SMX induced lupus enteritis. Serologic associations may identify those with greater risk, as a positive RNP, Smith and chromatin antibodies were found in three patients and SSA was positive in only one patient. Increased photosensitivity secondary to TMP-SMX may lead to exacerbation, as three cases occurred during summer months. More studies are needed to clarify guidelines for TMP-SMX use in patients with SLE and promote awareness of exacerbation risk within the primary care community.

Funding Source(s): None

78 DISCOVERY OF A NOVEL ANTI-TACI ANTIBODY WITH SLE TREATMENT EFFECT AND LIMITED SIDE-EFFECT

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Background All clinical trials involving the BAFF axis to date have targeted the ligand, BAFF. Remarkably, there have been no reports of targeting any of the BAFF receptors, BCMA, TACI, or BR3. TACI is critical for T cell-independent type antibody production and memory B cell survival. Also IgG autoantibody production in SLE patient is mainly a T cell-independent. Thus, TACI is a promising target for SLE treatment.

Methods In this study, we discovered a novel anti-TACI antibody, GenSci-X002, by hybridoma and humanization approach to investigate its function on SLE treatment.

Results GenSci-X002 specifically binds to TACI receptor with sub-nanomolar affinity and blocks the binding of TACI and BAFF ligand. Also, GenSci-X002 neutralized BAFF-TACI downstream signal in a luciferase reporter assay. In SLE mouse model, GenSci-X002 exhibited equivalent SLE treatment effects with Belimumab, evidenced by the significant decrease of pathogenic autoantibody production, kidney Ig deposition and the development of nephritis. Remarkably, GenSci-X002 didnt alter normal B cell subsets and B cell numbers with minimal side effect.

Conclusions Here, we show that anti-TACI antibody protected against BAFF-mediated autoimmune manifestations while preserving B cells, suggesting that loss of BAFF signaling through TACI rather than loss of B cells may underpin the effect of Belimumab in the clinic. Therefore, B cell blockade of TACI by GenSci-X002 may offer a more specific and safer therapeutic alternative to broad B cell depletion in SLE. The candidate therapeutics, GenSci-X002, will be further studied in preclinical evaluation to enter early-stage clinical trials of SLE in future.

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79 CLINICAL CHARACTERISTICS OF PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS COMPLICATED WITH PULMONARY THROMBOEMBOLISM

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Background There is strong evidence for an association between SLE and an increased risk of pulmonary thromboembolism (PTE). PTE occurs with a higher frequency in SLE patients compared to the general population.