External fixation, in which an implant protrudes from the skin, is typical for lower limb amputees because it enables them to attach a prosthetic to their limb. Soft tissue infection at the skin-external fixator interface is a common condition that can spread to the internal prosthesis device. If prosthesis infection remains undetected, it usually requires surgical removal of the device.

University researchers have constructed an antimicrobial cap to mitigate infection complications of external fixators. The cap slips over the external portion of a fixator and covers the soft tissue surrounding it. The cap is imbued with an antimicrobial agent and fits closely to the soft tissue-fixator interface, providing long-lasting protection against infection.

TECHNOLOGY TYPE
Class I/II

STAGE OF DEVELOPMENT
Prototype developed.

IP PROTECTION
Nationalized PCT Issued in the United States
Antimicrobial Containment Cap for a Bone Anchored Prosthesis Mounting System US8444701B2

FEATURES AND BENEFITS
- Enables maintenance of soft tissue through a removable cap.
- Creates a tight seal between the fixator and the soft tissue, preventing infection.
- Facilitates long-term use and maintenance of cap, which can be refilled with antimicrobial agents.

INVENTOR PROFILE
Kent N. Bachus, Ph.D., Research Professor – Orthopedic Surgery Operations
Roy Bloebaum, Ph.D., Research Professor Emeritus – Orthopedic Surgery Operations