Knowledge Transfer Partnership with JRI Orthopaedics enables the creation of new hip materials

About the company
JRI Orthopaedics are a Sheffield based company with world-class expertise in the design, development and manufacture of orthopaedic implants and surgical instruments. They have a long established reputation for making pioneering innovations in the development of hip implants and are keen to explore the use of new materials and novel manufacturing techniques to bring about benefits to surgical procedures and improve patient wellbeing.

Project objectives
To develop, evaluate and test a selection of new bioactive surface coatings for orthopaedic implants.

These new coatings will be developed to improve biological responses to enable the patient to recover more quickly therefore reducing their hospital stay. The project goal was to discover a product differentiator that would meet clinical and patient need, increase company market share and sustain the future growth of JRI.
The Mercury Centre have de-risked not only the technical elements of our research-led innovation, but also the financial. Without that, a lot of areas would have been closed to us.”
Edward Draper, Executive Innovation Manager, JRI Orthopaedics.

**Project outputs**
The project was successful in sourcing, designing and manufacturing a range of new surface coatings for the next generation of hip implants. These were tested using an entirely new approach and ultimately used to select an optimum surface. A major output was the new testing process developed to evaluate the biological responses to the surfaces.

**Business benefits**
The KTP project enabled the development of a rapid and robust pre-clinical number of test methods for selecting a range of bio-active surfaces with the potential for orthopaedic application, as well as a new candidate coating for commercial use. Academic knowledge of the bone/implant interface was greatly increased, with benefits to both JRI and the University. Existing relationships with partners have been strengthened and new relationships with future collaborators have been developed. The Mercury Centre was involved in the design and manufacture in some of the new orthopaedic materials.

For further information please visit: mercurycentre.org
For further information on the ways to collaborate with the University and contact details please visit: Sheffield.ac.uk/business
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