Company: **22nd Century Group, Inc.**

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Moderator: **John Brodfuehrer**

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Operator: Good day and welcome to the 22nd Century Third Quarter 2018 Business Update Conference Call. Today's conference is being recorded. At this time, I would like to turn the conference over to Tom James. Please go ahead sir.

Tom James: Thank you. Good afternoon everyone and thank you for joining our call. My name is Thomas James, the General Counsel of the Company. Thank you for bearing with us while I read the obligatory legal safe harbor text.

The statements made on today's call that are not based on historical information are forward-looking statements made pursuant to the safe harbour provisions of the Private Securities Litigation Reform Act of 1995. Forward-looking statements include, but are not limited to, statements regarding our Company's business strategy, future plans and objectives and future results of operations or that may predict, forecast, indicate or imply future results, performance or achievements.

The words estimate, project, intend, forecast, anticipate, plan, expect, believe, will, will likely, should, may or the negative of such words, or words of similar expressions or meanings 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 our 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, including but not limited to the risk factors disclosed in our Company's most recent Annual Report on Form 10-K for the year ended December 31, 2017 as filed with the SEC on March 7, 2018.

22nd Century does not undertake and it disclaims any obligation to update any forward-looking statements or to announce revisions to any of the forward-looking statements. During this conference call we will also disclose certain non-GAAP financial measures, including Adjusted EBITDA, which we define as earnings before interest, taxes, depreciation and amortization as adjusted by 22nd Century for certain non-cash and non-operating expenses, as described in our Company's earnings press release for the quarter ended September 30, 2018, as publicly issued yesterday on November 7, 2018, and which is available on our Company's website. I will now turn the call over to our Chief Financial Officer, John Brodfuehrer.

John Brodfuehrer: Thank you, Tom. Good afternoon, everyone. Thank you for dialling into the 22nd Century third quarter 2018 business update call. My name is John Brodfuehrer and I am the Chief Financial Officer of 22nd Century Group. Today's conference will be one hour in duration and will conclude at 5:00 p.m. Eastern Time. We will take questions at the end of the presentations if time permit.

This afternoon I will provide you with a summary of the Company's financial results for the three and nine months ended September 30, 2018. Before I address the usual quarterly financial metrics, I want to discuss some positive transactions that occurred during the third quarter of 2018 that propelled 22nd Century into a net income position for both of three and nine months ended September 30, 2018. The three distinct, but related, transactions are as follows:

1. On August 8, 2018, our 14.8% equity investment in Anandia was acquired by Aurora Cannabis, a publicly traded Canadian company. As a result of this transaction, 22nd Century received 1,947,943 shares of Aurora common stock and a warrant to purchase 973,971 shares of Aurora common stock. We reported a realized gain on this transaction of $4,516,000 during the third quarter of 2018.

2. Subsequent to the overall Anandia/Aurora transaction, we sold the Aurora common stock resulting in net cash proceeds in the amount of $13,052,000 and we recorded a realized gain on the sale, for GAAP accounting purposes, in the amount of $3,830,000. It should be noted, however, that we realized a tax gain of more than 800% on the sale of the Aurora common stock since our original equity investment in Anandia was approximately $1.4 million, consisting of cash and common stock of 22nd Century. For further emphasis, we originally invested approximately $1.4 million, or $0.73 per share, in Anandia and sold the resulting 1.947,943 shares of Aurora common stock for $13,052,000, or $6.70 per share; a tax gain on the transaction of $5.97 per share, or approximately $11.65 million.

3. The warrant to purchase 973,971 shares of Aurora common stock have a five-year term, has an exercise price of $9.37 Canadian dollars per share, is considered an equity security, and is recorded at fair value on our financial statements. We reported the fair value of the Aurora common stock warrant of $6,731,000 at September 30, 2018 and, as a result, recorded an unrealized gain on the warrant in the amount of $3,923,000 during the three months ended September 30, 2018. At future quarter end dates, and if the warrant is still owned by us at that time, we will record the fair value of the warrant at that time and any unrealized gain or loss will be included in net income or loss for that quarter.

These transactions will be referenced during the remainder of my presentation.

Next, I would like to discuss our net sales revenue generated from sales of products. As reported in our Form 10-Q as filed with the SEC yesterday and as stated in yesterday's press release, net sales revenue for the three and nine months ended September 30, 2018 was $6,260,000 and $19,291,000, respectively, as compared to net sales revenue for the three and nine months ended September 30, 2017 of $4,531,000 and $10,660,000, respectively.

Accordingly, net sales revenue increased $1,729,000, or 38.2%, and $8.631,000, or 81%, for the three and nine months ended September 30, 2018, as compared to the same periods in 2017. The net sales revenue increase is primarily the result of additional net sales revenue generated from our contract manufacturing of cigarettes and filtered cigars during 2018.

Next, I will address gross profit or loss on product sales. Our factory in North Carolina continued to utilize additional production capacity due to increased net sales revenue as just discussed. As a result, we generated gross profit on net sales revenue for the three and nine months ended September 30, 2018 in the amount of $151,000 and $384,000, respectively. In comparison, we experienced a gross loss on net sales revenue for the three and nine months ended September 30, 2017 in the amount of $340,000 and $779,000, respectively.

The positive change from a gross loss to gross profit amounted to $491,000 and $1,163,000 for the three and nine months ended September 30, 2018 as compared to the same periods for 2017. This improvement is primarily the result of increased factory utilization.

Next, we will discuss our operating expenses. Our net cash operating expenses are up for both the third quarter of 2018 and for the nine months ended September 30, 2018, as compared to the same periods in 2017. The increase was primarily due to temporarily increased expenses attributed to our Modified Risk Tobacco Product, or MRTP, application with the FDA for our Brand A Very Low Nicotine cigarettes. Our expenses relating to the MRTP application amounted to $3,135,000 and $7,155,000 for the three and nine months ended September 30, 2018, respectively.

Our net cash operating expenses, that exclude non-cash equity based compensation, amortization and depreciation, increased during the three months ended September 30, 2018 by $3,095,000, or 126.8%, from $2,440,000 for the three months ended September 30, 2017 to $5,535,000 for the three months September 30, 2018. Our net cash operating expenses

increased during the nine months ended September 30, 2018 by $7,467,000, or 100%, from $7,470,000 for the nine months ended September 30, 2017 to $14,937,000 for the nine months ended September 30, 2018.

I will now discuss our net income (loss). As mentioned above, we generated net income for both the three and nine months ended September 30, 2018. We generated net income of $6,305,000, or $0.05 per share, for the three months ended September 30, 2018, as compared to a net loss of $3,317,000, or ($0.03) per share, for the three months ended September 30, 2017. This positive change from a net loss for the three months ended September 30, 2017 to net income for the three months ended September 30, 2018 amounted to an increase of $9,622,000, or 290.1%.

This positive change from a net loss to net income of $9,622,000 was primarily attributable to realized gains on the Anandia/Aurora transactions discussed previously in the amount of $8,346,000, the unrealized gain on the fair value of the Aurora common stock warrant in the amount of $3,923,000, also discussed previously, an increase in net interest income of $235,000, and an increase in the gross profit of product sales of $491,000, all partially offset by an increase in net cash operating expenses of $3,095,000, an increase in equity based compensation of $213,000, and an increase in depreciation and amortization expense of $117,000.

We generated net income of $952,000, or $0.01 per share, for the nine months ended September 30, 2018, as compared to a net loss of $9,294,000, or ($0.10) per share, for the nine months ended of September 30, 2017. The positive change from a net loss for the nine months ended September 30, 2017 to net income for the nine months ended September 30, 2018 amounted to an increase of $10,246,000, or 110.2%.

This positive change from a net loss to net income of $10,246,000 was primarily attributable to realized gains again on the Anandia/Aurora transactions discussed previously in the amount of $8,346,000, the unrealized gain on the fair value of the Aurora common stock warrant in the

amount of $3,923,000, also discussed previously, the unrealized gain on the Anandia investment in the amount of $6,147,000 from the first quarter of 2018, an increase in net interest income of $710,000, and an increase in gross profit on product sales of $1,164,000, all partially offset by an increase in net cash operating expenses of $7,467,000, an increase in equity based compensation of $2,137,000, and an increase in depreciation and amortization expense of $251,000.

I will next discuss our Adjusted EBITDA. Our Adjusted EBITDA, a non-GAAP financial metric previously defined by Tom James in his opening statement, for the three months end September 30, 2018 was a negative $5,384,000, or ($0.04) per share, as compared to negative $2,780,000, or ($0.03) per share, for the three months ended September 30, 2017, an increase in negative Adjusted EBITDA approximately $2,604,000, or 93.7%. This increase was primarily the result of the previously discussed increase in our net cash operating expenses of $3,095,000, as partially offset by an improvement in our gross profit on product sales of $491,000.

Our Adjusted EBITDA for the nine months ended September 30, 2018 was a negative $14,553,000, or ($0.12) per share, as compared to a negative $8,249,000, or ($0.09) per share, for the nine months ended September 30, 2017, an increase in the negative Adjusted EBITDA of approximately $6,304,000, or 76.4%. This increase is primarily the result of the previously discussed increase in our net cash operating expenses of $7,467,000, as partially offset by an improvement in our gross profit on product sales of $1,164,000.

Finally, I will discuss the Company's cash position at September 30, 2018. We continue to be in a strong cash position with a total of cash and short-term investment securities totalling $62.1 million as of September 30, 2018, an amount we believe will be adequate to cover normal monthly operating expenses of approximately $850,000 and to meet all current obligations as they come due for a number of years. In addition, we expect to incur approximately $4.0 million

in additional expenses relating to our Modified Risk Tobacco Product application with the FDA over approximately the next three to six months.

That concludes my remarks. Thank you for your time, consideration and continued interest in 22nd Century Group. I will now turn the remainder of this conference over to our President and CEO, Henry Sicignano, who will provide you with a business review and update. Thank you very much.

Henry Sicignano: Thanks John. Good afternoon and thank you again to our conference call participants for joining us. I would like to begin my remarks today with an overview of our Modified Risk Tobacco Product, or MRTP, application for our Very Low Nicotine Content cigarette that contains at least 95% less nicotine as compared to the highly addictive tobacco contained in conventional cigarettes.

Although assembling a robust MRTP application is a major undertaking, I am pleased to report that we remain on schedule for a December filing with the FDA. Our particular MRTP application has required the assembly of significant amounts of clinical research results, a large body of data related to the technical properties of our products, and substantial additional documentation relating to a wide array of topics, such as environmental impact, product ingredient analyses, manufacturing specifications and tolerance ranges, consumer perception studies, and so on.

The application will contain the results of more than 100 published, independent clinical trials and studies relating to our Company's proprietary Very Low Nicotine tobacco. A team of internal staff and expert consultants that we have tasked to assemble and complete our MRTP application includes highly talented scientists, toxicologists, regulatory experts, manufacturing experts, and unfortunately, but of course necessarily, a bevy of attorneys. This massive effort has been the primary focus of 22nd Century for more than a year. All in, our Company's MRTP application will be more than 100,000 pages in length and at cost of more than $10 million.

As we speak, our Company-sponsored consumer perceptions studies, conducted in support of our MRTP application, are in their final stages. Separately, our "Abuse Liability" studies that were commissioned to identify any possible negative consequences related to VLN™ cigarette use, are already showing that VLN™ cigarettes have a much lower propensity for abuse than conventional cigarettes. Further, our separate six-week study that converts smokers from their usual brand of cigarettes to our Very Low Nicotine cigarettes is also nearing completion. We anticipate that the result of this particular study will show that smokers of VLN™ cigarettes consume fewer cigarettes per day and show reduced biomarkers of exposure to nicotine and other smoke components.

Our MRTP application will reference all the collected data and the results of these important Company-sponsored studies along with the results of more than 100 independent studies. Through it all, we are proud of the work the team has done and look forward to submitting our MRTP application to the FDA before the end of this year.

For any of our listeners who are not familiar with the approval process for an MRTP product, I should point out that our application actually consists of two distinct parts. The first part is the Pre-Market Tobacco Product Application or "PMTA." Upon approval of the PMTA by the FDA, we would technically be able to begin selling our VLN™ cigarettes in the U.S. market. However, the PMTA does not allow us to say what makes our product so special, *i.e.,* the remarkably low nicotine content of our "Brand A" cigarettes.

Therefore, a PMTA is not enough -- which is what leads us to the second and most critical part of our filing; the MRTP application itself. Upon FDA approval of the actual Modified Risk Tobacco Product application, we will be able to make the informative reduced exposure claims that are ultimately allowed by the FDA relating to our Very Low Nicotine cigarettes. Together, the PMTA

and the MRTP applications will allow 22nd Century to begin selling and making specific reduced exposure claims about the world's lowest nicotine tobacco cigarette.

Because we anticipate that 22nd Century's VLNC cigarettes will be the first, and perhaps the only, combustible cigarette to receive an MRTP marketing order from the FDA, we will likely have several choices for how we bring our product to market. We may choose simply and directly to launch our Very Low Nicotine MRTP cigarettes unilaterally, by employing the network of distributors and independent retailers that we already developed through our contract manufacturing business – or we may choose to license our VLNC cigarettes to one or more third party Big Tobacco companies.

In either case, we expect to have many partners for distribution and sale of our new, highly differentiated, premium Very Low Nicotine cigarettes. Not since the *American Spirit* brand launch more than 20 years ago has there been a successful, profitable, highly differentiated, super-premium cigarette in the United States. With an approved MRTP product, our VLNC cigarettes would sit alone at the top of the market as the only combustible cigarette available with minimally or non-addictive levels of nicotine.

Indeed this product concept is so powerful and potentially so beneficial to the efforts of public health officials to break smokers' addiction to nicotine and to help prevent youth from becoming addicted to combustible cigarettes that FDA Commissioner Dr. Scott Gottlieb has announced that the FDA intends to mandate that every cigarette sold in the United States contains only minimally or non-addicted levels of nicotine. Of course, 22nd Century stands ready to make feasible the FDA's sweeping policy change.

To pave the way for the FDA's national nicotine reduction mandate, we believe the Agency should allow our MRTP cigarettes on the market in advance of implementing a reduced nicotine rule for the entire U.S. tobacco industry. In this way, 22nd Century's Very Low Nicotine cigarettes

will provide the FDA with an indisputable example of how VLN™ cigarettes are both feasible to bring to market and beneficial for public health.

While we are focused intensely on advancing our Very Low Nicotine cigarettes and our MRTP application, we are also continuing to expand 22nd Century's very important work with *cannabis sativa*. With the national legalization of cannabis in Canada, many companies have already chosen to jump into the Canadian cannabis market. Of course, 22nd Century has been involved in cannabis research since 2014. Four years ago we provided start-up funding to Anandia Laboratories in Canada and consequently obtained the exclusive U.S. rights to Anandia's intellectual property that gives us the ability to manipulate the production of cannabinoids in the *cannabis sativa* plant.

We continue to focus our efforts on developing unique *cannabis sativa* plants with elevated concentrations of high-value medicinal cannabinoids and other plant varieties with highly desirable agronomic traits. We anticipate that our unique *cannabis sativa* plants will greatly reduce the cost for Big Pharma to extract cannabinoids for medical purposes and our proprietary technology will greatly improve commercial yields for industrial growing. On all these fronts, we look forward to the continued evolution of federal laws and state regulations that will make possible the acceleration of our commercial efforts in the *cannabis sativa*-related industry.

At the same time 22nd Century is expanding the Company's efforts to develop international partnership collaborations to take advantage of more liberal laws abroad and to gain access and IP rights to unique cannabis plants that we can import and develop for the U.S. market in full compliance with all applicable U.S. laws.

This is precisely the strategy we followed when 22nd Century invested $1.4 million in Anandia Labs in 2014. Some four years later, when Aurora Cannabis purchased Anandia, we took a hard look at our investment and our choices to exploit 22nd Century's net profit of more than $11.6

million. Given the extreme volatility of Aurora's share price and given 22nd Century's focus in developing and exploiting our own technology, we decided to sell the Aurora common stock that we received following the Anandia buy-out.

As John explained earlier in the call, our sales of the Aurora shares generated more than $13 million in cash for 22nd Century, which I am pleased to report is more than enough to fund our entire MRTP application. What's more, we continue to hold a warrant to buy an additional 973,000 shares of Aurora common stock anytime over the next 4 and 1/2 years. It is also important to note and to emphasize that even after Aurora's purchase of Anandia, 22nd Century retains all of our rights to the research and intellectual property developed in collaboration with Anandia.

Our exclusive sublicense to the intellectual property developed by Anandia's principals that allows us to regulate the genes – and the Cannabis plant that produce cannabinoids – remains intact. We still have rights to our zero-THC hemp plants and to other important *cannabis sativa* plant lines developed by our Company in partnership with Anandia. What's more, we're in discussions with Anandia regarding the continuation and expansion of our scientific collaboration.

So, let's take a step back and review what has been reported. 22nd Century has just realized a gain of more than 800% on our investment in Anandia. We are about to submit an application to the FDA for what we believe will be the world's first combustible cigarette authorized as a Modified Risk Tobacco Product. Using the peer-reviewed, published results from numerous independent studies completed with 22nd Century's proprietary SPECTRUM® cigarettes, the Commissioner of the FDA has announced the Agency's plan to mandate that all cigarettes sold in the U.S. contain only Very Low Nicotine tobacco. And, last but not least, 22nd Century has more than $62 million in the bank, which is enough to fund all Company operations for a number of years.

All in all, I think our growing Company has done remarkably well over the last year and has even greater prospects going forward. However, we are still a microcap and operations are not yet profitable. For these reasons, it appears, we seem to represent a target for nefarious investors who make their living at the expense of regular investors. As I am sure you are aware, 22nd Century has recently received some negative attention in the form of highly misleading articles written by anonymous short sellers who profit when they convince unsuspecting or naïve investors to sell their shares of 22nd Century.

We encourage investors to ignore the false and misleading “short and distort” hit pieces written by short sellers. Rather, we encourage all investors to do their own due diligence. Spending just a few minutes with a quick and simple Google search will reveal a treasure trove of published scientific research results and news on 22nd Century’s proprietary Very Low Nicotine tobacco plants and technology.

I ask you -- how many other companies can you name that have a technology that serves as the foundation for a national mandate planned by the FDA? How many other microcaps can aspire to save hundreds of thousands of American lives each year, to save billions of dollars annually in healthcare costs, and to help prevent underage youth from ever becoming addicted to cigarettes? 22nd Century is the only company that enjoys such notoriety.

In conclusion, I want to say that 22nd Century, your Company and mine, is a team of enormously talented, accomplished and hard working women and men who are absolutely devoted to our important mission and our unrivaled technology. First and foremost, we believe that 22nd Century’s Very Low Nicotine cigarettes will prove tremendously disruptive to the entire tobacco industry. And, on top of our enviable position in tobacco IP, 22nd Century’s strategic investments and intellectual property in cannabis are rapidly expanding.

There has never been a more exciting time for our shareholders. Thank you so much for joining us today and for your continued interest in our extraordinary Company. At this time, I am going to open up the call to your questions. But, let me remind everyone to please refrain from asking questions about any non-public information and please keep your questions short and concise since we have a limited amount of time today. We will conclude this call at 5:00 p.m. Operator, if there are callers with questions, then feel free to patch them in.

Operator: Thank you. If you would like to ask a question, please signal by pressing star 1 on your telephone keypad. If you are using a speakerphone, please make sure your mute function is turned off to allow your signal to reach our equipment. Again press star 1 to ask a question. We will pause for just a moment to allow everyone an opportunity to signal for questions.

Henry Sicignano: Go ahead operator.

Operator: Thank you. The first question will come from Manuel Harnish with Burtch Capital. Please go ahead with your question.

Manuel Harnish: Yes hello, thanks for taking the question. You mentioned the strong cash position which is certainly great and congratulations on the sale of the Aurora shares. Could you elaborate a little bit on the rationale on the timing and why you chose to do that rather than just keeping the investment and seeing where it goes?

Henry Sicignano: Well, we are not a mutual fund. I do not think investors want us to be gambling with securities of other companies' common stocks. Our thought was to liquidate our Aurora shares in a ratable way. We are going to hold onto the warrants and enjoy the upside of the warrant.

Operator: Thank you for your question. The next question will come from John Cloud with Prime Cap Management. Please go ahead.

John Cloud: Good afternoon, thanks for the good quarter. You guys got a lot of stuff on your plate. Specifically, I wanted to ask about the MRTP application. It seems like your Company, given the amount of studies the government agencies have done with your cigarette, that you guys are similarly aligned with the government already in your products. Are you anticipating a 2020 approval of the MRTP application? Without putting a guestimate on it, do you think it could happen sooner than that?

Henry Sicignano: Well, if experience is any guide, when we submitted a preliminary application to the FDA in December 2015, we heard back from the Agency very quickly and wound up in the Maryland headquarters in January, actually, in consultation with the FDA. After that initial meeting, things seemed to slow down a bit. But, our expectation now is that because Very Low Nicotine cigarettes seem to be such an important topic on the current FDA agenda, I would expect that our MRTP application will be reviewed much quicker than it was in 2016. I am not sure if that is exactly what you are looking for. I would be surprised if we did not have feedback from the FDA in the first quarter of 2019.

John Cloud: That would be great. That would be the logical reasoning, so I appreciate it. Thank you very much. Keep up the good work.

Henry Sicignano: Thank you sir.

Operator: Thank you. If you find your question has been answered, you may remove yourself from the queue by pressing star 2. The next question will come from Robert Bransafort with Morgan Stanley. Please go ahead.

Robert Bransafort: Thanks for taking my question. First Henry, just very quickly, I just want to say that I am a professional investor for about 40 years and I am very committed in the future of the

Company. But, even I get weak knees when I read these short articles. I very much appreciate the push back in the Company's public response. It was exactly what I wanted to hear.

Next, just a logical timeline. I do not mean to be speculative here, but I am just trying to think logically. The FDA probably is waiting for the results of these two or three additional studies to be complete, but when those results are in, there would not be any chance of them coming out with their mandate before we get the MRTP approval. I am assuming that a logical move would be they then wait. They get the results from the study. It proves the science. You file your MRTP. They accept the MRTP and then the mandate would be proffered. Is that the dream timeline?

Henry Sicignano: Even though the products are related, I think they are independent processes. We are waiting right now... Everyone is waiting for the Notice of Proposed Rulemaking that most folks believe the FDA will issue before the end of this calendar year. That is separate distinct from our MRTP filing, but we believe that when our MRTP application is filed that our application will add fuel to the fire that I think will hasten the progress that is being made already on the national nicotine reduction mandate.

That is what we expect. We expect to see a Notice of Proposed Rulemaking hopefully by the end of this calendar year. We will be submitting our own MRTP application by the end of this calendar year. We would expect in the first quarter of 2019 to have some sort of feedback from the FDA on our MRTP application, and major public health organizations to have called on the FDA to issue its final nicotine reduction rule by March of 2019. I am not sure that the FDA will be quite as aggressive as that, but the American Heart Association, the American Lung Association, and 39 other major public health organizations are calling on the FDA to actually issue its formal final rule by this spring.

I guess, fingers crossed, we will see what happens. My expectation is that we will receive an authorized MRTP before the final nicotine reduction rule. Is that helpful?

Robert Bransafort: Yes, it is very helpful. I do not mean to dominate the call, but I have another question. From what I have been reading, all of the studies that have been done with VLNs have used your cigarettes. Am I correct in that? Are there any other companies' cigarettes that have been used in these tests, any other kinds of cigarettes?

Henry Sicignano: None that I am aware of.

Robert Bransafort: None, okay.

Henry Sicignano: That is why detractors make comments. It boggles the mind because the FDA has used all the science and all the studies done with our Very Low Nicotine Content cigarettes to issue a planned mandate that ALL cigarettes sold in the country are Very Low Nicotine. To me, that is unassailable, so I appreciate your questions. I think they are very good ones and I am glad you gave us the chance to respond.

Robert Bransafort: Okay thanks. Good luck Henry. Keep up the good work.

Henry Sicignano: Thank you sir.

Operator: Thank you. The next question will come from Marian Green, a private investor. Please go ahead.

Marian Green: Hello Henry, thanks for everything. Everything is going in the right direction. All good news.

Henry Sicignano: Thank you. We appreciate that.

Marian Green: There was one thing you had done that I was very pleased with. I think it was the Washington Observer. There was an editorial there. Do I have the right newspaper?

Henry Sicignano: Yes. And?

Marian Green: I would love to see more of that.

Henry Sicignano: That is an excellent point. To be honest with you, we would like to do more of that as well. I think it is a big undertaking for our small Company to compile 100,000 pages for this MRTP application. My expectation is that when that application is filed that all of our folks will have much more time to devote to op-eds like that. We plan to do much more of that in the new year in support of Very Low Nicotine cigarettes generally. Thank you for your observation and I think you are spot on.

Operator: Thank you. The next question will come from Irvin Rosenfeld with New Bridge Securities. Please go ahead.

Irvin Rosenfeld: Good afternoon you all… I appreciate the update. I have two quick questions. You mentioned cannabis sativa. What about cannabis indica?

Tom James: Irv, we refer to the plant genus that covers all plant derivatives and species.

Irvin Rosenfeld: Okay good, that is what I want to make sure about. Number 2, my other question is when do you expect revenue coming from the sale or license of your discovery of the zero-THC plant for CBD?

Tom James: Irv, we do not give future financial projections in that regard. Just know that we have it and we are making use of it. We are keeping control of it with our collaborations.

Henry Sicignano: I will comment too. I will mention what we are doing is we are not just putting it on the shelf and sitting on it. We are actually working in collaboration with University of Virginia to optimize that plant for the tobacco belt. There is actually a lot of work and a lot of spending going on right now around the plant and I expect that when we have the variety we are happy with, especially for the tobacco belt, then I think you will see a lot more activity there. Does that make sense?

Irvin Rosenfeld: All right thank you, that does. Thank you very much.

Operator: Next question will come from John Keller, a private investor. Please go ahead.

John Keller: Hello Henry and all. My question would be this hemp bill that they are working to pass currently. What would that mean for us with our hemp technology?

Tom James: I think you are referring to the federal Farm Bill. The 2014 Farm Bill expired and lapsed. The 2018 Farm Bill is scheduled to be taken up now that the mid-term elections are done. It will be taken up by both houses of Congress. It is supposed to be done before the end of the year and it includes a lot of things, like subsidies for farmers for normal crops. The benefit for hemp is that Mitch McConnell, the leader of the Senate who confirmed that he wants his home State of Kentucky to be the number one hemp growing state in the country, is pushing hemp to be treated in the new Farm Bill like any other agricultural crop, such as corn, soybean, wheat, and the rest of it, with no more DEA problems. That includes extracts. We are very focused and new Farm Bill will be greatly beneficial for us and the entire industry.

John Keller: Greatly beneficial for us when that passes. Is that what you said?

Tom James: Yes, definitely.

John Keller: Okay. One last thing, Marian commented on your editorial. My feeling is with the savings – first of all with Big Tobacco misleading the general public for so many years and costing the general public so many dollars with us footing the bill for all the medical expenses, it seems like we could capitalize on our angle on saving so much money and perhaps we could pick up some investors if we pursue that a little bit more.

Henry Sicignano: I think you are right. We are bringing on in just a few short months a new head of regulatory science. One of his first action items is going to be to engage in those kinds of efforts. We would like to get more and more pieces out in the press, expressing exactly that view.

John Keller: Great, thank you Henry.

Operator: Thank you. The next question will come from John Shaw with Wilshire Partners. Please go ahead.

John Shaw: Good afternoon Henry and everyone. Three hopefully quick questions. First, one concern is – and I missed the acronym for the designation for how you would introduce the VLNs without being able to make the specific product claims on the benefits of Very Low Nicotine. My question is about the big picture, like Botox was enormously successful as an off-label drug long before – years before it got approved. Would not doctors who have patients who smoke with cancer but will not quit say even though it is not FDA labeled, I want you to try these VLN cigarettes and inform consumers? I have always been one who just wanted that choice. Why does the Company not pursue that kind of market?

Henry Sicignano: That is an excellent question. The problem is we would not even be allowed to tell the doctors those benefits. That is precisely the problem. An off-label indication would be great, but we need to communicate that. We would be prohibited from communicating any benefits or any

lower than attributes of our cigarette relative to others without FDA authorization. We are really trying our best to work in partnership with the FDA. We do not want to get crosswise with the Agency by doing something that they would not approve of. That is the best answer that I can give.

John Shaw: Understood. I want to be brief so thank you for that. Number 2 is when we talk about the FDA passing a sweeping mandate that all cigarettes be VLN and we are not biotech experts, but that seems so enormously sweeping that if that was even a possibility, the stock should already be trading in the high five digits. It would be extremely valuable. So, what is the more likely outcome? Is it that they would phase in a nicotine standard over a number of years or mandate compliance sooner?

I know I am asking you for a guess on whether they will mandate that companies like Big Tobacco sell not less than 10% of their cigarettes as VLN or that all the Big Tobacco companies at a certain level will be required to at least offer a VLN product. What is the realistic, not best case but middle case, scenario for what an FDA mandate really looks like?

Henry Sicignano: What you say sounds very practical and I appreciate the thought you are putting in. To be perfectly clear here, the FDA has announced that it plans to mandate that EVERY single cigarette sold in the U.S. is minimally or non-addictive. The question that you just asked about phasing in the mandate, that is a question that the FDA asked. Frankly the question was asked and answered with the study – the 1,250 patient study that was published in JAMA, the Journal of the American Medical Association, in September.

That study basically shows the difference between a gradual reduction in nicotine level versus an immediate drop in nicotine. It became very clear that, if you take a look at the data, a gradual reduction in nicotine does not help. It does not serve the public health benefit. You need an immediate drop to Very Low Nicotine and you need it to be across the board. One of the most

important things that the FDA is trying to do is to prevent underage smokers from becoming addicted to combustible cigarettes. Helping people to quit, that is of course important, but even more important the FDA has said is preventing a new generation of smokers from becoming addicted to combustible cigarettes.

The FDA reasons that if they make every single combustible cigarette sold in the U.S. only minimally or non-addictive, then they can save – I think the numbers are something like 2,500 underage smokers every single day from become addicted to cigarettes. That is some 900,000 young people every year becoming addicted to combustible cigarettes. The FDA wants to nip that in the bud. I think the real answer to your question is not if, but when.

Now why is our stock where it is? Obviously people are gaming. There is thinking that this is not going to happen for two years or it is not going to happen for four years. I guess those are estimations that everyone needs to make of their own accord. We believe strongly that it is going to happen. The question is when. The American Medical Association, the American Heart Association, the American Lung Association and others are all pushing for this to happen with a final rule, a final rule to be issued this spring… and for that rule to become effective 12 months later.

John Shaw: Thank you, third question if I may, on a very different subject. I was in Thailand last month. I hadn't been in 20 years and I really noticed how much less smoking I saw around the country. I was in four cities and vaping, which did not exist when I was there 20 years ago, I am not talking cannabis, but just tobacco or nicotine flavored vaping was so outlawed that you could not buy a vape battery, a cartridge or anything in the country. There was no black market because they enforced their laws in a very serious way.

Again I apologize if this has been addressed in recent calls, but why is the Company not marketing in countries that clearly have a very strong pro-healthcare, anti-tobacco bias or can

they all be waiting for the FDA? It seems the science would be compelling for a country with that kind of a bias.

Henry Sicignano: That is another very thoughtful question and I think the short answer is that many countries do not have an “FDA” of their own. Many of them do look to the United States FDA for leadership. We have heard that many times, but at the same time even though our cigarette is Very Low Nicotine, it is still a combustible cigarette. There are very different laws in every country all around the world governing combustible cigarettes. Suffice to say that we have been in discussions with many of these countries. We know that at least four of them are exploring Very Low Nicotine cigarette mandates or encouragements of their own, each in a different way.

There are tax policies that some are exploring, there are brand offerings that some are exploring, and then there are mandates that some are exploring. All of these things are being studied. My guess is that when the FDA moves, then everyone else will follow soon thereafter.

John Shaw: Thank you Henry.

Henry Sicignano: Thank you so much. We are going to take the next call, but I just want to mention there are seven minutes remaining. We have a hard stop at 5:00 p.m. I will be happy to answer questions until we have to stop. Go ahead operator.

Operator: Thank you. The next question will come from John Ellegate, a shareholder. Please go ahead.

John Ellegate: Hello Henry.

Henry Sicignano: Hello John.

John Ellegate: This is just a follow up to the last question actually. Everything that we talked about obviously has been pretty much domestic, a little bit north of the border. I appreciated the last question because I wanted to ask that relative to the Very Low Nicotine cigarettes. Is there anything that you can share with us in terms of the cannabis sativa or indica that also might be going on outside of the U.S.?

Tom James: Nothing we can talk about.

Henry Sicignano: Nothing we can talk about, but we are exploring partnerships in both cannabis and in tobacco internationally. That is all I can say. We are certainly aware of the opportunities. We are certainly working on the opportunities and not only on this continent.

John Ellegate: Okay thank you.

Henry Sicignano: Thanks John.

Operator: Thank you. Next question will come from Rex Wiggins, a private investor.

Rex Wiggins: Henry, good job. Just had one quick question. From all your prior experience in the tobacco industry, from the approval of an MRTP, what would be your personal guess on percentage of market share let us say for this product?

Henry Sicignano: That is a great question. I think today, demonstrated by American Spirit, which has a value of between $8 and $10 billion domestically as calculated by a very respected Wall Street analyst, has about 2.5% market share. What that suggests is that every percent market share is worth about $4 billion in market cap.

I believe that a Very Low Nicotine cigarette as a modified risk product without the mandate, I believe that 6% to 10% market share is absolutely feasible and absolutely possible. You can do the math and you can figure out what the market cap for the Company could be if we had 6% market share. I guess it would be slightly different than American Spirit. Presumably people would smoke fewer Very Low Nicotine cigarettes. Hopefully many people would stop smoking altogether.

If we discount $24 billion in potential market cap with 6% share, if you discount that by half, then you are down to a $12 billion market capital potential. I think there is plenty of upside… and that is why this is so tremendously exciting for us.

Rex Wiggins: That is why I am invested. Go for it. Thanks a lot.

Henry Sicignano: Thank you Mr. Wiggins. The next call will be our last call. It is four minutes to five.

Operator: Thank you. The final question will come from John Cloud with Prime Cap Management. Go ahead.

John Cloud: Hello guys, just a follow up. Henry, based on all the information you gave us today with respect to FDA timelines, MRTP timelines, final rules, all the information you shared with us seems to be widely known if you look for it. Big Tobacco companies certainly must be aware of all these same timelines and the same information that you have been talking about. Short of telling us anything non-public, what is their plan to deal with Very Low Nicotine tobacco? Do they have a product they can compete or at some point are they having to knock on your door for a license or something else?

Henry Sicignano: I think it only makes sense that Big Tobacco's primary strategy is to delay, to do whatever they can to delay the mandate. It will obviously cut their market caps probably by more than 50%. That is their first priority – to delay if they can and to the degree that they can.

But they all know that it is inevitable. It is coming. You can rest assured that they are all working on a Plan B for when in fact the mandate does become effective. All I can say is that of course I cannot divulge non-public information, but you have to realize they have to have a Plan B.

John Cloud: Is it your opinion do they have a Very Low Nicotine plan internally? Can they produce it themselves, I guess is a good question?

Henry Sicignano: Okay, that is an excellent question. I am happy to say that yes, Big Tobacco knows how to chemically strip nicotine out of tobacco, absolutely 100% for sure. They know how to chemically do it. Philip Morris has said so publicly. They launched a product in 1987 called Next. It was a chemically stripped cigarette. They spent, I believe, a couple hundred million dollars on a factory in Virginia that enabled them to chemically strip nicotine out of tobacco.

The problem with the product… which generated 1% market share in test market sales back in the late 1980s… the problem was that it did not smell very good and it tasted terrible. Still, they generated, at time when people really were not thinking about nicotine, they generated 1% market share in those test markets. More recently, a director I think of public policy at PMI explained that it would take Philip Morris International 20 years to genetically modify the tobacco as we have done or, if they chemically stripped the tobacco, it would cost $10 billion to $12 billion a year in the European Union alone to be able to comply with the rule if the FDA rule were to find its way over to Europe.

If you do a little bit of math and back of the envelope calculations that means that their cost of products would go up by something like 50%. So, technically yes, Big Tobacco knows how to

chemically strip tobacco to make a virtually nicotine free tobacco that costs 50% more, tastes bad and smells bad. I will give them that. They can do that, but if they want a Very Low Nicotine cigarette that tastes good, smells good… and whose only cost will be a very low royalty to 22nd Century shareholders… then our doors will be wide open.

John Cloud: That is what I am talking about. Thank you very much, good answer.

Henry Sicignano: Thank you sir. I appreciate it. Thank you to everyone for joining us on the call. We will look forward to speaking with you in a few months.

Operator: Thank you ladies and gentlemen. This concludes today's event. You may now disconnect your lines. Have a great evening.