

Q&A with Alan D. Hahn, CEO of MycoTechnology Inc. and their Sustainable, Great Tasting Alternative Protein Product that replaces Yeast with Shiitake Mushroom Fermentation**Alan D. Hahn**
CEO**MycoTechnology Inc.**
www.mycotechcorp.com**Contact:**
Josh Hahn
303.578.9648
press@mycotechcorp.com**Interview conducted by:**
Lynn Fosse, Senior Editor
CEOCFO Magazine**CEOCFO: Mr. Hahn, what is the idea and focus behind MycoTechnology Inc?**

Mr. Hahn: MycoTechnology is a company that is focused on developing novel new foods that take on some of the biggest challenges that the food industry has. We do it with an organic technology that we have developed. It is a food processing platform that uses fermentation to create novel new ingredients. However, what is really different is, instead of using a simple organism like yeast to do fermentation we use a very complex organism such as filamentous fungi or the root system of mushrooms as the organism for our fermentation.

CEOCFO: Where did the concept for what you are doing emanate? How did it start?

Mr. Hahn: Originally, Dr Brooks Kelly got his PhD at Penn State. Penn State, you may not know, has the largest collection of fungi in the world. He started working with fungi while he was in college and has been working on it for thirty years post college, developing ways to make food and extracts from mushrooms. I got involved with Dr Kelly about four and a half years ago, and there were four founders that formed MycoTechnology; two scientists, Dr Kelly and Jim Langdon. Dr Kelly is a microbiologist and Jim is a chemist. Then Pete Lubar and I were business partners from a couple of different startups that we were part of over the years. I have known Pete for about fifteen years. We formed the company around April of 2013 and it was all around how to improve food. My personal driver is that about seven years ago I was diagnosed as a Type II diabetic and my doctor said, "Here is how you run your life; if it tastes bad eat it, if it tastes good, do not eat it." That set the challenge for me to go figure out a way to make food that tasted good and was good for you.

CEOCFO: Where are you today? What are you working on at this point?

Mr. Hahn: Right now, we have just completed our second round of funding. We have raised ten million dollars in our Series A round of funding, where we have commercialized our first product called ClearTaste®. It is the first organically certified bitter blocker. It blocks your ability to taste bitterness, sourness and astringency and it lasts, typically, for about fifteen seconds for most people and your saliva breaks that bond. It allows you to greatly reduce sugar in food. Sugar is used as a masking agent and by lowering bitterness in food you can typically cut sugar down in half and sometimes even greater amounts. We have received regulatory approval in seventy six countries and have a plant that we finished building in May of 2016. During the commercialization of ClearTaste, we had an additional breakthrough in the protein space. I do not know if you are aware, but our current population is about seven billion people. The projections are that we will be at nine billion people by 2040 and that we would need an increase in food production by seventy percent. That is just not going to happen with the current way that we create food, particularly protein. We set off to discover a way to feed an

exponentially growing population with a sustainable but great tasting protein source and our solution is PureTaste®. It is a product of Shiitake mushroom fermentation and solves the biggest challenges faced by the alternative protein space which is taste and sustainability. Taste is the number one attribute that companies are looking for. PureTaste has a slight cereal taste and neutral aroma making it an ideal protein for product formulators. It is a very similar process to brewing beer. We use large stainless steel fermentation tanks and grow the protein for thirty-five hours. Being that it is a simple process and quick to produce we can help to supply a sustainable protein source to help feed the planet.

CEOCFO: *I want to go back to the bitterness blocker. Would you please explain who should be using it, what they might incorporate it in and how you reach people and convince them that they should do it?*

Mr. Hahn: Yes, and it is not easy because food companies are very conservative. We are a B2B company, so we work directly with other businesses, typically working with CPG's, ingredient and flavor companies. We go out and talk to companies to see if they are interested in reducing sugar in their products and I will tell you that most companies are actively looking for solutions. That is because consumers have made food companies highly aware that they no longer want high sugar products and are looking for reduced or no added sugar options. This has led companies to seek out alternatives to high sugar foods and ClearTaste checks off all the boxes from a consumer demand point of view and from a practical business case. We will typically work with a company to help determine how much ClearTaste is needed for their application, whether it is a beverage, baked good, snack or whatever else – the first step is to determine how much is needed. And in most applications ClearTaste is effective in the low part per million so a little bit goes a long way. When you take away the flavors and sweeteners from a product, the base ingredients tend to be extremely bitter and by using ClearTaste you can clean up the flavor profiles of those ingredients. In the past companies have had to use sugar to cover up those bitter flavors by over-satiating your taste receptors with sweetness. Now companies have an organic ingredient that they can add to their product that address the real problem which is bitterness.

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CEOCFO: *Are there particular types of foods that are more suitable or that might be better candidates or can it really go into a wide range of products?*

Mr. Hahn: It works very well with things like chocolate; chocolate is bitter. It works very well with things like a yogurt that is sour. It can lower the sour profile of that. Different alternative proteins like a pea protein, rice protein or a whey protein; it really improves the taste of that. It works well across the entire spectrum of high intensity sweeteners, such as natural ones like stevia, which has a metallic after taste. Other non-natural ones such as Aspartame or sucralose; it really lessens the intensity on your taste buds and cleans up those unwanted flavors. What is interesting is that when you add ClearTaste to certain products that are particularly bitter you can experience whole new flavors. When you drink a cup of black coffee it is bitter; all you taste is bitterness. However, if you add ClearTaste you lower that bitter profile and you will start to pick up on other flavors that have been hidden by the overwhelming bitterness and those flavors really pop which is really amazing. You can take beverages right off the shelf in a grocery store, let say an orange soda that is sweetened with aspartame, put a little ClearTaste in it and all of a sudden the taste of that flavor just explodes! It tastes amazing; very orangey, because you are not getting that bitterness from the high intensity sweetener.

CEOCFO: *Where does cost come into play?*

Mr. Hahn: Cost is always a concern. Our ingredient is a premium priced ingredient, but you use so little in parts per million in ingredients, you could say per-beverage; it is going to add about one and a half cents per case to the cost to cut your sugar in half. Therefore, it is not unreasonable at all.

CEOCFO: *Are there certifications needed for natural products?*

Mr. Hahn: We are USDA organic certified. We are vegan, we are kosher, and we are non-GMO project verified, so we have every certification you can have on ClearTaste. The manufacturing facility that we have built is certified as BRC and BRC is the highest level of food safety certification you can have.

CEOCFO: *Would you tell us what you are doing with the protein or what you can do eventually?*

Mr. Hahn: We are looking for PureTaste to be the gold standard of alternative proteins. When you look at the market place you have whey which is the gold standard for animal based protein but with sustainability challenges and environmental factors we have to start to look at the alternative protein space. Currently soy represents 50% of the

market, however, there is growing concern around soy regarding hormones, GMO's, and allergens. Then it starts to get really interesting, you are starting to see things like cricket protein pop-up and personally I do think people will embrace based on ick factor but has gotten some traction. Algae protein has recently hit the scene but its color impact, strong aroma and flavor profile makes it difficult for formulators to use. You will also find potato, rice & pea protein on the market but all of these struggle with flavor challenges. After seeing all the option available, we knew that we had to figure out a way to make our product highly sustainable but not compromise on taste. If we could solve both of these issues, we could get more people to embrace alternative proteins and be able to supply it to our growing population.

CEO CFO: *What do you do with it now that you have created it?*

Mr. Hahn: Since we have developed PureTaste we have been working with several companies to identify which applications it works best in. We are starting to see some traction in the RTM powders, RTD's, savory applications and extruded bars; however, there seems to be new applications being successfully tested every day. We also feel we will make a huge impact on the market by adding our protein to various flours so you can decrease the glycemic load. We had a company just test it in a corn tortilla and a flour tortilla. It did a beautiful job of holding the water so you could roll it and it would not crack. It really does a great job of holding water or oil in applications and absorbs extremely well.

CEO CFO: *How do you channel your activities when there are endless possibilities? How do you stay focused in any way, shape or form?*

Mr. Hahn: It is really about figuring out what is most important and what has the most impact. The round of funding that we just did with some really amazing investors are strategic in nature; they are going to be customers as well as investors. We leverage as much as we can from the support we receive from our investors, but we are also expanding the team. We are going to grow from twenty eight people to one hundred people in the next twelve months.

CEO CFO: *That is daunting as well!*

Mr. Hahn: It is quite a daunting task but at least I will have more resources to deal with all the things that we need to address.

CEO CFO: *How do you go from concept and trial to companies licensing, partnering whatever they are going to do with you to actually create the product? Where do you see a breakthrough?*

Mr. Hahn: The best way to describe it is what happens with the proteins. I had the concept and challenged my R&D team to produce the product and come up with a way to leverage our platform to produce it. They came with a bunch of iterations to the point where we were happy with the success of what we had done. The next thing was, "Okay, I am glad we like it; do others like it!" My target was going after those big CPG companies out there, get the product out there and tell me if the baby is beautiful or ugly. There were immediate responses of one of the best proteins they had ever seen! They said, "Wow!" So we started looking around for those that would be the big buyers and who would invest in the company. What is really challenging is that venture capitalists tend not to invest in brick and mortar physical structures. They want to do virtual things; things that you can leverage over and over again. Therefore, I went out and found two very big companies that were interested in distribution. We went through a period of time of negotiating and I signed with Naturex.

CEO CFO: *Then you are ready?*

Mr. Hahn: We are ready!

