NASCIC
SCI RESEARCH
ADVOCACY COURSE

Module 7 – Neurorepair

Support for Neuro-Repair

Stimulating axon growth after an SCI will require more than blocking inhibitory signals and providing growth signals; they also need a clear path to grow on. Researchers are working on strategies to restore the path for axons to grow on.

They are developing scaffolds or injectable gels that provide physical support for growing axons. The current advancements in material science have resulted in the implantation of scaffolds into the spinal cord to help axons “bridge” the lesion that forms at the injury site and to rebuild neural circuits by providing a beneficial microenvironment.

This biomaterial therapy is usually integrated with synergistic cells, growth factors and/or stem cells (which will be discussed in Module 8 (Neuroreplacement) that play a critical role in neuroprotection and neuroregeneration).