Conclusion:

From The ANoA results we can conclude that IFN gamma is an important factor for production of ANoA and also exposure to Hg induces autoimmunity in susceptible mice.

ELISA analysis of the antibodies show that Tregs can suppress the effect of autoimmune diseases.

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Effect of induced T-regulatory cells (Tregs) in mercury induced autoimmunity

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Background:

Autoimmune diseaseis the third major cause of mortality.The subtoxic doses of mercury causes systemic autoimmune diseases leads to development of antinucleolar antibodies (ANoA). Treg cells are the controlling factors which suppress development of unspecified ANA autoantibodies induced by Hg.

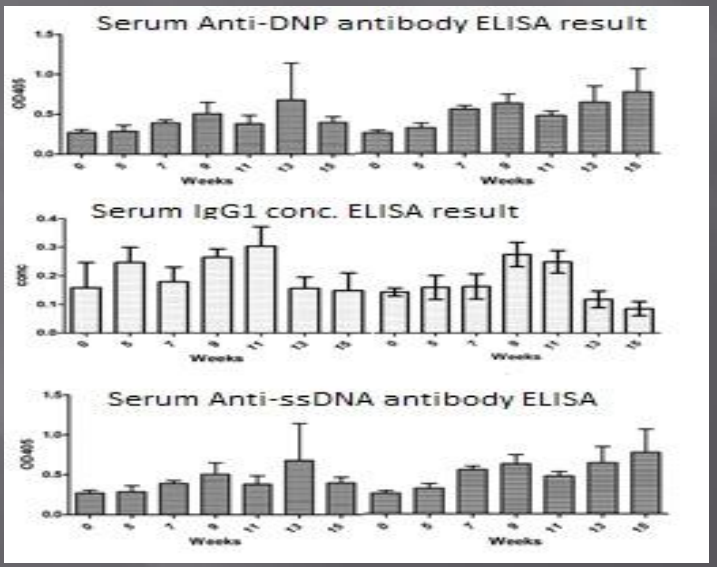
The aim of the project is to study the effect of induced T-regulatory cells (Tregs) in mercury induced autoimmunity

Result

In ANoA test, donor treated mice didn't produce any ANoA but it recipient mice produced ANoA.

ANoA was Also absent in untreated mice.

Treated recipient mice which received Tregs from Hg primed donor mice showed suppressed level of antibodies which can be seen in the graphs bellow.



Methods:

Tregs are isolated from spleen of IFN-gama knockout B.10.S mice (B.10.S IFN $\gamma^{-/-}$) after 4 weeks of treatment with mercury. The isolated Tregs are transferred to new set of mice. Autoimmune responses are noticed for 15 weeks. Serum was isolated and the autoantibodies were assessed by ELISA, Immunofloresence, and Immunohistochemis try.