

Helping patients to feel again.

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The outcomes for patients undergoing nerve repair is poor despite numerous refinements to microsurgical techniques. Many are left with incomplete hand or arm movements, resulting in considerable socio-economic costs and prolonged psychosocial problems for these patients.

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The unmet need

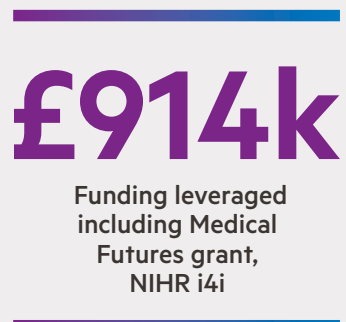
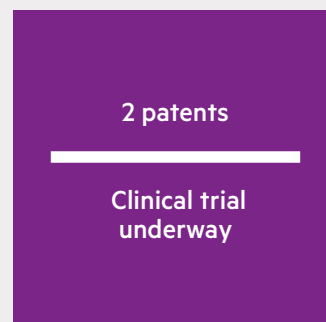
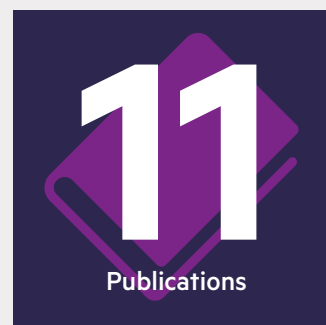
An improved solution for the surgical repair of severed peripheral nerves.

The solution

An artificial nerve conduit has been created – Polynerve – to guide and improve nerve regeneration. The Polynerve conduits are made using a blend of polycaprolactone (PCL) and polylactic acid (PLA). The material has excellent compatibility with body tissues and the required flexibility and strength for use in nerve surgery – for example, in the arm or hand.

The development of this innovation has focused on novel micro-patterning of the conduit's inner lumen. This permits Schwann cells (the supportive cell of the peripheral nerve) to align and direct the nerve regeneration across the gap caused by trauma to a peripheral nerve.

The output



Pathway status:

Idea

Research Team

Discovery

Prototype

Safety/ Efficacy

Product

Deploy/ Commercial

In use