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**With A Platform Technology That Gives Them Unique Ability To Measure
The Properties Of An Optical Fiber, Luna Innovations Incorporated Is
Able To Develop Products And Different Applications For A Variety
Of Large Markets Including Telecommunications And Healthcare**

**Services
Research Services
(LUNA-NASDAQ)**

Luna Innovations Incorporated

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**Dr. Kent A. Murphy, Ph.D.
Founder, Chairman, President
and CEO**

BIO:

Dr. Murphy is the Founder, Chairman and Chief Executive Officer of Luna Innovations Incorporated. He has founded and built three additional companies that were later sold to a Fortune 300 company, a multi-billion dollar European firm and a billion dollar biotech company, and has taken Luna Innovations public.

Dr. Murphy is a founding member and Co-Chairman of the Virginia Research & Technology Advisory Commission (VRTAC) and Co-Chairman of the Pro-

ductivity Advisory Committee, which offers advice on the Commonwealth of Virginia's approach to effective and efficient government operations. Both of these positions are appointed by the Governor of Virginia. Dr. Murphy is a member of the Small Business Innovation Research (SBIR) Steering Committee in association with the National Research Council and the National Academies. Additionally, he serves on the Board of Directors of the Northern Virginia Technology Council and is also a member of the VirginiaFIRST Executive Advisory Board, a non-profit organization that has a focus to make science, math, engineering and technology exciting to youth.

In 2004, Dr. Murphy was recognized by the Governor and Science Museum of Virginia as an Outstanding Industrialist of the Year and Luna was recognized with a Governor's Technology Award for Entrepreneurship in 2005. In 2007, Luna was recognized with an R&D 100 award for its test / measurement instrument, the Optical Backscatter Reflectometer™. This award recognizes the 100 most technologically significant new products introduced into the marketplace. The company is also a three-time recipient of the highly prestigious Tibbetts Award, which is presented to companies that best exemplify the philosophy and doctrine of the SBIR program.

Dr. Murphy began his career in fiber optics at age 19 when he received multiple patents for fiber optic couplers. He has a portfolio of more than 35 patents in the areas of telecommunications, sensing for oil and gas and aerospace, diagnostics for pharmaceuticals and medical devices. Dr.

Murphy received his Ph.D. in Electrical Engineering from Virginia Tech, where he became a tenured professor.

Company Profile:

Luna Innovations Incorporated (NASDAQ: LUNA) develops and manufactures new-generation products for the healthcare, telecommunications, energy and defense markets. Our products are used to measure, monitor, protect and improve critical processes in the markets we serve. Through its disciplined commercialization business model, Luna has become a recognized leader in transitioning science to solutions.

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

CEOCFO: Dr. Murphy, you have a long history in fiber optics, what is the focus of Luna today, and why is this what you are choosing to work on now?

Dr. Murphy: One of our major focuses is in fiber optics, and most of our product sales are related to fiber optics. We also do a significant amount of development work in other areas, including in pharmaceutical applications of nanomaterials and work for the defense department and other government agencies.

CEOCFO: There has been a bit of a restructuring for Luna; what happened and where are you now?

Dr. Murphy: We had signed a feasibility study for \$84 thousand with Hansen Medical in September 2006. Subsequently, they accused us of having misappropriated trade secrets that they had for catheters and things like that. We

were unable to reach a settlement, so we ended up in a California civil court jury trial in Santa Clara County. The jury found \$36 million worth of damages. We believe there were significant errors in the determination of damages. Before the jury verdict was turned into a judgment by the judge in that court, we determined that the appropriate option for us was to file for Chapter 11 in a Virginia federal court, which would put a stay on those proceeding and allowed us to resolve the damages in a federal court here in Virginia. We filed that in July 2009, and as part of that, we asked the bankruptcy judge to hear an argument for an estimation of those damages. Before he could make a ruling on that, and we were finally able to arrive at a settlement. That settlement was signed in December of 2009, and we emerged from Chapter 11 on January the twelfth 2010 with a plan that allows us to pay all of our creditors 100 cents on the dollar, no contracts were rejected, and our common stock remains intact.

CEOCFO: So it is behind you!

Dr. Murphy: Both the litigation and the bankruptcy are behind us, and through all of that, we worked closely with NASDAQ and managed to have our stock stay listed through the whole thing. I am incredibly happy that having gone through this litigation and Chapter 11 we were able to keep our common shareholders shares intact and pay our suppliers 100% of what we owed. During the year that we were in a legal battle and in Chapter 11, we managed to continue to grow parts of the business and improve operations and were running adjusted EBITDA positive excluding the litigation fees through the last three quarters of the year.

CEOCFO: Quite unusual!

Dr. Murphy: Yes, we are very pleased with what everybody here at the company has been able to achieve in the last year.

CEOCFO: Would you tell us about Luna's products and services?

Dr. Murphy: Again, one of our main focal areas is fiber optics. We have a platform technology that allows us to do many things with basically the same platform, allows us to measure things inside of an optical fiber that no one else can. We can use that platform technology to measure the 3-dimensional shape of an optical fiber and we are developing that for many different applications. We are

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Outside of medical, we believe there are other applications where our distributed sensing system provides unique capabilities. We are measuring thermal profiles inside gas turbines for another Fortune 500 company. We partnered with another well known company for measuring the shape of wind turbine blades, something that only we can do using a fiber optic solution. We have been working with Baker Hughes, on measuring pressure down hole in oil wells. We have been working with them since 2002 and have done a great job with them, and also have been funded by the United States Navy to measure the shape of cables on towed sonar

arrays as well as stationary arrays. Sonar arrays are dropped to the ocean floor along our coasts to protect our borders, and when they through them overboard, they would like to know the shape of the cables between the arrays, so that they can better improve signal processing on those arrays as they are detecting things.

CEOCFO: Are people actively looking for your solutions or once you finish the development do you need to let people know why they need the to consider your products?

Dr. Murphy: That's a great question; it is some of both! Sometimes they know they need to measure these things, but they only have in their minds conventional sensors. For instance, Boeing has a mark-up of their latest jet, it is wide-sized and it is sitting there in a structural test frame being moved around to measure the structure under loads. I have seen this in person upfront and close. They will have more than 3000 strain gauges on it. Each strain gauge is a little wire that is bonded to the metal surface to measure the deflection of the surface, the deformation as well as the underload, while it is under load and each strain gauge has to have three pretty good sized wires coming back. So if they have 3000 strain gauges that is 9000 wires they are trying to keep track of and a huge bundle coming back to the room where they got all these read-outs, literally 3000 read-outs for each one of those gauges. We can do 3000 strain gauges on the length of one single fiber; bring back one fiber that is just a little thicker than a human hair, and measure the exact same thing. While we don't need to convince them they need strain gauges, we need to convince them that there is something out there that can do exactly the same thing with only one small fiber and sometimes that is really hard for people to grasp what that does.

As well as measuring strain, we are trying to measure 3-dimensional shape like in our work related to robotic medical devices for instance. Just the ability to measure shape in 3-dimensions with one single fiber is quite amazing. You would in the past need strain gauges all along the length to try to piece that information together. You have a pretty good bulk of wires at the other end to try and get something like that to work.

CEOCFO: What is in the marketplace now and what are you looking at in R&D?

Dr. Murphy: We have had telecommunications gear out there for about eight years. That is Luna branded products, they have our name on the front. We sell

those and have been for about eight years. In our little market niche, which is really high end test and measurement gear, we are a fairly dominant player there. We are currently working on portable hand-held versions of those instruments that will be coming out on the marketplace early this year. Those are being finalized right now, so those are new products that will be launching under the Luna brand name. In the pipeline we have been working on developing the shape sensing for other applications whether in or outside of the medical space. Those would not be Luna branded products, those we would be through partnering with someone else. We don't intend to make medical robots. We don't intend to make catheters or tools that do surgery under an MRI scanner. However, we do intend to make the shape sensing technology to allow surgeons to understand where their tools or catheters and the like are. In addition, hopefully enable robots to be more precise and have them be able to expand the number of procedures that they could do. We are currently developing things for the energy industry as well and have sold a few of the prototype systems into that space as well as having sold prototype systems into the navy as well.

CEOCFO: With so many avenues to look at, how do you set priorities?

Dr. Murphy: We make sure that we are continuing to move forward on the basic platform, so 90-95% of everything that I discussed is one single platform we have developed for many years. We have a lot of intellectual property around that, and it was an original license from Nasa Langley. Mark Froggatt was the inventor and when we licensed that intellectual property from NASA, Mark and a team of people from NASA came here and have been working at Luna ever since. We have built a fantastic team that continues to build that platform, so we want to make sure we stay ahead with the capabilities of that platform. In addition, we want to bring out products that are the highest rate of return for our investment as well as having diversified application, so that we are selling into multiple markets with that platform, to make sure we have a very stable income.

CEOCFO: How has the macro economic situation affected what is going on for you?

Dr. Murphy: In Q-3 of 2008, we had a record quarter for our organization and in Q-4 2008, demand for capital equipment, just kind of fell off. So we had a rough Q-4 of 2008, and the first part of 2009 wasn't much better. However, we saw significant improvements in the latter part of 2009, and we feel things are about to go back on track now for us.

CEOCFO: Why should potential investors be interested, and what might they miss that they should understand about Luna?

Dr. Murphy: If you look at our organization, certainly there are a lot of things going on here, but if you look at us as an investment opportunity and you look at just the optical platform and the potential growth that we had in that optical sensing platform, that alone warrants a second look. We have a phenomenal platform that no one else on this planet has and the applications that I just discussed and the market potential and the potential growth that we have there is tremendous. We also have a contracts business that has been growing since the day we started our business where we do research and development work in many other areas and that part of our business has always grown as well. Within that, we have one of the biggest opportunities we have today, in the nanopharmaceutical space. We have developed our own intellectual property for those diagnostic and therapeutic compounds and we just recently acquired the assets from Tego Biosciences, a division of Arrowhead Research, which gives us a very dominant position in the world of nanopharmaceuticals. The work that we are doing there is being funded by the National Institutes of Health, including the National Cancer Institute. We have been funded through NIH for development of compounds to potentially treat arthritis, allergies, and asthma. We are partnering with folks at Harvard on the arthritis work and with the asthma and allergy work we are partnering with BC University. I think that if you look at us as a fiber optic sensing and instrumentation company, well that warrants the investment alone. Then on top of that you get all these other opportuni-

ties as well including our defense work, which has grown dramatically in the last couple of years.

CEOCFO: Final thoughts, what should people reading about Luna remember most?

Dr. Murphy: During a very down economy and through a major lawsuit and a Chapter 11, we managed to move this company from adjusted EBITDA negative to adjusted EBITDA positive organization minus the litigation. We are a well-managed business with a tremen-

dous opportunity going forward and we intend to capture that in 2010 and beyond.



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