effect of ethanol on the development of systemic lupus erythematosus (SLE) remains controversial. This study was performed to determine the potential role of moderate ethanol consumption in SLE pathological progression and clarify its functional mechanism.

Methods We used MRI/lpr mice to assess whether ethanol drinking has any impact on the development of SLE and investigated whether ethanol regulates pathologic progression of SLE through inhibiting lipid rafts.

Results We found that 10% ethanol in vivo delayed disease progression and organ damage and prolonged survival. In vitro ethanol treatment not only inhibited the aggregation, proliferation, adhesion molecule expression and IFN-γ secretion of T cells, but also decreased lipid raft clustering on T cells. In addition, ethanol inhibited SLE serum-induced skin inflammation and monocyte differentiation into dendritic cells (DCs). Furthermore, ethanol treatment of monocytes that were in the process of differentiating into DCs decreased lipid raft clustering.

Conclusions These data strongly support the viewpoint that ethanol delays the disease progression of SLE by inhibiting lipid raft clustering and suggest that moderate drinking of ethanol may have a protective value for patients with SLE.

83 BIIB059, A MONOCLONAL ANTIBODY TARGETING BDCA2, DEMONSTRATES EVIDENCE OF PROOF OF BIOLOGICAL ACTIVITY IN SUBJECTS WITH CUTANEOUS LUPUS

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Background and aims Type I interferons (IFN-I) are central to the pathogenesis of systemic lupus erythematosus (SLE). BDCA2 is a plasmacytoid dendritic cell (pDC)-specific receptor that, upon engagement, inhibits the production of IFN-I and other inflammatory mediators. In this first-in-patient 1b study, biological activity of BIIB059, a humanised anti-BDCA2 monoclonal antibody, was evaluated in SLE subjects with active cutaneous lupus (CLE).

Methods 12 adult SLE subjects with active CLE received a single IV administration of either BIIB059 20 mg/kg (n=8) or placebo (n=4). A panel of IFN-responsive genes (IRG) was assessed from whole blood. Cellular infiltration and expression of MsA and IFITM3 were evaluated in skin biopsies from active lesions at baseline and week 4. CLE disease activity was determined using the Cutaneous Lupus Erythematosus Disease Area and Severity Index (CLASI). Safety data were also collected.

Results BIIB059 decreased the expression of IRG in blood and MsA and IFITM3 proteins in skin. CD45+ cells were reduced in skin biopsies of BIIB059-treated subjects. The reduction in inflammatory cells as well as MxA and IFITM3 expression at week 4 correlated with improvement in CLASI activity score at week 12. BIIB059 was well tolerated with no withdrawals due to AEs.

Conclusions The study, confirming the major role played by pDCs in the production of IFN-I in the blood and skin in CLE, supports further development of BIIB059.