

IR BIOSCIENCES HOLDINGS INC  
Form 10-K/A  
April 30, 2010

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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

\_\_\_\_\_  
FORM 10-K/A  
Amendment No. 1  
\_\_\_\_\_

x Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange  
Act of 1934  
For the fiscal year ended December 31, 2009

OR

o Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange  
Act of 1934

COMMISSION FILE NUMBER: 33-05384

IR BIOSCIENCES HOLDINGS, INC.  
(Name of Small Business Issuer in its Charter)

DELAWARE  
(State or Other Jurisdiction of  
Incorporation or Organization)

13-3301899  
(I.R.S. Employer Identification No.)

8777 E. Via de Ventura, Suite 280,  
Scottsdale, AZ  
(Address of Principal Executive Offices)

85258  
(Zip Code)

(480) 922-3926  
(Issuer's Telephone Number, including Area Code)

SECURITIES REGISTERED UNDER SECTION 12(B) OF THE EXCHANGE ACT:

NONE

SECURITIES REGISTERED PURSUANT TO SECTION 12(G) OF THE EXCHANGE ACT:

COMMON STOCK, \$ 0.001 PAR VALUE PER SHARE

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(Title of class)

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

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

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  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  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) 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.

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 definitions of "accelerated filer," "large accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

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

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

The aggregate market value of the registrant's issued and outstanding shares of common stock held by non-affiliates of the Registrant as of June 30, 2009 (based on the average of the bid and asked prices as reported by the FINRA OTC Bulletin Board as of that date) was approximately \$2,231,674. Shares of common stock held by officers, directors and each shareholder owning ten percent or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates.

The number of shares of the Registrant's common stock outstanding as of March 31, 2010 was 14,130,857.

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Explanatory Note

IR BioSciences Holdings, Inc. (hereinafter, "we," "us," "our," or the "Company") is filing this Amendment No. 1 on Form 10-K/A to amend our Annual Report on Form 10-K for the year ended December 31, 2009 filed with the SEC on April 15, 2010 ("Original 10-K"). This amendment is filed solely for the purpose of including information that was to be incorporated by reference from the Company's definitive proxy statement pursuant to Regulation 14A of the Securities Exchange Act of 1934. The Company will not file its proxy statement for its annual meeting of stockholders within 120 days of its fiscal year ended December 31, 2009 and accordingly, is amending and restating in their entirety Items 10, 11, 12, 13 and 14 of Part III and Part IV, Item 15 of the Original 10-K. In addition, pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, the Company is including with this Amendment certain currently dated certifications.

Except for the information described above, the Company has not modified or updated disclosures provided in the Original 10-K in this amendment. Accordingly, this amendment does not reflect events occurring after the filing of the Original 10-K or modify or update those disclosures affected by subsequent events. Information not affected by this amendment is unchanged and reflects the disclosures made at the time the Original 10-K was filed.

Additional Information

On July 10, 2008, we effected a 1-for-10 reverse stock split of our common stock. Accordingly, the effect of the reverse-split has been presented in the accompanying tables and disclosures.

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PART III

Item 10. Directors, Executive Officers and Corporate Governance

Directors And Executive Officers

The following tables set forth certain information with respect to our directors and officers as of March 31, 2010. The following persons serve as our directors and executive officers.

| Name                          | Age | Position  |
|-------------------------------|-----|---|
| Michael K. Wilhelm            | 43  | President, Chief Executive Officer and Director |
| John N. Fermanis              | 56  | Chief Financial Officer                         |
| Hal N. Siegel, Ph.D.          | 55  | Chief Scientific Officer and Director           |
| Lance K. Gordon, Ph.D.        | 62  | Director  |
| Robert J. Hariri, M.D., Ph.D. | 51  | Director  |
| Theodore E. Staahl, M.D.      | 65  | Director  |
| Jerome B. Zeldis, M.D., Ph.D. | 60  | Director  |

Background of Directors and Executive Officers.

The directors named below will continue to serve until the next annual meeting and until their successors are elected and have qualified. The Board of Directors, as a whole, identifies director nominees, evaluating candidates based on the requirements set forth in the Company's Bylaws and applicable regulatory requirements.

Our executive officers are appointed by and serve at the discretion of our Board of Directors. There are no family relationships among the directors and executive officers.

The following are biographical summaries for the Company's directors and executive officers:

Michael K. Wilhelm, President, Chief Executive Officer and Director. Michael K. Wilhelm has been our President and Chief Executive Officer and a member of our Board of Directors since July 2003. Mr. Wilhelm has been President and Chief Executive Officer and a member of the Board of Directors since co-founding ImmuneRegen BioSciences, Inc., our wholly-owned subsidiary, in December 2002. Mr. Wilhelm has served as Managing Director of Foresight Capital Corporation since July 1996, a company he founded to consult and assist early-stage companies in furthering their growth and development. Mr. Wilhelm retains the title of Managing Director of Foresight Capital Corporation, but the company has had limited business operations since December 2002.

As a result of these and other professional experiences and his prior service as our President and Chief Executive Officer, Mr. Wilhelm has a comprehensive understanding of the biotechnology industry and our business, and possesses particular knowledge and experience in strategic planning and operations, and the finance areas relevant to the Company, which are among the key attributes which qualify Mr. Wilhelm for service on IR BioSciences Holdings, Inc.'s Board.

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John N. Fermanis, Chief Financial Officer. Mr. Fermanis has served as our Chief Financial Officer since December 2004. From May 2001 to October 2004 Mr. Fermanis served as Chief Financial Officer of AMPS Wireless Data, Inc., a privately held Arizona corporation which he co-founded in 1998. From 1997 to 2001, Mr. Fermanis held the position of Treasury Manager for Peter Piper, Inc., a national restaurant chain headquartered in Scottsdale, Arizona. Mr. Fermanis has over 18 years of financial management experience with both the American Express Corporation and Citigroup in New York City. Mr. Fermanis holds a Bachelor of Arts degree from the S.U.N.Y. at Stony Brook and attended Pace University's Graduate School of Management in New York City.

Hal N. Siegel, Ph.D., Vice President, Chief Scientific Officer and Director.

Dr. Siegel has served on the Board of Directors since June 2006. Dr. Siegel was appointed as Chief Scientific Officer and Vice President in January 2008 after serving as our Senior Director of Product Development and Regulatory Affairs since June 2006. Prior to joining the company, Dr. Siegel served as Acting General Manager Zila Biotechnology, Inc. and Vice President Regulatory and Scientific Affairs for Zila, Inc. from 2004 to October 2006. In addition, since 2001, Dr. Siegel has provided consulting services for Siegel Consultancy LLC, which has been providing strategic and tactical expertise to life science companies, helping them meet FDA requirements from pre-clinical studies through the regulatory submission process and into the post-approval marketplace. Dr. Siegel holds degrees from Rensselaer Polytechnic Institute and SUNY Buffalo, where he earned his Ph.D., in Biochemical Pharmacology.

As a result of these and other professional experiences and his service as our Chief Scientific Officer, Dr. Siegel has a comprehensive understanding of the biotechnology and pharmaceutical industries and our business, and possesses particular knowledge and experience in strategic planning, strategic opportunities, operating, compliance and technology areas relevant to our business, which are among the key attributes which qualify Dr. Siegel to serve on the Board.

Lance K. Gordon, Ph.D., Director. Dr. Gordon has served on our Board of Directors since May 2007. He currently serves as President and CEO of ImmunoBiologics Corporation, a formative biotechnology company that he founded in 2007. Prior to his work at ImmunoBiologics Corporation Dr. Gordon served as President, Chief Executive Officer and as a Director of VaxGen, Inc. from 2001 to 2007. Prior to joining VaxGen, Dr. Gordon was Executive Director of North America for Acambis plc. and a member of the Company's Board of Directors from 1999 to 2001. Previously, he served as President and CEO of OraVax, Inc. from 1990 to 1999, prior to its acquisition by Peptide Therapeutics to form Acambis. Before joining OraVax, he served as the CEO of North American Vaccine from 1988 to 1990, prior to its acquisition by Baxter International. Dr. Gordon received his Ph.D. in Biomedical Science, Immunology from the University of Connecticut and completed his postdoctoral fellowship as an NIH fellow at the Division of Allergy and Immunology, Washington University Medical School, St. Louis, Missouri. He was a member of the DHHS National Vaccines Advisory Committee from 2005 to 2009. Dr. Gordon currently serves as a member of the Board of Trustees of the Sabin Vaccine Institute.

As a result of these and other professional experiences and his prior service on our Board, Dr. Gordon has a significant understanding of the pharmaceutical industry and possesses particular knowledge and experience in the management, accounting, and operating areas relevant to our business. Dr. Gordon's position as the President and CEO of a public company in the pharmaceutical industry also provides the Board with valuable experience regarding compensation, corporate governance, finance and other relevant matters. The foregoing are among the key attributes which qualify Dr. Gordon for serving on the Company's Board.

Robert J. Hariri, M.D., Ph.D., Director. Dr. Hariri, M.D. has served on our Board of Directors since April 2007. Dr. Hariri has been CEO of Celgene Cellular Therapeutics, a division of Celgene, since 2005. Previously, he had been President of the division from 2002 to 2005. The division focuses on human stem and biomaterial solutions for a range of clinical indications. Additionally, Dr. Hariri is a founder and board member of the Rocket Racing League, an

extreme aerospace corporation. From 1998 to 2002, prior to joining Celgene Cellular Therapeutics, Dr. Hariri was Founder, Chairman and Chief Scientific Officer for Anthrogenesis Corp./LIFEBANK, Inc., a New Jersey-based privately held biomedical technology and service corporation involved in umbilical cord blood banking and its supporting technology platform. From 1987 to 1994, he was Co-founder, Vice Chairman and Chief Scientific Officer of Neurodynamics, a privately held medical device and technology corporation. Dr. Hariri serves on numerous Boards of Directors including Semorex and Wafergen (NASDAQ:WGBS). Dr. Hariri is a member of the Board of Visitors of the Columbia University Fu Foundation School of Engineering and Applied Sciences and the Science and Technology Council of the Columbia University College of Physicians and Surgeons. Dr. Hariri received his undergraduate training at Columbia College and Columbia University School of Engineering and Applied Sciences and was awarded his M.D. and Ph.D. degrees from Cornell University Medical College. Dr. Hariri received his surgical training at The New York Hospital-Cornell Medical Center and directed the Aitken Neurosurgery Laboratory and the Center for Trauma Research.

As a result of these and other professional experiences and his prior service on our Board, Dr. Hariri has a significant understanding of the pharmaceutical industry and possesses particular knowledge and experience in the finance, management, marketing, strategic opportunities, operating and technology areas relevant to our business, which are among the key attributes which qualify Dr. Hariri for service on the Board of IR BioSciences Holdings, Inc.

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Theodore E. Staahl, M.D., Director. Dr. Staahl has served on our Board of Directors since April 2003. Dr. Staahl is employed at the Cosmetic, Plastic and Reconstructive Surgery Center, a company which he founded in 1978. Dr. Staahl's professional training was received at the University of Illinois and the University of Wisconsin and is board certified by the American Board of Facial, Plastic and Reconstruction Surgeons, the Board of Cosmetic Surgeons and the American Board of Head and Neck Surgeons. Dr. Staahl has presented papers at national and international meetings on hair transplant, rhinoplasty and cleft lip deformities.

As a result of these and other professional experiences and his prior service on our Board, Dr. Staahl has a significant understanding of the pharmaceutical industry and possesses particular knowledge and experience in the management, operating and technology areas relevant to our business. Dr. Staahl's experience of operating a private medical practice also provides the Board with valuable experience regarding marketing, finance and other relevant matters. The foregoing are among the key attributes which qualify Dr. Staahl for serving on the Company's Board.

Jerome B. Zeldis, M.D., Ph.D., Director. Dr. Zeldis has served on our Board of Directors since November 2007. Dr. Zeldis currently serves as CEO of Celgene Global Health and Chief Medical Officer of Celgene Corporation, Summit, NJ. Prior to that Dr. Zeldis was Celgene's Senior Vice President of Clinical Research and Medical Affairs, a position he has held since 1997. Dr. Zeldis is also currently, and since 2003, Professor of Clinical Medicine at the Robert Wood Johnson Medical School in New Brunswick, N.J. Prior to working at Celgene, Dr. Zeldis worked at Sandoz Research Institute from 1994 to 1995 and Janssen Research Institute from 1995 to 1997 in both clinical research and medical development. Dr. Zeldis currently is a member of the Board of the Semorex Corporation, the N.J. Chapter of the Arthritis Foundation, and the Castleman's Disease Organization. Dr. Zeldis attended Brown University for an A.B., M.S., followed by Yale University for an M.Phil., M.D., Ph.D. in Molecular Biophysics and Biochemistry (immunochemistry). Dr. Zeldis trained in Internal Medicine at the UCLA Center for the Health Sciences and Gastroenterology at the Massachusetts General Hospital and Harvard Medical School. He was Assistant Professor of Medicine at the Harvard Medical School, Associate Professor of Medicine at University of California, Davis, Clinical Associate Professor of Medicine at Cornell Medical School and Professor of Clinical Medicine at the Robert Wood Johnson Medical School in New Brunswick, New Jersey. Dr. Zeldis has published 112 peer reviewed articles and 24 reviews, book chapters, and editorials.

As a result of these and other professional experiences and his prior service on our Board, Dr. Zeldis has a significant understanding of the pharmaceutical industry and possesses particular knowledge and experience in the management, marketing, strategic opportunities, operating and technology areas relevant to our business, which are among the key attributes which qualify Dr. Zeldis for service on IR BioSciences Holdings, Inc.'s Board.

## Diversity of the Board

The Company does not have a Nominating and Governance Committee and of the six directors on the Board, two are employed by IR BioSciences Holdings, Inc. or its subsidiary ImmuneRegen BioSciences, Inc. The Board does not have a formal written policy regarding diversity when reviewing candidates but consider the diversity as well as breadth and wealth of a director's professional experience and how such might compliment the experience currently represented on the Board. The Company places a significant emphasis on identifying directors who have operational, financial and strategic experience. Other factors considered in evaluating a director's qualifications include educational/technical skills; exposure with turnaround situations; leadership roles and experience in the pharmaceutical and biotechnology industries. All directors must have a high ethical character and solid professional reputation; possess sound business judgment and be willing to be engaged in the business of the Board.

## Section 16(a) Beneficial Ownership Reporting Compliance



Section 16(a) of the Securities Exchange Act of 1934 requires the directors, executive officers and persons who beneficially own more than 10% of our Common Stock (collectively the "Reporting Persons") to file reports of ownership and changes in ownership with the Securities and Exchange Commission, with a copy delivered to us.

Based solely on its review of the copies of such forms received by it, or written representations from its directors and executive officers, the Company believes that during 2009 its executive officers, directors and more than ten percent beneficial owners complied with all SEC filing requirements applicable to them. Prior to 2009, we believe that our directors, officers and owners of more than 10% of our common stock complied with all applicable filing requirements except as indicated below.

- Mr. Wilhelm failed to file 22 Form 4s for 40 transactions that occurred in 2004, 2005, 2006, 2007 and 2008. Mr. Wilhelm failed to file a Form 5 for fiscal 2003, 2004, 2005, 2006 and 2007. Mr. Wilhelm filed a Form 5 for fiscal 2008 on February 18, 2009 which reported 40 of these transactions. Mr. Wilhelm's Form 5 for fiscal 2008 was not timely filed;
- Mr. Fermanis failed to file 6 Form 4s for 7 transactions that occurred in 2004, 2005, 2006 and 2007. Mr. Fermanis failed to file a Form 5 for fiscal 2004, 2005, 2006 and 2007. Mr. Fermanis filed a Form 5 for fiscal 2008 on February 17, 2009 which reported 7 of these transactions;
- Dr. Siegel failed to file 5 Form 4s for 5 transactions that occurred in 2005. Dr. Siegel failed to file a Form 5 for fiscal 2006 and 2007. Dr. Siegel filed a Form 5 for fiscal 2008 on February 17, 2009 which reported 5 of these transactions;
- Dr. Gordon failed to file a Form 4 for 1 transaction that occurred in 2007 to report an option grant he received in August 2007 and failed to file a Form 5 for fiscal 2007. Dr. Gordon filed a Form 5 for fiscal 2008 on February 17, 2009 which reported 1 transaction;
- Dr. Hariri failed to file a Form 4 for 2 transactions that occurred in 2007 to report option grants he received in August 2007 and failed to file a Form 5 for fiscal 2007 and 2008;
- Dr. Staahl failed to file 11 Form 4s for 14 transactions that occurred in 2003, 2004, 2006, 2007 and 2008. Dr. Staahl failed to file a Form 5 for fiscal 2003, 2004, 2005, 2006 and 2007. Dr. Staahl filed a Form 5 for fiscal 2008 on February 17, 2009 which reported 14 of these transactions; and,
- Dr. Zeldis failed to timely file a Form 3 within 10 days of his appointment as a director in 2007 and failed to file 2 Form 4s for 2 transactions that occurred in 2008 and failed to file a Form 5 for fiscal 2007. Dr. Zeldis filed a Form 5 for fiscal 2008 on February 17, 2009 which reported 2 of these transactions.

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### Code of Ethics

All of our directors and employees, including our Chief Executive Officer, Chief Financial Officer, President and the persons performing similar functions, are required to abide by our code of ethics to ensure that our business is conducted in a consistently legal and ethical manner. We intend to disclose any changes in or waivers from our code of ethics by filing a current report on Form 8-K with the Securities and Exchange Commission. A copy of the Company's code of conduct is available on our website at [www.immunoregen.com](http://www.immunoregen.com), as required under SEC rules and regulations.

We will provide to any person without charge, upon request, a copy of such Code of Ethics. You may request a copy of our Code of Ethics at no cost by writing or calling us at the following address: IR BioSciences Holdings, Inc., 8777 E. Via De Ventura, Suite 280, Scottsdale, Arizona 85258, Attention: John N. Fermanis. You can also request by phone at (480) 922-3926 or fax at (480) 922-4781.

### Corporate Governance

Our Bylaws provide that the number of members of the Board of Directors shall be determined from time to time by resolution of the directors. Our Board of Directors should neither be too small to maintain the needed expertise and independence, nor too large so as to be inefficient in functioning. The general expectation is that the Board will consist of between two and nine directors, although periodically the Board of Directors will review the appropriate size and mix of the Board of Directors in light of our needs provided, however, that no change shall have the effect of shortening the term of any incumbent director.

Our Board of Directors has determined that Drs. Gordon, Hariri, Staahl and Zeldis are independent under the standards of independence applicable to companies traded on the NYSE Amex, although such standards are not applicable to us since we are quoted on the FINRA OTC Bulletin Board (the "OTCBB") and not listed on the NYSE Amex. In addition, our Board of Directors has made a subjective determination as to each independent director that no relationships exists which, in the opinion of the Board of Directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. However, members of the Board of Directors have recused themselves, and the Board of Directors reserves the right to recusal of any member of the Board of Directors from discussion and deliberation in respect of any particular issue in which there is perceived to be a conflict of interest.

The Board of Directors did not meet during 2009; however, the Board held 4 telephone board meetings during 2009. Each board member attended 75% or more of the aggregate number of the meetings of the board and the committees on which he served. Our policy regarding attendance by members of the Board of Directors at our annual meeting of shareholders is to encourage our directors to attend, subject to their availability for travel at that time.

### Committees Of The Board Of Directors

The committees of our Board of Directors consist of an Audit Committee and a Compensation Committee, each of which has the composition and responsibilities as described below. The Board may also establish other committees from time to time to assist in the discharge of its responsibilities.

Our Board of Directors does not maintain a separate Nominating or Corporate Governance Committee. Functions customarily performed by such committees are performed by our Board of Directors as a whole. We are not required to maintain such committees under the applicable rules of the Over-the-Counter Bulletin Board.

### Audit Committee.

Our Audit Committee was established in June 2008. The Audit Committee oversees our corporate accounting and financial reporting. Among other things, the Audit Committee determines the engagement of and approves fees paid to our independent registered public accounting firm; monitors the qualifications, independence, activities and performance of our independent registered public accounting firm; approves the retention of our independent registered public accounting firm to perform any proposed and permissible non-audit services; reviews our financial statements and critical accounting estimates; and discusses with management and our independent registered public accounting firm the results of the annual audit and the reviews of our quarterly financial statements. The Audit Committee also reviews the effectiveness of internal controls and the adequacy of our disclosure controls and procedures. In addition, the Audit Committee maintains procedures for the receipt of employee complaints and submissions of concerns regarding accounting or auditing matters. The members of our Audit Committee are Dr. Lance K. Gordon and Dr. Theodore E. Staahl. Our Board of Directors has determined that Dr. Gordon is the Audit Committee Financial Expert as defined under Item 407(d) of Regulation S-K. Our Audit Committee did not meet during 2009; however, the Audit Committee held one telephone meeting during 2009

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### Compensation Committee.

Our Compensation Committee was established in June 2008. Our Compensation Committee establishes, amends, reviews and approves the compensation and benefit plans with respect to officers and employees, including determining individual elements of total compensation of the Chief Executive Officer and other executive officers, and reviewing the performance of IR BioSciences Holdings, Inc., its wholly owned subsidiary ImmuneRegen BioSciences, Inc. and its executive officers with respect to these elements of compensation. The Compensation Committee considers a number of metrics, including peer group analyses and tally sheets, as well as the individual performance of the executive officers and the Company as a whole, based on goals set by the Compensation Committee. The Compensation Committee also determines annual retainer, meeting fees, equity awards and other compensation for members of the Board of Directors and administers the issuance of stock options and other awards under our equity incentive plan. The members of the Compensation Committee are Dr. Hariri, Chairman, and Dr. Gordon. Our Compensation Committee did not meet during 2009; however, the Compensation Committee held one telephone meeting during 2009.

The Board of Directors has adopted a written charter for the Audit Committee and the Compensation Committee. Copies of the current charters of our Audit Committee and Compensation Committee are posted on our website at [www.immuneregen.com](http://www.immuneregen.com). We will provide to any person without charge, upon request, a copy of such charters. You may request a copy of our charters at no cost by writing or calling us at the following address: IR BioSciences Holdings, Inc., 8777 E. Via De Ventura, Suite 280, Scottsdale, Arizona 85258, Attention: John N. Fermanis. You can also request by phone at (480) 922-3926 or fax at (480) 922-4781.

### Stockholder Communications

We do not have a formal procedure for stockholder communication with our Board of Directors. Stockholders who wish to contact the Board of Directors, a committee of the Board of Directors or an individual director should send their correspondence to IR BioSciences Holdings, Inc., 8777 E. Via De Ventura, Suite 280, Scottsdale, Arizona 85258, Attention: Board of Directors. Any such communication should specify the applicable addressee or addressees to be contacted, as well as the general topic of the communication. We will initially receive and process communications before forwarding them to the addressee. We generally will not forward a stockholder communication to our directors that we determine to be primarily commercial in nature or may be abusive, threatening or otherwise inappropriate.

### Item 11. Executive Compensation

As a “smaller reporting company,” IR BioSciences Holdings, Inc. has elected to follow scaled disclosure requirements for smaller reporting companies with respect to Part III, Item 11 – Executive Compensation. Under the scaled disclosure obligations, IR BioSciences Holdings, Inc. is not required to provide Compensation Discussion and Analysis and certain other tabular and narrative disclosures relating to executive compensation. Nor is IR BioSciences Holdings, Inc. required to quantify payments due to the named executives upon termination of employment. Management believes that the scaled disclosure for the Company’s executive compensation policy and practices is appropriate because IR BioSciences Holdings, Inc. is small for a publicly-traded company, has only three named executives and has a relatively simple compensation policy and structure that has not changed in the last fiscal year.

#### Compensation Discussion and Analysis

The Compensation Committee operates under a written charter adopted by the Board and is responsible for making all compensation decisions for the Company’s named executives including determining base salary and annual incentive compensation amounts and recommending stock option grants and other stock-based compensation under our equity

incentive plans.

Our Compensation Committee has not historically employed compensation consultants to assist it in designing our compensation programs. Instead, we rely on our familiarity with the market and ongoing market intelligence, including occasional review of publicly available compensation information of other companies, both those with which we compete and those within our geographic labor market, to gauge the competitiveness of our compensation programs.

#### Overview and Philosophy

The goals of our executive compensation program are to:

- o provide competitive compensation that will help attract, retain and reward qualified executives, with a focus on talent from within the bio-pharmaceutical industry; and,
- o align management's interests with the interests of stockholders by including long-term equity incentives.

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Our compensation philosophy is to motivate, measure and reward employees for performance that we believe will result in efficient and effective progress toward the achievement of our product development and corporate partnering goals and building long-term value for our shareholders. Our executive compensation program is designed to:

- focus decision-making and behavior on long and near-term goals that are consistent with our overall business strategy;
- allow us to attract and retain employees with the skills critical to our long-term success; and
- align management's financial interests with the interests of our shareholders.

The Compensation Committee does not focus on any particular benchmark to set executive compensation. Instead, we believe that a successful compensation program requires the application of judgment and subjective determinations based on the consideration of a number of factors. These factors include the following:

- o the scope and strategic impact of the executive officer's responsibilities, including the importance of the job function to our business;
- o our past financial performance and future expectations;
- o the performance and experience of each individual;
- o past salary levels of each individual and of the officers as a group;
- o our need for someone in a particular position; and
- o for each executive officer, other than the Chief Executive Officer, the evaluations and recommendations of our Chief Executive Officer, in consultation with our Chief Financial Officer.

### Components of Executive Compensation

Our executive compensation program consists of base salary and long-term equity incentives in the form of stock options. Executive officers also are eligible to participate in certain benefit programs that are generally available to all of our employees, such as medical insurance programs and our 401(k) plan. The Compensation Committee of our Board of Directors oversees our executive compensation program.

### Base Salary

Each named executive officer and key employee's employment agreement sets forth his salary, which varies with the scope of his respective responsibilities. Consistent with our compensation objectives and philosophy described above, the Compensation Committee attempts to set base salary compensation, and adjust it when warranted, based on company financial performance, the individual's position and responsibility within our company and performance in that position and the importance of the executive's position to our business. The Committee also generally takes into account its perceived range of salaries of executive officers with comparable qualifications, experience and responsibilities at other companies with which we compete for executive talent. The Committee also reviews historical salary information for each of the executive officers as part of its analysis in setting base salary structures. The Committee uses this information to review historical progression of each executive officer's compensation and to identify variations in compensation levels among the executive officers.



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In 2009, the Compensation Committee reviewed the base salaries of our named executive officers and key employees, taking into account the considerations described above. The base salary rates for 2009 and 2008 are as follows:

| Named Executive Officers & Key Employees | 2009 Salary | 2008 Salary | % Increase |
|--|-------------|-------------|------------|
| Michael K. Wilhelm                       | \$ 380,365  | \$ 344,842  | 10.3%      |
| Hal N. Siegel                            | \$ 229,191  | \$ 210,000  | 9.1%       |
| John N. Fermanis                         | \$ 140,000  | \$ 130,000  | 7.7%       |

The Compensation Committee also approved an increase to one non-key employee to reflect the employee's responsibility and importance to the Company, as well as an increase to match market conditions for scientific personnel at other companies with which we compete. To date, salary amounts in 2010 have remained unchanged for all employees from the amounts established by the Compensation Committee during 2009. Per the terms of employment agreements with our President and Chief Executive Officer and Chief Science Officer, salaries are to increase in 2010. In addition, the Compensation Committee may meet subsequent to the filing of this amendment to determine salary amounts for other employees for 2010.

## Bonuses

In the past, we have provided bonuses in the form of cash and or shares of common stock, which are designed to motivate and reward executives for their contribution to the company's performance during the fiscal year. Bonuses have been awarded in 2008 for performance, as a signing bonus for employment agreements and as per the terms of employment agreements with regard to specific target incentive milestones. In 2009, John N. Fermanis, our Chief Financial Officer, received incentive bonuses of \$9,000 for meeting target milestones and Hal N. Siegel, our Chief Scientific Officer, received \$10,000 as a sign on bonus. To date, the Compensation Committee has not determined to provide bonuses to any employees in 2010. The Compensation Committee may meet subsequent to the filing of this amendment to determine bonuses, if any, to be paid in 2010.

## Stock Options

Executive officers and key employees are also eligible to receive annual grants of stock option awards under our 2003 Stock Option, Deferred Stock, Restricted Stock and Bonus Stock Plan. Typically, we have granted stock options every year because these awards are consistent with our compensation goals of aligning executives' interests with those of our stockholders in the long term, and because these grants are a standard form of compensation among the companies with which we compete. The Compensation Committee believes that stock option awards can be an especially valuable tool in linking the personal interests of executives to those of our stockholders, because executives' compensation under these awards is directly linked to our stock price. These awards give executive officers a significant, long-term interest in the company's success. Moreover, the vesting component of our stock option awards provides a valuable retention tool, and retention is a significant consideration in making these awards.

In August 2009, the Committee granted stock option awards to employees, officers and directors. To date, the Compensation Committee has not granted any stock option awards to any of the Company's employees, officers and directors in 2010. The Compensation Committee may meet subsequent to the filing of this amendment to determine the stock option awards, if any, to be granted to Company employees in 2010.

## Other Compensation and Personal Benefits

We maintain general broad-based employee benefit plans in which our executives participate, such as health insurance plans and a 401(k) plan. These benefits are provided as part of the basic conditions of employment for all of our employees. In addition, we believe that providing these basic benefits is necessary for us to attract and retain



high-level executives working in our industry and in our geographic area. We believe that these benefits substantially enhance employee morale and performance. Our benefit plans may change over time as the Compensation Committee determines appropriate.

The Company's 401(k) plan permits a contribution of salary to our 401(k) plan. We do not match any such contribution. Participation in the Company's 401(k) plan is available to all full-time employees.

#### Retirement Benefits

Our executive officers and key employees do not participate in any defined benefit retirement plans such as a pension plan. We do not have any deferred compensation programs. As noted above, our executive officers and key employees are eligible for our 401(k) plan, as described immediately above in "Other Compensation and Personal Benefits".

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## Summary Compensation Table

The following table sets forth, for the fiscal years ended December 31, 2009 and December 31, 2008, the total compensation earned by or paid to our Chief Executive Officer, Chief Financial Officer, and each of our other most highly compensated key employees who were serving as key employees as of December 31, 2009.

| Name & Principal Position                   | Fiscal Year | Salary (\$)(1) | Bonus (\$)(2) | Stock Awards (\$)(3) | Option Awards (\$)(4) | Non-Equity Incentive Plan Compensation (\$)(5) | All Other Compensation (\$)(6) | Total Compensation (\$) |
|---|-------------|----------------|---------------|----------------------|-----------------------|--|--------------------------------|-------------------------|
| Michael K. Wilhelm                          | 2009        | 380,365        | —             | —                    | 56,250                | —  | 15,820                         | 452,435                 |
| President, CEO                              | 2008        | 344,842        | 550,000       | —                    | —                     | —  | 15,820                         | 910,662                 |
| John N. Fermanis                            | 2009        | 140,000        | 9,000         | —                    | 31,250                | —  | 499                            | 180,749                 |
| Chief Financial Officer                     | 2008        | 130,000        | 7,800         | —                    | —                     | —  | 6,498                          | 144,298                 |
| Hal N. Siegel                               | 2009        | 229,191        | 10,000        | —                    | 43,750                | —  | —                              | 282,941                 |
| Vice-President and Chief Scientific Officer | 2008        | 210,000        | 10,000        | —                    | —                     | —  | —                              | 220,000                 |

- (1) The amounts reported in the Salary column represent the dollar amount of base salary earned by each named executive officer in the year indicated.
- (2) Bonuses have been awarded for performance, as a signing bonus for employment agreements and as per the terms of employment agreements with regard to specific target incentive milestones.

| Named Executive Officer | Bonus Date      | Bonus (\$) | Reason           | Form of Bonus           |
|-------------------------|-----------------|------------|------------------|-------------------------|
| Michael K. Wilhelm      | January 9, 2008 | \$ 90,750  | Target Incentive | Cash                    |
| Michael K. Wilhelm      | July 3, 2008    | \$ 59,250  | Target Incentive | Cash                    |
| Michael K. Wilhelm      | August 15, 2008 | \$ 150,000 | Target Incentive | Cash                    |
| Michael K. Wilhelm      | August 15, 2008 | \$ 250,000 | Target Incentive | Restricted Common Stock |
|                         |                 | \$ 550,000 |                  |                         |
| John N. Fermanis        | 2008            | \$ 7,800   | Performance      | Cash                    |
| John N. Fermanis        | 2009            | \$ 9,000   | Performance      | Cash                    |
| Hal N. Siegel           | 2008            | \$ 10,000  | Signing bonus    | Cash                    |
| Hal N. Siegel           | 2009            | \$ 10,000  | Signing bonus    | Cash                    |

- (3) The amounts reported in the Stock Awards column represent the grant date fair value of such awards, computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718 (FASB ASC Topic 718). There were no awards of stock in 2009 or 2008.

(4)

The amounts reported in the Option Awards column represent the grant date fair value of such awards. Stock option awards are subject to a vesting schedule vesting in equal quarterly installments over a 12 month period. The amounts in this column are equal to the aggregate fair value on the date of grant for stock option awards. For a description of the assumptions used to determine the fair value of stock options granted in 2009, see Note 7 to our Consolidated Financial Statement in our Annual Report on Form 10-K for the year ended December 31, 2009. For information on the valuation assumptions used for stock option awards made prior to 2009, see the notes to the Company's Consolidated Financial Statements regarding stock-based compensation in our Annual Report on Form 10-K for the respective year.

- (5) The amounts reported in the Non-Equity Incentive Plan Compensation column represent the amounts of annual incentive bonus awards earned by the named executive officer in the year indicated, but paid in the following year. No incentive bonus awards were paid for 2009 or 2008.

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- (6) All Other Compensation is comprised of automobile leases for our Chief Executive Officer and Chief Financial Officer. The total cost recognized by us in fiscal year 2009 related to automobile leases for our Chief Executive Officer and Chief Financial Officer was \$15,820 and \$499, respectively. The total cost recognized by us in fiscal year 2008 related to automobile leases for our Chief Executive Officer and Chief Financial Officer was \$15,820 and \$6,498, respectively.

Employment, Severance and Change in Control Agreements

Set forth below are the material terms of employment for each of the three named executives. The terms of employment provide for certain payments upon termination or change in control. Such benefits are in addition to benefits available generally to salaried employees.

President and Chief Executive Officer:

On August 10, 2005, we entered into a new employment agreement with our President and Chief Executive Officer, Michael K. Wilhelm. The employment agreement calls for a salary at the rate of \$275,000 per annum. The salary will be subject to adjustment of at least 10% per year at the end of each year. The Company also agreed to defend and indemnify, to the fullest extent permitted by the Company's certificate of incorporation and bylaws and the Delaware General Corporation Law, Mr. Wilhelm and hold him harmless against any liability that he incurs within the scope of his employment under the agreement. The agreement also provides for the following various bonus incentives:

- i) A target incentive bonus in cash and/or stock if the Company consummates a transaction with any unaffiliated third party such as an equity or debt financing, acquisition, merger, strategic partnership or other similar transaction.
- ii) A one time grant of an option to purchase 200,000 shares (post-split) of the Company's common stock at an exercise price equal to the fair market value per share on the date option is granted.

In connection with Mr. Wilhelm's new employment agreement, we also entered into a change of control agreement with him on August 10, 2005. On November 7, 2005 the agreement was amended to include a severance agreement.

Under the change of control agreement, Mr. Wilhelm shall be entitled to a continuation of his base salary for a period of 18 months following an involuntary termination, which means, at any time within that period which is one-year from the change of control date (including such date), the termination of the employment of Mr. Wilhelm (i) by us without cause or (ii) due to constructive termination, as such terms are defined in the change of control agreement. Further, in the event of an involuntary termination, the agreement provides that the Company shall pay Mr. Wilhelm a lump sum amount in cash, equal to the sum of (i) any unpaid incentive compensation which has been allocated or awarded to Mr. Wilhelm for a completed fiscal year or other measuring period preceding the date of involuntary termination under any annual or long-term incentive plan and which, as of the date of involuntary termination, is contingent only upon the continued employment of Mr. Wilhelm to a subsequent date, and (ii) a pro rata portion to the date of involuntary termination of the aggregate value of all contingent incentive compensation awards to Mr. Wilhelm for all then uncompleted periods under any such plan. Further, 100% of the unvested portion of each outstanding stock option granted to Mr. Wilhelm shall be accelerated so that they become immediately exercisable upon the date of involuntary termination.

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Under the severance agreement, Mr. Wilhelm shall be entitled to a continuation of his base salary for a period of 18 months following an involuntary termination, which means the termination of the employment of Mr. Wilhelm (i) by the Company without cause or (ii) due to constructive termination, as such terms are defined in the severance agreement. Further, in the event of an involuntary termination, the agreement provides that the Company shall pay Mr. Wilhelm an amount equal to the amount of executive incentive pay (bonus) that he would have received for the year in which the involuntary termination occurred had he met one hundred percent (100%) of the target for such incentive pay.

Chief Financial Officer:

Pursuant to our employment agreement with John N. Fermanis, our Chief Financial Officer, dated February 15, 2005, we paid a salary of \$60,000 until the Company completed a financing of \$500,000 or more. This occurred on March 4, 2005 when we completed a tender offer for warrants totaling \$1,190,857 net of fees. From March 4, 2005, until December 31, 2005, we paid an annual salary of \$85,000. Thereafter, we paid an annual salary of \$98,000 for the second year ending December 31, 2006 and an annual salary of \$112,000 for the third year ending December 31, 2007. Mr. Fermanis' salary is payable in regular installments in accordance with the customary payroll practices. Mr. Fermanis also received 10,000 shares (post-split) of our common stock, which were earned at the rate of 1/12 or 833 (post-split) per month beginning January 2005.

On April 3, 2008, we entered into a new employment agreement with John Fermanis effective January 1, 2008 continuing his employment as Chief Financial Officer of the Company and our wholly owned subsidiary, ImmuneRegen BioSciences, Inc. for a period of two years. Mr. Fermanis' previous employment agreement with the Company expired on December 31, 2007. On the same day, we also approved a change of control agreement with Mr. Fermanis effective January 1, 2008.

Pursuant to terms of the employment agreement, Mr. Fermanis will be compensated at an annual base salary of \$130,000 for the first year and \$140,000 for the second year. Mr. Fermanis will also be eligible for discretionary bonuses under our stock option plan during his employment. The employment agreement has a term of two years, subject to early termination provisions.

On February 2, 2010, the Company entered into a new employment agreement with John Fermanis (effective January 1, 2010) continuing his employment as Chief Financial Officer of the Company and its wholly owned subsidiary, ImmuneRegen BioSciences, Inc. for a period of two years. Mr. Fermanis' previous employment agreement with the Company expired on December 31, 2009.

Pursuant to terms of the employment agreement, Mr. Fermanis will be compensated at an annual base salary of \$140,000 for the first year and \$150,000 for the second year. Mr. Fermanis will also be eligible for discretionary bonuses under the Company's stock option plan during his employment. The employment agreement has a term of two years, subject to early termination provisions.

In connection with Mr. Fermanis' new employment agreement, the Company also entered into a change of control agreement.

Pursuant to the terms of the change of control agreement, the Company agrees to pay Mr. Fermanis his salary for a period of 18 months from the date of an involuntary termination, payable in accordance with the Company's compensation practice. Involuntary termination is defined as the termination of Mr. Fermanis's employment by the Company without cause or due to constructive termination at any time within one-year from a change of control event, as defined in the agreement. The change of control agreement commences on the effective date and continues until the earlier of (i) the termination of Mr. Fermanis's employment with Company if the termination is prior to a change of

control or (ii) subsequent to a change of control date the earlier of (x) the termination of Mr. Fermanis's employment absent involuntary termination or (y) the one-year anniversary of a change of control.

#### Chief Scientific Officer

Pursuant to our employment agreement with Dr. Hal N. Siegel, our Senior Director of Product Development and Regulatory Affairs, dated October 23, 2006, we will pay an annual base salary of \$200,000 for the first year and \$210,000 for the second year. Dr. Siegel will also be eligible for discretionary bonuses under our stock option plan during his employment. In addition, Dr. Siegel received options with a term of five years to purchase 20,000 shares (post-split) of our common stock. The options are exercisable at \$2.00 per share. The employment agreement has a term of two years, subject to early termination provisions. Upon termination of Dr. Siegel's employment by the Company without cause or constructive termination, as defined in the agreement, the Company agrees to pay to Dr. Siegel the remainder of his salary for the year or six months salary, whichever is greater, and any accrued vacation.

On December 19, 2008, we, through our wholly-owned subsidiary ImmuneRegen BioSciences, Inc., approved a new employment agreement with Hal N. Siegel as Vice President and Chief Scientific Officer. Mr. Siegel, who is also a member of our Board of Directors and has served as Vice President and Chief Scientific Officer of the Company since November, 2007, also entered into a change of control agreement with us. The effective date of these agreements is October 24, 2008.

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Pursuant to terms of the employment agreement, Mr. Siegel will be compensated at an annual base salary of \$225,000 for the first year and \$247,500 for the second year. Mr. Siegel also is entitled to a sign-on cash bonus of \$20,000. Mr. Siegel will also be eligible for bonuses in the form of cash or discretionary stock awards under our stock option plan upon approval of the Board of Directors. The employment agreement has a term of two years, subject to early termination provisions. We may terminate the employment agreement at any time for cause, as defined in the employment agreement, and with 30 days notice without cause. Mr. Siegel may terminate the employment agreement for any reason with 30 days notice. Upon termination of Mr. Siegel's employment by us without cause or constructive termination, as defined in the agreement, we agree to pay to Mr. Siegel the remainder of his salary for the year or an amount equal to six months salary, whichever is greater, along with any accrued vacation at the time of the termination. Pursuant to the terms of the employment agreement, Mr. Siegel may not compete against the Company, and he may not solicit our customers during the term of the agreement and for a period of three years following the termination of his employment agreement. Mr. Siegel also may not disclose any confidential information regarding us during or within three years after his employment.

Pursuant to the terms of the change of control agreement, we agree to pay Mr. Siegel his salary for a period of 18 months from the date of an involuntary termination, payable in accordance with our compensation practice. Involuntary termination is defined as the termination of Mr. Siegel's employment by the Company without cause or due to constructive termination at any time within one-year from a change of control event, as defined in the agreement. The change of control agreement commences on the effective date and continues until the earlier of (i) the termination of Mr. Siegel's employment with Company, if the termination is prior to a change of control or (ii) subsequent to a change of control date the earlier of (x) the termination of Mr. Siegel's employment absent involuntary termination or (y) the one-year anniversary of a change of control.

## Grants of Plan Based Awards During Fiscal Year 2009

The following table sets forth information regarding grants of stock options under the Company's 2003 Stock Option, Deferred Stock, Restricted Stock and Bonus Stock Plan during 2009 to named executive officers and key employees at the discretion of the Compensation Committee.

In August 2009, the Committee granted an aggregate of 970,000 ten-year stock option awards exercisable at \$0.25 to employees, officers and directors, which include 525,000 options issued to our officers as summarized in the table below.

| Named Executive Officer | 2009<br>Options<br>Granted |
|-------------------------|----------------------------|
| Michael K. Wilhelm      | 225,000                    |
| John N. Fermanis        | 125,000                    |
| Hal N. Siegel           | 175,000                    |
| Total Options Granted   | 525,000                    |

To date, the Compensation Committee has not granted any stock option awards to any of the Company's employees, officers and directors in 2010. The Compensation Committee may meet subsequent to the filing of this amendment to determine the stock option awards, if any, to be granted to Company employees in 2010. No options or other equity-based awards were granted to any of the Named Executive Officers during the year ended December 31, 2008.

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## Outstanding Equity Awards at 2009 Fiscal Year-End

The following table sets forth information regarding grants of stock options and grants of unvested restricted stock awards held by the named executive officers and key employees at December 31, 2009.

| Name  | Grant Date | Option Awards   |   |                                      |                        | Stock Awards  |  |  |
|---|------------|---|---|--------------------------------------|------------------------|---|--|--|
|   |            | Number of Securities Underlying Unexercised Options (#) Exercisable | Number of Securities Underlying Unexercised Options (#) Unexercisable | Option Exercise Price per Share (\$) | Option Expiration Date | Number of Shares or Units of Stock That Have Not Vested (#) | Market Value of Shares or Units of Stock That Have Not Vested (\$) |  |
| Michael K. Wilhelm, President, Chief Executive Officer            | 7/1/05     | 15,000 (1)  | —   | 4.40                                 | 5/19/10                | —   | —  |  |
|   | 8/20/05    | 10,303 (1)  | —   | 3.30                                 | 8/9/10                 | —   | —  |  |
|   | 7/14/06    | 189,697 (2)   | —   | 2.31                                 | 7/13/11                | —   | —  |  |
|   | 9/13/06    | 45,455 (2)  | —   | 2.20                                 | 9/12/11                | —   | —  |  |
|   | 9/13/06    | 304,546 (2)   | —   | 2.20                                 | 9/12/11                | —   | —  |  |
|   | 8/1/07     | 200,000 (4)   | —   | 1.66                                 | 7/31/17                | —   | —  |  |
|   | 8/1/07     | 50,000 (4)  | —   | 1.95                                 | 7/31/17                | —   | —  |  |
|   | 8/19/09    | 112,500 (5)   | 112,500   | 0.25                                 | 8/19/19                | —   | —  |  |
| John N. Fermanis, Chief Financial Officer                         | 8/1/07     | 90,000 (4)  | —   | 1.66                                 | 7/31/17                | —   | —  |  |
|   | 8/1/07     | 50,000 (4)  | —   | 1.95                                 | 7/31/17                | —   | —  |  |
|   | 8/19/09    | 62,500 (5)  | 62,500  | 0.25                                 | 8/19/19                | —   | —  |  |
| Hal N. Siegel, Ph.D., Vice President and Chief Scientific Officer | 10/23/06   | 20,000 (3)  | —   | 2.00                                 | 10/22/11               | —   | —  |  |
|   | 8/1/07     | 110,000 (4)   | —   | 1.66                                 | 7/31/17                | —   | —  |  |
|   | 8/1/07     | 50,000 (4)  | —   | 1.95                                 | 7/31/17                | —   | —  |  |



|         |        |     |        |      |         |   |   |
|---------|--------|-----|--------|------|---------|---|---|
| 8/19/09 | 87,500 | (5) | 87,500 | 0.25 | 8/19/19 | — | — |
|---------|--------|-----|--------|------|---------|---|---|

- (1) Stock option awards granted in 2005 pursuant to the terms of our 2003 Stock Option, Deferred Stock, Restricted Stock and Bonus Stock Plan to Mr. Wilhelm at a price equal to 110% of the closing price of our common stock on the date of grant and vested immediately. The stock options expire five years from date of grant.
- (2) Stock option awards granted in 2006 pursuant to the terms of our 2003 Stock Option, Deferred Stock, Restricted Stock and Bonus Stock Plan to Mr. Wilhelm vest 50% after ninety days of continued employment and the balance in equal monthly installments for 12 months thereafter. The stock options expire five years from date of grant.
- (3) Stock option awards granted in 2006 pursuant to the terms of our 2003 Stock Option, Deferred Stock, Restricted Stock and Bonus Stock Plan to Dr. Siegel at a price equal to 100% of the closing price of our common stock on the date of grant and vested immediately. The stock options expire five years from date of grant.
- (4) Stock option awards granted in 2007 pursuant to the terms of our 2003 Stock Option, Deferred Stock, Restricted Stock and Bonus Stock Plan at a price equal to 100% of the closing price of our common stock on the date of grant and vest 100% in 30 days from the vesting commencement date of August 1, 2007. The stock options expire ten years from date of grant.
- (5) Stock option awards granted in 2009 pursuant to the terms of our 2003 Stock Option, Deferred Stock, Restricted Stock and Bonus Stock Plan at a price equal to 100% of the closing price of our common stock on the date of grant and vest in equal quarterly installments over a 12 month period. The stock options expire ten years from date of grant.

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## Option Grants in Fiscal Years 2009

In August 2009, the Company issued options to purchase an aggregate of 910,000 shares of common stock to our officers and directors. All stock option awards were granted pursuant to the terms of our 2003 Stock Option, Deferred Stock, Restricted Stock and Bonus Stock Plan and are subject to twelve month vesting terms commencing on the date of grant and vesting in equal quarterly installments beginning September 30, 2009. The Company valued these options at \$227,500. This amount will be charged to operations as the options vest.

## Compensation of Directors

**Standard Arrangements.** Directors currently receive no cash compensation from IR BioSciences Holdings, Inc. for their services as members of the Board or for attendance at committee meetings. Members of the Board are reimbursed for some expenses in connection with attendance at Board and committee meetings.

**Other Arrangements.** We may from time to time issue options and/or warrants to executives and directors for fulfilling certain performance goals.

Directors who are officers or employees of IR BioSciences Holdings, Inc. do not receive separate consideration for their service on the Board of Directors.

During the year ended December 31, 2009, the Company granted to our non-employee board members ten-year options to purchase an aggregate of 385,000 shares of common stock at a price of \$0.25 for board service. The Company charged to operations the fair value of \$96,250 for these option grants to board members.

Fiscal Year 2009 Director Compensation Table

| Name                             | Fees<br>Earned<br>or    | Stock<br>Awards<br>(\$) | Option<br>Awards<br>\$(1)(2) | Non-Equity                                | Nonqualified                             | All Other<br>Compensation<br>(\$) | Total<br>(\$) |
|----------------------------------|-------------------------|-------------------------|------------------------------|---|--|-----------------------------------|---------------|
|                                  | Paid in<br>Cash<br>(\$) |                         |                              | Incentive<br>Plan<br>Compensation<br>(\$) | Deferred<br>Compensation<br>Earnings(\$) |                                   |               |
| Lance K.<br>Gordon, Ph.D.        | —                       | —                       | 25,000                       | —   | —  | —                                 | 25,000        |
| Robert J. Hariri,<br>M.D., Ph.D. | —                       | —                       | 50,000                       | —   | —  | —                                 | 50,000        |
| Theodore E.<br>Staahl, M.D.      | —                       | —                       | 12,500                       | —   | —  | —                                 | 12,500        |
| Jerome B. Zeldis,<br>M.D., Ph.D. | —                       | —                       | 8,750                        | —   | —  | —                                 | 8,750         |

(1) Represents the aggregate grant date fair value of option awards granted within the fiscal year in accordance with FASB Accounting Standards Codification Topic 718 for stock-based compensation (Formerly FAS 123R). These amounts reflect the total grant date expense for these awards, and do not correspond to the actual cash value

that will be recognized by each of the directors when received. For a detailed discussion of the assumptions made in the valuation of option awards, please see the Notes to the Consolidated Financial Statements included in our Annual Report on Form 10-K.

(2) The following table sets forth the aggregate number of shares of Common Stock underlying equity awards outstanding at December 31, 2009:

| Name                          | Stock<br>Option<br>Grants |
|-------------------------------|---------------------------|
| Lance K. Gordon, Ph.D.        | 200,000                   |
| Robert J. Hariri, M.D., Ph.D. | 400,000                   |
| Theodore E. Stahl, M.D.       | 150,000                   |
| Jerome B. Zeldis, M.D., Ph.D. | 135,000                   |

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Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table sets forth information regarding the beneficial ownership of the common stock by:

- Our executive officers and directors;
- All directors and executive officers as a group; and
- Each person known to us to beneficially own more than five percent (5%) of our outstanding shares of common stock.

The information contained in these tables is as of April 1, 2010, except as indicated below. At that date, we had 14,130,857 shares of common stock outstanding. Ownership is based upon information provided by each respective officer and director, Forms 4, Schedules 13G and other public documents filed with the Securities and Exchange Commission for some of the stockholders.

A person is deemed to be a beneficial owner of shares if he has the power to vote or dispose of the shares. This power can be exclusive or shared, direct or indirect. In addition, a person is considered by SEC rules to beneficially own shares underlying options or warrants that are presently exercisable or that will become exercisable within sixty (60) days.

Except as otherwise noted, the persons or entities in this table have sole voting and investing power with respect to all of the shares of Common Stock beneficially owned by them, subject to community property laws, where applicable. Unless otherwise indicated, the address of each stockholder listed in the table is c/o IR BioSciences Holdings, Inc., 8777 E. Via De Ventura, Suite 280, Scottsdale, Arizona 85258.

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## Beneficial Ownership

| Name of Beneficial Owner  | Number of Shares | Percent of Class |
|---|------------------|------------------|
| (i) Directors and Executive Officers  |                  |                  |
| Michael K. Wilhelm (1)  | 2,116,808        | 13.9%            |
| John N. Fermanis (2)  | 282,500          | 2.0              |
| Hal N. Siegel, Ph.D. (3)  | 366,500          | 2.5              |
| Lance K. Gordon, Ph.D. (4)  | 200,000          | 1.4              |
| Robert J. Hariri, M.D., Ph.D. (5)   | 521,055          | 3.6              |
| Theodore E. Staahl, M.D. (6)  | 493,407          | 3.5              |
| Jerome B. Zeldis, M.D., Ph.D. (7)   | 135,000          | *                |
| Officers and Directors as a group (7 persons) (8)   | 4,115,270        | 24.6             |
| (ii) Other Beneficial Owners (and their addresses)  |                  |                  |
| YA Global Investments, L.P. (9)<br>101 Hudson Street, Suite 3700<br>Jersey City, NJ 07302 | 1,411,672        | 9.99             |
| Brencourt Advisors, LLC (10)<br>600 Lexington Avenue, 8th Floor<br>New York, NY 10022.    | 1,410,260        | 9.98             |

\* Represents beneficial ownership of less than one percent of the Company's Common Stock.

- (1) Consists of 1,038,727 shares of Common Stock, 38,081 shares issuable upon the exercise of outstanding warrants, and 1,040,000 shares issuable upon the exercise of stock options exercisable within 60 days of April 1, 2010.
- (2) Consists of 10,000 shares of Common Stock, 7,500 shares issuable upon the exercise of outstanding warrants, and 355,000 shares issuable upon the exercise of stock options exercisable within 60 days of April 1, 2010.
- (3) Consists of 11,000 shares of Common Stock, 500 shares issuable upon the exercise of outstanding warrants, and 355,000 shares issuable upon the exercise of stock options exercisable within 60 days of April 1, 2010.
- (4) Consists of 200,000 shares issuable upon the exercise of stock options exercisable within 60 days of April 1, 2010.
- (5) Consists of 89,805 shares of Common Stock, 31,250 shares issuable upon the exercise of outstanding warrants and 400,000 shares issuable upon the exercise of stock options exercisable within 60 days of April 1, 2010. Includes 27,305 shares of Common Stock and 400,000 shares issuable upon the exercise of stock options exercisable within 60 days of April 1, 2010 held by Dr. Hariri and includes 62,500 shares of Common Stock and 31,250 shares issuable upon the exercise of outstanding warrants exercisable within 60 days of April 1, 2010 held by The Hariri Family Limited Partnership, a partnership that Dr. Hariri is the administrative manager thereof.
- (6) Consists of 343,407 shares of Common Stock and 150,000 shares issuable upon the exercise of stock options exercisable within 60 days of April 1, 2010.

- (7) Consists of 200,000 shares issuable upon the exercise of stock options exercisable within 60 days of April 1, 2010.
- (8) Consists of 1,492,938 shares of Common Stock, 77,331 shares issuable upon the exercise of outstanding warrants and 2,545,000 shares issuable upon the exercise of stock options exercisable within 60 days of April 1, 2010. Includes 62,500 shares of Common Stock and 31,250 shares issuable upon the exercise of outstanding warrants exercisable within 60 days of April 1, 2010 held by The Hariri Family Limited Partnership, a partnership that Dr. Hariri is the administrative manager thereof.
- (9) Consists of 1,500,000 shares issuable upon the exercise of outstanding warrants exercisable within 60 days of April 1, 2010, an aggregate of \$3,000,000 in secured convertible notes convertible into Common Stock at \$1.50 per share; \$68,889 secured convertible notes convertible at a price of no less than \$0.57 per share; an aggregate of \$75,000 secured convertible notes convertible at a price of no less than \$0.34 per share; and, an aggregate of \$300,000 secured convertible notes convertible at a price of no less than \$0.30 per share. However, by contract, the warrants cannot be exercised nor may the notes be converted if after the exercise or conversion the beneficial owner would own more than 9.99% of the outstanding shares of common stock, unless waived by YA Global Investments, L.P. upon 65 days notice. Accordingly only 1,411,672 of shares issuable upon the exercise of warrants and conversion of secured convertible notes are included.
- (10) Represents securities owned by Brencourt Multi-Strategy Master, Ltd., Schreckhorn Fund Limited and Brencourt BD, LLC, over which Brencourt Advisors, LLC has investment and voting control. Consists of 2,500,000 shares issuable upon the exercise of outstanding warrants exercisable within 60 days of April 1, 2010, an aggregate of \$5,000,000 in secured convertible notes convertible into Common Stock at \$1.55 per share; an aggregate of \$125,000 secured convertible notes convertible at a price of no less than \$0.34 per share; and, an aggregate of \$500,000 secured convertible notes convertible at a price of no less than \$0.30 per share. . However, by contract, the warrants cannot be exercised if after the exercise the beneficial owner would own more than 4.99% of the outstanding shares of common stock, unless such ownership limitation is increased or decreased by the holder upon 61 days' prior notice to us subject to a maximum ownership limitation of 9.99%. The secured convertible notes may not be converted if after the conversion the beneficial owner would own more than 9.98% of the outstanding shares of common stock. Accordingly only 1,410,260 of shares issuable upon the exercise of warrants and conversion of secured convertible notes are included.

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## Equity Compensation Plan Information

The following table sets forth, as of April 1, 2010, information about our equity compensation plans that have been approved by our stockholders, and the number of shares of our common stock exercisable under all outstanding options, the weighted-average exercise price of all outstanding options and the number of shares available for future issuance under our equity compensation plans.

| Plan Category  | (a)<br>Number of securities to be Issued upon exercise of outstanding options | (b)<br>Weighted-average exercise price of Outstanding options | (c)<br>Number of securities remaining available for future issuance under equity compensation plans excluding securities reflected in column(a) |
|--|---|---|---|
| Equity Compensation Plans Approved by Stockholders (1) | 2,818,724   | \$ 1.79   | 1,802,936   |
| Equity Compensation Plans Not Approved by Stockholders | -   | \$ -  | -   |

(1) Represents securities to be issued upon exercise of options and securities remaining available for future issuance under our 2003 Stock Option, Deferred Stock and Restricted Stock Plan.

## Item 13. Certain Relationships and Related Transactions, and Director Independence

As a smaller reporting company, IR BioSciences Holdings, Inc. is required to follow the scaled disclosure requirements with respect to this Part III, Item 13 – Certain Relationships and Related Transactions, and Director Independence. The disclosures related to review of related person transactions are not applicable to smaller reporting companies

## Director Independence

Our securities are not listed on a national securities exchange or in an inter-dealer quotation system which has requirements that directors be independent. Shares of our common stock are quoted on the OTCBB. We have adopted the independence standards of the NYSE Amex to determine the independence of our directors and those directors serving on our committees, although we are not subject to the rules of the NYSE Amex.

The Board of Directors currently consists of six members, four of whom are “independent” as defined under NYSE Amex regulations. The four independent members of the Board of Directors are Lance K. Gordon, Ph.D., Robert J. Hariri, M.D., Ph.D., Theodore E. Staahl, M.D. and Jerome B. Zeldis, M.D., Ph.D.

For a director to be considered independent, the Board must determine that the director has no relationship which, in the opinion of the Board, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

All members of the Audit Committee, the Compensation Committee and the Corporate Governance and Nominating Committee must be independent directors. Members of the Audit Committee also must satisfy a separate SEC independence requirement, which provides that they may not accept directly or indirectly any consulting, advisory or other compensatory fee from the Company or any of its subsidiaries other than their directors' compensation. In addition, under SEC rules, an Audit Committee member who is an affiliate of the issuer (other than through service as a director) cannot be deemed to be independent.

#### Certain Relationships And Related Transactions

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ImmuneRegen Biosciences, Inc.

ImmuneRegen BioSciences, Inc. is a wholly-owned subsidiary of IR BioSciences Holdings, Inc. IR BioSciences Holdings, Inc. and ImmuneRegen BioSciences, Inc. have interlocking executive positions and share common ownership.

## Item 14. Principal Accountant Fees and Services

The following table represents aggregate fees billed to the Company for the fiscal years ended December 31, 2009 and 2008, by RBSM LLP, the Company's independent registered public accounting firm.

| Fee Category          | 2009       | % of Total | 2008      | % of Total |
|-----------------------|------------|------------|-----------|------------|
| Audit Fees(1)         | \$ 108,485 | 100.0 %    | \$ 77,975 | 94.0%      |
| Audit-related Fees(2) | —          | %          | —         | — %        |
| Tax Fees(3)           | —          |            | —         | —          |
| All Other Fees(4)     | —          |            | 5,000     | 6.0%       |
| Total Fees            | \$ 108,485 | 100.0%     | \$ 82,975 | 100.0%     |

(1) Audit fees consist of fees billed for professional services rendered for the audit of our consolidated financial statements and review of the interim condensed consolidated financial statements included in quarterly reports and services that are normally provided by RBSM LLP in connection with statutory and regulatory filings or engagements.

(3) Tax fees consist of fees for tax compliance/preparation and other tax services. No such services were incurred in 2009 or 2008.

(4) All other fees consist of fees for accounting literature subscription services. In 2008, audit fees also included \$5,000 billed for professional services rendered in connection with the review of and consent to the Company's SEC Form S-8.

## Policy for Pre-Approval of Audit and Non-Audit Services

Our Audit Committee pre-approves all audit and permissible non-audit services provided by the independent registered public accounting firm. These services may include audit services, audit-related services, tax services and other services. Our Audit Committee has a policy for the pre-approval of services provided by the independent registered public accounting firm. Under the policy, any pre-approval is detailed as to the particular service or category of services and includes an estimate of the related fees. Our Audit Committee may delegate pre-approval authority to one or more of its members. Such a member must report any decisions to our Audit Committee at the next scheduled meeting. During fiscal years 2009 and 2008, our Audit Committee approved all of the Audit Fees, Audit-Related Fees and All Other Fees.

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PART IV

Item 15. Exhibits and Financial Statement Schedules

1. Financial Statements: See “Index to Consolidated Financial Statements” in Part II, Item 8 of this annual report on Form 10-K.

2. Financial Statement Schedule: Not applicable.

3. Exhibits:

Exhibit

Number Description of Exhibit

2.1 Agreement and Plan of Merger dated July 2, 2003 among the Registrant, GPN Acquisition Corporation and ImmuneRegen BioSciences, Inc. (incorporated by reference to exhibit 2 of the Registrant's current report on Form 8-k filed with the Securities and Exchange Commission on July 7, 2003).

3.1 Certificate of Incorporation filed with the Delaware Secretary of State on June 4, 1985 (incorporated by reference to exhibit 3.1 of the Registrant's annual report on Form 10-KSB for the year ended December 31, 2001 filed with the Securities and Exchange Commission on April 16, 2002).

3.1(a) Certificate of Amendment filed with the Delaware Secretary of State on July 16, 1987 (incorporated by reference to exhibit 3.1(a) of the Registrant's annual report on Form 10-KSB for the year ended December 31, 2001 filed with the Securities and Exchange Commission on April 16, 2002).

3.1(b) Certificate of Amendment filed with the Delaware Secretary of State on February 3, 1992 (incorporated by reference to exhibit 3.1(b) of the Registrant's annual report on Form 10-KSB for the year ended December 31, 2001 filed with the Securities and Exchange Commission on April 16, 2002).

3.1(c) Certificate of Amendment filed with the Delaware Secretary of State on November 23, 1992 (incorporated by reference to exhibit 3.1(c) of the Registrant's annual report on Form 10-KSB for the year ended December 31, 2001 filed with the Securities and Exchange Commission on April 16, 2002).

3.1(d) Certificate of Amendment filed with the Delaware Secretary of State on December 15, 1994 (incorporated by reference to exhibit 3.1(d) of the Registrant's annual report on Form 10-KSB for the year ended December 31, 2001 filed with the Securities and Exchange Commission on April 16, 2002).

3.1(e)

Certificate of Amendment filed with the Delaware Secretary of State on November 7, 1995 (incorporated by reference to exhibit 3.1(e) of the Registrant's annual report on Form 10-KSB for the year ended December 31, 2001 filed with the Securities and Exchange Commission on April 16, 2002).

- 3.1(f) Certificate of Amendment filed with the Delaware Secretary of State on December 30, 1996 (incorporated by reference to exhibit 3.1(f) of the Registrant's annual report on Form 10-KSB for the year ended December 31, 2001 filed with the Securities and Exchange Commission on April 16, 2002).
- 3.1(g) Certificate of Amendment filed with the Delaware Secretary of State on November 8, 2000 (incorporated by reference to exhibit 3.1(h) of the Registrant's annual report on Form 10-KSB for the year ended December 31, 2001 filed with the Securities and Exchange Commission on April 16, 2002).
- 3.1(h) Certificate of Amendment filed with the Delaware Secretary of State on June 27, 2008.
- 3.1(i) Certificate of Amendment filed with the Delaware Secretary of State on July 10, 2008.
- 3.2 Amended and Restated Bylaws of the Registrant dated as of January 1, 2002 (incorporated by reference to exhibit 3(b) of the Registrant's annual report on Form 10-KSB for the year ended December 31, 2001 filed with the Securities and Exchange Commission on April 16, 2002).
- 4.1 Specimen Common Stock Certificate (incorporated by reference to exhibit 4.1 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 24, 2004).
- 4.2 2003 Stock Option, Deferred Stock and Restricted Stock Plan (incorporated by reference to exhibit 4.1 of the Registrant's registration statement on Form S-8 (file no. 333-113511) filed with the Securities and Exchange Commission on March 11, 2004).

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Exhibit

Number Description of Exhibit

- 4.3 Amendment No. 1 to IR BioSciences Holdings, Inc. 2003 Stock Option, Deferred Stock and Restricted Stock Plan (incorporated by reference to Annex B to the definitive Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on June 5, 2006).
- 4.4 Amendment No. 2 (titled “Amendment No. 3”) to IR BioSciences Holdings, Inc. 2003 Stock Option, Deferred Stock and Restricted Stock Plan (incorporated by reference to Appendix B to the definitive Proxy Statement on Schedule 14A filed with the Securities and Exchange Commission on May 9, 2008).
- 4.5 Form of Warrant by and between the Registrant and each of the Investors or Creditors, as the case may be, who entered into an Agreement filed as Exhibit 10.6, 10.7, 10.8 or 10.9 herewith (incorporated by reference to exhibit 4.1 of the Registrant's current report on Form 8-K filed with the Securities and Exchange Commission on October 19, 2004).
- 4.6 Form of Registration Rights (Annex A to Subscription Agreement) by and between the Registrant and each of the Investors who entered into the Agreements filed as Exhibits 10.6 and 10.8 herewith (incorporated by reference to exhibit 4.2 of the Registrant's current report on Form 8-K filed with the Securities and Exchange Commission on October 19, 2004).
- 4.7 Form of Anti-Dilution Rights (Annex B to Subscription Agreement) by and between the Registrant and each of the Investors who entered into the Agreements filed as Exhibits 10.6 and 10.8 herewith (incorporated by reference to exhibit 4.3 of the Registrant's current report on Form 8-K filed with the Securities and Exchange Commission on October 19, 2004).
- 4.8 Promissory Note issued from the Registrant to SBM Certificate Company as of April 28, 2004 (incorporated by reference to exhibit 4.6 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 24, 2004).
- 4.8 Form of Warrant by and between the Registrant and each of the investors who entered into the Subscription Agreements filed as Exhibits 10.18, 10.19 and 10.20 herewith (incorporated by reference from Exhibit 4.1 to the Quarterly Report on Form 10-QSB as filed with the Securities and Exchange Commission on November 14, 2006).
- 4.10 8% Secured Convertible Debenture due December 31, 2010, issued to YA Global Investments, L.P., dated January 3, 2008 (incorporated by reference from Exhibit 4.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 9, 2008).

- 4.11 Common Stock Purchase Warrant, issued to YA Global Investments, L.P., dated January 3, 2008 (incorporated by reference from Exhibit 4.2 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 9, 2008).
- 4.12 8% Secured Convertible Debenture due May 31, 2011 in the amount of \$1,000,000, issued to YA Global Investments, L.P., dated June 12, 2008 (incorporated by reference from Exhibit 4.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on June 17, 2008)
- 4.13 Amendment Number 1 to 8% Secured Convertible Debenture in the amounts of \$2,000,000 and \$1,000,000, issued to YA Global Investments, L.P., dated January 3, 2008 and June 12, 2008, respectively (incorporated by reference from Exhibit 4.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on July 23, 2008).
- 4.14 Waiver of Application of Provisions Under Secured Convertible Debenture between the Company and YA Global Investments, L.P. dated July 18, 2008 (incorporated by reference from Exhibit 4.2 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on July 23, 2008).
- 4.15 Form of 10% Secured Convertible Debenture due August 8, 2013 dated August 8, 2008 issued to Funds Managed by Brencourt Advisors LLC (incorporated by reference from Exhibit 4.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 11, 2008).
- 4.16 Form of Common Stock Purchase Warrant dated August 8, 2008 issued to Funds Managed by Brencourt Advisors LLC (incorporated by reference from Exhibit 4.2 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 11, 2008)

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Exhibit

| Exhibit<br>Number | Description of Exhibit  |
|-------------------|---|
| 4.17              | Amendment Number 2 to 8% Secured Convertible Debenture in the amount of \$2,000,000 issued to YA Global Investments, L.P., dated January 3, 2008 (incorporated by reference from Exhibit 4.3 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 11, 2008).  |
| 4.18              | Amendment Number 2 to 8% Secured Convertible Debenture in the amount of \$1,000,000 issued to YA Global Investments, L.P., dated June 12, 2008 (incorporated by reference from Exhibit 4.4 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 11, 2008)   |
| 4.19              | Amendment Number 1 to Common Stock Purchase Warrant, issued to YA Global Investments, L.P., dated August 8, 2008 (incorporated by reference from Exhibit 4.5 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 11, 2008)   |
| 4.20              | Common Stock Purchase Warrant, issued to YA Global Investments, L.P., dated August 8, 2008 incorporated by reference from Exhibit 4.6 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 11, 2008).   |
| 10.1              | License Agreement dated December 16, 2002 among ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant, David Harris and Mark Witten (incorporated by reference to exhibit 10.4 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 24, 2004).                       |
| 10.1(a)           | First Amendment to License Agreement dated December 20, 2002 among ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant, David Harris and Mark Witten (incorporated by reference to exhibit 10.4(a) of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 24, 2004). |
| 10.1(b)           | Second Amendment to License Agreement dated June 26, 2003 among ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant, David Harris and Mark Witten (incorporated by reference to exhibit 10.4(b) of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 24, 2004).    |
| 10.1(c)           | Assignment Agreement dated February 23, 2005 between ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant and Mark Witten (incorporated by reference to exhibit 10.4(c) of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on July 20, 2005).                                 |

- 10.1(d) Assignment Agreement dated February 23, 2005 among ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant, David Harris and Mark Witten (incorporated by reference to exhibit 10.4(d) of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on July 20, 2005).
- 10.1(e) Assignment Agreement dated November 7, 2005 between ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant and Mark Witten (incorporated by reference to exhibit 10.4(e) of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 16, 2005).
- 10.1(f) Assignment Agreement dated November 7, 2005 between ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant and Mark Witten (incorporated by reference to exhibit 10.4(f) of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on February 22, 2006).
- 10.1(g) Assignment Agreement dated November 7, 2005 between ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant and Mark Witten (incorporated by reference to exhibit 10.4(g) of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 16, 2005).
- 10.1(h) Assignment Agreement dated November 7, 2005 between ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant and Mark Witten (incorporated by reference to exhibit 10.4(h) of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 16, 2005).
- 10.2 Lease Agreement dated July 1, 2004 between ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant, and The Clayton Companies (incorporated by reference to exhibit 10.5 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 24, 2004).
- 10.3 Form of Subscription Agreement entered into as of October 13, 2004 between the Registrant and each of the Investors set forth on the Schedule of Investors thereto (incorporated by reference to exhibit 10.1 of the Registrant's current report on Form 8-K filed with the Securities and Exchange Commission on October 19, 2004).
- 10.4 Form of Settlement Agreement entered into as of October 13, 2004 between the Registrant and each of the Creditors set forth on the Schedule of Creditors thereto (incorporated by reference to exhibit 10.2 of the Registrant's current report on Form 8-K filed with the Securities and Exchange Commission on October 19, 2004).
- 10.5 Form of Subscription Agreement entered into as of October 26, 2004 between the Registrant and each of the Investors set forth on the Schedule

of Investors thereto (incorporated by reference to exhibit 10.1 of the Registrant's current report on Form 8-K filed with the Securities and Exchange Commission on October 27, 2004).

| Exhibit Number | Description of Exhibit   |
|----------------|--|
| 10.6           | Form of Settlement Agreement entered into as of October 26, 2004 between the Registrant and each of the Creditors set forth on the Schedule of Creditors thereto (incorporated by reference to exhibit 10.2 of the Registrant's current report on Form 8-K filed with the Securities and Exchange Commission on October 27, 2004).                       |
| 10.7           | Employment Agreement dated August 10, 2005 by and between the Registrant and Michael K. Wilhelm (incorporated by reference to exhibit 10.1 of the Registrant's quarterly report on Form 10-QSB for the three months ended September 30, 2005).   |
| 10.8           | Change of Control Agreement dated August 10, 2005 by and between the Registrant and Michael K. Wilhelm (incorporated by reference to exhibit 10.2 of the Registrant's quarterly report on Form 10-QSB for the three months ended September 30, 2005).  |
| 10.9           | Severance Agreement dated November 7, 2005 by and between the Registrant and Michael K. Wilhelm (incorporated by reference to exhibit 10.3 of the Registrant's quarterly report on Form 10-QSB for the three months ended September 30, 2005).   |
| 10.10          | Authorization for Regulatory Contact dated November 7, 2005 between ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant, and Synergos, Inc. (incorporated by reference to exhibit 10.14 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on February 22, 2006). |
| 10.11          | Proforma invoice/quotation dated November 7, 2005 from Sigma-Aldrich, Inc. to ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant (incorporated by reference to exhibit 10.15 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 16, 2005).           |
| 10.12          | Letter of acceptance dated October 2, 2003, from Huntingdon Life Sciences to ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant (incorporated by reference to exhibit 10.16 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on February 22, 2006).            |
| 10.13          | Price Quotation dated June 27, 2003 received by ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant from AppTec Laboratory Services (incorporated by reference to exhibit 10.17 of the Registrant's  |



registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on February 22, 2006).

- 10.14 Consulting Agreement dated March 15, 2005 between ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant and Dr. Hal Siegel, Ph.D. (Siegel Consultancy) (incorporated by reference to exhibit 10.18 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on February 22, 2006).
- 10.15 Consulting Agreement dated November 3, 2005 between ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant and Dr. Jack Caravelli, Ph.D (incorporated by reference to exhibit 10.19 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on February 22, 2006).
- 10.16 Consulting Agreement dated July 29, 2005 between ImmuneRegen BioSciences, Inc., a subsidiary of the Registrant and Dr. Kelly McQueen, MD, MPH (incorporated by reference to exhibit 10.20 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on February 22, 2006).
- 10.17 Form of Subscription Agreement entered into as of December 6, 2006 between the Registrant and each of the Investors set forth on the Schedule of Investors contained therein (incorporated by reference from Exhibit 10.1 to the Report on Form 8-K as filed with the Securities and Exchange Commission on December 7, 2006).
- 10.18 Form of Subscription Agreement entered into as of October 4, 2006 between the Registrant and each of the Investors set forth on the Schedule of Investors contained therein. (incorporated by reference from Exhibit 10.2 to the Quarterly Report on Form 10-QSB as filed with the Securities and Exchange Commission on November 14, 2006).
- 10.19 Form of Subscription Agreement entered into as of October 26, 2006 between the Registrant and each of the Investors set forth on the Schedule of Investors contained therein (incorporated by reference from Exhibit 10.2 to the Quarterly Report on Form 10-QSB as filed with the Securities and Exchange Commission on November 14, 2006).
- 10.20 Standard Form of Director Indemnification Agreement (incorporated by reference from Exhibit 10.21 to the Annual Report on Form 10-KSB/A as filed with the Securities and Exchange Commission on April 30, 2007).
- 10.21 Agreement dated May 14, 2007 by and between the Company and Dr. Lance K. Gordon (incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on May 17, 2007).
- 10.22 Agreement dated August 14, 2007 by and between the Company and Dr. Robert J. Hariri Gordon (incorporated by reference from Exhibit 10.1 to

the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 17, 2007).

- 10.23 Office Lease dated October 25, 2007 by and between the Company and Bay Colony Executive Center-West, a division of BC Management Company, Inc. (incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on October 30, 2007).

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Exhibit

Number Description of Exhibit

- 10.24 Amendment for an Extension to Lease Term and to Relocate to Suite 280 at the Bay Colony Executive Center - East dated March 17, 2009 by and between the Company and Bay Colony Executive Center-West, a division of BC Management Company, Inc. (incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on March 20, 2009).
- 10.25 Securities Purchase Agreement, dated as of January 3, 2008, by and among the Company, YA Global Investments, L.P., and ImmuneRegen BioSciences, Inc. (incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 9, 2008).
- 10.26 Guaranty Agreement dated as of January 3, 2008, executed by ImmuneRegen BioSciences, Inc. in favor of YA Global Investments, L.P. (incorporated by reference from Exhibit 10.2 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 9, 2008).
- 10.27 Security Agreement dated as of January 3, 2008, by and among the Company, YA Global Investments, L.P. and ImmuneRegen BioSciences, Inc. (incorporated by reference from Exhibit 10.3 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 9, 2008).
- 10.28 Patent Security Agreement dated as of January 3, 2008, by and among the Company, YA Global Investments, L.P. and ImmuneRegen BioSciences, Inc. (incorporated by reference from Exhibit 10.3 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on January 9, 2008).
- 10.29 Unsecured 12% Senior Promissory Note dated April 13, 2006 (incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on April 19, 2006).
- 10.30 Unsecured 12% Senior Promissory Note dated July 25, 2006 in the amount of \$250,000 (incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 4, 2006).
- 10.31 Unsecured 12% Senior Promissory Note dated August 1, 2006 in the amount of \$50,000 (incorporated by reference from Exhibit 10.2 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 4, 2006).

- 10.32 Unsecured 12% Senior Promissory Note dated August 1, 2006 in the amount of \$20,000 (incorporated by reference from Exhibit 10.3 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 4, 2006).
- 10.33 Employment Agreement dated January 1, 2008 by and between the Company and John Fermanis (incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on April 8, 2008).
- 10.34 Change of Control Agreement dated January 1, 2008 by and between the Company and John Fermanis (incorporated by reference from Exhibit 10.2 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on April 8, 2008).
- 10.35 Securities Purchase Agreement, dated as of August 8, 2008, by and among the Company, ImmuneRegen BioSciences, Inc., and certain funds managed by Brencourt Advisors, LLC (incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 11, 2008).
- 10.36 Guaranty Agreement dated as of August 8, 2008, executed by ImmuneRegen BioSciences, Inc. in favor of certain funds managed by Brencourt Advisors, LLC (incorporated by reference from Exhibit 10.2 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 11, 2008).
- 10.37 Security Agreement dated as of August 8, 2008, by and among the Company, ImmuneRegen BioSciences, Inc., and certain funds managed by Brencourt Advisors, LLC (incorporated by reference from Exhibit 10.3 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 11, 2008).
- 10.38 Patent Security Agreement dated as of August 8, 2008, by and among the Company, ImmuneRegen BioSciences, Inc. and certain funds managed by Brencourt Advisors, LLC (incorporated by reference from Exhibit 10.4 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on August 11, 2008).
- 10.39 Employment Agreement dated October 24, 2008 by and between the Company and Hal Siegel (incorporated by reference from Exhibit 10.1 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on December 22, 2008).
- 10.40 Change of Control Agreement dated October 24, 2008 by and between the Company and Hal Siegel (incorporated by reference from Exhibit 10.2 to the Current Report on Form 8-K as filed with the Securities and Exchange Commission on December 22, 2008).
- 10.41 Employment Agreement dated February 2, 2010 by and between the Company and John N. Fermanis

- 10.42 Change of Control Agreement dated February 2, 2010 by and between the Company and John N. Fermanis
- 21.1 Subsidiaries of Registrant (incorporated by reference to exhibit 21.1 of the Registrant's registration statement on Form SB-2 (File No. 333-120784) filed with the Securities and Exchange Commission on November 24, 2004).

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| Exhibit Number | Description of Exhibit  |
|----------------|---|
| 31.1           | <u>Certification of Chief Executive Officer pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>  |
| 31.2           | <u>Certification of Chief Financial Officer pursuant to Item 601(b)(31) of Regulation S-K, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.</u>  |
| 32.1*          | Certifications of Chief Executive Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.**  |
| 32.2*          | Certifications of Chief Financial Officer pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.**  |
| *              | Previously filed.   |
| **             | This exhibit shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, whether made before or after the date hereof and irrespective of any general incorporation language in any filings. |







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