Background and aims Allergy is a common condition that is caused by an overreaction of the immune system to foreign substances. Severe allergic reactions can result in a systemic life-threatening state referred to as an anaphylactic shock. The progression of the anaphylactic reaction is hard to control after onset, and there is no effective prophylactic treatment available. Recently, mice deficient of the group III metabotropic glutamate receptor mGluR7 were shown to display an anaphylactic-like behaviour when exposed to peripheral histamine, suggesting that mGluR7 works as a neuronal brake on peripheral neurons involved in allergy and anaphylaxis. However, the role of mGluR7 in allergen-induced anaphylaxis is still unknown.
Methods In the PCA model, on the first day, BALB/C mice were lightly anaesthetised with isoflurane and their left ears were intradermally (i.d.) injected with a monoclonal antibody (IgE directed against OVA- trinitrophenol (TNP), 1 µg in 10 µl PBS), whereas the right ears were used as controls (receives an i.d. injection of 10 µl PBS as vehicle). The PCA reaction was induced 24 hours later by an intravenous injection of 50 µg OVA-TNP in 200 µl of 2% Evans blue in PBS.
Results Here, we show that central activation of mGluR7 dampens the development of allergen-induced anaphylaxis as intrathecal, but not intraperitoneal, prophylactic administration of the mGluR7 allosteric agonist N, N'-dibenzhydrylethane-1, 2-diamine dihydrochloride [ML1] AMN082 attenuated the development of passive cutaneous anaphylaxis in mice.
Conclusions Activating the mGluR7 system thus represents a potential preventive treatment for anaphylaxis.

72 IMPLICATIONS OF AUTOPHAGY FOR FUNCTINAL CHANGES OF RHEUMATOID ARTHRITIS FIBROBLAST-LIKE SYNOVIOCYTES

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Background and aims Rheumatoid arthritis (RA) is characterised by exaggerated synovial proliferation in which interleukin-17A (IL-17A) plays a key role. Recently several evidences support the implication of autophagy in the pathogenesis of RA. The aims of this study are (1) to evaluate whether IL-17A influences on autophagic flux in RA synovium and (2) to investigate whether the modulation of autophagy can regulate migration and proliferation of fibroblast-like synoviocytes (FLS) from the patients with RA (RA-FLS) under inflammatory milieu.
Methods FLS from the patients with RA or osteoarthritis (OA) were cultured with IL-17A and/or autophagy regulators. The expression of marker proteins for autophagic flux or the formation of autophagolysosome was analysed by western blot or immunofluorescence study. A migration scratch assay was used to assess FLS migration. Proliferation of FLS was determined by the viable cell count using trypan blue.
Results LC3 conversion from LC3-I to LC3-II was increased in RA-FLS than in OA-FLS. IL-17A upregulated the expression of LC3B, Atg5, Beclin1, LAMP1 in RA-FLS. The accumulation of p62 was also prominent in RA-FLS. Migration and proliferation of FLS stimulated by IL-17A was suppressed by Bafilomycin A1 which prevented the formation of autophagolysosomes. P62-silencing enhanced IL-17A-induced autophagy activation in RA-FLS.
Conclusions This study reveals that IL-17A stimulates autophagy and that intervention of autophagy can control IL-17A-induced migration and proliferation of FLS. Our results also provide additional evidence for a significant role of autophagy in the pathogenesis of RA. Thus, we suggest that autophagy might be a potential therapeutic target for the management of RA.

73 ANTIARTHRITIC EFFECT OF CROCETIN AGAINST ADJUVANT INDUCED AUTOINNUME DISEASE VIA SUPPRESSION THE NF-KB EXPRESSION AND ACTIVATING OF HEM OXYGENASE (HO)-1/NUCLEAR FACTOR-E2-RELATED FACTOR SIGNALLING PATHWAY

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Background and aims Rheumatoid arthritis (RA) is chronic autoimmune diseases, which inducing the cartilage obliteration, synovial joints destruction and typically producing the symmetrical inflammation, which further leads to disability, demolition and deformity into the joint. The aim of the current study was to scrutinise the anti-arthritic potential of crocetin in formaldehyde induced inflammation and complete freund's adjuvant (CFA) induced arthritis.
Methods Formaldehyde used for the induction of acute inflammation and CFA used for induction the arthritis. Both method, the rats were divided into different groups and each group contains the 6 rats. The different doses of crocetin (10, 20 and 40 mg/kg) was used in this model. The body weight, arthritic index were scrutinised at regular interval. Hepatic and antioxidant parameter were determined, respectively.
Results Crocetin dose dependently reduced joint inflammation as support via reduce the joint diameter and decreased inflammatory cell infiltration. Crocetin showed the improvement the synovium redox status (down-regulation in MDA and GSH and boost the CAT and SOD level). Crocetin significantly reduced the expression of inflammatory marker viz., TNF-α. Crocetin enhanced The HO-1/Nrf-2 and reduced the NF-κB mRNA expression in adjuvant joint. Additionally, crocetin treatment decreased the expression of degrading enzymes such AS MMP-3 and MMP-9 in adjuvant induced arthritic rats.
Conclusions Collectively, we can conclude that crocetin showed the anti-arthritic effect via down-regulating the NF-κB and Nrf-2/HO-1 pathway.

74 INFLAMMATORY Vδ2 T CELLS CHEMOTAXIS TO THE JOINTS AND CONTRIBUTE TO THE PATHOGENESIS OF RHEUMATOID ARTHRITIS

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