



NovaSterilis

March 14, 2011

NovaSterilis Awarded NIH Funding for Supercritical Carbon Dioxide Sterilization of Advanced BioMaterials and Absorbable Sutures

Lansing NY, March 14, 2011 – NovaSterilis today received a \$100,000 Small Business Innovation Research (SBIR) grant from the National Institutes of Health (NIH) for developing a supercritical CO₂ process to sterilize absorbable sutures and advanced biomaterials. The grant funds a collaboration with Chih-Chang Chu Ph.D, a pioneer in absorbable polymer development at Cornell University.

The market for sutures, the number one wound closure device, is forecast to grow 4.4% annually to \$1.2 billion by 2015. Past decades have seen few advances in medical device sterilization technologies beyond ethylene oxide (ETO) and gamma irradiation. In particular, synthetic polymers such as suture materials and hydrogels are sterilized almost exclusively by ETO, since irradiation causes undesirable chemical degradation and/or mechanical changes. Sutures can be effectively sterilized by ETO, but many governments and regulatory bodies are seeking alternatives to this process because of the short- and long-term effects of residual ETO, such as cytotoxicity and delayed healing. Moreover, ETO is a recognized carcinogen and requires precautionary measures to operate around this toxic and explosive agent.

“Suture manufacturers have been using this extremely dangerous and toxic process to sterilize sutures in the absence of a suitable alternative,” commented David Burns, President and CEO NovaSterilis. “ETO sterilization may be putting the health of employees at risk, and residual ETO may result in delayed healing. We believe that the NovaSterilis supercritical CO₂ sterilization process will sterilize these products while maintaining mechanical integrity and reduce risk to patients and process technicians.”

About NovaSterilis

NovaSterilis currently markets terminal sterilization technology and equipment built on their supercritical carbon dioxide platform. The supercritical or the fluid phase of CO₂ occurs at low pressure (72.9 atm) and moderate temperatures (31.1° C). Supercritical CO₂ retains advantageous properties of the gas and liquid phases of carbon dioxide making it an ideal fluid for manufacturing processes. The company currently markets the Nova 2200, a 20 liter fully automated supercritical CO₂ terminal sterilization chamber and is in final development of an 80 liter unit. NovaSterilis is a privately held biotechnology company located in Lansing New York. NovaSterilis is the recipient of a 2007 Presidents Green Chemistry Award presented by the Environmental Protection Agency.

For more information on NovaSterilis and supercritical carbon dioxide visit www.novasterilis.com