

innovations

from The University of Vermont

TITLE: HYBRID DESIGN KNEE JOINT PROSTHESIS

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DESCRIPTION: This invention is directed to a knee joint prosthesis having femoral, patellar, and tibial components having surfaces for receiving bone cement which promote bone ingrowth. The femoral component is concave in shape wherein the posterior end forms two condyles along an axis of the femoral component, and the bone facing surface contains surfaces for receiving fixation material adjacent to the anterior and posterior ends, and a central surface for promoting bone ingrowth. There is a corresponding tibial design as well as a patellar component with a peripheral surface designed to receive fixation material. These designs utilize a unique “hybrid” design that allows a combination of both cement and natural bone ingrowth for fixation.

ADVANTAGES: Hybrid knee replacement prosthetic components have been developed in an attempt to overcome the loosening problems of either bone cemented or bone ingrowth methods of replacement. Current hybrid designs have limited surface area for cement. There are several aspects of the design of this invention that overcome this limitation, while allowing a large undersurface area for bone ingrowth for long term stability. Mechanical data and drawings are available under a confidentiality agreement.

PATENT STATUS: Patent pending

LICENSING STATUS: Worldwide rights available

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