

Dyadic International (DYAI)



MARK A. EMALFARB is the Founder of Dyadic International. He has been a member of Dyadic's board of directors since October 2004, and he has served as its Chairman, President and Chief Executive Officer from October 2004 until April 2007, and from June 2008 until the present. Since founding Dyadic in 1979, Mr. Emalfarb has successfully led and managed the evolution of Dyadic from its origins as a pioneer and leader in providing ingredients used in the stone washing of blue jeans to the discovery, development, manufacturing and commercialization of specialty enzymes used in various industrial applications and the development of an integrated technology platform based on Dyadic's patented and proprietary C1 fungal microorganism. Mr. Emalfarb is an inventor of more than 25 U.S. and foreign

biotechnology patents and patent applications resulting from discoveries related to the company's patented and proprietary C1 fungus. He has been the architect behind its formation of several strategic research and development, manufacturing and marketing relationships with U.S. and international partners. Mr. Emalfarb earned his B.A. degree from the University of Iowa in 1977.

SECTOR – PHARMACEUTICALS

TWST: Please begin with a short introduction to Dyadic International.

Mr. Emalfarb: Dyadic International is a biotechnology company that operates around the globe, that has developed a technology platform that turns DNA or genes into proteins and enzymes in large scale affordably. We are using that technology to produce enzymes for converting biomass into cellulosic sugars to produce second-generation fuels and chemicals, like ethanol, butanol, succinic acid, lactic acid, etc. We are also using that same technology to develop enzymes for animal feed and food, pulp and paper, textiles, etc., in the industrial enzyme business. We do that in several ways. We do it by producing our own products, selling them all over the globe in 35 countries, but we also do that by licensing technology to some of the world's biggest, best companies in their respective fields, where we actually bring the development and manufacturing capabilities of turning their discoveries into proteins and enzymes in large volumes affordably.

TWST: Would you give us more background on what the science is behind the C1 fungus technology platform?

Mr. Emalfarb: C1 technology platform is a fungus we found in Russia in the early 1990s. What we found and what we have today is like night and day. We spent over 20 years developing

this technology to make this more robust, more versatile and more productive, so that it can turn more genes into more products more quickly, more affordably. And what we've created there is a way to take the world's gene pool, whether it be from bacteria, yeast, fungi, humans, mollusks — I mean, any kind of living cell has its own genome, we can strip the genes from those genomes out, determine what the proteins and enzymes are, what markets and applications those may be for, and then insert those genes into our patented and proprietary C1 technology platform, the C1 fungus, and produce the protein and enzyme products of those genes in large volumes affordably for the different market applications. We do that for ourselves and as importantly, if not more importantly, we are doing that in collaboration with some of the world's biggest multinational corporations.

A couple examples of that are, if we take for the bioenergy space of making cellulosic sugars for biofuels and bio-based chemicals, Abengoa Bioenergy is a nonexclusive licensee of Dyadic's, and they are using our C1 technology to turn biomass into sugar to make ethanol and other types of bio-based chemical and fuels. Abengoa is actually building one of the first cellulosic ethanol plants in the United States, and that's in Hugoton, Kansas. And it's opening up or estimated to open up in Q4 this year, 2013, and estimated to be fully operational by 2014. And what we

hope is that if they are successful in achieving their goals and objectives, that that will lead to them producing and building more facilities in the U.S. and across the globe, and then licensing their technology out all over the world to stamp out cellulosic sugar plants for the production of fuels and chemicals.

And so we are leveraging our technology with some of the biggest and the brightest people that have the experience, expertise, distribution, engineering, and manufacturing capabilities for their respective fields, whether that be biofuels, bio-based chemicals, animal feed, food, etc.

TWST: Where do you see your technology fitting in when you look at the standards and possibilities for gene discovery and product development techniques today?

Mr. Emalfarb: I think that we are the intersection between the people discovering genes — whether it's their own scientists or the millions of scientists all over the earth that are discovering genes and turning those genes into proteins and enzymes, characterizing those genes into proteins and enzymes and the products of those genes into what applications they may be useful for. And what happens is, most of these scientists end up putting their discoveries on the shelf, because once they find a gene that encodes a protein and enzyme, they are stuck making micrograms of it, and they study it and they characterize it, they realize what the performance benefits may be in the applications in the commercial world, they have no way of bringing those forward into development and manufacturing.

TWST: Do you get involved in genetically altered foods?

Mr. Emalfarb: We don't actually make genetically altered foods. Our enzymes are used to actually convert certain foods into higher-value products, adding nutritional value or healthier benefit to food. But it's possible that some of our genes from C1 could end up in some of those crops to provide some benefits if that's something that the food companies or the feed companies want to do.

TWST: What kind of market is available? What market share can Dyadic's technology address, and what pricing and revenue opportunities do you see for Dyadic within that overall market?

Mr. Emalfarb: If you just look at the bio-based fuel and bio-based chemical market, it's a trillion-dollar market. I mean, we are talking about displacing oil with cellulosic sugars. So these are non-food sugars. These could be sugars that are derived from either the byproducts of crops, for example, wheat straw, or corn stover, or sugarcane bagasse, or empty fruit-bunch of Malaysia. Any plant material can be converted into glucose and xylose and other types of sugars by enzymes. So that's a huge opportunity. That's an opportunity that not only are we addressing, but our licensees, Abengoa and Codexis, are addressing as well. And obviously, we are working on adding additional licensees as well. And what we offer there is, in a particular space, not only can we sell you an enzyme as a final product, just like Novozymes and DuPont do to their Genencor division, but we have a different model as well.

"[W]hether it's cosmetics, nutraceuticals, animal feed, food, pulp and paper, starch, textiles, biofuels, bio-based chemicals, biopharmaceuticals, virtually anybody that needs to turn a gene into a protein and enzyme in quantities sufficient to evaluate and test, as well as to manufacture the commercial product, we are there."

And that's what we do, is we bring their discoveries and our own discoveries forward through the development and manufacturing of those gene products, proteins and enzymes, for a wide array of industries. Again, Abengoa is one example in biofuels. Codexis is another nonexclusive licensee of ours in the biofuel space. We have licensees and partnerships with people in food and feed, animal feed and food, and human nutrition. And we are working with Sanofi Pasteur in the biopharmaceutical space to actually turn one of their genes into proteins for a vaccine, and we hope using our C1 technology to make quicker, better, cheaper vaccines, so we can treat more people for less and bring those vaccines into market at a much faster timeframe.

So the opportunities are endless, because the gene pool is billions and billions of genes coming from all these millions and millions of living organisms, and millions of scientists are doing all these discoveries. And we are going to help them develop their discoveries into commercial products, and we'll do that with our own scientists on a smaller scale, but leveraging and licensing the technology on a large scale with some of the multinational companies, as well as small entrepreneurial businesses. So whether it's cosmetics, nutraceuticals, animal feed, food, pulp and paper, starch, textiles, biofuels, bio-based chemicals, biopharmaceuticals, virtually anybody that needs to turn a gene into a protein and enzyme in quantities sufficient to evaluate and test, as well as to manufacture the commercial product, we are there. And we are helpful in enabling all those companies bringing those discoveries into the commercial world. We can license you the technology to produce those enzymes onsite. And the advantage of that is, one, when you produce an enzyme in industrial markets, you typically take five, six days in a fermenter. Then after the fermentation is done — and let's say that's 50% of the cost of the production — you add on another 50% when you do the downstream processing, which is separating the cells, purifying, concentrating and stabilizing the enzyme and putting them in drums or in tanker trucks, which adds another 50%. So by producing these enzymes onsite, by taking a license from Dyadic to do that on your own, you can save that extra 50% cost, and paying us a small margin of a royalty versus a 60% or 70% margin that Novozymes, for example, works on in their enzyme business. So there is a huge savings opportunity to produce your own enzymes onsite. It is a massive potential marketplace.

And then if you go the animal feed industry — which is another application of our technology, where we are already selling products in that space today with our first-generation products — we're developing our own second-generation products using our C1 platform technology. But we are also developing second-generation animal feed enzyme products for some of the leading enzyme providers and companies in the world, so that they can displace their first-generation products with a better product that can be produced for less, that is more efficient, that does the job better at a lower cost to their customers.

And then also in the food industry, we are also working with a food company today, as another licensee. We are trying to help them

to produce their existing enzymes that they have today at a lower cost, and in that case, we will be sharing in the cost-savings. So all we're saying, it's not just about the upfront fees that we get in the case of Abengoa, and which we received in the case of Codexis. In the case of the animal feed company, we do get million-dollar fees in some cases, and in other cases we get \$1 million upfront, just to get access for the animal feed license we are talking about. Codexis paid us \$10 million upfront for the nonexclusive right, all these licensees so far are nonexclusive, to use our C1 technology. And then Shell provided Codexis with the funding, I think somewhere in the neighborhood of \$200 million to \$300 million, to be employed on top of that \$10 million they gave us to make their C1 technology licensed from Dyadic better, faster, quicker and cheaper. They had 109 scientists working on this for three to four years.

In the case of Abengoa, last year they gave us another \$5.5 million just to expand their rights to what they already had bought earlier on. In fact, Abengoa is an approximately 7% owner of Dyadic shares. So we get these upfront fees, which run to the bottom line as licensing revenue. We get research and development projects through these licensees and projects, and that provides income and profits. And then we also, in addition to that, get milestones and royalties, in some cases facility fees on the back end, when these companies commercialize products. So the thing here is we are building future royalties in revenues, and royalties and milestones.

But in the short term, we are getting license fees, access fees and research and development fees for all these projects that are leading to licenses down the road — so unlike a typical CRO, which basically does work for hire. Work for hire is profitable, but it's really made to lead us towards these license agreements, which we anticipate will lead to upfront access fees, milestones and royalties down the road on these different types of products for all these different industries. And what we hope and expect is to continue to expand the breadth and scope of the industries we service using C1 and the numbers of companies that we've been licensing the C1 technology to. and duplicate this, would be nearly impossible. I'm certain it would take years and tens and tens of millions of dollars if you attempt to do it, and you'll probably fail.

In the case of C1, what we found was a very unique fungus in terms of, it was able to produce certain enzymes we wanted, but it did so in the original C1 isolate at such miniscule quantities it was commercially irrelevant. We took that fungus back to America, we improved the productivity of it through random mutagenesis, had a serendipitous mutation that led to a remarkable change in morphology that changed its very thick filamentous fungal growth of a fungi into a yeast-like single-cell colony; which allowed us to produce significantly larger quantities of protein under significant lower viscosity; which gives us not only high productivity, but it gives us advantages in terms of the morphology and the growth characteristics of C1 in large-scale fermenters. That's important, because we can go from a 1-liter fermenter to a 150,000-liter fermenter seamlessly, where other people have to go from 1 liter to 10 liters, to 100 liters, to 1,000 liters, to 10,000 liters. So we can do it in a shorter time frame.

The probabilities of getting to where you want to go are shorter with greater success rates. And you mitigate risk by having this unique morphology that gives you this low viscosity. It allows you to grow up C1 in very large industrial fermenters with less energy more uniformly. So you are consuming less energy in the first place. You are getting more uniform distribution of the nutrients the fungus needs, and you're able to do so under better aeration conditions, because of the unique morphology that we achieved through this serendipitous mutation.

And then after we achieved this serendipitous mutation, that was great for just making classical genetics and classical strains. We then took another decade to create the molecular tools, the promoters, the vectors, the secretion signals, all the different things that you need to transfect this fungus with the DNA of either, from its own genes, to overexpress those proteins and enzymes, homologous genes, or heterologous genes encoding for proteins and enzymes from other organisms that you may want to make for

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TWST: How strong is the intellectual property portfolio at Dyadic and how expensive or difficult is it to defend?

Mr. Emalfarb: I mean, we have a multitude of patents all over the world and in a variety of countries. All the countries, we think, are relatively important for the applications that we, in fact, are pursuing. And we were the ones that actually took this fungus from the ground in Russia in the early 1990s, because there was nobody else really working on this technology. And what we found in Russia and what we have today is like night and day. So besides the fact that we have all this I.P. and we believe it's very defendable, is we actually have cell lines of C1 that we have evolved, or improved, over the last 20 years into much more productive, much more robust, much better in terms of being able to produce proteins and enzymes at very large scale that even if we didn't have I.P., which we do, to replicate

vaccines, for human consumption or human treatment — like the vaccine project, which we're working on with Sanofi Pasteur — or animal feed or food products that come from other DNA, from other organisms and aren't from C1 itself.

The beautiful thing and interesting thing is, there has been a lot of really great science done. And there's also been a lot of scientific anomalies that we've created to form the basis of this great science. One was this mutation that led to this unique morphology that led to the low viscosity and high production. But another unique anomaly happened is, when we were selecting for these biofuels, cellulase strains, to make more cellulases, we actually created a strain that made no cellulases, so we can now make pure enzymes in a separate C1 cell line, which is good for different applications in food and feed, places we don't want one of the background enzymes being produced at the same time.

So it's nearly impossible to duplicate or replicate C1 to where we are today, but to try would be at best very expensive and very time consuming. And on top of that, we have all the different I.P.s for the different aspects, the promoters, the vectors, the systems, the special technology to mix these enzymes. So I think most people wouldn't tackle that as a project, if they will try to do something that's a lot of time and a lot of money and a lot of risk. That's why there are very few people in the world that actually have the capabilities that we do to make proteins and enzymes from a filamentous fungi in large volumes affordably.

TWST: What role can M&A play to grow your own portfolio or perhaps add to the portfolio of others?

Mr. Emalfarb: Well, obviously there could be potentially other scientific things we need to make the puzzle better and complete to do different things. And we have the puzzle complete just to make proteins and express proteins at large scale. But if, in fact, we wanted to then take genes and make them better or do evolution of those names like direct evolution or gene shuffling, that technology is out there. But we

power of C1 and what it could do for them, not only in that project, potentially other projects that they may, in fact, may want to you pursue down the road. Again, we are out looking for more licensees in feed, in food, in biofuels, in cosmetics, in nutraceuticals, pharmaceuticals. We are out there chasing down opportunities to help them take their discoveries and bring them to the marketplace, whether that's through a license agreement, a joint venture or some other form of collaboration.

One of the things about being a small, flexible, entrepreneurial company is, we offer more choices than the big guys do and more variety of opportunities. And we're more flexible and we listen to what the needs of the customers are, and we try to provide specific solutions for those needs. In addition to that, we have our own enzyme business, and we're trying to grow our own product lines in the countries that we are in with the customers we have and to find new customers to grow that business as well. So they grow revenues and profits on our sales of our own enzymes as well, for feed, for food, for fuels, for textiles, etc.

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don't necessarily have to buy that technology. We can just pay somebody to do the task we need done at the specific time. That sort of differentiates us from the lot of other people, as we don't have to own the cow, we can just milk the cow.

If I want to take a, let's give an example, a phytase enzyme for the animal feed industry, and I want to make it thermostable and I have a good phytase gene that has the properties, but it's not thermostable, I can go out and hire somebody to do that job and change that gene. And then put that new improved gene into C1 to make that new improved product. I don't necessarily have to acquire a company to develop that technology. I can just go and hire that particular service. But there are other companies out there, they potentially could be acquisition targets, different industries, different spaces. So we do evaluate that. We look at that. And there is potential there.

TWST: What are your priorities for the next six to 12 months, and what would make that time frame a success?

Mr. Emalfarb: Our priorities for the next six to 12 months, or even shorter, are to execute on one or more license agreements we're negotiating and in the middle of. In our last conference call, we had mentioned that there is a fairly substantial license agreement we're in the middle of negotiating right now, which we expect to get done in Q2. That should help us, number one, bring in more capital for us to utilize for our own research and development for our own products, to help us go out and find more people, to license the C1 technology to. And it will help that company enable them to bring their discoveries and their products to the marketplace to compete head-to-head with the Novozymes and the DuPonts of the world. I think this company has the resources to do that, and I think it will be an interesting next few months. It's one of the many things we're working on, and there's a variety of other things that I can't give the details.

Hopefully, we'll continue to work with Sanofi Pasteur and bring that vaccine to the marketplace and show them that, in fact, the

TWST: What is management's background, both on the science and business sides?

Mr. Emalfarb: I founded Dyadic in 1979. So I've got 33 years, I've been entrepreneur, at the helm, for all but maybe a year and a quarter of that time frame, developing new things, being able to make swift changes when you need to, adapt to different market conditions as the market changes. We've been able to adapt and go from jeans – blue jean business to genetics. So I'd say we have a proven track record of creating value for our shareholders. And scientifically, we have a subsidiary that's 100% owned, called Dyadic Netherlands. It's in Holland. It's www.dyadic.nl. And there we have approximately 20 employees that are working on, not only our projects, but the projects of third parties that are funding it, they are already existing licensees, to bring out better biofuel enzymes, feed or food enzymes. In addition, our scientists are further developing the C1 system by constantly making the C1 system more robust, more versatile, more powerful. So that, in fact, us and our licensees will benefit from those improvements, and we can get more licensees down the road.

TWST: Michael Faby, your CFO, and Richard Jundzil, your VP of Operations, what do you rely on them to do?

Mr. Emalfarb: I rely on them and others to do the jobs that they are specifically talented and tasked to do. I mean, Michael Faby as a CFO is responsible for and oversees the finances of the company, and to work with the accounting people and all the people in the company to make sure that our financial statements are accurate and complete and as detailed as possible. Rich Jundzil handles the enzyme operations and the quality control in the manufacturing. And both of those people provide great benefit to the company, as well as do others. Tom O'Shaughnessy in marketing and sales. Wim van der Wilden at operations in Holland, and our other colleagues that work in Netherlands, are doing all the incredible research that goes on there — all the way down to the people that do the shipping and billing,

and the clerks here in the office here in Jupiter, as well as the labs here in Jupiter, which are actually doing the quality control for the enzymes so that we make sure they are perfect quality before they go out and are shipped to our customers in the world.

TWST: You founded Dyadic in 1979. What caused you to found this company? What were the challenges and opportunities that you saw, and have you met the goals that you set for yourself?

Mr. Emalfarb: In 1979 and the early 1980s we, in fact, we were the people that helped pioneer the stonewash blue jean business by selling pumice stone to Levi's, Guess, Lee and Wrangler, etc., and teaching them how to wash blue jeans to make them more comfortable, softer and more fashionable by selling pumice to do that and tumbling them in large industrial washing machines in LA, El Paso, North Carolina and other parts of the world. Through that we basically morphed into a biotech company in the early 1990s, because in the mid-1980s we started distributing enzymes, because enzymes came to displace the pumice in their process.

So companies like Novozymes actually came out with an enzyme to stone-wash blue jeans. We became the distributor, or one of their distributors. And then they put on more distributors, and our margins shrunk and our volumes shrank, and we decided that we're going to make our own enzymes. And so this is where the creativity in entrepreneurship works, as at the time in 1990 the wall fell in Russia, we went and hired 35 Russian scientists to do peaceful science versus biological warfare. And we went out to seek a way to make enzymes that could make blue jean enzyme better and cheaper than what Novo and Genencor were offering. And again, we went out and scoured nature thinking that there were better funguses out there in the world to do the things we needed to do better than the Trichoderma fungus, which was discovered by accident by the U.S. Army Corp of Engineers on a tent in World War II, which is what Genencor or Novo were using at the time. creating their filamentous fungal expression systems. So we knew what we didn't know. Therefore, we went out and sought the very best scientific minds in the world to achieve what it is we needed to achieve. And then through those efforts, we eventually created our own laboratory in Holland, and our 100% research subsidiary, where we have these 20 molecular gene jockeys and scientists there that insert and delete genes in and out of C1, prospectively, depending on what people want to make or what people want to take out that's causing a deleterious effect.

So I think that our 30-plus-years entrepreneurial journey from jeans to genes has been great. Starting, for example, the stone-wash business, we grew from nothing to \$15 million a year in sales, \$4.7 million in profits back in 1987. So we've done tremendous. We've had license agreements with Codexis, \$10 million upfront, with milestones and payments down the road. We have Abengoa, who have invested \$10 million into Dyadic and just last year expanded their license agreement with us by paying another \$ 5.5 million. We built a successful enzyme business. So we've had a lot of great successes, although we've had a few issues and bumps along the way.

In fact, you should maybe judge people not only by their success, but how they've handled the, I'd say, difficulties that they have gone through. And we've gone through our own difficulties in certain times, and we've survived. And we're now finally healthy and we're growing. And in 2012, we were actually profitable. So we tried to run a business in a way that it generates income and profits, and no or minimal dilution to our shareholders, because me and my family own approximately one-third of the company. So we are the biggest shareholders, and we don't want to dilute ourselves. So we operate the business in a lot of different ways than most typical biotech companies do. We respect shareholders, we honor the shareholders, and we try at all expenses to make sure that the shareholders then get rewarded as well as all the other people, employees, etc.

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And we found C1, and C1 seemed to be better, seemed to be more applicable to the pH and temperature ranges that we wanted to operate at. Then we took C1 and we brought it back to America to a company called Biotechnical Resource, whom we paid to do classic random mutagenesis to C1, which led to that serendipitous mutation or scientific anomaly that led to low viscosity, high yield. And all of a sudden, we are in the enzyme business, making our own cellulase enzymes.

And then we took the technology back to Holland, to Europe, where we applied molecular biology using recombinant DNA techniques, and we painstakingly developed all the tools to move genes in and out of C1 with a institute called TNO, which is a world-class national lab and institute in Holland. TNO are the Scripps of filamentous fungi in terms of developing molecular tools and creating these capabilities. And the scientists at TNO had previously worked with Genencor, DSM and Novo and others on TWST: When speaking with potential shareholders and investors, what are their misperceptions or recurring questions? Do you feel the story is understood?

Mr. Emalfarb: I don't think that they understand the market opportunity for proteins and enzymes. Few companies can make proteins and enzymes in large volumes affordably. It's an almost unlimited opportunity, when and if we are going to find the commercially valuable genes for multiple uses, or when is somebody going to bring us a gene that's a \$1 billion molecule or is a \$100 million molecule. And so we've hit singles, we get doubles, and we are looking for the grand slams and the home-runs. But we are still here to play the game, we are still on the field, and we have plenty of juice in the car to keep running. In fact, our financials are getting better, they are getting stronger, and we are pursuing opportunities that we think are best for us. And we are pursuing partnerships through licensing and joint ventures, or other kinds of strategic

relationships with some of the biggest companies on earth. And I'd say that, in addition to the really phenomenal foundational licensees we have today, stay tuned and see who is coming tomorrow.

TWST: What are the key metrics or key events that an investor should focus on as they track your performance?

Mr. Emalfarb: I think they should track our performance based on the growth of which license agreements we make with whom, what the potential of those license agreements can be for those companies, which will lead to royalties and milestones and other types of benefits to Dyadic. And in addition to that, our own enzyme business, we'll start growing that and expanding that. But it's not just about what Dyadic does. It's about who we do or potentially license this technology to, and what abilities and capabilities they have in bringing the products to the marketplace that we don't have, because of their size, their distribution, their marketing, regulatory skills, and their abilities to do the things that would take us years to develop.

So it's kind of like Intel with a chip inside, it's like Dyadic INSIDE, we own the term and a registered trademark INSIDE for biotech, because biotechnology is inside almost everything we do, in your food, in your feed, in your clothing, in your fuel, in your medicine. So it's already there, embedded in everything we do every day in life. And biotechnology makes things better and makes things cheaper, makes things more affordable, makes things more nutritional, makes things healthier, and makes things greener, and makes things cleaner. So where the world is going, to this green-clean world, we've been there for 20 years, and the system is getting more powerful, more productive, more robust and more versatile in the types of genes that can be converted into proteins and enzymes for ourselves and others. So judge us by the improvement of the technology and the expansion of the licensees and ultimately the commercialization of these products from our licensees and our own business. or a better cosmetic or nutraceutical enzyme, that there is somebody out there that can help them bring that discovery to the marketplace in an efficient manner, at a low cost, in large volumes, affordably. And they can share in that through royalties or in some other structure.

That's a major thing — getting the word out as to the capabilities that we have and the abilities we have of taking genes and making proteins and enzymes in large volumes affordably. And we are working on getting that message out to a broader audience across diverse industries in both academics and industries to see what we can find and if we can find those billion-dollar molecules lying around that are just sitting there that have no way forward. We can enable those things. And only if a few of those things are commercialized it will be a success for us, our shareholders and the people who brought us those discoveries.

TWST: In conclusion, what three or four summary statements would you give to an investor to get their attention? With so many biotech companies to choose from, why should somebody be buying DYAI stock?

Mr. Emalfarb: Take a look at the fact of how our shareholders have been minimally diluted versus other people. Dyadic is being run by a management team that actually has an investment in the company of their own money, not just options that were given to them. But I and my family have millions and millions of dollars of ours invested in this company, 30 years of sweat and equity in this company. And so, we are not going to just willy-nilly dilute our shareholders, which unfortunately seems to happen more often than not in a lot of biotech companies. It's easy for us to go raise money, it's difficult for us to generate through product sales, or licensing money that's not dilutive and which will lead to further revenues down the road. And so, our goal is to use nondilutive money through example license agreements, or profits from research and product revenues to build our business, to advance our technologies, to allow our shareholders to benefit in a meaningful way.

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TWST: What types of programs does Dyadic have in place to get its message out to the investor community?

Mr. Emalfarb: Recently we hired ICR, both from a PR perspective and an institutional investor firm. So we are going to start talking to investors, and we're going to be educating investors as to the opportunity, and as to where we are today and where we expect to be tomorrow. We are going to help them understand what it takes to make proteins and enzymes from genes and how limited the competition in the real world of doing that on a commercial scale and what our licensees are doing with this technology.

And then we are trying to go out to the trade magazines and the publications and educate them as to the skills and capabilities of our C1 technology, so that the hundreds of thousands — millions of scientists all over the earth that are discovering genes and their proteins and enzymes that for most cases are stuck on a shelf, because these scientists have no way of bringing their discoveries into the commercial world. We want to educate the scientific, academic and industrial communities, that there is a way, and a willing commercial partner, Dyadic will help bring their discoveries into the commercial world. So that if they did discover a better food enzyme or a better feed enzyme or better fuel enzyme or a better drug

It's one thing to own 1% of a billion-dollar company, it's one thing to own 30% of a million-dollar company. So we are like the tortoise, we're going to take our time to do it right and not just to get there — we want to get there profitably and in a way that our shareholders actually make a good return on investment. And so that's one message I will give them.

The other message I would give them is that we've a great management team, we've great scientists, the technology speaks for itself, and when the world's biggest and brightest start licensing it which some of them have begun and we anticipate others will in the future — pay attention to who those companies are and the potential of what they can do with this C1 technology and where they are going to take it. So it's not just about what we are doing, it's about what our licensees today are going to do and what are our future licensees tomorrow are going to do with this C1 technology. And how they are going to gain market share or bring new products to market that don't exist today with better benefits and unique properties, versus what we can just do on our own.

So we are not on our own. It's us plus the licensees and the growing number of scientists across the world working with C1 to

develop cutting-edge products from the worlds gene pool. As our C1 technology platform becomes more and more recognized as a worldclass protein and enzyme expression system — which it is starting to do now both through scientific publications as well as the commercial successes we at Dyadic have had and which our licensees are starting to realize — we expect the number of scientists across the globe working with C1 to grow as well, as the C1 technology starts is becoming recognized by more and more people who can benefit from getting access to such a platform technology.

TWST: Is there anything we've missed, anything you'd like to add?

Mr. Emalfarb: No, I'm sure we missed a lot. I'm sure there is a lot I can include that I haven't, because as I mentioned, the pool of genes that one can make products from is virtually unlimited. And the thing we want to do is marry the C1 platform technology to the discoveries of the world's scientific community out there that's vast and large, and to work together with these academic and industrial scientists to figure out how to help them turn those discoveries into products. We need to have them understand what we do. And once they do and realize the potential we have, hopefully it will lead to more license agreements and more opportunities for everybody.

TWST: Thank you. (KL)

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