SPINAL RESEARCH

Spinal Research UK
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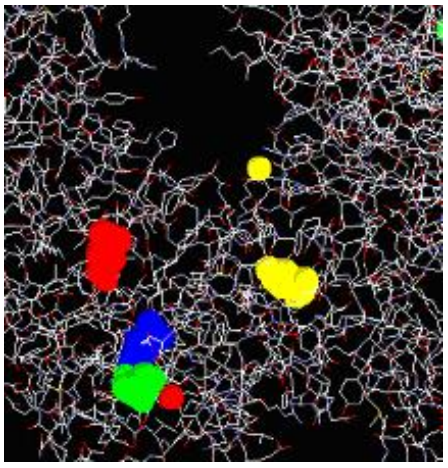
Chondroitinase treatment becomes research focus

A group of leading spinal cord repair researchers is coming together to formulate plans towards clinical trials using a
very promising therapy – chondroitinase.



A microscope image of the
Chondroitinase enzyme

When we awarded our first Translational Initiative grants in 2010, our aim was to identify leading clinical tria candidates amongst potential treatments for spinal cord injury (SCI) and fund the essential studies needed to achieve milestones that brought these potential treatments to a point where they are ready for studies on patients. The case for funding translational work around chondroitinase – a bacterial protein known to break down the injury scar tissue which represents a significant obstacle to repair – was already strong: the evidence supporting chondroitinase as a leading therapeutic candidate has built over a number of years, in numerous injury models and from many different laboratories around the world.

Chondroitinase therapy can enable injured nerves to regenerate through injury scar tissue and it may encourage "sprouting" of uninjured nerves into damaged areas where they may "take over" the role of the nerves that were damaged or lost. Researchers have also shown that chondroitinase gene therapy leads to widespread and sustained digestion of inhibitory molecules in the spinal cord. Nevertheless, issues remain surrounding potential concerns about repeated delivery of a bacterial enzyme to the delicate human spinal cord. Work being carried out by our Cambridge group, led by Dr Elizabeth Muir and Professors Roger Keynes and James Fawcett, is now overcoming many of these issues and the results are proving very exciting.

Confidence amongst leaders in the field surrounding this approach is now such that we have decided to pull together a panel of experts with the specific objective of establishing detailed plans for a final push to the clinic. The panel includes members with expertise in gene therapy, in vivo models of SCI, regulatory experience and clinical trial design: all the appropriate expertise and experience to plan and scope the work needed to achieve our aim.

During 2012 the group will deliver detailed development plans and a timetable of activities and supporting budgets for this important work to be carried out.

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