# Antigen-specific adaptive immune responses in fingolimod-treated multiple sclerosis patients



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**Author(s)** Mehling, Matthias; Hilbert, Patricia; Fritz, Stefanie; Durovic, Bojana; Eichin, Dominik; Gasser, Olivier; Kuhle, Jens; Klimkait, Thomas; Lindberg, Raija L P; Kappos, Ludwig; Hess, Christoph
**Author(s) at UniBasel** Klimkait, Thomas ; Hess, Christoph ; Lindberg Gasser, Raija L.P. ; Kappos, Ludwig ; Mehling, Matthias ;
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T cells exit secondary lymphoid organs along a sphingosine1-phosphate (S1P) gradient and, accordingly, are reduced in blood upon fingolimod-mediated S1P-receptor (S1PR)-blockade. Serving as a model of adaptive immunity, we characterized cellular and humoral immune responses to influenza vaccine in fingolimod-treated patients with multiple sclerosis (MS) and in untreated healthy controls. Although the mode of action of fingolimod might predict reduced immunity, vaccine-triggered T cells accumulated normally in blood despite efficient Si PR-blockade. Concentrations of anti-influenza A/B immunoglobulin (Ig)M and IgG also increased similarly in both groups. These results indicate that fingolimod-treated individuals can mount vaccine-specific adaptive immune responses comparable to healthy controls. ANN NEUROL 2011;69:408-413
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