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Mining myelination

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Schwann cells are responsible for axon myelination in the peripheral nervous system. Disabling **demyelinating neuropathies** are associated with mutations in genes associated with regulating the process of myelination. In the June 25 **Proceedings of the National Academy of Sciences**, Nagarajan *et al.* describe a study of gene expression in Schwann cells (*Proc Natl Acad Sci USA* 2001, **99**:8998-9003). They performed microarray analysis on normal or injured sciatic nerve material in mice following nerve crush or transection. More than 15% of the 12,645 genes that they analysed changed expression following injury. To interpret their results they performed careful anchor gene correlation analysis (AGCA), using the expression of proliferative markers (Ki-67 antigen or *PCNA*), inflammatory genes (*MCP-1* or interleukin 6) or myelination genes (such as *PMP22* or *MAG*), as anchor genes. Their analysis led to the identification of myelination-associated genes involved in lipid synthesis and fatty acid metabolism.

References

1. Hereditary peripheral neuropathies: clinical forms, genetics, and molecular mechanisms.
2. *Proceedings of the National Academy of Sciences* , [<http://www.pnas.org>]