

## Agents spark nerve regrowth

Myelin-associated glycoprotein (MAG), a carbohydrate-binding protein on the myelin sheaths that coat nerve cells, inhibits regeneration of damaged neurons by binding to gangliosides on axon surfaces. This interaction causes gangliosides (shown) to cluster together, generating a signal that inhibits axon regrowth. Professor of pharmacology and neuroscience [Ronald L. Schnaar](#) of Johns Hopkins School of Medicine and coworkers have now found a number of antibodies and enzymes that reverse the MAG-ganglioside interaction, permitting nerve regeneration to occur in rat brain cells. Other labs "are discovering different molecular 'handshakes' that are involved in enhancing or inhibiting nerve regeneration," Schnaar says. "It is our hope that the knowledge gained can be combined to develop new therapies" for paralytic nerve injury and disease. For example, Elizabeth J. Bradbury of the Centre for Neuroscience Research at King's College London and coworkers reported recently that the bacterial enzyme chondroitinase ABC dissolves scar tissue on damaged nerves, also permitting regrowth that doesn't otherwise occur [*Nature*, **416**, 636 (2002)].

