22nd Century Group, Inc.
Form S-3/A
May 21, 2014

As filed with the Securities and Exchange Commission on May 21, 2014

Registration No. 333-195386

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
Amendment No. 1

to

FORM S-3 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

22nd Century Group, Inc.

(Exact name of registrant as specified in its charter)

Nevada 98-0468420

(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification No.)

9530 Main Street

Clarence, New York 14031

(716) 270-1523

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Joseph Pandolfino
Chief Executive Officer
22nd Century Group, Inc.
9530 Main Street
Clarence, New York 14031
(716) 270-1523
(Name, address, including zip code, and telephone number, including area code, of agent for service)
with a copy to: Michael B. Kirwan, Esq.
John J. Wolfel, Esq.
Foley & Lardner LLP
One Independent Drive, Suite 1300
Jacksonville, Florida 32202
(904) 359-2000
Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.
If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. o
If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, please check the following box. x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box."

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. o

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

Large accelerated filer o Accelerated filer o (Do not check if a smaller reporting company)x Non-accelerated filer o Smaller reporting company

CALCULATION OF REGISTRATION FEE

Amount to be registered/ Title of each class of

Amount of registration

Proposed maximum offering price per unit/ Proposed securities to be registered

fee

maximum offering price

Debt Securities

Common stock, $$0.00001 \text{ par}_{(2)(3)(4)(5)}$

value

Preferred Stock, \$0.00001

par value

Warrants

Stock Purchase Contracts

Stock Purchase Units (1)

Total \$45,000,000 \$5,796 (6)

Each stock purchase unit consists of (a) a stock purchase contract under which the holder, upon settlement, will purchase or sell an indeterminate number of shares of common stock and (b) common stock, debt securities, other stock purchase contracts or debt obligations of third parties subject to the stock purchase contract. No separate consideration will be received for the stock purchase contract or the related pledged securities.

There is being registered hereunder an indeterminate amount of (a) debt securities, (b) common stock, (c) preferred stock, (d) warrants to purchase common stock, preferred stock or debt securities, (e) stock purchase contracts, and (f) stock purchase units, as may be sold from time to time by the Registrant. There are also being registered

- hereunder an indeterminate number of shares of common stock, preferred stock and debt securities as shall be issuable upon conversion, exchange or exercise of any securities that provide for such issuance. Pursuant to Rule 416 under the Securities Act of 1933, as amended, the securities being registered hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the securities being registered hereunder as a result of stock splits, stock dividends or similar transactions.
- (3) The proposed maximum offering price per security will be determined from time to time by the registrant in connection with the issuance of the securities registered by this registration statement.
- (4) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933.
- Pursuant to General Instruction II.D of Form S-3. An indeterminate aggregate initial offering price or number of (5) securities of each class of securities to be registered hereunder is being registered as may from time to time be offered at indeterminate prices.
- (6) Previously paid.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities nor a solicitation of an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

reliminary Prospectus (Subject to completion, dated May 21, 2014)	
bebt Securities	
Common Stock referred Stock Varrants	
tock Purchase Contracts	
tock Purchase Units	

We may offer and sell from time up to \$45.0 million of any combination of the securities described in this prospectus, in one or more classes or series and in amounts, at prices and on terms that we will determine at the times of the offerings.

This prospectus describes the general manner in which our securities may be offered using this prospectus. We will provide specific terms of the securities, including the offering prices, in one or more supplements to this prospectus. The supplements may also add, update or change information contained in this prospectus. You should read this prospectus and the prospectus supplement relating to the specific issue of securities carefully before you invest.

We may offer the securities independently or together in any combination for sale directly to purchasers or through underwriters, dealers or agents to be designated at a future date. The supplements to this prospectus will provide the specific terms of the plan of distribution.

Our common stock is listed on the NYSE MKT under the symbol "XXII."

recent Annual Report on Form	olves risks. Please read carefully the section entitled 10-K and in any applicable prospectus supplement a ain factors which should be considered in an investr	and/or other offering
	ge Commission nor any state securities commission ha nis prospectus is truthful or complete. Any representation	**
The date of this prospectus is	2014	

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About This Prospectus

Unless the context otherwise requires, in this prospectus, "company," "we," "us," "our" and "ours" refer to 22nd Century Grou Inc. and its subsidiaries on a combined basis.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a "shelf" registration process. Under this shelf registration process, we may, from time to time, sell the securities or combinations of the securities described in this prospectus in one or more offerings. This prospectus provides you with a general description of the securities that we may offer. Each time we offer securities, we will provide a prospectus supplement and/or other offering material that will contain specific information about the terms of that offering. The prospectus supplement and/or other offering material may also add, update or change information contained in this prospectus. You should read this prospectus, any prospectus supplement and any other offering material together with additional information described under the heading "Where You Can Find More Information."

You should rely only on the information contained or incorporated by reference in this prospectus and in any prospectus supplement or other offering material. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making offers to sell or solicitations to buy the securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should not assume that the information in this prospectus, any prospectus supplement or any other offering material, or the information we previously filed with the SEC that we incorporate by reference in this prospectus or any prospectus supplement, is accurate as of any date other than its respective date. Our business, financial condition, results of operations and prospects may have changed since those

dates.

"Forward-Looking" Information

The information included or incorporation by reference into this prospectus contains statements that the company believes to be "forward-looking statements" within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include, without limitation, any statement that is not a statement of historical fact, including, without limitation, statements regarding the company's business strategy and plans and objectives of management for future operations or that may predict, forecast, indicate or imply future results, performance or achievements. The words "estimate," "project," "intend," "forecast," "anticipate," "plan," "planning," "believe," "will," "will likely," "should," "could," "would," "may" or the negative of such words or words or expressions of simeaning are intended to identify forward-looking statements. These forward-looking statements are not guarantees of future performance, and all such forward-looking statements involve risks and uncertainties, many of which are beyond the company's ability to control. Actual results may differ materially from those expressed or implied by such forward-looking statements as a result of various factors. We do not undertake, and we disclaim, any obligation to update any forward-looking statements or to announce revisions to any of the forward-looking statements. Certain factors that could cause results to differ materially from those projected in the forward-looking statements, including, among other things:

Our ability to comply with existing and new government regulations;
Our ability to retain key personnel;
Our ability to retain key personnel;
Our ability to enter into additional licensing transactions;
The prospect of one of our subsidiaries becoming a member of the U.S. Master Settlement Agreement;
Our ability to achieve profitability;
The potential for our clinical trials to produce negative or inconclusive results;
Our ability to obtain significant revenue for our tobacco products in the U.S.;
Our ability to obtain U.S. Food and Drug Administration ("FDA") clearance for our potentially modified risk tobacco products and FDA approval for our X-22 smoking cessation aid;
Our ability to gain market acceptance for our products;
Our ability to compete with competitors that may have greater resources than us;
The potential for our competitors to develop products that are less expensive, safer or more effective than ours;
The potential exposure to product liability claims, product recalls and other claims; and
Our ability to adequately protect our intellectual property and to avoid infringement on rights of third parties.

22nd CENTURY GROUP, INC.

We are a plant biotechnology company focused on tobacco harm reduction and smoking cessation products produced from modifying the nicotine content in tobacco plants through genetic engineering and plant breeding. We exclusively control 116 issued patents and an additional 36 patent applications; of these, we own 15 issued patents plus 27 patent applications and we license the remaining patents and patent applications on an exclusive basis. Goodrich Tobacco Company, LLC ("Goodrich Tobacco") and Hercules Pharmaceuticals, LLC ("Hercules Pharmaceuticals") are subsidiaries of 22nd Century Ltd. Goodrich Tobacco is focused on commercial tobacco products and potentially reduced-risk or modified risk tobacco products. Hercules Pharmaceuticals is focused on *X-22*, a prescription smoking cessation aid in development.

Our long-term focus is the research, development, licensing, manufacturing, and worldwide sales and distribution of our products to reduce the harm caused by smoking. We are primarily involved in the following activities:

The international licensing of our technology, proprietary tobaccos, trademarks;

The manufacture, marketing and international distribution of *RED SUN*, *MOONLIGHT* and *MAGIC* proprietary cigarettes;

The production of *SPECTRUM* research cigarettes for the National Institute on Drug Abuse ("NIDA"), a department of the National Institutes of Health ("NIH");

The research and development of potentially less harmful or modified risk tobacco products and tobacco plant varieties contained therein;

• The development of X-22, a prescription-based smoking cessation aid consisting of very low nicotine cigarettes; and

The pursuit of necessary regulatory approvals and clearances from the FDA to market in the U.S. *X-22* as a prescription smoking cessation aid and BRAND A and BRAND B as reduced-risk or modified risk cigarettes.

We are a Nevada corporation and our corporate headquarters is located at 9530 Main Street, Clarence, New York 14031. Our telephone number is (716) 270-1523. Our Internet website address is www.xxiicentury.com. We do not incorporate the information on our website into this prospectus, and you should not consider it part of this prospectus.

Use of Proceeds

Unless otherwise described in the applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities for general corporate purposes, including the repayment of debt, acquiring businesses and investing in other businesses. Pending such use, we may temporarily invest the net proceeds in short-term investments.

Description of Debt Securities

The following description of the terms of the debt securities sets forth general terms that may apply to the debt securities and provisions of the indenture that will govern the debt securities, and is not complete. We will describe the particular terms of any debt securities in the prospectus supplement relating to those debt securities.

The debt securities will be our senior debt securities and will be issued under an indenture between us and a trustee, a form of which is incorporated by reference into this prospectus and attached as an exhibit to the registration statement of which this prospectus is a part. See "Where You Can Find More Information." We refer to this indenture as the "indenture."

The following is a summary of some provisions of the indenture. The following summary does not purport to be complete, and is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture, including the definitions of specified terms used in the indenture, and the debt securities. We encourage you to read the indenture and the debt securities because they, and not this description, set forth your rights as a holder of our debt securities. We will describe the particular terms of any debt securities in the prospectus supplement relating to those debt securities. Parenthetical section references under this heading are references to sections in the indenture unless we indicate otherwise.

General Terms

The indenture does not limit the amount of debt securities that we may issue (Section 301). The indenture provides that debt securities may be issued up to the principal amount authorized by us from time to time. The debt securities will be unsecured and will have the same rank as all of our other unsecured debt. None of our subsidiaries, if any, will have any obligations with respect to the debt securities. Therefore, our rights and the rights of our creditors, including holders of senior debt securities and subordinated debt securities, to participate in the assets of any subsidiary will be subject to the prior claims of the creditors of any such subsidiaries.

We may issue the debt securities in one or more separate series of senior debt securities (Section 301). The prospectus supplement relating to the particular series of debt securities being offered will specify the particular amounts, prices and terms of those debt securities. These terms may include:

- the title of the debt securities and the series in which the debt securities will be included;
 - the authorized denominations and aggregate principal amount of the debt securities;
 - the date or dates on which the principal and premium, if any, are payable;

the rate or rates per annum at which the debt securities will bear interest, if there is any interest, or the method or methods of calculating interest and the date from which interest will accrue;

- the place or places where the principal of and any premium and interest on the debt securities will be payable;
 - the dates on which the interest will be payable and the corresponding record dates;

the period or periods within which, the price or prices at which, and the terms and conditions on which, the debt securities may be redeemed, in whole or in part, at our option;

· whether the debt securities of the series will be issued in whole or in part;

whether the debt securities of the series will be issued in the form of a global security and, if so, the name of the applicable depositary and global exchange agent;

any obligation to redeem, repay or purchase debt securities pursuant to any sinking fund or analogous provisions or at the option of a holder;

the portion of the principal amount of the debt securities payable upon declaration of the acceleration of the maturity of the debt securities;

the person to whom any interest on any debt security will be payable if other than the person in whose name the debt security is registered on the applicable record date;

- any events of default, covenants or warranties applicable to the debt securities;
- the currency, currencies or composite currency of denomination of the debt securities;

the currency, currencies or composite currencies in which payments on the debt securities will be payable and whether the holder may elect payment to be made in a different currency;

- · whether and under what conditions we will pay additional amounts to holders of the debt securities;
- the terms and conditions of any conversion or exchange provisions in respect of the debt securities;

the terms pursuant to which our obligation under the indenture may be terminated through the deposit of money or government obligations;

- · whether the debt securities of the series will be subordinated in right of payment to senior indebtedness; and
 - any other specific terms of the debt securities not inconsistent with the indenture (Section 301).

Unless otherwise specified in the applicable prospectus supplement, the debt securities will not be listed on any securities exchange.

Unless the applicable prospectus supplement specifies otherwise, we will issue the debt securities in fully registered form without coupons. If we issue debt securities of any series in bearer form, the applicable prospectus supplement will describe the special restrictions and considerations, including special offering restrictions and special federal income tax considerations, applicable to those debt securities and to payment on and transfer and exchange of those debt securities.

U.S. Federal Income Tax Considerations

We may issue the debt securities as original issue discount securities, bearing no interest or bearing interest at a rate, which, at the time of issuance, is below market rates, to be sold at a substantial discount below their principal amount. We will describe some special U.S. federal income tax and other considerations applicable to any debt securities that are issued as original issue discount securities in the applicable prospectus supplement. We encourage you to consult with your own tax and financial advisors on these important matters.

Payment, Registration, Transfer and Exchange

Subject to any applicable laws or regulations, we will make payments on the debt securities at a designated office or agency, unless the applicable prospectus supplement otherwise sets forth. At our option, however, we may also make interest payments on the debt securities in registered form:

by checks mailed to the persons entitled to interest payments at their registered addresses; or

by wire transfer to an account maintained by the person entitled to interest payments as specified in the security register.

Unless the applicable prospectus supplement otherwise indicates, we will pay any installment of interest on debt securities in registered form to the person in whose name the debt security is registered at the close of business on the regular record date for that installment of interest (Section 307). If a holder wishes to receive payment by wire transfer, the holder should provide the paying agent with written wire transfer instructions at least 15 days prior to the payment date.

Unless the applicable prospectus supplement otherwise sets forth, debt securities issued in registered form will be transferable or exchangeable at the agency we may designate from time to time. Debt securities may be transferred or exchanged without service charge, other than any tax or other governmental charge imposed in connection with the transfer or exchange (Section 305).
Book-Entry Procedures
The applicable prospectus supplement for each series of debt securities will state whether those debt securities will be subject to the following provisions.
Unless debt securities in physical form are issued, the debt securities will be represented by one or more fully-registered global certificates, in denominations of \$1,000 or any integral multiple of \$1,000. Each global certificate will be deposited with, or on behalf of, The Depository Trust Company, which we refer to in this prospectus as DTC, and registered in its name or in the name of Cede & Co. or other nominee of DTC. No holder of debt securities initially issued as a global certificate will be entitled to receive a certificate in physical form, except as set forth below.
DTC has advised us that:
DTC is:
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- a "banking organization" within the meaning of the New York banking law;
- a limited purpose trust company organized under the New York banking law;
 - a member of the Federal Reserve System;
- a "clearing corporation" within the meaning of the New York Uniform Commercial Code; and

a "clearing agency" registered pursuant to Section 17A of the Securities Exchange Act of 1934, as amended, or the Exchange Act.

DTC holds securities for DTC participants and facilitates the settlement of securities transactions between DTC participants through electronic book-entry transfers and pledges, thereby eliminating the need for physical movement of certificates.

DTC participants include securities brokers and dealers, banks, trust companies, clearing corporations and other organizations.

Access to DTC's book-entry system is also available to others, such as banks, brokers, dealers, trust companies and ·clearing corporations that clear through or maintain a custodial relationship with a DTC participant, either directly or indirectly.

Holders that are not DTC participants but desire to purchase, sell or otherwise transfer ownership of, or other interests in, the debt securities may do so only through DTC participants. In addition, holders of the debt securities will receive all distributions of principal and interest from the trustee through DTC participants. Under the rules, regulations and procedures creating and affecting DTC and its operation, DTC is required to make book-entry transfers of debt securities among DTC participants on whose behalf it acts and to receive and transmit distributions of principal of, and interest on, the debt securities. Under the book-entry system, holders of debt securities may experience some delay in receipt of payments, since the trustee will forward such payments to Cede & Co., as nominee for DTC, and DTC, in turn, will forward the payments to the appropriate DTC participants.

DTC participants will be responsible for distributions to holders of debt securities, which distributions will be made in accordance with customary industry practices. Although holders of debt securities will not have possession of the debt securities, the DTC rules provide a mechanism by which those holders will receive payments and will be able to transfer their interests. Although the DTC participants are expected to convey the rights represented by their interests in any global security to the related holders, because DTC can act only on behalf of DTC participants, the ability of holders of debt securities to pledge the debt securities to persons or entities that are not DTC participants or to otherwise act with respect to the debt securities may be limited due to the lack of physical certificates for the debt

securities.

Neither we nor the trustee will be responsible or liable for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the debt securities or for supervising or reviewing any records relating to such beneficial ownership interests. Since the only "holder of debt securities," for purposes of the indenture, will be DTC or its nominee, the trustee will not recognize beneficial holders of debt securities as "holders of debt securities," and beneficial holders of debt securities will be permitted to exercise the rights of holders only indirectly through DTC and DTC participants. DTC has advised us that it will take any action permitted to be taken by a holder of debt securities under the indenture only at the direction of one or more DTC participants to whose accounts with DTC the related debt securities are credited.

All payments we make to the trustee will be in immediately available funds and will be passed through to DTC in immediately available funds.

Physical certificates will be issued to holders of a global security, or their nominees, if:

- DTC advises the trustee in writing that DTC is no longer willing, able or eligible to discharge properly its responsibilities as depository and we are unable to locate a qualified successor; or
- we decide in our sole discretion to terminate the book-entry system through DTC (Section 305).

In such event, the trustee will notify all holders of debt securities through DTC participants of the availability of such physical debt securities. Upon surrender by DTC of a definitive global note representing the debt securities and receipt of instructions for reregistration, the trustee will reissue the debt securities in physical form to holders or their nominees (Section 305).

Debt securities in physical form will be freely transferable and exchangeable at the office of the trustee upon compliance with the requirements set forth in the indenture.

No service charge will be imposed for any registration of transfer or exchange, but payment of a sum sufficient to cover any tax or other governmental charge may be required (Section 305).

Consolidation, Merger or Sale by the Company

The indenture generally permits a consolidation or merger between us and another U.S. legal entity. It also permits the sale or transfer by us of all or substantially all of our property and assets to another legal entity. These transactions are permitted if:

- (A) we are the continuing or surviving legal entity, or (B) the resulting or acquiring legal entity, if other than us, assumes all of our responsibilities and liabilities under the indenture, including the payment of all amounts due on the debt securities and performance of the covenants in the indenture;
 - · immediately after the transaction, no event of default exists (Section 801); and

the trustee shall have received an officer's certificate and an opinion stating such consolidation, merger, conveyance, ·transfer or lease and, if applicable, the corresponding supplemental indenture, are in compliance with the base indenture.

Even though the indenture contains the provisions described above, we are not required by the indenture to comply with those provisions if we sell all of our property and assets to another U.S. legal entity if, immediately after the sale, that legal entity is one of our wholly-owned subsidiaries (Section 803).

If we consolidate or merge with or into any other legal entity or sell all or substantially all of our assets according to the terms and conditions of the indenture, the resulting or acquiring legal entity will be substituted for us in the

indenture with the same effect as if it had been an original party to the indenture. As a result, the successor legal entity may exercise our rights and powers under the indenture, in our name or in its own name and we will be released from all our liabilities and obligations under the indenture and under the debt securities (Section 802).

Events of Default, Notice and Certain Rights on Default

Unless otherwise stated in the applicable prospectus supplement, an "event of default," when used with respect to any series of debt securities, means any of the following:

- failure to pay interest on any debt security of that series for 30 days after the payment is due;
- failure to pay the principal of or any premium on any debt security of that series when due;
- failure to deposit any sinking fund payment on debt securities of that series when due;

failure to perform any other covenant in the indenture that applies to debt securities of that series for 90 days after we have received written notice of the failure to perform in the manner specified in the indenture;

an event of default under any debt by the company or any significant subsidiary of the company (including a default with respect to any series of debt securities) that results in debt of an outstanding principal amount greater than \$50,000,000 becoming or being declared due and payable;

certain events in bankruptcy, insolvency or reorganization; or

any other event of default that may be specified for the debt securities of that series when that series is created (Section 501).

If an event of default for any series of debt securities occurs and continues, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of the series may declare the entire principal of all the debt securities of that series to be due and payable immediately. If a declaration occurs, the holders of a majority of the aggregate principal amount of the outstanding debt securities of that series can, subject to certain conditions, rescind the declaration (Section 502).

The prospectus supplement relating to each series of debt securities which are original issue discount securities will describe the particular provisions that relate to the acceleration of maturity of a portion of the principal amount of that series when an event of default occurs and continues.

An event of default for a particular series of debt securities does not necessarily constitute an event of default for any other series of debt securities issued under the indenture.

The indenture requires us to furnish an officer's certificate to the trustee each year as to the knowledge of our principal executive, financial or accounting officer of our compliance with all conditions and covenants under the indenture (Section 1008). The trustee will transmit by mail to the holders of debt securities of a series notice of any default.

Other than its duties in the case of a default, the trustee will not be obligated to exercise any of its rights or powers under an indenture at the request, order or direction of any holders, unless the holders offer the trustee indemnification satisfactory to the trustee (Section 603). If indemnification satisfactory to the trustee is provided, then, subject to certain other rights of the trustee, the holders of a majority in principal amount of the outstanding debt securities of any series may, with respect to the debt securities of that series, direct the time, method and place of:

- · conducting any proceeding for any remedy available to the trustee; or
- exercising any trust or power conferred upon the trustee (Section 512).

The holder of a debt security of any series will have the right to begin any proceeding with respect to the indenture or for any remedy only if:

·the holder has previously given the trustee written notice of a continuing event of default with respect to that series;

the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made a written request of, and offered reasonable indemnification to, the trustee to begin the proceeding;

the trustee has not started the proceeding within 60 days after receiving the request; and

the trustee has not received directions inconsistent with the request from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series during those 60 days (Section 507).

The holders of not less than a majority in aggregate principal amount of any series of debt securities, by notice to the trustee for that series, may waive, on behalf of the holders of all debt securities of that series, any past default or event of default with respect to that series and its consequences (Section 513). A default or event of default in the payment of the principal of, or premium or interest on, any debt security and certain other defaults may not, however, be waived (Sections 508 and 513).

Modification of the Indenture

We, as well as the trustee for a series of debt securities, may enter into one or more supplemental indentures, without the consent of, or notice to, the holders of any of the debt securities, in order to:

· evidence the succession of another corporation to us and the assumption of our covenants by a successor;
add to our covenants or surrender any of our rights or powers;
add additional events of default for any series;
change or eliminate any restrictions on the payment of principal of (or premium, if any, on) debt securities, provided such action will not adversely affect the interest of holders of any series of debt securities in any material respect;
permit or facilitate the issuance of debt securities in uncertificated form, provided such action will not adversely affect the interests of holders of any series of debt securities in any material respect;
secure the debt securities;
establish the form or terms of debt securities not yet issued;
· evidence and provide for successor trustees;
· add, change or eliminate any provision affecting registration as to principal of debt securities;
change or eliminate provisions or add any other provisions that are required or desirable in accordance with any amendments to the Trust Indenture Act of 1939, which we refer to in this prospectus as the Trust Indenture Act, on the condition that this action does not adversely affect the interests of any holder of debt securities of any series issued under the indenture in any material respect;
comply with requirements of the SEC in order to maintain the qualification of the indenture under the Trust Indenture Act;
· provide for uncertificated debt securities in addition to or in place of certificated debt securities;
make any change that would provide additional rights or benefits to holders of debt securities or any series, or that does not adversely affect the legal rights of such holders under the indenture;

·supplement any provisions of the indenture to facilitate defeasance and discharge of any series of debt securities, provided such action will not adversely affect the interest of the holders of debt securities of such series or any other

series;

· conform text of the indenture or any debt securities to the description thereof in any prospectus supplement;

cure any ambiguity or correct any mistake; or

make any other provision with respect to the indenture, provided that such actions will not adversely affect the interests of the holders, as determined in good faith by the board of directors of the company (Section 901).

In addition, with the consent of the holders of not less than a majority in aggregate principal amount of the outstanding debt securities of all series affected by the supplemental indenture, we and the trustee may execute supplemental indentures adding any provisions to or changing or eliminating any of the provisions of the indenture or any supplemental indenture or modifying the rights of the holders of debt securities of that series. No such supplemental indenture may, however, without the consent of the holder of each debt security that is affected:

- change the time for payment of principal or interest on any debt security;
- · reduce the principal of, or any installment of principal of, or interest on, any debt security;
- · reduce the amount of premium, if any, payable upon the redemption of any debt security;
 - · change any obligation of the company to pay additional amounts;
- ·reduce the amount of principal payable upon acceleration of the maturity of an original issue discount debt security;
 - impair the right to institute suit for the enforcement of any payment on or for any debt security;

reduce the percentage in principal amount of the outstanding debt securities of any series the consent of whose holders is required for modification or amendment of the indenture or for waiver of compliance with certain provisions of the indenture or for waiver of certain defaults;

modify the provisions relating to waiver of some defaults or any of the foregoing provisions; change the currency of payment; adversely affect the right to repayment of debt securities of any series at the option of the holders of those debt securities; or change the place of payment (Section 902). Any supplemental indenture will be filed with the SEC as an exhibit to: a post-effective amendment to the registration statement of which this prospectus is a part; an annual report on Form 10-K; a quarterly report on Form 10-Q; or a current report on Form 8-K. Defeasance and Covenant Defeasance

When we use the term defeasance, we mean discharge from some or all of our obligations under the indenture. If we deposit with the trustee sufficient cash or government obligations to pay the principal, interest, any premium and any mandatory sinking fund or analogous payments due to the stated maturity or a redemption date of the debt securities of a particular series, then at our option:

·we will be discharged from our obligations for the debt securities of that series, the holders of the debt securities of the affected series will no longer be entitled to the benefits of the indenture, except for registration of transfer and exchange of debt securities and replacement of lost, stolen or mutilated debt securities, and those holders may look

only to the deposited funds or obligations for payment, which is referred to as "defeasance"; or

we will no longer be under any obligation to comply with certain covenants under the indenture as it relates to that ·series, and some events of default will no longer apply to us, which is referred to as "covenant defeasance" (Sections 403 and 1401).

Unless the applicable prospectus supplement specifies otherwise and except as described below, the conditions to both defeasance and covenant defeasance are as follows:

it must not result in a breach or violation of, or constitute a default or event of default under, the indenture, or result in a breach or violation of, or constitute a default under, any other of our material agreements or instruments;

certain bankruptcy-related defaults or events of default with respect to us must not have occurred and be occurring during the period commencing on the date of the deposit of the trust funds to defease the debt securities and ending on the 91st day after that date;

we must deliver to the trustee an officer's certificate and an opinion of counsel addressing compliance with the conditions of the defeasance or covenant defeasance; and

we must comply with any additional conditions to the defeasance or covenant defeasance that the indenture may impose on us. (Sections 403 and 1401).

In the event that government obligations deposited with the trustee for the defeasance of such debt securities decrease in value or default subsequent to their being deposited, we will have no further obligation, and the holders of the debt securities will have no additional recourse against us, for any decrease in value or default. If indicated in the prospectus supplement, in addition to obligations of the United States or an agency or instrumentality of the United States, government obligations may include obligations of the government or an agency or instrumentality of the government issuing the currency in which debt securities of such series are payable.

We may exercise our defeasance option for the debt securities even if we have already exercised our covenant defeasance option. If we exercise our defeasance option, payment of the debt securities may not be accelerated because of default or an event of default. If we exercise our covenant defeasance option, payment of the debt securities may not be accelerated because of default or an event of default with respect to the covenants to which the covenant defeasance is applicable. If, however, acceleration occurs, the realizable value at the acceleration date of the money and government obligations in the defeasance trust could be less than the principal and interest then due on the debt securities, because the required deposit in the defeasance trust is based on scheduled cash flow rather than market value, which will vary depending on interest rates and other factors.

Conversion and Exchange Rights

The debt securities of any series may be convertible into or exchangeable for other securities of our company or another issuer or property or cash on the terms and subject to the conditions set forth in the applicable prospectus supplement (Section 301).

Governing Law

The indenture and the debt securities will be governed by, and construed under, the laws of the State of New York without regard to conflicts of laws principles thereof.

Regarding the Trustee

We may from time to time maintain lines of credit, and have other customary banking relationships, with the trustee under the indenture.

The indenture and provisions of the Trust Indenture Act that are incorporated by reference therein contain limitations on the rights of the trustee, should it become one of our creditors, to obtain payment of claims in certain cases or to realize on certain property received by it in respect of any such claim as security or otherwise. The trustee is permitted to engage in other transactions with us or any of our affiliates; provided, however, that if it acquires any conflicting interest (as defined under the Trust Indenture Act), it must eliminate such conflict or resign.

Description of Capital Stock

Our authorized capital stock consists of 300,000,000 shares of common stock, \$0.00001 par value per share, and 10,000,000 shares of preferred stock, \$0.00001 par value per share. As of May 15, 2014, 59,162,958 shares of common stock were issued and outstanding and no shares of preferred stock were issued and outstanding.

The following summary of certain provisions of our capital stock does not purport to be complete and is subject to and is qualified in its entirety by our amended and restated articles of incorporation, amended and restated bylaws, warrants and notes referred to below. This description is only a summary. For more detailed information, you should refer to the exhibits to the registration statement of which this prospectus is a part and incorporated by reference into this prospectus. See "Where You Can Find More Information."

Common Stock

Our common stock is traded on the NYSE MKT under the symbol "XXII." Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. Holders of common stock are entitled to receive ratably such dividends, if any, as may be declared by the board of directors out of funds legally available therefore, subject to a preferential dividend right of outstanding preferred stock. Upon the liquidation, dissolution or our winding up, the holders of common stock are entitled to receive ratably our net assets available after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by the rights of the holders any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Under the terms of our amended and restated articles of incorporation, the board of directors is authorized, subject to any limitations prescribed by law, without stockholder approval, to issue such shares of preferred stock in one or more series. Each such series of preferred stock shall have such rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, as shall be determined by the board of directors.

The purpose of authorizing the board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while

providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, a majority of our outstanding voting stock. We have no present plans to issue any additional shares of preferred stock.

The effects of issuing preferred stock could include one or more of the following:
· decreasing the amount of earnings and assets available for distribution to holders of common stock;
· restricting dividends on the common stock;
diluting the voting power of the common stock;
· impairing the liquidation rights of the common stock; or
delaying, deferring or preventing changes in our control or management.
As of the date of this prospectus, there were no shares of preferred stock outstanding.
Stock Options and Restricted Stock

As of May 15, 2014, we had outstanding options to purchase a total of 610,000 shares of common stock at a weighted

average exercise price of \$0.74 per share. All options to purchase 610,000 shares are vested.

As of May 15, 2014, we had outstanding 1,100,000 shares of restricted common stock subject to vesting conditions.

Warrants and Convertible Notes

Warrants Issued in Connection with our January 25, 2011 Private Placement Offering

Investor Warrants. We issued five-year warrants to purchase shares of our common stock in exchange for the warrants contained in the securities purchased by investors in our January 25, 2011 private placement offering. These warrants may be exercised on a cashless basis in certain circumstances. The exercise price and number of shares of our common stock issuable upon exercise of the warrants may be adjusted in certain circumstances, including in the event of a stock dividend, or our recapitalization, reorganization, merger or consolidation. Certain of these warrants also provide holders with weighted-average anti-dilution price protection. No fractional shares will be issued upon exercise of these warrants. If, upon exercise of these warrants, a holder would be entitled to receive a fractional interest in a share, we may, in our discretion, upon exercise, round up to the nearest whole number of shares of our common stock to be issued to the warrant holder or otherwise equitably adjust the exercise and exercise price per share. Of the warrants described above, as of May 15, 2014, warrants to purchase 369,999 shares of our common stock were outstanding and consisted of 296,840 shares purchasable with an exercise price of \$1.2672 per share, 62,329 shares purchasable with an exercise price of \$1.2018 per share, and 10,830 shares purchasable with an exercise price of \$1.1718. All of the warrants to purchase 369,999 shares of our common stock have been amended to remove the weighted-average anti-dilution provisions.

Century Warrants. We issued five-year warrants to purchase shares of our common stock in exchange for the warrants held by the members of 22nd Century Limited LLC prior to the consummation of the January 25, 2011 private placement offering. These warrants may be exercised on a cashless basis in certain circumstances. The exercise price and number of shares of our common stock issuable upon exercise of the warrants may be adjusted in certain circumstances, including in the event of a stock dividend, or our recapitalization, reorganization, merger or consolidation. These warrants also provide holders with weighted-average anti-dilution price protection. No fractional shares will be issued upon exercise of these warrants. If, upon exercise of these warrants, a holder would be entitled to receive a fractional interest in a share, we may, in our discretion, upon exercise, round up to the nearest whole number of shares of our common stock to be issued to the warrant holder or otherwise equitably adjust the exercise and exercise price per share. Of the warrants described above, as of May 15, 2014, warrants to purchase 6,534,486 shares of our common stock were outstanding consisting of 3,062,665 shares purchasable with an exercise price of \$1.96 per share, 653,870 shares purchasable with an exercise price of \$2.2029 per share. All of the warrants to purchase 6,534,486 shares of our common stock have been amended to remove the weighted-average anti-dilution provisions.

Conversion Warrants. We issued five-year warrants to purchase shares of our common stock in exchange for the warrants issued to the placement agent and sub-placement agent in the January 25, 2011 private placement offering.

These warrants contain a cashless exercise provision. The exercise price and number of shares of our common stock issuable upon exercise of the warrants may be adjusted in certain circumstances, including in the event of a stock dividend, or our recapitalization, reorganization, merger or consolidation. These warrants also provide holders with weighted-average anti-dilution price protection. No fractional shares will be issued upon exercise of these warrants. If, upon exercise of these warrants, a holder would be entitled to receive a fractional interest in a share, we may, in our discretion, upon exercise, round up to the nearest whole number of shares of our common stock to be issued to the warrant holder or otherwise equitably adjust the exercise and exercise price per share. Of the warrants described above, as of May 15, 2014, warrants to purchase an aggregate of 49,677 shares of our common stock were outstanding and consisted of 12,500 purchasable with an exercise price of \$1.2672 per share and 37,177 shares purchasable with an exercise price of \$1.2018 per share. Of the 49,677 warrants to purchase shares of our common stock, 12,500 shares purchasable under these warrants have been amended to remove the weighted-average anti-dilution provisions.

Convertible Notes Issued in December 2011 and Related Warrants

On December 14, 2011, we entered into an agreement with certain accredited investors, whereby such investors acquired approximately \$1.9 million of convertible promissory notes of the Company (the "Convertible Notes").

All of the Convertible Notes were converted or paid off in full subsequent to December 31, 2012 in transactions that resulted in the issuance of warrants to the note holders to purchase an aggregate amount of 2,636,060 shares of our common stock at an exercise price of \$1.50 per share. These warrants issued upon conversion of the Convertible Notes have a term of five years and are exercisable at any time on or before the fifth anniversary of the issue date of the warrants. The warrants may be exercised on a cashless basis. The exercise price and number of shares of our common stock issuable upon exercise of these warrants may be adjusted in certain circumstances, including in the event of a stock dividend, or our recapitalization, reorganization, merger or consolidation. Of the warrants described above, as of May 15, 2014, warrants to purchase an aggregate of 974,945 shares of our common stock were outstanding and consisted of 802,215 shares purchasable with an exercise price of \$1.3816 per share and 172,730 shares purchasable with an exercise price of \$1.1984 per share. All of the warrants to purchase 974,945 shares of our common stock have been amended to remove the weighted average anti-dilution provision.

In connection with the issuance of preferred shares in January 2013, the note holders entered into a lock-up agreement with the Company which limited their ability to sell any of the shares received as a result of the conversion of the notes and received additional warrants (five year term at \$1.50 exercise price) to purchase 239,900 shares of common stock.

Warrants Issued in 2012

On May 15, 2012, we entered into an agreement with certain accredited investors, whereby the investors acquired warrants with a 5-year term to purchase up to 1,710,833 shares of our common stock at an exercise price of \$1.00 per share. The exercise price and number of shares of our common stock issuable upon exercise of the warrants may be adjusted in certain circumstances, including in the event of a stock dividend, or our recapitalization, reorganization, merger or consolidation. These warrants also provided holders with weighted-average anti-dilution price protection. No fractional shares will be issued upon exercise of these warrants. Of the warrants described above, as of May 15, 2014, warrants to purchase an aggregate of 572,200 shares of common stock are outstanding with an exercise price of \$0.60 per share. All of the warrants to purchase 572,200 shares of our common stock have been amended to remove the weighted average anti-dilution provision.

On November 9, 2012, we entered into an agreement with certain accredited investors, whereby the investors acquired warrants with a 5-year term to purchase up to 1,619,000 shares of our common stock at an exercise price of \$1.00 per

share. The exercise price and number of shares of our common stock issuable upon exercise of the warrants may be adjusted in certain circumstances, including in the event of a stock dividend, or our recapitalization, reorganization, merger or consolidation. These warrants also provide holders with anti-dilution price protection. No fractional shares will be issued upon exercise of these warrants. Of the warrants described above, as of May 15, 2014, warrants to purchase an aggregate of 1,103,600 shares of common stock are outstanding with an exercise price of \$0.60 per share. All of the warrants to purchase 1,103,600 shares of our common stock have been amended to remove the weighted average anti-dilution provision.

Convertible Notes Issued in August 2012

On August 9, 2012, we completed a private placement of \$222,600 of convertible notes, which were sold at a 6% discount. We received proceeds of \$210,000. All of the Convertible Notes were converted in August 2013 in transactions that resulted in the issuance of warrants to the note holders to purchase an aggregate amount of 371,000 shares of our common stock at an exercise price of \$1.00 per share. These warrants issued upon conversion of the Convertible Notes have a term of five years and are exercisable at any time on or before the fifth anniversary of the issue date of the warrants. The warrants may be exercised on a cashless basis. The exercise price and number of shares of our common stock issuable upon exercise of these warrants may be adjusted in certain circumstances, including in the event of a stock dividend, or our recapitalization, reorganization, merger or consolidation. These warrants also provide holders with weighted-average anti-dilution price protection. As of May 15, 2014, warrants to purchase an aggregate of 184,488 shares of common stock are outstanding and consist of 92,244 shares purchasable with an exercise price of \$0.9560 and 92,244 shares purchasable with an exercise price of \$0.9060 per share. Of the 184,488 warrants to purchase shares of our common stock, 92,244 shares purchasable under these warrants have been amended to remove the weighted-average anti-dilution provisions.

Anti-Takeover Provisions Under Nevada Law

Combinations with Interested Stockholder. Sections 78.411-78.444, inclusive, of the Nevada Revised Statutes (NRS) contain provisions governing combinations with an interested stockholder. For purposes of the NRS, "combinations" include: (i) any merger or consolidation with any interested stockholder, (ii) any sale, lease, exchange, mortgage, pledge, transfer or other disposition to any interested stockholder of corporate assets with an aggregate market value equal to 5% or more of the aggregate market value of the corporation's consolidated assets, 5% or more of the outstanding shares of the corporation or 10% or more of the earning power or net income of the corporation; (iii) the issuance to any interested stockholder of voting shares (except pursuant to a share dividend or similar proportionate distribution) with an aggregate market value equal to 5% or more of the aggregate market value of all the outstanding shares of the corporation, (iv) the dissolution of the corporation if proposed by or on behalf of any interested stockholder, (v) any reclassification of securities, recapitalization or corporate reorganization that will have the effect of increasing the proportionate share of the corporation's outstanding voting shares held by any interested stockholder and (vi) any receipt by the interested stockholder of the benefit (except proportionately as a stockholder) of any loan, advance, guarantee, pledge or other financial assistance. For purposes of the NRS, an "interested stockholder" is defined to include any beneficial owner of more than 10% of any class of the voting securities of a Nevada corporation and any person who is an affiliate or associate of the corporation and was at any time during the preceding three years the beneficial owner or more than 10% of any class of the voting securities of the Nevada corporation.

Subject to certain exceptions, the provisions of the NRS statute governing combinations with interested stockholders provide that a Nevada corporation may not engage in a combination with an interested stockholder for two years after the date that the person first became an interested stockholder unless the combination or the transaction by which the person first became an interested stockholder is approved by the board of directors before the person first became an interested stockholder.

Control Share Acquisitions. The NRS also contains a "control share acquisitions statute." If applicable to a Nevada corporation this statute restricts the voting rights of certain stockholders referred to as "acquiring persons," that acquire or offer to acquire ownership of a "controlling interest" in the outstanding voting stock of an "issuing corporation." For purposes of these provisions a "controlling interest" means with certain exceptions the ownership of outstanding voting stock sufficient to enable the acquiring person to exercise one-fifth or more but less than one-third, one-third or more but less than a majority, or a majority or more of all voting power in the election of directors and "issuing corporation" means a Nevada corporation that has 200 or more stockholders of record, at least 100 of whom have addresses in Nevada appearing on the stock ledger of the corporation, and which does business in Nevada directly or through an affiliated corporation. The voting rights of an acquiring person in the affected shares will be restored only if such restoration is approved by the holders of a majority of the voting power of the corporation (excluding the shares held by the acquiring person). The NRS allows a corporation to "opt-out" of the control share acquisitions statute by providing in such corporation's articles of incorporation or bylaws that the control share acquisitions statute does not apply to the corporation or to an acquisition of a controlling interest specifically by types of existing or future stockholders, whether or not identified. We have not opted-out of the control share acquisitions statute.

Liability and Indemnification of Directors and Officers

NRS Sections 78.7502 and 78.751 provide us with the power to indemnify any of our directors and officers. The director and officer must have conducted himself or herself in good faith and reasonably believe that his or her conduct was in, or not opposed to, our best interests. In a criminal action, the director, officer, employee, or agent must not have had reasonable cause to believe that his or her conduct was unlawful.

Under NRS Section 78.751, advances for expenses may be made by agreement if the director or officer affirms in writing that he or she believes that he or she has met the statutory standards and will personally repay the expenses if it is determined that such officer or director did not meet the statutory standards.

Our amended and restated articles of incorporation provide that we shall indemnify directors and officers to the fullest extent permitted by the NRS. Our amended and restated articles of incorporation also provide a limitation of liability such that no director or officer shall be personally liable to us or any of our stockholders to the fullest extent permitted by the NRS.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of ours under Nevada law or otherwise, we have been advised the opinion of the SEC is that such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event a claim for indemnification against such liabilities (other than payment by us for expenses incurred or paid by a director, officer or controlling person of ours in successful defense of any action, suit, or proceeding) is asserted by a director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction, the question of whether such indemnification by it is against public policy in the Securities Act and will be governed by the final adjudication of such issue.

NYSE MKT Listing

Our common stock is listed on the NYSE MKT under the symbol "XXII."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Continental Stock Transfer & Trust Company, 17 Battery Place, 8th Floor, New York, NY 10004.

Description of Warrants

We may issue other warrants in the future for the purchase of debt securities, common stock or preferred stock. Warrants may be issued independently or together with debt securities, common stock or preferred stock offered by any prospectus supplement and/or other offering material and may be attached to or separate from any such offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent, all as will be set forth in the prospectus supplement and/or other offering material relating to the particular issue of warrants. The warrant agent will act solely as our agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any holders of warrants or beneficial owners of warrants.

The following summary of certain provisions of the warrants we may issue in the future does not purport to be complete and is subject to, and is qualified in its entirety by reference to, all provisions of the warrant agreements.

Reference is made to the prospectus supplement and/or other offering material relating to the particular issue of warrants offered pursuant to such prospectus supplement and/or other offering material for the terms of and information relating to such warrants, including, where applicable:

the designation, aggregate principal amount, currencies, denominations and terms of the series of debt securities purchasable upon exercise of warrants to purchase debt securities and the price at which such debt securities may be purchased upon such exercise;

the number of shares of common stock or preferred stock purchasable upon the exercise of warrants to purchase common stock or preferred stock and the price at which such number of shares of common stock or preferred stock may be purchased upon such exercise;

•the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;

U.S. federal income tax consequences applicable to such warrants;

the amount of warrants outstanding as of the most recent practicable date; and

any other terms of such warrants.

Warrants will be issued in registered form only. The exercise price for warrants will be subject to adjustment in accordance with the applicable prospectus supplement and/or other offering material.

Each warrant will entitle the holder thereof to purchase such principal amount of debt securities or such number of shares of common stock or preferred stock at such exercise price as shall in each case be set forth in, or calculable from, the prospectus supplement and/or other offering material relating to the warrants, which exercise price may be subject to adjustment upon the occurrence of certain events as set forth in such prospectus supplement and/or other offering material. After the close of business on the expiration date, or such later date to which such expiration date may be extended by us, unexercised warrants will become void. The place or places where, and the manner in which, warrants may be exercised shall be specified in the prospectus supplement and/or other offering material relating to such warrants.

Prior to the exercise of any warrants to purchase debt securities, common stock or preferred stock, holders of such warrants will not have any of the rights of holders of debt securities, common stock or preferred stock, as the case may be, purchasable upon such exercise, including the right to receive payments of principal of, premium, if any, or interest, if any, on the debt securities purchasable upon such exercise or to enforce covenants in the applicable indenture, or to receive payments of dividends, if any, on the common stock purchasable upon such exercise, or to exercise any applicable right to vote.

Description of Stock Purchase Contracts and Stock Purchase Units

We may issue stock purchase contracts, including contracts obligating holders to purchase from us, and obligating us to sell to the holders, a specified number of shares of common stock or preferred stock at a future date or dates, which we refer to in this prospectus as "stock purchase contracts." The price per share of the securities and the number of shares of the securities may be fixed at the time the stock purchase contracts are issued or may be determined by reference to a specific formula set forth in the stock purchase contracts. The stock purchase contracts may be issued separately or as part of units consisting of a stock purchase contract and debt securities or warrants, which we refer to herein as "stock purchase units." The stock purchase contracts may require holders to secure their obligations under the stock purchase contracts in a specified manner. The stock purchase contracts also may require us to make periodic payments to the holders of the stock purchase units or vice versa, and those payments may be unsecured or refunded on some basis.

The stock purchase contracts, and, if applicable, collateral or depositary arrangements, relating to the stock purchase contracts or stock purchase units, will be filed with the SEC in connection with the offering of stock purchase contracts or stock purchase units. The prospectus supplement and/or other offering material relating to a particular issue of stock purchase contracts or stock purchase units will describe the terms of those stock purchase contracts or stock purchase units, including the following:

- if applicable, a discussion of material U.S. federal income tax considerations; and
- any other information we think is important about the stock purchase contracts or the stock purchase units.

Where You Can Find More Information

We file annual, quarterly and current reports, proxy statements and other information with the SEC. We also filed a registration statement on Form S-3, including exhibits, under the Securities Act of 1933, as amended, or the Securities Act, with respect to the securities offered by this prospectus. This prospectus is a part of the registration statement, but does not contain all of the information included in the registration statement or the exhibits. You may read and copy the registration statement and any other document that we file at the SEC's public reference room at 100 F Street, N.E., Washington D.C. 20549. You can call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference room. You can also find our public filings with the SEC on the internet at a web site maintained by the SEC located at www.sec.gov.

Incorporation of Certain Documents by Reference

We are "incorporating by reference" specified documents that we file with the SEC, which means:

incorporated documents are considered part of this prospectus;

we are disclosing important information to you by referring you to those documents; and

information we file with the SEC will automatically update and supersede information contained in this prospectus.

We incorporate by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the registration statement on Form S-3 filed under the Securities Act with respect to securities offered by this prospectus and prior to the effectiveness of such registration statement and (ii) after the date of this prospectus and before the end of the offering of the securities pursuant to this prospectus:

- our Annual Report on Form 10-K for the year ended December 31, 2013;
- our Quarterly Report on Form 10-Q for the three months ended March 31, 2014;

our Definitive Proxy Statement on Schedule 14A filed March 4, 2014;

our Current Reports on Form 8-K filed on April 14, 2014, May 14, 2014 and May 19, 2014; and

the description of our common stock contained in or incorporated into our Registration Statement on Form 8-A, filed March 6, 2014, and any amendment or report updating that description.

Information in this prospectus supersedes related information in the documents listed above, and information in subsequently filed documents supersedes related information in both this prospectus and the incorporated documents.

We will promptly provide, without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, other than exhibits to those documents, unless the exhibits are specifically incorporated by reference in those documents. Requests should be directed to:

22nd Century Group, Inc.

9530 Main Street

Clarence, New York 14031

(716) 270-1523

You can also find these filings on our website at www.xxiicentury.com. We are not incorporating the information on our website other than these filings into this prospectus.

Plan of Distribution

We may sell securities in any one or more of the following ways from time to time: (i) through agents; (ii) to or through underwriters; (iii) through brokers or dealers; (iv) directly by us to purchasers, including through a specific bidding, auction or other process; or (v) through a combination of any of these methods of sale. The applicable prospectus supplement and/or other offering material will contain the terms of the transaction, name or names of any underwriters, dealers, agents and the respective amounts of securities underwritten or purchased by them, the initial public offering price of the securities, and the applicable agent's commission, dealer's purchase price or underwriter's discount. Any dealers and agents participating in the distribution of the securities may be deemed to be underwriters, and compensation received by them on resale of the securities may be deemed to be underwriting discounts.

Any initial offering price, dealer purchase price, discount or commission may be changed from time to time.

The securities may be distributed from time to time in one or more transactions, at negotiated prices, at a fixed price or fixed prices (that may be subject to change), at market prices prevailing at the time of sale, at various prices determined at the time of sale or at prices related to prevailing market prices.

Offers to purchase securities may be solicited directly by us or by agents designated by us from time to time. Any such agent may be deemed to be an underwriter, as that term is defined in the Securities Act of 1933, of the securities so offered and sold.

If underwriters are utilized in the sale of any securities in respect of which this prospectus is being delivered, such securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at fixed public offering prices or at varying prices determined by the underwriters at the time of sale. Securities may be offered to the public either through underwriting syndicates represented by managing underwriters or directly by one or more underwriters. If any underwriter or underwriters are utilized in the sale of securities, unless otherwise indicated in the applicable prospectus supplement and/or other offering material, the obligations of the underwriters are subject to certain conditions precedent, and that the underwriters will be obligated to purchase all such securities if any are purchased.

If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale. Transactions through brokers or dealers may include block trades in which brokers or dealers will attempt to sell shares as agent but may position and resell as principal to facilitate the transaction or in crosses, in which the same broker or dealer acts as agent on both sides of the trade. Any such dealer may be deemed to be an underwriter, as such term is defined in the Securities Act of 1933, of the securities so offered and sold.

Offers to purchase securities may be solicited directly by us and the sale thereof may be made by us directly to institutional investors or others, who may be deemed to be underwriters within the meaning of the Securities Act of 1933 with respect to any resale thereof.

If so indicated in the applicable prospectus supplement and/or other offering material, we may authorize agents and underwriters to solicit offers by certain institutions to purchase securities from us at the public offering price set forth in the applicable prospectus supplement and/or other offering material pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in the applicable prospectus supplement and/or other offering material. Such delayed delivery contracts will be subject only to those conditions set forth in the applicable

prospectus supplement and/or other offering material.

Agents, underwriters and dealers may be entitled under relevant agreements with us to indemnification by us against certain liabilities, including liabilities under the Securities Act of 1933, or to contribution with respect to payments which such agents, underwriters and dealers may be required to make in respect thereof. The terms and conditions of any indemnification or contribution will be described in the applicable prospectus supplement and/or other offering material.

We may also sell shares of our common stock through various arrangements involving mandatorily or optionally exchangeable securities, and this prospectus may be delivered in connection with those sales.

We may enter into derivative, sale or forward sale transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement and/or other offering material indicates, in connection with those transactions, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement and/or other offering material, including in short sale transactions and by issuing securities not covered by this prospectus but convertible into, or exchangeable for or representing beneficial interests in such securities covered by this prospectus, or the return of which is derived in whole or in part from the value of such securities. The third parties may use securities received under derivative, sale or forward sale transactions, or securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those transactions to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement (or a post-effective amendment) and/or other offering material.

Underwriters, broker-dealers or agents may receive compensation in the form of commissions, discounts or concessions from us. Underwriters, broker-dealers or agents may also receive compensation from the purchasers of shares for whom they act as agents or to whom they sell as principals, or both. Compensation as to a particular underwriter, broker-dealer or agent might be in excess of customary commissions and will be in amounts to be negotiated in connection with transactions involving shares. In effecting sales, broker-dealers engaged by us may arrange for other broker-dealers to participate in the resales.

Each series of securities will be a new issue and, other than the common stock, which is listed on the NYSE MKT, will have no established trading market. We may elect to list any series of securities on an exchange, and in the case of the common stock, on any additional exchange, but, unless otherwise specified in the applicable prospectus supplement and/or other offering material, we shall not be obligated to do so. No assurance can be given as to the liquidity of the trading market for any of the securities.

Agents, underwriters and dealers may engage in transactions with, or perform services for us and our respective subsidiaries in the ordinary course of business.

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. An underwriter may carry out these transactions on the NYSE MKT, in the over-the-counter market or otherwise.

The place and time of delivery for securities will be set forth in the accompanying prospectus supplement and/or other offering material for such securities.

Legal Matters

The validity of the securities offered by this prospectus will be passed upon for us by Foley & Lardner LLP. As of May 15, 2014, Foley & Lardner, LLP owns 1,000,000 shares of common stock of the Company. The validity of the securities offered by this prospectus will be passed upon for any underwriters or agents by counsel named in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements of 22nd Century Group, Inc. as of December 31, 2013 and 2012, and for the years then ended, have been incorporated by reference herein in reliance upon the report of Freed Maxick CPAs, P.C., independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing. To the extent that Freed Maxick CPAs, P.C. audits and reports on consolidated financial statements of 22nd Century Group, Inc. at future dates and consents to the use of their reports thereon, such consolidated financial statements also will be incorporated by reference in the registration statement in reliance upon their reports and said authority.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The aggregate estimated expenses, other than underwriting discounts and commissions, in connection with the sale of the securities being registered hereby are currently anticipated to be as follows (all amounts are estimated except the Securities and Exchange Commission registration fee). All expenses of the offering will be paid by 22nd Century Group, Inc.

	Amount
Securities and Exchange Commission registration fee	\$ 5,796
Legal fees and expenses	50,000
Accounting fees and expenses	3,500
Miscellaneous expenses	2,500
Total	\$ 61,796

Item 15. Indemnification of Directors and Officers.

Nevada Revised Statutes (NRS) Sections 78.7502 and 78.751 provide us with the power to indemnify any of our directors, officers, employees and agents. The person entitled to indemnification must have conducted himself in good faith, and must reasonably believe that his conduct was in, or not opposed to, our best interests. In a criminal action, the director, officer, employee or agent must not have had reasonable cause to believe that his conduct was unlawful.

Under NRS Section 78.751, advances for expenses may be made by agreement if the director or officer affirms in writing that he has met the standards for indemnification and will personally repay the expenses if it is determined that such officer or director did not meet those standards.

Our amended and restated bylaws include an indemnification provision under which we have the power to indemnify, to the extent permitted under Nevada law, our current and former directors and officers, or any person who serves or served at our request for our benefit as a director or officer of another corporation or our representative in a partnership, joint venture, trust or other enterprise, against all expenses, liability and loss reasonably incurred by

reason of being or having been a director, officer or representative of ours or any of our subsidiaries. We may make advances for expenses upon receipt of an undertaking by or on behalf of the director or officer to repay the amount if it is ultimately determined by a court of competent jurisdiction that he, she or it is not entitled to be indemnified by us.

Our amended and restated articles of incorporation provide that we shall indemnify directors and officers to the fullest extent permitted by the NRS. Our amended and restated articles of incorporation also provide a limitation of liability such that no director or officer shall be personally liable to us or any of our stockholders to the fullest extent permitted by the NRS.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of ours under Nevada law or otherwise, we have been advised the opinion of the SEC is that such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event a claim for indemnification against such liabilities (other than payment by us for expenses incurred or paid by a director, officer or controlling person of ours in successful defense of any action, suit, or proceeding) is asserted by a director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction, the question of whether such indemnification by it is against public policy in the Securities Act and will be governed by the final adjudication of such issue.

Item 16. Exhibits and Financial Statement Schedules.

The exhibits listed in the accompanying Exhibit Index are filed or incorporated by reference as part of this Registration Statement.

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Item 17. Undertakings.
The undersigned Registrant hereby undertakes:
(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission (the "Commission") pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;
provided, however, that paragraphs (i), (ii) and (iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.
(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial <i>bona fide</i> offering thereof.

- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
- (i) If the Registrant is relying on Rule 430B:
- (A) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and
- (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which the prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

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- (ii) If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (5) That, for the purpose of determining liability of the Registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned Registrant undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
- (i) Any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of its annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the issue has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes to file an application for the purpose of determining the eligibility of the trustee to act under subsection (a) of Section 310 of the Trust Indenture Act in accordance with the rules and regulations prescribed by the Commission under Section 305(b)(2) of the Trust Indenture Act.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Amendment No. 1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Clarence, New York, on this 21st day of May 2014.

22nd CENTURY GROUP, INC.

By:/s/ Joseph Pandolfino Joseph Pandolfino Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 1 to the Registration Statement has been signed by the following persons in the capacities indicated below on May 21, 2014.

Signature	<u>Title</u>
/s/ Joseph Pandolfino Joseph Pandolfino	Chief Executive Officer and Chairman (Principal Executive Officer)
/s/ John T. Brodfuehrer John T. Brodfuehrer	Chief Financial Officer (Principal Financial and Accounting Officer)
* Henry Sicignano III	President, Secretary and Director
* Joseph Alexander Dunn, Ph.D.	Director
* James W. Cornell	Director
* Richard M. Sanders	Director

* By: /s/ Joseph Pandolfino Attorney-in-Fact

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EXHIBIT INDEX

Exhibit <u>Number</u>	Document Description
(1)	Form of Underwriting Agreement.*
(4.1)	Amended and Restated Articles of Incorporation (incorporated herein by reference to Exhibit 3.2 of the Company's Annual Report on Form 10-K for the year ended September 30, 2010).
(4.1.1)	Certificate of Amendment to Articles of Incorporation (incorporated by reference from Appendix A to the Company's definitive proxy statement filed March 4, 2014).
(4.2)	Amended and Restated Bylaws (Incorporated herein by reference to Exhibit 3.2 to the Company's Annual Report on Form 10-K for the year ended December 31, 2013).
(4.3)	Form of Indenture (previously filed)
(4.4)	Form of Debt Securities.*
(4.5)	Form of Warrant.*
(4.6)	Form of Warrant Agreement.*
(4.7)	Form of Stock Purchase Contract.*
(4.8)	Form of Warrant dated as of January 25, 2011 (incorporated herein by reference to Exhibit 10.4 of the Company's Current Report on Form 8-K filed on February 1, 2011).
(4.9)	Form of Warrant dated as of January 25, 2011 (Incorporated herein by reference to Exhibit 10.5 of the Company's Current Report on Form 8-K filed on February 1, 2011).
(4.10)	Form of Warrant dated as of January 25, 2011 (incorporated herein by reference to Exhibit 10.6 of the Company's Current Report on Form 8-K filed on February 1, 2011).
(4.11)	Form of Common Stock Purchase Warrant (incorporated herein by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K filed on December 14, 2011).
(4.12)	Form of Common Stock Purchase Warrant (incorporated herein by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on May 18, 2012).
(4.13)	Form of Common Stock Purchase Warrant (incorporated herein by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K filed on November 13, 2012).
(5.1)	Opinion of Foley & Lardner LLP (including consent of counsel).

- (23.1) Consent of Foley & Lardner LLP (filed as part of Exhibit (5)).
- (23.2) Consent of Freed Maxick CPAs, P.C.
- (24) Powers of Attorney (previously filed)
- (25) Form T-1 Statement of Eligibility and Qualification under the Trust Indenture Act of 1939.*

Documents incorporated by reference to filings made by 22nd Century Group, Inc. under the Securities Exchange Act of 1934 are under SEC File No. 000-54111.

^{*} If necessary, to be filed by amendment or under subsequent Current Report on Form 8-K.