of Tregs in RA and osteoarthritis (OA) BM samples. In parallel, the levels and activities of another T cell inhibitory enzyme, indoleamine 2,3-dioxygenase (IDO) was analysed.

Materials and Methods BM mononuclear cells (BMMC) were obtained from BM of RA or OA patients undergoing hip bone replacement surgery. The expression of Foxp3 protein together with CD4 and CD25 was assessed by FACS analysis. After 72 h, in vitro culture of BMMC with or without IL15 CD4 CD25²⁺ Tregs were isolated for functional activity measured in proliferation assay. IDO expression (RT-PCR) and enzymatic activity estimated by IDO product kynurenine (high performance liquid chromatography) were evaluated in BMMC cultured for 72 h in the presence of IL15 and IDO inhibitor (1-methyl-DL-tryptophan).

Results CD4 Foxp3⁺ regulatory T cells are present in OA BM at a higher number than in RA patients (4.7% vs 2.6% of CD4, $p < 0.05$). Tregs from both OA and RA BM are functional, suppressing CD4 CD25 T cell proliferation. IL15 triggered CD4 Foxp3⁺ expression correlated with IDO levels in cultured BMMC from both OA and RA. Moreover, IL15-triggered Foxp3 expression was IDO dependent. The IDO inhibitor (1-methyl-DL-tryptophan) decreased Foxp3⁺ expression for >30% in 4/5 OA cultures ($p < 0.05$) and only in 2/5 RA cultures. IDO activity measured by kynurenine formation confirmed these findings.

Conclusion Partial dependence of IL15-triggered Foxp3 expression on IDO activity suggests that both these immunoregulatory mechanisms may operate together for more efficient immunosuppression. However, the lower number of functional Tregs present in RA BM in comparison with OA may account for less efficient inhibition of T cell activation in RA BM.

A174 INTERLEUKIN 15 TRIGGERS DIFFERENTIATION/MATURATION OF FOXP3+ T CELLS FROM BONE MARROW IN INDOLEAMINE 2,3-DIOXYGENASE (IDO)-DEPENDENT MANNER

M Chorazy-Massalska,¹ A Radzikowska,¹ E Warnawin,¹ M Jastrzebska,¹ I Janicka,¹ T Burakowski,¹ D Pawlak,² W Rudnicka,¹ P Malyk,³ E Kontny,¹ W Maslinski¹ ¹Department of Pathophysiology and Immunology, Warsaw, Poland; ²Clinic of Orthopaedy, Institute of Rheumatology, Warsaw, Poland; ³Medical University, Bialystok, Poland

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Objective Recent data provide evidence that efficient T cell priming takes place in bone marrow (BM). Moreover, our recent data indicate that these processes are even more pronounced in chronic autoimmune diseases such as rheumatoid arthritis (RA), suggesting that natural inhibitory mechanisms including recruitment and functions of regulatory T cells (Tregs) compartment may be affected in these diseases. In the present study the authors analysed the presence and function