**Accumulation of 8,9-unsaturated sterols as a unifying mechanism for drug-induced remyelination**

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Remyelination represents an unmet need in multiple sclerosis therapy.  High-throughput screens conducted in recent years have validated a diverse range of FDA-approved drugs and small molecules that promote oligodendrocyte formation from oligodendrocyte progenitor cells.  Recently the Adams Lab reported that dozens of small molecules that enhance oligodendrocyte formation share the ability to inhibit a narrow range of steps in cholesterol biosynthesis.  By inhibiting enzymes between CYP51 and EBP, these molecules cause the cellular accumulation of specific 8,9-unsaturated sterols, which are sufficient to promote oligodendrocyte formation when supplied in purified form.  These studies suggest novel druggable targets and lead molecules to accelerate the development of the first remyelinating therapeutics.

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