glutathione peroxidase activity (GPx), and inflammatory progenitors ICE/caspase-1 (ELISA) were determined.

Results: SAC increased OAC's proliferation rate and adhesion profile at relatively low concentrations (1, 10 and 100 nM), but inhibited at higher concentrations (1-100 μ M). SAC (1 nM-10 μ M) inhibited ROS, LPO and 3-NT, but not HNE- and AGE-modified proteins levels. SAC increased GPx but drastically down regulated ICE/caspase-1, indicating a potential redox regulating and anti-inflammatory effect.

Conclusion: Results suggest that SAC has favourable effects on OA chondrocytes through protecting proliferation capacity and ameliorating redox-mediated inflammatory pathways. Further studies are needed to investigate its therapeutic potential in patients with OA.

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Figure. Cell proliferation of human primary chondrocytes (A) and dynamic monitoring of adhesion profile of human primary chondrocytes during SAC (B) treated with SAC (24 h). ICE/caspase-1, ROS, LPO, HNE, AGE, 3-NT levels after SAC (24 h) treatment (C). ^ap<0.05, ^bp<0.01, ^cp<0.001 vs OAC. (Bland-Altman Statistics)

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AB0108 THE ROLE OF CD70 IN THE PATHOGENESIS OF RHEUMATOID ARTHRITIS

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Background: Rheumatoid arthritis (RA) is characterized by inflammation and cellular proliferation in the synovium. Activated lymphocytes and proinflammatory molecules are important in the pathogenesis of RA.

CD70 belongs to the tumor necrosis factor (TNF) ligand superfamily and is typically present on activated B and T lymphocytes, natural killer cells and mature dendritic cells.

CD70 expressing CD4⁺ T cells are enriched in the peripheral blood and synovial fluid of patients with RA and promote autoimmunity via co-stimulatory CD70-CD27 interaction.

CD70 expression is associated with aggressive phenotype of cancer cells and it is mediated by hypoxia inducible factor 2 α (HIF-2 α).

Objectives: In this study, we examined the presence of CD70 on the surface of fibroblast-like synovocyte (FLS) of patients with RA (RA-FLS) and investigate the role of CD70 in the pathogenesis of RA associated with HIF-2 α .

Methods: RA FLS were obtained from 7 patients with RA who were undergone operation like total knee replacement or synovectomy. All patients were fulfilled the 2010 ACR-EULAR classification criteria for RA.

CD70 and HIF-2 α messenger ribonucleic acid (mRNA) were analyzed in RA-FLS by quantitative polymerase chain reaction (qPCR).

CD70 and CD27 on the surface of RA-FLS were stained by PE-Anti CD70 antibody and PerCP-Cy5.5-CD27 antibody respectively and evaluated by flow cytometry.

Same experiments were performed after treatment with interleukin (IL)-17, TNF- α and HIF-2 α blocking antibody (Anti HIF-2 α antibody).

Results: CD70 and HIF-2 α mRNA in the RA-FLS were elevated after treatment with IL-17 and TNF- α (Figure 1, 2).

The level of CD70 expression on the surface of RA-FLS was elevated after stimulation with IL-17 and TNF- α (Figure 3). And it was lowered after treatment with HIF-2 α blocking antibody as dose dependent pattern (Figure 3).

CD27 wasn't present on the surface of RA-FLS (Figure 4).

Conclusion: We identified the expression of CD70 on the surface of RA-FLS.

And in inflammatory conditions like stimulation with IL-17 and TNF- α , both CD70 and HIF-2 α mRNA were increased. The level of CD70 on the surface of RA-FLS also elevated by treatment with IL-17 and TNF- α .

The result of decreased level of CD70 after treatment with anti HIF-2 α antibody suggest that CD70 expression on the surface of RA-FLS is associated with HIF-2 α .

From these results, we expect that CD70-targeted therapy associated with HIF-2 α may be effective for treatment with RA.

Fig1. The result of CD70 mRNA after treatment with IL-17 & TNF α (5 RA FLS, * P = 0.008)

Fig2. The result of HIF2 α mRNA after treatment with IL-17 & TNF α (7 RA FLS, * P = 0.019, ** P = 0.039)

Fig3. The result of CD70 on the RA FLS after treatment with IL-17, TNF α and anti-HIF2 α antibody by flow-cytometry

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AB0108B PREVALENCE AND RISK FACTORS INFLUENCING THE DEVELOPMENT OF ARTERIAL HYPERTENSION IN PATIENTS WITH A GOUT

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Background: Cardiovascular diseases (CVD) is the leading cause of death for gout. Arterial hypertension (AH) is a proven CVD risk factor (CVD-RF).

Objectives: To assess the factors influencing on development of an AH in patients with a gout.

Methods: 286 male patients fulfilling Wallace proposed criteria for gout were included in the study: age 51.2 [42.8;59.4] years (ys), disease duration – 6.2 [3.8;12.1] ys, number of joints involved during disease course – 7 [4;12], subcutaneous tophi – in 35% pts, intraosseous tophi – in 44% pts, nephrolithiasis – in 69% pts, abdominal obesity – in 71%. All pts underwent standard clinical examination, C-reactive protein (CRP), total cholesterol (TC), triglycerides (TG), low and high density lipoproteins (LDL/HDL), serum uric acid, serum creatinine, smoking, family history of AH, body mass index (BMI), diabetes mellitus was performed by standard procedure. We estimated the adjusted odds ratio (OR) and 95% confidence interval (95% CI).

Results: There were two groups of patients with AH diagnosed on clinical data: group 1 (with AH) - 244 (85%) pts, group 2 (without AH) - 42 (15%) pts. The 1st group pts were older (52.3[44.5; 61.1] vs 41.9[38.3; 50.1] ys), had longer duration of gout (6.7[3.9; 13.7] vs 4.5[3; 7.9]), a higher number of joints involved during disease course (8[4; 12] vs 5[3; 9]). The frequency of family history of AH (68.3% vs 48.8%), abdominal obesity (55.3% vs 33.3%), nephrolithiasis (71% vs 54.7%), intraosseous tophi (48% vs 21%) was higher in group 1 as compared with group 2, p<0.05. BMI and CRP level was higher in group 1 compared with group 2: 30.2[27.4; 33.1] vs 27.9[26.3; 30.5] kg/m², and 12.7[5.84; 19.2] vs 7.8[3.7;16.4]mg/l, accordingly, p<0.05. We didn't find differences of lipid profile, serum uric acid, and serum creatinine level in 1 and 2 group. We also didn't find differences the frequency of smoking, diabetes mellitus, subcutaneous tophi in both groups (table 1).

Table 1

Parameters	Group 1	Group 2
Uric acid, mmol/l	494[420; 575.8]	466[397.3; 547]
Creatinine, mmol/l	94[84.7; 108]	93[83.8; 102]
TC, mg/dl	225[190; 266.8]	225[190; 251]
HDL, mg/dl	35.2[28; 44]	38[27.5; 46.8]
LDL, mg/dl	152.8[113.5; 182.4]	132.2[103;175.2]
TG, mg/dl	172.5[120; 262.3]	147[94;240]
Subcutaneous tophi,%	36.5	26
Smoking,%	29.9	28.6
Diabetes mellitus,%	17.6	11.9

Data are present in median values and interquartile range, *p<0.05 (nonparametric paired Mann-Whitney U-test).

Abdominal obesity (OR, 1.247; 95% CI, 1.063-1.462), family history of AH (OR, 2.8; 95% CI, 1.5-5.4), disease duration more 10 ys (OR, 4.5; 95% CI, 1.1-19.4), intraosseous tophi (OR, 3.0; 95% CI, 1.4-6.4), increased the risk for AH in patients with a gout.

Conclusion: Majority (85%) of patients with gout had AH. Abdominal obesity, family history of AH, disease duration more 10 ys, intraosseous tophi were associated with an increased risk of AH in pts with a gout.

Disclosure of Interests: None declared

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Rheumatoid arthritis - etiology, pathogenesis and animal models

AB0109 SYSTEMIC OVEREXPRESSION OF INTERLEUKIN-22 INDUCES EXPRESSION OF THE NEGATIVE IMMUNE-REGULATOR SOCS3 AND POTENTLY REDUCES COLLAGEN-INDUCED ARTHRITIS IN MICE

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Background: High interleukin-22 (IL-22) levels are detected in serum and synovial fluid of rheumatoid arthritis (RA) patients. The increased IL-22 serum levels in RA patients correlated positively with multiple clinical disease parameters like disease activity score (DAS)28 and serum levels of rheumatoid factor. The role of IL-22 in autoimmunity and inflammation appears to be greatly contradictory, being both pro- and anti-inflammatory. Especially the anti-inflammatory properties of IL-22 are not well understood.

Objectives: We aimed to investigate the anti-inflammatory and immune-suppressive effect of IL-22 during experimental arthritis.

Methods: Collagen-induced arthritis was induced in DBA1 mice by immunization and booster with bovine collagen type II (CII). After booster, but before arthritis onset, IL-22 was overexpressed either locally or systemically using an adenoviral construct (AdIL-22) or Luciferase as control (AdLuc). 1x10⁷ plaque-forming units (PFU) of the adenoviruses were injected intra-articularly for local overexpression, or 3x10⁸ PFU was injected intravenously for systemic overexpression in immunized mice, and mice were sacrificed 10 days later. Macroscopic scoring and histological analysis was performed, and mRNA expression and protein production of various pro- and anti-inflammatory mediators was determined in synovial tissue, spleen, and serum.

Results: Local overexpression of IL-22 by injection of AdIL-22 in the knee joint of CII-immunized mice resulted in an unaltered arthritis incidence and severity as compared to the control virus AdLuc. Accordingly, no changes in mRNA expression or protein production were observed in CIA mice locally overexpressing IL-22. In contrast, systemic overexpression of IL-22 potentially reduced disease incidence and severity, which was also confirmed by histological analysis. Systemic levels of IL-1 β , IL-17, GM-CSF and MCP1 were unaltered in mice overexpressing IL-22 systemically. However, these mice showed significantly lower serum levels of IFN γ , TNF α , MIP1 α , and IL-10. Interestingly, the significantly enhanced splenic SOCS3 expression was found to negatively correlate to serum TNF α and MIP1 α levels, which is in line with our hypothesis that that the observed reduction in the cytokine levels is mediated in a SOCS3-dependent manner.

Conclusion: With this study, we revealed clear anti-inflammatory effects of IL-22 overexpression during collagen-induced arthritis, which are completely dependent on the systemic route of administration. Additionally, we were the first to show that this protective effect of IL-22 during experimental arthritis is likely orchestrated via up-regulation of the negative regulator SOCS3.

Disclosure of Interests: None declared

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AB0110 RITUXIMAB INDUCED GRANULOMATOUS HEPATITIS WITH A SARCOIDOSIS LIKE REACTION: A BLINDED TRIAL IN MICE

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Background: Rituximab is useful in patients with rheumatoid arthritis (RA) with persistently active disease despite adequate trials with other disease-modifying antirheumatic drugs (DMARDs).

Objectives: To determine whether the inhibition of the B cell CD20 receptor by rituximab results in acute hepatitis in BALB/c mice.

Methods: Twenty BALB/c mice were studied. Ten mice received subcutaneous (SC) injection of rituximab (0.31 mg per 25g body weight per 0.03 ml normal saline) at 0, 1, 2 and 4 weeks. For the control group, 10 mice received a SC injection of normal saline (NS) (0.03 ml). At the 10th week post injection, the mice were sacrificed, and histopathological studies were conducted.

Results: Of the rituximab-treated group, 1/10 mice died. Liver histology for the rituximab-treated group showed that 7/9 displayed histopathological changes in the lobular cellular infiltrates of eosinophils, lymphocytes and histiocytes, in addition to granuloma formation. In contrast, only minimal inflammation was observed in 3/10 mice in the control group (p=0.051).