evaluated in the methotrexate cohort. Prostaglandins deriving from the COX pathway were determined by liquid-chromatography coupled with mass spectrometry in supernatants from in vitro cultured fibroblast-like synoviocytes (FLS) activated with IL-1β and treated with methotrexate.

Results 15-PGDH is present in synovial tissue of RA, ostheoarthritis and psoriatic arthritis patients but also in healthy individuals, mainly in lining macrophages, fibroblasts and vessels. Intra-articular show a trend towards reduced 15-PGDH in RA synovium while methotrexate treatment to leaves unaltered the PGE_2 pathway both in biopsies ex vivo and in cultured FLS.

Conclusion 15-PGDH, the enzyme implicated in degradation and removal of pro-inflammatory PGE_2 in the rheumatoid joint is expressed in the synovial tissue. While local glucocorticoids may decrease its expression, methotrexate has little influence on any of the PGE_2 pathway enzymes 8 weeks after therapy start. Thus therapeutical strategies involving blocking PGE_2 synthesis may find a rationale in additionally reducing local inflammatory mediators.

A175 LIMITED EFFECTS OF METHOTREXATE ON ENZYMES OF THE PGE_2 PATHWAY IN RHEUMATOID ARTHRITIS SYNOVIAL TISSUE

Karina Roxana Gheorghe,[1,2] Syed Sadique,[1] Helena Idborg,[1] Yvonne Wobst,[3] Anca Irinel Catrina,[1] Per-Johan Jakobsson,[1] Marina Korotkova[1] *[1]Department of Medicine, Rheumatology Unit, Karolinska Institute/Karolinska University Hospital, Solna, Stockholm, Sweden; [2]Department of Biosciences and Nutrition, Karolinska Institute Novum, Huddinge, Sweden; [3]Department of Clinical Pharmacology, Johann Wolfgang Goethe-University Frankfurt, LIFF/ ZAFES, Frankfurt/Main, Germany*

10.1136/ard.2010.149013.18

Objectives Rheumatoid arthritis (RA) is a chronic inflammatory disease in which prostaglandin E_2 (PGE_2) displays important pathogenic role in the affected joints. Whereas the enzymes involved in its synthesis, microsomal PGE_2 synthase-1 and cyclooxygenases (COX1 and COX2), are highly expressed in the inflamed synovium, little is known about 15-prostaglandin dihydrogenase (15-PGDH) that metabolises PGE_2. In this study the authors aimed to investigate the localisation of 15-PGDH in the synovial tissue and the influence of common RA therapy on its expression.

Materials and methods Synovial tissue specimens were obtained from healthy individuals, psoriatic arthritis, ostheoarthritis and RA patients and immunohistochemical analysis and double immunfluorescence staining was used to describe the expression pattern of 15-PGDH. In addition, synovial biopsies were obtained by arthroscopy from 10 RA patients with active knee arthritis undergoing intra-articular glucocorticoid therapy as well as from 13 newly diagnosed RA patients starting methotrexate therapy, before and after start of treatment. After immunohistochemical staining, 15-PGDH was analysed in patients receiving glucocorticoid injection and the expression of enzymes involved in the PGE_2 cascade was