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# Resveratrol and its derivatives modulates TH17 differentiation and attenuates experimental autoimmune encephalitis (P5139)

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The pathogenic role of IL-17 and TH17 cells in inflammation and autoimmunity has prompted the development of new inhibitors by pharmacologic approaches. Here we demonstrated resveratrol (3,5,4'-trihydroxy-trans-stilbene) and its derivatives from natural products and traditional Chinese medicine, inhibit TH17 differentiation in a concentration-dependent manner in vitro. CD4 T cells polarized in the TH17 condition with resveratrol expressed a relatively lower level of IL-17, ROR-gt, and TH17-related gene expression compared to the non-treated cells. To further determine its efficacy in vivo, we administered candidate drugs in a murine model of experimental autoimmune encephalitis, resveratrol and its derivatives ameliorates the disease severity and the production of TH17 in vivo. Our preliminary data fit the niche that is required to modulate TH17 for immunotherapy and we suggest that, to treat autoimmune disease, administering resveratrol and its derivative could be a promising pharmacologic approach to achieve the goal. Additional mechanisms are being explored.

## Abstract Proof

**CURRENT ABSTRACT TOPIC CATEGORY:**

Therapeutic Approaches to Autoimmunity

**TITLE:**

Resveratrol and its derivatives modulates TH17 differentiation and attenuates experimental autoimmune encephalitis

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**ABSTRACT:**

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