

Ignyta, Inc.
Form 424B3
June 16, 2014

Filed pursuant to Rule 424(b)(3)

Registration No. 333-192956

PROSPECTUS SUPPLEMENT NO. 2

IGNYTA, INC.

9,010,238 Shares of Common Stock

This prospectus supplement No. 2 supplements and amends the prospectus dated April 4, 2014, as supplemented and amended by prospectus supplement dated May 14, 2014 (as so supplemented and amended, the prospectus), relating to the resale of up to 9,010,238 outstanding shares of common stock of Ignyta, Inc. (the Company). These shares include 7,740,142 shares of common stock issued and sold to accredited investors in a private placement offering closed on November 6, 2013 (the Initial Private Placement), and 1,270,096 shares of common stock issued and sold to accredited investors in a private placement offering closed on November 29, 2013 (together with the Initial Private Placement, the Private Placements). All shares of common stock issued in the Private Placements were sold at a purchase price of \$6.00 per share.

This prospectus supplement incorporates into our prospectus the information contained in our attached:

Current Reports on Form 8-K, which were filed with the Securities and Exchange Commission on May 30, 2014 and June 13, 2014.

This prospectus supplement is not complete without, and may not be delivered or utilized in connection with the prospectus, including any supplements and amendments thereto. This prospectus supplement should be read in conjunction with the prospectus, which is to be delivered with this prospectus supplement. This prospectus supplement is qualified by reference to the prospectus, except to the extent that the information in this prospectus supplement updates or supersedes the information contained in the prospectus, including any supplements and amendments thereto.

Investing in our common stock involves a high degree of risk. Before making any investment in our common stock, you should read and carefully consider matters discussed under the caption Risk Factors beginning on page 8 of the prospectus, as updated or superseded by the Risk Factors section beginning on page 26 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2014.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This prospectus supplement is dated June 16, 2014

This prospectus supplement supplements and amends the section entitled "Risk Factors" in our prospectus by deleting the subsections entitled "Some provisions of our charter documents and Nevada law may discourage an acquisition of us by others, even if the acquisition may be beneficial to some of our stockholder" and "The elimination of personal liability against our directors and officers under Nevada law and the existence of indemnification rights held by our directors, officers and employees may result in substantial expense" and replacing them with the following:

Anti-takeover provisions under our charter documents and Delaware law could delay or prevent a change of control which could limit the market price of our common stock and may prevent or frustrate attempts by our stockholders to replace or remove our current management.

Our second amended and restated certificate of incorporation and amended and restated bylaws contain provisions that could delay or prevent a change of control of our company or changes in our board of directors that our stockholders might consider favorable. Some of these provisions include:

a board of directors divided into three classes serving staggered three-year terms, such that not all members of the board will be elected at one time;

a prohibition on stockholder action through written consent, which requires that all stockholder actions be taken at a meeting of our stockholders;

a requirement that special meetings of stockholders be called only by the chairman of the board of directors, the chief executive officer, the president or by a majority of the total number of authorized directors;

advance notice requirements for stockholder proposals and nominations for election to our board of directors;

a requirement that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two-thirds of all outstanding shares of our voting stock then entitled to vote in the election of directors;

a requirement of approval of not less than two-thirds of all outstanding shares of our voting stock to amend any bylaws by stockholder action or to amend specific provisions of our second amended and restated certificate of incorporation; and

the authority of the board of directors to issue preferred stock on terms determined by the board of directors without stockholder approval and which preferred stock may include rights superior to the rights of the holders of common stock.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporate Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. These anti-takeover provisions and other provisions in our second amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for stockholders or potential acquirors to obtain control of our board of directors or initiate actions that are opposed by the

then-current board of directors and could also delay or impede a merger, tender offer or proxy contest involving our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

This prospectus supplement supplements and amends the section entitled "Description of Capital Stock" in our prospectus by amending and restating in its entirety the subsection thereof entitled "Anti-Takeover Provisions" as follows:

Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws

Some provisions of Delaware law, our second amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could make the following transactions more difficult: an acquisition of us by means of a tender offer; an acquisition of us by means of a proxy contest or otherwise; or the removal of our incumbent officers and directors. It is possible that these provisions could make it more difficult to accomplish or could deter transactions that stockholders may otherwise consider to be in their best interest or in our best interests, including transactions which provide for payment of a premium over the market price for our shares.

These provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of the increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging these proposals because negotiation of these proposals could result in an improvement of their terms.

Undesignated Preferred Stock

The ability of our board of directors, without action by the stockholders, to issue up to 10,000,000 shares of preferred stock with voting or other rights or preferences as designated by our board of directors could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Stockholder Meetings

Our amended and restated bylaws provide that a special meeting of stockholders may be called only by our chairman of the board, chief executive officer or president, or by a resolution adopted by a majority of our board of directors.

Requirements for Advance Notification of Stockholder Nominations and Proposals

Our amended and restated bylaws establish advance notice procedures with respect to stockholder proposals to be brought before a stockholder meeting and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Elimination of Stockholder Action by Written Consent

Our second amended and restated certificate of incorporation and amended and restated bylaws eliminate the right of stockholders to act by written consent without a meeting.

Staggered Board

Our board of directors is divided into three classes. The directors in each class will serve for a three-year term, one class being elected each year by our stockholders. This system of electing and removing directors may tend to discourage a third-party from making a tender offer or otherwise attempting to obtain control of us, because it generally makes it more difficult for stockholders to replace a majority of the directors.

Removal of Directors

Our second amended and restated certificate of incorporation provides that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two-thirds of the total voting power of all of our outstanding voting stock then entitled to vote in the election of directors.

Stockholders Not Entitled to Cumulative Voting

Our second amended and restated certificate of incorporation does not permit stockholders to cumulate their votes in the election of directors. Accordingly, the holders of a majority of the outstanding shares of our common stock entitled to vote in any election of directors can elect all of the directors standing for election, if they choose, other than any directors that holders of our preferred stock may be entitled to elect.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits persons deemed to be interested stockholders from engaging in a business combination with a publicly held Delaware corporation for three years following the date these persons become interested stockholders unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. Generally, an interested stockholder is a person who, together with affiliates and associates, owns, or within three years prior to the determination of interested stockholder status did own, 15% or more of a corporation's voting stock. Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors.

Amendment of Charter Provisions

The amendment of any of the above provisions, except for the provision making it possible for our board of directors to issue preferred stock, would require approval by holders of at least two-thirds of the total voting power of all of our outstanding voting stock.

The provisions of Delaware law, our second amended and restated certificate of incorporation and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in the composition of our board and management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

This prospectus supplement supplements and amends the section entitled *Description of Capital Stock* in our prospectus by amending and restating in its entirety the subsection entitled *Liability and Indemnification of Directors and Officers* as follows:

Limitations of Liability and Indemnification Matters

Our second amended and restated certificate of incorporation and our amended and restated bylaws provide that we will indemnify our directors and officers to the fullest extent permitted by the Delaware General Corporation Law, which prohibits our second amended and restated certificate of incorporation from limiting the liability of our directors for the following:

any breach of the director's duty of loyalty to us or our stockholders;

acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;

unlawful payment of dividends or unlawful stock repurchases or redemptions; or

any transaction from which the director derived an improper personal benefit.

Our second amended and restated certificate of incorporation and our amended and restated bylaws also provide that if Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a

director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. This limitation of liability does not apply to liabilities arising under the federal securities laws and does not affect the availability of equitable remedies such as injunctive relief or rescission.

Our second amended and restated certificate of incorporation and our amended and restated bylaws also provide that we shall have the power to indemnify our employees and agents to the fullest extent permitted by law. Our amended and restated bylaws also permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in this capacity, regardless of whether our amended and restated bylaws would permit indemnification. We have obtained directors and officers liability insurance.

We have entered into separate indemnification agreements with our directors and executive officers, in addition to indemnification provided for in our second amended and restated certificate of incorporation and amended and restated bylaws. These agreements, among other things, provide for indemnification of our directors and executive officers for expenses, judgments, fines and settlement amounts incurred by this person in any action or proceeding arising out of this person's services as a director or executive officer or at our request. We believe that these provisions in our second amended and restated certificate of incorporation and amended and restated bylaws and indemnification agreements are necessary to attract and retain qualified persons as directors and executive officers.

The above description of the indemnification provisions of our second amended and restated certificate of incorporation, our amended and restated bylaws and our indemnification agreements is not complete and is qualified in its entirety by reference to these documents.

The limitation of liability and indemnification provisions in our second amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

This prospectus supplement supplements and amends the section entitled "Legal Matters" in our prospectus as follows:

LEGAL MATTERS

The validity of the common stock being offered by this prospectus will be passed upon by Latham & Watkins LLP, San Diego, California.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

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

Date of Report (Date of earliest event reported): May 30, 2014

IGNYTA, INC.

(Exact Name of Registrant as Specified in its Charter)

Nevada
(State of Incorporation)

001-36344
(Commission
File Number)
11095 Flintkote Avenue, Suite D

59-3564984
(IRS Employer
Identification No.)

San Diego, California 92121

(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (858) 255-5959

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- .. Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- .. Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- .. Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- .. Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers

(c) On May 30, 2014, Ignyta, Inc. (Ignyta) appointed Jacob Chacko, M.D., as Ignyta s Chief Financial Officer, effective immediately. Dr. Chacko assumed responsibility for the role from Zachary Hornby, who has been appointed to the newly-created role of Ignyta s Chief Operating Officer.

Prior to joining Ignyta, Dr. Chacko, 35, was Vice President at TPG Capital, a global private investment firm, 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.

Dr. Chacko s annual base salary will be \$345,000, and he will receive a signing bonus of \$50,000. Ignyta will reimburse Dr. Chacko for up to \$25,000 in expenses incurred in relocating to San Diego, California, with the reimbursed amounts to be grossed up for applicable taxes. Dr. Chacko will also be eligible to participate in cash or other bonus plans at the discretion and upon the approval of Ignyta s Board of Directors. Further, Dr. Chacko will be eligible to receive grants of equity awards under equity compensation plans that Ignyta s Board of Directors, or a committee thereof, may approve and adopt in the future, at the discretion of the Board of Directors or any such committee. As with Ignyta s other employees, Dr. Chacko does not have a formal employment agreement with Ignyta, and will not have such an agreement unless and until the Board of Directors, or a committee thereof, and Dr. Chacko approve the terms of any such agreement. As a result, the amount of Dr. Chacko s annual base salary, cash or other bonus compensation, equity compensation or any other form of compensation he may receive may be modified at any time at the discretion of the Board of Directors or a committee thereof.

In connection with his appointment, on May 30, 2014, Ignyta granted to Dr. Chacko a stock option award to purchase 250,000 shares of Ignyta s common stock under Ignyta s Employment Inducement Incentive Award Plan (the Inducement Plan) at an exercise price per share equal to the closing price of Ignyta s common stock on the Nasdaq Capital Market on May 30, 2014. The option will have a ten-year term. The option award agreement will be consistent with the standard option award agreement under the Inducement Plan, and the options will vest on Ignyta s standard four-year vesting schedule, with 25% of the shares subject to the award vesting on the first anniversary of Dr. Chacko s date of hire and 1/36th of the remaining shares subject to the award vesting each monthly anniversary thereafter, subject to Dr. Chacko s continued employment by Ignyta on each vesting date. The inducement stock option award was approved by the Compensation Committee of Ignyta s Board of Directors and was granted as an inducement material to Dr. Chacko entering into employment with Ignyta in accordance with Nasdaq Marketplace Rule 5635(c)(4).

In addition, Dr. Chacko will be eligible to participate in Ignyta s 2013 Severance and Change in Control Severance Plan (the Severance Plan) as a Tier 2 Covered Employee. The terms and provisions of the Severance Plan as applied to a Tier 2 Covered Employee are set forth in Ignyta s Current Report on Form 8-K filed with the Securities and Exchange Commission on December 19, 2013, which description is incorporated herein by reference.

There are no family relationships between Dr. Chacko and any of Ignyta s current or former directors or executive officers. Dr. Chacko is not a party to any transaction that would require disclosure under Item 404(a) of Regulation S-K promulgated under the Securities Act of 1933.

In connection with his appointment as Chief Operating Officer, Mr. Hornby s annual base salary will be increased to \$345,000. All other terms of Mr. Hornby s compensation and employment with Ignyta will remain unchanged. A

description of such compensation and employment terms, as well as Mr. Hornby's biography, is available in Ignyta's definitive proxy statement, filed with the Securities and Exchange Commission on April 30, 2014, and is incorporated herein by reference.

The press release dated May 30, 2014 announcing the appointments of Dr. Chacko and Mr. Hornby is attached hereto as Exhibit 99.1. The information contained in Exhibit 99.1 of this Current Report on Form 8-K shall not be deemed filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the Exchange Act), or incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 9.01. Financial Statements and Exhibits

(d) Exhibits.

Exhibit No.	Description
99.1	Press Release, dated May 30, 2014.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: May 30, 2014

IGNYTA, INC.

By: /s/ Jonathan E. Lim, M.D.

Name: Jonathan E. Lim, M.D.

Title: President and Chief Executive Officer

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press Release, dated May 30, 2014.

**Ignyta Boosts Leadership Capacity with Appointments of
Jacob Chacko, M.D. as Chief Financial Officer
and Zachary Hornby as Chief Operating Officer**

May 30, 2014 04:00 PM Eastern Daylight Time

SAN DIEGO (BUSINESS WIRE) Ignyta, Inc. (Nasdaq: RXDX), an oncology precision medicine biotechnology company, announced today that Jacob Chacko, M.D. has been appointed as Chief Financial Officer, assuming responsibility for the role from Zachary Hornby, who has been appointed to the newly-created role of Chief Operating Officer.

We are thrilled to expand leadership capacity at Ignyta with the addition of Jacob to our management team, said Jonathan Lim, M.D., Chairman and CEO of Ignyta. His broad range of experience with financing, managing, and advising companies in the life sciences field will contribute greatly to Ignyta's growth as a leading precision medicine biotechnology company.

Ignyta will always be grateful for Zach's invaluable contributions as CFO during a period in which we successfully went public and raised nearly \$120 million, continued Dr. Lim. This move helps us build significant capacity for future growth by deploying Zach to drive our operations as our COO, where his talents are needed most. During our rapid growth phase, Zach has operated as our de facto COO on top of his CFO responsibilities, and we are fortunate to be able to benefit from his contributions in this official capacity.

Dr. Chacko joins Ignyta from TPG Capital, a global private investment firm with approximately \$60 billion of assets under management, where he served as a Vice President focused primarily on healthcare and digital media since August 2008. At TPG, Dr. Chacko helped lead teams that successfully completed acquisitions having an aggregate value of over \$10 billion. 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. Prior to TPG, Dr. Chacko concurrently received his M.D. from UCLA and his M.B.A. from Harvard University, and was president of his class at both institutions. Prior to this, Dr. Chacko was an Associate serving healthcare clients at the management consulting firm McKinsey & Company. 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.

On May 30, 2014, Dr. Chacko received an inducement stock option award under Ignyta's Employment Inducement Incentive Award Plan, which was adopted March 28, 2014 and provides for the granting of equity awards to new employees of Ignyta. The inducement award consists of an option to purchase an aggregate of 250,000 shares of Ignyta common stock. The option has a ten-year term and an exercise price equal to the closing price per share of Ignyta's common stock on the Nasdaq Capital Market on the date of grant. The option vests over a four-year period, with 25% of the option vesting on the first anniversary of the date of hire and the remainder vesting in equal monthly installments over the three years thereafter. The award was approved by the compensation committee of Ignyta's board of directors and was granted as an inducement material to Dr. Chacko entering into employment with Ignyta in accordance with Nasdaq Marketplace Rule 5635(c)(4).

About Ignyta, Inc.

Ignyta, Inc., located in San Diego, California, is a biotechnology company developing precision medicine with integrated Rx/Dx solutions for cancer patients. Its goal is to discover and develop revolutionary new drugs that target activated genes in cancer cells for the customized treatment of cancer patients. The company's present focus is on the development of RXDX-101, its proprietary oral tyrosine kinase inhibitor that targets solid tumor indications, and advancing its novel Spark discovery programs that leverage its proprietary cancer genomic and epigenomic knowledge bases. For more information, please visit: www.ignyta.com.

Forward-Looking Statements

This press release contains forward-looking statements as that term is defined in Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Statements in this press release that are not purely historical are forward-looking statements. Such forward-looking statements include, among other things, references to the expected contributions of Ignyta's new Chief Financial Officer and Chief Operating Officer. Actual results could differ from those projected in any forward-looking statements due to numerous factors. Such factors include, among others, the inherent uncertainties associated with developing new products or technologies and operating as a development stage company; the potential for final results of any Phase I/II clinical trial of RXDX-101 to differ from the preliminary results; regulatory developments in the United States and foreign countries; Ignyta's ability to develop, complete clinical trials for, obtain approvals for and commercialize any of its product candidates; changes in Ignyta's plans to develop and commercialize its product candidates; Ignyta's ability to raise any additional funding it will need to continue to pursue its business and product development plans; Ignyta's ability to obtain and maintain intellectual property protection for its product candidates; the loss of key scientific or management personnel; competition in the industry in which Ignyta operates; and market conditions. These forward-looking statements are made as of the date of this press release, and Ignyta assumes no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those projected in the forward-looking statements. Investors should consult all of the information set forth herein and should also refer to the risk factor disclosure set forth in the reports and other documents the company files with the SEC available at www.sec.gov, including without limitation Ignyta's Annual Report on Form 10-K for the year ended December 31, 2013 and subsequent Quarterly Reports on Form 10-Q.

Contacts

Ignyta, Inc.

Jonathan E. Lim, M.D.

CEO

858-255-5958

jl@ignyta.com

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K12B

CURRENT REPORT

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

Date of Report (Date of earliest event reported): June 11, 2014

IGNYTA, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State of Incorporation)

001-36344
(Commission

59-3564984
(IRS Employer

File Number)
11095 Flintkote Avenue, Suite D

Identification No.)

San Diego, California 92121

(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (858) 255-5959

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- .. Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- .. Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- .. Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- .. Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 1.01 Entry into a Material Definitive Agreement.

As further described in Item 3.03 below, Ignyta, Inc., a Nevada corporation (Ignyta Nevada), consummated a reincorporation merger (the Reincorporation) with and into its wholly owned subsidiary, Ignyta Operating, Inc., a Delaware corporation (Ignyta Delaware), pursuant to the terms of an Agreement and Plan of Merger entered into between Ignyta Nevada and Ignyta Delaware on June 12, 2014, which is attached as Exhibit 2.1 to this Current Report on Form 8-K and incorporated herein by reference. The effective time and date of the Reincorporation was 11 a.m. Eastern time on June 12, 2014 (the Effective Time). As a result of the Reincorporation, the registrant is now a Delaware corporation and Ignyta Nevada has ceased to exist. In addition, at the Effective Time, Ignyta Operating, Inc. changed its name to Ignyta, Inc. The directors and officers of Ignyta Nevada are now the directors and officers of Ignyta Delaware, and Ignyta Delaware will continue to operate the business of Ignyta Nevada as it existed immediately prior to the Reincorporation.

In connection with the Reincorporation, we entered into indemnification agreements in the form attached hereto as Exhibit 10.1 with our current directors and executive officers. These agreements, among other things, require us or will require us to indemnify each director and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys' fees, judgments, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of us, arising out of the person's services as a director or executive officer.

Item 3.03 Material Modification to Rights of Security Holders.

At the Effective Time, Ignyta Nevada changed its state of incorporation from Nevada to Delaware through a merger with and into Ignyta Delaware. The Reincorporation was accomplished pursuant to the terms of an Agreement and Plan of Merger entered into between Ignyta Nevada and Ignyta Delaware on June 12, 2014, which is attached as Exhibit 2.1 to this Current Report on Form 8-K and incorporated herein by reference. The stockholders of Ignyta Nevada approved the Reincorporation pursuant to the Agreement and Plan of Merger at the 2014 annual meeting of stockholders of Ignyta Nevada held on June 11, 2014.

At the Effective Time, (i) each share of Ignyta Nevada's common stock, par value \$0.00001, issued and outstanding was automatically converted into one share of Ignyta Delaware's common stock, \$0.0001 par value per share (the Common Stock); and (ii) each outstanding option, warrant and other equity award to acquire Ignyta Nevada's common stock outstanding immediately before the Effective Time was automatically converted into an option, warrant and other equity award, as applicable, to acquire the same number of shares of Ignyta Delaware's Common Stock upon the same terms, including price. Each outstanding certificate representing shares of Ignyta Nevada's common stock was deemed, without any action by the stockholders, to represent the same number of shares of Ignyta Delaware's Common Stock. Ignyta Nevada stockholders may, but are not required to, exchange their stock certificates as a result of the Reincorporation.

In accordance with Rule 12g-3 under the Exchange Act, the shares of Common Stock of Ignyta Delaware are deemed to be registered under Section 12(b) of the Exchange Act as the successor to Ignyta Nevada. The shares of Common Stock of Ignyta Delaware continue to be listed on the NASDAQ Capital Market under the symbol RXDX.

Prior to the Effective Time, the rights of Ignyta Nevada's stockholders were governed by the Nevada Revised Statutes and Ignyta Nevada's amended and restated articles of incorporation and amended bylaws. As a result of the Reincorporation, holders of Ignyta Nevada common stock are now holders of Ignyta Delaware's Common Stock, and their rights as stockholders are governed by the Delaware General Corporation Law and Ignyta Delaware's second amended and restated certificate of incorporation and amended and restated bylaws. In connection with the Reincorporation, the number of authorized shares of common stock was increased from the 100,000,000 shares under Ignyta Nevada's amended and restated articles of incorporation to 150,000,000 shares of Common Stock under Ignyta

Delaware's second amended and restated certificate of incorporation. Ignyta Delaware's second amended and restated certificate of incorporation, amended and restated bylaws, and form of Common Stock certificate are attached as Exhibits 3.1, 3.2, and 4.1 respectively, to this Current Report on Form 8-K and are incorporated herein by reference.

Ignyta Delaware hereby incorporates by reference the description of the Common Stock contained in the section entitled "Proposal No. 3 Approval of Reincorporation in Delaware and Related Transactions" in Ignyta Nevada's definitive proxy statement on Schedule 14A, as filed with the Securities and Exchange Commission on April 30, 2014 (the "Proxy Statement"), including the following captions: "Securities Act Consequences" and "Comparison of Certain Rights of Stockholders Under Nevada and Delaware Law," to the extent such description relates to the common stock of Ignyta Delaware.

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

The information in Item 1.01 above is incorporated herein by reference.

In connection with the Reincorporation, on June 12, 2014, the board of directors of the registrant (the Board) assigned Heinrich Dreismann, Ph.D. to Class I of the Board, Alexander Casdin and James Freddo, M.D. to Class II of the Board, and Jonathan Lim, M.D. and James Bristol, Ph.D. to Class III of the Board. Dr. Dreismann shall serve for a term expiring at the registrant's annual meeting of stockholders to be held in 2015; Mr. Casdin and Dr. Freddo shall serve for a term expiring at the registrant's annual meeting of stockholders to be held in 2016; and Dr. Lim and Dr. Bristol shall serve for a term expiring at the registrant's annual meeting of stockholders to be held in 2017.

At the annual meeting of stockholders of the registrant held on June 11, 2014, the registrant's stockholders approved the Ignyta, Inc. 2014 Incentive Award Plan (the 2014 Plan), which authorized the issuance of the sum of 3,000,000 shares of the registrant's common stock plus one share for each share subject to a stock option that is outstanding under the Ignyta, Inc. Amended and Restated 2011 Stock Incentive Plan (the 2011 Plan) as of the effective date of the 2014 Plan that subsequently expires, is forfeited or is settled in cash. A maximum of an additional 1,643,488 shares (representing the number of shares subject to stock options under the 2011 Plan as of March 31, 2014) could become available for future issuance under the 2014 Plan in respect of outstanding stock options under the 2011 Plan. 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 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.

The terms and conditions of the 2014 Plan are described in the section entitled Proposal No. 4 Approval of the Ignyta, Inc. 2014 Incentive Award Plan in the registrant's Proxy Statement. The registrant's directors and executive officers are eligible to participate in the 2014 Plan. The foregoing description of the 2014 Plan does not purport to be complete and is qualified in its entirety by reference to the complete text of the 2014 Plan, which is filed as Exhibit 10.2 to this report and incorporated herein by reference.

Item 5.03 Amendments to Articles of Incorporation or Bylaws; Change in Fiscal Year.

The information in Item 3.03 above is incorporated herein by reference.

Item 5.07 Submission of Matters to a Vote of Security Holders.

The registrant held its annual meeting of stockholders on June 11, 2014. The following is a brief description of each matter voted upon at the meeting and the number of votes cast for, withheld or against, the number of abstentions and the number of broker non-votes with respect to each matter, as applicable.

1. To elect the following five directors for a one-year term to expire at the 2015 annual meeting of stockholders:

Director Name	For	Withheld	Broker Non-Votes
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James Bristol, Ph.D.	13,429,284	800	1,240,416
Alexander Casdin	13,427,784	2,300	1,240,416
Heinrich Dreismann, Ph.D.	13,429,284	800	1,240,416
James Freddo, M.D.	13,371,904	58,180	1,240,416
Jonathan E. Lim, M.D.	13,429,284	800	1,240,416

In accordance with the above results, each nominee was elected to serve as a director.

- To ratify the selection of Mayer Hoffman McCann P.C. as the Registrant's independent registered public accounting firm for the fiscal year ending December 31, 2014:

For	Against	Abstain	Broker Non-Votes
14,664,500	1,000	5,000	N/A

In accordance with the above results, the selection of Mayer Hoffman McCann P.C. was ratified.

3. To approve an agreement and plan of merger pursuant to which Ignyta Nevada would merge with and into Ignyta Delaware, with Ignyta Delaware being the surviving entity to the merger and changing its name to Ignyta, Inc., resulting in Ignyta Nevada's reincorporation from the State of Nevada to the State of Delaware:

For	Against	Abstain	Broker Non-Votes
11,529,558	1,895,526	5,000	1,240,416

In accordance with the above results, the proposal to reincorporate Ignyta Nevada from the State of Nevada to the State of Delaware was approved.

4. To approve the Ignyta, Inc. 2014 Incentive Award Plan:

For	Against	Abstain	Broker Non-Votes
13,285,206	139,868	5,010	1,240,416

In accordance with the above results, the Ignyta, Inc. 2014 Incentive Award Plan was approved.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

- Exhibit 2.1 Agreement and Plan of Merger
- Exhibit 3.1 Second Amended and Restated Certificate of Incorporation of Ignyta, Inc.
- Exhibit 3.2 Amended and Restated Bylaws of Ignyta, Inc.
- Exhibit 4.1 Form of Common Stock Certificate of Ignyta, Inc.
- Exhibit 10.1 Form of Indemnification Agreement by and between Ignyta, Inc. and each of its current directors and executive officers
- Exhibit 10.2 Ignyta, Inc. 2014 Incentive Award Plan
- Exhibit 10.3 Form of Stock Option Agreement under the Ignyta, Inc. 2014 Incentive Award Plan

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: June 13, 2014

IGNYTA, INC.

By: /s/ Jonathan E. Lim, M.D.

Name: Jonathan E. Lim, M.D.

Title: President and Chief Executive Officer

Index to Exhibits

Exhibit Number	Description
Exhibit 2.1	Agreement and Plan of Merger
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AGREEMENT AND PLAN OF MERGER

AMONG

IGNYTA, INC.

and

IGNYTA OPERATING, INC.

Dated as of June 12, 2014

THIS AGREEMENT AND PLAN OF MERGER, dated as of June 12, 2014 (this Agreement), is entered into by and between Ignyta, Inc., a Nevada corporation (Ignyta), and Ignyta Operating, Inc., a Delaware corporation (Ignyta Operating). Ignyta and Ignyta Operating are hereinafter sometimes collectively referred to as the Constituent Corporations.

WITNESSETH:

WHEREAS, Ignyta is a corporation duly organized and existing under the laws of the State of Nevada;

WHEREAS, Ignyta Operating is a corporation duly organized and existing under the laws of the State of Delaware and a wholly-owned subsidiary of Ignyta;

WHEREAS, Ignyta has authority to issue 100,000,000 shares of Common Stock, \$0.00001 par value per share (Ignyta Common Stock), of which 19,579,588 shares are issued and outstanding, and 10,000 shares of Preferred Stock, \$0.00001 par value per share (Ignyta Preferred Stock), of which no shares are issued and outstanding;

WHEREAS, at and following the Effective Time (as defined herein), Ignyta Operating will have authority to issue 150,000,000 shares of Common Stock, \$0.0001 par value per share (Ignyta Operating Common Stock), and 10,000,000 shares of Preferred Stock, \$0.0001 par value per share;

WHEREAS, 1,000 shares of Ignyta Operating Common Stock are issued and outstanding, all of which are owned by Ignyta;

WHEREAS, the respective Boards of Directors of Ignyta and Ignyta Operating have determined that it is advisable and in the best interests of such corporations and their stockholders that Ignyta merge with and into Ignyta Operating upon the terms and subject to the conditions set forth in this Agreement;

WHEREAS, the purpose of the Merger (as defined below) is, among other things, to change the state of incorporation of Ignyta to enable Ignyta to avail itself of the advantages that the corporate laws of Delaware afford to public companies;

WHEREAS, for United States federal income tax purposes, the parties hereto intend the Merger (as defined below) to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended (the Code), and the Treasury Regulations promulgated thereunder;

WHEREAS, the Board of Directors of Ignyta has approved this Agreement and directed that this Agreement be submitted to a vote of Ignyta stockholders for approval in accordance with Chapter 92A of the Nevada Revised Statutes (the NRS), and the stockholders of Ignyta have approved this Agreement and the Merger; and

WHEREAS, the Board of Directors of Ignyta Operating has approved this Agreement and the sole stockholder of Ignyta Operating has approved this Agreement.

NOW, THEREFORE, in consideration of the premises and mutual agreements and covenants herein contained, Ignyta and Ignyta Operating hereby agree as follows:

1: Merger. Ignyta shall be merged with and into Ignyta Operating (the Merger) in accordance with Section 253 of the Delaware General Corporation Law (the DGCL) and Sections 92A.120 and 92A.190 of the NRS such that Ignyta Operating shall be the surviving corporation (hereinafter sometimes referred to as the Surviving Corporation). The Merger shall become effective (the Effective Time) upon the latest to occur of (a) the filing with the Nevada Secretary of State of the Articles of Merger complying with NRS Chapter 92A and executed and acknowledged on behalf of Ignyta Operating and Ignyta in accordance with the requirements of the NRS and (b) the filing with the Delaware Secretary of State of the Certificate of Merger complying with the DGCL and executed and acknowledged on behalf of Ignyta Operating and Ignyta in accordance with the requirements of the DGCL.

2: Governing Documents. At and following the Effective Time, the Certificate of Incorporation attached to the Certificate of Merger filed with the Secretary of State of the State of Delaware shall be the Certificate of Incorporation of the Surviving Corporation until thereafter amended in accordance with the provisions thereof and applicable law. At and following the Effective Time, the Bylaws of Ignyta Operating in effect immediately prior to the Effective Time shall be the Bylaws of the Surviving Corporation until thereafter duly amended.

3: Directors. The persons who are directors of Ignyta immediately prior to the Effective Time shall, after the Effective Time, be the directors of the Surviving Corporation, without change until their successors have been duly elected and qualified in accordance with the Certificate of Incorporation and Bylaws of the Surviving Corporation.

4: Officers. The persons who are officers of Ignyta immediately prior to the Effective Time shall, after the Effective Time, be the officers of the Surviving Corporation, without change until their successors have been duly elected and qualified in accordance with the Certificate of Incorporation and Bylaws of the Surviving Corporation.

5: Succession. At the Effective Time, in accordance with NRS 92A.250 the separate corporate existence of Ignyta shall cease and (i) all the rights, privileges, powers and franchises of a public and private nature of each of the Constituent Corporations, subject to all the restrictions, disabilities and duties of each of the Constituent Corporations; (ii) all assets, property, real, personal and mixed, belonging to each of the Constituent Corporations; and (iii) all debts due to each of the Constituent Corporations on whatever account, including stock subscriptions and all other things in action, in each case, shall succeed to, be vested in and become the property of the Surviving Corporation without any further act or deed as they were of the respective Constituent Corporations. The title to any real estate vested by deed or otherwise and any other asset, in either of such Constituent Corporations, shall not revert or be in any way impaired by reason of the Merger, and all rights of creditors and all liens

upon any property of Ignyta shall be preserved unimpaired. To the extent permitted by law, any claim existing or action or proceeding pending by or against either of the Constituent Corporations may be prosecuted as if the Merger had not taken place. All debts, liabilities and duties of the respective Constituent Corporations shall thenceforth attach to the Surviving Corporation and may be enforced against it to the same extent as if such debts, liabilities and duties had been incurred or contracted by it. All corporate acts, plans, policies, agreements, arrangements, approvals and authorizations of Ignyta, its stockholders, Board of Directors and committees thereof, officers and agents that were valid and effective immediately prior to the Effective Time shall be taken for all purposes as the acts, plans, policies, agreements, arrangements, approvals and authorizations of the Surviving Corporation and shall be as effective and binding thereon as the same were with respect to Ignyta. The employees and agents of Ignyta shall become the employees and agents of the Surviving Corporation and continue to be entitled to the same rights and benefits that they enjoyed as employees and agents of Ignyta.

6: Further Assurances. From time to time, as and when required by the Surviving Corporation or by its successors or assigns, there shall be executed and delivered on behalf of Ignyta such deeds and other instruments, and there shall be taken or caused to be taken by it all such further and other action, as shall be appropriate, advisable or necessary in order to vest, perfect or confirm, of record or otherwise, in the Surviving Corporation the title to and possession of all property, interests, assets, rights, privileges, immunities, powers, franchises and authority of Ignyta, and otherwise to carry out the purposes of this Agreement. The officers and directors of the Surviving Corporation are fully authorized in the name and on behalf of Ignyta or otherwise, to take any and all such action and to execute and deliver any and all such deeds and other instruments.

7: Conversion of Shares. At the Effective Time, by virtue of the Merger and without any action on the part of the holder thereof, (i) each share of Ignyta Common Stock issued and outstanding immediately prior to the Effective Time shall be cancelled and converted into one (1) validly issued, fully paid and non-assessable share of Ignyta Operating Common Stock; (ii) each security convertible into or exercisable or exchangeable for Ignyta Common Stock issued and outstanding immediately prior to the Effective Time under the Ignyta, Inc. 2014 Incentive Award Plan (the Ignyta 2014 Plan), the Amended and Restated 2011 Stock Incentive Plan (the Ignyta 2011 Plan) and the Ignyta, Inc. Employment Inducement Incentive Plan (the Ignyta Inducement Plan and, together with the Ignyta 2014 Plan and the Ignyta 2011 Plan, the Ignyta Plans) shall be cancelled and converted, exercised or exchanged, upon the same restrictions, terms and conditions, into an option to purchase or other right to acquire, upon the same terms and conditions, the number of shares of Ignyta Operating Common Stock that is equal to the number of shares of Ignyta Common Stock that the holder would have received had the holder exercised such option to purchase or other right to acquire in full immediately prior to the Effective Time (whether or not such option to purchase or other right to acquire was then exercisable) and the exercise price per share or conversion price or ratio per share under each of said options to purchase or other rights to acquire shall be the exercise price per share or conversion price or ratio per share thereunder immediately prior to the Effective Time; (iii) the shares of Ignyta Common Stock that remain available for issuance under the Ignyta Plans, if any, including without limitation any such shares that are added back to the authorized share limit at any time by virtue of forfeitures, surrenders or otherwise, shall be cancelled and converted into shares of Ignyta Operating Common Stock, such that all awards under the Ignyta Plans from and after the Effective Time shall relate to shares of

Ignyta Operating Common Stock rather than shares of Ignyta Common Stock; (iv) each warrant convertible into or exercisable or exchangeable for Ignyta Common Stock issued and outstanding immediately prior to the Effective Time shall be cancelled and converted, upon the same restrictions, terms and conditions, into the option to purchase or other right to acquire, upon the same terms and conditions, the number of shares of Ignyta Operating Common Stock that is equal to the number of shares of Ignyta Common Stock that the holder would receive had the holder exercised such right to acquire in full immediately prior to the Effective Time (whether or not such right to acquire was then exercisable) and the exercise price per share or conversion ratio per share under each of said option to purchase or other right to acquire shall be the exercise price per share or conversion price or ratio per share thereunder immediately prior to the Effective Time; and (v) each share of Ignyta Operating Common Stock issued and outstanding immediately prior to the Effective Time and held by Ignyta shall be cancelled, without any consideration being issued or paid therefor, and shall resume the status of authorized and unissued shares of Ignyta Operating Common Stock, and no shares of Ignyta Operating Common Stock or other securities of the Surviving Corporation shall be issued in respect thereof. After the Effective Time, the Surviving Corporation shall reflect in its stock ledger the number of shares of Ignyta Operating Common Stock to which each stockholder of Ignyta is entitled pursuant to the terms hereof.

8: Conversion of Plans. The terms of the Ignyta Plans, as in effect at the Effective Time, shall remain in full force and effect with respect to each option to purchase or other right to acquire shares of Ignyta Common Stock after giving effect to the Merger and the assumptions by Ignyta Operating as set forth above. As of the Effective Time, Ignyta Operating shall assume the Ignyta Plans and all references therein to Ignyta or Ignyta Common Stock shall be deemed automatically amended to be references to Ignyta Operating and Ignyta Operating Common Stock. The parties acknowledge that there are 3,000,000 shares of Ignyta Common Stock (plus one share of Ignyta Common Stock for each share of Ignyta Common Stock subject to a stock option immediately prior to the Effective Time under the Ignyta 2011 Plan that subsequently expires, is forfeited or is settled in cash) reserved for issuance under the Ignyta 2014 Plan as of immediately prior to the Effective Time pursuant to its terms, all of which may be issued pursuant to the award of incentive stock options (as such term is defined in Section 422 of the Internal Revenue Code of 1986, as amended). The Ignyta 2014 Plan permits the issuance of awards thereunder, including incentive stock options, to all employees of Ignyta and its subsidiaries. Following the Effective Time and the assumption of the Ignyta 2014 Plan by Ignyta Operating, there will be 3,000,000 shares of Ignyta Operating Common Stock (plus one share of Ignyta Operating Common Stock for each share of Ignyta Operating Common Stock subject to a stock option as of the Effective Time under the Ignyta 2011 Plan that subsequently expires, is forfeited or is settled in cash) reserved for issuance under the Ignyta 2014 Plan as of immediately following the Effective Time pursuant to its terms which may be issued to employees of Ignyta Operating and its subsidiaries.

9: Fractional Shares. No fractional shares of Ignyta Operating Common Stock shall be issued upon the conversion of any shares of Ignyta Common Stock.

10: Stock Certificates. At the Effective Time, each certificate representing issued and outstanding shares of Ignyta Common Stock immediately prior to the Effective Time shall be deemed and treated for all purposes as representing the shares of Ignyta Operating Common Stock into which such shares of Ignyta Common Stock have been converted as provided in this Agreement. Each stockholder of

Ignyta may, but is not required to, exchange any existing stock certificates representing shares of Ignyta Common Stock for stock certificates representing the same number of shares of Ignyta Operating Common Stock. All shares of Ignyta Operating Common Stock into which shares of Ignyta Common Stock shall have been converted pursuant to this Agreement shall be deemed to have been issued in full satisfaction of all rights pertaining to such converted shares. At the Effective Time, the holders of certificates representing Ignyta Common Stock outstanding immediately prior to the Effective Time shall cease to have any rights with respect to such stock, and their sole rights shall be with respect to Ignyta Operating Common Stock into which their shares of Ignyta Common Stock have been converted as provided in this Agreement. At the Effective Time, the stock transfer books of Ignyta shall be closed, and no transfer of shares of Ignyta Common Stock outstanding immediately prior to the Effective Time shall thereafter be made or consummated.

11: Amendment. Subject to compliance with the provisions of NRS 92A.120(9), the parties hereto may amend, modify or supplement this Agreement prior to the Effective Time.

12: Abandonment. At any time before the Effective Time, this Agreement may be terminated and the Merger may be abandoned by the Board of Directors of either Ignyta Operating or Ignyta or both, notwithstanding the approval of this Agreement by the stockholders of Ignyta or the sole stockholder of Ignyta Operating.

13: Counterparts. This Agreement may be executed in one or more counterparts, and each such counterpart hereof shall be deemed to be an original instrument, but all such counterparts together shall constitute but one agreement.

14: Descriptive Headings. The descriptive headings herein are inserted for convenience of reference only and are not intended to be part of or to affect the meaning or interpretation of this Agreement.

15: Governing Law. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, without giving effect to the choice or conflict of law provisions contained therein to the extent that the application of the laws of another jurisdiction will be required thereby.

16: Plan of Reorganization. This Agreement is hereby adopted as a plan of reorganization within the meaning of Section 368(a) of the Code.

17: Severability. The provisions of this Agreement are severable, and in the event any provision hereof is determined to be invalid or unenforceable, such invalidity or unenforceability shall not in any way affect the validity or enforceability of the remaining provisions hereof.

18: Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their respective successors and assigns.

IN WITNESS WHEREOF, Ignyta and Ignyta Operating have caused this Agreement and Plan of Merger to be executed and delivered as of the date first written above.

Ignyta, Inc., a Nevada corporation

By: /s/ Jonathan E. Lim

Name: Jonathan E. Lim

Title: President and Chief Executive Officer

Ignyta Operating, Inc., a Delaware corporation

By: /s/ Jonathan E. Lim

Name: Jonathan E. Lim

Title: President and Chief Executive Officer

SECOND AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
IGNYTA, INC.

FIRST: The name of the Corporation is Ignyta, Inc.

SECOND: The address of the Corporation's registered office in the State of Delaware is 615 South DuPont Highway, in the City of Dover, County of Kent, Zip Code 19901. The name of its registered agent at that address is National Corporate Research, Ltd.

THIRD: The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is 160,000,000 shares, consisting of (a) 150,000,000 shares of Common Stock, \$0.0001 par value per share (Common Stock), and (b) 10,000,000 shares of Preferred Stock, \$0.0001 par value per share (Preferred Stock).

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK.

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights of the holders of the Preferred Stock of any series as may be designated by the Board of Directors upon any issuance of the Preferred Stock of any series.

2. Voting. The holders of the Common Stock shall have voting rights at all meetings of stockholders, each such holder being entitled to one vote for each share thereof held by such holder; provided, however, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Certificate of Incorporation (which, as used herein, shall mean the certificate of incorporation of the Corporation, as amended from time to time, including the terms of any certificate of designations of any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon pursuant to this Certificate of Incorporation or the General Corporation Law of the State of Delaware. There shall be no cumulative voting.

The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of the State of Delaware.

3. Dividends. Dividends may be declared and paid on the Common Stock as and when determined by the Board of Directors subject to any preferential dividend or other rights of any then outstanding Preferred Stock and to the requirements of applicable law.

4. Liquidation. Upon the dissolution or liquidation of the Corporation, whether voluntary or involuntary, holders of Common Stock will be entitled to receive all assets of the Corporation available for distribution to its stockholders, subject to any preferential or other rights of any then outstanding Preferred Stock.

B. PREFERRED STOCK.

Preferred Stock may be issued from time to time in one or more series, each of such series to have such terms as stated or expressed herein and in the resolution or resolutions providing for the issue of such series adopted by the Board of Directors of the Corporation as hereinafter provided.

Authority is hereby expressly granted to the Board of Directors from time to time to issue the Preferred Stock in one or more series, and in connection with the creation of any such series, by adopting a resolution or resolutions providing for the issuance of the shares thereof and by filing a certificate of designations relating thereto in accordance with the General Corporation Law of the State

of Delaware, to determine and fix the number of shares of such series and such voting powers, full or limited, or no voting powers, and such designations, preferences and relative participating, optional or other special rights, and qualifications, limitations or restrictions thereof, including without limitation thereof, dividend rights, conversion rights, redemption privileges and liquidation preferences, as shall be stated and expressed in such resolutions, all to the fullest extent now or hereafter permitted by the General Corporation Law of the State of Delaware. Without limiting the generality of the foregoing, the resolution or resolutions providing for the issuance of any series of Preferred Stock may provide that such series shall be superior or rank equally or be junior to any other series of Preferred Stock to the extent permitted by law.

The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of the State of Delaware.

FIFTH: Except as otherwise provided herein, the Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute and this Certificate of Incorporation, and all rights conferred upon stockholders herein are granted subject to this reservation.

SIXTH: In furtherance and not in limitation of the powers conferred upon it by the General Corporation Law of the State of Delaware, and subject to the terms of any series of Preferred Stock, the Board of Directors shall have the power to adopt, amend, alter or repeal the Bylaws of the Corporation. The stockholders may not adopt, amend, alter or repeal the Bylaws of the Corporation, or adopt any provision inconsistent therewith, unless such action is approved, in addition to any other vote required by this Certificate of Incorporation, by the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock of the Corporation entitled to vote thereon. Notwithstanding any other provisions of law, this Certificate of Incorporation or the Bylaws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least two-thirds in voting power of the outstanding shares of capital stock of the Corporation entitled to vote thereon shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article SIXTH.

SEVENTH: Except to the extent that the General Corporation Law of the State of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty, no director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for any breach of fiduciary duty as a director, notwithstanding any provision of law imposing such liability. No amendment to or repeal of this provision shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment or repeal. If the General Corporation Law of the State of Delaware is amended to permit further elimination or limitation of the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law of the State of Delaware as so amended.

EIGHTH: This Article EIGHTH is inserted for the management of the business and for the conduct of the affairs of the Corporation.

1. General Powers. The business and affairs of the Corporation shall be managed by or under the direction of the Board of Director