

ETM/439 - Oligosaccharides as new therapeutic for CNS repair

The damage to the central nervous system (CNS) after injury or disease is largely permanent, mainly due to the limited capacity for repair, and represents a major area of unmet clinical need. We have developed a moderate throughput assay to model spinal cord injury (SCI). It comprises of mixed rat neural cells that over time develop into many myelinated fibres with correctly formed nodes of Ranvier. When cut they exhibit feature of SCI including astrocytosis, demyelination and a neurite free area resembling a lesion(1-3). Using these cultures we have validated the model by showing similar repair potential of drugs used in animal models of SCI. We have identified the level of sulphation around a lesion as a potential therapeutic strategy and now arm to test various drugs developed by Glycomar for the clinic that can modulate sulphation for other diseases in our model to establish their novel use in the clinic for CNS repair.