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MODELLING THE SUPPRESSION OF AUTOIMMUNITY PATHOGEN CAUSED PROLIFERATION OF T CELLS

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We study a mathematical model of immune response by T cells where the regulatory T cells (Treg) inhibit interleukine 2 secretion. We model the suppression of the autoimmune line of T cells after a different line of T cells was stimulated by the presence of a pathogen. The exposure to a pathogen results in an increased proliferation rate of the bystander T cells. If the population of the pathogen responding line of T cells becomes large enough, for a sufficiently long time period, it may be able to deplete the concentration of autoimmune T cells. As a consequence, autoimmunity can be suppressed.