

Ignyta, Inc.
Form DEF 14A
April 30, 2015
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SCHEDULE 14A INFORMATION

(Rule 14a-101)

**PROXY STATEMENT PURSUANT TO SECTION 14(a) OF THE
SECURITIES EXCHANGE ACT OF 1934**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

Preliminary Proxy Statement

Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))

Definitive Proxy Statement

Definitive Additional Materials

Soliciting Material under §240.14a-12

Ignyta, Inc.

(Name of Registrant as Specified in Its Charter)

(Name of Person(s) Filing Proxy Statement, if other Than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- x No fee required.
- .. Fee computed on table below per Exchange Act Rules 14a-6(i)(4) and 0-11.
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- .. Fee paid previously with preliminary materials.
- .. Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.
 - (1) Amount Previously Paid:

 - (2) Form, Schedule or Registration Statement No.:

 - (3) Filing Party:

 - (4) Date Filed:

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11111 Flintkote Avenue

San Diego, California 92121

**NOTICE OF 2015 ANNUAL MEETING OF
STOCKHOLDERS AND PROXY STATEMENT**

Dear stockholder:

The annual meeting of stockholders of Ignyta, Inc. will be held at the offices of Latham & Watkins LLP located at 12670 High Bluff Drive, San Diego, California 92130 on June 9, 2015 at 8:00 a.m. local time, for the following purposes:

1. To elect one director for a three-year term to expire at the 2018 annual meeting of stockholders.
2. To ratify the appointment of Mayer Hoffman McCann P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2015.
3. To transact any other business that may properly come before our annual meeting or any adjournment or postponement of the meeting.

These items of business are more fully described in the Proxy Statement accompanying this Notice.

Our board of directors has fixed April 20, 2015 as the record date for the determination of stockholders entitled to notice of, and to vote at, the annual meeting and at any adjournment or postponement of the meeting.

All stockholders are cordially invited to attend the annual meeting. **Whether or not you expect to attend the annual meeting, please complete, sign and date the enclosed proxy and return it promptly.** If you plan to attend the annual meeting and wish to vote your shares personally, you may do so at any time before the proxy is voted.

By Order of the Board of Directors,

/s/ JONATHAN E. LIM, M.D.

Jonathan E. Lim, M.D.

*President, Chief Executive Officer and
Chairman of
the Board*

San Diego, California

April 30, 2015

Your vote is important. Please vote your shares whether or not you plan to attend the meeting.

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11111 Flintkote Avenue

San Diego, California 92121

PROXY STATEMENT FOR THE 2015 ANNUAL MEETING OF STOCKHOLDERS

TO BE HELD ON TUESDAY, JUNE 9, 2015

The board of directors of Ignyta, Inc. is soliciting the enclosed proxy for use at the annual meeting of stockholders to be held on June 9, 2015 at 8:00 a.m., local time, at the offices of Latham & Watkins LLP located at 12670 High Bluff Drive, San Diego, California 92130. If you need directions to the location of the annual meeting, please contact us at (858) 255-5959.

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to be Held on June 9, 2015.

This proxy statement and our annual report are available electronically at www.proxyvote.com.

GENERAL INFORMATION ABOUT THE ANNUAL MEETING AND VOTING

Why did you send me this proxy statement?

We sent you this proxy statement and the enclosed proxy card because our board of directors is soliciting your proxy to vote at the 2015 annual meeting of stockholders. This proxy statement summarizes information related to your vote at the annual meeting. All stockholders who find it convenient to do so are cordially invited to attend the annual meeting in person. However, you do not need to attend the meeting to vote your shares. Instead, you may simply complete, sign and return the enclosed proxy card in the envelope provided.

We intend to begin mailing this proxy statement, the attached notice of annual meeting and the enclosed proxy card on or about April 30, 2015 to all stockholders of record entitled to vote at the annual meeting. Only stockholders who owned our common stock on April 20, 2015 are entitled to vote at the annual meeting. On this record date, there were 25,262,023 shares of our common stock outstanding. Common stock is our only class of stock entitled to vote.

What am I voting on?

There are two proposals scheduled for a vote:

Proposal 1: Election of Heinrich Dreismann, Ph.D., for election to the company's board of directors for a three-year term expiring at the company's 2018 annual meeting of stockholders.

Proposal 2: Ratification of the appointment of Mayer Hoffman McCann P.C. as the company's independent registered public accountants for the fiscal year ending December 31, 2015.

How many votes do I have?

Each share of our common stock that you own as of April 20, 2015 entitles you to one vote.

How do I vote by proxy?

With respect to the election of directors, you may either vote For the nominee to the board of directors or you may Withhold your vote for such nominee. For ratification of the appointment of Mayer Hoffman McCann P.C. as the company s independent registered public accountants, you may vote For or Against or abstain from voting.

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Stockholders of Record: Shares Registered in Your Name

If your shares are held in your name you are considered, with respect to those shares, the stockholder of record. You have three options for returning your proxy:

By Mail. If you choose to return your proxy by mail, please mark, sign, date and mail back the enclosed form of proxy, which requires no postage if mailed in the United States. If you properly complete your proxy card and send it to us in time to vote, your proxy (one of the individuals named on your proxy card) will vote your shares as you have directed. If you sign the proxy card but do not make specific choices, your shares will be, as permitted, voted as recommended by our board of directors. If any other matter is presented at the annual meeting, your proxy (one of the individuals named on your proxy card) will vote in accordance with his or her best judgment. As of the date of this proxy statement, we knew of no matters to be acted on at the meeting, other than those discussed in this proxy statement.

Voting by Telephone or Internet. Please call the toll-free telephone number on the proxy card (1-800-690-6903) and follow the recorded instructions; or access our secure website registration page through the Internet (at www.proxyvote.com), as identified on the proxy card and follow the instructions, using the unique control number printed on the proxy card. Please note that the Internet and telephone voting facilities for stockholders of record will close at 11:59 p.m. Eastern Time on June 8, 2015.

In Person at the Annual Meeting. You may attend the annual meeting and vote in person even if you have already voted by proxy. To vote in person, come to the annual meeting, and we will give you a ballot at the annual meeting.

Beneficial Owners: Shares Registered in the Name of a Broker or Bank

If your shares are registered in the name of your broker, bank or other agent, you are the beneficial owner of those shares and those shares are held in street name. You should have received a proxy card and voting instructions with these proxy materials from that organization rather than directly from us. Generally you have three options for returning your proxy:

By Mail. You may vote by signing, dating and returning your voting instruction card in the pre-addressed envelope provided by your broker, bank or other agent.

By Method Listed on Voting Instruction Card. Please refer to your voting instruction card or other information provided by your bank, broker or other agent to determine whether you may vote by telephone or electronically on the Internet, and follow the instructions on the voting instruction card or other information provided by your broker, bank or other agent. If your bank, broker or other agent does not offer Internet or telephone voting information, please complete and return your voting instruction card in the pre-addressed, postage-paid envelope provided.

In Person at the Annual Meeting. To vote in person at the annual meeting, you must obtain a valid proxy from your broker, bank or other agent. Follow the instructions from your broker or bank included with these proxy materials, or contact your broker or bank to request the proxy form authorizing you to vote the shares. You will need to bring with you to the annual meeting the legal proxy form from your broker, bank or other agent authorizing you to vote the shares as well as proof of identity.

May I revoke my proxy?

If you give us your proxy, you may revoke it at any time before it is exercised. You may revoke your proxy in any one of the two following ways:

you may send in another signed proxy with a later date; or

you may notify our corporate secretary, Matthew W. Onaitis, in writing before the annual meeting that you have revoked your proxy, after which you are entitled to submit a new proxy or vote in person at the meeting.

What constitutes a quorum?

The presence at the annual meeting, in person or by proxy, of holders representing a majority of our outstanding common stock as of April 20, 2015, or approximately 12,631,012 shares, constitutes a quorum at the meeting, permitting us to conduct our business.

What vote is required to approve each proposal?

Proposal 1: Election of Director. For Proposal 1, because the election of directors is determined by a plurality of votes cast, there is no threshold number of For votes (among votes properly cast in person or by proxy) required to elect the nominee. As a result, Withheld votes would not affect the outcome.

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Proposal 2: Ratification of Independent Registered Public Accounting Firm. To be approved, Proposal 2 must receive For votes from the holders of a majority of the shares of common stock present or represented by proxy and entitled to vote at the annual meeting.

Voting results will be tabulated and certified by our mailing and tabulating agent, Broadridge Financial Solutions, Inc.

What is the effect of abstentions and broker non-votes?

Shares of common stock held by persons attending the annual meeting but not voting, and shares represented by proxies that reflect abstentions as to a particular proposal, will be counted as present for purposes of determining the presence of a quorum. Abstentions are treated as shares present in person or by proxy and entitled to vote, so abstaining has the same effect as a negative vote for purposes of determining whether our stockholders have ratified the appointment of Mayer Hoffman McCann P.C. as our independent registered public accounting firm. However, because the election of directors is determined by a plurality of votes cast, abstentions will not be counted in determining the outcome of that proposal.

Shares represented by proxies that reflect a broker non-vote will be counted for purposes of determining whether a quorum exists. A broker non-vote occurs when a nominee holding shares for a beneficial owner has not received instructions from the beneficial owner and does not have discretionary authority to vote the shares for certain non-routine matters. With regard to the election of directors, broker non-votes, if any, will not be counted as votes cast and will have no effect on the result of the vote. However, ratification of the appointment of Mayer Hoffman McCann P.C. is considered a routine matter on which a broker or other nominee has discretionary authority to vote. As a result, broker non-votes will be counted for purposes of this proposal.

Who is paying the costs of soliciting these proxies?

We will pay all of the costs of soliciting these proxies. Our directors, officers and other employees may solicit proxies in person or by telephone, fax or email. We will pay our directors, officers and other employees no additional compensation for these services. We will ask banks, brokers and other institutions, nominees and fiduciaries to forward these proxy materials to their principals and to obtain authority to execute proxies. We will then reimburse them for their expenses. Our costs for forwarding proxy materials will not be significant.

How do I obtain an Annual Report on Form 10-K?

If you would like a copy of our annual report on Form 10-K for the fiscal year ended December 31, 2014 that we filed with the Securities and Exchange Commission, or the SEC, on March 12, 2015, we will send you one without charge. Please write to:

Ignyta, Inc.

11111 Flintkote Avenue

San Diego, California 92121

Attn: Corporate Secretary

All of our SEC filings are also available free of charge in the investor relations section of our website at www.ignyta.com.

How can I find out the results of the voting at the annual meeting?

Preliminary voting results will be announced at the annual meeting. Final voting results will be published in our current report on Form 8-K to be filed with the SEC within four business days after the annual meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

Explanatory Note

Infinity Oil & Gas Company, or Parent, was incorporated under the laws of the State of Nevada on August 21, 2012. Ignyta, Inc., or Ignyta, was incorporated under the laws of the State of Delaware on August 29, 2011, with the name NexDx, Inc. On October 31, 2013, IGAS Acquisition Corp, a wholly owned subsidiary of Parent, merged with and into Ignyta, and Ignyta survived the merger and became the wholly owned subsidiary of Parent. Upon the closing of the merger, Parent ceased to be a shell company under applicable rules of the SEC. In connection with the merger, Parent changed its name to Ignyta, Inc. and Ignyta changed its name to Ignyta Operating, Inc. On June 12, 2014, Parent merged with and into Ignyta, with Ignyta surviving the merger and changing its name to Ignyta, Inc. As used in this proxy statement, unless the context indicates or otherwise requires, Ignyta, our company, we, us, and our refer to Ignyta, Inc., a Delaware corporation.

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Parent and Ignyta effected reverse stock splits of their capital stock at the ratios of 100-to-one and three-to-one, respectively, on October 31, 2013. Unless the context indicates or otherwise requires, all share numbers and share price data included in this proxy statement have been adjusted to give effect to those reverse stock splits.

We are an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. We will remain an emerging growth company until the earlier of (i) the last day of the fiscal year following the fifth anniversary of the date of the first sale of our common stock pursuant to an effective registration statement under the Securities Act of 1933, as amended, or the Securities Act, which was on February 15, 2013; (ii) the last day of the fiscal year in which we have total annual gross revenues of \$1 billion or more; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under applicable SEC rules. We expect that we will remain an emerging growth company for the foreseeable future, but cannot retain our emerging growth company status indefinitely and will no longer qualify as an emerging growth company on or before December 31, 2018. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from specified disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced related disclosure;

not being required to comply with the requirement of auditor attestation of our internal controls over financial reporting;

not being required to comply with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;

reduced disclosure obligations regarding executive compensation; and

not being required to hold a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

For as long as we continue to be an emerging growth company, we expect that we will take advantage of the reduced disclosure obligations available to us as a result of that classification. We have taken advantage of certain of reduced reporting burdens in this proxy statement. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

An emerging growth company can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. This allows an emerging growth company to delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected to avail ourselves of this extended transition period and, as a result, we will not be required to adopt new or revised accounting standards on the dates on which adoption of such standards is required for other public reporting companies.

PROPOSAL 1:

ELECTION OF DIRECTOR

Our amended and restated bylaws currently specify that the number of directors shall be at least one and shall be determined from time to time by resolution of our board of directors. Our second amended and restated certificate of incorporation provides for the classification of our board of directors into three classes, as nearly equal in number as possible and with staggered terms of office, and provides that upon the expiration of the term of office for a class of directors, nominees for such class shall be elected for a term of three years or until their successors are duly elected and qualified. At this meeting, one nominee for director is to be elected as a Class I director for a three-year term expiring at our 2018 annual meeting of stockholders and until such individual's successor is elected and qualified. The nominee, who was recommended for nomination by the nominating and corporate governance committee of our board of directors, is Heinrich Dreismann, Ph.D. The Class II and Class III directors have one year and two years, respectively, remaining on their terms of office.

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If no contrary indication is made, proxies in the accompanying form are to be voted for Dr. Dreismann, or in the event that Dr. Dreismann is not a candidate or is unable to serve as a director at the time of the election (which is not currently expected), for any nominee who is designated by our board of directors to fill the vacancy. Dr. Dreismann is currently a member of our board of directors.

All of our directors bring to the board of directors significant leadership experience derived from their professional experience and service as executives or board members of other corporations. The process undertaken by the nominating and corporate governance committee in recommending qualified director candidates is described below under Director Nominations Process. Certain individual qualifications and skills of our directors that contribute to the board of directors effectiveness as a whole are described in the following paragraphs.

NOMINEE FOR ELECTION TO THE BOARD OF DIRECTORS

For a Three-Year Term Expiring at the

2018 Annual Meeting of Stockholders (Class I)

| Name | Age | Present Position with Ignyta, Inc. |
|---------------------------|------------|---|
| Heinrich Dreismann, Ph.D. | 61 | Director |

Heinrich Dreismann, Ph.D. Dr. Dreismann joined our board of directors in October 2013. Dr. Dreismann currently serves on the boards of directors of several public and private diagnostic companies, including Myriad Genetics, Inc., a public molecular diagnostic company, and GeneNews, a Canadian public molecular diagnostics company. Dr. Dreismann also served on the board of directors of Shrink Nanotechnologies, Inc., a nanotechnology company, from June 2009 until November 2011, and Med BioGene, Inc., a Canadian public life sciences company focused on genomic-based clinical laboratory diagnostic tests from 2008 through 2014. Dr. Dreismann completed a career at Roche Molecular Systems in 2006, where he served since 1985 and held several senior positions, including President and Chief Executive Officer of Roche Molecular Systems, Head of Global Business Development at Roche Diagnostics and Member of Roche's Global Diagnostic Executive Committee. Dr. Dreismann earned a Master of Science in biology and a Doctor of Philosophy in microbiology/molecular biology from Westfaelische Wilhelms University in Muenster, Germany. He conducted his Post-Doctoral studies in microbial genetics at the Centre d'Etudes Nucleaires de Saclay, France. We believe that Dr. Dreismann adds value to our board of directors based on his experience as a member of boards of directors and senior management of public companies and his expertise in the molecular diagnostics field.

MEMBERS OF THE BOARD OF DIRECTORS CONTINUING IN OFFICE

Term Expiring at the

2016 Annual Meeting of Stockholders (Class II)

| Name | Age | Present Position with Ignyta, Inc. |
|--------------------|------------|---|
| Alexander Casdin | 47 | Director |
| James Freddo, M.D. | 60 | Director |

Alexander Casdin. Mr. Casdin joined our board of directors in October 2013. Alex Casdin is CEO at Reneo Capital Management L.P., a position he has held since January 2015. From September 2012 through December 2014, Mr. Casdin was a private investor focused on the healthcare sector. From October 2011 through September 2012, Mr. Casdin was the Chief Financial Officer of Sophiris Bio, Inc., a Canadian public urology company. Prior to Sophiris Bio, Mr. Casdin served as the Vice President, Finance of Amylin Pharmaceuticals, a biopharmaceutical company that was acquired by Bristol-Myers Squibb in 2012, a position he held from October 2009 to October 2011. Prior to his position at Amylin Pharmaceuticals, Mr. Casdin founded and operated Casdin Advisors LLC, where he served as a strategic advisor to companies in the life sciences industry. Before founding Casdin Advisors, Mr. Casdin was the Chief Executive Officer and Portfolio Manager of Cooper Hill Partners, LLC, a healthcare investment fund. Mr. Casdin has also held previous positions at Pequot Capital Management and Dreyfus Corporation. Mr. Casdin currently serves on

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the board of directors of DiaVacs, a private clinical-stage biotechnology company focused on a treatment for Type 1 Diabetes, and as a member of the advisory boards of the Hassenfeld Center For Cancer & Blood Disorders and the Social Enterprise Program of the Columbia Business School, each of which are non-profit entities, and served on the board of directors of DUSA Pharmaceuticals, a specialty pharmaceutical company in the field of dermatology that was previously listed on the NASDAQ Stock Market and was acquired by Sun Pharmaceutical Industries Limited in December 2012, from January 2009 until December 2012. Mr. Casdin earned his B.A. degree from Brown University and his M.B.A., Beta Gamma Sigma, from Columbia Business School. We believe that Mr. Casdin adds value to our board of directors based on his experience with the financing and other aspects of company-building for enterprises in our industry.

James Freddo, M.D. Dr. Freddo joined our board of directors in February 2014. Previously, Dr. Freddo was a consultant to Ignyta from July 2013 to February 2014, holding the position of Chief Medical Officer. Prior to joining Ignyta, he served as a consultant from April 2012 until May 2012 and as the Executive Vice President, Clinical Development and Chief Medical Officer from June 2012 until May 2013, in each case for Ruga Corporation, a private oncology biopharmaceutical company. Prior to that, he was the Chief Medical Officer and Senior Vice President, Drug Development at Anadys Pharmaceuticals, a drug development company focused on small molecule therapeutics that was previously listed on the NASDAQ Stock Market and was acquired by Roche in 2011, from July 2006 until March 2012, where he also served as a member of the board of directors from January 2011 until November 2011. Prior to joining Anadys Pharmaceuticals, Dr. Freddo served at Pfizer, a global research-based pharmaceutical company, in La Jolla, California from June 2002 until July 2006, holding the positions of Vice President, Clinical Site Head and Development Site Head and, prior to that, Executive Director and leader of Oncology Clinical Development. Prior to joining Pfizer, Dr. Freddo held a variety of senior management positions at Wyeth-Ayerst Research from 1996 to 2002, in the Oncology, Infectious Diseases and Transplantation Immunology therapeutic areas. He also served as a member of the board of directors for InfuSystems, Inc., a public healthcare products and services company, from 2008 until 2011. Dr. Freddo received an M.D. degree from the University of North Carolina, Chapel Hill, completed his residency training at University of California, San Diego and returned to Chapel Hill for his fellowship training in gynecologic oncology. We believe that Dr. Freddo adds value to our board of directors based on his experience as a member of boards of directors and senior management of life sciences companies and his expertise in drug development, clinical investigations and other aspects of our industry.

Term Expiring at the**2017 Annual Meeting of Stockholders (Class III)**

| Name | Age | Present Position with Ignyta, Inc. |
|-----------------------|------------|--|
| Jonathan E. Lim, M.D. | 43 | Chairman of the Board, President and Chief Executive Officer |
| James Bristol, Ph.D. | 68 | Director |

Jonathan E. Lim, M.D. Dr. Lim is a co-founder of Ignyta and joined us as Chairman, President and Chief Executive Officer at our inception in August 2011. Prior to joining Ignyta, Dr. Lim most recently served as Chairman and Chief Executive Officer of Eclipse Therapeutics, Inc., a private biotechnology company discovering and developing monoclonal antibody therapeutics targeting cancer stem cells that he co-founded in March 2011 as a spinout from Biogen Idec and that was sold to Bionomics Ltd., an Australian public biotechnology company discovering and developing drugs targeting oncology and central nervous system disorders, in September 2012. Dr. Lim currently serves as a member of the board of directors of Bionomics Ltd. Prior to founding Eclipse Therapeutics, Dr. Lim served as the President, Chief Executive Officer and a Director of Halozyme Therapeutics, Inc., a public

biotechnology company, from May 2003 to December 2010. Prior to that, Dr. Lim's experience included management consulting at McKinsey & Company, a National Institutes of Health Postdoctoral Fellowship at Harvard Medical School and two years of general surgery residency at New York Hospital-Cornell. Dr. Lim has B.S. and M.S. degrees from Stanford University, an M.D. from McGill University and an M.P.H. from Harvard University. We believe that Dr. Lim adds value to our board of directors based on his intimate knowledge of our business plans and strategies as a co-founder of our company and his extensive experience as an executive officer and director of multiple public and private biotechnology companies.

James Bristol, Ph.D. Dr. Bristol joined our board of directors in February 2014. Dr. Bristol worked for 33 years in drug discovery research and pre-clinical development at Schering-Plough, Parke-Davis and Pfizer, serving in various senior research and development roles. From 2003 until his retirement in 2007, Dr. Bristol was Senior Vice President of Worldwide Drug Discovery Research at Pfizer Global Research & Development. Dr. Bristol has been a Co-Chairman of the Board of Managers at Deciphera Pharmaceuticals, LLC since 2007 and serves as a Member of the Managing Board. He has also served as a Director of Mnemosyne

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Pharmaceuticals, Inc. since 2011. In 2009, Dr. Bristol joined Frazier Healthcare Ventures as a Senior Advisor. Dr. Bristol is the author of over 100 publications, abstracts and patents. He conducted postdoctoral research at the University of Michigan (N.I.H. Postdoctoral Fellow) and at The Squibb Institute for Medical Research. Dr. Bristol holds a Ph.D. in organic chemistry from the University of New Hampshire and a B.S. in Chemistry from Bates College. We believe that Dr. Bristol adds value to our board of directors based on his experience in the biopharmaceutical industry, including in management and as a director, as well as his expertise in drug discovery and development.

Board Independence

Our board of directors has determined that all of our directors are independent directors within the meaning of the applicable NASDAQ Stock Market LLC, or Nasdaq, listing standards, except for Jonathan E. Lim, our President and Chief Executive Officer.

Board Leadership Structure

The board believes that Dr. Lim's service as both chairman of the board and Chief Executive Officer is in the best interest of the company and its stockholders. Dr. Lim possesses detailed and in-depth knowledge of the issues, opportunities and challenges facing the company and its businesses and is thus best positioned to develop agendas that ensure that the board's time and attention are focused on the most critical matters.

Although we believe that the combination of the chairman and Chief Executive Officer roles is appropriate at this time based upon the current circumstances, our Corporate Governance Guidelines do not establish this approach as a policy. Pursuant to our Corporate Governance Guidelines, the board determines the best board leadership structure for our company from time to time. As part of our annual board self-evaluation process, we evaluate our leadership structure to ensure that the board continues to believe that it provides the optimal structure for our company and stockholders. We recognize that different board leadership structures may be appropriate for companies in different situations. We believe our current leadership structure is the optimal structure for our company at this time.

Dr. Lim's combined role enables decisive leadership, ensures clear accountability, and enhances our ability to communicate our message and strategy clearly and consistently to our stockholders, partners and suppliers, particularly during times of turbulent economic and industry conditions. This is expected to be particularly beneficial in driving a unified approach to core operating processes as we experience significant growth.

Each of the directors other than Dr. Lim is independent, and the board believes that the independent directors provide effective oversight of management. Moreover, in addition to feedback provided during the course of board meetings, the independent directors have regular executive sessions. Following an executive session of independent directors, the independent directors communicate with Dr. Lim directly regarding any specific feedback or issues, provide Dr. Lim with input regarding agenda items for board and board committee meetings, and coordinate with Dr. Lim regarding information to be provided to the independent directors in performing their duties. The board believes that this approach appropriately and effectively complements the combined Chief Executive Officer/chairman structure.

The Board's Role in Risk Oversight

The responsibility for day-to-day risk management lies with our management; however, our board of directors is responsible for risk oversight as part of its fiduciary duty of care to effectively monitor our business operations. Our audit committee, pursuant to its charter, is primarily responsible for overseeing the company's risk management processes on behalf of the full board. The audit committee receives reports from management at least quarterly

regarding the company's assessment of risks. In addition, the audit committee reports regularly to the full board of directors, which also considers the company's risk profile. The audit committee and the full board of directors focus on the most significant risks facing the company's business and the company's general risk management strategy, and also ensure that risks undertaken by the company are consistent with the board's appetite for risk. We believe this division of responsibilities is the most effective approach for addressing the risks facing our company and that our board leadership structure supports this approach.

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On June 12, 2014, Ignyta, Inc., or Parent, a corporation incorporated under the laws of the State of Nevada previously named Infinity Oil & Gas Company, merged with and into Ignyta Operating, Inc., or Ignyta, a corporation incorporated under the laws of the State of Delaware, with Ignyta surviving the merger and changing its name to Ignyta, Inc. From January 1, 2014 through June 12, 2014, the board of directors of Parent held four meetings and acted by unanimous written consent without a meeting one time; the audit committee of Parent held one meeting; the compensation committee of Parent held one meeting; and the nominating/corporate governance committee of Parent held one meeting. From June 12, 2014 through December 31, 2014, the board of directors of Ignyta held three meetings and acted by unanimous written consent without a meeting five times; the audit committee of Ignyta held two meetings; the compensation committee of Ignyta held two meetings; and the nominating and corporate governance committee of Ignyta did not meet. Each of the directors who served during the past year attended at least 75% of the aggregate of the total number of meetings of the board of directors of Parent and Ignyta and the total number of meetings of committees of the board of directors of Parent and Ignyta on which he served, during the periods in which he served.

Committees of the Board of Directors

We have three standing committees: the audit committee, the compensation committee and the nominating and corporate governance committee. Each of these committees has a written charter approved by our board of directors. A copy of each charter can be found under the Investors-Corporate Governance section of our website at www.ignyta.com. The current members of the committees are identified in the following table.

| Director | Audit Committee | Compensation Committee | Nominating and Corporate Governance Committee |
|-------------------------------|------------------------|-------------------------------|--|
| Jonathan E. Lim, M.D. | | | |
| James Bristol, Ph.D. | | X | X |
| Alexander Casdin | X | X | X |
| Heinrich Dreismann, Ph.D. | X | X | |
| James Freddo, M.D. | X | | X |
| <i>Audit Committee</i> | | | |

The audit committee of our board of directors currently consists of Mr. Casdin, Dr. Dreismann and Dr. Freddo. Mr. Casdin serves as the chairman of the committee. All members of our audit committee meet the requirements for financial literacy under the applicable rules and regulations of the SEC and the NASDAQ Capital Market. Our board of directors has determined that Mr. Casdin is an audit committee financial expert as defined by applicable SEC rules and has the requisite financial sophistication as defined under the applicable Nasdaq rules and regulations. Our board of directors has determined that all members of the audit committee are independent directors, as defined in the Nasdaq qualification standards. The audit committee is governed by a written charter adopted by our board of directors. The audit committee's main function is to oversee our accounting and financial reporting processes and the audits of our financial statements. This committee's responsibilities include, among other things:

appointing our independent registered public accounting firm;

evaluating the qualifications, independence and performance of our independent registered public accounting firm;

approving the audit and non-audit services to be performed by our independent registered public accounting firm;

reviewing the design, implementation, adequacy and effectiveness of our internal accounting controls and our critical accounting policies;

discussing with management and the independent registered public accounting firm the results of our annual audit and the review of our quarterly unaudited financial statements;

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reviewing, overseeing and monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to financial statements or accounting matters;

reviewing on a periodic basis, or as appropriate, our investment policy and recommending to our board any changes to such investment policy;

reviewing with management and our auditors any earnings announcements and other public announcements regarding our results of operations;

preparing the report that the SEC requires in our annual proxy statement;

reviewing and approving any related party transactions and reviewing and monitoring compliance with our code of conduct and ethics; and

reviewing and evaluating, at least annually, the performance of the audit committee and its members including compliance of the audit committee with its charter.

Report of the Audit Committee of the Board of Directors

The principal purpose of the audit committee is to assist the board of directors in its oversight of (i) the integrity of our accounting and financial reporting processes and the audits of our financial statements; (ii) our system of disclosure controls and internal controls over financial reporting; (iii) our compliance with legal and regulatory requirements; (iv) the qualifications and independence of our independent auditor; (v) the performance of our independent auditor; and (vi) the business practices and ethical standards of the company. The audit committee is responsible for the appointment, compensation, retention and oversight of work of our independent auditor. The audit committee's function is more fully described in its charter.

This report of the audit committee is required by the SEC and, in accordance with the SEC's rules, will not be deemed to be part of or incorporated by reference by any general statement incorporating by reference this proxy statement into any filing under the Securities Act or under the Securities Exchange Act of 1934, as amended, or the Exchange Act, except to the extent that we specifically incorporate this information by reference, and will not otherwise be deemed soliciting material or filed under either the Securities Act or the Exchange Act.

Our management is responsible for the preparation, presentation, and integrity of our financial statements, for the appropriateness of the accounting principles and reporting policies that we use and for establishing and maintaining adequate internal control over financial reporting. Mayer Hoffman McCann P.C., our independent registered public accounting firm for 2014, was responsible for performing an independent audit of our financial statements and expressing an opinion on the conformity of those financial statements with generally accepted accounting principles.

The audit committee reviewed and discussed with management our audited financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2014 that was filed with the SEC on March 12, 2015, or the Form 10-K. The audit committee also reviewed and discussed with Mayer Hoffman McCann P.C. the audited financial statements in the Form 10-K. In addition, the audit committee discussed with Mayer Hoffman McCann P.C. those matters required to be discussed by Auditing Standard No. 61, as amended, as adopted by the Public Company

Accounting Oversight Board, or the PCAOB, in Rule 3200T. Additionally, Mayer Hoffman McCann P.C. provided to the audit committee the written disclosures and the letter required by applicable requirements of the PCAOB regarding Mayer Hoffman McCann P.C.'s communications with the audit committee concerning independence. The audit committee also discussed with Mayer Hoffman McCann P.C. its independence from the company.

In reliance on the reviews and discussions described above, the audit committee recommended to the company's board of directors that the audited financial statements be included in the company's annual report on Form 10-K and filed with the SEC. The audit committee and the company's board of directors also have recommended, subject to stockholder approval, the ratification of the appointment of Mayer Hoffman McCann P.C. as the company's independent registered public accounting firm for 2015.

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The foregoing report has been furnished by the board of directors.

Respectfully submitted,

Alexander Casdin, Chairman

Heinrich Dreismann, Ph.D.

James Freddo, M.D.

Compensation Committee

The compensation committee of our board of directors currently consists of Dr. Bristol, Mr. Casdin and Dr. Dreismann. Dr. Dreismann serves as the chairman of the committee. Our board of directors has determined that all members of the compensation committee are independent directors, as defined in the Nasdaq qualification standards. The compensation committee is governed by a written charter approved by our board of directors. Our compensation committee reviews and approves policies relating to compensation and benefits of our officers and employees. The compensation committee reviews and approves corporate goals and objectives relevant to the compensation of our Chief Executive Officer and other executive officers, evaluates the performance of these officers in light of those goals and objectives and approves the compensation of these officers based on such evaluations. The compensation committee also reviews and approves the issuance of stock options and other awards under our equity plan. The compensation committee reviews and evaluates, at least annually, the performance of the compensation committee and its members, including compliance by the compensation committee with its charter.

Nominating and Corporate Governance Committee

The members of our nominating and corporate governance committee are Dr. Bristol, Mr. Casdin and Dr. Freddo. Dr. Freddo serves as the chairman of the committee. Our board of directors has determined that all members of the nominating and corporate governance committee are independent directors, as defined in the Nasdaq qualification standards. The nominating and corporate governance committee is governed by a written charter approved by our board of directors. The nominating and corporate governance committee is responsible for assisting our board of directors in discharging the board's responsibilities regarding the identification of qualified candidates to become board members, the selection and recommendation to the board of directors of nominees for election as directors at our annual meetings of stockholders (or special meetings of stockholders at which directors are to be elected), and the selection and recommendation to the board of directors of candidates to fill any vacancies on our board of directors and any committees thereof. In addition, the nominating and corporate governance committee is responsible for overseeing our corporate governance policies, reporting and making recommendations to our board of directors concerning governance matters and oversight of the evaluation of our board of directors.

Director Nomination Process

Director Qualifications

The nominating and corporate governance committee's goal is to assemble a board of directors that brings to our company a variety of perspectives and skills derived from high quality business and professional experience. In

evaluating director nominees, the nominating and corporate governance committee considers the following factors:

personal and professional integrity, ethics and values;

experience in corporate management, such as serving as an officer or former officer of a publicly held company;

strong finance experience;

experience relevant to our industry and with relevant social policy concerns;

experience as a board member of another publicly held company;

relevant academic expertise or other proficiency in an area of our operations, such as clinical, medical or commercial experience in the pharmaceutical and/or companion diagnostics areas;

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diversity of expertise and experience in substantive matters pertaining to our business relative to other board members;

diversity of background and perspective, including, but not limited to, with respect to age, gender, race, place of residence and specialized experience;

practical and mature business judgment, including, but not limited to, the ability to make independent analytical inquiries; and

any other relevant qualifications, attributes or skills.

Other than the foregoing, there are no stated minimum criteria for director nominees, although the nominating and corporate governance committee may also consider such other factors as it may deem to be in the best interests of our company and our stockholders. The nominating and corporate governance committee does, however, believe it appropriate for at least one, and preferably, several, members of our board of directors to meet the criteria for an audit committee financial expert as defined by SEC rules, and that a majority of the members of our board of directors meet the definition of independent director under Nasdaq qualification standards. The nominating and corporate governance committee also believes it appropriate for our President and Chief Executive Officer to serve as a member of our board of directors.

Identification and Evaluation of Nominees for Directors

The nominating and corporate governance committee identifies nominees for director by first evaluating the current members of our board of directors willing to continue in service. Current members with qualifications and skills that are consistent with the nominating and corporate governance committee's criteria for board service and who are willing to continue in service are considered for re-nomination, balancing the value of continuity of service by existing members of our board of directors with that of obtaining a new perspective.

If any member of our board of directors does not wish to continue in service or if our board of directors decides not to re-nominate a member for re-election, the nominating and corporate governance committee identifies the desired skills and experience of a new nominee in light of the criteria above. The nominating and corporate governance committee generally polls our board of directors and members of management for their recommendations. The nominating and corporate governance committee may also review the composition and qualification of the boards of directors of our competitors, and may seek input from industry experts or analysts. The nominating and corporate governance committee reviews the qualifications, experience and background of the candidates. In making its determinations, the nominating and corporate governance committee evaluates each individual in the context of our board of directors as a whole, with the objective of assembling a group that can best perpetuate the success of our company and represent stockholder interests through the exercise of sound business judgment. After review and deliberation of all feedback and data, the nominating and corporate governance committee makes its recommendation to our board of directors. Historically, the nominating and corporate governance committee has not relied on third-party search firms to identify director candidates. The nominating and corporate governance committee may in the future choose to do so in those situations where particular qualifications are required or where existing contacts are not sufficient to identify an appropriate candidate.

We have not received director candidate recommendations from our stockholders, and we do not have a formal policy regarding consideration of such recommendations. However, any recommendations received from stockholders will

be evaluated in the same manner that potential nominees suggested by board members, management or other parties are evaluated.

Director Compensation

On December 16, 2013, our board of directors approved a director compensation program applicable to our non-employee directors. That program provides for annual cash compensation of \$35,000 for each non-employee member of our board of directors. In addition, our lead independent director, if any, will receive an additional annual cash retainer of \$20,000, the chair of our audit committee will receive an additional annual cash retainer of \$15,000, the chair of our compensation committee will receive an additional annual cash retainer of \$10,000 and the chair of our nominating and corporate governance committee will receive an additional annual cash retainer of \$7,500. Audit committee members will receive an additional annual cash retainer of \$7,500, compensation committee members will receive an additional annual cash retainer of \$5,000 and nominating and corporate governance committee members will receive an additional annual cash retainer of \$3,500.

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In addition, it is contemplated that each of our non-employee directors will be eligible to receive annual equity awards, and that upon appointment, new non-employee directors will be eligible to receive an initial equity award. It is anticipated that all such equity awards will be granted under the Ignyta, Inc. 2014 Incentive Award Plan, or the 2014 Plan, or any other equity compensation plan our board of directors and stockholders may approve and adopt in the future. The type of any such award, the amount of shares subject to the award, the vesting schedule and all other terms thereof will be subject to the discretion and approval of our board of directors on an annual basis.

On February 28, 2014, in connection with their appointment as non-employee directors, our board of directors granted to each of Dr. Freddo and Dr. Bristol an option to purchase 24,000 shares of our common stock under the Ignyta, Inc. Amended and Restated 2011 Stock Incentive Plan, or the 2011 Plan, at an exercise price equal to \$8.95, the fair market value of our common stock on the grant date. The options vested as to 1/3 of the total number of shares subject to the award on February 28, 2015, and 1/36th of the total number of shares subject to the award on each monthly anniversary thereafter, subject to the recipient's continued service with us as a member of our board of directors on each vesting date.

Dr. Freddo was granted an additional option to purchase 5,000 shares of our common stock under the 2014 Plan on August 11, 2014. The options will vest as to 1/3 of the total number of shares subject to the award on the one year anniversary of the vesting commencement date, and 1/36th of the total number of shares subject to the award will vest on each monthly anniversary thereafter, subject to Dr. Freddo's continued service with us as a member of our board of directors on each vesting date.

The table below summarizes all compensation earned by each of our non-employee directors for services performed during our fiscal year ended December 31, 2014. Dr. Lim is not in the table below because he receives no separate compensation for his services as a director of our company; all of the compensation earned by Dr. Lim during our 2014 fiscal year as an executive officer of our company is reflected in the Summary Compensation Table below.

| Name | Fees earned or paid in cash(\$) | Option awards (\$)⁽¹⁾ | All other compensation (\$) | Total(\$) |
|--|--|---|--|------------------|
| James Bristol, Ph.D. ⁽²⁾ | 36,250 | 130,097 ⁽⁶⁾ | | 166,347 |
| Alexander Casdin ⁽³⁾ | 54,583 | | | 54,583 |
| Heinrich Dreismann, Ph.D. ⁽⁴⁾ | 49,583 | | | 49,583 |
| James Freddo, M.D. ⁽⁵⁾ | 41,667 | 153,435 ⁽⁷⁾ | 71,675 ⁽⁸⁾ | 266,777 |

- (1) Amounts represent the grant date fair value of the option awards, determined in accordance with FASB ASC Topic 718. All awards are amortized over the vesting life of the award. For information on the valuation assumptions with respect to these option grants, refer to footnotes 1 and 8 in our financial statements for the fiscal year ended December 31, 2014 contained in our Annual Report on Form 10-K, which we filed with the SEC on March 12, 2015.
- (2) As of December 31, 2014, Dr. Bristol had the following options outstanding: 24,000 shares at an exercise price of \$8.95.
- (3) As of December 31, 2014, Mr. Casdin had the following options outstanding: 6,666 shares at an exercise price of \$0.57, 10,000 shares at an exercise price of \$1.02 and 24,000 shares at an exercise price of \$6.00.
- (4) As of December 31, 2014, Dr. Dreismann had the following options outstanding: 6,666 shares at an exercise price of \$0.18, 10,000 shares at an exercise price of \$1.02 and 24,000 shares at an exercise price of \$6.00.

- (5) As of December 31, 2014, Dr. Freddo had the following options outstanding: 6,666 shares at an exercise price of \$1.02, 24,000 shares at an exercise price of \$8.95 and 5,000 shares at an exercise price of \$7.59.
- (6) The option award has a grant date of February 28, 2014 and vests pursuant to the following schedule: 33% of the shares subject to the award vested on February 28, 2015, and 1/36th of the shares subject to the award will vest on each monthly anniversary thereafter.
- (7) Consists of an option award with a grant date of September 9, 2013, an option award with a grant date of February 28, 2014 and an option award with a grant date of August 11, 2014. Each of the awards vests pursuant to the following schedule: 33% of the shares subject to the award vest on the first anniversary of the grant date, and 1/36th of the shares subject to the award vest on each monthly anniversary thereafter.
- (8) Amount represents consulting fees paid to Dr. Freddo for services prior to his appointment to the board of directors.

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Director Attendance at Annual Meetings

Although we do not have a formal policy regarding attendance by members of our board of directors at our annual meeting, we encourage all of our directors to attend.

Communications with our Board of Directors

Stockholders seeking to communicate with our board of directors should submit their written comments to our corporate secretary, Ignyta, Inc., 11111 Flintkote Avenue, San Diego, California 92121. The corporate secretary will forward such communications to each member of our board of directors; provided that, if in the opinion of our corporate secretary it would be inappropriate to send a particular stockholder communication to a specific director, such communication will only be sent to the remaining directors (subject to the remaining directors concurring with such opinion).

Corporate Governance

Our company's Code of Business Conduct and Ethics, Corporate Governance Guidelines, Audit Committee Charter, Compensation Committee Charter and Nominating and Corporate Governance Committee Charter are available, free of charge, on our website at www.ignyta.com. Please note, however, that the information contained on the website is not incorporated by reference in, or considered part of, this proxy statement. We will also provide copies of these documents as well as our company's other corporate governance documents, free of charge, to any stockholder upon written request to Ignyta, Inc., 11111 Flintkote Avenue, San Diego, California 92121.

Vote Required; Recommendation of the Board of Directors

If a quorum is present and voting at the annual meeting, the nominee receiving the highest number of votes will be elected to our board of directors. Votes withheld from any nominee, abstentions and broker non-votes will be counted only for purposes of determining a quorum. Broker non-votes will have no effect on this proposal as brokers or other nominees are not entitled to vote on such proposal in the absence of voting instructions from the beneficial owner.

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT THE STOCKHOLDERS VOTE FOR THE ELECTION OF HEINRICH DREISMANN, PH.D. PROXIES SOLICITED BY THE BOARD OF DIRECTORS WILL BE SO VOTED UNLESS YOU SPECIFY OTHERWISE ON YOUR PROXY CARD.

PROPOSAL 2:

RATIFICATION OF SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTANTS

The audit committee has selected Mayer Hoffman McCann P.C. as the company's independent registered public accountants for the fiscal year ending December 31, 2015 and has further directed that management submit the selection of independent registered public accountants for ratification by the stockholders at the annual meeting. Mayer Hoffman McCann P.C. has audited Ignyta's financial statements since its inception in 2011, and audited Parent's financial statements (together with its consolidated subsidiary) from October 2013 through its merger with and into Ignyta in June 2014. Representatives of Mayer Hoffman McCann P.C. are expected to be present at the annual meeting, will have an opportunity to make a statement if they so desire, and will be available to respond to appropriate questions.

Stockholder ratification of the selection of Mayer Hoffman McCann P.C. as the company's independent registered public accountants is not required by Delaware law, the company's second amended and restated certificate of incorporation, or the company's amended and restated bylaws. However, the audit committee is submitting the selection of Mayer Hoffman McCann P.C. to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the selection, the audit committee will reconsider whether to retain that firm. Even if the selection is ratified, the audit committee in its discretion may direct the appointment of different independent registered public accountants at any time during the year if the audit committee determines that such a change would be in the best interests of the company and its stockholders.

The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote at the annual meeting will be required to ratify the selection of Mayer Hoffman McCann P.C. Abstentions will be counted toward the tabulation of votes cast on Proposal 2 and will have the same effect as negative votes. Broker non-votes will be counted towards a quorum, but will not be counted for any purpose in determining whether Proposal 2 has been approved.

Table of Contents**Independent Registered Public Accountants Fees**

The following table represents aggregate fees billed to us for services related to the fiscal years ended December 31, 2014 and 2013, by Mayer Hoffman McCann P.C., our independent registered public accounting firm.

| | Year Ended December 31, | |
|-----------------------------------|--------------------------------|-------------|
| | 2014 | 2013 |
| Audit Fees ⁽¹⁾ | \$ 161,034 | \$ 125,108 |
| Audit Related Fees ⁽²⁾ | | |
| Tax Fees ⁽³⁾ | | |
| All Other Fees | | |
| | \$ 161,034 | \$ 125,108 |

- (1) Audit Fees consist of fees billed for professional services performed by Mayer Hoffman McCann P.C. for the audit of our annual financial statements, due diligence procedures to support comfort and/or consent letters in connection with our 2014 public offering and the resale registration statement relating to our 2013 private placements of common stock, and related services that are normally provided in connection with statutory and regulatory filings or engagements. Mayer Hoffman McCann P.C. leases substantially all its personnel, who work under the control of Mayer Hoffmann McCann P.C. shareholders, from wholly-owned subsidiaries of CBIZ, Inc., in an alternative practice structure.
- (2) Audit Related Fees consist of fees billed by Mayer Hoffman McCann P.C. for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements. There were no such fees incurred during 2014 or 2013.
- (3) Tax Fees consist of fees for professional services, including tax consulting and compliance performed by Mayer Hoffman McCann P.C. There were no such fees incurred during 2014 or 2013.

Pre-Approval Policies and Procedures

Our audit committee has established a policy that all audit and permissible non-audit services provided by our independent registered public accounting firm will be pre-approved by the audit committee, and all such services were pre-approved in accordance with this policy during the fiscal year ended December 31, 2014. Prior to February 28, 2014, when our audit committee was formed, our full board of directors had responsibility for the activities that were delegated to the audit committee. All audit and permissible non-audit services were pre-approved by the board of directors in accordance with this policy during the fiscal year ended December 31, 2013. These services may include audit services, audit-related services, tax services and other services. The audit committee considers whether the provision of each non-audit service is compatible with maintaining the independence of our auditors. Pre-approval is detailed as to the particular service or category of services and is generally subject to a specific budget. Our independent registered public accounting firm and management are required to periodically report to the audit committee regarding the extent of services provided by the independent registered public accounting firm in accordance with this pre-approval, and the fees for the services performed to date.

Vote Required; Recommendation of the Board of Directors

The affirmative vote of a majority of the shares of common stock present or represented by proxy and entitled to vote at the meeting will be required to ratify the selection of Mayer Hoffman McCann P.C. Abstentions will be counted toward the tabulation of votes cast on this proposal and will have the same effect as negative votes. The approval of Proposal 2 is a routine proposal on which a broker or other nominee has discretionary authority to vote. Accordingly, no broker non-votes will likely result from this proposal.

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT THE STOCKHOLDERS VOTE TO RATIFY THE SELECTION OF MAYER HOFFMAN MCCANN P.C. AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2015. PROXIES SOLICITED BY OUR BOARD OF DIRECTORS WILL BE SO VOTED UNLESS STOCKHOLDERS SPECIFY OTHERWISE ON THEIR PROXY CARDS.

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**SECURITY OWNERSHIP OF CERTAIN
BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth certain information regarding the beneficial ownership of our common stock as of March 31, 2015, by (i) each person who, to our knowledge, owns more than 5% of our common stock, (ii) each of our current directors and the named executive officers identified under the heading Executive Compensation, (iii) certain of our other executive officers that may be named executive officers for the fiscal year ending December 31, 2015, and (iv) all of those directors and executive officers as a group. We have determined beneficial ownership in accordance with applicable rules of the SEC, and the information reflected in the table below is not necessarily indicative of beneficial ownership for any other purpose. Under applicable SEC rules, beneficial ownership includes any shares of common stock as to which a person has sole or shared voting power or investment power and any shares of common stock which the person has the right to acquire within 60 days after March 31, 2015 through the exercise of any option, warrant or right or through the conversion of any convertible security. Unless otherwise indicated in the footnotes to the table below and subject to community property laws where applicable, we believe, based on the information furnished to us, that each of the persons named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned.

The information set forth in the table below is based on 25,250,185 shares of our common stock issued and outstanding on March 31, 2015. In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed to be outstanding all shares of common stock subject to options, warrants, rights or other convertible securities held by that person that are currently exercisable or will be exercisable within 60 days after March 31, 2015. We did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person. Except as otherwise noted, the address for each person listed in the table below is c/o Ignyta, Inc., 11111 Flintkote Avenue, San Diego, California 92121.

| Name and Address of Beneficial Owner | Number of Shares Beneficially Owned | Percentage Beneficially Owned |
|--|--|-------------------------------------|
| <i>5% Stockholders:</i> | | |
| City Hill Venture Partners I, LLC ⁽¹⁾ | 3,316,668 | 13.14% |
| Cephalon, Inc. ⁽²⁾ | 3,000,000 | 11.88% |
| Armistice Capital, LLC ⁽³⁾ | 1,713,100 | 6.78% |
| Broadfin Capital, LLC ⁽⁴⁾ | 1,516,700 | 6.01% |
| FMR LLC ⁽⁵⁾ | 1,429,609 | 5.66% |
| <i>Directors and Executive Officers:</i> | | |
| Jonathan E. Lim, M.D. ⁽⁶⁾ | 3,502,778 | 13.78% |
| Zachary Hornby ⁽⁷⁾ | 158,679 | * |
| Jacob Chacko, M.D. ⁽⁸⁾ | 65,938 | * |
| Matthew W. Onaitis ⁽⁹⁾ | 62,500 | * |
| Robert Wild, Ph.D. | 0 | * |
| Pratik Multani, M.D. | 0 | * |
| Adrian Senderowicz, M.D. | 0 | * |
| Sara Zaknoen, M.D. | 0 | * |

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|---|-----------|--------|
| James Bristol, Ph.D. ⁽¹⁰⁾ | 26,666 | * |
| Alexander Casdin ⁽¹¹⁾ | 531,007 | 2.10% |
| Heinrich Dreismann, Ph.D. ⁽¹²⁾ | 23,554 | * |
| James Freddo, M.D. ⁽¹³⁾ | 16,665 | * |
| All Current Directors and Executive Officers as a Group (10 persons) ⁽¹⁴⁾ | 4,387,787 | 17.05% |

- (1) Dr. Jonathan E. Lim, our President, Chief Executive Officer and Chairman of our board of directors, is the Manager of City Hill Ventures, LLC, which is the Manager of City Hill Venture Partners I, LLC, and as such he and City Hill Ventures, LLC have the power to vote or dispose of the securities held of record by City Hill Venture Partners I, LLC and may be deemed to beneficially own those securities. Dr. Lim disclaims beneficial ownership of the securities held of record by City Hill Venture Partners I, LLC except to the extent of his pecuniary interest therein. The address of City Hill Venture Partners I, LLC is 11575 Sorrento Valley Road, Suite 200, San Diego, California 92121.

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- (2) Based on information disclosed in the Schedule 13G filed with the SEC by Cephalon, Inc., a Delaware corporation (Cephalon) and Teva Pharmaceutical Industries Limited, an Israel company and parent of Cephalon (Teva), on March 27, 2015. Teva may be deemed to have sole voting and dispositive power over all of the shares. The address of Cephalon is 1090 Horsham Road, North Wales, PA 19454. The address of Teva is 5 Basel Street, PO Box 3190, Petach Tikva 4951033, Israel.
- (3) Based on information disclosed in the Schedule 13G/A filed with the SEC on February 17, 2015, in addition to the purchase by Armistice Capital, LLC of an additional 200,000 shares of our common stock in our registered direct public offering on March 17, 2015. Armistice Capital, LLC, Armistice Capital Master Fund Ltd. and Steven Boyd share voting power and dispositive power over all of the shares. Mr. Boyd is the Managing Member of Armistice Capital, LLC and Director of Armistice Capital Master Fund Ltd., and he disclaims beneficial ownership of the shares except to the extent of his pecuniary interest therein. The address of Armistice Capital is 623 Fifth Avenue, New York, New York 10022.
- (4) Based on information disclosed in the Schedule 13G filed with the SEC on March 24, 2015. Broadfin Capital, LLC, Broadfin Healthcare Master Fund, Ltd. and Kevin Kotler share voting and dispositive power with respect to the shares. Mr. Kotler is the Managing Member of Broadfin Capital, LLC and Director of Broadfin Healthcare Master Fund, Ltd. Broadfin Capital, LLC and Mr. Kotler disclaim beneficial ownership of the shares except to the extent of their pecuniary interests therein. The address of Broadfin Capital, LLC and Mr. Kotler is 300 Park Avenue, 25th Floor, New York, New York 10022, and the address of Broadfin Healthcare Master Fund, Ltd. is 20 Genesis Close, Ansbacher House, Second Floor, PO Box 1344, Grand Cayman KY1-1108, Cayman Islands.
- (5) Based on information disclosed in the Schedule 13G filed with the SEC by FMR LLC, Edward C. Johnson III, Abigail P. Johnson and Select Biotechnology Portfolio on February 16, 2015. FMR LLC has the sole power to dispose or direct the disposition of all of such shares. Neither FMR LLC nor Edward C. Johnson III nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act (Fidelity Funds) advised by Fidelity Management & Research Company (FMR Co.), a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds Boards of Trustees. FMR Co. carries out the voting of the shares under written guidelines established by the Fidelity Funds Boards of Trustees. The address of FMR LLC is 245 Summer Street, Boston, Massachusetts 02210.
- (6) Represents (a) 3,316,668 shares of our common stock held by City Hill Venture Partners I, LLC, with respect to which Dr. Lim has sole voting and investment control, (b) 25,000 shares held directly by Dr. Lim and (c) 161,110 shares underlying options held by Dr. Lim and exercisable within 60 days following March 31, 2015.
- (7) Includes 127,012 shares underlying options held by Mr. Hornby and exercisable within 60 days following March 31, 2015.
- (8) Includes 62,500 shares underlying options held by Dr. Chacko and exercisable within 60 days following March 31, 2015
- (9) Represents 62,500 shares underlying options held by Mr. Onaitis and exercisable within 60 days following March 31, 2015.
- (10) Includes 9,999 shares underlying options held by Dr. Bristol and exercisable within 60 days following March 31, 2015.
- (11) Includes 22,257 shares underlying options held by Mr. Casdin and exercisable within 60 days following March 31, 2015. Also includes 408,750 shares held by Reneo Capital SPV I LP. Mr. Casdin is the Managing Member of Reneo GP, LLC, which is the General Partner of Reneo Capital SPV I LP. Mr. Casdin disclaims beneficial ownership of the shares held by Reneo Capital SPV I LP except to the extent of his pecuniary interest therein.
- (12) Represents 23,554 shares underlying options held by Dr. Dreismann and exercisable within 60 days following March 31, 2015.
- (13) Represents 16,665 shares underlying options held by Dr. Freddo and exercisable within 60 days following March 31, 2015.

(14) Includes 485,597 shares underlying options exercisable within 60 days following March 31, 2015.

EXECUTIVE COMPENSATION AND OTHER INFORMATION

Our Executive Officers

The table below sets forth the name, age and position of each of our executive officers as of March 31, 2015.

| Name | Age | Position |
|----------------------------|------------|--|
| <i>Executive Officers:</i> | | |
| Jonathan E. Lim, M.D. | 43 | President, Chief Executive Officer and Chairman of the Board |
| Jacob Chacko, M.D. | 36 | Chief Financial Officer |
| Zachary Hornby | 36 | Chief Operating Officer |
| Pratik Multani, M.D. | 48 | Chief Medical Officer |
| Robert Wild, Ph.D. | 44 | Chief Scientific Officer and Senior Vice President, Research |
| Matthew W. Onaitis | 44 | General Counsel and Secretary |

Table of Contents**Business Experience**

The following is a brief account of the education and business experience of our current executive officers:

The biography of Jonathan E. Lim, M.D., can be found above under Proposal 1 Election of Director.

Jacob Chacko, M.D. Dr. Chacko joined us in May 2014 as Chief Financial Officer. Prior to joining Ignyta, Dr. Chacko was Vice President at TPG Capital from August 2008 to May 2014. Prior to TPG, Dr. Chacko concurrently received his M.D. from UCLA and his M.B.A. from Harvard University. Previously, Dr. Chacko was an Associate serving healthcare clients at the management consulting firm McKinsey & Company. He served on the boards of directors of RentPath and EnvisionRx, was an advisor to the Audit Committee of Par Pharmaceutical, and was a board observer to IMS Health and Quintiles Transnational. Dr. Chacko received an M.Sc. in economic and social history from Oxford University, where he was a Marshall Scholar, and a B.A. in biology, B.S. in gerontology, and minor in health policy and management from the University of Southern California.

Zachary Hornby. Mr. Hornby joined us in August 2012 as Vice President, Corporate Development, was appointed as our Chief Financial Officer in August 2013, and was appointed Chief Operating Officer in May 2014. Prior to joining Ignyta, Mr. Hornby served as senior director of business development at Fate Therapeutics from August 2010 to August 2012. Prior to Fate Therapeutics, Mr. Hornby was director of business development at Halozyme Therapeutics from January 2008 to August 2010. Prior to Halozyme Therapeutics, Mr. Hornby was senior product manager at Neurocrine Biosciences from June 2006 to January 2008. Prior to Neurocrine Biosciences, Mr. Hornby served as a life sciences consultant at L.E.K. Consulting and in regulatory affairs and business development roles at Transkaryotic Therapies (acquired by Shire Pharmaceuticals in 2005). Mr. Hornby is a director of Independa, Inc. Mr. Hornby holds B.S. and M.S. degrees in biology from Stanford University and an M.B.A. from Harvard Business School.

Pratik Multani, M.D. Dr. Multani joined us on February 17, 2015. Prior to joining Ignyta, Dr. Multani was Chief Medical Officer at Fate Therapeutics, Inc., where he served from April 2009 to January 2015. Prior to that, Dr. Multani was Vice President of Clinical Development at Kalypsys, Inc. from 2007 to March 2009. From 2005 to 2007, he served as Senior Vice President of Clinical Development and then Chief Medical Officer at Kanisa Pharmaceuticals, Inc. From 1999 to 2004, Dr. Multani advanced from Associate Director of Oncology and Hematology to Senior Director of Medical Research at Biogen-Idec. Dr. Multani holds an M.S. in epidemiology from Harvard School of Public Health, an M.D. from Harvard Medical School and a B.S. in chemistry and biology from Yale University. He completed his Internal Medicine residency at the Massachusetts General Hospital, followed by a medical oncology fellowship at the Dana Farber/Partners joint program, after which he was a member of the transplant unit at Massachusetts General Hospital.

Robert Wild, Ph.D. Dr. Wild joined us in September 2014. Prior to joining Ignyta, Dr. Wild was Chief Scientific Officer, Oncology Research, Drug Discovery at Eli Lilly & Company, a position he held from August 2010 to August 2014. Prior to Lilly, Dr. Wild held positions of increasing responsibility from January 2006 to July 2010 at OSI Pharmaceuticals, Inc., including Senior Director, Oncology Research, In Vivo Pharmacology, Molecular Imaging & Research DMPK. Before his tenure at OSI, Dr. Wild spent more than four years at Bristol-Myers Squibb, and he also previously worked at SUGEN, Inc. Dr. Wild holds both a Ph.D. in pharmacology and a B.S. in biochemistry from the University of Minnesota.

Matthew W. Onaitis. Mr. Onaitis joined us in February 2014. Prior to joining Ignyta, Mr. Onaitis was General Counsel of Trius Therapeutics, Inc. from May 2013 through its acquisition by Cubist Pharmaceuticals, Inc. in September 2013, remaining with Cubist assisting with the integration through December 2013. Mr. Onaitis was Senior Vice President, General Counsel and Secretary at Somaxon Pharmaceuticals, Inc. from May 2006 through Somaxon's acquisition by

Pernix Therapeutics Holdings, Inc. in March 2013. Prior to Somaxon, Mr. Onaitis served as Associate General Counsel at Biogen Idec Inc., as Director, Legal Affairs at Elan Corporation plc, and in private practice specializing in corporate and commercial law. Mr. Onaitis is a director of SNP Bio, Inc. Mr. Onaitis holds a J.D. from Stanford Law School and a B.S. in mechanical engineering from Carnegie Mellon University.

Table of Contents**Summary of Executive Compensation****Summary Compensation Table**

The following table summarizes the compensation earned in each of our fiscal years ended December 31, 2014 and 2013 by our named executive officers.

Summary Compensation Table

| Name and Principal Position | Year ended December 31, | Salary (\$) | Bonus (\$)⁽⁵⁾ | Option Awards (\$)⁽⁶⁾ | All other Compensation (\$) | Total (\$) |
|---|--------------------------------|--------------------|---------------------------------|---|------------------------------------|-------------------|
| Jonathan E. Lim, M.D. <i>President and Chief Executive Officer</i> | 2014 | 403,333 | 205,000 | | | 608,333 |
| | 2013 | 250,000 | 187,500 | 1,359,378 | | 1,796,878 |
| Jacob Chacko, M.D. <i>Chief Financial Officer⁽¹⁾</i> | 2014 | 184,375 | 76,073 | 1,143,620 | 75,577 ⁽⁷⁾ | 1,479,646 |
| | 2013 | | | | | |
| Zachary Hornby <i>Chief Operating Officer⁽²⁾</i> | 2014 | 310,237 | 144,900 | | | 455,137 |
| | 2013 | 200,000 | 105,000 | 873,497 | | 1,178,497 |
| Adrian Senderowicz, M.D. <i>Former Chief Medical Officer⁽³⁾</i> | 2014 | 132,212 | 31,500 | 1,166,919 | 451,202 ⁽⁸⁾ | 1,781,833 |
| | 2013 | | | | | |
| Sara Zaknoen, M.D. <i>Former Chief Medical Officer⁽⁴⁾</i> | 2014 | 286,957 | | 978,753 | | 1,265,710 |
| | 2013 | | | | | |

- (1) Dr. Chacko commenced employment with Ignyta in May 2014 with an annual base salary of \$345,000, of which he earned a pro-rated amount in 2014 as reflected in the table above based on the term of his service as an employee of Ignyta during that fiscal year.
- (2) Mr. Hornby was our Chief Financial Officer until May 30, 2014, at which time he was appointed as our Chief Operating Officer with an annual base salary of \$345,000.
- (3) Dr. Senderowicz commenced employment with Ignyta in August 2014 with an annual base salary of \$375,000, of which he earned a pro-rated amount in 2014 as reflected in the table above based on the term of his service as an employee of Ignyta during that fiscal year. As of February 17, 2015, Dr. Senderowicz served as Ignyta's Chief Regulatory and Strategy Officer and was no longer an executive officer. Dr. Senderowicz's employment with Ignyta ended on April 27, 2015.
- (4) Dr. Zaknoen commenced employment with Ignyta in February 2014 with an annual base salary of \$350,000, of which she earned a pro-rated amount through April 2014, when she left the company. She continued to be paid her base salary through December 31, 2014, pursuant to her benefits under our Severance and Change in Control Severance Plan. All of the options granted to Dr. Zaknoen represented by the amount in the Option Awards column expired unexercised.
- (5) For 2014, all such amounts were paid in 2015 as discretionary bonuses based on performance during the fiscal year ended December 31, 2014, in amounts equal to 50%, 35%, 42% and 20%, respectively, of Dr. Lim's, Dr. Chacko's, Mr. Hornby's and Dr. Senderowicz's respective annual base salaries in effect during that fiscal year, with Dr. Chacko's and Dr. Senderowicz's bonuses pro-rated based on their terms of service as employees of Ignyta during 2014. For 2013, all such amounts were paid in 2014 as discretionary bonuses based on performance during the fiscal year ended December 31, 2013, in amounts equal to 75% and 52.5%, respectively, of Dr. Lim's and Mr. Hornby's respective annual base salaries in effect during that fiscal year.

- (6) Amounts represent the grant date fair value of the option awards granted during the fiscal years presented, determined in accordance with FASB ASC Topic 718. All awards are amortized over the vesting life of the award. For information on the valuation assumptions with respect to certain of the option grants reflected in this table, refer to footnotes 1 and 8 in our financial statements for the fiscal year ended December 31, 2014 contained in our Annual Report on Form 10-K, which we filed with the SEC on March 12, 2015.
- (7) Consists of a signing bonus of \$50,000 and relocation assistance of \$18,118. The relocation assistance amount was grossed up for applicable taxes and other withholdings.
- (8) Consists of a signing bonus of \$50,000 and a payment of \$198,890 made directly to Dr. Senderowicz's previous employer, Sanofi, of the amount owed by Dr. Senderowicz to Sanofi related to his relocation to Massachusetts to work for Sanofi; each of these amounts was grossed up for applicable taxes and other withholdings.

Table of Contents**Narrative Disclosure to Summary Compensation Table*****No Employment Agreements; At Will Employees***

We do not have formal employment agreements with our named executive officers or any of our other employees, who all serve as at will employees. None of our executive officers will have such a formal employment agreement unless and until our board of directors, or a committee thereof, and the applicable executive officer approve the terms of any such agreement.

As a result, the amount of each of our executive officers' annual base salary, cash or other bonus compensation, equity compensation or any other form of compensation may be modified at any time at the discretion of our board of directors.

Other Elements of Compensation***Employee Benefits and Perquisites***

Our named executive officers are eligible to participate in our health and welfare plans to the same extent as all full-time employees generally. We do not provide our named executive officers with any perquisites or other personal benefits.

No Tax Gross-Ups

Except as described in the Summary Compensation Table above, we have not made gross-up payments to cover our named executive officers' personal income taxes that may pertain to any of the compensation paid or provided by our company.

Change in Control Benefits

Our named executive officers may become entitled to certain benefits or enhanced benefits in connection with a change in control of our company, as described below under Potential Payments upon Termination or Change in Control Severance and Change in Control Severance Plan.

Outstanding Equity Awards at Fiscal Year-End

The table below summarizes the aggregate stock and option awards held by our named executive officers as of December 31, 2014.

| Name | Number of Securities Underlying Unexercised Options (#) Exercisable | Number of Securities Underlying Unexercised Options (#) Unexercisable | Option Exercise Price (\$) | Option Expiration Date | Number of Shares or Units of Stock that have not Vested (#) ⁽¹⁾ | Market Value of Shares or Units of Stock that have not Vested (\$) |
|------|--|--|----------------------------------|------------------------------|---|---|
|------|--|--|----------------------------------|------------------------------|---|---|

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| | | | | | | |
|---|---|---|--|---|----------------------|-----------------------|
| Jonathan E. Lim, M.D. <i>President and Chief Executive Officer</i> | 15,971 ⁽²⁾ 100,000 ⁽³⁾ | 17,362 ⁽²⁾ 300,000 ⁽³⁾ | \$ 0.60 \$ 6.00 | 2/14/2023 12/16/2023 | | |
| Jacob Chacko, M.D. <i>Chief Financial Officer</i> | | 250,000 ⁽⁴⁾ | \$ 7.40 | 5/30/2024 | | |
| Zachary Hornby <i>Chief Operating Officer</i> | 11,667 ⁽⁵⁾ 3,194 ⁽²⁾ 15,624 ⁽⁶⁾ 62,500 ⁽³⁾ | 8,333 ⁽⁵⁾ 3,472 ⁽²⁾ 34,376 ⁽⁶⁾ 187,500 ⁽³⁾ | \$ 0.57 \$ 0.60 \$ 1.02 \$ 6.00 | 12/10/2022 2/14/2023 9/9/2023 12/16/2023 | | |
| Adrian Senderowicz, M.D. <i>Former Chief Medical Officer</i> | | 250,000 ⁽⁸⁾ | \$ 7.59 | 8/10/2024 | 6,482 ⁽⁷⁾ | 44,399 ⁽⁷⁾ |
| Sara Zaknoen, M.D. <i>Former Chief Medical Officer</i> | | | \$ | | | |

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- (1) All stock awards were issued as compensation for services performed for Actagene prior to its merger with and into us in May 2013. All such restricted stock awards were assumed by us upon the closing of our merger with Actagene.
- (2) The option award has a grant date of February 14, 2013 and vests pursuant to the following schedule: 1/48th of the shares subject to the award vested on February 14, 2013, and 1/48th of the shares subject to the award vest on each monthly anniversary thereafter.
- (3) The option award has a grant date of December 16, 2013 and vests pursuant to the following schedule: 25% of the shares subject to the award vested on December 2, 2014, and 1/48th of the shares subject to the award vest on each monthly anniversary thereafter.
- (4) The option award has a grant date of May 30, 2014 and vests pursuant to the following schedule: 25% of the shares subject to the award vest on May 30, 2015, and 1/48th of the shares subject to the award vest on each monthly anniversary thereafter.
- (5) The option award has a grant date of December 10, 2012 and vests pursuant to the following schedule: 25% of the shares subject to the award vested on August 6, 2013, and 1/48th of the shares subject to the award vest on each monthly anniversary thereafter.
- (6) The option award has a grant date of September 9, 2013 and vests pursuant to the following schedule: 1/48th of the shares subject to the award vested on of October 9, 2013, and 1/48th of the shares subject to the award vest on each monthly anniversary thereafter.
- (7) The restricted stock award has a grant date of February 28, 2013 and vests pursuant to the following schedule: 1/3 of the shares subject to the award vested on February 28, 2014, and 1/36th of the shares subject to the award vest on each monthly anniversary thereafter. The market value of the restricted stock award has been determined by multiplying the number of shares subject to the restricted stock award by the closing market price of our common stock on the NASDAQ Capital Market on December 31, 2014 of \$6.85.
- (8) The option award had a grant date of August 11, 2014 and expired unexercised when Dr. Senderowicz's employment ended on April 27, 2015.

Potential Payments upon Termination or Change in Control

Except as described below, we do not have any agreements, plans or arrangements that provide for payments or benefits to our named executive officers in connection with the resignation, retirement or other termination, a change in control, or a change in a named executive officer's responsibilities following a change in control.

Severance and Change in Control Severance Plan

On December 16, 2013, our board of directors approved and adopted the Ignyta, Inc. 2013 Severance and Change in Control Severance Plan, or the Severance Plan, for the benefit of certain employees of our company or any of our parents or subsidiaries as designated by our board of directors, or our Covered Employees. Our board of directors adopted the Severance Plan to provide assurances of specified severance benefits to Covered Employees whose employment is subject to involuntarily termination by us other than for Cause (as defined in the Severance Plan) under the circumstances described in the Severance Plan, including, but not limited to, following a Change in Control (as defined in the Severance Plan). The severance benefits each Covered Employee could be entitled to receive under the Severance Plan are determined pursuant to each Covered Employee's classification as a Tier 1 Covered Employee, Tier 2 Covered Employee or Tier 3 Covered Employee. Covered Employees are classified as follows:

Tier 1 Covered Employee means our Chief Executive Officer.

Tier 2 Covered Employee means a C-level employee of our company who has been designated by our board of directors as eligible to participate in the Severance Plan.

Tier 3 Covered Employee means a Vice President-level employee of our company who has been designated by our board of directors as eligible to participate in the Severance Plan.

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Pursuant to the Severance Plan, if, at any time before or after the 12-month period beginning on the date of a Change in Control, we (or any of our parents or subsidiaries) terminate a Covered Employee's employment other than for Cause (and other than due to death or Disability (as defined in the Severance Plan)), then the Covered Employee will be entitled to receive the following severance benefits, subject to his or her execution of a release of claims and compliance with certain restrictive covenants, including with respect to non-solicitation and non-disparagement:

Continued payment of Base Pay (as defined in the Severance Plan) for 12 months, nine months or six months following termination in the case of a Tier 1, Tier 2 or Tier 3 Covered Employee, respectively; and

Company-paid COBRA coverage for 12 months, nine months or six months following termination in the case of a Tier 1, Tier 2 or Tier 3 Covered Employee, respectively.

Pursuant to the Severance Plan, if, at any time on or within the 12 month period following a Change in Control, we (or any of our parents or subsidiaries) terminate a Covered Employee's employment other than for Cause (and other than due to death or Disability), then the Covered Employee will be entitled to receive the following severance benefits, subject to his or her execution of a release of claims and compliance with certain restrictive covenants, including with respect to non-solicitation and non-disparagement:

The following aggregate cash amount paid in installments over the following time period:

In the case of a Tier 1 Covered Employee, the sum of 1.5 times annualized Base Pay and 1.5 times Target Bonus (each as defined in the Severance Plan) paid in equal installments over the 18-month period following termination;

In the case of a Tier 2 Covered Employee, the sum of 1.0 times annualized Base Pay and 1.0 times Target Bonus paid in equal installments over the 12-month period following termination; or

In the case of a Tier 3 Covered Employee, the sum of 0.75 times annualized Base Pay and 0.75 times Target Bonus paid in equal installments over the nine-month period following termination.

Company-paid COBRA coverage for 18 months, 12 months or nine months following termination in the case of a Tier 1, Tier 2 or Tier 3 Covered Employee, respectively.

100% accelerated vesting of the Covered Employee's Equity Compensation Awards (as defined in the Severance Plan).

The severance benefits prescribed by the Severance Plan are subject to a Section 280G better-off cutback provision, which provides that, in the event that the benefits provided to the Covered Employee pursuant to the Severance Plan or otherwise constitute parachute payments with the meaning of Section 280G of the Internal Revenue Code of 1986, as amended, or the Code, the Covered Employee's severance benefits under the Severance Plan will either be delivered

in full or reduced to the extent necessary to avoid an excise tax under Section 4999 of the Code, whichever would result in the Covered Employee receiving the largest amount of severance benefits on an after-tax basis.

The Severance Plan has an initial term of three years commencing on December 16, 2013 and will automatically terminate on the third anniversary thereof unless otherwise extended by our board of directors.

Table of Contents**Equity Compensation Plan Information**

The following table summarizes securities available under our equity compensation plans as of December 31, 2014 (in thousands, except per share data).

| | Number of securities to be issued upon exercise of outstanding options, warrants and rights | Weighted average exercise price of outstanding options, warrants and rights | Number of securities available for future issuance under equity compensation plans (excluding securities reflected in column (a)) |
|--|--|--|--|
| Equity compensation plans approved by security holders: | | | |
| Amended and Restated 2011 Stock Incentive Plan (1) | 566,325 | \$ 3.24 | |
| 2014 Incentive Award Plan (2) | 868,000 | \$ 7.85 | 2,233,319 |
| Equity compensation plans not approved by security holders: | | | |
| Amended and Restated 2011 Stock Incentive Plan (1) (3) | 847,331 | \$ 7.19 | |
| Employment Inducement Incentive Award Plan (4) | 710,000 | \$ 7.32 | |

- (1) The material features of the Amended and Restated 2011 Stock Incentive Plan are described in footnote 8 to our financial statements for the fiscal year ended December 31, 2014 contained in our Annual Report on Form 10-K, which we filed with the SEC on March 12, 2015. Effective June 11, 2014, the 2014 Incentive Award Plan replaced the Amended and Restated 2011 Stock Incentive Plan and the Employment Inducement Incentive Award Plan, and our board of directors will not grant any future awards under the Amended and Restated 2011 Stock Incentive Plan or the Employment Inducement Incentive Award Plan.
- (2) The material features of the 2014 Incentive Award Plan are described in footnote 8 to our financial statements for the fiscal year ended December 31, 2014 contained in our Annual Report on Form 10-K, which we filed with the SEC on March 12, 2015.
- (3) On December 16, 2013, our board of directors approved an amendment to the Amended and Restated 2011 Stock Incentive Plan to increase the total number of shares of our common stock available for issuance thereunder from 712,652 shares to 2,712,652 shares. That amendment became effective on December 16, 2013 upon the approval thereof by our board of directors; however, our stockholders did not approve such increase to the share reserve. Effective June 11, 2014, the 2014 Incentive Award Plan replaced the Amended and Restated 2011 Stock Incentive Plan and the Employment Inducement Incentive Award Plan, and our board of directors will not grant

any future awards under the Amended and Restated 2011 Stock Incentive Plan or the Employment Inducement Incentive Award Plan.

- (4) The material features of the Employment Inducement Incentive Award Plan are described in footnote 8 to our financial statements for the fiscal year ended December 31, 2014. Effective June 11, 2014, the 2014 Incentive Award Plan replaced the Amended and Restated 2011 Stock Incentive Plan and the Employment Inducement Incentive Award Plan, and our board of directors will not grant any future awards under the Amended and Restated 2011 Stock Incentive Plan or the Employment Inducement Incentive Award Plan.

Policies Regarding Tax Deductibility of Compensation

Within our performance-based compensation program, we aim to compensate the named executive officers in a manner that is tax-effective for us without sacrificing the effectiveness of the incentive programs being offered to executives. Section 162(m) of the Code restricts the ability of publicly held companies to take a federal income tax deduction for compensation paid to certain of their executive officers to the extent that compensation exceeds \$1.0 million per covered officer in any fiscal year. However, this limitation does not apply to compensation that is qualified performance-based compensation under Section 162(m) of the Code.

The non-performance based compensation paid in cash to our executive officers for the 2013 and 2014 fiscal years did not exceed the \$1.0 million limit per officer. While we consider the tax deductibility of each element of executive compensation as a factor in our overall compensation program, the compensation committee retains the discretion to approve compensation that may not qualify for the compensation deduction if, in light of all applicable circumstances, it would be in our best interest for such compensation to be paid without regard to whether it may be tax deductible.

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Compensation Committee Interlocks and Insider Participation

We did not have a compensation committee until February 28, 2014. On that date, Dr. Bristol, Mr. Casdin and Dr. Dreismann were appointed to our compensation committee. None of the members of our compensation committee has ever been one of our officers or employees. None of our executive officers currently serves, or has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee. On March 17, 2015, Reneo Capital SPV I LP purchased 408,750 shares of our common stock in our registered direct public offering, at a price of \$10.00 per share. Mr. Casdin is the Managing Member of Reneo GP, LLC, which is the General Partner of Reneo Capital SPV I LP.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Except as described below and except for compensation for employment or services provided in other roles, since our inception there has not been, nor is there currently proposed, any transaction to which we are or were a party in which the amount involved exceeds the lesser of \$120,000 and 1% of the average of our total assets at year-end for the last two completed fiscal years, and in which any of our current directors, executive officers, holders of more than 5% of any class of our voting securities or any of their respective affiliates or immediate family members, had, or will have, a direct or indirect material interest.

We also describe below certain other transactions with our directors, executive officers and stockholders. Pursuant to the written charter of our audit committee, the audit committee is responsible for reviewing and approving all transactions in which we are a participant and in which any parties related to us, including our executive officers, our directors, beneficial owners of more than 5% of our securities, immediate family members of the foregoing persons and any other persons whom our board of directors determines may be considered related parties under Item 404 of Regulation S-K, has or will have a direct or indirect material interest.

Parent

On November 6, 2013, City Hill Venture Partners I, LLC, or City Hill, and Alexander Casdin, among other investors, purchased shares of the common stock of Parent in a private placement for a per share purchase price of \$6.00, with City Hill purchasing 333,334 shares for an aggregate purchase price of \$2,000,004, and Mr. Casdin purchasing 50,000 shares for an aggregate purchase price of \$300,000. Jonathan Lim is the Manager of City Hill Ventures, LLC, which is the Manager of City Hill, and City Hill is a holder of more than 5% of the outstanding capital stock of Ignyta as of February 28, 2015. Mr. Casdin is currently a member of the board of directors of Ignyta.

Each of our directors and officers that was an investor in or held a director, officer or other position with us prior to the closing of the October 2013 merger in which we became the wholly-owned subsidiary of Parent was issued shares of our common stock as consideration for the cancellation of their equity holdings in us upon the closing of the merger. Each of our directors and officers that was an investor in or held a director, officer or other position with us prior to the closing of the June 2014 merger of us and Parent was issued shares of our common stock as consideration for the cancellation of their equity holdings in Parent upon the closing of the merger.

Ignyta

On July 26, 2011 and March 21, 2012, City Hill purchased an aggregate of 833,334 shares of our series A preferred stock, for a per share purchase price of \$0.60 and an aggregate purchase price of \$500,000. In addition, (i) on June 22, 2012, City Hill and Alexander Casdin, among other investors, purchased shares of our series B preferred stock for a

per share purchase price of \$3.00, with City Hill purchasing 500,000 shares for an aggregate purchase price of \$1,500,000, and Mr. Casdin purchasing 33,334 shares for an aggregate purchase price of \$100,000, and (ii) on December 21, 2012, City Hill, Mr. Casdin and Zachary Hornby, among other investors, purchased shares of our series B preferred stock for a per share purchase price of \$3.00, with City Hill purchasing an additional 83,334 shares for an aggregate purchase price of \$250,000, Mr. Casdin purchasing an additional 16,667 shares for an aggregate purchase price of \$50,000, and Mr. Hornby purchasing 8,334 shares for an aggregate purchase price of \$25,000. Jonathan Lim is the Manager of City Hill Ventures, LLC, which is the Manager of City Hill, and City Hill is a holder of more than 5% of the outstanding capital stock of Ignyta as of February 28, 2015. Mr. Casdin is currently a member of the board of directors of Ignyta. Mr. Hornby currently serves as the Chief Operating Officer of Ignyta.

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On May 20, 2013, we closed our acquisition of Actagene, by way of Actagene's merger with and into us. As consideration for the cancellation of the shares of Actagene held by its stockholders upon the closing of that merger, we issued to each such stockholder a number of shares of our common stock based on a specified ratio. Jonathan Lim was a director, and City Hill was the controlling stockholder, of both Ignyta and Actagene immediately prior to the closing of the merger. As a result of its equity ownership of Actagene, City Hill was issued an aggregate of 1,000,000 shares of our common stock as consideration upon the closing of the merger. Pursuant to a valuation completed shortly following the merger with Actagene, our common stock had a fair market value of \$1.02 per share as of the date of such valuation, resulting in an aggregate fair market value of approximately \$1,020,000 for the shares of our common stock issued to City Hill (and thereby controlled by Dr. Lim) in connection with the merger with Actagene. We have accounted for the merger with Actagene as a combination of entities under common control, and as a result the shares issued as merger consideration were valued for accounting purposes at \$0.003 per share.

Mr. Casdin is the Managing Member of Reneo GP, LLC, which is the General Partner of Reneo Capital SPV I LP. On March 17, 2015, Reneo Capital SPV I LP purchased 408,750 shares of our common stock in our registered direct public offering, at a price of \$10.00 per share.

Indemnification of Officers and Directors

Our second amended and restated certificate of incorporation provides for indemnification of our directors and officers substantially identical in scope to that permitted under applicable Delaware law. Our second amended and restated certificate of incorporation also provides that the expenses of our directors and officers incurred in defending any applicable action, suit or proceeding must be paid by us as they are incurred and in advance of the final disposition of the action, suit or proceeding, provided that the required undertaking by the director or officer is delivered to us.

We have also entered into separate indemnification agreements with each of our current directors and executive officers consistent with Delaware law and in the form approved by our board of directors and our stockholders, and we contemplate entering into such indemnification agreements with directors and certain executive officers that may be elected or appointed in the future. Those indemnification agreements require that under the circumstances and to the extent provided for therein, we indemnify such persons to the fullest extent permitted by applicable law against certain expenses incurred by any such person as a result of such person being made a party to certain actions, suits and proceedings by reason of the fact that such person is or was a director, officer, employee or agent of our company, any entity that was a predecessor corporation of our company or any of our affiliates. The rights of each person who is a party to such an indemnification agreement are in addition to any other rights such person may have under applicable Delaware law, our second amended and restated certificate of incorporation, our amended and restated bylaws, any other agreement, any vote of our stockholders, a resolution adopted by our board of directors or otherwise. We also maintain a customary insurance policy that indemnifies our directors and officers against various liabilities, including liabilities arising under the Securities Act, that may be incurred by any director or officer in his or her capacity as such.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Under Section 16(a) of the Exchange Act, directors, executive officers and beneficial owners of 10% or more of our common stock, or reporting persons, are required to report to the SEC on a timely basis the initiation of their status as a reporting person and any changes with respect to their beneficial ownership of our common stock. Based solely on our review of copies of such forms that we have received, or written representations from reporting persons, we believe that during the fiscal year ended December 31, 2014, all executive officers, directors and greater than 10% stockholders complied with all applicable filing requirements.

STOCKHOLDER PROPOSALS

Proposals of stockholders intended to be presented at our annual meeting of stockholders to be held in 2016 must be received by us no later than December 31, 2015, which is 120 days prior to the first anniversary of the mailing date of this proxy, in order to be included in our proxy statement and form of proxy relating to that meeting. These proposals must comply with the requirements as to form and substance established by the SEC for such proposals in order to be included in the proxy statement. In addition, our amended and restated bylaws establish an advance notice procedure with regard to certain matters, including stockholder proposals not included in our proxy statement, to be brought before an annual meeting of stockholders. In general, notice must be received at our principal executive offices not less than 90 calendar days before nor more than 120 calendar days before the first anniversary of the date of our 2015 annual meeting of stockholders. Therefore, to be presented at our 2016 annual meeting of stockholders, such a proposal must be received by us no earlier than February 10, 2016 and no later than March 11, 2016. However, if the date of the annual meeting is

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more than 30 days earlier or more than 60 days later than such anniversary date, notice must be received not less than 90 calendar days before nor more than 120 calendar days before such annual meeting, or, if later, ten calendar days following the date on which public announcement of the date of such meeting is first made. If the stockholder fails to give notice by these dates, then the persons named as proxies in the proxies solicited by the board of directors for the 2016 annual meeting may exercise discretionary voting power regarding any such proposal.

ANNUAL REPORT

Our annual report for the fiscal year ended December 31, 2014 will be mailed to stockholders of record on or about April 30, 2015. Our annual report does not constitute, and should not be considered, a part of this proxy solicitation material.

Any person who was a beneficial owner of our common stock on the record date may request a copy of our annual report, and it will be furnished without charge upon receipt of a written request identifying the person so requesting a report as a stockholder of our company at such date. Requests should be directed to Ignyta, Inc., 11111 Flintkote Avenue, San Diego, California 92121, Attention: Corporate Secretary.

OTHER MATTERS

We do not know of any business other than that described in this proxy statement that will be presented for consideration or action by the stockholders at the annual meeting. If, however, any other business is properly brought before the meeting, shares represented by proxies will be voted in accordance with the best judgment of the persons named in the proxies or their substitutes. All stockholders are urged to complete, sign and return the accompanying proxy card in the enclosed envelope.

By Order of the Board of Directors

/s/ JONATHAN E. LIM, M.D.

Jonathan E. Lim, M.D.

*President, Chief Executive Officer and
Chairman of the Board*

San Diego, California

April 30, 2015

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IGNYTA, INC.

1111 FLINTKOTE AVENUE

SAN DIEGO, CA 92121

VOTE BY INTERNET - www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS

If you would like to reduce the costs incurred by our company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

M92681-P66119

KEEP THIS PORTION FOR YOUR RECORDS
DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

IGNYTA, INC.

The Board of Directors recommends you vote FOR

the following:

1. Election of Directors

Nominees: For Against Abstain

1a. Heinrich Dreismann, Ph.D. " " "

The Board of Directors recommends you vote FOR the following proposal:

For Against Abstain

2. To ratify the appointment of Mayer Hoffman McCann P.C. as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2015. " " "

In their discretion, the proxies are authorized to vote upon such other business as may be properly brought before the meeting or any adjournment or postponement thereof.

The undersigned revokes any prior proxy at the meeting and ratifies all that said attorneys and proxies, or any of them, may lawfully do by virtue hereof. Receipt of the Notice of Annual Meeting of Stockholders and proxy statement is hereby acknowledged.

Yes No

Please indicate if you plan to attend this meeting:

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.

Signature [PLEASE SIGN WITHIN BOX]

Signature (Joint Owners) Date

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Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:

The Notice & Proxy Statement and Annual Report are available at www.proxyvote.com.

M92682-P66119

IGNYTA, INC.

Annual Meeting of Stockholders

June 9, 2015 at 8:00 AM

This proxy is solicited by the Board of Directors

The undersigned hereby appoints Jonathan E. Lim, M.D. and Matthew W. Onaitis, and each of them, with the power to act without the other and with power of substitution, as proxies and attorneys-in-fact and hereby authorizes them to represent and vote, as provided on the other side, all of the shares of Ignyta, Inc. Common Stock which the undersigned is entitled to vote and, in their discretion, to vote upon such other business as may properly come before the Annual Meeting of Stockholders of the Company to be held at 8:00 AM, Pacific time, on June 9, 2015, or any adjournment thereof, with all powers which the undersigned would possess if present at the Meeting.

THIS PROXY CARD, WHEN PROPERLY EXECUTED, WILL BE VOTED IN THE MANNER DIRECTED HEREIN BY THE UNDERSIGNED. IF NO DIRECTION IS MADE BUT THE CARD IS SIGNED, THIS PROXY CARD WILL BE VOTED FOR THE ELECTION OF THE NOMINEE UNDER PROPOSAL 1, FOR PROPOSAL 2 AND IN THE DISCRETION OF THE PROXIES WITH RESPECT TO SUCH OTHER BUSINESS AS MAY PROPERLY COME BEFORE THE MEETING.

Continued and to be signed on reverse side