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MedAir Labs

MedAir Labs – developing a unique Multi-Virus COVID Rapid Test



Dr. William Kedia
President and CEO

MedAir Labs
<https://medairlabs.com/>

<https://serenio.com/>

Contact:
info@medairlabs.com
(800) 515-9087

“MedAir Labs was founded to use innovative technology to improve the quality of people’s lives. That is our mission statement.” Dr. William Kedia

Interview conducted by:
Lynn Fosse, Senior Editor
CEOCFO Magazine

CEOCFO: *Dr. Kedia MD, what is the overall concept behind MedAir Labs?*

Dr. Kedia: MedAir Labs was founded to use innovative technology to improve the quality of people’s lives. That is our mission statement.

CEOCFO: *In what ways are you doing that now? What might you look at in the future?*

Dr. Kedia: Initially, the idea of creating MedAir Labs occurred at the end of 2019, into 2020, during the height of the pandemic. That was when my partners and I first thought that we need to be able to help in some way or fashion. I am a primary care physician by trade, and I was seeing so many patients who did not have any certainty. There was so much uncertainty surrounding Covid, how to diagnose and how to treat, that we thought there must be something that we can do.

Specifically, what really brought it into focus was that I was seeing patients with upper respiratory tract symptoms, and we had no idea whether it was Covid, whether it was influenza, whether it was just a simple cold. Therefore, I was sticking, 2, 3, sometimes 4 swabs into people’s noses and throats to figure out what they had, to rule out Covid, to rule out influenza, and we felt that we can do better than this. We can create a test that, with one swab, would be able to test for multiple viruses, and that is exactly what we have done.

We have created a very unique test, where with one swab, you get results for influenza A, influenza B, and Covid in 10 to 15 minutes, in an office setting, with the accuracy of a PCR test. We are currently going through the FDA process to get emergency use authorization, and we



should have that relatively shortly, and hopefully bring it to market before the end of the year.

CEO CFO: *Would that be the Serenio powered by SHYCOCAN@?*

Dr. Kedia: No. These are specifically rapid antigen test kits. In talking about developing these test kits, we came across this technology, which is the Serenio powered by SHYCOCAN, and I started really paying attention to this through 2019, and into the early part of 2020. We reached out to the company, followed all of their data, followed their studies, all the trials that they were doing. We managed to secure the rights to manufacture and sell the device here in the United States. Since that time, we have endeavored to bring manufacturing back to the US, specifically surrounding the production of Serenio, which we have successfully done.

We have 2 companies that we are working with to manufacture the device here in the US. We have had multiple installations here in Cleveland, Ohio area, for the last year and a half. For example, we have had it at a school in downtown Cleveland, and during that timeframe they have not reported any cases of in person transmission cases of Covid.

We installed it in a group home for developmentally disabled individuals in southern Ohio. At the time that we installed the Serenio device, they were in the midst of an acute outbreak of Covid. Within 24 hours of the device being installed, all transmission of cases simply stopped. There was no more transmission of cases. We just followed up with the administrator of those group homes, about 2 weeks ago, and he informed us that since the installation, they have only had one case of Covid, and that, they suspect, happened in an area where the device was not installed. Those are just two examples of the effectiveness of this device.

CEO CFO: *Is this your first business venture, other than being a physician? Would you tell us a little bit about how you marry being a primary care physician with the business requirements or the business challenges that you have may have had in starting the business, bringing manufacturing back, and getting people to pay attention?*

Dr. Kedia: I was actually in private practice up until February of this year. I purchased the practice back in 2002, so I do have some familiarity with running the business side, specifically the business side of medicine. I am very comfortable with that and have been doing it successfully for over 20 years. When I bought the practice, we had roughly just under 3,000 active patients. By the time I sold the practice we had grown it to over 30,000 active patients. Therefore, from that perspective, I do understand that side of things.

Now, when you are talking about manufacturing and retail, that is one thing that I do not have the most expertise in. However, in between my practice and starting MedAir Labs, I also was fortunate enough to get involved in a multi-state medical cannabis business, so that really homed in on some of the manufacturing, and especially the retail side of things, and how that works. In addition, my two partners; Murthy Talasila, along with my other partner, Surya "Sonny" Verma; both of them had

extensive experience. Murthy was an executive at Progressive, and so large scale, a lot of IT background, and has experience in manufacturing. Sonny has multiple businesses that he has run, and is also very, very familiar with the manufacturing side of things.

CEOCFO: *What is the competitive landscape? Are there similar ideas, similar products in use today, or in development? Where do you fit into all the items that have come to the forefront, many real, and probably more not so real, regarding the industry?*

Dr. Kedia: When you are talking about air purification, the go to, the stand-by, has always been HEPA filtration. For the most part HEPA filtration works. The problem, specifically in dealing with the Covid virus, SARS-CoV-2, is the particle sizes. SARS-CoV-2 is approximately .7 to .9 microns in size. Most HEPA filtration systems that you find that are commercially available or retail available, only filter down to 3 microns in size. The concern is that the virus passes through these HEPA filtration systems and does not effectively stop transmission of virus and you have seen that. For example, we know that transmission occurs in hospitals, and hospitals have HEPA filtration systems in them. That is an area of concern.

The other form of air purification, so to speak, that is out there, is UV light, or UV radiation. The problem with UV radiation, is that it is great as a surface disinfectant, but you cannot have it actively on when you have people in that space, because it can cause cancer. It does nothing to mitigate person-to-person transmission. What is unique about our device is that we provide instantaneous neutralization of the virus. The way our device works is, when you look at the structure of SARS-CoV-2, the spike protein, the spike protein has positive charges on it, and the receptor that it binds to in the human body is called the ACE2 receptor. That receptor is negatively charged. This positive/negative interaction, kind of like a magnet, to use an analogy, is critical for binding to occur. Thereby, that is how infection occurs. Therefore, if you can interrupt that binding of that positively charged spike protein, to the negative charged ACE2 receptor, you have now prevented or stopped transmission and infection from occurring, and that is, in essence, what our device does.

Our device produces electrons, and in basic physics, electrons are the same thing that you find in a ray of light. Sunlight is composed of electrons. We fill a space of 1,000 square feet with a cloud of electrons. If a virus enters into that space, whether it be from a person or an object, or whatever it may be, those positive charges on the spike protein attract all of these electrons that are floating in that atmosphere, and that binds that positive charge to that spike protein and neutralizes the virus. Once the virus is neutralized, in essence, it is ineffective, it cannot do anything. That is the biggest difference between our device. How we look at it is that our device is pushing out electrons to instantly neutralize the virus, whereas with HEPA filtration, we are waiting for it to pull in air, to filter that air, and then pass it out. There are many variables again there; how fast does the air move into the system, how fast does the air get cleaned, those are all concerns with HEPA filtration.

CEOCFO: *Are you seeking funding or partnership with other organizations?*

Dr. Kedia: Right now, we do not need a funding partner. That may change in the future, obviously, as we start scaling up. However, we were currently able to secure a small business loan, and that has gotten us through so far.

CEOCFO: *Is it easy to get a foot in the door to explain what you are doing and to show what you can offer? How are you commercializing?*

Dr. Kedia: It has been difficult. I will not beat around the bush. We have been trying now for about 10 to 12 months, and having this data, having both laboratory data and real-world data, has helped. However, I think that the biggest problem is that people have become kind of immune to the pandemic now, where they think it is over, and we know it is not over. All three of us, for sure, know that it is not over, and I still see it in my office. When I am seeing patients, I am seeing so many positive cases of Covid, and I am seeing complications of Long Covid.

About 3 weeks ago I have a patient who had a massive clot in his lung, and he almost died from it, and he has no reason to get a clot other than the fact that he had Covid 4 months ago! Therefore, it is getting people to understand that this is not gone, that we need to be cautious, we need to prevent further infection. That now, is becoming our biggest hurdle.

CEOCFO: *What do the next 6 months to a year look like for MedAir Labs?*

Dr. Kedia: As a business, I look at it from two perspectives, because of our 2 different products. From the Serenio side of things, we are hoping that we are on the cusp of the dam breaking. We have been actively engaged with different departments in the federal government who are extremely interested in the product. We are hoping that something comes to fruition from that side of things, and we get this product out everywhere, because quite frankly, it can save lives. We have seen it now. We have seen it in multiple settings, not just in the lab, obviously, but in real-world places where we have the device installed. Therefore, as a physician, at the end of the day, that is what my number one concern is; to keep people healthy. I know this device will keep people healthy. It is just getting them to understand and accept it.

From the second perspective, we are very confident that our test kits will get approved, and that we will be able to provide them to urgent cares, ERs, and physician offices, to increase patient comfort, increase accuracy and rapidity of which we can diagnose Covid and other viral illnesses, and just help people. That is the main goal.

CEOCFO: *Where do you stand on FDA clearance?*

Dr. Kedia: Serenio is FDA authorized to be marketed and sold in the United States. With the test kits we are currently doing our clinical trials. We are almost complete with that. We have been in communication, a lot of back and forth with the FDA in terms of the study design and how to go about doing this. They are very familiar with our product. They are very excited about our product. Therefore, I think that once we have

met all of the requirements, then we just do the application, and hopefully within 90 days that application is approved.

CEOCFO: *What, if anything, might someone miss about what you have developed, that really needs to be understood?*

Dr. Kedia: I think the instant neutralization and the mechanism by which this device works, because it is so unique, I think that is the hard part for people to understand. It is a very quiet device, so they do not hear it, they do not see it, they do not see any air moving or feel any air moving, so their question is, "How is the thing possibly working?" One of the questions that we get is "How do you know it is working, what proof do you have?" We have proof that it was tested in the lab, by multiple reputable labs. In fact, one of the labs that tested it is called TNO, they are based out of the Netherlands, they are research partners with Johns Hopkins, they have done work with Boeing, with Dow Corning, some of the biggest companies in the world, these guys have done work for and with, so we have their reports.

Now, we have affidavits and reports from places where we have installed the device, where we know people have come in with Covid, where we know that no one has gotten Covid because our device was installed there. For example, we had a retail location install our devices across 4 of their stores in Ohio, and one of their employees came in feeling ill, did not report that to the manager, and did her whole 10-hour shift. She ended up leaving at the end of the shift and going straight to the urgent care to get tested and tested positive for Covid. Let us say that shift ended at 6pm. She tested positive for Covid at 6:30pm, called the manager and let them know. However, there were 10 employees working with her that day, and not one employee, nor any customer, developed Covid!

CEOCFO: *As far as people being reimbursed for testing, or use of the devices, are there challenges there with insurance companies or medical practices, or is it pretty straightforward today in this arena?*

Dr. Kedia: It is pretty straightforward, at least from the device standpoint, depending on how they are acquiring it. For a business, it would be a business-to-business sale. They would buy the unit and install it wherever they want. They buy the unit and install it wherever they want. Through the government, it is a little bit of a process. For example, we are working with FEMA right now, and they have a Covid mitigation program, where an applicant, has to be a non-profit, and can apply for a grant, using a Grant Writer. They write the application, the application gets submitted to FEMA, FEMA then approves, and then the device is installed for free to the customer or to the non-profit. Then the government reimburses us for the cost of the unit.

CEOCFO: *Why should people pay attention to MedAir Labs? Why do you stand out from the crowd?*

Dr. Kedia: We are bringing some very innovative technology to improve, again, patient's lives or people's lives, and specifically centered around Covid, to stop the spread of Covid. That is because, again, as a primary care physician, I see the long-term consequences of having Covid, and it is not fun. When you have a 16 year old who is a straight A student, who then cannot function in school, literally the day after she

gets Covid, and to date, this is over a year ago she has had it, she still cannot function in school, cannot do critical thinking, goes from straight A's to getting Cs, Ds and Fs, there is something wrong there and we need to prevent that from happening. That is our goal. That is what our device does, and that is, in essence, what the testing kit does, because if you can accurately diagnose someone who has Covid and then quarantine them, you are preventing spread of the disease.

I think that getting the message out, specifically about Serenio, given what we are going to see coming up this fall, is incredibly important. Just to give a brief of what I expect to see in my office this fall, I fully anticipate seeing someone walking in with influenza and Covid at the exact same time, and that is a nightmare scenario that I really do not want to see, but I know I am going to. There are no more mask mandates required for kids in school. There is no more masking in indoor spaces, masking in public in general, anywhere you go, pretty much in most places throughout the country. Because of that, we are going to go right back to what I used to see pre-Covid, which is, within 24 hours of school starting I see my first case of strep. Within 5 days of school starting, I start seeing cases of upper respiratory tract infection, Respiratory Syncytial Virus, or RSV. All of these things happen within a few days of school starting, and I anticipate this fall is going to be terrible, because you are going to have Covid on top of all of these other normal infections.

