

Ignyta, Inc.
Form DEF 14A
April 29, 2016
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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):

No fee required.

Fee computed on table below per Exchange Act Rules 14a-6(i)(4) and 0-11.

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- (1) Title of each class of securities to which transaction applies:

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- (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 2016 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 13, 2016 at 8:00 a.m. local time, for the following purposes:

1. To elect two directors for a three-year term to expire at the 2019 annual meeting of stockholders.
2. To approve the amendment and restatement of the Ignyta, Inc. 2014 Incentive Award Plan, including the reservation of an additional 3,000,000 shares for issuance thereunder.
3. To ratify the appointment of Mayer Hoffman McCann P.C. as our independent registered public accounting firm for the fiscal year ending December 31, 2016.
4. 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 21, 2016 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 vote by Internet or telephone as described in the enclosed proxy materials, or 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 29, 2016

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 2016 ANNUAL MEETING OF STOCKHOLDERS

TO BE HELD ON MONDAY, JUNE 13, 2016

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 13, 2016 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 13, 2016.

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 2016 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 29, 2016 to all stockholders of record entitled to vote at the annual meeting. Only stockholders who owned our common stock on April 21, 2016 are entitled to vote at the annual meeting. On this record date, there were 32,445,895 shares of our common stock outstanding. Common stock is our only class of stock entitled to vote.

What am I voting on?

There are three proposals scheduled for a vote:

Proposal 1: Election of Alexander Casdin and James Freddo, M.D., for election to the company's board of directors for a three-year term expiring at the company's 2019 annual meeting of stockholders.

Proposal 2: Approval of the amended and restated Ignyta, Inc. 2014 Incentive Award Plan, or the 2014 Plan, including the reservation of an additional 3,000,000 shares for issuance thereunder.

Proposal 3: 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, 2016.

How many votes do I have?

Each share of our common stock that you own as of April 21, 2016 entitles you to one vote.

How do I vote by proxy?

With respect to the election of directors, you may either vote For the nominees to the board of directors or you may Withhold your vote for any such nominee. For approval of the amended and restated 2014 Plan and the 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 12, 2016.

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 authorize a proxy again on a later date on the Internet (only the latest Internet proxy submitted prior to the annual meeting will be counted);

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.

If you are a beneficial owner, your broker, bank or other agent can provide you with instructions on how to revoke your proxy and/or change your vote.

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 21, 2016, or approximately 16,222,948 shares, constitutes a quorum at the meeting, permitting us to conduct our business.

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What vote is required to approve each proposal?

Proposal 1: Election of Directors. 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 nominees. The two directors who receive the most For votes (among votes properly cast in person or by proxy) will be elected. As a result, Withheld votes would not affect the outcome.

Proposal 2: Amendment and Restatement of Ignyta, Inc. 2014 Incentive Award Plan. 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.

Proposal 3: Ratification of Independent Registered Public Accounting Firm. To be approved, Proposal 3 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 approved the amendment and restatement of the 2014 Plan and 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 and the amendment and restatement of the 2014 Plan, 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.

In addition, we have engaged Georgeson Inc. to assist in soliciting proxies on our behalf. Georgeson may solicit proxies personally, electronically or by telephone. We have agreed to pay Georgeson \$7,500 plus reasonable expenses for these services. We have also agreed to indemnify Georgeson and its employees against certain liabilities arising from or in connection with the engagement.

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, 2015 that we filed with the Securities and Exchange Commission, or the SEC, on March 14, 2016, 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 Investors SEC Filings section of our website at www.ignyta.com.

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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.

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.

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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, two nominees for director are to be elected as Class II directors for a three-year term expiring at our 2019 annual meeting of stockholders or until their successors are duly elected and qualified. The nominees, who were recommended for nomination by the nominating and corporate governance committee of our board of directors, are Alexander Casdin and James Freddo, M.D. The Class III and Class I directors have one year and two years, respectively, remaining on their terms of office.

If no contrary indication is made, proxies in the accompanying form are to be voted for each of Mr. Casdin and Dr. Freddo, or in the event that either of such nominees 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. Each of Mr. Casdin and Dr. Freddo 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.

NOMINEES FOR ELECTION TO THE BOARD OF DIRECTORS**For a Three-Year Term Expiring at the****2019 Annual Meeting of Stockholders (Class II)**

Name	Age	Present Position with Ignyta, Inc.
Alexander Casdin	48	Director
James Freddo, M.D.	61	Director

Alexander Casdin. Mr. Casdin joined our board of directors in October 2013. Alex Casdin is CEO and Portfolio Manager 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, Corp., 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 the board of directors of DiaVacs, a private

clinical-stage biotechnology company focused on a treatment for Type 1 Diabetes, and the Conquer Cancer Foundation of the American Society of Clinical Oncology, as well 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. He also 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 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

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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.

MEMBERS OF THE BOARD OF DIRECTORS CONTINUING IN OFFICE**Term Expiring at the 2017 Annual Meeting of Stockholders (Class III)**

Name	Age	Present Position with Ignyta, Inc.
Jonathan E. Lim, M.D.	44	Chairman of the Board, President and Chief Executive Officer
James Bristol, Ph.D.	69	Director

Jonathan E. Lim, M.D. Dr. Lim is a co-founder of Ignyta and joined us as Chairman at our inception in August 2011 and as President and Chief Executive Officer in July 2012. In February 2016, Dr. Lim joined the board of directors and currently serves as Chairman of Bonti, Inc., a startup company developing next generation neurotoxins for patients with unmet needs in post-surgical care and aesthetic medicine. Dr. Lim is also a member of the Board of Visitors of the Moores Cancer Center at the University of California, San Diego, a position he has held since December 2015, and an Advisory Council member of Stanford Bio-X, an initiative by Stanford University to foster interdisciplinary medical research. 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 served as a member of the board of directors of Bionomics Ltd. until November 2015. Prior to founding Eclipse Therapeutics, Dr. Lim served as the President, Chief Executive Officer and a Director of Halozyne 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 the Dana Farber Cancer Institute, and two years of general surgery residency at New York Hospital-Cornell and Memorial Sloan Kettering Cancer Center. 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 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.

Term Expiring at the 2018 Annual Meeting of Stockholders (Class I)

Name	Age	Present Position with Ignyta, Inc.
Heinrich Dreismann, Ph.D.	62	Director

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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.

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.

Table of Contents**Board of Directors Meetings**

During 2015, the board of directors of Ignyta held ten meetings, the audit committee held four meetings, the compensation committee held two meetings and the nominating and corporate governance committee held two meetings. 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 and the committees of the board of directors on which he served, during the periods in which he served. The board of directors may also take action from time to time by written or electronic consent. The independent directors also hold regularly scheduled meetings in executive session without the presence of management.

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*

* Indicates chairman of the committee

Audit Committee

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. The audit committee was established in February 2014. 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 and by Section 10A of the Exchange Act. 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;

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;

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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 2015, 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, 2015 that was filed with the SEC on March 14, 2016, 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 2016.

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

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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 goal of the nominating and corporate governance committee of the board of directors 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;

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.

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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, if our board of directors decides not to re-nominate a member for re-election or if the board of directors decides to expand the size of the board, 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

In December 2013, our board of directors approved a director compensation program applicable to our non-employee directors. That program provided for annual cash compensation of \$35,000 for each non-employee member of our board of directors. On March 10, 2016, our board of directors amended the director compensation program so that this annual compensation amount will be \$40,000 beginning with the 2016 fiscal year. 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.

In addition, each of our non-employee directors will receive an annual grant of options to purchase 15,000 shares of our common stock at each annual meeting of our stockholders, beginning with the 2016 annual meeting, and upon appointment, new non-employee directors will receive an initial grant of options to purchase 24,000 shares of our common stock. It is anticipated that all such option grants will be granted under the 2014 Plan, or any other equity compensation plan our board of directors and stockholders may approve and adopt in the future.

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. 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.

On March 10, 2016, each of Mr. Casdin and Dr. Dreismann was granted a fully-vested option to purchase 15,000 shares of our common stock under the 2014 Plan.

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The table below summarizes all compensation earned by each of our non-employee directors for services performed during our fiscal year ended December 31, 2015. 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 2015 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⁾	43,500			43,500
Alexander Casdin ⁽³⁾	58,500			58,500
Heinrich Dreismann, Ph.D. ⁽⁴⁾	52,500			52,500
James Freddo, M.D. ⁽⁵⁾	50,000			50,000

(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 2 and 11 in our financial statements for the fiscal year ended December 31, 2015 included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015 filed on March 14, 2016.

(2) As of December 31, 2015, Dr. Bristol held 24,000 outstanding stock options.

(3) As of December 31, 2015, Mr. Casdin held 40,666 outstanding stock options.

(4) As of December 31, 2015, Dr. Dreismann held 40,666 outstanding stock options.

(5) As of December 31, 2015, Dr. Freddo held 35,666 outstanding stock options.

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 two nominees receiving the highest number of For votes will each 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 ALEXANDER CASDIN AND JAMES FREDDO, M.D. PROXIES SOLICITED BY THE BOARD OF DIRECTORS WILL BE SO VOTED UNLESS YOU SPECIFY OTHERWISE ON YOUR PROXY CARD.

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PROPOSAL 2:

APPROVAL OF THE AMENDED AND RESTATED IGNYTA, INC. 2014 INCENTIVE AWARD PLAN

We are asking our stockholders to vote for approval of the amendment and restatement of the Ignyta, Inc. 2014 Incentive Award Plan, or the 2014 Plan. The amended and restated 2014 Plan is referred to in this proposal as the Restated Plan. Our board of directors has approved the Restated Plan, subject to stockholder approval. The Restated Plan will become effective on the day of approval of the Restated Plan by our stockholders.

Description of Proposed Amendments

Increase in Share Reserve. We strongly believe that an employee equity compensation program is a necessary and powerful incentive and retention tool that benefits all stockholders. The 2014 Plan was first adopted by our board of directors and approved by our stockholders in 2014. As of March 31, 2016, a total of 3,006,737 shares were reserved for issuance under the 2014 Plan, there were 2,247,923 shares subject to options and 284,880 shares subject to restricted stock units, or RSUs, granted under the 2014 Plan, and a total of 376,688 shares remained available for issuance under the 2014 Plan. The number of shares reserved for issuance under the 2014 Plan may be increased from time to time by the number of shares of common stock related to options granted under the Ignyta, Inc. Amended and Restated 2011 Stock Incentive Plan, or the 2011 Plan, that are repurchased, forfeited, expire or are cancelled on or after the original effective date of the 2014 Plan. As of March 31, 2016, options to purchase 1,339,954 shares were outstanding under the 2011 Plan, and 6,737 shares subject to options granted under the 2011 Plan had been added to the share reserve under the 2014 Plan as a result of the forfeiture of such options. Notwithstanding the foregoing, the maximum number of shares of stock that may be issued or transferred pursuant to awards under the 2014 Plan may not exceed an aggregate of 4,346,691 shares.

In addition, as of March 31, 2016, there were 1,217,000 shares subject to stock options granted under the 2015 Employment Inducement Equity Incentive Award Plan, or the 2015 Inducement Plan, and a total of 783,000 shares remained available for issuance under the 2015 Inducement Plan. Pursuant to Nasdaq Marketplace Rule 5635(c), however, awards under the 2015 Inducement Plan generally may only be granted to an individual who has not previously been an employee of our company or a member of our board of directors, and such awards must be granted in connection with such individual's commencement of employment with our company and as an inducement material to his or her entering into employment with our company.

Under the terms of the 2014 Plan, the shares available for issuance may be used for all types of awards under a fungible pool formula. Pursuant to this fungible pool formula, the authorized share limit will be reduced by one share of common stock for every one share subject to an option or stock appreciation right, or SAR, granted under the 2014 Plan, and by 1.3 shares of common stock for every one share subject to a full value award granted under the 2014 Plan. For purposes of the 2014 Plan, a full value award is an award pursuant to which shares of our common stock are issuable that is granted with a per-share exercise or purchase price less than 100% of the fair market value of a share of our common stock on the date of grant.

Pursuant to the Restated Plan, an additional 3,000,000 shares will be reserved for issuance over the existing share reserve under the 2014 Plan. Assuming approval of this Proposal 2, this would result in the aggregate share reserve under the Restated Plan being increased to 6,006,737 (assuming that no awards under the 2011 Plan are forfeited between March 31, 2016 and the date of the annual meeting), and would adjust the maximum cap on the issuance of shares under the Restated Plan from 4,346,691 to 7,346,691.

If the Restated Plan is approved by our stockholders pursuant to this Proposal 2, our board of directors will not grant any future awards under the 2015 Inducement Plan. As a result, the only shares that will be available for future issuance of equity awards will be the shares reserved for issuance under the Restated Plan.

All of the foregoing share numbers may be adjusted for changes in our capitalization and certain corporate transactions, as described below under the heading *Adjustments*.

Extension of Term. The term of the Restated Plan will also be extended so that the Restated Plan will terminate in April 2026.

Stockholder Approval Under Section 162(m) of the Code. Our stockholders are being asked to approve the Restated Plan to satisfy the stockholder approval requirements of Section 162(m), or Section 162(m), of the Internal Revenue Code of 1986, as amended, or the Code, and to approve the material terms of the performance goals for awards that may be granted under the Restated Plan as required under Section 162(m). In general, Section 162(m) places a limit on the deductibility for federal income tax purposes of the compensation paid to our Chief Executive Officer or any of our three other most highly compensated executive officers (other than our Chief Financial Officer). Under Section 162(m), compensation paid to such persons in excess of \$1 million in a taxable year generally is not deductible. However, compensation that qualifies as performance-based under Section 162(m) does not count against the \$1 million deduction limitation. One of the requirements of performance-based compensation for purposes of Section 162(m) is that the material terms of the plan under which compensation may be paid be disclosed to and approved by our public stockholders. For purposes of Section 162(m), the material terms include (1) the employees eligible to receive compensation, (2) a description of the business criteria on which the performance goals may be based and (3) the maximum amount of compensation that can be paid to an employee under the performance goals. Each of these aspects of the Restated Plan is discussed below, and stockholder approval of this Proposal 2 is intended to constitute approval of the material terms of the Restated Plan for purposes of the stockholder approval requirements of Section 162(m).

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Stockholder approval of the Restated Plan is only one of several requirements under Section 162(m) that must be satisfied for amounts realized under the Restated Plan to qualify for the performance-based compensation exemption under Section 162(m), and submission of the material terms of the Restated Plan performance goals for stockholder approval should not be viewed as a guarantee that we will be able to deduct all compensation under the Restated Plan. Nothing in this proposal precludes us or the plan administrator from making any payment or granting awards that do not qualify for tax deductibility under Section 162(m).

Other Amendment – Limit on Director Compensation. The Restated Plan also establishes an annual limit on the compensation that may be paid to a non-employee director in any one calendar year.

The Restated Plan is not being amended in any material respect other than to reflect the changes described above.

Equity Incentive Awards Are Critical to Long-Term Stockholder Value Creation

We believe that the adoption of the Restated Plan is essential to our success. Equity awards are intended to motivate high levels of performance, align the interests of our directors, employees and consultants with those of our stockholders by giving directors, employees and consultants the perspective of an owner with an equity stake in our company and providing a means of recognizing their contributions to the success of our company. Our board of directors and management believe that equity awards are necessary to remain competitive in our industry and are essential to recruiting and retaining the highly qualified employees who help our company meet its goals.

Our equity incentive program is broad-based. As of March 31, 2016, all 120 of our employees had received grants of equity awards, 12 of our current consultants had received grants of equity awards and all four of our non-employee directors had received grants of equity awards. We believe we must continue to offer a competitive equity compensation plan in order to attract, retain and motivate the industry-leading talent imperative to our continued growth and success.

Outstanding Awards Under Existing Plans – Ability to Grant Future Equity Awards is Limited

The table below presents information about the number of shares that were subject to various outstanding equity awards under our equity plans, and the shares remaining available for issuance under each such plan, each at March 31, 2016. The existing 2014 Plan and the 2015 Inducement Plan are the only equity incentive plans we currently have in place under which we can grant awards. As noted above, if the Restated Plan is approved by our stockholders pursuant to this Proposal 2, our board of directors will not grant any future awards under the 2015 Inducement Plan. As a result, assuming approval of this Proposal 2, the only shares we will have available for future issuance of equity awards will be the shares reserved for issuance under the Restated Plan.

	Number of Shares	As a % of Shares Outstanding(1)	Dollar Value(2)
<i>2011 Plan</i>			
Options outstanding	1,339,954	4.1%	\$ 9,071,489
Weighted average exercise price of outstanding options			\$ 5.78
Weighted average remaining term of outstanding options			7.6 years

Shares remaining available for grant			
2014 Inducement Plan			
Options outstanding	602,438	1.9%	\$ 4,078,505
Weighted average exercise price of outstanding options			\$ 7.39
Weighted average remaining term of outstanding options			8.1 years
Shares remaining available for grant			
2015 Inducement Plan			
Options outstanding	1,217,000	3.8%	\$ 8,239,090
Weighted average exercise price of outstanding options			\$ 13.28
Weighted average remaining term of outstanding options			9.6 years
Shares remaining available for grant	783,000	2.4%	\$ 5,300,910
2014 Plan			
Options outstanding	2,247,923	6.9%	\$ 15,218,439
Weighted average exercise price of outstanding options			\$ 9.18
Weighted average remaining term of outstanding options			9.1 years
Restricted stock units outstanding	284,880	0.9%	\$ 1,928,638
Shares remaining available for grant	376,688	1.2%	\$ 2,550,178
Proposed increase to share reserve	3,000,000	9.3%	\$ 20,310,000

- (1) Based on 32,366,670 shares of our common stock outstanding as of March 31, 2016.
(2) Based on the closing price of our common stock on March 31, 2016 of \$6.77 per share.

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Background for the Determination of the Share Reserve under the Restated Plan

In determining whether to approve the Restated Plan, our board of directors considered that:

The shares to be initially reserved for issuance under the Restated Plan represent an increase of 2,217,000 shares over the aggregate number of shares reserved for issuance and available for future grant under the existing 2014 Plan and the 2015 Inducement Plan as of March 31, 2016. If the Restated Plan is approved, it will represent the only equity plan under which we will be able to grant future equity awards and we will no longer grant awards under the 2015 Inducement Plan.

Based on the compensation needs of the company and our historical equity compensation practices since the closing of the October 31, 2013 merger in which Ignyta Operating became our wholly-owned subsidiary, we would expect to exhaust the available shares under the existing 2014 Plan within the next twelve months.

Although we have additional shares available for issuance under the 2015 Inducement Plan, pursuant to Nasdaq Marketplace Rule 5635(c), awards under the 2015 Inducement Plan generally may only be granted to an individual who has not previously been an employee of our company or a member of our board of directors, and such awards must be granted in connection with such individual's commencement of employment with our company and as an inducement material to his or her entering into employment with our company. Combining the outstanding share reserve under the 2015 Inducement Plan (and discontinuing the use of the 2015 Inducement Plan) with the reservation of additional shares under our existing 2014 Plan will allow us more flexibility in our equity grant practices and ensure that we retain an important compensation tool for all employees, not just new employees.

In setting the size of the share reserve under the Restated Plan, as described above, our board of directors also considered the historical amounts of equity awards granted by our company and Ignyta Operating in the past three years. In 2013, 2014 and 2015, equity awards representing a total of approximately 1,061,325 shares, 2,300,000 shares and 2,785,991 shares, respectively, were granted under our equity plans, for an annual equity burn rate of 7.6%, 11.7% and 8.6%, respectively. This level of equity awards represents a 3-year average burn rate of 9.3% of common shares outstanding. If each full-value award is multiplied by 1.3 (consistent with the methodology employed pursuant to the fungible share ratio in the Restated Plan), the adjusted annual burn rate under the 2014 Plan would be 7.6%, 11.7% and 8.7%, for calendar years 2013, 2014 and 2015, respectively. Equity burn rate is calculated by dividing the number of shares subject to equity awards granted during the fiscal year by the number of shares outstanding at the end of the period.

We expect the share authorization under the Restated Plan to provide us with enough shares for awards for approximately three years, assuming we continue to grant awards consistent with our current practices and historical usage, as reflected in our historical burn rate, and further dependent on the price of our shares and hiring activity during the next few years, forfeitures of outstanding awards, and noting that future circumstances may require us to change our current equity grant practices. We cannot predict our future

equity grant practices, the future price of our shares or future hiring activity with any degree of certainty at this time, and the share reserve under the Restated Plan could last for a shorter or longer time.

In 2013, 2014 and 2015, our end of year overhang rate was 8.1%, 15.3% and 16.5%, respectively. If the Restated Plan is approved, we expect our overhang at the end of 2016 will be approximately 22.9%.

Overhang is calculated by dividing (1) the sum of the number of shares subject to equity awards outstanding at the end of the fiscal year plus shares remaining available for issuance for future awards at the end of the fiscal year by (2) the number of shares outstanding at the end of the fiscal year.

In light of the factors described above, and the fact that the ability to continue to grant equity compensation is vital to our ability to continue to attract and retain employees in the extremely competitive labor markets in which we compete, our board of directors has determined that the size of the share reserve under the Restated Plan is reasonable and appropriate at this time. Our board of directors will not create a subcommittee to evaluate the risk and benefits for issuing shares under the Restated Plan.

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Other Key Features of the Restated Plan

We depend on the performance and commitment of our employees to succeed. The use of equity-based long-term incentives assists us in attracting, retaining, motivating and rewarding talented employees. Providing equity grants creates long-term participation in our company and aligns the interests of our employees with the interests of our stockholders. The use of equity awards as compensation also allows us to conserve cash resources for other important purposes.

The Restated Plan reflects a broad range of compensation and governance best practices, with some of the key features of the Restated Plan as follows:

No Increase to Shares Available for Issuance without Stockholder Approval. Without stockholder approval, the Restated Plan prohibits any alteration or amendment that operates to increase the total number of shares of common stock that may be issued under the Restated Plan (other than adjustments in connection with certain corporate reorganizations and other events).

No Single-Trigger Vesting of Awards. The Restated Plan does not have single-trigger accelerated vesting provisions for changes in control.

No Repricing of Awards. Awards may not be repriced, replaced or re-granted through cancellation or modification without stockholder approval if the effect would be to reduce the exercise price for the shares under the award.

Limitations on Dividend Payments on Performance Awards. Dividends and dividend equivalents may not be paid on awards subject to performance vesting conditions unless and until such conditions are met.

Limitations on Grants. The maximum aggregate number of shares of our common stock that may be subject to one or more awards granted to any participant, other than a non-employee director, pursuant to the Restated Plan during any calendar year cannot exceed 3,000,000. However, this number may be adjusted to take into account equity restructurings and certain other corporate transactions as described below. No participant may be granted, during any calendar year, awards initially payable in cash that could result in such participant receiving cash payments exceeding \$10,000,000 pursuant to such awards. In addition, the sum of any cash compensation, or other compensation, and the value (determined as of the grant date in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or any successor thereto) of awards granted to a non-employee director as compensation for services as a non-employee director during any calendar year under the Restated Plan may not exceed \$750,000.

No In-the-Money Option or Stock Appreciation Right Grants. The Restated Plan prohibits the grant of options or SARs with an exercise or base price less than 100% of the fair market value of our common stock on the date of grant.

Section 162(m) Qualification. The Restated Plan is designed to allow awards made under the Restated Plan, including equity awards and incentive cash bonuses, to qualify as performance-based compensation under Section 162(m) of the Code. Awards granted under the Restated Plan will be treated as qualified performance-based compensation under Section 162(m) of the Code only if the awards and the procedures associated with them comply with all requirements of Section 162(m) of the Code.

Independent Administration. The compensation committee of our board of directors, which consists of two or more non-employee directors, generally will administer the Restated Plan if it is approved by stockholders. The full board of directors will administer the Restated Plan with respect to awards granted to non-employee directors. The compensation committee may delegate certain of its duties and authorities to a management committee for awards to certain individuals, within specific guidelines and limitations. However, no delegation of authority is permitted with respect to awards made to individuals who (1) are subject to Section 16 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, (2) are covered employees within the meaning of Section 162(m) of the Code, or (3) have been delegated authority to grant, amend or administer awards under the Restated Plan.

Stockholder Approval Requirement

In general, stockholder approval of the Restated Plan is necessary in order for us to (1) meet the stockholder approval requirements of the principal securities market on which shares of our common stock are traded, (2) take tax deductions for certain compensation resulting from awards granted in order to qualify them as performance-based compensation under Section 162(m) of the Code, and (3) grant stock options that qualify as incentive stock options, or ISOs, as defined under Section 422 of the Code.

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Specifically, approval of the Restated Plan will constitute approval of the material terms of the Restated Plan pursuant to the stockholder approval requirements of Section 162(m), as discussed above, which will enable (but not require) us to award performance-based compensation within the meaning of Section 162(m) under the Restated Plan, preserving the deductibility of these awards for federal income tax purposes. In addition, approval of the Restated Plan will constitute approval pursuant to the stockholder approval requirements of Section 422 of the Code relating to ISOs.

If the Restated Plan is not approved by our stockholders, the Restated Plan will not become effective, the existing 2014 Plan and the 2015 Inducement Plan will continue in full force and effect, and we may continue to grant awards under the existing 2014 Plan and the 2015 Inducement Plan, subject to their terms, conditions and limitations, using the shares available for issuance thereunder.

Summary of the Restated Plan

This section summarizes certain principal features of the Restated Plan, subject to stockholder approval. The summary is qualified in its entirety by reference to the complete text of the Restated Plan. Stockholders are urged to read the actual text of the Restated Plan in its entirety which is set forth in Annex A to this proxy statement.

Authorized Shares. Pursuant to the Restated Plan, the number of shares that will be reserved for issuance as of the effective date of the Restated Plan will be 6,000,000 shares, plus one share for each share subject to a stock option that was outstanding under the 2011 Plan as of the original effective date of the 2014 Plan that expires, is forfeited or is settled in cash after such date. As of March 31, 2016, a total of 6,737 shares subject to options granted under our 2011 Plan had been added to the share reserve under the 2014 Plan as a result of the forfeiture, expiration or cancellation of such options. Assuming that no awards under the 2011 Plan are repurchased, forfeited, expire or are cancelled between March 31, 2016 and the date of the annual meeting, (1) the total number of shares that will be reserved for issuance under the Restated Plan as of the date of the annual meeting will be 6,006,737 shares, and (2) a maximum of an additional 1,339,954 shares (representing the number of shares subject to stock options under the 2011 Plan as of March 31, 2016) could become available for future issuance under the Restated Plan in respect of outstanding stock options under the 2011 Plan.

In no event will more than 7,346,691 shares of our common stock be issuable pursuant to awards under the Restated Plan during its ten-year term. No awards will be granted under the 2015 Inducement Plan following the effective date of the Restated Plan.

Shares that are subject to awards of options or SARs granted under the Restated Plan will be counted against this limit as one share for every one share granted. Shares that are subject to full value awards granted under the Restated Plan will be counted against this limit as 1.3 shares for every one share granted. The payment of dividend equivalents in cash in conjunction with any outstanding awards will not be counted against the shares available for issuance under the Restated Plan.

If any award under the Restated Plan or any option granted under the 2011 Plan is repurchased by us, forfeited, expires, lapses for any reason or is settled in cash without the delivery of shares to the holder, then the shares subject to such award may be used again for future grants of awards under the Restated Plan in an amount corresponding to the reduction in the share reserve previously made. In addition, shares that are tendered or withheld to satisfy any tax withholding obligation with respect to a full value award granted under the Restated Plan may be used again for new grants under the Restated Plan. Any shares that again become available for grant will be added back in an amount corresponding to the reduction in the share reserve previously made in connection with such award, as described above. Notwithstanding the foregoing, shares tendered or withheld to satisfy the exercise price of an option granted under the Restated Plan or an option granted under the 2011 Plan or any tax withholding obligation with respect to an

option or SAR granted under the Restated Plan or option granted under the 2011 Plan, any shares subject to a SAR that are not issued in connection with the stock settlement of such award on exercise, and shares purchased on the open market with the cash proceeds from the exercise of options granted under the Restated Plan or options granted under the 2011 Plan, will not be added to the shares authorized for grant under the Restated Plan.

Plan Administration. The compensation committee of our board of directors will administer the Restated Plan (except with respect to any award granted to independent directors (as defined in the Restated Plan), which must be administered by our full board of directors). To administer the Restated Plan, our compensation committee must consist solely of at least two members of our board of directors, each of whom is a non-employee director for purposes of Rule 16b-3 under the Exchange Act, an independent director under the rules of any securities exchange or automated quotation system on which the shares of our common stock are listed and, with respect to awards that are intended to constitute performance-based compensation under Section 162(m) of the Code, an outside director for purposes of Section 162(m). Subject to the terms and conditions of the Restated Plan, our compensation committee has the authority to select the persons to whom awards are to be made, to determine the type or types of awards to be granted to each person, the number of awards to grant, the number of shares to be subject to such awards, and the terms and conditions of such awards, and to make all other determinations and decisions and to take all other actions necessary or advisable for the administration of the Restated Plan. Our compensation committee is also authorized to establish, adopt, amend or revise rules relating to administration of the Restated Plan. Our board of directors may at any time revert in itself the authority to administer the Restated Plan.

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Eligibility. Options, SARs, restricted stock and other awards under the Restated Plan may be granted to individuals who are then our officers or employees or are the officers or employees of any of our subsidiaries. Such awards may also be granted to our non-employee directors and consultants but only employees may be granted ISOs. As of March 31, 2016, there were four non-employee directors and 120 employees, in addition to our 12 active consultants, who would have been eligible for awards under the Restated Plan had it been in effect on such date. The maximum aggregate number of shares that may be subject to one or more awards granted to any participant, other than a non-employee director, under the Restated Plan during any calendar year cannot exceed 3,000,000 shares, and the maximum amount that may be paid to a participant in cash during any calendar year with respect to one or more cash based awards under the Restated Plan is \$10,000,000. In addition, the sum of any cash compensation, or other compensation, and the value (determined as of the grant date in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or any successor thereto) of awards granted to a non-employee director as compensation for services as a non-employee director during any calendar year under the Restated Plan may not exceed \$750,000. The board of directors may make exceptions to this limit for individual non-employee directors in extraordinary circumstances, as the board of directors may determine in its discretion, provided that the non-employee director receiving such additional compensation may not participate in the decision to award such compensation or in other contemporaneous compensation decisions involving non-employee directors. The closing share price per share for our common stock on the Nasdaq Capital Market on March 31, 2016 was \$6.77.

Awards. The Restated Plan provides that our compensation committee (or the board of directors, in the case of awards to non-employee directors) may grant or issue stock options, SARs, restricted stock, restricted stock units, dividend equivalents, stock payments and performance awards, or any combination thereof. Our compensation committee (or the board of directors, in the case of awards to non-employee directors) will consider each award grant subjectively, considering factors such as the individual performance of the recipient and the anticipated contribution of the recipient to the attainment of our long-term goals. Each award will be set forth in a separate agreement with the person receiving the award and will indicate the type, terms and conditions of the award.

Nonqualified stock options, or NQSOs, will provide for the right to purchase shares of our common stock at a specified price which may not be less than the fair market value of a share of common stock on the date of grant, must be exercised within ten years after the date of grant, and usually will become exercisable (at the discretion of our compensation committee or our board of directors, in the case of awards to non-employee directors) in one or more installments after the grant date, subject to the participant's continued employment or service with us and/or subject to the satisfaction of performance targets established by our compensation committee (or our board of directors, in the case of awards to non-employee directors). NQSOs may be granted for any term specified by our compensation committee (or our board of directors, in the case of awards to non-employee directors).

ISOs will be designed to comply with the provisions of the Code and will be subject to specified restrictions contained in the Code. Among such restrictions, ISOs must have an exercise price of not less than the fair market value of a share of common stock on the date of grant, may only be granted to employees, must expire within a specified period of time following the optionee's termination of employment, and must be exercised within ten years after the date of grant. In the case of an ISO granted to an individual who owns (or is deemed to own) more than 10% of the total combined voting power of all classes of our capital stock, the Restated Plan provides that the exercise price must be at least 110% of the fair market value of a share of common stock on the date of grant and the ISO must expire upon the fifth anniversary of the date of grant.

Restricted stock may be granted to participants and made subject to such restrictions as may be determined by our compensation committee (or our board of directors, in the case of awards to non-employee directors). Typically, restricted stock may be forfeited for no consideration if the conditions or restrictions are not met, and it may not be sold or otherwise transferred to third parties until the restrictions are removed or expire. Recipients of restricted stock, unlike recipients of options, may have voting rights and may receive dividends, if any, prior to the time when the restrictions lapse.

Restricted stock units may be awarded to participants, typically without payment of consideration or for a nominal purchase price, but subject to vesting conditions including continued employment or performance criteria established by our compensation committee (or our board of directors, in the case of awards to non-employee directors). Like restricted stock, restricted stock units may not be sold or otherwise transferred or hypothecated until vesting conditions are removed or expire. Unlike restricted stock, stock underlying restricted stock units will not be issued until the restricted stock units have vested, and recipients of restricted stock units generally will have no voting or dividend rights prior to the time when vesting conditions are satisfied.

SARs granted under the Restated Plan typically will provide for payments to the holder based upon increases in the price of our common stock over the exercise price of the SAR. Except as required by Section 162(m) of the Code with respect to SARs intended to qualify as performance-based compensation as described in Section 162(m) of the Code, there are no restrictions specified in the Restated Plan on the exercise of SARs or the amount of gain realizable therefrom. Our compensation committee (or the board of directors, in the case of awards to non-employee directors) may elect to pay SARs in cash or in common stock or in a combination of both.

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Dividend equivalents represent the value of the dividends, if any, per share paid by us, calculated with reference to the number of shares covered by the stock options, SARs or other awards held by the participant.

Performance awards may be granted by our compensation committee on an individual or group basis. Generally, these awards will be based upon the attainment of specific performance goals that are established by our compensation committee and relate to one or more performance criteria on a specified date or dates determined by our compensation committee. Any such cash bonus paid to a covered employee within the meaning of Section 162(m) of the Code may be, but need not be, qualified performance-based compensation as described below and will be paid in cash.

Stock payments may be authorized by our compensation committee (or our board of directors, in the case of awards to non-employee directors) in the form of common stock or an option or other right to purchase common stock as part of any bonus, deferred compensation or other arrangement, made in lieu of all or any part of compensation, that would otherwise be payable to employees, consultants or members of our board of directors.

Transferability of Awards. Unless the administrator provides otherwise, the Restated Plan generally does not allow for the transfer of awards and only the recipient of an option or SAR may exercise such an award during his or her lifetime.

Qualified Performance-Based Compensation. The compensation committee may designate employees as covered employees whose compensation for a given fiscal year may be subject to the limit on deductible compensation imposed by Section 162(m) of the Code. The compensation committee may grant to such covered employees restricted stock, dividend equivalents, stock payments, restricted stock units, cash bonuses and other stock-based awards that are paid, vest or become exercisable upon the attainment of company performance criteria, which are related to one or more of the following performance criteria as applicable to our performance or the performance of a division, business unit or an individual: (1) net earnings (either before or after one or more of (a) interest, (b) taxes, (c) depreciation and (d) amortization), (2) gross or net sales or revenue, (3) net income (either before or after taxes), (4) adjusted net income, (5) operating earnings or profit, (6) cash flow (including, but not limited to, operating cash flow and free cash flow), (7) return on assets, (8) return on capital, (9) return on stockholders' equity, (10) total stockholder return, (11) return on sales, (12) gross or net profit or operating margin, (13) operating or other costs and expenses, (14) improvements in expense levels, (15) working capital, (16) earnings per share, (17) adjusted earnings per share, (18) price per share of our common stock, (19) regulatory body approval for commercialization of a product, (20) implementation or completion of critical projects, (21) market share, (22) economic value, (23) comparisons with various stock market indices, (24) capital raised in financing transactions or other financing milestones, (25) stockholders' equity, (26) market recognition (including, but not limited to, awards and analyst ratings), (27) financial ratios, and (28) implementation, completion or attainment of objectively determinable objectives relating to research, development, regulatory, commercial, or strategic milestones or developments. These performance criteria may be measured in absolute terms or as compared to any incremental increase or decrease or as compared to results of a peer group or to market performance indicators or indices.

The compensation committee may provide that one or more objectively determinable adjustments will be made to one or more of the performance goals established for any performance period. Such adjustments may include one or more of the following: (1) items related to a change in accounting principle, (2) items relating to financing activities, (3) expenses for restructuring or productivity initiatives, (4) other non-operating items, (5) items related to acquisitions, (6) items attributable to the business operations of any entity acquired by us during the performance

period, (7) items related to the disposal of a business or segment of a business, (8) items related to discontinued operations that do not qualify as a segment of a business under applicable accounting standards, (9) items attributable to any stock dividend, stock split, combination or exchange of shares occurring during the performance period, (10) any other items of significant income or expense which are determined to be appropriate adjustments, (11) items relating to unusual or extraordinary corporate transactions, events or developments, (12) items related to amortization of acquired intangible assets, (13) items that are outside the scope of our core, on-going business activities, (14) items related to acquired in-process research and development, (15) items relating to changes in tax laws, (16) items relating to major licensing or partnership arrangements, (17) items relating to asset impairment charges, (18) items relating to gains and losses for litigation, arbitration or contractual settlements, or (19) items relating to any other unusual or nonrecurring events or changes in applicable laws, accounting principles or business conditions.

Forfeiture, Recoupment and Clawback Provisions. Pursuant to its general authority to determine the terms and conditions applicable to awards under the Restated Plan, the compensation committee has the right to provide, in an award agreement or otherwise, that an award shall be subject to the provisions of any recoupment or clawback policies implemented by us, including, without limitation, any recoupment or clawback policies adopted to comply with the requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act and any rules or regulations promulgated thereunder.

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Adjustments. If there is any stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of our assets to stockholders, or any other change affecting the shares of our common stock or the share price of our common stock other than an equity restructuring (as defined in the Restated Plan), the plan administrator may make such equitable adjustments, if any, as the plan administrator in its discretion may deem appropriate to reflect such change with respect to (1) the aggregate number and type of shares that may be issued under the Restated Plan (including, but not limited to, adjustments of the number of shares available under the Restated Plan and the maximum number of shares which may be subject to one or more awards to a participant pursuant to the Restated Plan during any calendar year), (2) the number and kind of shares, or other securities or property, subject to outstanding awards, (3) the terms and conditions of any outstanding awards (including, without limitation, any applicable performance targets or criteria with respect thereto), and (4) the grant or exercise price per share for any outstanding awards under the Restated Plan. If there is any equity restructuring, the number and type of securities subject to each outstanding award and the grant or exercise price per share for each outstanding award, if applicable, will be proportionately adjusted. Adjustments in the event of an equity restructuring will not be discretionary. Any adjustment affecting an award intended as qualified performance-based compensation will be made consistent with the requirements of Section 162(m) of the Code. The plan administrator also has the authority under the Restated Plan to take certain other actions with respect to outstanding awards in the event of a corporate transaction, including provision for the cash-out, termination, assumption or substitution of such awards.

Corporate Transactions. In the event of a change in control where the acquirer does not assume awards granted under the Restated Plan, awards issued under the Restated Plan may, at the discretion of the administrator, be subject to accelerated vesting such that 100% of the awards will become vested and exercisable or payable, as applicable. Under the Restated Plan, a change in control is generally defined as:

a transaction or series of related transactions (other than an offering of our stock to the general public through a registration statement filed with the Securities and Exchange Commission, or SEC) whereby any person or entity or related group of persons or entities (other than us, our subsidiaries, an employee benefit plan maintained by us or any of our subsidiaries or a person or entity that, prior to such transaction, directly or indirectly controls, is controlled by, or is under common control with, us) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of 50% or more of the total combined voting power of our securities outstanding immediately after such acquisition;

during any two-year period, individuals who, at the beginning of such period, constitute our board of directors together with any new director(s) whose election by our board of directors or nomination for election by our stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of the two-year period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority of our board of directors;

our consummation (whether we are directly or indirectly involved through one or more intermediaries) of (1) a merger, consolidation, reorganization, or business combination or (2) the sale or other disposition of all or substantially all of our assets in any single transaction or series of transactions or (3) the acquisition of assets or stock of another entity, in each case other than a transaction:

which results in our voting securities outstanding immediately before the transaction continuing to represent (either by remaining outstanding or by being converted into our voting securities or the voting securities of the person that, as a result of the transaction, controls us, directly or indirectly, or owns, directly or indirectly, all or substantially all of our assets or otherwise succeeds to our business (we or such person being referred to as a successor entity)) directly or indirectly, at least 50% of the combined voting power of the successor entity's outstanding voting securities immediately after the transaction; and

after which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the successor entity; provided, however, that no person or group is treated as beneficially owning 50% or more of combined voting power of the successor entity solely as a result of the voting power held in us prior to the consummation of the transaction; or

our stockholders approve a liquidation or dissolution of our company.

Notwithstanding the foregoing, a transaction shall not constitute a change in control if its purpose is to change the state of our incorporation.

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Amendment and Termination; Repricing Without Stockholder Approval Prohibited. Our board of directors has the authority to amend, suspend or terminate the Restated Plan at any time. However, stockholder approval of any amendment to the Restated Plan will be obtained to the extent necessary to comply with any applicable law, regulation or stock exchange rule. Additionally, stockholder approval is required to (1) increase the maximum number of shares that may be issued under the Restated Plan, (2) increase the limits imposed on the maximum number of shares that may be issued to any individual under the Restated Plan for Section 162(m) purposes, (3) reduce the per-share exercise price of the shares subject to any option or SAR, and (4) cancel any option or SAR in exchange for cash or another award when the option or SAR price per share exceeds the fair market value of the underlying shares. Except as necessary to comply with Section 409A of the Code, no amendment, suspension or termination of the Restated Plan will impair the rights or obligations of a holder under an award theretofore granted, unless such award expressly so provides or such holder consents. If not terminated earlier by our board of directors, the Restated Plan will terminate on April 6, 2026.

Securities Laws. The Restated Plan is intended to conform to all provisions of the Securities Act of 1933, as amended, and the Exchange Act and any and all regulations and rules promulgated by the SEC thereunder, including, without limitation, Rule 16b-3. The Restated Plan will be administered, and awards will be granted and may be exercised, only in such a manner as to conform to such laws, rules and regulations.

Federal Income Tax Consequences

The material federal income tax consequences of the Restated Plan under current federal income tax law are summarized in the following discussion, which deals with the general tax principles applicable to the Restated Plan. The following discussion is based upon laws, regulations, rulings and decisions now in effect, all of which are subject to change. Foreign, state and local tax laws, and employment, estate and gift tax considerations are not discussed due to the fact that they may vary depending on individual circumstances and from locality to locality.

Stock Options and Stock Appreciation Rights. A Restated Plan participant generally will not recognize taxable income and we generally will not be entitled to a tax deduction upon the grant of a stock option or SAR. The tax consequences of exercising a stock option and the subsequent disposition of the shares received upon exercise will depend upon whether the option qualifies as an ISO as defined in Section 422 of the Code. The Restated Plan permits the grant of options that are intended to qualify as ISOs as well as options that are not intended to so qualify; however, ISOs generally may be granted only to our employees and employees of our parent or subsidiary corporations, if any. Upon exercising an option that does not qualify as an ISO when the fair market value of our stock is higher than the exercise price of the option, a Restated Plan participant generally will recognize taxable income at ordinary income tax rates equal to the excess of the fair market value of the stock on the date of exercise over the purchase price, and we (or our subsidiaries, if any) generally will be entitled to a corresponding tax deduction for compensation expense, in the amount equal to the amount by which the fair market value of the shares purchased exceeds the purchase price for the shares. Upon a subsequent sale or other disposition of the option shares, the participant will recognize a short-term or long-term capital gain or loss in the amount of the difference between the sales price of the shares and the participant's tax basis in the shares.

Upon exercising an ISO, a Restated Plan participant generally will not recognize taxable income, and we will not be entitled to a tax deduction for compensation expense. However, upon exercise, the amount by which the fair market value of the shares purchased exceeds the purchase price will be an item of adjustment for alternative minimum tax purposes. The participant will recognize taxable income upon a sale or other taxable disposition of the option shares. For federal income tax purposes, dispositions are divided into two categories: qualifying and disqualifying. A qualifying disposition generally occurs if the sale or other disposition is made more than two years after the date the option was granted and more than one year after the date the shares are transferred upon exercise. If the sale or

disposition occurs before these two periods are satisfied, then a disqualifying disposition generally will result.

Upon a qualifying disposition of ISO shares, the participant will recognize long-term capital gain in an amount equal to the excess of the amount realized upon the sale or other disposition of the shares over their purchase price. If there is a disqualifying disposition of the shares, then the excess of the fair market value of the shares on the exercise date (or, if less, the price at which the shares are sold) over their purchase price will be taxable as ordinary income to the participant. If there is a disqualifying disposition in the same year of exercise, it eliminates the item of adjustment for alternative minimum tax purposes. Any additional gain or loss recognized upon the disposition will be recognized as a capital gain or loss by the participant.

We will not be entitled to any tax deduction if the participant makes a qualifying disposition of ISO shares. If the participant makes a disqualifying disposition of the shares, we should be entitled to a tax deduction for compensation expense in the amount of the ordinary income recognized by the participant.

Upon exercising or settling a SAR, a Restated Plan participant will recognize taxable income at ordinary income tax rates, and we should be entitled to a corresponding tax deduction for compensation expense, in the amount paid or value of the shares issued upon exercise or settlement. Payments in shares will be valued at the fair market value of the shares at the time of the payment, and upon the subsequent disposition of the shares the participant will recognize a short-term or long-term capital gain or loss in the amount of the difference between the sales price of the shares and the participant's tax basis in the shares.

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Restricted Stock and Restricted Stock Units. A Restated Plan participant generally will not recognize taxable income at ordinary income tax rates and we generally will not be entitled to a tax deduction upon the grant of restricted stock or restricted stock units. Upon the termination of restrictions on restricted stock or the payment of restricted stock units, the participant will recognize taxable income at ordinary income tax rates, and we should be entitled to a corresponding tax deduction for compensation expense, in the amount paid to the participant or the amount by which the then fair market value of the shares received by the participant exceeds the amount, if any, paid for them. Upon the subsequent disposition of any shares, the participant will recognize a short-term or long-term capital gain or loss in the amount of the difference between the sales price of the shares and the participant's tax basis in the shares. However, a Restated Plan participant granted restricted stock that is subject to forfeiture or repurchase through a vesting schedule such that it is subject to a risk of forfeiture (as defined in Section 83 of the Code) may make an election under Section 83(b) of the Code to recognize taxable income at ordinary income tax rates, at the time of the grant, in an amount equal to the fair market value of the shares of common stock on the date of grant, less the amount paid, if any, for such shares. We will be entitled to a corresponding tax deduction for compensation, in the amount recognized as taxable income by the participant. If a timely Section 83(b) election is made, the participant will not recognize any additional ordinary income on the termination of restrictions on restricted stock, and we will not be entitled to any additional tax deduction.

Dividend Equivalents, Stock Payment Awards and Cash-Based Awards. A Restated Plan participant will not recognize taxable income and we will not be entitled to a tax deduction upon the grant of dividend equivalents, stock payment awards or cash-based awards until cash or shares are paid or distributed to the participant. At that time, any cash payments or the fair market value of shares that the participant receives will be taxable to the participant at ordinary income tax rates and we should be entitled to a corresponding tax deduction for compensation expense. Payments in shares will be valued at the fair market value of the shares at the time of the payment, and upon the subsequent disposition of the shares, the participant will recognize a short-term or long-term capital gain or loss in the amount of the difference between the sales price of the shares and the participant's tax basis in the shares.

Section 409A of the Code. Certain types of awards under the Restated Plan may constitute, or provide for, a deferral of compensation under Section 409A. Unless certain requirements set forth in Section 409A are complied with, holders of such awards may be taxed earlier than would otherwise be the case (e.g., at the time of vesting instead of the time of payment) and may be subject to an additional 20% federal income tax (and, potentially, certain interest penalties). To the extent applicable, the Restated Plan and awards granted under the Restated Plan will be structured and interpreted to comply with Section 409A and the Department of Treasury regulations and other interpretive guidance that may be issued pursuant to Section 409A.

Section 162(m) Limitation. In general, under Section 162(m) of the Code, income tax deductions of publicly held corporations may be limited to the extent total compensation (including base salary, annual bonus, stock option exercises and non-qualified benefits paid) for certain executive officers exceeds \$1 million (less the amount of any excess parachute payments as defined in Section 280G of the Code) in any one year. However, under Section 162(m), the deduction limit does not apply to certain performance-based compensation if an independent compensation committee determines performance goals and if the material terms of the performance-based compensation are disclosed to and approved by our stockholders. In particular, stock options and SARs will satisfy the performance-based compensation exception if the awards are made by a qualifying compensation committee, the plan sets the maximum number of shares that can be granted to any person within a specified period and the compensation is based solely on an increase in the stock price after the grant date. Specifically, the option exercise price must be equal to or greater than the fair market value of the stock subject to the award on the grant date. The Restated Plan has been structured with the intent that certain other awards granted under the Restated Plan may, in the discretion of the compensation committee, be structured so as to qualify for the qualified performance-based compensation exception to the \$1 million annual deductibility limit of Section 162(m) of the Code. However, awards granted under the

Restated Plan will be treated as qualified performance-based compensation under Section 162(m) of the Code only if the awards and the procedures associated with them comply with all requirements of Section 162(m) of the Code. There can be no assurance that compensation attributable to awards granted under the Restated Plan will be treated as qualified performance-based compensation under Section 162(m) of the Code and thus be deductible to us.

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As of March 31, 2016, each of our named executive officers and the other groups identified below have been granted the following awards under the 2014 Plan:

	Stock Options Granted	Restricted Stock Units Granted
Jonathan E. Lim, President and Chief Executive Officer	100,000	72,000
Igor Bilinsky, Ph.D., Senior Vice President, Research, Operations and General Manager, Immuno-Oncology		6,960
Valerie Harding Start, Ph.D., Senior Vice President, Chemistry, Manufacturing and Controls		7,920
All Executive Officers as a Group (8 persons)	417,360	284,880
All Non-Executive Directors as a Group (4 persons) (1)	35,000	
All Non-Executive Employees as a Group (120 persons)	1,627,922	

- (1) Our non-employee directors as a group will be eligible to receive automatic grants under the Restated Plan, as described above under Director Compensation.

All other future grants under our 2014 Plan and the Restated Plan are within the discretion of our board of directors or the compensation committee and the benefits of such grants are, therefore, not determinable.

Awards are subject to the discretion of the administrator and no determinations have been made by the administrator as to any awards that may be granted pursuant to the Restated Plan. Therefore, it is not possible to determine the benefits that will be received in the future by participants in the Restated Plan or the benefits that would have been received by such participants if the Restated Plan had been in effect in the year ended December 31, 2015.

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 approve the Restated Plan.

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT THE STOCKHOLDERS VOTE TO APPROVE THE AMENDED AND RESTATED IGNYTA, INC. 2014 INCENTIVE AWARD PLAN.

Table of Contents**PROPOSAL 3:****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, 2016 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. 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.

Independent Registered Public Accountants Fees

The following table represents aggregate fees for services rendered by our independent registered public accounting firm, Mayer Hoffman McCann P.C., related to the fiscal years ended December 31, 2015 and 2014.

	Year Ended December 31,	
	2015	2014
Audit Fees ⁽¹⁾	\$ 161,894	\$ 161,034
Audit Related Fees		
Tax Fees		
All Other Fees		
	\$ 161,894	\$ 161,034

- (1) Audit fees consist of fees and out-of-pocket expenses whether or not yet invoiced for professional services provided in connection with the audit of our annual financial statements, review of our quarterly financial statements, due diligence procedures to support comfort and/or consent letters in connection with our public offerings and the resale registration statements relating to our private placements of common stock, and related services that are normally provided in connection with statutory and regulatory filings or engagements.

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. 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 our audit committee or board of directors in accordance with this policy during the fiscal years ended December 31, 2015 and 2014. 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 3 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.

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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, 2016. 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, 2016, 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, 2016, 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, 2016 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 that, we believe, based on the information furnished to us, 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 32,366,670 shares of our common stock issued and outstanding on March 31, 2016. 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, 2016. 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⁾	3,350,000	10.35%
Cephalon, Inc. ⁽²⁾	3,000,000	9.27%
Eli Lilly and Company ⁽³⁾	2,713,000	8.38%
Broadfin Capital, LLC ⁽⁴⁾	2,256,546	6.97%
FMR LLC ⁽⁵⁾	1,962,081	6.06%
Perceptive Advisors LLC ⁽⁶⁾	1,812,060	5.60%
Armistice Capital, LLC ⁽⁷⁾	1,744,000	5.39%
<i>Directors and Executive Officers:</i>		
Jonathan E. Lim, M.D. ⁽⁸⁾	3,677,776	11.26%
Zachary Hornby ⁽⁹⁾	279,540	*
Jacob Chacko, M.D. ⁽¹⁰⁾	149,838	*
Pratik Multani, M.D. ⁽¹¹⁾	62,500	*
Matthew W. Onaitis ⁽¹²⁾	127,220	*
Igor Bilinsky, Ph.D.		*
William McCarthy		*

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Valerie Harding Start		*
James Bristol, Ph.D. ⁽¹³⁾	34,666	*
Alexander Casdin ⁽¹⁴⁾	624,351	1.93%
Heinrich Dreismann, Ph.D. ⁽¹⁵⁾	49,887	*
James Freddo, M.D. ⁽¹⁶⁾	30,581	*
All Current Directors and Executive Officers as a Group (12 persons) ⁽¹⁷⁾	5,036,359	15.10%

- (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, or Cephalon, and Teva Pharmaceutical Industries Limited, an Israel company and parent of Cephalon, or 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 filed with the SEC on November 16, 2015. Eli Lilly and Company has the sole power to dispose or direct the disposition of, and the sole power to vote, all of such shares. The address of Eli Lilly and Company is Lilly Corporate Center, Indianapolis, Indiana 46285.
- (4) Based on information disclosed in the Schedule 13G/A filed with the SEC on February 12, 2016. 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/A filed by FMR LLC and Abigail P. Johnson with the SEC on February 12, 2016. FMR LLC has the sole power to dispose or direct the disposition of all of such shares and the sole power to vote or direct the vote of 500 of such shares. Neither FMR LLC 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) Based on information disclosed in the Schedule 13G filed with the SEC on February 12, 2016. Perceptive Advisors LLC and Joseph Edelman share voting and dispositive power with respect to the shares. Mr. Edelman is the managing member of Perceptive Advisors LLC. The address of Perceptive Advisors LLC and Mr. Edelman is 499 Park Avenue, 25th Floor, New York, New York 10022.
- (7) Based on information disclosed in the Schedule 13G filed with the SEC on March 24, 2016. Armistice Capital, LLC, Armistice Capital Master Fund Ltd. and Steven Boyd share voting and dispositive power with respect to the shares. Mr. Boyd is the Managing Member of Armistice Capital, LLC and Director of Armistice Capital Master Fund Ltd. Armistice Capital, LLC and Mr. Boyd disclaim beneficial ownership of the shares except to the extent of their pecuniary interests therein. The address of Armistice Capital, LLC and Mr. Boyd is 510 Madison Avenue, 22nd Floor, New York, New York 10022 and the address of Armistice Capital Master Fund Ltd. is 20 Genesis Close, P.O. Box 314, Grand Cayman KY 1-1104, Cayman Islands.
- (8) Includes (a) 3,350,000 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, and (b) 302,776 shares underlying options held by Dr. Lim and exercisable within 60 days following March 31, 2016.
- (9) Includes 224,679 shares underlying options held by Mr. Hornby and exercisable within 60 days following March 31, 2016.
- (10) Includes 133,400 shares underlying options held by Dr. Chacko and exercisable within 60 days following March 31, 2016 March 31, 2016.
- (11) Represents 62,500 shares underlying options held by Dr. Multani and exercisable within 60 days following March 31, 2016.
- (12) Represents 127,220 shares underlying options held by Mr. Onaitis and exercisable within 60 days following March 31, 2016.
- (13)

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- Includes 17,999 shares underlying options held by Dr. Bristol and exercisable within 60 days following March 31, 2016
- (14) Includes 49,887 shares underlying options held by Mr. Casdin and exercisable within 60 days following March 31, 2016. Also includes 474,464 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.
- (15) Represents 49,887 shares underlying options held by Dr. Dreismann and exercisable within 60 days following March 31, 2016.
- (16) Represents 27,581 shares underlying options held by Dr. Freddo and exercisable within 60 days following March 31, 2016.
- (17) Includes 995,929 shares underlying options exercisable within 60 days following March 31, 2016.

Table of Contents**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, 2016.

Name	Age	Position
<i>Executive Officers:</i>		
Jonathan E. Lim, M.D.	44	President, Chief Executive Officer and Chairman of the Board
Zachary Hornby	37	Chief Operating Officer
Igor Bilinsky, Ph.D.		Senior Vice President, Research Operations and General Manager, 43 Immuno-Oncology
Jacob Chacko, M.D.	37	Chief Financial Officer
William McCarthy	44	Chief Business Officer
Pratik Multani, M.D.	49	Chief Medical Officer
Matthew W. Onaitis	45	General Counsel and Secretary
Valerie Harding Start, Ph.D.	56	Senior Vice President, Chemistry, Manufacturing, and Controls

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 under Directors, Executive Officers and Corporate Governance Board of Directors.

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.

Igor Bilinsky, Ph.D. Dr. Bilinsky joined us in September 2015 as General Manager, Immuno-Oncology and Senior Vice President, Special Operations and became Senior Vice President, Research Operations and General Manager, Immuno-Oncology in February 2016. Prior to joining Ignyta, Dr. Bilinsky was Senior Vice President, Corporate Development at Vical Incorporated, a position he held since 2010. Dr. Bilinsky was previously Vice President, Business Development and Special Operations at Halozyme Therapeutics from 2008 to 2010, after joining Halozyme in 2007 as Executive Director, Corporate Development and Special Operations. From 2005 to 2007, Dr. Bilinsky was Chief Executive Officer of Androclus Therapeutics, a privately-held biotechnology company developing novel therapeutics for autoimmune and inflammatory diseases. He joined Androclus in 2004 as Chief Operating Officer.

From 1999 to 2004, Dr. Bilinsky served in positions of increasing responsibility as a management consultant, project leader and ultimately as principal in the healthcare practice of the Boston Consulting Group, where he advised companies in the biotechnology, pharmaceutical and life science industries on business strategy, operational performance and mergers and acquisitions. Prior to joining the Boston Consulting Group, Dr. Bilinsky worked in research positions at Symyx Technologies and the Massachusetts Institute of Technology, or MIT, Lincoln Laboratory. Dr. Bilinsky received his B.S. degree in physics from the Moscow Institute of Physics and Technology and his Ph.D. degree in physics from MIT.

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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.

William McCarthy. Mr. McCarthy joined us in December 2015 as Chief Business Officer. Prior to joining Ignyta, from April 2014 to November 2015, Mr. McCarthy was Vice President, Corporate and Business Development at Foundation Medicine, Inc. Prior to Foundation Medicine, Mr. McCarthy held positions of increasing responsibility at Halozyme Therapeutics from 2007 to 2014, including Executive Director, Business Development and Senior Director, Marketing and New Product Planning. From 2006 to 2007, Mr. McCarthy was Associate Director, Finance and Business Planning at Biogen Idec, and from 2005 to 2006, he was Associate Director, New Product Planning at Neurocrine Biosciences. Prior to Neurocrine, Mr. McCarthy spent ten years as a management consultant at IMS Consulting Group, Deloitte Consulting and Cambridge Pharma Consultancy. Mr. McCarthy holds an M.B.A. from London Business School and a B.A. in economics from the University of Exeter.

Pratik Multani, M.D. Dr. Multani joined us in February 2015 as Chief Medical Officer. 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.

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.

Valerie Harding Start, Ph.D. Dr. Harding Start joined us in September 2015 as Senior Vice President, Chemistry, Manufacturing, and Controls. Prior to joining Ignyta, Dr. Harding spent more than 25 years in positions of increasing responsibility at Pfizer, including Vice President, Product Differentiation, Vice President, Drug Product Design and Vice President, Pharmaceutical Development. Prior to Pfizer, Dr. Harding spent three years as a Scientist and Team leader at Boots and Company, preceded by three years as a Tutor and Researcher at the University of Nottingham School of Pharmacy. Dr. Harding holds a Ph.D. in Pharmaceutical Microbiology from the University of Nottingham and a B.S. in Pharmacy from the University of London.

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, 2015 and 2014 by our named executive officers, which consisted of (i) our principal executive officer, and (ii) our two next most highly compensated executive officers other than our principal executive officer who were serving as executive officers as of December 31, 2015 and whose total compensation exceeded \$100,000 during the year ended December 31, 2015.

Name and Principal Position	Year ended December 31,	Salary (\$)	Bonus (\$)	Option	Non-Equity	All	Total (\$)
				Awards (\$) ⁽³⁾	Plan Compensation (\$) ⁽⁴⁾	other Compensation (\$)	
Jonathan E. Lim, M.D. <i>President and Chief Executive Officer</i>	2015	505,083		414,593	351,360		1,271,036
	2014	403,333	205,000 ⁽⁵⁾				608,333
Igor Bilinsky, Ph.D ⁽¹⁾ <i>Senior Vice President, Research Operations and General Manager, Immuno-Oncology</i>	2015	96,635		2,057,000	40,803	45,157 ⁽⁶⁾	2,239,595
Valerie Harding Start, Ph.D ⁽²⁾ <i>Senior Vice President, Chemistry, Manufacturing and Controls</i>	2015	87,596		1,773,512	41,580		1,902,688

- (1) Dr. Bilinsky commenced employment with Ignyta in September 2015 with an annual base salary of \$335,000, of which he earned a pro-rated amount in 2015 as reflected in the table above based on the term of his service as an employee of Ignyta during that fiscal year.
- (2) Dr. Harding Start commenced employment with Ignyta in September 2015 with an annual base salary of \$300,000, of which she earned a pro-rated amount in 2015 as reflected in the table above based on the term of her service as an employee of Ignyta during that fiscal year.
- (3) 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 11 in our financial statements for the fiscal year ended December 31, 2015 included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2015 filed on March 14, 2016.
- (4) Each named executive officer is eligible for a performance bonus that is based 100% upon the achievement of certain corporate performance goals and objectives. Bonuses are set based on the executive officer's base salary as of the end of the applicable calendar year and are paid out in the first quarter of the following year. The target levels for executive bonuses are currently 50% of base salary for our chief executive officer and 35% of base salary for our other named executive officers. Each year our board of directors sets corporate goals and milestones for the year, which generally relate to factors such as clinical and non-clinical development, business

- development and finance and operations. The compensation committee determines the level of achievement of the corporate goals following each year. This achievement level is then applied to each named executive officer's target bonus to determine that year's total bonus opportunity, with the potential for the compensation committee to exercise discretion in setting final bonus numbers to account for superior or substandard performance of any individual. For 2015, the bonus amounts were based on an achievement level of 120% with respect to the corporate goals and resulted in bonus percentages of 72%, 42% and 42%, respectively, of Dr. Lim's, Dr. Bilinsky's and Dr. Harding Start's respective annual base salaries in effect during that fiscal year, with Dr. Bilinsky's and Dr. Harding Start's bonuses pro-rated based on the terms of their service as employees of Ignyta during 2015.
- (5) For 2014, such amount was paid in 2015 as a discretionary bonus based on performance during the fiscal year ended December 31, 2014, in an amount equal to 75% of Dr. Lim's annual base salary in effect during that fiscal year.
 - (6) Includes a signing bonus of \$20,000; this amount 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 has a formal employment agreement with us, and none of them 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, 2015.

Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of Market	
					Shares or Units of Stock that have not Vested (#)	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>	24,305 ⁽¹⁾ 200,000 ⁽²⁾	9,028 ⁽¹⁾ 200,000 ⁽²⁾ 100,000 ⁽³⁾	\$ 0.60 \$ 6.00 \$ 6.58	2/14/2023 12/16/2023 1/07/2025
Igor Bilinsky, Ph.D. <i>Senior Vice President, Research Operations and General Manager, Immuno-Oncology</i>		200,000 ⁽⁴⁾	\$ 16.75	9/16/2025
Valerie Harding Start, Ph.D. <i>Senior Vice President, Chemistry, Manufacturing and Controls</i>		200,000 ⁽⁵⁾	\$ 14.47	9/01/2025

- (1) 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.
- (2) 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.

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- (3) The option award has a grant date of January 8, 2015 and vests pursuant to the following schedule: 25% of the shares subject to the award vested on January 8, 2016, 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 September 17, 2015 and vests pursuant to the following schedule: 25% of the shares subject to the award vest on September 17, 2016, 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 September 2, 2015 and vests pursuant to the following schedule: 25% of the shares subject to the award vest on September 1, 2016, and 1/48th of the shares subject to the award vest on each monthly anniversary thereafter.

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

In December 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 amended the Severance Plan on January 7, 2016. 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.

Pursuant to the Severance Plan, if, at any time during a specified period of time prior to a Change in Control 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 during a specified period of time prior to a Change in Control 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) or the Covered Employee resigns for Good Reason (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:

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 2.0 times annualized Base Pay and 2.0 times Target Bonus (each as defined in the Severance Plan) paid in equal installments over the 24-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

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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 24 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 will automatically terminate on December 16, 2019 unless otherwise extended by our board of directors.

Equity Compensation Plan Information

The following table summarizes securities available under our equity compensation plans as of December 31, 2015 (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)	393,021	\$ 2.41	
2014 Incentive Award Plan (2)	1,947,398	\$ 8.81	930,558

Equity compensation plans not approved by security holders:

Amended and Restated 2011 Stock Incentive Plan (1) (3)	974,521	\$	6.98	
Employment Inducement Incentive Award Plan (4)	680,000	\$	7.33	
2015 Employment Inducement Incentive Award Plan (5)	1,256,000	\$	14.48	744,000

- (1) The material features of the Amended and Restated 2011 Stock Incentive Plan are described in footnote 11 to our financial statements for the fiscal year ended December 31, 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 11 to our financial statements for the fiscal year ended December 31, 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.

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- (4) The material features of the Employment Inducement Incentive Award Plan are described in footnote 11 to our financial statements for the fiscal year ended December 31, 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.
- (5) The material features of the 2015 Employment Inducement Incentive Award Plan are described in footnote 11 to our financial statements for the fiscal year ended December 31, 2015.

Policies Regarding Tax Deductibility of Compensation

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 Internal Revenue Code. The non-performance based compensation paid in cash to our executive officers for the 2013, 2014 and 2015 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.

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.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Except as described below and except for compensation for employment or services provided in other roles, the following is a description of transactions since January 1, 2015 to which we are or were a party in which the amount involved exceeds \$120,000, 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. All of the transactions described in this section that were consummated prior to February 28, 2014 occurred prior to the formation of our audit committee and the adoption of our audit committee charter.

Asset Acquisition

In March 2015, under the terms of an asset purchase agreement Cephalon, Inc., or Cephalon, we acquired certain assets relating to four oncology development programs. As consideration under the asset purchase agreement, we issued to Cephalon 1,500,000 unregistered shares of our common stock and assumed certain other third-party royalty obligations. Concurrent with the asset purchase agreement with Cephalon, we issued and sold 4,158,750 shares of common stock at a price of \$10.00 per share in a registered direct offering. Cephalon purchased 1,500,000 shares in the registered direct offering.

In connection with the asset purchase agreement, we entered into a registration rights agreement with Cephalon pursuant to which we agreed to register the shares of our common stock held by Cephalon. We filed a registration statement with the SEC relating to such shares, and the SEC has declared the registration statement effective.

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Registered Direct Offering

On March 17, 2015, we issued an aggregate of 4,158,750 shares of our common stock in a registered direct offering at a purchase price per share of \$10.00 per share. Reneo Capital SPV I LP purchased 408,750 of these shares, for an aggregate purchase price of \$4,087,500. Alexander Casdin, a member of our board of directors, is the Managing Member of Reneo GP, LLC, which is the General Partner of Reneo Capital SPV I LP.

License Agreement

In November 2015, under the terms of a license, development and commercialization agreement with Eli Lilly and Company, or Lilly, pursuant to which we received exclusive, global rights to develop and commercialize pharmaceutical products under certain licensed technology, we issued, as partial consideration under such agreement, 1,213,000 unregistered shares of common stock in a private placement. Also in November 2015, concurrent with our license, development and commercialization agreement with Lilly, we issued to Lilly in a private placement 1,500,000 unregistered shares of common stock at a price of \$20.00 per share.

We also entered into a registration rights agreement with Lilly pursuant to which we agreed to register the resale of the shares of the Company's common stock held by Lilly. We filed a registration statement with the SEC relating to such shares, and the SEC has declared the registration statement effective.

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 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 Securities Exchange Act of 1934, or the Exchange Act, directors, executive officers and beneficial owners of 10% or more of our common stock are required to file with the SEC on a timely basis initial reports of beneficial ownership and reports of changes regarding their beneficial ownership of our common stock.

Officers, directors and 10% beneficial owners are required by SEC regulations to furnish us with copies of all Section 16(a) forms that they file.

Based solely on our review of the copies of such forms received and the written representations from certain reporting persons, we have determined that no officer, director or 10% beneficial owner, or any other person subject to Section 16(a) of the Exchange Act, known to us was delinquent with respect to their reporting obligations as set forth in Section 16(a) of the Exchange Act during the fiscal year ended December 31, 2015, except for a single late Form 4 for Alexander Casdin, a director, reporting the purchase of shares of our common stock by Reneo Capital SPV I LP. Alexander Casdin is the Managing Member of Reneo GP, LLC, which is the General Partner of Reneo Capital SPV I LP.

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STOCKHOLDER PROPOSALS

Proposals of stockholders intended to be presented at our annual meeting of stockholders to be held in 2017 must be received by us no later than December 30, 2016, 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 2016 annual meeting of stockholders. Therefore, to be presented at our 2017 annual meeting of stockholders, such a proposal must be received by us no earlier than February 13, 2017 and no later than March 15, 2017. However, if the date of the annual meeting is 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 2017 annual meeting may exercise discretionary voting power regarding any such proposal. Stockholders are also advised to review our amended and restated bylaws which also specify requirements as to the form and content of a stockholder's notice.

ANNUAL REPORT

Our annual report for the fiscal year ended December 31, 2015 will be mailed to stockholders of record on or about April 29, 2016. 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 29, 2016

IGNYTA, INC.

2014 INCENTIVE AWARD PLAN

(As Amended and Restated as of June 13, 2016)

ARTICLE 1.

PURPOSE

The purpose of the Ignyta, Inc. 2014 Incentive Award Plan (as it may be amended or restated from time to time, the Plan) is to promote the success and enhance the value of Ignyta, Inc. (the Company) by linking the individual interests of the members of the Board, Employees, and Consultants to those of Company stockholders and by providing such individuals with an incentive for outstanding performance to generate superior returns to Company stockholders. The Plan is further intended to provide flexibility to the Company in its ability to motivate, attract, and retain the services of members of the Board, Employees, and Consultants upon whose judgment, interest, and special effort the successful conduct of the Company's operation is largely dependent.

ARTICLE 2.

DEFINITIONS AND CONSTRUCTION

Wherever the following terms are used in the Plan they shall have the meanings specified below, unless the context clearly indicates otherwise. The singular pronoun shall include the plural where the context so indicates.

2.1 Administrator shall mean the entity that conducts the general administration of the Plan as provided in Article 12. With reference to the duties of the Committee under the Plan which have been delegated to one or more persons pursuant to Section 12.6, or as to which the Board has assumed, the term Administrator shall refer to such person(s) unless the Committee or the Board has revoked such delegation or the Board has terminated the assumption of such duties.

2.2 Applicable Accounting Standards shall mean Generally Accepted Accounting Principles in the United States, International Financial Reporting Standards or such other accounting principles or standards as may apply to the Company's financial statements under United States federal securities laws from time to time.

2.3 Applicable Law shall mean any applicable law, including without limitation: (i) provisions of the Code, the Securities Act, the Exchange Act and any rules or regulations thereunder; (ii) corporate, securities, tax or other laws, statutes, rules, requirements or regulations, whether federal, state, local or foreign; and (iii) rules of any securities exchange or automated quotation system on which the Shares are listed, quoted or traded.

2.4 Award shall mean an Option, a Restricted Stock award, a Restricted Stock Unit award, a Performance Award, a Dividend Equivalents award, a Stock Payment award or a Stock Appreciation Right, which may be awarded or granted under the Plan (collectively, Awards).

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2.5 Award Agreement shall mean any written notice, agreement, terms and conditions, contract or other instrument or document evidencing an Award, including through electronic medium, which shall contain such terms and conditions with respect to an Award as the Administrator shall determine consistent with the Plan.

2.6 Board shall mean the Board of Directors of the Company.

2.7 Cause shall mean (a) the Administrator's determination that the Holder failed to substantially perform the Holder's duties (other than any such failure resulting from the Holder's Disability); (b) the Administrator's determination that the Holder failed to carry out, or comply with any lawful and reasonable directive of the Board or the Holder's immediate supervisor; (c) the Holder's conviction, plea of no contest, plea of nolo contendere, or imposition of unadjudicated probation for any felony, indictable offense or crime involving moral turpitude; (d) the Holder's unlawful use (including being under the influence) or possession of illegal drugs on the premises of the Company or any of its Subsidiaries or while performing the Holder's duties and responsibilities; or (e) the Holder's commission of an act of fraud, embezzlement, misappropriation, misconduct, or breach of fiduciary duty against the Company or any of its Subsidiaries. Notwithstanding the foregoing, if the Holder is a party to a written employment or consulting agreement with the Company (or its Subsidiary) in which the term "cause" is defined, then "Cause" shall be as such term is defined in the applicable written employment or consulting agreement.

2.8 Change in Control shall mean and includes each of the following:

(a) A transaction or series of transactions (other than an offering of Common Stock to the general public through a registration statement filed with the Securities and Exchange Commission) whereby any person or related group of persons (as such terms are used in Sections 13(d) and 14(d)(2) of the Exchange Act) (other than the Company, any of its Subsidiaries, an employee benefit plan maintained by the Company or any of its Subsidiaries or a person that, prior to such transaction, directly or indirectly controls, is controlled by, or is under common control with, the Company) directly or indirectly acquires beneficial ownership (within the meaning of Rule 13d-3 under the Exchange Act) of securities of the Company possessing more than 50% of the total combined voting power of the Company's securities outstanding immediately after such acquisition; or

(b) During any period of two consecutive years, individuals who, at the beginning of such period, constitute the Board together with any new Director(s) (other than a Director designated by a person who shall have entered into an agreement with the Company to effect a transaction described in Section 2.8(a) or Section 2.8(c)) whose election by the Board or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the Directors then still in office who either were Directors at the beginning of the two-year period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof; or

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(c) The consummation by the Company (whether directly involving the Company or indirectly involving the Company through one or more intermediaries) of (x) a merger, consolidation, reorganization, or business combination or (y) a sale or other disposition of all or substantially all of the Company's assets in any single transaction or series of related transactions or (z) the acquisition of assets or stock of another entity, in each case other than a transaction:

(i) which results in the Company's voting securities outstanding immediately before the transaction continuing to represent (either by remaining outstanding or by being converted into voting securities of the Company or the person that, as a result of the transaction, controls, directly or indirectly, the Company or owns, directly or indirectly, all or substantially all of the Company's assets or otherwise succeeds to the business of the Company (the Company or such person, the Successor Entity)) directly or indirectly, at least a majority of the combined voting power of the Successor Entity's outstanding voting securities immediately after the transaction, and

(ii) after which no person or group beneficially owns voting securities representing 50% or more of the combined voting power of the Successor Entity; provided, however, that no person or group shall be treated for purposes of this Section 2.8(c)(ii) as beneficially owning 50% or more of the combined voting power of the Successor Entity solely as a result of the voting power held in the Company prior to the consummation of the transaction; or

(d) The Company's stockholders approve a liquidation or dissolution of the Company.

In addition, if a Change in Control constitutes a payment event with respect to any portion of an Award that provides for the deferral of compensation and is subject to Section 409A of the Code, the transaction or event described in subsection (a), (b), (c) or (d) with respect to such Award (or portion thereof) must also constitute a change in control event, as defined in Treasury Regulation Section 1.409A-3(i)(5) to the extent required by Section 409A.

Notwithstanding the foregoing, a transaction shall not constitute a Change in Control if its purpose is to change the state of the Company's incorporation.

The Committee shall have full and final authority, which shall be exercised in its discretion, to determine conclusively whether a Change in Control of the Company has occurred pursuant to the above definition, and the date of the occurrence of such Change in Control and any incidental matters relating thereto; provided that any exercise of authority in conjunction with a determination of whether a Change in Control is a change in control event as defined in Treasury Regulation Section 1.409A-3(i)(5) shall be consistent with such regulation.

2.9 Code shall mean the Internal Revenue Code of 1986, as amended from time to time, together with the regulations and official guidance promulgated thereunder.

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2.10 Committee shall mean the Compensation Committee of the Board, or another committee or subcommittee of the Board or the Compensation Committee, appointed as provided in Section 12.1.

2.11 Common Stock shall mean the common stock of the Company, par value \$0.00001 per share.

2.12 Company shall have the meaning set forth in Article 1.

2.13 Consultant shall mean any consultant or adviser engaged to provide services to the Company or any Subsidiary that qualifies as a consultant under the applicable rules of the Securities and Exchange Commission for registration of shares on a Form S-8 Registration Statement.

2.14 Covered Employee shall mean any Employee who is, or could be, a covered employee within the meaning of Section 162(m) of the Code.

2.15 Director shall mean a member of the Board, as constituted from time to time.

2.16 Disability shall mean that the Holder is either (a) unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than twelve months, or (b) by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than twelve months, receiving income replacement benefits for a period of not less than three months under a long-term disability income plan, if any, covering employees of the Company. For purposes of the Plan, a Holder shall be deemed to have incurred a Disability if the Holder is determined to be totally disabled by the Social Security Administration or in accordance with the applicable disability insurance program of the Company; provided that the definition of disability applied under such disability insurance program complies with the requirements of this definition.

2.17 Dividend Equivalent shall mean a right to receive the equivalent value (in cash or Shares) of dividends paid on Shares, awarded under Section 9.2.

2.18 DRO shall mean a domestic relations order as defined by the Code or Title I of the Employee Retirement Income Security Act of 1974, as amended from time to time, or the rules thereunder.

2.19 Effective Date shall mean the date this amended and restated Plan is approved by the Company's stockholders.

2.20 Eligible Individual shall mean any person who is an Employee, a Consultant or a Non-Employee Director, as determined by the Administrator.

2.21 Employee shall mean any officer or other employee (as determined in accordance with Section 3401(c) of the Code) of the Company or of any Subsidiary.

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2.22 Equity Restructuring shall mean a nonreciprocal transaction between the Company and its stockholders, such as a stock dividend, stock split, spin-off, rights offering or recapitalization through a large, nonrecurring cash dividend, that affects the number or kind of Shares (or other securities of the Company) or the share price of Common Stock (or other securities) and causes a change in the per share value of the Common Stock underlying outstanding Awards.

2.23 Exchange Act shall mean the Securities Exchange Act of 1934, as amended from time to time.

2.24 Expiration Date shall have the meaning given to such term in Section 13.1.

2.25 Fair Market Value shall mean, as of any given date, the value of a Share determined as follows:

(a) If the Common Stock is listed on any (i) established securities exchange (such as the New York Stock Exchange or the NASDAQ Stock Market), (ii) national market system or (iii) automated quotation system, its Fair Market Value shall be the closing sales price for a Share as quoted on such exchange or system for such date or, if there is no closing sales price for a Share on the date in question, the closing sales price for a Share on the last preceding date for which such quotation exists, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable;

(b) If the Common Stock is not listed on an established securities exchange, national market system or automated quotation system, but the Common Stock is regularly quoted by a recognized securities dealer, its Fair Market Value shall be the mean of the high bid and low asked prices for such date or, if there are no high bid and low asked prices for a Share on such date, the high bid and low asked prices for a Share on the last preceding date for which such information exists, as reported in *The Wall Street Journal* or such other source as the Administrator deems reliable; or

(c) If the Common Stock is neither listed on an established securities exchange, national market system or automated quotation system nor regularly quoted by a recognized securities dealer, its Fair Market Value shall be established by the Administrator in good faith.

2.26 Full Value Award shall mean any Award that is settled by the issuance of Shares other than (i) an Option, (ii) a Stock Appreciation Right or (iii) any other Award which has a per-share exercise or purchase price that is at least equal to 100% of the Fair Market Value per share of Common Stock on the date of grant of such Award.

2.27 Good Reason shall mean (a) a change in the Holder's position with the Company (or its Subsidiary employing the Holder) that materially reduces the Holder's authority, duties or responsibilities or the level of management to which he or she reports, (b) a material diminution in the Holder's level of compensation (including base salary, fringe benefits and target bonuses under any corporate performance-based incentive programs) or (c) a relocation of the Holder's place of employment by more than 50 miles, provided that such

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change, reduction or relocation is effected by the Company (or its Subsidiary employing the Holder) without the Holder's consent. Notwithstanding the foregoing, if Holder is a party to a written employment or consulting agreement with the Company (or its Subsidiary) in which the term "good reason" is defined, then "Good Reason" shall be as such term is defined in the applicable written employment or consulting agreement.

2.28 Greater Than 10% Stockholder shall mean an individual then owning (within the meaning of Section 424(d) of the Code) more than 10% of the total combined voting power of all classes of stock of the Company or any subsidiary corporation (as defined in Section 424(f) of the Code) or parent corporation thereof (as defined in Section 424(e) of the Code).

2.29 Holder shall mean a person who has been granted an Award.

2.30 Incentive Stock Option shall mean an Option that is intended to qualify as an incentive stock option and conforms to the applicable provisions of Section 422 of the Code.

2.31 Independent Director shall mean a Director of the Company who is not an Employee of the Company and who qualifies as "independent" within the meaning of NASDAQ Stock Market Rule 5605(a)(2), or any successor rule, if the Company's securities are traded on the NASDAQ Stock Market, and/or the applicable requirements of any other established stock exchange on which the Company's securities are traded, as applicable, as such rules and requirements may be amended from time to time.

2.32 Inducement Plans shall mean, collectively, (a) the Ignyta, Inc. Employment Inducement Incentive Award Plan and (b) the Ignyta, Inc. 2015 Employment Inducement Incentive Award Plan.

2.33 Non-Employee Director shall mean a Director of the Company who qualifies as a "Non-Employee Director" as defined in Rule 16b-3(b)(3) of the Exchange Act, or any successor definition.

2.34 Non-Employee Director Compensation Program shall have the meaning set forth in Section 4.6.

2.35 Non-Qualified Stock Option shall mean an Option that is not an Incentive Stock Option.

2.36 Option shall mean a right to purchase Shares at a specified exercise price, granted under Article 5. An Option shall be either a Non-Qualified Stock Option or an Incentive Stock Option; provided, however, that Options granted to Non-Employee Directors and Consultants shall only be Non-Qualified Stock Options.

2.37 Option Term shall have the meaning set forth in Section 6.6.

2.38 Original Effective Date shall mean June 11, 2014, the date the original 2014 Incentive Award Plan was approved by the stockholders of the Company and became effective.

2.39 Parent shall mean any entity (other than the Company), whether domestic or foreign, in an unbroken chain of entities ending with the Company if each of the entities other than the Company beneficially owns, at the time of the determination, securities or interests representing at least 50% of the total combined voting power of all classes of securities or interests in one of the other entities in such chain.

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2.40 Performance Award shall mean a cash bonus award, stock bonus award, performance award or other incentive award that is paid in cash, Shares or a combination of both, awarded under Section 9.1.

2.41 Performance-Based Compensation shall mean any compensation that is intended to qualify as performance-based compensation as described in Section 162(m)(4)(C) of the Code.

2.42 Performance Criteria shall mean the criteria (and adjustments) that the Committee selects for an Award for purposes of establishing the Performance Goal or Performance Goals for a Performance Period, determined as follows:

(a) The Performance Criteria that shall be used to establish Performance Goals are limited to the following: (i) net earnings (either before or after one or more of (A) interest, (B) taxes, (C) depreciation and (D) amortization); (ii) gross or net sales or revenue; (iii) net income (either before or after taxes); (iv) adjusted net income; (v) operating earnings or profit; (vi) cash flow (including, but not limited to, operating cash flow and free cash flow); (vii) return on assets; (viii) return on capital; (ix) return on stockholders' equity; (x) total stockholder return; (xi) return on sales; (xii) gross or net profit or operating margin; (xiii) operating or other costs and expenses; (xiv) improvements in expense levels; (xv) working capital; (xvi) earnings per share; (xvii) adjusted earnings per share; (xviii) price per share of Common Stock; (xix) regulatory body approval for commercialization of a product; (xx) implementation or completion of critical projects; (xxi) market share; (xxii) economic value; (xxiii) comparisons with various stock market indices; (xxiv) capital raised in financing transactions or other financing milestones; (xxv) stockholders' equity; (xxvi) market recognition (including but not limited to awards and analyst ratings); (xxvii) financial ratios; and (xxviii) implementation, completion or attainment of objectively determinable objectives relating to research, development, regulatory, commercial, or strategic milestones or developments; in each case as determined in accordance with Applicable Accounting Standards, if applicable, any of which may be measured either in absolute terms or as compared to any incremental increase or decrease or as compared to results of a peer group or to market performance indicators or indices.

(b) The Administrator, in its sole discretion, may provide that one or more objectively determinable adjustments shall be made to one or more of the Performance Goals. Such adjustments may include one or more of the following: (i) items related to a change in accounting principle; (ii) items relating to financing activities; (iii) expenses for restructuring or productivity initiatives; (iv) other non-operating items; (v) items related to acquisitions; (vi) items attributable to the business operations of any entity acquired by the Company during the Performance Period; (vii) items related to the disposal of a business or segment of a business; (viii) items related to discontinued operations that do not qualify as a segment of a business under Applicable Accounting Standards; (ix) items attributable to any stock dividend, stock split, combination or exchange of stock occurring during the Performance Period; (x) any other items of significant income or expense that are determined to be appropriate adjustments; (xi) items relating to unusual or extraordinary corporate transactions, events or developments; (xii) items

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related to amortization of acquired intangible assets; (xiii) items that are outside the scope of the Company's core, on-going business activities; (xiv) items related to acquired in-process research and development; (xv) items relating to changes in tax laws; (xvi) items relating to major licensing or partnership arrangements; (xvii) items relating to asset impairment charges; (xviii) items relating to gains or losses for litigation, arbitration and contractual settlements; or (xix) items relating to any other unusual or nonrecurring events or changes in Applicable Law, accounting principles or business conditions. For all Awards intended to qualify as Performance-Based Compensation, such determinations shall be made within the time prescribed by, and otherwise in compliance with, Section 162(m) of the Code.

2.43 Performance Goals shall mean, for a Performance Period, one or more goals established in writing by the Administrator for the Performance Period based upon one or more Performance Criteria. Depending on the Performance Criteria used to establish Performance Goals, Performance Goals may be expressed in terms of overall Company performance or the performance of a Subsidiary, division, business unit, or an individual. The achievement of each Performance Goal shall be determined, to the extent applicable, with reference to Applicable Accounting Standards.

2.44 Performance Period shall mean one or more periods of time, which may be of varying and overlapping durations, as the Administrator may select, over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Holder's right to, and the payment of, an Award.

2.45 Performance Stock Unit shall mean a Performance Award awarded under Section 9.1 which is denominated in units of value including dollar value of Shares.

2.46 Permitted Transferee shall mean, with respect to a Holder, any family member of the Holder, as defined in the instructions to the Form S-8 Registration Statement under the Securities Act, or any other transferee specifically approved by the Administrator after taking into account Applicable Law.

2.47 Plan shall mean this amended and restated Ignyta, Inc. 2014 Incentive Award Plan, as it may be further amended from time to time. This amended and restated Plan was adopted by the Board effective April 7, 2016, subject to approval by the stockholders of the Company.

2.48 Prior Plan shall mean the Ignyta, Inc. Amended and Restated 2011 Stock Incentive Plan, as amended.

2.49 Prior Plan Option shall mean a stock option award outstanding under the Prior Plan as of the Effective Date.

2.50 Restricted Stock shall mean Common Stock awarded under Article 7 that is subject to certain restrictions and may be subject to risk of forfeiture or repurchase.

2.51 Restricted Stock Unit shall mean the right to receive Shares or cash awarded under Article 8.

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2.52 Securities Act shall mean the Securities Act of 1933, as amended.

2.53 Shares shall mean shares of Common Stock.

2.54 Stock Appreciation Right shall mean a stock appreciation right granted under Article 10.

2.55 Stock Appreciation Right Term shall have the meaning set forth in Section 10.4.

2.56 Stock Payment shall mean (a) a payment in the form of Shares, or (b) an option or other right to purchase Shares, as part of a bonus, deferred compensation or other arrangement, awarded under Section 9.3.

2.57 Subsidiary shall mean any entity (other than the Company), whether domestic or foreign, in an unbroken chain of entities beginning with the Company if each of the entities other than the last entity in the unbroken chain beneficially owns, at the time of the determination, securities or interests representing at least 50% of the total combined voting power of all classes of securities or interests in one of the other entities in such chain.

2.58 Substitute Award shall mean an Award granted under the Plan upon the assumption of, or in substitution for, outstanding equity awards granted by a company or other entity in connection with a corporate transaction, such as a merger, combination, consolidation or acquisition of property or stock; provided, however, that in no event shall the term Substitute Award be construed to refer to an award made in connection with the cancellation and repricing of an Option or Stock Appreciation Right.

2.59 Termination of Service shall mean:

(a) As to a Consultant, the time when the engagement of a Holder as a Consultant to the Company or a Subsidiary is terminated for any reason, with or without cause, including, without limitation, by resignation, discharge, death, disability or retirement, but excluding terminations where the Consultant simultaneously commences or remains in employment or service with the Company or any Subsidiary.

(b) As to a Non-Employee Director, the time when a Holder who is a Non-Employee Director ceases to be a Director for any reason, including, without limitation, a termination by resignation, failure to be elected, death, disability or retirement, but excluding terminations where the Holder simultaneously commences or remains in employment or service with the Company or any Subsidiary.

(c) As to an Employee, the time when the employee-employer relationship between a Holder and the Company or any Subsidiary is terminated for any reason, including, without limitation, a termination by resignation, discharge, death, disability or retirement; but excluding terminations where the Holder simultaneously commences or remains in employment or service with the Company or any Subsidiary.

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The Administrator, in its discretion, shall determine the effect of all matters and questions relating to any Termination of Service, including, without limitation, the question of whether a Termination of Service resulted from a discharge for cause and all questions of whether particular leaves of absence constitute a Termination of Service; provided, however, that, with respect to Incentive Stock Options, unless the Administrator otherwise provides in the terms of the Award Agreement or otherwise, or as otherwise required by Applicable Law, a leave of absence, change in status from an employee to an independent contractor or other change in the employee-employer relationship shall constitute a Termination of Service (and result in such Incentive Stock Option ceasing to be treated as such for tax purposes and to instead be treated as a Non-Qualified Stock Option) only if, and to the extent that, such leave of absence, change in status or other change interrupts employment for the purposes of Section 422(a)(2) of the Code and the then-applicable regulations and revenue rulings under said Section. For purposes of the Plan, a Holder's employee-employer relationship or consultancy relationship shall be deemed to be terminated in the event that the Subsidiary employing or contracting with such Holder ceases to remain an Subsidiary following any merger, sale of stock or other corporate transaction or event (including, without limitation, a spin-off).

ARTICLE 3.

SHARES SUBJECT TO THE PLAN

3.1 Number of Shares.

(a) Subject to Sections 3.1(b) and 13.2, the aggregate number of Shares which may be issued or transferred pursuant to Awards under the Plan is the sum of (i) 6,000,000 Shares, plus (ii) the number of Shares subject to any Prior Plan Option to the extent such Prior Plan Option was outstanding as of the Original Effective Date and such Shares become available for issuance under the Plan pursuant to Section 3.1(b) below thereafter; provided, however, that in no event shall the number of Shares which shall become available for issuance or transfer pursuant to Awards under the Plan pursuant to clause (ii) above exceed an aggregate of 1,346,691 Shares. Any Shares that are subject to Awards of Options or Stock Appreciation Rights granted under the Plan after the Effective Date shall be counted against this limit as one Share for every one Share subject to such Awards. Any Shares that are subject to Full Value Awards granted under the Plan after the Effective Date shall be counted against this limit as 1.3 Shares for every one Share subject to such Awards. From and after the Effective Date, no awards shall be granted under the Prior Plan or either of the Inducement Plans; however, outstanding awards under the Prior Plan or either of the Inducement Plans shall continue to be subject to the terms and conditions of the Prior Plan or either of the Inducement Plans, as applicable. Notwithstanding anything in this Section 3.1 to the contrary, the number of Shares that may be issued or transferred pursuant to Awards under the Plan (including Incentive Stock Options) shall not exceed an aggregate of 7,346,691 Shares, subject to adjustment pursuant to Section 13.2.

(b) To the extent all or a portion of an Award or a Prior Plan Option is forfeited, expires, lapses for any reason, or is settled for cash without the delivery of Shares to the Holder, any Shares subject to such Award, Prior Plan Option or portion thereof, to the extent of such forfeiture, expiration, lapse or cash settlement, shall again be available for future grants

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of Awards under the Plan in an amount corresponding to the reduction in the share reserve previously made in accordance with Section 3.1(a) above. Notwithstanding anything to the contrary contained herein, the following Shares shall not be added to the Shares authorized for grant under Section 3.1(a) and will not be available for future grants of Awards: (i) Shares tendered by a Holder or withheld by the Company in payment of the exercise price of an Option or a Prior Plan Option; (ii) Shares tendered by the Holder or withheld by the Company to satisfy any tax withholding obligation with respect to an Option or a Stock Appreciation Right or a Prior Plan Option; (iii) Shares subject to a Stock Appreciation Right that are not issued in connection with the stock settlement of the Stock Appreciation Right on exercise thereof; and (iv) Shares purchased on the open market with the cash proceeds from the exercise of Options or Prior Plan Options. Shares tendered by the Holder or withheld by the Company to satisfy any tax withholding obligation with respect to a Full Value Award shall be available for future grants of Awards under the Plan in an amount corresponding to the reduction in the share reserve previously made in accordance with Section 3.1(a) above. Any Shares forfeited by the Holder or repurchased by the Company under Section 7.4 at a price not greater than the price originally paid by the Holder so that such Shares are returned to the Company will again be available for Awards in an amount corresponding to the reduction in the share reserve previously made in accordance with Section 3.1(a) above. The payment of Dividend Equivalents in cash in conjunction with any outstanding Awards shall not be counted against the shares available for issuance under the Plan. Notwithstanding the provisions of this Section 3.1(b), no Shares may again be optioned, granted or awarded if such action would cause an Incentive Stock Option to fail to qualify as an incentive stock option under Section 422 of the Code.

(c) To the extent permitted by Applicable Law, Substitute Awards shall not reduce the Shares authorized for grant under the Plan.

3.2 Stock Distributed. Any Shares distributed pursuant to an Award may consist, in whole or in part, of authorized and unissued Common Stock, treasury Common Stock or Common Stock purchased on the open market.

3.3 Limitation on Awards.

(a) Notwithstanding any provision in the Plan to the contrary, and subject to Section 13.2, the maximum aggregate number of Shares with respect to one or more Awards that may be granted to any one person during any calendar year shall be 3,000,000, and no Eligible Individual may be granted, during any calendar year, Awards initially payable in cash that could result in such Eligible Individual receiving cash payments exceeding \$10,000,000 pursuant to such Awards. To the extent required by Section 162(m) of the Code, Shares subject to Awards that are canceled shall continue to be counted against the share limitations contained in Sections 3.1 and 3.3.

(b) Notwithstanding any provision in the Plan to the contrary, the sum of any cash compensation, or other compensation, and the value (determined as of the grant date in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or any successor thereto) of Awards granted to a Non-Employee Director as compensation for services as a Non-Employee Director during any calendar year of the Company may not exceed \$750,000. The Administrator may make exceptions to this limit for

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individual Non-Employee Directors in extraordinary circumstances, as the Administrator may determine in its discretion, provided that the Non-Employee Director receiving such additional compensation may not participate in the decision to award such compensation or in other contemporaneous compensation decisions involving Non-Employee Directors.

ARTICLE 4.

GRANTING OF AWARDS

4.1 Participation. The Administrator may, from time to time, select from among all Eligible Individuals, those to whom an Award shall be granted and shall determine the nature and amount of each Award, which shall not be inconsistent with the requirements of the Plan. Except as provided in Section 4.6 regarding the grant of Awards pursuant to the Non-Employee Director Compensation Program, no Eligible Individual shall have any right to be granted an Award pursuant to the Plan.

4.2 Award Agreement. Each Award shall be evidenced by an Award Agreement that sets forth the terms, conditions and limitations for such Award, which may include the term of the Award, the provisions applicable in the event of the Holder's Termination of Service, and the Company's authority to unilaterally or bilaterally amend, modify, suspend, cancel or rescind an Award. Award Agreements evidencing Awards intended to qualify as Performance-Based Compensation shall contain such terms and conditions as may be necessary to meet the applicable provisions of Section 162(m) of the Code. Award agreements evidencing Incentive Stock Options shall contain such terms and conditions as may be necessary to meet the applicable provisions of Section 422 of the Code.

4.3 Limitations Applicable to Section 16 Persons. Notwithstanding any other provision of the Plan, the Plan, and any Award granted or awarded to any individual who is then subject to Section 16 of the Exchange Act, shall be subject to any additional limitations set forth in any applicable exemptive rule under Section 16 of the Exchange Act (including Rule 16b-3 of the Exchange Act and any amendments thereto) that are requirements for the application of such exemptive rule. To the extent permitted by Applicable Law, the Plan and Awards granted or awarded hereunder shall be deemed amended to the extent necessary to conform to such applicable exemptive rule.

4.4 At-Will Employment; Voluntary Participation. Nothing in the Plan or Award Agreement shall confer upon any Holder any right to continue in the employ of, or as a Director or Consultant for, the Company or any Subsidiary, or shall interfere with or restrict in any way the rights of the Company and any Subsidiary, which rights are hereby expressly reserved, to discharge any Holder at any time for any reason whatsoever, with or without cause, and with or without notice, or to terminate or change all other terms and conditions of employment or engagement, except to the extent expressly provided otherwise in a written agreement between the Holder and the Company or any Subsidiary. Participation by each Holder in the Plan shall be voluntary and nothing in the Plan shall be construed as mandating that any Eligible Individual shall participate in the Plan.

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4.5 Foreign Holders. Notwithstanding any provision of the Plan to the contrary, in order to comply with the laws in countries other than the United States in which the Company or any Subsidiary operates or has Employees, Non-Employee Directors or Consultants, or in order to comply with the requirements of any foreign securities exchange, the Administrator, in its sole discretion, shall have the power and authority to: (a) determine which Subsidiaries shall be covered by the Plan; (b) determine which Eligible Individuals outside the United States are eligible to participate in the Plan; (c) modify the terms and conditions of any Award granted to Eligible Individuals outside the United States to comply with applicable foreign laws or listing requirements of any such foreign securities exchange; (d) establish subplans and modify exercise procedures and other terms and procedures, to the extent such actions may be necessary or advisable (any such subplans and/or modifications shall be attached to the Plan as appendices); provided, however, that no such subplans and/or modifications shall increase the share limitations contained in Sections 3.1 and 3.3; and (e) take any action, before or after an Award is made, that it deems advisable to obtain approval or comply with any necessary local governmental regulatory exemptions or approvals or listing requirements of any such foreign securities exchange. Notwithstanding the foregoing, the Administrator may not take any actions hereunder, and no Awards shall be granted, that would violate Applicable Law. For purposes of the Plan, all references to foreign laws, rules, regulations or taxes shall be references to the laws, rules, regulations and taxes of any applicable jurisdiction other than the United States or a political subdivision thereof.

4.6 Non-Employee Director Awards. The Administrator, in its discretion, may provide that Awards granted to Non-Employee Directors shall be granted pursuant to a written nondiscretionary formula established by the Administrator (the Non-Employee Director Compensation Program), subject to the limitations of the Plan. The Non-Employee Director Compensation Program shall set forth the type of Award(s) to be granted to Non-Employee Directors, the number of Shares to be subject to Non-Employee Director Awards, the conditions on which such Awards shall be granted, become exercisable and/or payable and expire, and such other terms and conditions as the Administrator shall determine in its discretion. The Non-Employee Director Compensation Program may be modified by the Administrator from time to time in its discretion.

4.7 Stand-Alone and Tandem Awards. Awards granted pursuant to the Plan may, in the discretion of the Administrator, be granted either alone, in addition to, or in tandem with, any other Award granted pursuant to the Plan. Awards granted in addition to or in tandem with other Awards may be granted either at the same time as or at a different time from the grant of such other Awards.

ARTICLE 5.**PROVISIONS APPLICABLE TO AWARDS INTENDED TO QUALIFY AS****PERFORMANCE-BASED COMPENSATION**

5.1 Purpose. The Committee, in its sole discretion, may determine at the time an Award is granted or at any time thereafter whether such Award is intended to qualify as Performance-Based Compensation. If the Committee, in its sole discretion, decides to grant such an Award to an Eligible Individual that is intended to qualify as Performance-Based

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Compensation, then the provisions of this Article 5 shall control over any contrary provision contained in the Plan. The Administrator, in its sole discretion, may grant Awards to other Eligible Individuals that are based on Performance Criteria or Performance Goals but that do not satisfy the requirements of this Article 5 and that are not intended to qualify as Performance-Based Compensation. Unless otherwise specified by the Administrator at the time of grant, the Performance Criteria with respect to an Award intended to be Performance-Based Compensation payable to a Covered Employee shall be determined on the basis of Applicable Accounting Standards.

5.2 Applicability. The grant of an Award to an Eligible Individual for a particular Performance Period shall not require the grant of an Award to such Eligible Individual in any subsequent Performance Period and the grant of an Award to any one Eligible Individual shall not require the grant of an Award to any other Eligible Individual in such period or in any other period.

5.3 Types of Awards. Notwithstanding anything in the Plan to the contrary, the Committee may grant any Award to an Eligible Individual intended to qualify as Performance-Based Compensation, including, without limitation, Restricted Stock the restrictions with respect to which lapse upon the attainment of specified Performance Goals, Restricted Stock Units that vest and become payable upon the attainment of specified Performance Goals and any Performance Awards described in Article 9 that vest or become exercisable or payable upon the attainment of one or more specified Performance Goals.

5.4 Procedures with Respect to Performance-Based Awards. To the extent necessary to comply with the requirements of Section 162(m)(4)(C) of the Code, with respect to any Award granted to one or more Eligible Individuals that is intended to qualify as Performance-Based Compensation, no later than 90 days following the commencement of any Performance Period or any designated fiscal period or period of service (or such earlier time as may be required under Section 162(m) of the Code), the Committee shall, in writing, (a) designate one or more Eligible Individuals, (b) select the Performance Criteria applicable to the Performance Period, (c) establish the Performance Goals, and amounts of such Awards, as applicable, that may be earned for such Performance Period based on the Performance Criteria, and (d) specify the relationship between Performance Criteria and the Performance Goals and the amounts of such Awards, as applicable, to be earned by each Covered Employee for such Performance Period. Following the completion of each Performance Period, the Committee shall certify in writing whether and the extent to which the applicable Performance Goals have been achieved for such Performance Period. In determining the amount earned under such Awards, the Committee shall have the right to reduce or eliminate (but not to increase) the amount payable at a given level of performance to take into account additional factors that the Committee may deem relevant, including the assessment of individual or corporate performance for the Performance Period.

5.5 Payment of Performance-Based Awards. Unless otherwise provided in the applicable Award Agreement and only to the extent otherwise permitted by Section 162(m)(4)(C) of the Code, as to an Award that is intended to qualify as Performance-Based Compensation, the Holder must be employed by the Company or an Affiliate throughout the Performance Period. Unless otherwise provided in the applicable Performance Goals or Award Agreement, a Holder shall be eligible to receive payment pursuant to such Awards for a Performance Period only if and to the extent the Performance Goals for such period are achieved.

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5.6 Additional Limitations. Notwithstanding any other provision of the Plan and except as otherwise determined by the Administrator, any Award that is granted to an Eligible Individual and is intended to qualify as Performance-Based Compensation shall be subject to any additional limitations set forth in Section 162(m) of the Code or any regulations or rulings issued thereunder that are requirements for qualification as Performance-Based Compensation, and the Plan and the applicable Award Agreement shall be deemed amended to the extent necessary to conform to such requirements.

ARTICLE 6.

OPTIONS

6.1 Granting of Options to Eligible Individuals. The Administrator is authorized to grant Options to Eligible Individuals from time to time, in its discretion, on such terms and conditions as it may determine, which shall not be inconsistent with the Plan.

6.2 Option Exercise Price. The exercise price per Share subject to each Option shall be set by the Administrator, but shall not be less than 100% of the Fair Market Value of a Share on the date the Option is granted (or, as to Incentive Stock Options, on the date the Option is modified, extended or renewed for purposes of Section 424(h) of the Code) unless otherwise determined by the Administrator. In addition, in the case of Incentive Stock Options granted to a Greater Than 10% Stockholder, such price shall not be less than 110% of the Fair Market Value of a Share on the date the Option is granted (or the date the Option is modified, extended or renewed for purposes of Section 424(h) of the Code).

6.3 Option Vesting.

(a) The period during which the right to exercise, in whole or in part, an Option vests in the Holder shall be set by the Administrator and the Administrator may determine that an Option may not be exercised in whole or in part for a specified period after it is granted. Such vesting may be based on service with the Company or any Subsidiary or any other criteria selected by the Administrator, including Performance Goals or Performance Criteria. At any time after the grant of an Option, the Administrator, in its discretion and subject to whatever terms and conditions it selects, may accelerate the period during which an Option vests.

(b) No portion of an Option which is unexercisable at a Holder's Termination of Service shall thereafter become exercisable, except as may be otherwise provided by the Administrator either in the Award Agreement evidencing the grant of an Option or by action of the Administrator following the grant of the Option. Unless otherwise determined by the Administrator in the Award Agreement or by action of the Administrator following the grant of the Option, the portion of an Option that is unexercisable at a Holder's Termination of Service shall automatically expire 30 days following such Termination of Service.

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6.4 Manner of Exercise. All or a portion of an exercisable Option shall be deemed exercised upon delivery of all of the following to the Secretary of the Company, the stock administrator of the Company or such other person or entity designated by the Administrator, or his, her or its office, as applicable:

(a) A written or electronic notice complying with the applicable rules established by the Administrator stating that the Option, or a portion thereof, is exercised. The notice shall be signed by the Holder or other person then entitled to exercise the Option or such portion of the Option.

(b) Such representations and documents as the Administrator, in its discretion, deems necessary or advisable to effect compliance with Applicable Law. The Administrator may, in its discretion, also take whatever additional actions it deems appropriate to effect such compliance including, without limitation, placing legends on share certificates and issuing stop-transfer notices to agents and registrars.

(c) In the event that the Option shall be exercised by any person or persons other than the Holder, appropriate proof of the right of such person or persons to exercise the Option, as determined in the discretion of the Administrator.

(d) Full payment of the exercise price and applicable withholding taxes for the shares with respect to which the Option, or portion thereof, is exercised, in a manner permitted by Section 11.1 and Section 11.2.

6.5 Partial Exercise. An exercisable Option may be exercised in whole or in part. However, an Option shall not be exercisable with respect to fractional Shares unless otherwise determined by the Administrator and the Administrator may require that, by the terms of the Option, a partial exercise must be with respect to a minimum number of shares.

6.6 Option Term. The term of each Option (the Option Term) shall be set by the Administrator in its discretion; provided, however, that the Option Term shall not be more than 10 years from the date the Option is granted, or five years from the date an Incentive Stock Option is granted to a Greater Than 10% Stockholder. The Administrator shall determine the time period, including the time period following a Termination of Service, during which the Holder has the right to exercise the vested Options, which time period may not extend beyond the last day of the Option Term. Except as limited by the requirements of Section 409A of the Code or the first sentence of this Section 6.6, the Administrator may extend the Option Term of any outstanding Option, and may extend the time period during which vested Options may be exercised, in connection with any Termination of Service of the Holder, and may amend, subject to Section 13.1, any other term or condition of such Option relating to such a Termination of Service.

6.7 Qualification of Incentive Stock Options. No Incentive Stock Option shall be granted to any person who is not an Employee of the Company or any subsidiary corporation (as defined in Section 424(f) of the Code) of the Company. No person who qualifies as a Greater Than 10% Stockholder may be granted an Incentive Stock Option unless such Incentive Stock Option conforms to the applicable provisions of Section 422 of the Code. Any Incentive Stock Option granted under the Plan may be modified by the Administrator, with the consent of the Holder, to disqualify such Option from treatment as an incentive stock option under Section

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422 of the Code. To the extent that the aggregate Fair Market Value of stock with respect to which incentive stock options (within the meaning of Section 422 of the Code, but without regard to Section 422(d) of the Code) are exercisable for the first time by a Holder during any calendar year under the Plan, and all other plans of the Company and any parent or subsidiary corporation thereof (each as defined in Section 424(e) and 424(f) of the Code, respectively), exceeds \$100,000, the Options shall be treated as Non-Qualified Stock Options to the extent required by Section 422 of the Code. The rule set forth in the immediately preceding sentence shall be applied by taking Options and other incentive stock options into account in the order in which they were granted and the Fair Market Value of stock shall be determined as of the time the respective options were granted.

6.8 Notification Regarding Disposition. The Holder shall give the Company prompt written or electronic notice of any disposition of Shares acquired by exercise of an Incentive Stock Option which occurs within (a) two years from the date of granting (including the date the Option is modified, extended or renewed for purposes of Section 424(h) of the Code) such Option to such Holder, or (b) one year after the transfer of such Shares to such Holder.

ARTICLE 7.

RESTRICTED STOCK

7.1 Award of Restricted Stock.

(a) The Administrator is authorized to grant Restricted Stock to Eligible Individuals, and shall determine the terms and conditions, including the restrictions applicable to each award of Restricted Stock, which terms and conditions shall not be inconsistent with the Plan, and may impose such conditions on the issuance of such Restricted Stock as it deems appropriate.

(b) The Administrator shall establish the purchase price, if any, and form of payment for Restricted Stock; provided, however, that if a purchase price is charged, such purchase price shall be no less than the par value, if any, of the Shares to be purchased, unless otherwise permitted by Applicable Law. In all cases, legal consideration shall be required for each issuance of Restricted Stock.

7.2 Rights as Stockholders. Subject to Section 7.4, upon issuance of Restricted Stock, the Holder shall have, unless otherwise provided by the Administrator, all the rights of a stockholder with respect to said Shares, subject to the restrictions in each individual Award Agreement, including the right to receive all dividends and other distributions paid or made with respect to the Shares; provided, however, that, in the discretion of the Administrator, any extraordinary distributions with respect to the Shares shall be subject to the restrictions set forth in Section 7.3. In addition, with respect to a share of Restricted Stock with performance-based vesting, dividends which are paid prior to vesting shall only be paid out to the Holder to the extent that the performance-based vesting conditions are subsequently satisfied and the share of Restricted Stock vests.

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7.3 Restrictions. All shares of Restricted Stock (including any shares received by Holders thereof with respect to shares of Restricted Stock as a result of stock dividends, stock splits or any other form of recapitalization) shall, in the terms of each individual Award Agreement, be subject to such restrictions and vesting requirements as the Administrator shall provide. Such restrictions may include, without limitation, restrictions concerning voting rights and transferability and such restrictions may lapse separately or in combination at such times and pursuant to such circumstances or based on such criteria as selected by the Administrator, including, without limitation, criteria based on the Holder's duration of employment, directorship or consultancy with the Company, Performance Goals, Performance Criteria, Company performance, individual performance or other criteria selected by the Administrator. By action taken after the Restricted Stock is issued, the Administrator may, on such terms and conditions as it may determine to be appropriate, accelerate the vesting of such Restricted Stock by removing any or all of the restrictions imposed by the terms of the applicable Award Agreement. Unless otherwise determined by the Administrator, Restricted Stock may not be sold or encumbered until all restrictions are terminated or expire.

7.4 Repurchase or Forfeiture of Restricted Stock. Except as otherwise determined by the Administrator at the time of the grant of the Award or thereafter, (a) if no price was paid by the Holder for the Restricted Stock, upon a Termination of Service during the applicable restriction period, the Holder's rights in unvested Restricted Stock then subject to restrictions shall lapse, and such Restricted Stock shall be surrendered to the Company and cancelled without consideration, and (b) if a price was paid by the Holder for the Restricted Stock, upon a Termination of Service during the applicable restriction period, the Company shall have the right to repurchase from the Holder the unvested Restricted Stock then subject to restrictions at a cash price per share equal to the price paid by the Holder for such Restricted Stock or such other amount as may be specified in the applicable Award Agreement.

7.5 Certificates for Restricted Stock. Restricted Stock granted pursuant to the Plan may be evidenced in such manner as the Administrator shall determine. Certificates or book entries evidencing shares of Restricted Stock shall include an appropriate legend referring to the terms, conditions, and restrictions applicable to such Restricted Stock. The Company, in its discretion, may (a) retain physical possession of any stock certificate evidencing shares of Restricted Stock until the restrictions thereon shall have lapsed and/or (b) require that the stock certificates evidencing shares of Restricted Stock be held in custody by a designated escrow agent (which may but need not be the Company) until the restrictions thereon shall have lapsed and that the Holder deliver a stock power, endorsed in blank, relating to such Restricted Stock.

7.6 Section 83(b) Election. If a Holder makes an election under Section 83(b) of the Code to be taxed with respect to the Restricted Stock as of the date of transfer of the Restricted Stock rather than as of the date or dates upon which the Holder would otherwise be taxable under Section 83(a) of the Code, the Holder shall be required to deliver a copy of such election to the Company promptly after filing such election with the Internal Revenue Service.

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ARTICLE 8.

RESTRICTED STOCK UNITS

8.1 Grant of Restricted Stock Units. The Administrator is authorized to grant Awards of Restricted Stock Units to any Eligible Individual selected by the Administrator in such amounts and subject to such terms and conditions as determined by the Administrator.

8.2 Purchase Price. The Administrator shall specify the purchase price, if any, to be paid by the Holder to the Company with respect to any Restricted Stock Unit award; provided, however, that value of the consideration shall not be less than the par value of a Share, unless otherwise permitted by Applicable Law.

8.3 Vesting of Restricted Stock Units. At the time of grant, the Administrator shall specify the date or dates on which the Restricted Stock Units shall become fully vested and nonforfeitable, and may specify such conditions to vesting as it deems appropriate, including, without limitation, vesting based upon the Holder's duration of service to the Company or any Subsidiary, one or more Performance Criteria, Company performance, individual performance or other specific criteria, in each case on a specified date or dates or over any period or periods, as determined by the Administrator.

8.4 Maturity and Payment. At the time of grant, the Administrator shall specify the maturity date applicable to each grant of Restricted Stock Units, which shall be no earlier than the vesting date or dates of the Award and may be determined at the election of the Holder (if permitted by the applicable Award Agreement); provided that, except as otherwise set forth in an applicable Award Agreement, the maturity date relating to each Restricted Stock Unit shall not occur following the later of (a) the 15th day of the third month following the end of the calendar year in which the applicable portion of the Restricted Stock Unit vests; or (b) the 15th day of the third month following the end of the Company's fiscal year in which the applicable portion of the Restricted Stock Unit vests. On the maturity date, the Company shall, subject to Section 11.4, transfer to the Holder one unrestricted, fully transferable Share for each Restricted Stock Unit scheduled to be paid out on such date and not previously forfeited, or in the discretion of the Administrator, an amount in cash equal to the Fair Market Value of such Shares on the maturity date or a combination of cash and Common Stock as determined by the Administrator.

8.5 No Rights as a Stockholder. Unless otherwise determined by the Administrator, a Holder of Restricted Stock Units shall possess no incidents of ownership with respect to the Shares represented by such Restricted Stock Units, unless and until such Shares are transferred to the Holder pursuant to the terms of this Plan and the Award Agreement.

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ARTICLE 9.

PERFORMANCE AWARDS, DIVIDEND EQUIVALENTS, STOCK PAYMENTS

9.1 Performance Awards.

(a) The Administrator is authorized to grant Performance Awards, including Awards of Performance Stock Units and other Awards of cash bonuses or other cash awards determined in the Administrator's discretion from time to time, to any Eligible Individual and to determine whether such Performance Awards shall be Performance-Based Compensation. The value of Performance Awards, including Performance Stock Units and any cash awards, may be linked to the attainment of the Performance Goals or other specific criteria determined by the Administrator, in each case on a specified date or dates or over any period or periods and in such amounts as may be determined by the Administrator. Performance Awards, including Performance Stock Unit awards, may be paid in cash, Shares, or a combination of cash and Shares, as determined by the Administrator.

(b) Without limiting Section 9.1(a), the Administrator may grant Performance Awards to any Eligible Individual in the form of a cash bonus payable upon the attainment of objective Performance Goals, or such other criteria, whether or not objective, that are established by the Administrator, in each case on a specified date or dates or over any period or periods determined by the Administrator. Any such bonuses paid to a Holder that are intended to be Performance-Based Compensation shall be based upon objectively determinable bonus formulas established in accordance with the provisions of Article 5.

9.2 Dividend Equivalents.

(a) Dividend Equivalents may be granted by the Administrator based on dividends declared on the Common Stock, to be credited as of dividend payment dates with respect to dividends with record dates that occur during the period between the date an Award is granted to a Holder and the date such Award vests, is exercised, is distributed or expires, as determined by the Administrator. Such Dividend Equivalents shall be converted to cash or additional Shares by such formula and at such time and subject to such restrictions and limitations as may be determined by the Administrator. In addition, Dividend Equivalents with respect to an Award with performance-based vesting that are based on dividends paid prior to the vesting of such Award shall only be paid out to the Holder to the extent that the performance-based vesting conditions are subsequently satisfied and the Award vests.

(b) Notwithstanding the foregoing, no Dividend Equivalents shall be payable with respect to Options or Stock Appreciation Rights.

9.3 Stock Payments. The Administrator is authorized to make Stock Payments to any Eligible Individual. The number or value of Shares of any Stock Payment shall be determined by the Administrator and may be based upon one or more Performance Goals or any other specific criteria, including service to the Company or any Subsidiary, determined by the Administrator. Shares underlying a Stock Payment which is subject to a vesting schedule or other conditions or criteria set by the Administrator shall not be issued until those conditions have been satisfied. Unless otherwise provided by the Administrator, a Holder of a Stock Payment shall have no rights as a Company stockholder with respect to such Stock Payment until such time as the Stock Payment has vested and the Shares underlying the Award have been issued to the Holder. Stock Payments may, but are not required to, be made in lieu of base salary, bonus, fees or other cash compensation otherwise payable to such Eligible Individual.

9.4 Purchase Price. The Administrator may establish the purchase price of a Performance Award or Shares distributed as a Stock Payment award; provided, however, that value of the consideration shall not be less than the par value of a

Share, unless otherwise permitted by Applicable Law.

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ARTICLE 10.

STOCK APPRECIATION RIGHTS

10.1 Grant of Stock Appreciation Rights.

(a) The Administrator is authorized to grant Stock Appreciation Rights to Eligible Individuals from time to time, in its discretion, on such terms and conditions as it may determine, which shall not be inconsistent with the Plan.

(b) A Stock Appreciation Right shall entitle the Holder (or other person entitled to exercise the Stock Appreciation Right pursuant to the Plan) to exercise all or a specified portion of the Stock Appreciation Right (to the extent then exercisable pursuant to its terms) and to receive from the Company an amount determined by multiplying the difference obtained by subtracting the exercise price per share of the Stock Appreciation Right from the Fair Market Value on the date of exercise of the Stock Appreciation Right by the number of Shares with respect to which the Stock Appreciation Right shall have been exercised, subject to any limitations the Administrator may impose. The exercise price per Share subject to each Stock Appreciation Right shall be set by the Administrator, but shall not be less than 100% of the Fair Market Value on the date the Stock Appreciation Right is granted.

10.2 Stock Appreciation Right Vesting.

(a) The period during which the right to exercise, in whole or in part, a Stock Appreciation Right vests in the Holder shall be set by the Administrator, and the Administrator may determine that a Stock Appreciation Right may not be exercised in whole or in part for a specified period after it is granted. Such vesting may be based on service with the Company or any Subsidiary, Performance Criteria, Performance Goals or any other criteria selected by the Administrator. At any time after grant of a Stock Appreciation Right, the Administrator, in its discretion and subject to whatever terms and conditions it selects, may accelerate the period during which a Stock Appreciation Right vests.

(b) No portion of a Stock Appreciation Right which is unexercisable at a Holder's Termination of Service shall thereafter become exercisable, except as may be otherwise provided by the Administrator in an Award Agreement or by action of the Administrator following the grant of the Stock Appreciation Right. Unless otherwise determined by the Administrator in the Award Agreement or by action of the Administrator following the grant of the Stock Appreciation Right, the portion of a Stock Appreciation Right which is unexercisable at a Holder's Termination of Service shall automatically expire 30 days following such Termination of Service.

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10.3 Manner of Exercise. All or a portion of an exercisable Stock Appreciation Right shall be deemed exercised upon delivery of all of the following to the Secretary of the Company, the stock administrator of the Company, or such other person or entity designated by the Administrator, or his, her or its office, as applicable:

(a) A written or electronic notice complying with the applicable rules established by the Administrator stating that the Stock Appreciation Right, or a portion thereof, is exercised. The notice shall be signed by the Holder or other person then entitled to exercise the Stock Appreciation Right or such portion of the Stock Appreciation Right.

(b) Such representations and documents as the Administrator, in its discretion, deems necessary or advisable to effect compliance with Applicable Law. The Administrator, in its discretion, may also take whatever additional actions it deems appropriate to effect such compliance, including, without limitation, placing legends on share certificates and issuing stop-transfer notices to agents and registrars.

(c) In the event that the Stock Appreciation Right shall be exercised by any person or persons other than the Holder, appropriate proof of the right of such person or persons to exercise the Stock Appreciation Right, as determined in the discretion of the Administrator.

(d) Full payment of the exercise price and applicable withholding taxes for the Shares with respect to which the Stock Appreciation Right, or portion thereof, is exercised, in a manner permitted by Section 11.1 and Section 11.2.

10.4 Stock Appreciation Right Term. The term of each Stock Appreciation Right (the Stock Appreciation Right Term) shall be set by the Administrator in its discretion; provided, however, that the Stock Appreciation Right Term shall not be more than ten (10) years from the date the Stock Appreciation Right is granted. The Administrator shall determine the time period, including the time period following a Termination of Service, during which the Holder has the right to exercise the vested Stock Appreciation Rights, which time period may not extend beyond the last day of the Stock Appreciation Right Term applicable to such Stock Appreciation Right. Except as limited by the requirements of Section 409A of the Code or the first sentence of this Section 10.4, the Administrator may extend the Stock Appreciation Right Term of any outstanding Stock Appreciation Right, and may extend the time period during which vested Stock Appreciation Rights may be exercised, in connection with any Termination of Service of the Holder, and may amend, subject to Section 13.1, any other term or condition of such Stock Appreciation Right relating to such a Termination of Service.

10.5 Payment. Payment of the amounts payable with respect to Stock Appreciation Rights pursuant to this Article 10 shall be in cash, Shares (based on Fair Market Value as of the date the Stock Appreciation Right is exercised), or a combination of both, as determined by the Administrator.

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ARTICLE 11.

ADDITIONAL TERMS OF AWARDS

11.1 Payment. The Administrator shall determine the methods by which payments by any Holder with respect to any Awards granted under the Plan shall be made, including, without limitation: (a) cash or check, (b) Shares (including, in the case of payment of the exercise price of an Award, Shares issuable pursuant to the exercise of the Award) held for such period of time as may be required by the Administrator in order to avoid adverse accounting consequences, in each case, having a Fair Market Value on the date of delivery equal to the aggregate payments required, (c) delivery of a written or electronic notice that the Holder has placed a market sell order with a broker acceptable to the Company with respect to Shares then issuable upon exercise or vesting of an Award, and that the broker has been directed to pay a sufficient portion of the net proceeds of the sale to the Company in satisfaction of the aggregate payments required; provided that payment of such proceeds is then made to the Company upon settlement of such sale, or (d) any other form of legal consideration acceptable to the Administrator in its discretion. The Administrator shall also determine the methods by which Shares shall be delivered or deemed to be delivered to Holders. Notwithstanding any other provision of the Plan to the contrary, no Holder who is a Director or an executive officer of the Company within the meaning of Section 13(k) of the Exchange Act shall be permitted to make payment with respect to any Awards granted under the Plan, or continue any extension of credit with respect to such payment, with a loan from the Company or a loan arranged by the Company in violation of Section 13(k) of the Exchange Act.

11.2 Tax Withholding. The Company or any Subsidiary shall have the authority and the right to deduct or withhold, or require a Holder to remit to the Company, an amount sufficient to satisfy federal, state, local and foreign taxes (including the Holder's FICA, employment tax or other social security contribution obligation) required by law to be withheld with respect to any taxable event concerning a Holder arising as a result of the Plan. The Administrator shall determine the methods by which payments by any Holder with respect to the tax withholding obligations with respect to any Awards granted under the Plan shall be made, which methods may include any of the methods permitted under Section 11.1 above. Without limiting the foregoing, the Administrator, in its discretion and in satisfaction of the foregoing requirement, may withhold, or allow a Holder to elect to have the Company withhold, Shares otherwise issuable under an Award (or allow the surrender of Shares). Unless otherwise determined by the Administrator, the number of Shares which may be so withheld or surrendered shall be limited to the number of Shares which have a Fair Market Value on the date of withholding or repurchase equal to the aggregate amount of such liabilities based on the minimum statutory withholding rates for federal, state, local and foreign income tax and payroll tax purposes that are applicable to such supplemental taxable income. The Administrator shall determine the fair market value of the Shares, consistent with applicable provisions of the Code, for tax withholding obligations due in connection with a broker-assisted cashless Option or Stock Appreciation Right exercise involving the sale of Shares to pay the Option or Stock Appreciation Right exercise price or any tax withholding obligation.

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11.3 Transferability of Awards.

(a) Except as otherwise provided in Section 11.3(b):

(i) No Award under the Plan may be sold, pledged, assigned or transferred in any manner other than by will or the laws of descent and distribution or, subject to the consent of the Administrator, pursuant to a DRO, unless and until such Award has been exercised, or the Shares underlying such Award have been issued, and all restrictions applicable to such Shares have lapsed;

(ii) No Award or interest or right therein shall be liable for the debts, contracts or engagements of the Holder or the Holder's successors in interest or shall be subject to disposition by transfer, alienation, anticipation, pledge, hypothecation, encumbrance, assignment or any other means whether such disposition be voluntary or involuntary or by operation of law by judgment, levy, attachment, garnishment or any other legal or equitable proceedings (including bankruptcy), and any attempted disposition thereof shall be null and void and of no effect, except to the extent that such disposition is permitted by Section 11.3(a)(i); and

(iii) During the lifetime of the Holder, only the Holder may exercise an Award (or any portion thereof) granted to such Holder under the Plan, unless it has been disposed of pursuant to a DRO; after the death of the Holder, any exercisable portion of an Award may, prior to the time when such portion becomes unexercisable under the Plan or the Award Agreement, be exercised by the Holder's personal representative or by any person empowered to do so under the deceased Holder's will or under the then-applicable laws of descent and distribution.

(b) Notwithstanding Section 11.3(a), the Administrator, in its discretion, may determine to permit a Holder to transfer an Award other than an Incentive Stock Option to any one or more Permitted Transferees, subject to the following terms and conditions: (i) an Award transferred to a Permitted Transferee shall not be assignable or transferable by the Permitted Transferee other than by will or the laws of descent and distribution or, subject to the consent of the Administrator, pursuant to a DRO; (ii) an Award transferred to a Permitted Transferee shall continue to be subject to all the terms and conditions of the Award as applicable to the original Holder (other than the ability to further transfer the Award); and (iii) the Holder and the Permitted Transferee shall execute any and all documents requested by the Administrator, including, without limitation documents to (A) confirm the status of the transferee as a Permitted Transferee, (B) satisfy any requirements for an exemption for the transfer under Applicable Law and (C) evidence the transfer.

(c) Notwithstanding Section 11.3(a), a Holder may, in the manner determined by the Administrator, designate a beneficiary to exercise the rights of the Holder and to receive any distribution with respect to any Award upon the Holder's death. A beneficiary, legal guardian, legal representative, or other person claiming any rights pursuant to the Plan is subject to all terms and conditions of the Plan and any Award Agreement applicable to the Holder, except to the extent the Plan and Award Agreement otherwise provide, and to any additional restrictions deemed necessary or appropriate by the Administrator. If the Holder is married or a domestic partner in a domestic partnership qualified under Applicable Law and resides in a

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community property state, a designation of a person other than the Holder's spouse or domestic partner, as applicable, as the Holder's beneficiary with respect to more than 50% of the Holder's interest in the Award shall not be effective without the prior written or electronic consent of the Holder's spouse or domestic partner. If no beneficiary has been designated or survives the Holder, payment shall be made to the person entitled thereto pursuant to the Holder's will or the laws of descent and distribution. Subject to the foregoing, a beneficiary designation may be changed or revoked by a Holder at any time; provided that the change or revocation is filed with the Administrator prior to the Holder's death.

11.4 Conditions to Issuance of Shares.

(a) Notwithstanding anything herein to the contrary, the Company shall not be required to issue or deliver any certificates or make any book entries evidencing Shares issuable pursuant to any Award, unless and until the Board or the Committee has determined, with advice of counsel, that the issuance of such Shares is in compliance with Applicable Law and the Shares are covered by an effective registration statement or applicable exemption from registration. In addition to the terms and conditions provided herein, the Board or the Committee may require that a Holder make such reasonable covenants, agreements and representations as the Board or the Committee, in its discretion, deems advisable in order to comply with Applicable Law.

(b) All Share certificates delivered pursuant to the Plan and all Shares issued pursuant to book entry procedures are subject to any stop-transfer orders and other restrictions as the Administrator deems necessary or advisable to comply with Applicable Law. The Administrator may place legends on any Share certificate or book entry to reference restrictions applicable to the Shares.

(c) The Administrator shall have the right to require any Holder to comply with any timing or other restrictions with respect to the settlement, distribution or exercise of any Award, including a window-period limitation, as may be imposed in the discretion of the Administrator.

(d) No fractional Shares shall be issued and the Administrator, in its discretion, shall determine whether cash shall be given in lieu of fractional Shares or whether such fractional Shares shall be eliminated by rounding down.

(e) Notwithstanding any other provision of the Plan, unless otherwise determined by the Administrator or required by Applicable Law, the Company shall not deliver to any Holder certificates evidencing Shares issued in connection with any Award and instead such Shares shall be recorded in the books of the Company (or, as applicable, its transfer agent or stock plan administrator).

11.5 Forfeiture and Claw-Back Provisions. Pursuant to its general authority to determine the terms and conditions applicable to Awards under the Plan, the Administrator shall have the right to provide, in an Award Agreement or otherwise, or to require a Holder to agree by separate written or electronic instrument, that:

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(a) (i) Any proceeds, gains or other economic benefit actually or constructively received by the Holder upon any receipt or exercise of the Award, or upon the receipt or resale of any Shares underlying the Award, shall be paid to the Company, and (ii) the Award shall terminate and any unexercised portion of the Award (whether or not vested) shall be forfeited, if (x) a Termination of Service occurs prior to a specified date, or within a specified time period following receipt or exercise of the Award, or (y) the Holder at any time, or during a specified time period, engages in any activity in competition with the Company, or which is inimical, contrary or harmful to the interests of the Company, as further defined by the Administrator or (z) the Holder incurs a Termination of Service for Cause; and

(b) All Awards (including any proceeds, gains or other economic benefit actually or constructively received by the Holder upon any receipt or exercise of any Award or upon the receipt or resale of any Shares underlying the Award) shall be subject to the provisions of any claw-back policy implemented by the Company, including, without limitation, any claw-back policy adopted to comply with the Dodd-Frank Wall Street Reform and Consumer Protection Act and any rules or regulations promulgated thereunder, to the extent set forth in such claw-back policy and/or in the applicable Award Agreement.

11.6 Prohibition on Repricing. Subject to Section 13.2, the Administrator shall not, without the approval of the stockholders of the Company, (a) authorize the amendment of any outstanding Option or Stock Appreciation Right to reduce its price per share, or (b) cancel any Option or Stock Appreciation Right in exchange for cash or another Award when the Option or Stock Appreciation Right price per share exceeds the Fair Market Value of the underlying Shares. Subject to Section 13.2, the Administrator shall have the authority, without the approval of the stockholders of the Company, to amend any outstanding Award to increase the price per share or to cancel and replace an Award with the grant of an Award having a price per share that is greater than or equal to the price per share of the original Award. Furthermore, for purposes of this Section 11.6, except in connection with a corporate transaction involving the Company (including, without limitation, any stock dividend, stock split, extraordinary cash dividend, recapitalization, reorganization, merger, consolidation, split-up, spin-off, combination or exchange of shares), the terms of outstanding Awards may not be amended to reduce the exercise price per share of outstanding Options or Stock Appreciation Rights or cancel outstanding Options or Stock Appreciation Rights in exchange for cash, other Awards or Options or Stock Appreciation Rights with an exercise price per share that is less than the exercise price per share of the original Options or Stock Appreciation Rights without the approval of the stockholders of the Company.

ARTICLE 12.

ADMINISTRATION

12.1 Administrator. The Administrator of the Plan shall be the Committee (or another committee or a subcommittee of the Board assuming the functions of the Committee under the Plan) (except as otherwise permitted herein) and, unless otherwise determined by the Board, shall consist solely of two or more members of the Board appointed by and holding office at the pleasure of the Board, each of whom is an Independent Director, an outside director for purposes of Section 162(m) of the Code and a Non-Employee Director. Notwithstanding the

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foregoing, any action taken by the Committee shall be valid and effective, whether or not members of the Committee at the time of such action are later determined not to have satisfied the requirements for membership set forth in this Section 12.1 or otherwise provided in any charter of the Committee. Except as may otherwise be provided in any charter of the Committee, appointment of Committee members shall be effective upon acceptance of appointment. Committee members may resign at any time by delivering written or electronic notice to the Board. Vacancies in the Committee may only be filled by the Board. Notwithstanding the foregoing, (a) the full Board, acting by a majority of its members in office, shall conduct the general administration of the Plan with respect to Awards granted to Non-Employee Directors and, with respect to such Awards, the terms Administrator and Committee as used in the Plan shall be deemed to refer to the Board and (b) the Board or Committee may delegate its authority hereunder to the extent permitted by Section 12.6.

12.2 Duties and Powers of Committee. It shall be the duty of the Committee to conduct the general administration of the Plan in accordance with its provisions. The Committee shall have the power to interpret the Plan and Award Agreements, and to adopt such rules for the administration, interpretation and application of the Plan as are not inconsistent therewith, to interpret, amend or revoke any such rules and to amend any Award Agreement; provided that the rights or obligations of the Holder of the Award that is the subject of any such Award Agreement are not affected adversely by such amendment, unless the consent of the Holder is obtained or such amendment is otherwise permitted under Section 11.5 or Section 13.10. Any such grant or award under the Plan need not be the same with respect to each Holder. Any such interpretations and rules with respect to Incentive Stock Options shall be consistent with the provisions of Section 422 of the Code. In its discretion, the Board may at any time and from time to time exercise any and all rights and duties of the Committee under the Plan except with respect to matters which under Rule 16b-3 under the Exchange Act or any successor rule, or Section 162(m) of the Code, or any regulations or rules issued thereunder, or the rules of any securities exchange or automated quotation system on which the Shares are listed, quoted or traded are required to be determined in the discretion of the Committee.

12.3 Action by the Committee. Unless otherwise established by the Board or in any charter of the Committee, a majority of the Committee shall constitute a quorum and the acts of a majority of the members present at any meeting at which a quorum is present, and acts approved in writing by all members of the Committee in lieu of a meeting, shall be deemed the acts of the Committee. Each member of the Committee is entitled to, in good faith, rely or act upon any report or other information furnished to that member by any officer or other employee of the Company or any Subsidiary, the Company's independent certified public accountants, or any executive compensation consultant or other professional retained by the Company to assist in the administration of the Plan.

12.4 Authority of Administrator. Subject to the Company's Bylaws, the Committee's Charter and any specific designation in the Plan, the Administrator has the exclusive power, authority and sole discretion to:

- (a) Designate Eligible Individuals to receive Awards;

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- (b) Determine the type or types of Awards to be granted to Eligible Individuals;
- (c) Determine the number of Awards to be granted and the number of Shares to which an Award will relate;
- (d) Determine the terms and conditions of any Award granted pursuant to the Plan, including, but not limited to, the exercise price, grant price, purchase price, any Performance Goals or Performance Criteria, any restrictions or limitations on the Award, any schedule for vesting, lapse of forfeiture restrictions or restrictions on the exercisability of an Award, and accelerations or waivers thereof, and any provisions related to non-competition and recapture of gain on an Award, based in each case on such considerations as the Administrator in its sole discretion determines;
- (e) Determine whether, to what extent, and pursuant to what circumstances an Award may be settled in, or the exercise price of an Award may be paid in cash, Shares, other Awards, or other property, or an Award may be canceled, forfeited, or surrendered;
- (f) Prescribe the form of each Award Agreement, which need not be identical for each Holder;
- (g) Decide all other matters that must be determined in connection with an Award;
- (h) Establish, adopt or revise any rules and regulations as it may deem necessary or advisable to administer the Plan;
- (i) Interpret the terms of, and any matter arising pursuant to, the Plan or any Award Agreement;
- (j) Make all other decisions and determinations that may be required pursuant to the Plan or as the Administrator deems necessary or advisable to administer the Plan; and
- (k) Accelerate wholly or partially the vesting or lapse of restrictions of any Award or portion thereof at any time after the grant of an Award, subject to whatever terms and conditions it selects and Section 13.2(d).

12.5 **Decisions Binding**. The Administrator's interpretation of the Plan, any Awards granted pursuant to the Plan, and any Award Agreement and all decisions and determinations by the Administrator with respect to the Plan are final, binding and conclusive on all parties.

12.6 **Delegation of Authority**. To the extent permitted by Applicable Law, the Board or Committee may from time to time delegate to a committee of one or more members of the Board or one or more officers of the Company the authority to grant or amend Awards or to take other administrative actions pursuant to this Article 12; **provided, however**, that in no event shall an officer of the Company be delegated the authority to grant awards to, or amend awards held by, or take administrative actions with respect to Awards held by, the following individuals:

- (a) individuals who are subject to Section 16 of the Exchange Act, (b) Covered Employees or (c)

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officers of the Company (or Directors) to whom authority to grant or amend Awards has been delegated hereunder; provided, further, that any delegation of administrative authority shall only be permitted to the extent it is permissible under Section 162(m) of the Code and other Applicable Law. Any delegation hereunder shall be subject to the restrictions and limits that the Board or Committee specifies at the time of such delegation, and the Board may at any time rescind the authority so delegated or appoint a new delegatee. At all times, the delegatee appointed under this Section 12.6 shall serve in such capacity at the pleasure of the Board and the Committee.

ARTICLE 13.

MISCELLANEOUS PROVISIONS

13.1 Amendment, Suspension or Termination of the Plan. Except as otherwise provided in this Section 13.1, the Plan may be wholly or partially amended or otherwise modified, suspended or terminated at any time or from time to time by the Board or the Committee. However, without approval of the Company's stockholders given within twelve (12) months before or after the action by the Administrator, no action of the Administrator may, except as provided in Section 13.2, (a) increase the share limitations contained in Section 3.1 or the individual award limitations contained in Section 3.3(a), (b) reduce the price per share of any outstanding Option or Stock Appreciation Right granted under the Plan or take any action prohibited under Section 11.6, or (c) cancel any Option or Stock Appreciation Right in exchange for cash or another Award when the Option or Stock Appreciation Right price per share exceeds the Fair Market Value of the underlying Shares. Except as provided in Section 13.10, no amendment, suspension or termination of the Plan shall, without the consent of the Holder, impair any rights or obligations under any Award theretofore granted or awarded, unless the Award itself otherwise expressly so provides. No Awards may be granted or awarded during any period of suspension or after termination of the Plan, and in no event may any Award be granted under the Plan after April 6, 2026 (the Expiration Date). Any Awards that are outstanding on the Expiration Date shall remain in force according to the terms of the Plan and the applicable Award Agreement.

13.2 Changes in Common Stock or Assets of the Company, Acquisition or Liquidation of the Company and Other Corporate Events.

(a) In the event of any stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other change affecting the shares of the Company's stock or the share price of the Company's stock other than an Equity Restructuring, the Administrator may make equitable adjustments, if any, to reflect such change with respect to: (i) the aggregate number and kind of shares that may be issued under the Plan (including, but not limited to, adjustments of the limitations in Sections 3.1 and 3.3 on the maximum number and kind of shares which may be issued under the Plan); (ii) the number and kind of Shares (or other securities or property) subject to outstanding Awards; (iii) the number and kind of Shares (or other securities or property) for which automatic grants are subsequently to be made to new and

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continuing Non-Employee Directors pursuant to Section 4.6, if applicable; (iv) the terms and conditions of any outstanding Awards (including, without limitation, any applicable performance targets or criteria with respect thereto); and (v) the grant or exercise price per share for any outstanding Awards under the Plan. Any adjustment affecting an Award intended as Performance-Based Compensation shall be made consistent with the requirements of Section 162(m) of the Code.

(b) In the event of any transaction or event described in Section 13.2(a) or any unusual or nonrecurring transactions or events affecting the Company, any Subsidiary of the Company, or the financial statements of the Company or any Subsidiary, or of changes in Applicable Law or accounting principles, including, without limitation, a Change in Control, the Administrator, in its discretion, and on such terms and conditions as it deems appropriate, either by the terms of the Award or by action taken prior to the occurrence of such transaction or event and either automatically or upon the Holder's request, is hereby authorized to take any one or more of the following actions whenever the Administrator determines that such action is appropriate in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made available under the Plan or with respect to any Award under the Plan, to facilitate such transactions or events or to give effect to such changes in laws, regulations or principles:

(i) To provide for either (A) termination of any such Award in exchange for an amount of cash, if any, equal to the amount that would have been attained upon the exercise of such Award or realization of the Holder's rights (and, for the avoidance of doubt, if as of the date of the occurrence of the transaction or event described in this Section 13.2 the Administrator determines in good faith that no amount would have been attained upon the exercise of such Award or realization of the Holder's rights, then such Award may be terminated by the Company without payment) or (B) the replacement of such Award with other rights or property selected by the Administrator, in its discretion, having an aggregate value not exceeding the amount that could have been attained upon the exercise of such Award or realization of the Holder's rights had such Award been currently exercisable or payable or fully vested;

(ii) To provide that such Award be assumed by the successor or survivor corporation, or a parent or subsidiary thereof, or shall be substituted for by similar options, rights or awards covering the stock of the successor or survivor corporation, or a parent or subsidiary thereof, with appropriate adjustments as to the number and kind of shares and prices;

(iii) To make adjustments in the number and type of shares of the Company's stock (or other securities or property) subject to outstanding Awards, and in the number and kind of outstanding Restricted Stock and/or in the terms and conditions of (including the grant or exercise price), and the criteria included in, outstanding Awards and Awards which may be granted in the future;

(iv) To provide that such Award shall be exercisable or payable or fully vested with respect to all shares covered thereby, notwithstanding anything to the contrary in the Plan or the applicable Award Agreement; and

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(v) To provide that the Award cannot vest, be exercised or become payable after such event.

(c) In connection with the occurrence of any Equity Restructuring, and notwithstanding anything to the contrary in Section 13.2(a) and 13.2(b), the Administrator shall equitably adjust each outstanding Award, which adjustments may include adjustments to the number and type of securities subject to each outstanding Award and/or the exercise price or grant price thereof, if applicable, the grant of new Awards to Holders, and/or the making of a cash payment to Holders, as the Administrator deems appropriate to reflect such Equity Restructuring. The adjustments provided under this Section 13.2(c) shall be nondiscretionary and shall be final and binding on the affected Holder and the Company; provided that whether an adjustment is equitable shall be determined in the discretion of the Administrator.

(d) Notwithstanding any other provision of the Plan, in the event of a Change in Control, each outstanding Award shall continue in effect or be assumed or an equivalent Award substituted by the successor corporation or a parent or subsidiary of the successor corporation.

(e) In the event that the successor corporation in a Change in Control refuses to assume or substitute for an Award, the Administrator may cause all or any portion of such Award to become fully vested and/or exercisable and/or payable immediately prior to the consummation of such transaction and all forfeiture restrictions on all or any portion of such Award to lapse. If an Award is exercisable in lieu of assumption or substitution in the event of a Change in Control, the Administrator shall notify the Holder that the Award shall be fully exercisable for a period of 15 days from the date of such notice, contingent upon the occurrence of the Change in Control, and the Award shall terminate upon the expiration of such period.

(f) For the purposes of this Section 13.2, an Award shall be considered assumed if, following the Change in Control, the Award confers the right to purchase or receive, for each Share subject to the Award immediately prior to the Change in Control, the consideration (whether stock, cash, or other securities or property) received in the Change in Control by holders of Common Stock for each Share held on the effective date of the transaction (and if holders were offered a choice of consideration, the type of consideration chosen by the holders of a majority of the outstanding Shares); provided, however, that if such consideration received in the Change in Control was not solely common stock of the successor corporation or its parent, the Administrator may, with the consent of the successor corporation, provide for the consideration to be received upon the exercise of the Award, for each Share subject to an Award, to be solely common stock of the successor corporation or its parent equal in fair market value to the per-share consideration received by holders of Common Stock in the Change in Control.

(g) The Administrator, in its discretion, may include such further provisions and limitations in any Award, agreement or certificate, as it may deem equitable and in the best interests of the Company that are not inconsistent with the provisions of the Plan.

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(h) With respect to Awards that are granted to Covered Employees and are intended to qualify as Performance-Based Compensation, no adjustment or action described in this Section 13.2 or in any other provision of the Plan shall be authorized to the extent that such adjustment or action would cause such Award to fail to so qualify as Performance-Based Compensation, unless the Administrator determines that the Award should not so qualify. No adjustment or action described in this Section 13.2 or in any other provision of the Plan shall be authorized to the extent that such adjustment or action would cause the Plan to violate Section 422(b)(1) of the Code. Furthermore, no such adjustment or action shall be authorized to the extent such adjustment or action would result in short-swing profits liability under Section 16 or violate the exemptive conditions of Rule 16b-3 unless the Administrator determines that the Award is not to comply with such exemptive conditions.

(i) The existence of the Plan, the Award Agreement and the Awards granted hereunder shall not affect or restrict in any way the right or power of the Company or the stockholders of the Company to make or authorize any adjustment, recapitalization, reorganization or other change in the Company's capital structure or its business, any merger or consolidation of the Company, any issue of stock or of options, warrants or rights to purchase stock or of bonds, debentures, preferred or prior preference stocks whose rights are superior to or affect the Common Stock or the rights thereof or which are convertible into or exchangeable for Common Stock, or the dissolution or liquidation of the Company, or any sale or transfer of all or any part of its assets or business, or any other corporate act or proceeding, whether of a similar character or otherwise.

(j) No action shall be taken under this Section 13.2 which shall cause an Award to fail to be exempt from or comply with Section 409A of the Code or the Treasury Regulations thereunder.

(k) In the event of any pending stock dividend, stock split, combination or exchange of shares, merger, consolidation or other distribution (other than normal cash dividends) of Company assets to stockholders, or any other change affecting the Shares or the share price of the Common Stock including any Equity Restructuring, for reasons of administrative convenience, the Company, in its discretion, may refuse to permit the exercise of any Award during a period of up to thirty (30) days prior to the consummation of any such transaction.

13.3 Approval of Plan by Stockholders. The Plan shall be submitted for the approval of the Company's stockholders within 12 months after the date of the Board's adoption of this amended and restated Plan.

13.4 No Stockholders Rights. Except as otherwise provided herein, a Holder shall have none of the rights of a stockholder with respect to Shares covered by any Award until the Holder becomes the record owner of such Shares.

13.5 Paperless Administration. In the event that the Company establishes, for itself or using the services of a third party, an automated system for the documentation, granting or exercise of Awards, such as a system using an internet website or interactive voice response, then the paperless documentation, granting or exercise of Awards by a Holder may be permitted through the use of such an automated system.

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13.6 Effect of Plan upon Other Compensation Plans. The adoption of the Plan shall not affect any other compensation or incentive plans in effect for the Company or any Subsidiary. Nothing in the Plan shall be construed to limit the right of the Company or any Subsidiary: (a) to establish any other forms of incentives or compensation for Employees, Directors or Consultants of the Company or any Subsidiary, or (b) to grant or assume options or other rights or awards otherwise than under the Plan in connection with any proper corporate purpose including without limitation, the grant or assumption of options in connection with the acquisition by purchase, lease, merger, consolidation or otherwise, of the business, stock or assets of any corporation, partnership, limited liability company, firm or association.

13.7 Compliance with Laws. The Plan, the granting and vesting of Awards under the Plan and the issuance and delivery of Shares and the payment of money under the Plan or under Awards granted or awarded hereunder are subject to compliance with all Applicable Law (including but not limited to state, federal and foreign securities law and margin requirements), and to such approvals by any listing, regulatory or governmental authority as may, in the opinion of counsel for the Company, be necessary or advisable in connection therewith. Any securities delivered under the Plan shall be subject to such restrictions, and the person acquiring such securities shall, if requested by the Company, provide such assurances and representations to the Company as the Company may deem necessary or desirable to assure compliance with all Applicable Law. To the extent permitted by Applicable Law, the Plan and Awards granted or awarded hereunder shall be deemed amended to the extent necessary to conform to Applicable Law.

13.8 Titles and Headings, References to Sections of the Code or Exchange Act. The titles and headings of the Sections in the Plan are for convenience of reference only and, in the event of any conflict, the text of the Plan, rather than such titles or headings, shall control. References to sections of the Code or the Exchange Act shall include any amendment or successor thereto.

13.9 Governing Law. The Plan and any agreements hereunder shall be administered, interpreted and enforced under the internal laws of the State of Delaware without regard to conflicts of laws thereof or of any other jurisdiction.

13.10 Section 409A. To the extent that the Administrator determines that any Award granted under the Plan is subject to Section 409A of the Code, the Award Agreement evidencing such Award shall incorporate the terms and conditions required by Section 409A of the Code. To the extent applicable, the Plan and any Award Agreements shall be interpreted in accordance with Section 409A of the Code, including without limitation any such regulations or other guidance that may be issued after the Effective Date. Notwithstanding any provision of the Plan to the contrary, in the event that following the Effective Date the Administrator determines that any Award may be subject to Section 409A of the Code (including Department of Treasury guidance as may be issued after the Effective Date), the Administrator may adopt such amendments to the Plan and the applicable Award Agreement or adopt other policies and procedures (including amendments, policies and procedures with retroactive effect), or take any other actions, that the Administrator determines are necessary or appropriate to (a) exempt the Award from Section 409A of the Code and/or preserve the intended tax treatment of the benefits provided with respect to the Award, or (b) comply with the requirements of Section 409A of the Code and thereby avoid the application of any penalty taxes under such Section.

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13.11 No Rights to Awards. No Eligible Individual or other person shall have any claim to be granted any Award pursuant to the Plan, and neither the Company nor the Administrator is obligated to treat Eligible Individuals, Holders or any other persons uniformly.

13.12 Unfunded Status of Awards. The Plan is intended to be an unfunded plan for incentive compensation. With respect to any payments not yet made to a Holder pursuant to an Award, nothing contained in the Plan or any Award Agreement shall give the Holder any rights that are greater than those of a general creditor of the Company or any Subsidiary.

13.13 Indemnification. To the extent allowable pursuant to Applicable Law, each member of the Committee or of the Board shall be indemnified and held harmless by the Company from any loss, cost, liability, or expense that may be imposed upon or reasonably incurred by such member in connection with or resulting from any claim, action, suit, or proceeding to which he or she may be a party or in which he or she may be involved by reason of any action or failure to act pursuant to the Plan and against and from any and all amounts paid by him or her in satisfaction of judgment in such action, suit, or proceeding against him or her; provided he or she gives the Company an opportunity, at its own expense, to handle and defend the same before he or she undertakes to handle and defend it on his or her own behalf. The foregoing right of indemnification shall not be exclusive of any other rights of indemnification to which such persons may be entitled pursuant to the Company's Certificate of Incorporation or Bylaws, as a matter of law, or otherwise, or any power that the Company may have to indemnify them or hold them harmless.

13.14 Relationship to other Benefits. No payment pursuant to the Plan shall be taken into account in determining any benefits under any pension, retirement, savings, profit sharing, group insurance, welfare or other benefit plan of the Company or any Subsidiary except to the extent otherwise expressly provided in writing in such other plan or an agreement thereunder.

13.15 Expenses. The expenses of administering the Plan shall be borne by the Company and its Subsidiaries.

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IGNYTA, INC.

11111 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:

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

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

The Board of Directors recommends you vote FOR the following:	For	Withhold	For All	To withhold authority to vote for any individual nominee(s), mark For All and write the number(s) of the nominee(s) on the line below.
	All	All	Except	

1. Election
of
Directors

Nominees

01. Alexander Casdin 02. James Freddo, M.D.

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

For Against Abstain

2. To approve the Amended and Restated Ignyta, Inc. 2014 Incentive Award Plan, including the reservation of an additional 3,000,000 shares for issuance thereunder.
3. 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, 2016.

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NOTE: 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 Shareholders 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 and Proxy Statement and Annual Report are available at www.proxyvote.com

IGNYTA, INC

Annual Meeting of Stockholders

June 13, 2016 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 13, 2016 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 NOMINEES UNDER PROPOSAL 1, FOR PROPOSALS 2 AND 3, 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

