



DiFusion, Evonik Working To Develop CleanFUZE™

Innovative Medical Polymer Resists Infection, Promotes Bone, Tissue Integration

GEORGETOWN, Texas, October 22, 2012 -- DiFusion Technologies, Inc., and Germany-based specialty chemicals company Evonik Degussa Corporation are working together to develop a PEEK based product called CleanFUZE™, a new medical polymer that prevents infection and promotes bone and tissue integration.

DiFusion recently completed a series of in vivo and in vitro clinical tests. These tests were performed by third party institutions whereby the results showed CleanFUZE™ eradicated 99.998% of methicillin-resistant staphylococcus aureus (MRSA) bacteria and prevented biofilm adhesion. MRSA is a bacterium which is resistant to known antibiotic drugs. Biofilm formation occurs when free-floating microorganisms attach themselves to a surface. Biofilms protect the bacteria and are often more resistant to traditional antimicrobial treatments, making them a serious health risk. No biofilm can effectively be treated with antibiotics once it has formed on a medical implant.

The parties are developing CleanFUZE™ using Evonik's VESTAKEEP® PEEK (polyetheretherketone) together with DiFusion's silver zeolite based technology, that when custom formulated together create enhanced durability and contains specialized molecular matrices of silver and/or zinc cations to create anti-bacterial and osteoconductive properties. CleanFUZE is a new load-bearing medical polymer from which any orthopedic or dental implant can be engineered and the first bioactive polymer for human implantation. Surgical Site Infections (SSI's) are the No. 1 problem in orthopedics and oral surgery, such a bioactive polymer could permanently shift the implant market to an implant-based solution. "Having a bioactive material which kills bacteria and promotes bone growth will revolutionize the way we think about orthopedic implants and the materials from which we make," said Andrew Park, M.D. and director at Dallas Spine Fellowship.

Hospital acquired infections (HAI's) are currently the fourth leading cause of death in the United States and increasing penalties for hospitals with high infection rates make new technologies such as CleanFUZE a solution for this growing problem. Medicare reimbursement penalties went into effect October 1, 2012 for hospitals with high-infection rates; an average hospital could be penalized by more than \$12 million a year. Reimbursement holdbacks from Medicare have even more stringent penalties phased in over the next two years. Older Medicare patients are the most likely to acquire an infection while hospitalized. Hospitals will be forced to endure enormous financial losses, thus crippling their ability to continue effectively treating patients and putting some hospitals out of business altogether.

According to Jami Hafiz, PhD, vice president of development at DiFusion, "VESTAKEEP® PEEK's superior properties in many critical areas are the primary reason we are working with Evonik to develop CleanFUZE." With Evonik's quality products and chemical expertise, CleanFUZE is expected to provide excellent bacteria-prevention solutions.



"Innovative materials and strategic collaborations will be a key driver of Evonik's growth in medical applications," said Jeff Smith, vice president and general manager of Evonik's High-Performance Polymers Business Line, Americas. "Evonik's ability to create custom-developed products is essential to meeting the demands of our customers and providing them with solutions to their specific challenges."

"Evonik's technical expertise and flexibility to create custom-tailored products has been key to successfully developing this product," said Derrick Johns, CEO of DiFusion. "Our combined technical knowledge and Evonik's world-class polymer chemistry will lead to a new class of bioactive medical polymers," he added.

DiFusion Technologies and Evonik will be exhibiting at the North American Spine Society (NASS) annual meeting in Dallas, Texas, October 24-26. DiFusion Technologies will be located at Booth # 2309 and Evonik at Booth #2110.

CleanFUZE is not FDA approved for sale in the US.

About DiFUSION Technologies, Inc.

Founded in 2008 in Austin, Texas, DiFUSION Technologies, Inc. is a medical device company focused on reducing the rising incidence of surgical site infections in orthopedic and spine surgery through the development of a suite of patented antimicrobial orthobiologic polymeric implants. Initially focusing on the multi-billion dollar spinal implant market, the company has developed a technology with applicability across a variety of orthopedic segments using well characterized implants with benefits for the patient, surgeon, hospital and payer. For more information about DiFUSION Technologies, visit www.difusiontech.com.

About Evonik

Evonik, the creative industrial group from Germany, is one of the world leaders in specialty chemicals. Its activities focus on the key megatrends health, nutrition, resource efficiency and globalization. Profitable growth and a sustained increase in the value of the company form the heart of Evonik's corporate strategy. Evonik benefits specifically from its innovative process and integrated technology platforms. Evonik is active in over 100 countries around the world. In fiscal 2011 more than 33,000 employees generated sales of around €14.5 billion and an operating profit (adjusted EBITDA) of about €2.8 billion. For more information about VESTAKEEP® PEEK, visit <http://medical.vestakeep.com>.

For More Information Contact:

Jami Hafiz
PhD, Vice President of Development
Office: 512-863-7777
jami@difusiontech.com