APPENDIX A

Citation and Response of the

2010 O. Max Gardner Award Recipient

DR. JAGANNATHAN SANKAR

Throughout his twenty-seven years as an esteemed member of the North Carolina A&T State University faculty, Dr. Jagannathan Sankar, Distinguished University Professor and White House Millennium Researcher at North Carolina Agricultural and Technical State University, has earned the reputation of being a highly dedicated professional who has distinguished himself both as a teacher and a researcher in the areas of advanced materials and smart structures.

Professor Sankar obtained his Bachelor of Engineering degree in 1976 from the University of Madras, India. That year, he was awarded the University of Madras's Proficiency Prize and the Jawaharlal Nehru Memorial Award for Highest Academic Achievement and Honor. He obtained his Master of Science degree in Materials Engineering from Concordia University, Montreal, in 1978 through the McGill-Concordia Co-op Program, and earned his Ph.D. in Materials Engineering from Lehigh University, in 1983.

It has been his passionate approach to research in the fields of advanced materials and smart structures that have been extremely beneficial to the advancement of modern science and for the improvement of the human condition. His visionary and entrepreneurial efforts have generated research and educational programs in science and technology of nanostructured and advanced engineered and innovative structural and electronic materials.

Dr. Sankar has led a team of national and international scientists that has carried out research on new implant technologies for controlled use of degradable metallic implants offering significant opportunities for regenerative medicine for children and adults. Their mission has been to deliver on the potential of bioengineering and nanotechnology to dramatically improve treatments for cardiovascular, orthopedic and craniofacial ailments. The promise is that new kinds of implants and biodegradable metals may be used that can grow and adapt to the human body they are implanted in and eventually dissolve when no longer needed. These kinds of implants would spare patients, especially children with a cleft palate or pediatric orthopedic patients, the pains and expense of multiple procedures used to implant, then later remove, refit and re-implant the current generation of devices. These dissolving implants are also well-suited

to treat fractures, angular deformities of long bones and limb length discrepancies. Cariovascular health will also benefit from this research. The wire mesh stents currently used to treat blockages in the coronary artery elicit an immune response that can lead to the growth of scar tissue and the formation of blood clots. If blockage reoccurs, these stents are difficult to remove and additional stents must be inserted. A biodegradable stent could avert this cycle and minimize the number of invasive procedures.

Professor Sankar's many recognitions includes one of the first Distinguished University Professorships at North Carolina A&T State University, White House Millennium Researcher title from the Department of Education, the 2004 American Association for the Advancement of Science Mentor Award from the publishers of *Science* magazine, and recognitions from the American Society of Mechanical Engineering.

Recognizing his passion, energy, and vision that provide the foundation for great and continuing contributions to human welfare in the field of advanced materials and smart structures, the Board of Governors takes great pride in presenting the 2010 Oliver Max Gardner Award to Dr. Jagannathan Sankar, Distinguished University Professor and White House Millennium Researcher at North Carolina Agricultural and Technical State University.

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Dr. Sankar remarked that this was a great day for North Carolina A&T State University. He thanked the O. Max Gardner family, his family members, and all his colleagues for attending the event. He especially thanked Chancellor Martin, whom he had previously worked with while Chancellor Martin served as Dean of the Department of Engineering at North Carolina A&T State University in 1994. Dr. Sankar remarked that his 27 years of service at North Carolina A&T State University were a credit to his colleagues. Together they contributed to the creation of the Center for Advanced Materials and Smart Structures. Dr. Sankar said that with his colleagues and the other industry professionals with whom he works, he has set a goal to make North Carolina A&T State University the top biomedical engineering school in the world.