

New Jersey Center for Biomaterials



Rutgers, The State University of New Jersey
Professor Joachim Kohn

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New Brunswick, NJ—Rutgers University and Trident Biomedical, Inc. have received an \$800,000 award from the US Army Medical Research and Materiel Command to develop a synthetic bone pin for fixation of fractures. This award supplements the major funding to Rutgers for its leadership of the Rutgers-Cleveland Clinic Consortium of the Armed Forces Institute of Regenerative Medicine, AFIRM. The new award will advance AFIRM's goal of delivering novel and improved treatment options for severely wounded servicemen and women.

Trident will work with the Rutgers laboratory of Professor Joachim Kohn to develop the design for a simple orthopedic device, based on a new biomaterial technology, toward approval for clinical use. Invented in Kohn's laboratory, the biomaterial promotes bone attachment and growth, and it degrades into harmless byproducts that are naturally excreted by the body. Through a license agreement with Rutgers Trident has the exclusive right to use tyrosine-derived polycarbonate biomaterials in all orthopedic applications.

Starting with a simple fracture fixation device will help Trident to rapidly create an approval history for a tyrosine-derived biomaterial, and then to take advantage of that history to gain approval for more complex devices using the same biomaterial. Important future applications of the class of tyrosine-derived polycarbonate biomaterials will be as scaffolds to promote regeneration of large bone defects in the limbs and skull resulting from battlefield injury or civilian trauma. The bone pin and future regeneration scaffolds will provide the wounded with a more natural healing process, greater function and less disability.

The versatile tyrosine-derived polycarbonates have potential application in many other medical devices, said Professor Kohn. He listed anchors for limb reconstruction, bone grafts used in dental treatments, drug delivery using nanosphere technology, nerve regeneration conduits, and soft tissue scaffolds.

"We see high value in our collaboration with the Kohn Lab at Rutgers, and have worked hard to integrate our operations with the R&D objectives of AFIRM. We are confident that partnering with Rutgers will leverage Trident's role in the advancement of regenerative medicine, and deliver advanced therapies to our nation's wounded warriors sooner than would have been possible," said Ms. Deborah Quarrie-Schmalz, Trident's vice president for new business development.

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