Nanofiber Solutions Recognizes Value of NSF Funding in Creating the World's First Successful Nanofiber Tracheal Implant

NSF funding provided the learning environment for Nanofiber Solution's Chief Technology Officer who created the windpipe made from an electrospun nanofiber scaffold

COLUMBUS, Ohio, December 01, 2011 – Nanofiber Solutions, LLC, global developer, manufacturer and marketer of products to advance life science research, tissue engineering and regenerative medicine, announced earlier this week the world's first successful implantation of its Artificial Tracheal Implant which was completed on November 17, 2011 in Stockholm.

The transplant was performed on 30-year-old Baltimore resident, Christopher Lyles, who was diagnosed with inoperable tracheal cancer. The operation was performed at Karolinska University Hospital in Huddinge, Stockholm, by Professor Paolo Macchiarini of Karolinska University Hospital and Karolinska Institutet, and colleagues. Professor Macchiarini led an international team that included Nanofiber Solution's CTO Dr. Jed Johnson and members of Harvard Bioscience. Dr. Johnson designed and built the nanofiber tracheal scaffold, while Harvard Bioscience produced a specifically designed bioreactor used to seed the scaffold with the patient's own stem cells. Because the cells used to seed the trachea were the patient's own, doctors report there has been extensive vascularization of the implant and it is well on its way to becoming a natural part of Mr. Lyles' own tissues.

"We wish to congratulate Dr. Macchiarini and his surgical team. It is an honor to have contributed to this life-saving procedure," said Ross Kayuha, Nanofiber Solutions CEO. "We would also like to acknowledge the National Science Foundation - specifically, the Civil, Mechanical and Manufacturing Innovation division - the National Institutes of Health and the Ohio State University who allowed Dr. Johnson to develop the skills needed to create this innovation. By funding Dr. Lannutti' s lab and Nanofiber Solutions' own research such efforts build the know-how necessary to construct even more innovative and life-saving solutions for the future.

This historic accomplishment heralds a major breakthrough in medicine, namely the ability to produce synthetic nanofiber organs. It is also at the forefront of two major trends in medicine today. The first is tissue engineering or the use of artificial scaffolds in the body and the second is regenerative medicine including the use of a patient's own stem cells to increase the likelihood of a scaffold's acceptance and success.

About Nanofiber Solutions (www.nanofibersolutions.com)

Nanofiber Solutions, LLC produces revolutionary products that are changing the way biologists, researchers and developers of next generation medicines are looking at cell culture and artificial tissues. Thanks to STTR funding from NSF and SBIR funding from NIH, the company currently serves several markets, including: 3-D Nanofiber Culture Plates that assist basic science, cancer and stem cell research; nanofiber additives for use in flasks and bioreactors that enhance commercial-scale stem cell expansion for Regenerative Medicine purposes; and tissue engineering structures for use in human implantation and animal research. Customers include pharmaceutical companies looking at high-throughput drug discovery, stem cell companies interested in improved cell expansion and research labs

investigating all aspects of cell biology. Nanofiber Solutions is located at 1275 Kinnear Road, Columbus, OH.

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