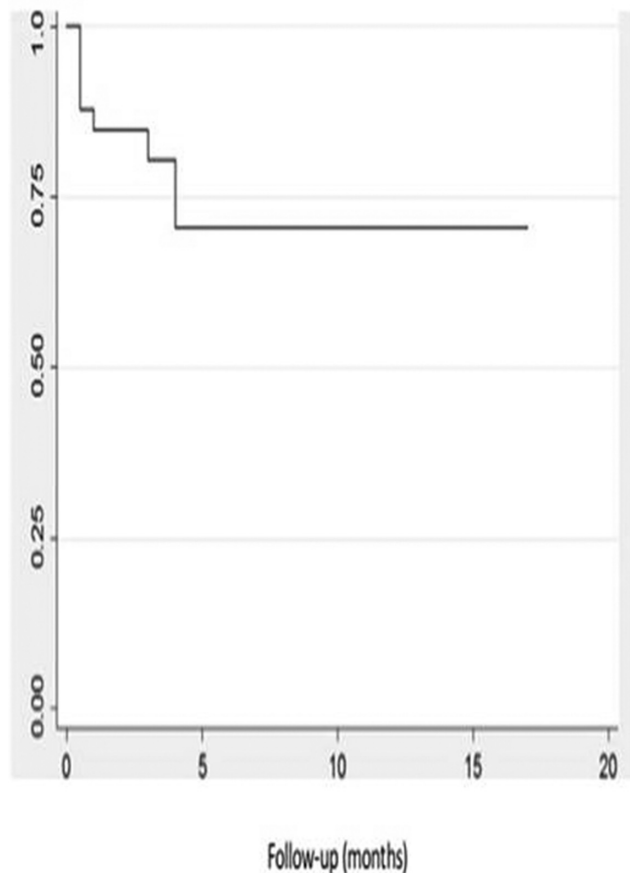


was to investigate safety of belimumab in patients with active SLE in daily clinical practice.

**Methods** We included patients with diagnosis of SLE (ACR criteria) treated at Medicarte IPS from March 2015 to October 2016. Medicarte is a referral centre for the integral medical care and pharmaco-surveillance of patients under biologic therapies in 13 cities in Colombia. Clinical information was obtained from electronic records. Adverse events (AE) were carefully evaluated during treatment.

**Results** Thirty three patients (all female) with active SLE were included. Mean age was  $38.0 \pm 11.8$  years, and mean disease duration was  $10.6 \pm 9.2$  years. Main refractory manifestations were musculoskeletal (100%), renal (45%), and mucocutaneous (42%). Background medications included MMF (87%), antimalarials (84%), MTX (72%), azathioprine (39%) and RTX (33%). Mean follow-up under belimumab treatment was  $7.9 \pm 5.6$  cycles. Mean prednisone doses were  $12.0 \pm 11$  mg/d. Only 8 (24%) out of 33 patients developed any AE. With a mean exposure time of 5.72 months, AE incidence rate, expressed as events per 100 p/months was 4.2 (Figure 1). The most common AE were: infusion reactions (3), urinary (2), and respiratory infections (1), herpes zoster (1) and mild pancytopenia (1). None of the patients stopped belimumab due AE

**Conclusions** Belimumab was safe in clinical practice setting; only a few number of mild side AE were recorded. None of the patients discontinued belimumab treatment due AE.



Abstract 85 Figure 1

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### MESENCHYMAL STEM CELLS INDUCE LYMPHOCYTES APOPTOSIS INDEPENDENT OF BIM AND BCL-XL IN LUPUS MICE

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**Background and aims** Mesenchymal stem cells (MSCs) have recently been used successfully in humans to control a lot of diseases. However, the mechanisms involved in their immunomodulatory effects remain a matter of debate. Here we explored whether lymphocytes apoptosis involved in the therapeutic effects of UC-MSCs in lupus mice.

**Methods**  $1 \times 10^6$  of human UC-MSCs were injected into B6.lpr mice via tail vein and 6, 24 hours and 4 weeks later, all the mice were sacrificed, the apoptosis of lymphocyte in peripheral blood and spleen tissues as well as the expressions of Bim and Bcl-xl were detected by FACS, the immune cell subpopulations and cytokines in serum were also examined at 6 and 24 hours, respectively. The curative effects were assessed 4 weeks later.

**Results** UC-MSCs ameliorated disease progression of lupus mice at 4 weeks, increasing the percentage of Treg while downregulating Tfh, plasma cells and Th1 cells, decreasing spleen weight and repairing kidney lesion. UC-MSCs promoted lymphocyte apoptosis in peripheral blood and spleen at 6 and 24 hours, and reduced serum TGF- $\beta$ 1 levels, but did not affect Bim and Bcl-xl expressions in CD4+ and CD8+ T cells. Meanwhile, the percentage of Treg was significantly increased in the MSCT group at both 6 and 24 hours. Reductions in the proportions of plasma cells, Th1, Th2 cells were also evident at 24 hours after MSCs infusion.

**Conclusions** UC-MSCs exhibit extensive pro-apoptosis properties against lymphocytes in B6.lpr mice, which may offer a form of immunomodulatory therapy for lupus.

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### SELECTIVE AND ORALLY AVAILABLE SMALL MOLECULE INHIBITORS OF TLR7 AND 8 FOR THE TREATMENT OF LUPUS

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**Background and aims** The toll-like receptors (TLRs) are critical participants in vertebrate innate immune recognition of pathogen-associated molecular patterns (PAMPs). Diverse ligands act as “danger signals” detected by this component of the innate immune system. TLR7 and 8 are located in the endosomes of specific immune subpopulations, and are activated by single-stranded RNA from viruses or by autologous RNA fragments bound to immune complexes, inducing the generation of cytokines such as interferons (specifically IFN- $\alpha$ ) and IL-6. Strong genetic evidence supports variants in TLR7 as contributors to development of systemic lupus erythematosus (SLE).

**Methods** *In vitro* and *in vivo* assays were used to guide development of potent and specific small molecule inhibitors.