

Using their Patent Pending CRS Hydrodynamic Process that can Dramatically Increase the Bioavailability of Live Plant Material from Sources such as Green Tea, Plandaí Biotechnology, Inc. Intends to Transform the World's Nutraceuticals

**Healthcare
Green Tea Extracts - Nutraceuticals
(PLPL-OTCBB)**

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**Roger Duffield
President and CEO**

Company Profile:

Plandaí Biotechnology, Inc., through its recent acquisition of Global Energy Solutions, Ltd. and its subsidiaries, focuses on the farming of whole fruits, vegetables and live plant material and the production of proprietary functional foods and botanical extracts for the health and wellness industry. Its principal holdings consist of land, farms and infrastructure in South Africa. Through the company's patent-pending CRS hydrodynamic process, live plant materials have their isomeric properties altered to a ratio more readily absorbable by human tissue. The benefits of delivering high concentrate bioavailable phytonutrients allow the body to more efficiently absorb the active and stable nutrients and antioxidants, which have a range of health and wellness benefits including improved immune system.

**Interview conducted by:
Lynn Fosse, Senior Editor
CEOCFO Magazine**

CEOCFO: Mr. Duffield, Plandaí intends to transform the world's

nutraceuticals, what is your grand plan?

Mr. Duffield: Our goal is to have our Plandaí-branded extracts incorporated into a multitude of third party consumer products. From supplements to vitamin drinks, we see our product meshing well in many markets worldwide. For the last number of years Plandaí has been developing a methodology to transform plant materials into a form that the body can easily absorb. With our patent pending CRS hydrodynamic process, we can dramatically increase the bioavailability of live plant material, such as green tea. Whereas the green tea extracts used in most supplements and consumer drinks are poorly absorbed, necessitating the consumption of vast amount to achieve a clinical dose, we can produce extracts that are eight times more bioavailable.

The difficulty in doing these exercises is the accessibility to suitable farmlands where sufficient raw materials can be made available. We have been very fortunate in South Africa to recently acquire a tea estate in order that we can efficiently farm the green tea leaf and we can recover a group of antioxidants from the leaf which are called *gallate catechins*. By controlling vast tracts of tea plantations, which is necessary because the leaves must be processed within hours of picking, and through our CRS hydrodynamic process, we can corner the market on highly-bioavailable antioxidants.

CEOCFO: What about the gallate

catechins; what does it do and is it available currently in Green Tea?

Mr. Duffield: The world market for green tea and green tea extract is well supplied primarily from China, India and Kenya. Green tea is essentially black tea that has not been fermented. In the world of recovering specific phytonutrients, the most notable extract out of green tea is a gallate catechin called EGCG, Epigallocatechin Gallate, which is 80% of the total catechins in green leaf tea. As an antioxidant, EGCG is a powerful tool for boosting the human immune system, reversing aging, and treating obesity. Unfortunately, the problem with most green tea extracts is the level of bioavailability. That is, the level of absorption into the blood that the individual can utilize as part of the body's defense mechanism. This is where we believe we are able to position ourselves into a unique position, because we are able to deliver plant extracts into a more bioavailable form.

CEOCFO: How does Plandaí do that?

Mr. Duffield: With conventional pharmaceutical products, the active ingredient is developed in such a way to maximize the absorbance in the body. In plant materials, however, the antioxidants in the form that the plant produces them are not in the form the human body requires them. The result is poor bioavailability—or poor absorption—even in processed extracts. We have a world population that is consuming vast quantities of green tea under the mistaken believe that they are receiving some sort of antioxidant benefit. What we are able to

do, which we have validation from the USDA with our extensive studies with carotenoids and specific antioxidants with specific molecular structures, is alter the fundamental isometric structure of the extract, without chemicals or additives, into a form that the body can easily absorb.

CEOCFO: What is it that you are doing that is different?

Mr. Duffield: The key to our success is our patent pending CRS hydrodynamic process. At the risk of being too technical, in plant materials, molecules are made up of isomers, either in the "all-trans" or "cis" form. In carotenoids lycopene, that ratio it is 95% trans isomeric with a human absorption average of around 10%. Green tea extract catechins have an isomeric ratio of 95% cis isomers. Again, there is poor bioavailability between 1% and 10%. Most human tissues have a cis/trans isomeric ratio closer to 50/50. So, if you consider that the plant extracts that are formulated into finished nutraceuticals and other products have an isomeric structure that is not compatible to humans, then the absorption of those isomers is extremely difficult and the body identifies a small percentage and passes most of it out as waste. What we do is convert the 95% trans isomers to as low as 57%. This was corroborated by the USDA published study with carotenoids, where eight different whole tomato samples were analyzed for isomeric configuration. In other words, we were getting around 85% of what you require for efficient absorption. Conversely, we are able to change cis isomer heavy extracts to a roughly 50/50 ratio, again bringing them in line with that found in human tissues. Obviously, the more absorbable nutrients are, the better your body is able to utilize them.

CEOCFO: What is the plan to move forward?

Mr. Duffield: Moving forward, our immediate plan is to commence production of green tea extract that has been subjected to our CRS hydrodynamic process. For the next several months, we will be producing limited quantities specifically for research,

study and marketing. During this time, we will be building the necessary infrastructure to product our extracts on a global scale. This includes building the extraction and processing facilities onsite in South Africa since our process must be done on live plant material. Finally, we are aggressively pursuing opportunities to introduce the Plandai brand into third party products with a goal of having consumer products on the shelf within twelve months. We know that there is a huge market in the United States that eagerly would take this product to address anti-aging, weight loss, high blood pressure, lowering diabetes types I and II, and for lowering cholesterol. These are established markets where there are a number of major players in nutraceuticals, both in formulations and marketing that are eagerly awaiting improved extracts. From where we sit in South Africa, there has been significant research to address the issues with malaria and recent studies undertaken in the University of Beijing corroborate previous

Plandai intends to transform the world's nutraceuticals - Roger Duffield

findings that gallate catechins appear to inhibit the transporting of the malaria parasite into the blood. There are so many opportunities for a highly bioavailable source of antioxidants that, frankly, medical research is just beginning in this exciting field.

CEOCFO: It must be exciting to come upon something that can really make a difference in so many areas!

Mr. Duffield: I have to tell you that when we started this company eleven years ago, we set out to make food emulsions and eliminate waste. Through a lot of research supported by an amazing group of Americans who invested in this dream from the beginning, we discovered a new field and opportunity to affect the lives of millions. We have been able to engineer our technology in such a way that we can address any live plant materials, which again opens up vast new opportunities we haven't even begun to explore. In addition, through our very strong presence in South Africa, we are lifting up struggling

communities. You must remember that the farms we are running belong to local communities through land claims. We secured the rights to use these farms through long-term notarial leases, which provide those communities with an equity participation in our local operations while also providing gainful employment in an area of abject poverty. We expect that each farm will employ between 500 and 1000 people.

CEOCFO: You have added to your team, what is the plan for the next year or so for Plandai, and how are you going to grow and develop?

Mr. Duffield: We have a game plan to first of all confirm the bioavailability of the extract independently with our green tea extract. That will be undertaken some time in May with results some time in July. These are in vitro studies and initially they are to confirm the isomeric configuration. These studies will be followed by a complete bioavailability study to confirm the levels of absorption and excretion. Then following that, we will look to do studies for malaria. In the next twelve months, we expect to do Phases I and II with the malaria studies coming next year. We are about to engineer processing and extraction systems and they will come on line this time next year. Then we believe we have an opportunity to bring our pilot plant into production in November this year (2012), where we can make extract available in small amounts to the market. We are trying to be as professional as we can. We are not looking to make erroneous statements that we cannot justify or support. At the end of the day, all of our science is pointing to clear understandings of a new opportunity for the general public to look at a product that will give them higher doses at less cost. Once we have put our farm back into order, once we are manufacturing the extract and delivering it to market, we then have the opportunity with the South African government to look at the other existing farms in this country, which will allow us to produce substantial amounts of this extract.

CEOCFO: What is the financial pic-

ture like today for Plandai Biotechnology?

Mr. Duffield: We have negotiated long-term debt financing through the Land and Agricultural Bank of South Africa. These documents were released by the Land Bank in December of 2011 and my understanding is that the final banking instruments are with the bank's legal department and we are imminently waiting to complete these documents and start the project.

CEO CFO: Have you been doing much investor outreach?

Mr. Duffield: We have a webpage, www.plandai biotech.com, which was made available earlier this month and which continues to be updated and improved to provide our shareholders with the latest information. We have an experienced team in the United States that is actively providing the investment community with updates and complete information on who we are and what we are and our long-term objectives.

CEO CFO: Would you tell us about your scientific board?

Mr. Duffield: We have attracted some of the world's eminent scientists to our scientific board. It is chaired by Dr. Tom Matula, a physicist at the University of Washington, who is the co-inventor of the technology, along with myself. Professor Volker Boehm is a world-renowned carotenoid and polyphenol scientist at the University of Jena in Berlin, and Dr. Ming Hu is a world-renowned scientist in the field of bioavailability issues of plant extracts such as polyphenols at the University of Houston. This team of scientists is a critical component to the growth of Plandai Biotechnology that will enable us to ensure that the in-

vesting community is confident in what we are doing as well as the claims we are making and that we are able to validate the science.

CEO CFO: Is the public aware when they are drinking green tea that they are getting very little out of it?

Mr. Duffield: The short answer is no. If you go to any wellness or grocery store in the United States and even in South Africa, there is an array of products that contain a whole host of extracts. But none of these products allude to bioavailability. They all mention purity of a specific ingredient that come from their extract. It is only now that we are starting to ask questions because the bioavailability issues have never really been addressed. Even in the 500 studies involving green tea extract published over the last 20 years, it is only in a few of these scientific papers that the issues of bioavailability have been actually highlighted and questions raised. The plant extracts being used have no compatibility with humans and that is the problem. Therefore, our challenge is to make that extract compatible. Yes, it is education; yes, a lot of people will not like to hearing that their favorite supplement is useless. We are not here to take on the industry. We are here to bring our product to market to satisfy a specific area that has needs for these extracts. At the end of the day, most people never question what they put in their mouth. They just take it without reading the label or questioning the science. I think now the time has arrived when people are asking the right questions considering the consequences of what they consume.

I believe there is an education required so that the American public can really understand what they are

putting in their mouths. Go back and look at the East. In the East, they drink large quantities of green tea every day and if you look at the level of their cardiovascular diseases, it is far lower than ours is. If you consider why, it is because they are building up their immune system protection by taking the green tea and absorbing the antioxidants on a daily basis. That is the real key to what our journey is all about.

CEO CFO: Final thoughts, why should investors pay attention to Plandai Biotechnology today?

Mr. Duffield: If you look at some of the big Fortune 500 companies that started from nothing, there had to be a core of people that believed in the dream of the person or individuals that started it. Then having looked at the science behind it, they were prepared to walk with that group to build a company. If people are going to invest in Plandai expecting to make a quick buck, well that is not what this is all about. We have invested a considerable amount of our own money in this company and labored without compensation for almost 11 years to bring our vision to market. We believe in the long-term development of this responsibility. The money will take care of itself as long as we build this company correctly. Investors should look at this as a long-term investment in building a healthier society. I believe that once we have gone through the next year of development, we will make astounding statements into the world of health that we can hang our hats on and of which the investment community will embrace.



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