systemic lupus erythematosus (SLE). We report data from a Phase I double-blind, multiple dose study (NCT01764594) of dapirolizumab pegol (DZP), a PEGylated anti-CD40L Fab' fragment, in SLE patients.

Methods Twenty-four SLE patients were randomised (2:1, stratified by the presence of anti-phospholipid antibodies) to receive DZP (loading dose 30 mg/kg, then 15 mg/kg every 2 weeks for 10 weeks) or placebo. Patients were followed for 18 weeks. Objectives: safety and tolerability of DZP (primary); disease activity measures (BICLA and SRI-4; exploratory). Genes expressed by plasma cells, B cells, other immune cells and transcripts associated with SLE disease activity were analysed by qPCR.

Results No serious adverse events (AEs), thromboembolic events or deaths occurred. Most treatment-emergent AEs (TEAEs) were mild or moderate, transient, and resolved without intervention. Nasopharyngitis was the most common TEAE (6 patients in the DZP group; none with placebo). One patient withdrew due to upper respiratory tract infection (DZP group). Of DZP-treated patients evaluable for BICLA and SRI-4, 46% and 42% respectively, responded by Week 12 (vs 14% placebo; Table 1). Rapid and maintained mechanism-related gene expression changes were observed, particularly in plasma cell genes (IgA, IgG, IgJ) from the DZP group.

Conclusions DZP was well tolerated and demonstrated improvement in clinical measures of disease activity. A Phase II study is evaluating efficacy and safety of DZP in SLE patients (NCT02804763).

91 POTENTIAL NOVEL NATURAL B CELL DEPLETING AND IMMUNOSUPPRESSION AGENT IN LUPUS TREATMENT USING BRYOPHYLLUM PINNATUM IN SILICO AND IN PRISTANE INDUCED LUPUS MICE

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Background and aims The purpose of this study is to use in silico molecular docking and in vivo study to identify the potential of Bryophyllum pinnatum as B cell depleting and immune suppression agent in SLE.

Methods In silico was done by docking 32 phytochemical compounds well known immunosuppressive herbs into three B cell activating receptors: B cell activating factor receptors (BAFF-R), trans-membrane activator and calcium modulator and cyclophilin ligand interactor (TACI), and B-cell maturation antigen (BCMA). In vivo study was done in pristane induced mice model treated with different doses of Bryophyllum pinnatum extract (B1:10.5 mg/kgBW/day, B2:21 mg/kgBW/day, and B3:42 mg/kgBW/day). Extracts were given everyday per orally from 3rd to 4th months after pristane injection. spleen mature B cell (CD19+CD22+) , Th1,Th2 and Th17 percentages were assessed using flow cytometry assay and serum anti-dsDNA level using ELISA.

Results It was revealed that one compound from Bryophyl- lum pinnatum had the strongest binding affinity to BAFF-R (~6.3 kcal/mol), to TACI (four compounds,~6.4 kcal/mol) and to BCMA (~7 kcal/mol). In vivo study revealed that Bryophyllum pinnatum treatment significantly lower the percentages of CD19+CD22+ cell and anti-dsDNA levels in dose dependent manner which significantly lower compared to control (p=0.002 and p=0.036 respectively). Bryophyllum pinnatum treatment lowered also Th1, Th2, and Th17 percentages dose dependently compared to control.

Conclusions Bryophyllum pinnatum is a potential natural product which may be used for B cell depleting agent in SLE treatment by suppressing Th1, Th2 and Th17 percentages.

92 EFFECT OF CURCUMIN AND VITAMIN D ON DISEASE ACTIVITY, FATIGUE, AND CYTOKINE PROFILE IN SYSTEMIC LUPUS ERYTHEMATOSUS PATIENTS WITH DEFICIENCY VITAMIN D

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Background and aims To investigate the effects of curcumin and vitamin D supplementation on disease activity, fatigue, and cytokine profile in systemic lupus erythematosus (SLE) patients with vitamin D deficiency.

Methods A total of 20 SLE patients with vitamin D deficiency were randomly assigned to two groups: the curcumin group (n = 10) and the placebo group (n = 10). The study period was 12 weeks. Both groups were administered oral calcium carbonate and vitamin D3, while the curcumin group was additionally administered oral curcumin for 12 weeks. Disease activity was assessed using the SLE Disease Activity Index (SLEDAI), fatigue was assessed using the Modified Fatigue Impact Scale (MFIS), and cytokine profile was assessed using ELISA.

Results After 12 weeks of treatment, there were significant improvements in disease activity (SLEDAI), fatigue (MFIS), and cytokine profile in the curcumin group compared to the placebo group. The improvements were primarily driven by a decrease in pro-inflammatory cytokines such as interleukin-6 (IL-6) and tumor necrosis factor-alpha (TNF-α).

Conclusions The results of this study suggest that curcumin supplementation, in addition to standard vitamin D and calcium therapy, may be beneficial in the management of SLE patients with vitamin D deficiency, particularly in improving disease activity and fatigue, and potentially in modulating the cytokine profile.