

# CEOCFO Interviews & News!

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# Applied DNA Sciences Has Achieved Its First Sales, Which Represents A Major Step In Bringing Their Product To Market



Services
Business Services
(APDN-OTC: BB)

Applied DNA Sciences, Inc.

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Dr. James Hayward Chief Executive Officer

### BIO:

Dr. James A. Hayward has over 20 years of experience in the biotechnology, pharmaceutical, life science and consumer product industries. He was one of the founding principals and research director of Europe's first liposome company, Biocompatibles Ltd. From 1984 to 1989, he was responsible for product development at Esteé Lauder Companies, where he served as director of research worldwide.

Between 1990 and July 2004, Dr. Hayward was the Chairman, President and

CEO of The Collaborative Group, Ltd., a provider of products and services to the biotechnology, pharmaceutical and consumer-product industries based in Stony Brook, New York.

Since 2000, Dr. Hayward has been a General Partner of Double D Venture Fund, a venture capital firm based in New York, New York. Dr. Hayward received his doctorate in molecular biology and biophysics from SUNY at Stony Brook.

Dr. Hayward received his bachelor's degree in Biology and Chemistry from the State University of New York at Oneonta in 1976, his Ph.D. in Molecular Biology from the State University of New York at Stony Brook in 1983, and an honorary Doctor of Science from Stony Brook in 2000. He also serves on the boards of the Stony Brook Foundation, the Research Foundation of the State of New York, Long Island Life Sciences Initiative and the Ward Melville Heritage Foundation.

## **Company Profile:**

Applied DNA Sciences (APDN) provides customized DNA embedment and authentication solutions that are designed to help prevent and identify counterfeits. Utilizing our proprietary overt-DNA and embedded covert-DNA technologies. APDN provides the definitive forensic proof of authentication and validation to help protect revenues, brands and consumer confidence. Secure and costeffective, APDN's SigNature<sup>TM</sup> Program provides ready-to-use DNA encryption and authentication solutions that will complement barcodes, watermarks, holograms, RFIDs and many other security applications. APDN also provides customized safeguards to meet heightened security requirements for government programs and anti-counterfeit measures worldwide. APDN has successfully marked nearly 1 billion DVD's, artwork, alcoholic beverages, luxury and personal care goods, through our Asian licensee.

# Interview conducted by: Lynn Fosse, Senior Editor CEOCFOinterviews.com

**CEOCFO:** Dr. Hayward, when we spoke around the beginning of the year, you were getting into the commercialization phase; please bring us up to date?

**Dr. Hayward:** "We had achieved our first sales and we were just making that transition the last time we spoke. We have now made sales to a large international chemical company, we have a contract with the trade association representing a large cotton trading group and we have signed agreements now with five selling partners and OEMs bringing our product to the market."

**CEOCFO:** Please tell us about the cotton organization.

Dr. Hayward: "We have an agreement with Supima, the promotional organization of the American Pima cotton growers that calls for the development of an indigenous DNA marker within mature cotton fibers that could be detected in the finished textile. It is a way of tracking finished textiles back to the cotton of origin and obviously that is quite valuable to an organization like Supima whose cotton represents the top 1% of cotton grown in the United States. Supima offers licenses to select textile mills, apparel and textile manufacturers and retailers, who can then use the Supima trademark on their products, indicating that the products are made of 100% American Pima cotton.

Because of this, there is value in being able to prove the presence of Supima brand cotton in the finished textile. This project is more important to us than it may appear. Number one, we look to achieving the goal that has been sought for more than twenty years - that is -being able to track cotton as it moves from the field to the finished product. In addition to that, this is important way beyond brand holders. It is important to the government of the United States. The US trade deficit is intertwined in part with sales of cotton globally and the sales of textiles into the United States (some of which are supposed to have been made with US cotton). To be able to keep our trading partners honest, it is quite worthwhile to be able to track US cotton back to textiles being sold into the United

States by foreign entities who have negotiated trade limits with the United States. It is one way of helping the US enforce trade agreements, which are really not enforceable right now. We are looking forward to the continued progression of this project and ultimately our successful completion of it."

**CEOCFO:** Please tell us more about some of the applications that people might not think of. **Dr. Hayward:** "That is why I personally find the value of Applied DNA such a compel-

ling opportunity. It is an opportunity for our company and investors to do well by doing good. What I mean by this is we can be successful as a company while using the technology to do some good, to help people throughout the world. Recently there have been many articles in the news about counterfeit and tainted products, many coming from the Orient including food products and pharmaceuticals. One area that I personally feel strongly about is the pharmaceutical market where a counterfeit or diverted product can lead to physical injury, complications and possibly even death. A prime example of personal impact of counterfeit drugs comes from our own backyard with a young man named Timothy Fagan from Long Island. Timothy was taking a drug to help eliminate the likelihood of organ rejection after he received a transplant and unbeknownst to him and to his family he received tampered products, which caused complications and landed him in the hospital. Stories like this abound, and in using our SigNature<sup>TM</sup> DNA, we can help to prevent more of these stories in the future.

In February of 2006, the World Health Organization estimated that counterfeits account for more than 10% of the global pharmaceuticals market. This number is as high as 25% in some developing countries and as much as 50% in some countries. The pharmaceutical industry produces millions of tablets each year. Even as little as 1% of the global production being counterfeit would affect many people. How do we get there marking DNA? We get there by continuing to do what we

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have been doing since I came to Applied DNA and that is educating the market about our SigNature<sup>TM</sup> DNA, speaking at conferences and other media opportunities throughout the US and Europe. We continue to make inroads in many different market verticals. We work with our outside agents, in specific countries and specific vertical markets and we work with our OEM partners to offer the ability to manufacture products directly using Applied DNA Sciences SigNature<sup>TM</sup> DNA."

**CEOCFO:** How does it work?

**Dr. Hayward:** "The way our DNA markers work, we create a unique DNA marker for each customer or it can be for each application or even for each product. The origin of that marker is a plant genome that works with large sections of DNA. The more complex, the larger, the

better. We reassemble that DNA; encrypt it in a form that only we can read. It is the equivalent of taking the Sunday New York Times, cutting all the words out of the paper and reassembling the words into our own order in such a way that they can be read only by us. We call that product a chimer and that is what our SigNature<sup>TM</sup> DNA marker represents. The next step in our process is to embed that DNA into or onto a product and if it's a pressed tablet we can simply add it to the pressed powder of the tablet. If it is ink on a packaging, we can apply it into the ink, or laminate it onto a hologram, an RFID, or even the varnish on a guitar; we can provide DNA in all of those vehicles and others as well. The final step in protecting brands or in dissuading counterfeiters is having a very effective au-

thentication system, which we do, offering three levels of authentication. We offer an immediate authentication, which takes on the order of one second, is done with remote handheld devices and is capable of identifying both the DNA and a marker which is covalently attached to the DNA.

Our second level of detection, which can also be done remotely, provides more detailed information, and can take as little as three or four minutes (sometimes it takes longer de-

pending on sample preparation). That is a forensic method called Polymerase chain reaction and it is much more specific, amplifying as little as one molecule of DNA marker strategically placed on a product or a document. This level of detection can verify simultaneously the presence of DNA and the sequence of that marker. Finally, for a case that might be going to court, in a sample prep that takes on the order of two hours, we do a full marker sequencing. That is equivalent to the kind of analytical work, which the FBI does with this kind of system and I can tell you that the reliability of that method is such that false positives virtually don't take place at all. The frequency of a false positive is on the order of one in five hundred trillion, if you can believe that number; which is to say it is a very reliable and robust platform."

**CEOCFO:** Please tell us about some of the reseller and joint agreements that you have, who is going to be representing you?

Dr. Hayward: "Our platform has been estimated by a number of firms to be relevant to a very significant amount of global trade, in fact somewhere between 6 and 10% of global trade is estimated by some of the larger firms to benefit from our SigNature<sup>TM</sup> platform (as they are affected by counterfeiting, piracy and product diversion). As a consequence, the challenge we face is penetrating a large number of vertical industries effectively. The best and fastest way we can do that is by leveraging relationships with original equipment manufacturers (OEMs) and so far this year we have found five of them. Our management team expects to find a total of about twelve; our expectation for their performance in the early stage of the company's growth is that our OEM partners should be providing on the order of \$2.5 million of revenues each to Applied DNA Sciences and on the order of \$10 million to some of the better performers. For example, one of our OEMs is a thread manufacturer with whom we have developed the techniques required to manufacture a tightly controlled DNA thread in which DNA is detected along every millimeter of the thread and where miles of the thread can literally be manufactured. If that thread were used, even a single thread included in any luxury apparel would make it very easy to authenticate its points of origin. We have other

OEM relationships in the food arena, in the arena of making thermal transfer ribbons for printing labels and stadium tickets and we have relationships in the ink and print areas."

**CEOCFO:** These are exciting times for Applied DNA.!

**Dr. Hayward:** "We have achieved half the watershed in our development. We are recognizing our very first revenue and we are deploying our technology. What is most exciting is to see the phone ringing with inquiries coming from people we have not yet even met. The word is getting out there and we have an opportunity to very effectively leave our mark on the marketplace."

**CEOCFO:** Why should potential investors be interested?

Dr. Hayward: "The most telling aspect of our platform is that we address such a broad market and have such an opportunity to deploy in so many different markets The cost of manufacturing DNA, many people expect to be expensive, but in fact it is not. We have been able to participate through our Asian affiliates in the marking of over one million DVDs. We were but one of a dozen security marks placed in those one billion DVDs and remarkably nine months after the launch of those DVDs, eleven of the twelve security platforms were counterfeited and the only security platform still left standing and absolutely uncounterfeitable was our SigNature<sup>TM</sup> DNA. Our DNA is accurate, offers forensic proof; it is secure, impenetrable, versatile, and can be integrated with other security measures in a seamless fashion. We can provide overt and covert markers in a wide variety of marker hosts, codings, packaging, labels, liquids, powders, ink. We are extraordinarily adaptive and versatile as well as robust."

**CEOCFO:** What should investors remember about the Applied DNA Sciences story?

Dr. Hayward: "Our challenges going forward are to customize our solutions with more customers, to continue to build the infrastructure that facilitates sales. Investors should recognize that we have evolved remarkably quickly since totally restructuring the company two years ago; providing a new management team, new board of directors and new incremental patents. In addition, investors should recognize the dominant role that counterfeiting and diversion plays in global trade. Just in the news headlines alone this year, we've seen very impacting events such as melamine poisoning of dogs and cats. diethylene glycol being sold as counterfeit glycerin poisoning 300 people in Panama and injuring people in Southern China, and lead paints used in so many of the tovs imported from Asia. Our authentication platforms are platforms that not only protect companies, but also protect consumers and can make for a more healthful and beneficial life overall."



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