related to our revenues in 2011 as well as increased operating expenses. The increase in net cash used in operating activities in 2010 compared to 2009 was primarily the result of increased research and development expenses associated with our clinical operations and deferred revenues under our $15.0 million license agreement with Sigma, which was received in full in October 2009, but recognized through July 2010.

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Net cash used in investing activities was $20.0 million in 2011. Net cash provided by investing activities was $12.4 million in 2010. Net cash used in investing activities was $19.2 million in 2009. Cash flows from investing activities for all periods primarily related to purchases, sales and maturities of investments.

Net cash provided by financing activities was $51.9 million in 2011, $1.2 million in 2010 and $26.8 million in 2009. Net cash provided by financing activities in 2011 was primarily attributable to the completion of an underwritten public offering of the our common stock in April 2011, in which 6,700,000 shares of our common stock were sold at a public offering price of $7.70 per share. The net proceeds to us from the sale of shares in this offering, after deducting underwriting discounts and commissions and other offering expenses, were approximately $50.2 million. Cash provided by financing activities in 2010 primarily related to proceeds from the issuance of common stock upon exercise of stock options. Cash provided by financing activities in 2009 were primarily attributable to the sale of our common stock. In October 2009, pursuant to the expanded license agreement with Sigma, we issued 636,000 shares of common stock valued at $7.73 per share to Sigma, resulting in proceeds of $4.9 million. Additionally, in October 2009, we completed an underwritten public offering of common stock, in which we sold an aggregate of 3,000,000 shares of common stock at a public offering price of $7.20 per share, resulting in net proceeds of approximately $20.9 million.

Operating Capital and Capital Expenditure Requirements

We anticipate continuing to incur operating losses for at least the next several years**.** While we expect our rate of cash usage to increase in the future, in particular to support our product development endeavors, we believe that the available cash resources as well as funds received from corporate collaborators, strategic partners and research grants will enable us to maintain our currently planned operations through 2013. Future capital requirements will be substantial and if our capital resources are insufficient to meet future capital requirements, we will need to raise additional capital to fund our operations, including ZFP Therapeutic development activities, through equity or debt financing. Additional capital may not be available on terms acceptable to us, or at all. If adequate funds are not available, or if the terms of potential funding sources are unfavorable, our business and our ability to develop our technology and our ZFP Therapeutic products would be harmed. Furthermore, any sales of additional equity securities may result in dilutions to our stockholders.

Our future capital requirements will depend on many forward looking factors, including the following:

- the initiation, progress, timing and completion of clinical trials for our product candidates and potential product candidates;
- the outcome, timing and cost of regulatory approvals;
- the success of our collaboration agreement with Shire;
- delays that may be caused by changing regulatory requirements;
- the number of product candidates that we pursue;
- the costs involved in filing and prosecuting patent applications and enforcing and defending patent claims;
- the timing and terms of future in-licensing and out-licensing transactions;
- the cost and timing of establishing sales, marketing, manufacturing and distribution capabilities;

the cost of procuring clinical and commercial supplies of our product candidates;

the extent to which we acquire or invest in businesses, products or technologies; and

the possible costs of litigation.

There is no provision for income taxes because we have only incurred losses since our inception. As of December 31, 2011, we had net operating loss carryforwards for federal and state income tax purposes of

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approximately $170.4 million and $162.1 million, respectively. If not utilized, the net federal and state operating loss carryforwards will begin to expire in 2012. We also have federal and state research tax credit carryforwards of $5.5 million and $5.4 million, respectively. The federal research credits will begin to expire in 2018 while the state research credits have no expiration date. Utilization of our net operating loss carryforwards and research tax credit carryforwards may be subject to substantial annual limitations due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions. The annual limitation could result in the expiration of the net operating loss carryforwards and research tax credit carryforwards before use.

Contractual Obligations and Commercial Commitments

As of December 31, 2011, we had contractual obligations and commercial commitments as follows (in thousands):

		Payments Due by Period			
Contractual Obligations	**Total**	**Less Than 1 Year**	**1-3 Years**	**3-5 Years**	**More Than 5 Years**
Operating leases	$ 1,633	$ 600	$ 1,033	$	$
License obligations	2,905	370	580	570	1,385
Total contractual obligations	$ 4,538	$ 970	$ 1,613	$ 570	$ 1,385

Operating leases consist of base rents for facilities we occupy in Richmond, California. License obligations consist of ongoing license maintenance fees associated with cancelable in-licensed patent agreements.

Recent Accounting Pronouncement

In October 2009, the FASB issued ASU No. 2009-13, Revenue Recognition *Multiple Deliverable Revenue Arrangements* (ASU 2009-13). ASU 2009-13 updates revenue recognition standards for arrangements with multiple elements. The revised guidance provides for two significant changes to the existing multiple-element arrangements guidance. The first relates to the determination of when the individual deliverables included in a multiple-element arrangement may be treated as separate units of accounting. This change is significant as it will likely result in the requirement to separate more deliverables within an arrangement. The second change modifies the manner in which the transaction consideration is allocated across the separately identifiable deliverables. We may be required to exercise considerable judgment in determining the estimated selling price of delivered items under new agreements. We adopted this guidance prospectively beginning January 1, 2011. There was no effect on the financial statements for fiscal year 2011 as we did not enter into or modify any such agreements as contemplated by the new standard. However, we expect that this adoption could have a material impact on our financial statements going forward, including on the accounting for the collaboration agreement with Shire.

In June 2011, Accounting Standards Codification Topic 220, *Comprehensive Income* was amended to increase the prominence of items reported in other comprehensive income. Accordingly, a company can present all non-owner changes in stockholders equity either in a single continuous statement of comprehensive income or in two separate but consecutive statements. We plan to adopt this guidance as of January 1, 2012 on a retrospective basis and do not expect the adoption thereof to have a material effect on our consolidated financial statements.

ITEM 7A QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our exposure to market risk relates to our cash, cash equivalents and investments. The goals of our investment policy are preservation of capital, fulfillment of liquidity needs and capturing a market rate of return based on our investment policy parameters and market conditions. We select investments that maximize interest income to the extent possible within these guidelines. To achieve our goals, we maintain a portfolio of cash

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equivalents and investments in securities of high credit quality and with varying maturities to match projected cash needs. As of December 31, 2011, none of our securities have maturities exceeding one year.

The securities in our investment portfolio are not leveraged, are classified as available for sale and are, due to their short-term nature, subject to minimal interest rate risk. Our investments currently consist of U.S. Treasury securities, U.S. government-sponsored enterprise securities and corporate notes. Our investment policy, approved by our Board of Directors, limits the amount we may invest in any one type of investment issuer, thereby reducing credit risk concentrations. All investments have a fixed interest rate and are carried at market value, which approximates cost. We do not use derivative financial instruments in our investment portfolio.

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ITEM 8 FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

SANGAMO BIOSCIENCES, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders

Sangamo BioSciences, Inc.

We have audited the accompanying consolidated balance sheets of Sangamo BioSciences, Inc. as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders equity, and cash flows for each of the three years in the period ended December 31, 2011. 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 the standards of the Public Company Accounting Oversight Board (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 consolidated financial statements referred to above present fairly, in all material respects, the financial position of Sangamo BioSciences, Inc. as of December 31, 2011 and 2010, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2011, in conformity with U.S. generally accepted accounting principles.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Sangamo BioSciences Inc. s internal control over financial reporting as of December 31, 2011, based on the criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 22, 2012 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

San Jose, California

February 22, 2012

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SANGAMO BIOSCIENCES, INC.

CONSOLIDATED BALANCE SHEETS

	December 31, 2011	2010
	(In thousands, except share and per share amounts)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 16,766	$ 10,784
Marketable securities	67,366	49,501
Interest receivable	331	337
Accounts receivable	919	366
Prepaid expenses	310	326
Total current assets	85,692	61,314
Property and equipment, net	1,603	1,673
Other assets	41	12
Total assets	$ 87,336	$ 62,999
LIABILITIES AND STOCKHOLDERS EQUITY		
Current liabilities:		
Accounts payable and accrued liabilities	$ 5,515	$ 5,654
Accrued compensation and employee benefits	1,672	1,357
Deferred revenue	17	81
Total current liabilities	7,204	7,092
Commitments and contingencies		
Stockholders equity:		
Common stock, $0.01 par value; 80,000,000 shares authorized, 52,554,795 and 45,377,739 shares issued and outstanding at December 31, 2011 and 2010, respectively	526	454
Additional paid-in capital	332,839	272,954
Accumulated deficit	(253,245)	(217,495)
Accumulated other comprehensive income / (loss)	12	(6)
Total stockholders equity	80,132	55,907
Total liabilities and stockholders equity	$ 87,336	$ 62,999

See accompanying Notes to Consolidated Financial Statements.

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SANGAMO BIOSCIENCES, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2011	2010	2009
	(In thousands, except per share amounts)		
Revenues:			
Collaboration agreements	$ 6,110	$ 16,819	$ 21,553
Research grants	4,209	3,986	634
Total revenues	10,319	20,805	22,187
Operating expenses:			
Research and development	32,098	33,154	28,984
General and administrative	14,042	12,586	12,605
Total operating expenses	46,140	45,740	41,589
Loss from operations	(35,821)	(24,935)	(19,402)
Interest income, net	71	81	547
Other income			268
Net loss	$ (35,750)	$ (24,854)	$ (18,587)
Basic and diluted net loss per share	$ (0.71)	$ (0.55)	$ (0.44)
Shares used in computing basic and diluted net loss per share	50,512	45,167	42,048

See accompanying Notes to Consolidated Financial Statements.

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SANGAMO BIOSCIENCES, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY

	Common Stock					
	Shares	Amount	Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income/ (Loss)	Total Stockholders Equity
			(In thousands, except share data)			
Balances at December 31, 2008	41,057,077	$ 410	$ 228,764	$ (174,054)	$ 276	$ 55,396
Issuance of common stock in connection with underwritten public offering	3,000,000	30	20,830			20,860
Issuance of common stock in connection with license agreement	636,133	6	4,911			4,917
Issuance of common stock upon exercise of stock options and in connection with restricted stock units	160,159	2	486			488
Issuance of common stock under employee stock purchase plan	141,040	2	497			499
Stock-based compensation			8,467			8,467
Comprehensive loss:						
Net unrealized loss on marketable securities					(258)	(258)
Net loss				(18,587)		(18,587)
Comprehensive loss						(18,845)
Balances at December 31, 2009	44,994,409	$ 450	$ 263,955	$ (192,641)	$ 18	$ 71,782
Issuance of common stock upon exercise of stock options and in connection with restricted stock units	249,156	2	736			738
Issuance of common stock under employee stock purchase plan	134,174	2	445			447
Stock-based compensation			7,818			7,818
Comprehensive loss:						
Net unrealized loss on marketable securities					(24)	(24)
Net loss				(24,854)		(24,854)
Comprehensive loss						(24,878)
Balances at December 31, 2010	45,377,739	$ 454	$ 272,954	$ (217,495)	$ (6)	$ 55,907
Issuance of common stock in connection with underwritten public offering	6,700,000	67	50,152			50,219
Issuance of common stock upon exercise of stock options and in connection with restricted stock units	324,416	3	1,191			1,194
Issuance of common stock under employee stock purchase plan	152,640	2	461			463
Stock-based compensation			8,081			8,081
Comprehensive loss:						
Net unrealized gain on marketable securities					18	18
Net loss				(35,750)		(35,750)

Comprehensive loss						(35,732)
Balances at December 31, 2011	52,554,795	$ 526	$ 332,839	$ (253,245)	$ 12	$ 80,132

See accompanying Notes to Consolidated Financial Statements.

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SANGAMO BIOSCIENCES, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2011	2010	2009
		(In thousands)	
Operating activities:			
Net loss	$ (35,750)	$ (24,854)	$ (18,587)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	646	676	572
Amortization of premium / discount on marketable securities	1,576	1,187	288
Stock-based compensation	8,081	7,818	8,467
Net loss on disposal of property and equipment			34
Other			(302)
Net changes in operating assets and liabilities:			
Interest receivable	6	4	(147)
Accounts receivable	(553)	(297)	431
Prepaid expenses and other assets	(13)	97	(96)
Accounts payable and accrued liabilities	(139)	3,196	(1,390)
Accrued compensation and employee benefits	315	(28)	997
Deferred revenue	(64)	(11,733)	3,596
Net cash used in operating activities	(25,895)	(23,934)	(6,137)
Investing activities:			
Purchases of marketable securities	(112,974)	(100,027)	(79,406)
Maturities of marketable securities	83,411	113,096	60,500
Proceeds from sales of marketable securities	10,139		
Purchases of property and equipment	(576)	(695)	(272)
Net cash provided by / (used in) investing activities	(20,000)	12,374	(19,178)
Financing activities:			
Proceeds from issuance of common stock	51,877	1,185	21,846
Issuance of common stock in connection with license agreements			4,917
Net cash provided by financing activities	51,877	1,185	26,763
Effect of exchange rate changes on cash			302
Net increase / (decrease) in cash and cash equivalents	5,982	(10,375)	1,750
Cash and cash equivalents, beginning of period	10,784	21,159	19,409
Cash and cash equivalents, end of period	$ 16,766	$ 10,784	$ 21,159

See accompanying Notes to Consolidated Financial Statements.

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SANGAMO BIOSCIENCES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Sangamo

Sangamo BioSciences, Inc. (the Company) was incorporated in the State of Delaware on June 22, 1995 and is focused on the development and commercialization of novel transcription factors for gene regulation and gene modification. Sangamo s gene regulation and gene modification technology platform is enabled by the engineering of a class of transcription factors known as zinc finger DNA-binding proteins (ZFPs). Potential applications of Sangamo s technology include development of human therapeutics, plant agriculture and enhancement of pharmaceutical protein production. Sangamo will require additional financial resources to complete the development and commercialization of its products including ZFP Therapeutics.

Sangamo is currently working on a number of long-term development projects that will involve experimental and unproven technology. The projects may require several years and substantial expenditures to complete and ultimately may be unsuccessful. The Company plans to finance operations with available cash resources, funds received under research grants and collaborations and strategic partnerships, and from the issuance of equity or debt securities. Sangamo believes that its available cash, cash equivalents and investments as of December 31, 2011, along with expected revenues collaborations and strategic partnerships, will be adequate to fund its operations through 2013. Sangamo will need to raise substantial additional capital to fund subsequent operations and complete the development and commercialization of its products either through significant corporate partnerships, research grants or issuance of equity securities. Sangamo may seek to raise additional capital when conditions permit; however, there is no assurance funding will be available on favorable terms, if at all.

Basis of Presentation

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and the accompanying notes. Actual results could differ from those estimates. The consolidated financial statements include the accounts of Sangamo and its wholly owned subsidiary, Gendaq Limited, after elimination of all intercompany balances and transactions.

Cash and Cash Equivalents

Sangamo considers all highly liquid investments purchased with original maturities of three months or less at the purchase date to be cash equivalents. Cash and cash equivalents consist of deposits in money market investment accounts, government sponsored entity debt securities, US Treasury debt securities and corporate bank accounts.

Marketable Securities

Sangamo classifies its marketable securities as available-for-sale and records its investments at estimated fair value based on quoted market prices or observable market inputs of almost identical assets, with the unrealized holding gains and losses included in accumulated other comprehensive income.

The Company s investments are subject to a periodic impairment review. The Company recognizes an impairment charge when a decline in the fair value of its investments below the cost basis is judged to be other-than-temporary. The Company considers various factors in determining whether to recognize an impairment charge, including the length of time and extent to which the fair value has been less than the Company s cost

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basis, the financial condition and near-term prospects of the investee, and the Company s intent and ability to hold the investment for a period of time sufficient to allow for any anticipated recovery in the market value. Realized gains and losses on available-for-sale securities are included in other (expense)/income, which is determined using the specific identification method.

Fair Value of Financial Instruments

The carrying amounts for financial instruments consisting of cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximate fair value due to their short maturities. Marketable securities are stated at their estimated fair values, based on quoted market prices for the same or similar instruments. The counterparties to the agreements relating to the Company s investment securities consist of the US Treasury, various major corporations, governmental agencies and financial institutions with high credit standing.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation is calculated using the straight-line method based on the estimated useful lives of the related assets (generally three to five years). For leasehold improvements, amortization is calculated using the straight-line method based on the shorter of the useful life or the lease term. The Company reviews its property, plant and equipment assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable.

Foreign Currency Translation

The functional currency of the Company s foreign subsidiary, Gendaq Limited, is the U.S. dollar. Monetary assets and liabilities which are denominated in foreign currency are remeasured at the exchange rates in effect at the balance sheet date. Nonmonetary assets and liabilities, if any, are remeasured at the historical exchange rates. Income and expenses are remeasured using the average exchange rate for the period. Gains and losses from remeasurement of the foreign subsidiary s financial statements are recorded as other income / (expense). During the third quarter of 2009, the cash balance held at Gendaq was transferred to Sangamo s U.S. investment account, eliminating foreign currency remeasurement gains and losses.

In 2011 and 2010, the Company did not record foreign currency remeasurement gains or losses. In 2009, the Company recorded a foreign currency remeasurement gain of $0.3 million.

Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive income (loss) which primarily consist of unrealized gains/(losses) on marketable securities. Comprehensive loss for the years ended December 31, 2011, 2010 and 2009 is included in the statement of stockholders equity.

Revenue Recognition

Revenue from research activities made under strategic partnering agreements and collaborations is recognized as the services are provided when there is persuasive evidence that an arrangement exists, delivery has occurred, the price is fixed or determinable, and collectability is reasonably assured. Revenue generated from research and licensing agreements typically includes upfront signing or license fees, cost reimbursements, minimum sublicense fees, milestone payments and royalties on future licensee s product sales.

Multiple Element Arrangements prior to the adoption of ASU No. 2009-13, Revenue Recognition Multiple Deliverable Revenue Arrangements (ASU 2009-13). For revenue arrangements entered into before January 1,

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2011, that include multiple deliverables, the elements of such agreement were divided into separate units of accounting if the deliverables met certain criteria, including whether the fair value of the delivered items could be determined and whether there was evidence of fair value of the undelivered items. In addition, the consideration was allocated among the separate units of accounting based on their fair values, and the applicable revenue recognition criteria are considered separately for each of the separate units of accounting. Prior to the adoption of ASU 2009-13, the Company recognized nonrefundable signing, license or non-exclusive option fees as revenue when rights to use the intellectual property related to the license were delivered and over the period of performance obligations if the Company had continuing performance obligations. The Company estimated the performance period at the inception of the arrangement and reevaluated it each reporting period. Changes to these estimates were recorded on a prospective basis.

Multiple Element Arrangements after the adoption of ASU 2009-13. ASU 2009-13 amended the accounting standards for certain multiple element revenue arrangements to:

- provide updated guidance on whether multiple elements exist, how the elements in an arrangement should be separated, and how the arrangement consideration should be allocated to the separate elements;

- require an entity to allocate arrangement consideration to each element based on a selling price hierarchy, also called the relative selling price method, where the selling price for an element is based on vendor-specific objective evidence (VSOE), if available; third-party evidence (TPE), if available and VSOE is not available; or the best estimate of selling price (ESP), if neither VSOE nor TPE is available; and

- eliminate the use of the residual method and require an entity to allocate arrangement consideration using the selling price hierarchy.

Since adoption of ASU 2009-13, the Company has not entered into new agreements and recognized revenues under this standard as of December 31, 2011. For future revenue agreements with multiple element arrangements, such as license and development agreements, the Company will allocate revenue to each non-contingent element based on the relative selling price of each element. When applying the relative selling price method, the Company determines the selling price for each deliverable using VSOE of selling price or TPE of selling price. If neither exists the Company uses ESP for that deliverable. Revenue allocated is then recognized when the basic four revenue recognition criteria are met for each element.

Additionally, the Company recognizes milestone payments, which are subject to substantive contingencies, upon completion of specified milestones, which represents the culmination of an earnings process, according to contract terms. Fees from licensees upon sublicensing Sangamo technologies by them to third parties (sublicense fees) are recognized as revenue in the period such fees are due. Minimum annual sublicense fees are also recognized as revenue in the period in which such fees are due. Royalties are generally recognized as revenue upon the receipt of the related royalty payment. The Company recognizes cost reimbursement revenue under collaborative agreements as the related research and development costs for services are rendered. Deferred revenue represents the portion of research or license payments received which have not been earned.

Sangamo s research grants are typically multi-year agreements and provide for the reimbursement of qualified expenses for research and development as defined under the terms of the grant agreement. Revenue under grant agreements is recognized when the related qualified research expenses are incurred.

During 2011, revenues related to Sigma-Aldrich Corporation (Sigma), Dow AgroSciences LLC (DAS), California Institute for Regenerative Medicine (CIRM) and CHDI Foundation, Inc. (CHDI) represented 15%, 43%, 18% and 11% of total revenues, respectively. During 2010, revenues related to Sigma and DAS represented 59% and 21%, respectively, of total revenues. During 2009, revenues related to Sigma and DAS represented 50% and 40%, respectively, of total revenues.

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Research and Development Expenses

Research and development costs are expensed as incurred. Research and development expenses consist of direct and research-related allocated overhead costs such as facilities costs, salaries and related personnel costs, and material and supply costs. In addition, research and development expenses include costs related to clinical trials, validation of our testing processes and procedures and as well as related overhead expenses. Research and development costs incurred in connection with collaborator-funded activities are expensed as incurred. Costs to acquire technologies that are utilized in research and development that have no alternative future use are expensed as incurred.

Stock-Based Compensation

The Company measures and recognizes compensation expense for all share-based payment awards made to Sangamo employees and directors, including employee share options, restricted stuck units (RSUs) and employee share purchases related to the Employee Share Purchase Plan (ESPP), based on estimated fair values at grant date. The fair value of equity-based awards is amortized over the vesting period of the award using a straight-line method.

To estimate the value of an award, the Company uses the Black-Scholes option pricing model. This model requires inputs such as expected life, expected volatility and risk-free interest rate. These inputs are subjective and generally require significant analysis and judgment to develop. While estimates of expected life and volatility are derived primarily from the Company s historical data, the risk-free rate is based on the U.S. Treasury yield curve in effect at the time of grant commensurate with the expected life assumption. Further, the Company is required to estimate forfeitures at the time of grant and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. The Company uses historical data to estimate pre-vesting option forfeitures and record stock-based compensation expense only for those awards that are expected to vest.

Income Taxes

Income tax expense has been provided using the liability method. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities as measured by the enacted tax rates that will be in effect when these differences reverse. The Company provides a valuation allowance against net deferred tax assets if, based upon the available evidence, it is not more likely than not that the deferred tax assets will be realized.

Net Loss Per Share

Basic net loss per share has been computed by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period. Diluted net loss per share is calculated by dividing net loss by the weighted average number of shares of common stock and potential dilutive securities outstanding during the period.

Because Sangamo is in a net loss position, diluted net loss per share excludes the effects of common stock equivalents consisting of options, which are all anti-dilutive. The total stock options outstanding excluded from the calculation of diluted net loss per share at the end of 2011, 2010 and 2009 were 8,346,190, 8,109,901 and 7,469,501, respectively.

Segments

The Company operates in one segment. Management uses one measurement of profitability and does not segregate its business for internal reporting. As of December 31, 2011 and 2010, all of the Company s assets

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were maintained in the U.S. For the years ended December 31, 2011, 2010 and 2009, 100% of revenues and operating expenses were generated and incurred in the U.S.

Recent Accounting Pronouncement

In October 2009, the FASB issued ASU 2009-13. ASU 2009-13 updates revenue recognition standards for arrangements with multiple elements. The revised guidance provides for two significant changes to the existing multiple-element arrangements guidance. The first relates to the determination of when the individual deliverables included in a multiple-element arrangement may be treated as separate units of accounting. This change is significant as it will likely result in the requirement to separate more deliverables within an arrangement. The second change modifies the manner in which the transaction consideration is allocated across the separately identifiable deliverables. The Company may be required to exercise considerable judgment in determining the estimated selling price of delivered items under new agreements. The Company adopted this guidance prospectively beginning January 1, 2011. There was no effect on 2011 financial statements as the Company did not enter into or materially amend any such agreements. However, the Company expects that this adoption could have a material impact on its financial statements going forward, including on the accounting for the collaboration agreement with Shire AG (Shire).

NOTE 2 INVESTMENTS AND FAIR VALUE MEASUREMENT

The table below summarizes the Company s available-for-sale securities (in thousands):

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized (Losses)	Estimated Fair Value
December 31, 2011				
Cash equivalents:				
Money market funds	$ 15,258			$ 15,258
Total	15,258			15,258
Marketable securities:				
U.S. government sponsored entity debt securities	27,020		(7)	27,013
U.S. treasury debt securities	751	1		752
Corporate debt securities	39,583	18		39,601
Total	67,354	19	(7)	67,366
Total cash equivalents and marketable securities	$ 82,612	$ 19	$ (7)	$ 82,624
December 31, 2010				
Cash equivalents:				
Money market funds	$ 9,390			$ 9,390
Total	9,390			9,390
Marketable securities:				
U.S. government sponsored entity debt securities	42,141		(6)	42,135
U.S. treasury debt securities	4,806	1		4,807
Corporate debt securities	2,560		(1)	2,559
Total	49,507	1	(7)	49,501
Total cash equivalents and marketable securities	$ 58,897	$ 1	$ (7)	$ 58,891

As of December 31, 2011, all of investments had maturity dates within one year and there were no material unrealized losses during 2011. The Company had no realized losses for the year ended December 31, 2011 and no other-than-temporary impairments of available-for-sale securities for the years ended December 31, 2011, 2010 and 2009.

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Fair Value Measurement

The Company measures certain financial assets at fair value on a recurring basis, including cash equivalents and available-for-sale securities. The fair value of these assets was determined based on a three-tier hierarchy under the authoritative guidance for fair value measurements and disclosures that prioritizes the inputs used in measuring fair value as follows:

Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

Level 2: Quoted prices in markets that are not active, or inputs which are observable, either directly or indirectly, for substantially the full term of the asset or liability;

Level 3: Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e., supported by little or no market activity).

The fair value measurements of cash equivalents and available-for-sale marketable securities are identified at the following levels within the fair value hierarchy (in thousands):

	December 31, 2011 Fair Value Measurements			
	Total	**Level 1**	**Level 2**	**Level 3**
Assets:				
Cash equivalents:				
Money market funds	$ 15,258	$ 15,258	$	$
Total	15,258	15,258		
Marketable securities:				
U.S. government sponsored entity debt securities	27,013		27,013	
U.S. treasury debt securities	752		752	
Corporate debt securities	39,601		39,601	
Total	67,366		67,366	
Total cash equivalents and marketable securities	$ 82,624	$ 15,258	$ 67,366	$

	December 31, 2010 Fair Value Measurements			
	Total	**Level 1**	**Level 2**	**Level 3**
Assets:				
Cash equivalents:				
Money market funds	$ 9,390	$ 9,390	$	$
Total	9,390	9,390		
Marketable securities:				
U.S. government sponsored entity debt securities	42,135		42,135	
U.S. treasury debt securities	4,807		4,807	
Corporate debt securities	2,559		2,559	
Total	49,501		49,501	
Total cash equivalents and marketable securities	$ 58,891	$ 9,390	$ 49,501	$

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NOTE 3 STOCK-BASED COMPENSATION

The following table shows total stock-based compensation expense recognized in the consolidated statements of operations (in thousands):

	Year Ended December 31,		
	2011	2010	2009
Research and development	$ 3,769	$ 3,612	$ 4,115
General and administrative	4,312	4,206	4,352
Total stock-based compensation expense	$ 8,081	$ 7,818	$ 8,467

As of December 31, 2011, total compensation cost related to unvested stock options to be recognized in future periods was $9.4 million, which is expected to be expensed over a weighted-average period of 2.48 years. As of December 31, 2011, total compensation cost related to unvested RSUs to be recognized in future periods was $1.4 million, which is expected to be expensed over a weighted-average period of 2.93 years. There was no capitalized stock-based employee compensation cost as of December 31, 2011.

Valuation Assumptions

The employee stock-based compensation expense was determined using the Black Scholes option valuation model. Option valuation models require the input of subjective assumptions and these assumptions can vary over time.

The Company primarily bases its determination of expected volatility through its assessment of the historical volatility of its common stock. The Company relied on its historical exercise and post-vested termination activity for estimating its expected term for use in determining the fair value of these options.

The weighted average assumptions used for estimating the fair value of the employee stock options are as follows:

	Year Ended December 31,		
	2011	2010	2009
Risk-free interest rate	0.93-2.11%	1.5-2.6%	2.0-2.2%
Expected life of option	5.39-5.41 yrs	5.23-5.41 yrs	5.31-5.38 yrs
Expected dividend yield of stock	0%	0%	0%
Expected volatility	0.83-0.86	0.83-0.84	0.83

The weighted average assumptions used for estimating the fair value of the ESPP purchase rights are as follows:

	Year Ended December 31,		
	2011	2010	2009
Risk-free interest rate	0.05-0.61%	0.2-1.0%	0.2-0.9%
Expected life of option	0.5-2.0 yrs	0.5-2.0 yrs	0.5-2.0 yrs
Expected dividend yield of stock	0%	0%	0%
Expected volatility	0.58-0.85	0.62-1.14	0.63-1.97

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NOTE 4 MAJOR CUSTOMERS, PARTNERSHIPS AND STRATEGIC ALLIANCES

Collaboration Agreements

Agreement with Sigma-Aldrich Corporation in Laboratory Research Reagents, Transgenic Animal and Commercial Protein Production Cell-line Engineering

In July 2007, Sangamo entered into a license agreement with Sigma. Under the license agreement, Sangamo agreed to provide Sigma with access to its proprietary ZFP technology and the exclusive right to use the technology to develop and commercialize research reagent products and services in the research field, excluding certain agricultural research uses that Sangamo previously licensed to Dow AgroSciences LLC. Under the agreement, Sangamo and Sigma agreed to conduct a three-year research program to develop laboratory research reagents using Sangamo s ZFP technology during which time Sangamo agreed to assist Sigma in connection with its efforts to market and sell services employing the Company s ZFP technology in the research field. Sangamo has transferred the ZFP manufacturing technology to Sigma.

In October 2009, Sangamo expanded its license agreement with Sigma. In addition to the original terms of the license agreement, Sigma received exclusive rights to develop and distribute ZFP-modified cell lines for commercial production of protein pharmaceuticals and certain ZFP-engineered transgenic animals for commercial applications. Under the terms of the agreement, Sigma made an upfront cash payment of $20.0 million consisting of a $4.9 million purchase of 636,133 shares of Sangamo common stock, valued at $4.9 million, and a $15.1 million upfront license fee. The upfront license fee was recognized on a straight-line basis from the effective date of the expanded license through July 2010, which represents the period over which Sangamo was obligated to perform research services for Sigma. Sangamo is also eligible to receive commercial license fees of $5.0 million based upon a percentage of net sales and sublicensing revenue and thereafter a reduced royalty rate of 10.5% of net sales and sublicensing revenue. In addition, upon the achievement of certain cumulative commercial milestones Sigma will make milestone payments to Sangamo up to an aggregate of $25.0 million.

License fee and milestone revenues related to the Sigma agreements were $0.7 million, $11.6 million and $11.1 million during 2011, 2010 and 2009, respectively. Royalty revenues under the Sigma agreement were $0.9 million, $0.7 million and $0.3 million during 2011, 2010 and 2009, respectively. Related costs and expenses incurred under the Sigma agreement were $0.5 million, $1.2 million and $2.6 million during 2011, 2010 and 2009, respectively.

Agreement with Dow AgroSciences in Plant Agriculture

In October 2005, Sangamo entered into an exclusive commercial license with DAS. Under this agreement, Sangamo is providing DAS with access to its proprietary ZFP technology and the exclusive right to use the technology to modify the genomes or alter the nucleic acid or protein expression of plant cells, plants, or plant cell cultures. Sangamo has retained rights to use plants or plant-derived products to deliver ZFP transcription factors (ZFP TFs) or ZFP nucleases (ZFNs) into humans or animals for diagnostic, therapeutic, or prophylactic purposes. The Company s agreement with DAS provided for an initial three-year research term. In June 2008, DAS exercised its option under the agreement to obtain a commercial license to sell products incorporating or derived from plant cells generated using the Company s ZFP technology, including agricultural crops, industrial products and plant-derived biopharmaceuticals. The exercise of the option triggered a one-time commercial license fee of $6.0 million, payment of the remaining $2.3 million of the previously agreed $4.0 million in research milestones, development and commercialization milestone payments for each product, and royalties on sales of products. Furthermore, DAS has the right to sublicense Sangamo s ZFP technology to third parties for use in plant cells, plants, or plant cell cultures, and Sangamo will be entitled to 25% of any cash consideration received by DAS under such sublicenses. In December 2010, the Company amended its agreement with DAS to extend the period of reagent manufacturing services through December 31, 2011 and research services through December 31, 2012.

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The agreement also provides for minimum sublicense fees each year due to Sangamo every October, provided the agreement is not terminated by DAS. Annual fees range from $250,000 to $3.0 million and total $25.3 million over 11 years. The Company does not have any performance obligations with respect to the sublicensing activities to be conducted by DAS. DAS has the right to terminate the agreement at any time; accordingly, the Company s actual sublicense fees over the term of the agreement could be lower than $25.3 million. In addition, each party may terminate the agreement upon an uncured material breach of the agreement by the other party. In the event of any termination of the agreement, all rights to use the Company s ZFP technology will revert to Sangamo, and DAS will no longer be permitted to practice Sangamo s ZFP technology or to develop or, except in limited circumstances, commercialize any products derived from the Company s ZFP technology.

Revenues under the agreement were $4.5 million, $4.4 million and $8.8 million during 2011, 2010 and 2009, respectively. Related costs and expenses incurred under the agreement were $0.9 million, $0.7 million and $0.6 million during 2011, 2010 and 2009, respectively.

Funding from Research Foundations

California Institute for Regenerative Medicine

In October 2009, the CIRM, a State of California entity, granted a $14.5 million Disease Team Research Award to develop an AIDS-related lymphoma therapy based on the application of ZFN gene-editing technology in stem cells. The four year grant supports an innovative research project conducted by a multidisciplinary team of investigators, including investigators from the University of Southern California, City of Hope National Medical Center and Sangamo BioSciences. Sangamo expects to receive funding up to $5.2 million from the total amount awarded based on expenses incurred for research and development efforts by Sangamo as prescribed in the agreement, and subject to its terms and conditions. The award is intended to substantially fund Sangamo s research and development efforts related to the agreement. The State of California has the right to receive, subject to the terms and conditions of the agreement between Sangamo and CIRM, payments from Sangamo resulting from sales of a commercial product resulting from research and development efforts supported by the grant, not to exceed two times the amount Sangamo receives in funding under the agreement with CIRM.

Revenues attributable to research and development performed under the CIRM grant agreement for AIDS-related lymphoma therapy were $1.7 million, $1.0 million and $0 during 2011, 2010 and 2009, respectively.

CHDI Foundation, Inc.

In April 2011, Sangamo entered into an agreement with the CHDI to develop a novel therapeutic for Huntington s disease based on Sangamo s proprietary ZFP technology. The ZFP therapeutic approach will target the gene that causes Huntington s disease, an inherited neurodegenerative disease for which there are currently no therapies available to slow the disease progression. Under the agreement with CHDI, and subject to its terms and conditions, CHDI will pay the Company $1.3 million, the total funds due under the agreement, over a period of one year which is intended to substantially fund the Company s research efforts related to the agreement.

Revenues attributable to research and development performed under the CHDI collaboration agreement were $1.1 million during 2011.

The Michael J. Fox Foundation for Parkinson s Research

In January 2007, Sangamo entered into an agreement with the Michael J. Fox Foundation for Parkinson s Research (MJFF) to provide financial support of a program to develop Sangamo s ZFP TFs to activate the expression of glial cell line-derived neurotrophic factor (GDNF) that has shown promise in preclinical testing to

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slow or stop the progression of Parkinson s disease. Under the agreement with MJFF, and subject to its terms and conditions, MJFF paid the Company $1.0 million, the total funds due under the agreement, over a period of two years. In June 2010, Sangamo received a commitment for renewed funding from MJFF to support further studies of ZFP TF activators of GDNF. Subject to the terms and conditions of the agreement, the $0.9 million award was paid over a period of two years and was intended to substantially fund the Company s research efforts related to the agreement. As of December 31, 2011, all revenues under the agreement have been recognized.

Revenues attributable to research and development performed under the MJFF agreement were $0.4 million in 2011 and 2010 and $0 in 2009.

The Juvenile Diabetes Research Foundation International

In October 2006, Sangamo entered into an agreement with the Juvenile Diabetes Research Foundation International (JDRF) to provide financial support for one of Sangamo s Phase 2 human clinical studies (SB-509-601) of the Company s product candidate SB-509, a ZFP Therapeutic® that was in development for the treatment of diabetic neuropathy. In January 2010, JDRF and Sangamo amended the agreement and, subject to its terms and conditions, JDRF agreed to provide additional funding of up to $3.0 million for a Phase 2b trial in diabetic neuropathy (SB-509-901) which was intended to partially fund expenses related to the trial. Under the amended agreement, Sangamo was obligated to use commercially reasonable efforts to carry out the Phase 2b trial and, thereafter, to develop and commercialize a product containing SB-509 for the treatment of diabetes and complications of diabetes. Sangamo is obligated to cover all costs of the Phase 2b trial that are not covered by JDRF s grant.

On October 3, 2011, the Company announced that the SB-509-901 trial did not meet its primary or secondary clinical endpoints in subjects with moderate severity diabetic neuropathy as compared to placebo. Further, the Company decided not to pursue additional clinical development of the SB-509 program. Upon termination of the program and pursuant to the terms of the agreement, JDRF may have the right, subject to certain limitations, to obtain an exclusive, sublicensable license, to the intellectual property generated by the Company in the course of the Phase 2b trial, to make and commercialize products containing SB-509 for the treatment of diabetes and complications of diabetes. If JDRF obtains such a license, it is obligated to pay Sangamo a percentage of its revenues from product sales and sublicensing arrangements. If JDRF fails to satisfy its obligations to develop and commercialize a product containing SB-509 under the agreement, then their license rights will terminate and Sangamo will receive a non-exclusive, fully paid license, for any intellectual property developed during JDRF s use of the license, to research, develop and commercialize products containing SB-509 for the treatment of diabetes and complications of diabetes.

Revenues attributable to research and development activities performed under the JDRF agreements were $0.5 million, $1.5 million and $0.5 million during 2011, 2010 and 2009, respectively.

Funding from Other Sources

Qualifying Therapeutic Discovery Project Program

In October 2010, Sangamo was awarded a total of $1.0 million in grants for four qualifying therapeutic discovery projects under the Patient Protection and Affordable Care Act. There was no such funding in 2011 or 2009.

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NOTE 5 PROPERTY AND EQUIPMENT

Property and equipment consist of the following (in thousands):

	December 31,	
	2011	2010
Laboratory equipment	$ 2,851	$ 2,406
Furniture and fixtures	442	403
Leasehold improvements	1,036	944
	4,329	3,753
Less accumulated depreciation	(2,726)	(2,080)
	$ 1,603	$ 1,673

Depreciation and amortization expense was $0.6 million, $0.7 million and $0.6 million for 2011, 2010 and 2009, respectively.

NOTE 6 COMMITMENTS

Sangamo occupies office and laboratory space under operating leases in Richmond, California that expire in August 2014. Rent expenses were $0.6 million for 2011, 2010 and 2009. Future minimum payments under contractual obligations at December 31, 2011 consist of the following (in thousands):

Fiscal Year:	Operating Lease
2012	$ 600
2013	616
2014	417
Thereafter	
Total minimum payments	$ 1,633

NOTE 7 STOCKHOLDERS EQUITY

Convertible Preferred Stock

All outstanding convertible preferred stock converted into common stock upon consummation of the Company s initial public offering in April 2000. The Company has 5,000,000 preferred shares authorized, which may be issued at the Board s discretion.

Common Stock

In April 2011, Sangamo completed an underwritten public offering of its common stock, in which the Company sold an aggregate of 6,700,000 shares of its common stock at a public offering price of $7.70 per share. The net proceeds to Sangamo from the sale of shares in this offering, after deducting underwriting discounts and commissions and other estimated offering expenses, were approximately $50.2 million.

In October 2009, pursuant to the expansion of the license agreement with Sigma, Sangamo issued 636,000 shares of common stock valued at a price of $7.73 per share for aggregate proceeds of $4.9 million.

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In October 2009, Sangamo completed an underwritten public offering of its common stock, in which Sangamo sold an aggregate of 3,000,000 shares of its common stock at a public offering price of $7.20 per share, resulting in net proceeds of approximately $20.9 million.

Stock Incentive Plan

Sangamo s 2004 Stock Incentive Plan (the 2004 Plan), which supersedes the 2000 Stock Incentive Plan (the 2000 Plan), provides for the issuance of common stock and grants of options for common stock to employees, officers, directors and consultants. The exercise price per share will be no less than 85 percent of the fair value per share of common stock on the option grant date, and the option term will not exceed ten years. If the person to whom the option is granted is a 10 percent stockholder, and the option granted qualifies as an Incentive Stock Option Grant, then the exercise price per share will not be less than 110 percent of the fair value per share of common stock on the option grant date, and the option term will not exceed five years. Options granted under the 2004 Plan generally vest over four years at a rate of 25 percent one year from the grant date and one thirty-sixth per month thereafter and expire ten years after the grant, or earlier upon employment termination. Options granted under the 2004 Plan may be exercised prior to vesting, with the related shares subject to Sangamo s right to repurchase the shares that have not vested at the issue price if the option holder terminates employment. The right of repurchase lapses over the original option vesting period, as described above. Approximately 6.5 million shares were initially reserved for issuance pursuant to the 2000 Plan and the 2004 Plan. The number of shares authorized for issuance under the 2004 Plan automatically increases on the first trading day of the fiscal year by an amount equal to 3% of the total number of shares of the Company s common stock outstanding on the last trading day of the preceding fiscal year, but in no event shall any such increase exceed 1.75 million shares per year. During 2011, 2010 and 2009, 1,361,332, 1,349,832 and 1,231,712 additional shares, respectively, were authorized for issuance under the 2004 Plan pursuant to the evergreen increase feature of such plan.

Employee Stock Purchase Plan

Sangamo s 2010 Employee Stock Purchase Plan (Purchase Plan), which supersedes the 2000 Employee Stock Purchase Plan, provides a total reserve of 2,100,000 shares of common stock for issuance under the Purchase Plan. Eligible employees may purchase common stock at 85 percent of the lesser of the fair market value of Sangamo s common stock on the first day of the applicable two-year offering period or the last day of the applicable six-month purchase period.

The weighted-average estimated fair value per share of ESPP purchase rights during 2011, 2010 and 2009 were $1.62, $2.76 and $3.11, respectively, based upon the assumptions in the Black-Scholes valuation model described in Note 1.

Stock Option Activity

A summary of Sangamo s stock option activity is as follows:

	Number of Shares	Weighted-Average Exercise per Share Price	Weighted Average Remaining Contractual Term (In years)
Options outstanding at December 31, 2010	8,109,901	$ 6.54	7.30
Options granted	836,000	$ 4.65	
Options exercised	(303,353)	$ 4.10	
Options canceled	(296,358)	$ 11.04	
Options outstanding at December 31, 2011	8,346,190	$ 6.28	6.78
Options exercisable at December 31, 2011	5,455,800	$ 7.00	5.84

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There were no shares subject to Sangamo s right of repurchase as of December 31, 2011. The intrinsic value of options exercised during 2011 was $1.0 million and the intrinsic value of options exercised during both 2010 and 2009 was $0.5 million.

At December 31, 2011, the aggregate intrinsic values of the outstanding and exercisable options were $0.1 million and $16,122, respectively. The aggregate intrinsic value of shares vested and expected to vest during 2011, 2010 and 2009 was $0.1 million, $11.2 million, $7.4 million, respectively.

The weighted-average fair value per share of options granted during 2011, 2010 and 2009 was $3.20, $3.85 and $3.61, respectively, based upon the assumption in the Black-Scholes valuation model described in Note 1.

The following table summarizes information with respect to stock options outstanding at December 31, 2011:

		Options Outstanding and Exercisable		Options Exercisable	
Range of Exercise Price		Number of Shares of common stock subject to options	Weighted Average Remaining Contractual Life (In years)	Number of Shares of common stock subject to options	Weighted Average Exercise Price
$ 2.04	$ 3.42	389,744	9.28	39,744	$ 2.50
$ 3.45	$ 3.45	1,733,092	6.94	1,232,118	$ 3.45
$ 3.61	$ 5.12	841,830	4.24	758,579	$ 4.08
$ 5.18	$ 5.30	279,767	2.96	279,767	$ 5.19
$ 5.35	$ 5.35	1,138,866	7.93	558,866	$ 5.35
$ 5.42	$ 5.66	70,875	6.24	35,458	$ 5.56
$ 5.70	$5.70	1,144,500	8.93	286,125	$ 5.70
$ 5.90	$6.82	1,044,230	6.62	634,965	$ 6.59
$ 6.88	$13.98	1,398,286	5.56	1,325,178	$ 12.03
$14.27	$14.62	305,000	5.92	305,000	$ 14.28
		8,346,190	6.78	5,455,800	$ 7.00

During 2011, the Company issued 550,000 RSUs under the Company s 2004 Stock Incentive Plan at a grant date fair value of $2.55. These awards will vest as follows: one-third of the award will vest on the second anniversary of the award date and two-thirds of the award will vest on the third anniversary of the award date. During 2010, the Company issued 10,000 RSUs under the Company s 2004 Stock Incentive Plan at a grant date fair value of $6.05. These RSUs will vest in equal monthly installments over a two-year service period. Fair value of restricted stock units are estimated based upon the closing sales price of the Company s common stock on the grant date. As of December 31, 2011, 551,667 RSUs were outstanding under the Company s stock option plans.

As of December 31, 2011, 2,824,067 shares were reserved for future awards under the Company s stock incentive plans. As of December 31, 2011, there are 2,036,330 shares of common stock reserved for future issuance under the 2010 Employee Stock Purchase Plan.

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NOTE 8 COMPREHENSIVE LOSS

Activities in comprehensive loss were as follows (in thousands):

	Year Ended December 31,		
	2011	2010	2009
Net loss	$ (35,750)	$ (24,854)	$ (18,587)
Increase / (Decrease) in unrealized gains on marketable securities	18	(24)	(258)
Comprehensive loss	$ (35,732)	$ (24,878)	$ (18,845)

NOTE 9 INCOME TAXES

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company s deferred tax assets are as follows (in thousands):

	December 31,	
	2011	2010
Deferred tax assets:		
Net operating loss carryforwards	$ 67,395	$ 56,254
Research and development tax credit carryforwards	6,844	4,689
Capitalized research	117	259
Stock-based compensation	7,355	831
Other	1,125	1,066
	82,836	63,099
Valuation allowance	(82,836)	(63,099)
Net deferred tax assets	$	$

Realization of deferred tax assets is dependent upon future earnings, if any, the timing and amount of which are uncertain. Accordingly, the net deferred tax assets have been fully offset by a valuation allowance. The valuation allowance increased by $19.7 million, $7.4 million and $4.1 million for the years ended December 31, 2011, 2010 and 2009, respectively. As of December 31, 2011, Sangamo had net operating loss carryforwards for federal and state income tax purposes of approximately $170.4 million and $162.1 million, respectively. If not utilized, the net federal and state operating loss carryforwards will begin to expire in 2012. The Company also has federal and state research tax credit carryforwards of $5.5 million and $5.4 million, respectively. The federal research credits will begin to expire in 2018 while the state research credits have no expiration date. Utilization of the Company s net operating loss carryforwards and research tax credit carryforwards may be subject to substantial annual limitations due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions. The annual limitation could result in the expiration of the net operating loss carryforwards and research tax credit carryforwards before use.

The Company files U.S and state income tax returns with varying statutes of limitations. The tax years from 2000 forward remain open to examination due to the carryover of net operating losses or tax credits. We also file various foreign income tax returns with varying statutes of limitations, and the tax years from 2005 and thereafter remain open to examination.

The Company s practice is to recognize interest and/or penalties related to income tax matters in income tax expense. As of December 31 2011, the Company had no accrued interest and/or penalties. The unrecognized tax benefits may change during the next year for items that arise in the ordinary course of business. In the event that any unrecognized tax benefits are recognized, the effective tax rate will not be affected.

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The following table summarizes the activity related to the Company s unrecognized tax benefits (in thousands):

	December 31,		
	2011	2010	2009
Beginning balance	$ 1,896	$ 1,643	$ 1,282
Additions based on tax positions related to the current year	589	253	361
Additions for tax positions of prior years	265		
Reductions for tax positions of prior years			
Ending Balance	$ 2,750	$ 1,896	$ 1,643

NOTE 10 ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Accounts payable and accrued liabilities consist of the following (in thousands):

	December 31,	
	2011	2010
Accounts payable	$ 4,110	$ 3,537
Accrued clinical trial expense	968	1,405
Accrued professional fees	299	278
Deferred rent	131	153
Other	7	281
Total accounts payable and accrued liabilities	$ 5,515	$ 5,654

NOTE 11 QUARTERLY FINANCIAL DATA (UNAUDITED)

The following table sets forth certain unaudited quarterly financial data for the eight quarters ended December 31, 2011. The unaudited information set forth below has been prepared on the same basis as the audited information and includes all adjustments necessary to present fairly the information set forth herein. The operating results for any quarter are not indicative of results for any future period. All data is in thousands except per common share data.

	2011				2010			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Revenues	$ 2,200	$ 1,514	$ 1,857	$ 4,748	$ 6,648	$ 6,525	$ 2,943	$ 4,689
Expenses	$ 11,801	$ 11,795	$ 11,431	$ 11,113	$ 10,651	$ 10,404	$ 11,658	$ 13,027
Net loss	$ (9,578)	$ (10,259)	$ (9,554)	$ (6,359)	$ (3,978)	$ (3,860)	$ (8,695)	$ (8,321)
Net loss per share	$ (0.21)	$ (0.20)	$ (0.18)	$ (0.12)	$ (0.09)	$ (0.09)	$ (0.19)	$ (0.18)

NOTE 12 SUBSEQUENT EVENT

On January 31, 2012, The Company entered into a collaboration and license agreement (the Agreement) with Shire, pursuant to which the Company and Shire will collaborate to research, develop and commercialize human therapeutics and diagnostics for monogenic diseases based on Sangamo s ZFP technology. Under the Agreement, the Company and Shire may develop potential human therapeutic or diagnostic products for seven gene targets. The initial four gene targets are blood clotting Factors VII, VIII, IX and X, and products developed for such initial gene targets would be used for treating or diagnosing hemophilia. Shire has the right, subject to certain limitations, to designate three additional gene targets. Pursuant to the Agreement, the Company granted Shire an exclusive, world-wide, royalty-bearing license, with the right to grant sublicenses, to use Sangamo s ZFP technology for the purpose of developing and commercializing human therapeutic and diagnostic products for the gene targets.

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The initial research term of the Agreement is six years and is subject to extensions upon mutual agreement and under other specified circumstances. The Company is responsible for all research activities through the submission of an Investigative New Drug Application (IND) or European Clinical Trial Application (CTA), while Shire is responsible for clinical development and commercialization of products generated from the research program from and after the acceptance of an IND or CTA for the product. Shire will reimburse Sangamo for its internal and external research program-related costs.

Under the Agreement, the Company received an upfront license fee of $13.0 million. Pursuant to the terms of the agreement with Shire, future expenses related to research activities related to the collaboration will be reimbursed by Shire, including employee and external research costs. In addition, for each gene target, Sangamo is eligible to receive milestone payments upon the achievement of specified research, regulatory, clinical development, commercialization and sales milestones. The total amount of potential milestone payments for each of the seven gene targets, assuming the achievement of all specified milestones in the Agreement, is $213.5 million. The milestone payments for each gene target through the acceptance of an IND or CTA submission total $8.5 million. Sangamo will also receive royalty payments that are a tiered double-digit percentage of net sales of products developed under the collaboration.

The Agreement may be terminated by (i) Sangamo or Shire, in whole or in part, for the uncured material breach of the other party, (ii) Sangamo or Shire for the bankruptcy or other insolvency proceeding of the other party and (iii) Shire, in its entirety, beginning 24 months after the effective date of the Agreement upon 90 days advance written notice. In addition, Shire may terminate the Agreement with respect to an individual gene target at any time, and under certain circumstances may designate a replacement gene target for a terminated gene target

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ITEM 9 CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A CONTROLS AND PROCEDURES

(I) Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures to ensure that information we are required to disclose in reports that we file or submit under the Securities Exchange Act of 1934, as amended (Exchange Act) is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission s (SEC) rules and forms. Our management evaluated, with the participation of our chief executive officer (CEO) and our chief financial officer (CFO), the effectiveness of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) under the Exchange Act. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures were effective, at a reasonable assurance level, as of December 31, 2011 and as of the date of this filing.

There have been no significant changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect internal control over financial reporting during the fiscal quarter ended December 31, 2011.

(II) Management s Report on Internal Control over Financial Reporting

Internal control over financial reporting refers to the process designed by, or under the supervision of, our CEO and CFO, and effected by our Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles, and includes those policies and procedures that:

(1) Pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Company;

(2) Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and

(3) Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company s assets that could have a material effect on the financial statements.

Management is responsible for establishing and maintaining an adequate internal control over financial reporting for the Company. Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Internal control over financial reporting is a process that involves human diligence and compliance and is subject to lapses in judgment and breakdowns resulting from human failures. Internal control over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected on a timely basis by internal control over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design into the process safeguards to reduce, though not eliminate, this risk.

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework set forth in Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework set forth in Internal Control Integrated Framework, our management concluded that our internal

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control over financial reporting was effective as of December 31, 2011. The effectiveness of our internal control over financial reporting as of December 31, 2011 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their report which is included herein.

(III) Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders

Sangamo BioSciences, Inc.

We have audited Sangamo BioSciences, Inc. s internal control over financial reporting as of December 31, 2011, based on criteria established in *Internal Control Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Sangamo BioSciences, Inc. s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management s Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company s internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Sangamo BioSciences, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2011 based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Sangamo BioSciences, Inc. as of December 31, 2011 and 2010, and the related consolidated statements of operations, stockholders equity, and cash flows for each of the three years in the period ended December 31, 2011 and our report dated February 22, 2012 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

San Jose, California

February 22, 2012

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ITEM 9B OTHER INFORMATION

In December 2011, following the recommendation of the Compensation Committee, the Board of Directors approved a 2012 cash incentive plan for the senior management of the Company, including Edward O. Lanphier II, Chief Executive Officer and President, H. Ward Wolff, Executive Vice President and Chief Financial Officer, Geoffrey Nichol, M.B., Ch.B., Executive Vice President, Research and Development, Dale G. Ando, M.D., Vice President, Therapeutic Development and Chief Medical Officer, Philip Gregory, D. Phil., Vice President, Research and Chief Science Officer, and David Ichikawa, Senior Vice President, Business Development. Under the plan, the Board has established clinical, business development, research and financial goals for the 2012 year and assigned relative weightings to these goals. For 2012 Mr. Lanphier is eligible for a bonus of up to 50% of his base salary, Messrs. Wolff and Nichol are eligible for a bonus of up to 40% of their base salary, Messrs. Ando and Gregory are eligible for a bonus of up to 30% of their base salary and Mr. Ichikawa is eligible for a bonus of up to 25% of his base salary, all based upon the Company s achievement of corporate objectives for 2012. The Compensation Committee has the discretion to increase, reduce or eliminate the bonus that would otherwise be payable to one or more participants on the basis of the level of attained performance or to grant supplemental bonuses to individual officers that are above or below the established target based on the established criteria and its subjective assessment of such officer s performance.

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PART III

Certain information required by Part III is omitted from this Report on Form 10-K since we intend to file our definitive Proxy Statement for our next Annual Meeting of Stockholders, pursuant to Regulation 14A of the Securities Exchange Act of 1934, as amended (the 2012 Proxy Statement), no later than April 30, 2012, and certain information to be included in the 2012 Proxy Statement is incorporated herein by reference.

ITEM 10 DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item concerning our directors, executive officers, Section 16 compliance and corporate governance matters is incorporated by reference to the information set forth in the sections titled Election of Directors, Management, and Section 16(a) Beneficial Ownership Reporting Compliance in our 2012 Proxy Statement.

ITEM 11 EXECUTIVE COMPENSATION

The information required by this item regarding executive compensation is incorporated by reference to the information set forth in the sections titled Executive Compensation in our 2012 Proxy Statement.

ITEM 12 SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item regarding security ownership of certain beneficial owners and management is incorporated by reference to the information set forth in the section titled Security Ownership of Certain Beneficial Owners and Management and Equity Compensation Plans in our 2012 Proxy Statement.

ITEM 13 CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item regarding certain relationships and related transactions is incorporated by reference to the information set forth in the section titled Certain Relationships and Related Transactions in our 2012 Proxy Statement.

ITEM 14 PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item regarding principal accounting fees and services is incorporated by reference to the information set forth in the section titled Principal Accounting Fees and Services in our 2012 Proxy Statement.

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PART IV

ITEM 15 EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are included as part of this Annual Report on Form 10-K:

1. Financial Statements See Index to Consolidated Financial Statements in Item 8.

2. Financial Statement Schedules Not Applicable.

3. Exhibits See Index to Exhibits.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on February 22, 2012.

SANGAMO BIOSCIENCES, INC.

By: /s/ EDWARD O. LANPHIER II
Edward O. Lanphier II
President, Chief Executive Officer and Director

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ EDWARD O. LANPHIER II **Edward O. Lanphier II**	President, Chief Executive Officer and Director (Principal Executive Officer)	February 22, 2012
/s/ H. WARD WOLFF **H. Ward Wolff**	Executive Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	February 22, 2012
/s/ WILLIAM R. RINGO **William R. Ringo**	Director and Chairman of the Board	February 22, 2012
/s/ PAUL B. CLEVELAND **Paul B. Cleveland**	Director	February 22, 2012
/s/ STEPHEN G. DILLY, M.B.B.S, PH.D **Stephen G. Dilly, M.B.B.S, Ph.D**	Director	February 22, 2012
/s/ JOHN W. LARSON **John W. Larson**	Director	February 22, 2012
/s/ STEVEN J. MENTO, PH.D **Steven J. Mento, Ph.D**	Director	February 22, 2012
/s/ THOMAS G. WIGGANS **Thomas G. Wiggans**	Director	February 22, 2012

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INDEX TO EXHIBITS

Exhibit Number	Description of Document
3.1	Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company s Registration Statement on Form S-1/A (Registration No. 333-30134) filed April 4, 2000).
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Company s Registration Statement on Form S-1/A (Registration No. 333-30134) filed April 4, 2000).
4.1	Form of Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company s Registration Statement on Form S-1/A (Registration No. 333-30134) filed April 4, 2000).
10.1(+)	2000 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.2 to the Company s Registration Statement on Form S-1/A (Registration No. 333-30134) filed February 24, 2000).
10.2	Form of Indemnification Agreement entered into between Sangamo and each of its directors and executive officers (incorporated by reference to Exhibit 10.4 to the Company s Registration Statement on Form S-1/A (Registration No. 333-30134) filed February 24, 2000).
10.3	Sublicense Agreement, by and between Sangamo and Johnson & Johnson, dated May 9, 1996 (incorporated by reference to Exhibit 10.3 to the Company s Annual Report on Form 10-K/A filed April 22, 2010).
10.4	Patent License Agreement between Sangamo and Massachusetts Institute of Technology, dated May 9, 1996, as amended by the First Amendment, dated December 10, 1997 (incorporated by reference to Exhibit 10.4 to the Company s Annual Report on Form 10-K/A filed April 22, 2010).
10.5	License Agreement between Sangamo and the Johns Hopkins University, dated June 25, 1995, as amended by Amendment No. 1, dated July 16, 1998 (incorporated by reference to Exhibit 10.5 to the Company s Annual Report on Form 10-K/A filed April 22, 2010).
10.6	Triple Net Laboratory Lease, between Sangamo and Point Richmond R&D Associates II, LLC, dated May 23, 1997 (incorporated by reference to Sangamo s Registration Statement on Form S-1 (Reg. No. 333-30314), as amended).
10.7(+)	Employment Agreement, between Sangamo and Edward O. Lanphier II, dated June 1, 1997 (incorporated by reference to Exhibit 10.15 to the Company s Registration Statement on Form S-1/A (Registration No. 333-30134) filed March 14, 2000).
10.8	Second Amendment to Patent License Agreement between Sangamo and Massachusetts Institute of Technology, dated December 2, 1998 (incorporated by reference to Exhibit 10.8 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.9	Amendment No. 2 to License Agreement between Sangamo and the Johns Hopkins University, effective as of July 26, 1999 (incorporated by reference to Exhibit 10.9 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.10	Third Amendment to Patent License Agreement between Sangamo and Massachusetts Institute of Technology, dated September 1, 1999 (incorporated by reference to Exhibit 10.10 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.11	Fourth Amendment to Patent License Agreement between Sangamo and Massachusetts Institute of Technology, effective as of February 10, 2000 (incorporated by reference to Exhibit 10.11 to the Company s Annual Report on Form 10-K, filed March 5, 2010).

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Exhibit Number	Description of Document
10.12	Amendment No. 3 to License Agreement between Sangamo and the Johns Hopkins University, effective as of March 10, 2000 (incorporated by reference to Exhibit 10.12 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.13	License Agreement by and between The Scripps Research Institute and Sangamo, dated March 14, 2000 (incorporated by reference to Exhibit 10.13 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.14	Fifth Amendment to Patent License Agreement between Sangamo and Massachusetts Institute of Technology, effective as of December 15, 2000 (incorporated by reference to Exhibit 10.14 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.15(+)	2004 Stock Incentive Plan (incorporated by reference to Appendix C of the Company s Definitive Proxy Statement on Schedule 14A filed April 29, 2004).
10.16	First Amendment to Triple Net Laboratory Lease, between Sangamo and Point Richmond R&D Associates II, LLC, dated March 12, 2004 (incorporated by reference to Sangamo s Annual Report on Form 10-K for the year ended December 31, 2004).
10.17	Sixth Amendment to Patent License Agreement between Sangamo and Massachusetts Institute of Technology, dated September 1, 2005 (incorporated by reference to Exhibit 10.17 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.18	Research and Commercial Option License Agreement, dated October 5, 2005, between Sangamo and Dow AgroSciences LLC (incorporated by reference to Exhibit 10.23 to the Company s Annual Report on Form 10-K, filed March 16, 2006).
10.19	Research, Development and Commercialization Agreement dated October 24, 2006 between Sangamo and Juvenile Diabetes Research Foundation International (incorporated by reference to Exhibit 10.19 to the Company s Annual Report on Form 10-K, filed March 1, 2007).
10.20	Seventh Amendment to Patent License Agreement between Sangamo and Massachusetts Institute of Technology, dated October 27, 2006 (incorporated by reference to Exhibit 10.20 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.21	First Amendment of Research and Commercial Option License Agreement between Sangamo and Dow AgroSciences LLC, dated November 7, 2006 (incorporated by reference to Exhibit 10.21 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.22	Asset Purchase Agreement dated December 1, 2006 by and between Sangamo and Edwards Lifesciences LLC (incorporated by reference to the Company s Form 8-K filed on December 28, 2006).
10.23	Eighth Amendment to Patent License Agreement between Sangamo and Massachusetts Institute of Technology, dated February 1, 2007 (incorporated by reference to Exhibit 10.23 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.24	Research and License Agreement between Sangamo and Genentech, Inc., dated April 27, 2007 (incorporated by reference to Exhibit 10.1 to the Company s Form 10-Q, filed August 9, 2007).
10.25	Amendment No. 4 to License Agreement between Sangamo and the Johns Hopkins University, effective as of May 21, 2007 (incorporated by reference to Exhibit 10.25 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.26	License Agreement between Sangamo and Sigma-Aldrich Corporation, dated July 10, 2007 (incorporated by reference to Exhibit 10.1 to the Company s Form 10-Q, filed November 1, 2007).

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Exhibit Number	Description of Document
10.27	Common Stock Purchase Agreement between Sangamo and Sigma-Aldrich Corporation, dated July 10, 2007 (incorporated by reference to Exhibit 10.1 to the Company s Form 8-K filed on July 10, 2007).
10.28	First Amendment of the License Agreement between Sigma-Aldrich Corporation and Sangamo, dated November 9, 2007 (incorporated by reference to Exhibit 10.1 to the Company s Form 10-Q filed on November 6, 2009).
10.29	Letter Agreement between Sangamo and Sigma-Aldrich Corporation, dated February 25, 2008 (incorporated by reference to Exhibit 10.2 to the Company s Form 10-Q filed on May 9, 2008).
10.30	Second Research and License Agreement between Sangamo and Genentech, Inc., dated February 27, 2008 (incorporated by reference to Exhibit 10.1 to the Company s Form 10-Q filed on May 9, 2008).
10.31	License Agreement between Sangamo and Open Monoclonal Technology, Inc., dated April 2, 2008 (incorporated by reference to Exhibit 10.1 to the Company s Form 10-Q filed on August 7, 2008).
10.32	Amendment to License Agreement by and between The Scripps Research Institute and Sangamo, dated April 29, 2008 (incorporated by reference to Exhibit 10.32 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.33	Research and License Agreement between Sangamo and F. Hoffmann-La Roche Ltd and Hoffmann-La Roche Inc., dated July 2, 2008 (incorporated by reference to Exhibit 10.1 to the Company s Form 10-Q filed on November 4, 2008).
10.34(+)	Plan Amendment to 2004 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the Company s Form 10-Q filed on August 7, 2008).
10.35	Letter Agreement between Sangamo and Sigma-Aldrich Corporation, dated July 2, 2008 (incorporated by reference to Exhibit 10.2 to the Company s Form 10-Q filed on November 4, 2008).
10.36	License Agreement between Sangamo and Pfizer Inc., dated December 19, 2008 (incorporated by reference to Exhibit 10.25 to the Company s Annual Report on Form 10-K, filed March 3, 2009).
10.37(+)	Amended and Restated Employment Agreement between Sangamo and H. Ward Wolff, dated December 31, 2008 (incorporated by reference to Exhibit 10.26 to the Company s Annual Report on Form 10-K, filed March 3, 2009).
10.38(+)	First Amendment to Employment Agreement between Sangamo and Edward O. Lanphier, dated December 31, 2008 (incorporated by reference to Exhibit 10.27 to the Company s Annual Report on Form 10-K, filed March 3, 2009).
10.39	Second Amendment of Research and Commercial Option License Agreement between Sangamo and Dow AgroSciences LLC, dated February 13, 2009 (incorporated by reference to Exhibit 10.39 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.40	Third Amendment of Research and Commercial Option License Agreement between Sangamo and Dow AgroSciences LLC, dated February 28, 2009 (incorporated by reference to Exhibit 10.40 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.41	Second Amendment of the License Agreement between Sigma-Aldrich Corporation and Sangamo, dated September 25, 2009 (incorporated by reference to Exhibit 10.2 to the Company s Form 10-Q filed on November 6, 2009).

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Exhibit Number	Description of Document
10.42	Common Stock Purchase Agreement between Sangamo and Sigma-Aldrich Corporation, dated October 2, 2009 (incorporated by reference to Exhibit 10.3 to the Company s Form 8-K filed on October 5, 2009).
10.43	Third Amendment to the License Agreement between Sigma-Aldrich Corporation and Sangamo, dated October 2, 2009 (incorporated by reference to Exhibit 10.1 to the Company s Form 10-Q filed on November 6, 2009).
10.44	First Amendment to the Research, Development and Commercialization Agreement between Sangamo and Juvenile Diabetes Research Foundation International, dated January 8, 2010 (incorporated by reference to Exhibit 10.44 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.45	Fourth Amendment of Research and Commercial Option License Agreement between Sangamo and Dow AgroSciences LLC, dated January 8, 2010 (incorporated by reference to Exhibit 10.45 to the Company s Annual Report on Form 10-K, filed March 5, 2010).
10.46	Form of Non-Employee Director Restricted Stock Issuance Agreement (incorporated by reference to Exhibit 10.1 to the Company s Form 10-Q filed on August 5, 2010).
10.47	Fifth Amendment of the Research and Commercial License Option Agreement between Sangamo BioSciences, Inc. and Dow AgroSciences LLC, dated May 14, 2010 (incorporated by reference to Exhibit 10.1 to the Company s Form 10-Q filed on November 3, 2010).
10.48	Sixth Amendment of the Research and Commercial License Option Agreement between Sangamo BioSciences, Inc. and Dow AgroSciences LLC, dated August 27, 2010 (incorporated by reference to Exhibit 10.2 to the Company s Form 10-Q filed on November 3, 2010).
10.49	Seventh Amendment of the Research and Commercial License Option Agreement between Sangamo BioSciences, Inc. and Dow AgroSciences LLC, dated December 3, 2010 (incorporated by reference to Exhibit 10.49 to the Company s Form 10-K filed on February 16, 2011).
10.50	Letter Agreement Amendment regarding the Research and Commercial License Option Agreement between Sangamo BioSciences, Inc. and Dow AgroSciences LLC, dated December 3, 2010 (incorporated by reference to Exhibit 10.50 to the Company s Form 10-K filed on February 16, 2011).
10.51	Letter Agreement between Sangamo and Sigma-Aldrich Corporation, dated March 1, 2011 (incorporated by reference to Exhibit 10.1 to the Company s Form 10-Q filed on August 5, 2011).
10.52	Letter dated May 19, 2011 from Dow AgroSciences LLC (DAS) to Sangamo amending the Research and Commercial License Option Agreement between DAS and Sangamo, dated as of October 1, 2005, as amended (incorporated by reference to Exhibit 10.2 to the Company s Form 10-Q filed on August 5, 2011).
10.53(+)	Amended and Restated Employment Agreement between Sangamo and Edward O. Lanphier II, dated June 21, 2011 (incorporated by reference to Exhibit 10.3 to the Company s Form 10-Q filed on August 5, 2011).
10.54(+)	Employment Agreement between Sangamo and Dr. Geoff Nichol, dated June 17, 2011 (incorporated by reference to Exhibit 10.4 to the Company s Form 10-Q filed on August 5, 2011).
10.55(+)	Amended and Restated Employment Agreement between Sangamo and H. Ward Wolff, dated December 15, 2011.
10.56(+)	Form of Restricted Stock Unit Agreement under the Company s 2004 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company s Form 8-K filed on December 3, 2007).

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Exhibit Number	Description of Document
10.57	Collaboration and License Agreement between Sangamo and Shire AG, dated January 31, 2012.
21.1	Subsidiaries of the Company (incorporated by reference to Exhibit 21.1 to the Company s Annual Report on Form 10-K, filed March 27, 2003).
23.1	Consent of Independent Registered Public Accounting Firm.
31.1	Rule 13a-14(a) Certification of Chief Executive Officer.
31.2	Rule 13a-14(a) Certification of Principal Financial Officer.
32.1	Certification Pursuant to 18 U.S.C. Section 1350.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

Confidential treatment has been granted for certain information contained in this document pursuant to an order of the Securities and Exchange Commission. Such information has been omitted and filed separately with the Securities and Exchange Commission.
Confidential treatment has been requested for certain information contained in this document. Such information has been omitted and filed separately with the Securities and Exchange Commission.

(+) Indicates management contract or compensatory plan or arrangement.