Methods: A20 gene expression was knocked out in KRT14$^+$ cells, namely ductal and myoepithelial cells. Whole pilocarpine-stimulated saliva was collected from A20$^{-/-}$ mice and wildtype (WT) littermate controls at 10, 20 and 30 weeks of age. Submandibular SGs were harvested at all time points for histological examination and qPCR.
Results: In submandibular SGs of A20$^{-/-}$ mice at 30 weeks of age, 10% of all cells were CD45$^+$ leukocytes and 3% were CD3$^+$ T cells, both significantly more than controls. B cell proportion increased over time in A20$^{-/-}$ mice, but was not significantly different to controls. CD45$^+$ cells formed immune foci (>50 CD45$^+$ cells together) localised to striated ducts, present at significanty greater frequencies than control mice. CD45$^+$ cells, T cells and occasional B cells in A20$^{-/-}$ mice also invaded striated ducts. Expression of the pro-inflammatory cyto/chemo-kines IFNγ, TNFα, IL-6, CXCL10 and CXCL13 was also significantly greater in A20$^{-/-}$ mice. Functionally, both volume and mucin 10 content of whole stimulated saliva from A20$^{-/-}$ mice was significantly reduced compared to controls.
Conclusions: We present a model for epithelial cell involvement in pSS SG pathology development. We confirm that saliva production defects, foci formation and striated duct invasion can be triggered solely by immune activated epithelial cells.

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AB0176 MORPHOLOGICAL HEART CHANGES IN ANIMALS WITH EXPERIMENTAL SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Heart pathology in systemic lupus erythematosus (SLE) refers to the most common manifestations of the disease and largely determines its prognosis..[1 2] The pathogenetic constructions of myocardium, endocardium and coronary vessel lesions remain insufficiently studied..[3 4] Histological evaluation of separate cardiac structures is performed on native models of SLE in linear mice.
Objectives: to study in the experiment on animals (rats) with SLE model the degree of cardiomyocytes, myocardium, endocardium, valves and cardiac vessel damage, comparing the results with thymus and spleen tissues histological data.
Methods: The SLE modelling was performed in 53 white non-breeding rats (34 females and 19 males) using full Freund's adjuvant, splenic deoxyribonucleic acid of cattle, cyclophosphamide, azid and sodium deoxyribonucleate. Cadmium sulfate, lithium oxybutyrate and ammonium molybdate were added for feeding animals. Histological heart specimen were stained with hematoxylin and eosin, altsyon blue (pH=2.6), van Gieson. PAS-reaction was applied.
Results: Experimental SLE is accompanied by the development of cardiopathy in all animals with cardiomyocytes hypertrophy, dystrophy and necrosis, morphological signs of coronary vessel, myocardial stroma, endocardium and heart valves sclerosis, proliferation of vascular endothelium, which has dispersion and direct correlation relationships with the degree of lymphoma-macrophage infiltration, interstitial tissue, perivascular and valvular histiocytic cell infiltration, and the vessels endothelium damage nature is closely linked to the presence of mast cells in myocardial stroma, it is defined by endocardium necrosis and valves collagenolysis, decrease in spleen lymphoid tissue, and also in the brain layer cells and Gassal cells in the thymus.
Conclusions: In the case of experimental lupus cardiopathy, there is determine heart structures lesion, what is more, the immune disorders are involved in their pathogenetic constructions, as indicated by the damage of the immunocompetent organs' (thymus and spleen) corresponding structures.

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AB0177 TOLL-LIKE RECEPTOR 7(TLR7) IS UPREGULATED ON PERIPHERAL B CELLS AND ASSOCIATED WITH DISEASE ACTIVITY AND DAMAGE IN PRIMARY SJOGREN SYNDROME

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Objectives: Primary Sjogren Syndrom(pSS) is characterised by activitition of B cells, increased production of RNA-associated antibodies and elevated proportion of transitonal B cell. Toll-like receptors 7(TLR7) have been reported promoting the effects above in some murine models of SS. We took up this study to identify if TLR7 expression is associated with disease activity and the role of TLR7 in pSS.
Methods: 21 pSS patients and 12 healthy controls(HCs) were selected. The mRNA expression of TLR7 was determined by real-time PCR on peripheral B cells of both pSS patients and HCs. We measured BAFF serum concentrations by ELISA, and the BAFF-R, TACI and BCMA expression was analysed on each B cell subset ($CD27^-CD24^{hi}CD38^{hi}$/transitional B cell; $CD27^-CD24^{lo}CD38^{lo}$/naive B cell;) by flow cytometry. The results were compared among patients with diversed degree of disease activity and damage to HCs.
Results: The expression level of TLR7 mRNA were elevated in pSS patients compared with HCs(p=0.004), and correlated with the SSDAI (SS disease activity index) (r=0.803; p=0.009) and the SSDI(SS damage index)(r=0.881;p=0.002). Serum BAFF concentrations increased in pSS patients compared with HCs (p=0.041), but not corrleted with TLR7 expression. TACI expression in pSS patients in total B cells and traditional B cells compared to HCs were elevated and are both associated with TLR7 expression (r=0.763,p=0.048,r=0.820,p=0.004, respectively). A lower BAFFR expression was seen in transitional B cell compared with HCs(p=0.018). BCMA expression was of no significance.
Conclusions: Increased TLR7 expression on peripheral B cells were associated with disease activity and damage, suggesting that TLR7 may play a role in the development in pSS. Increased serum BAFF concentrition and TACI expression were associated with TLR7 expression, indicating that BAFF may regulate TLR7 expression through TACI according to previous studies.TLR7 may be a potential treatment target of pSS and worth of further study.
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AB0178 SUPPRESSION OF ENDOPLASMIC RETICULUM STRESS BY 4-PBA IMPROVES THE MANIFESTATIONS OF MURINE LUPUS THROUGH MODULATING REGULATORY T CELLS

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Background: Impaired function of regulatory T cells (Treg) contributes to the pathogenesis of systemic lupus erythematosus (SLE). It has been reported that the aberrant responses of T lymphocytes to endoplasmic reticulum (ER) stress in patients with SLE.
Objectives: In the present study, we investigated whether ER stress inhibition through 4-phenylbutyric acid (4-PBA) ameliorates lupus manifestation on