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COX-2 Inhibitor Drug offering hope in Treating Colorectal and Non-Small Cell Lung Cancer in avoiding GI Side Effects

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CEOCFO: ***Dr. Sandage, what is the concept behind Euclises Pharmaceuticals?***
Dr. Sandage: Euclises was founded by our Chief Scientific Officer, Dr John Talley, Ph.D., who is the medicinal chemist inventor of Celebrex® and a number of other COX-2 inhibitors. His idea was to make a better Celebrex®. The COX-2 pathway is well known to be important in certain solid tumor cancers, such as colorectal cancer and non-small cell lung cancer. Celebrex® has shown some encouraging data to support its treatment in cancer. However, you have to give very high doses and at those doses you increase the risk of gastrointestinal side effects with Celebrex®. Also, another company had a drug called apricoxib. They ran into the same problem. John, having thirty five years experience in inventing drugs that affect the COX-2 pathway; he believed that he could invent a new COX-2 inhibitor that produces the anti-cancer effect without the GI side effects.

CEOCFO: ***What is different about this version?***
Dr. Sandage: His newest invention is a very selective inhibitor of only COX-2. It is also very potent. We believe that these features allow one to give a dose that is anti-cancer without producing the GI side effects.

CEOCFO: ***Would you please explain what you mean by selectivity?***
Dr. Sandage: What we know and what is hypothesized about the COX-2 pathway is its importance in elevating prostaglandin E2 levels (PGE-2). PGE-2 is important in the growth of many solid tumor cancers. COX-1 is not as important in the pro-cancer pathway, but it is very important in the epithelial protection pathway in the gastrointestinal tract. Therefore, if you have a drug that is not very selective, especially at high doses you get inhibition of both the COX-1 and COX-2 enzymes. Our lead molecule only selectively inhibits the COX-2 enzyme and not the COX-1 enzyme, which should result in important anti-cancer effects without the GI side effects.

CEOCFO: ***Is the medical community aware of what you found? Are they encouraging?***
Dr. Sandage: There are certain experts that understand the role of COX-2 inhibition for treating certain cancers. For example, Dr. Ray DuBois in Arizona has published extensively on this subject along Dr. Karen Reckamp at the City of Hope in LA. Dr. DuBois focuses on colorectal cancer and Dr. Reckamp focuses on non-small cell lung cancer. The problem is that many oncologists are hesitant to give the high doses of the older COX-2 inhibitors in fear of causing intolerable GI side effects. Dr. Reckamp even describes a patient in one of her studies who experienced a GI bleed requiring treatment. I think that if the right drug were to come along with the right features then more patients could benefit from this treatment. We believe that we may have the right drug with the right features.

CEOCFO: ***Where are you in the process?***
Dr. Sandage: We just finished our key preclinical animal tumor model studies. We have shown that our lead compound known as ECP-1014 can produce up to a sixty percent slowing in tumor growth. Our recently completed combination studies have shown almost a 90% slowing of tumor growth in animal models of colorectal cancer. The remaining IND-enabling studies are under way. We have had our pre-IND meeting with the FDA and know exactly what we need to do to get into the clinic. We are about a year away from beginning our initial clinical trials in cancer patients.

CEOCFO: ***You have been with the company just under a year, but have a long history in the industry. Why Euclises now for you? What do you see in it that perhaps others do not?***
Dr. Sandage: The main reason I "came out of retirement" was because I was presented with the opportunity to work with Dr. John Talley and this new class of COX-2 inhibitors that he invented. In addition, I was intrigued that these molecules offered a very different way of treating cancer. Euclises has a very unique approach to treating cancer with a class of drugs that should be well tolerated by most patients. John has made a molecule that is very easy to work with. It is easy to

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make. It has very favorable pharmacokinetics and is very potent. It is orally bioavailable making it easier for patients to take.

CEOCFO: ***Would you tell us about the European patent allowance that was just announced?***
Dr. Sandage: We have filed patents worldwide and have two already issued in China. In October we received a notice of allowance from the European Patent Office that cover our lead molecules. These patents that include composition of matter, uses and manufacturing processes should provide patent coverage through at least 2032.

CEOCFO: ***Are there many competitive approaches that you are working against or are you in green territory?***
Dr. Sandage: For sure, we are in in a lead position in this particular area because of Dr. John Talley. In a recent UK publication, Medicine Maker, Dr. Talley was named and ranked as the eleventh most important person in the pharmaceutical space. We know of only one other company that is beginning to try and discover new COX-2 inhibitors for cancer. They are early in the process and do not have the expertise of a Dr. Talley in their camp.

"Euclises is the leader in discovery and has the most advanced development program of COX-2 inhibitors for the treatment of COX-2 dependent solid tumors. Led by the leading authority of COX-2 medicinal chemistry, Euclises now has a molecule in development for the treatment of colorectal cancer."- Dr. Bobby W. Sandage, Jr., Ph.D.

CEOCFO: ***Does the fact that Celebrex® had such bad press matter to the medical community?***
Dr. Sandage: The COX-2 story is very good. Celebrex® is still on the market. It is still a great drug. It has generated billions of dollars of revenue for Pfizer. However, there is some history with this class of drugs for pain and arthritis. Euclises is focused on the use of COX-2 inhibitors for the treatment of cancer. As with most cancer treatments, clinicians and patients are willing tolerate more side effects for the chance to live longer and potentially become cancer free.

CEOCFO: ***How do you intend to find the right patient?***
Dr. Sandage: Understanding the cancer genome may help a doctor select the best treatment for each patient but it does require a least a blood test and sometimes even more invasive testing. At Euclises we have a non-invasive method for identifying patients who are most likely to respond to COX-2 inhibition therapy. It is a urine test of the metabolite of PGE-2, known as PGE-M. For example, if you have colorectal cancer and have high urinary levels of PGEM, then you should be a candidate for treatment with our COX-2 inhibitor. Studies have shown a relationship of the levels of PGE-M with both prognosis and treatment effectiveness. Scientist at Vanderbilt showed a doubling of median survival in patients with non-small lung cancer treated with a COX-2 inhibitor when urinary PGE-M was decreased by at least 72%. We intend to use urinary PGE-M levels to select patients for treatment and only continue to treat those patients if our drug, ECP-1014, can continue to suppress PGE-M levels in the urine.

CEOCFO: ***How do you deal with the length of time and the frustration, when you are working with something that clearly can make a big difference, but there are so many steps, so much money and so much time to advance?***
Dr. Sandage: I've been working in the pharmaceutical/biotech industry for over 30 years. The drug development process is long and arduous but it is a good system to assure that that you develop and safe and effective medications. In my experience regulators such as FDA and the EMA are very helpful working with you to do the most efficient development program possible. The regulators do provide guidance for the development of cancer drugs that are less arduous than for many other therapeutic categories. I don't want to say "shortcuts" are allowed for the development of cancer therapies, but the regulators understand the importance of getting new cancer therapies to the patients as soon as possible. However, it is important to go through the process, because you do not want a drug on the market that the risk/benefit ratio is just not in favor of the patient.

CEOCFO: ***Why is Euclises Pharmaceuticals noteworthy?***
Dr. Sandage: Euclises is the leader in discovery and has the most advanced development program of COX-2 inhibitors for the treatment of COX-2 dependent solid tumors. Led by the leading authority of COX-2 medicinal chemistry, Euclises now has a molecule in development for the treatment of colorectal cancer. We believe have a relatively higher chance of being successful because COX-2 inhibitors have already shown significant anti-cancer efficacy and we potentially are safer than the older drugs and we have a simple method for identifying those patients most likely to benefit from the treatment with our lead molecule.

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