

CEOCFO Magazine - The Most Powerful Name In Corporate News and Information

An Industrial Biotech Company Incubated from the Kapyon Ventures Program, Algenetix Focuses on the Commercialization of Novel Genetics to Improve the Yield and Energy Content of Key Renewable Crops for Petrochemical Alternatives

**Industrial
Biotech**

Algenetix Inc
4365 Executive Drive, Suite 1500
San Diego, CA 92121
Phone: (858) 876 - 4682
www.algenetix.com



**Han Chen
CEO**

BIO: Mr. Chen is a driving force behind the Kapyon incubation model and the formation of the various spin-out entities. He has been responsible for the strategic direction of the portfolio companies, aggregation of the intellectual property and partnership formation with global research institutions. Mr. Chen has had a successful track record of raising seed stage capital, managing biotech startups and brings expertise in business development, product management, patent strategy, licensing and corporate formation.

Mr. Chen comes from the venture capital industry where he served as the Investment Manager for Finistere Partners, LLC. He graduated Magna

Cum Laude from Amherst College and has a Master's in International Business Management from the University of California, San Diego. He is also a CFA charter holder.

About Algenetix

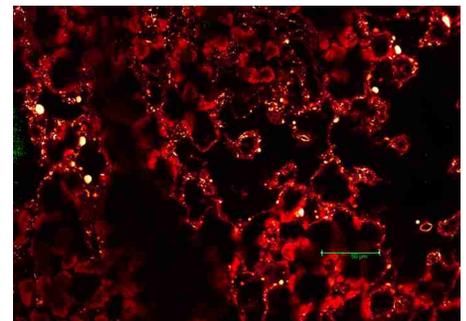
Algenetix is an industrial biotech company incubated from the Kapyon Ventures pipeline. The company develops single cell and plant based petrochemical alternatives using its proprietary PhotoSeed technology, which improves lipid productivity and yield across industrial microbes and plants.



HME Plant



HME Plant Regenerating



**HME Nile Red Confocal
Microscope**

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

CEOCFO: Mr. Chen, would you tell us about Algenetix?

Mr. Chen: Algenetix is a Kapyon portfolio company that graduated from the SEAD (Systematic Enterprise Acceleration & Development) incubation program. The company is an early stage biotech company focused on the commercialization of novel genetics to improve the yield as well as the energy content of key renewable crops for the production of petrochemical alternatives.

CEOCFO: How does Algenetix work on ideas and concepts?

Mr. Chen: Our business model is a little bit different than many of the other biotech companies. Through the Kapyon SEAD program, we are trying to change the way that innovation is financed and developed. Algenetix's technology portfolio originates from the programs of multiple research institutes and partnerships that Kapyon has formed over the years. Through the aggregation of these technologies, Algenetix was formed to further develop the science into products.

This access to early stage science has in turned provided the company and our investors with the ability to leverage private investment dollars alongside publically funded sources. Furthermore with the ongoing development occurring at the sites of Kapyon's research partnerships, Algenetix is able to further streamline and reduce the cost of innovation through conducting its development at these sites for a fraction of what it would cost traditional biotech companies.

CEOCFO: Would you tell us about the technology?

Mr. Chen: Algenetix's first product concept, PhotoSeed is a synthetic biology trait stack that can be applied in numerous plant and microbe species to improve yield and oil productivity. For example in algae and yeast we can greatly improve lipid productivity by making oil yield continuous rather than in batch processes while storing the oil effectively in the cell. In crops such as jatropha we have the potential to greatly increase the seed yield and also the oil content per seed. In some of our early stage trials with a number of plants we worked with, we have shown the ability to increase the rate of carbon utilization as much as 24%, translating to a biomass increase as much as 50%. In our oil seed programs we also showed a 34% increase in the oil content per seed. This could translate into oil yield increases by as much as 2x per acre. The synthetic nature of the technol-

ogy allows us to truly customize the same platform technology to work across different species.

CEOCFO: What is happening in the plants that allows the increases?

Mr. Chen: Plants and microbes have many of these metabolic pathways in place but because they have evolved very inefficiently there remains significant room for improvement. Our technology seeks to engineer new pathways that can improve the natural productivity of the organism but also allow the organism to function in new ways within industrial settings. Since our technology is synthetic biology, it allows us to make modifications that simply cannot be achieved through traditional breeding alone. For example stable oil bodies are typically only produced in the seed of flowering plants. Through the PhotoSeed tech-

“With the yield and energy increases we have seen in the lab, it is going to be very transformative for moving our world from a petroleum based economy to a photosynthetic one. Algenetix stands at the nexus of agriculture, materials and energy.”

- Han Chen

nology, we have been able to create a novel oil synthesis enzyme and encapsulation protein that allowed us to produce artificial seed like oil bodies into new tissue types within vascular plants and even into new species such as algae and yeast. The increased yield and carbon assimilation was also the result of our ability to engineer these synthetic oil bodies into photosynthetic tissue.

CEOCFO: Is it still too early to garner attention?

Mr. Chen: We have already received a lot of positive feedback from the industry thus far. We are an early stage company but because of the magnitude of the markets we are impacting, we have gained interest across multiple sectors including agriculture, energy, chemicals and even consumer product companies. What is driving the interest across all these diverse industries is the demand to

access sustainable materials and feed stocks.

CEOCFO: What is Algenetix's marketing strategy?

Mr. Chen: Like most early stage biotech companies, it will be many years before our product comes to market. We market ourselves to industry by continuing to mitigate the risk of the technology and create more data points to prove the technology and further reduce it to practice. There is already significant evidence that the PhotoSeed technology would be transformative to the cleantech sector and our team is focused on further building confidence in the industry that the technology will meet the targets we set out. Secondly rather than marketing to a broad audience, our goal is to find the right partnerships. Partnerships cannot be formed over-

night and it's more than looking at just the technology. A successful relationship needs to also take into account strategy, goals both short and long term and most importantly culture. These relationships take time to cultivate and we have to continue to build understanding of what we and our partners want out of the relationship. For early stage compa-

nies especially, this ongoing communication and dialogue is critical as it becomes an important factor in shaping the company's growth trajectory.

CEOCFO: What is Algenetix's financial outlook?

Mr. Chen: Financial strength and discipline is an area we feel that Algenetix has a competitive advantage in especially in these difficult financial markets. We have raised about \$2 million for Algenetix but the program is leveraging off of millions more in basic research funding. Furthermore because we are focused on the biology end of biotech we are able to undertake our program very cost efficiently. The cost of biotech is dropping rapidly and we can outsource many of our activities to third party providers. What used to be exhaustive work requiring expensive labs can now be done on the computer for example. This allows Algenetix to tar-

get its investment dollars towards innovation rather than infrastructure.

CEO CFO: What have you learned from previous ventures that is most helpful for you at Algenetix?

Mr. Chen: You have to do your homework at the beginning and have a clear plan. At the same time though biology and early stage ventures are risky so you also have to be nimble enough to refine and adapt your plan to handle unforeseen challenges that may come up.

Also you will never have all the right answers and part of being a good CEO is building the right team to help navigate through these difficult questions and decisions. We have a great team at Algenetix and what we have established first and foremost is clear and open lines of communication. If the proper lines of communications are not established, you cannot expect your team to effectively understand and execute on the plan or to communicate solutions to unexpected challenges. When you have such little runway and financing, you need to make sure that everyone is on the same page at every point.

CEO CFO: Are you aware of similar research that might challenge or compete with what is being developed at Algenetix?

Mr. Chen: There are a number of much larger companies working in this area of renewables many working in the same target species as Algenetix. From a competitive standpoint, our intellectual property is very strong and is differentiated enough that it gives us a unique niche in the industry. However because our industry is so new and the challenges we are trying to overcome are so daunting, it is often not about competitive advantage but collaborative advantage. We are all trying to figure out pieces of a vast and complicated puzzle. We as an industry need to do a better job of linking these pieces together because when our competitors are not successful it hurts all of us.

CEO CFO: Why should investors and people in the business community pay attention to Algenetix?

Mr. Chen: From the technology standpoint, Algenetix is addressing one of the most fundamental challenges to the renewables sector- which is how do we increase the bio-

mass and energy productivity of plants and microbes. Our solution and breakthrough addresses what many researchers have tried to solve over the past 20 years. With the yield and energy increases we have seen in the lab, it is going to be very transformative for moving our world from a petroleum based economy to a photosynthetic one. Algenetix stands at the nexus of agriculture, materials and energy. For our world to continue to consume at the rates we are going we have to find more sustainable practices and this will be an important piece of that solution.

CEO CFO: Final thoughts?

Mr. Chen: Biotechnology right now is more exciting than ever. With toolsets and new technologies emerging across the board, we are going to see a revolution in biology like we saw in computing and social media. Small companies are going to play a more critical role as the cost of innovation decreases. We hope that Algenetix is going to be one of those companies that is successful in this next wave of innovation.



Algenetix Inc

4365 Executive Drive, Suite 1500

San Diego, CA 92121

Phone: (858) 876 - 4682

www.algenetix.com