showed that caspase-3 scores were significantly higher in biopsies treated with tPDT compared to those incubated with buffer ($p=0.009$).

Conclusions FAP-tPDT induces cell death of FAP-positive activated fibroblasts in synovial tissue from RA patients. This is a first indication that FAP-targeted PDT can be a feasible new treatment strategy in RA.

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EFFECTS OF RESVERATROL AND A NOVEL RESVERATROL-SALICYLATE HYBRID MOLECULE ON ACTIVATION OF HUMAN CD4⁺ T-CELLS

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Career situation of first and presenting author Student for a master or a PhD.

Introduction T-cells are assumed to be crucially involved in the pathogenesis of systemic autoimmune diseases such as rheumatoid arthritis (RA). Consequently, substances modulating T-cell activation may have therapeutic benefit in RA and related rheumatic diseases. Resveratrol is a natural occurring polyphenol mainly produced in plants. The beneficial effects of resveratrol are due to its anti-inflammatory, anti-carcinogenic and anti-oxidant activities.

Objectives To compare the effects of resveratrol and a novel resveratrol-salicylate hybrid molecule termed C-10 (Aldawsari FS *et al*, 2016) on human CD4⁺ T-cells.

Methods CD4⁺ T-cells were isolated from healthy donors and pre-incubated with different concentrations of resveratrol or C-10 before being stimulated with anti-CD3/anti-CD28 antibodies. After 24 hour and 72 hour, respectively, cell culture supernatants were harvested and IL-2, IFN- γ and TNF- α release was quantified by ELISA. Proliferation rate was measured by thymidine incorporation. In addition, the up-regulation of the early activation markers CD25, CD69, CD71 and CD98 was analyzed and phosphorylation of signal transduction molecules were determined by western blot and/or flow cytometry.

Results Inhibition of IL-2, IFN- γ and particularly TNF- α release was significantly more effective when the cells were treated with C-10 as compared to resveratrol. Moreover, the proliferation rate was significantly more decreased in the presence of C-10. The expression of CD25, CD69, CD71 and CD98hc was reduced to a similar degree by both compounds. Furthermore, phosphorylation of Akt and STAT-5 was substantially attenuated by C-10 and to a lesser degree also by resveratrol. All T cell subsets investigated (Th1, Th2, Th17) were affected at a similar degree but the most pronounced effect was seen in naïve T cells.

Conclusions Our data demonstrate that C-10 suppressed cytokine secretion and proliferation more effectively than resveratrol. Both compounds influence the phosphorylation of important signalling molecules. The effect exerted on STAT-5 activation may be the key mechanism for inhibition of T cell activation. Thus, the resveratrol-salicylate hybrid molecule C-10 might be considered a candidate drug for treatment of RA and other T-cell driven autoimmune diseases.

REFERENCE

1. Aldawsari FS, Aguiar RP, Wiirzler LA, Aguayo-Ortiz R, Aljuhani N, Cuman RK, Medina-Franco JL, Siraki AG, Velázquez-Martínez CA. Anti-inflammatory and antioxidant properties of a novel resveratrol-salicylate hybrid analog. *Bioorg Med Chem Lett*. 2016 Mar 1;26(5):1411–5.

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CLINICAL AND IMMUNOLOGICAL EFFECTS OF TOFACITINIB THERAPY IN RHEUMATOID ARTHRITIS

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Career situation of first and presenting author Student for a master or a PhD.

Introduction During the treatment of rheumatoid arthritis (RA) we intend to achieve remission or low disease activity. In this regard, the most effective way is targeted therapy. Oral JAK inhibitor, tofacitinib appeared as a new therapeutic option, beside biological therapies, which has already proven its safety and effectiveness in RA.

Objectives The aim of this study was to assess the clinical and immunological effects of one-year tofacitinib therapy in patients with RA.

Methods Altogether 30 RA patients with active disease were recruited and treated with tofacitinib in this 12 months follow-up study. Mean duration of rheumatoid arthritis were 7.7 $\pm$ 5.0 years. Half of the patients haven't received biological treatment prior tofacitinib therapy, other half of the patients switched to tofacitinib therapy after completing washout. 15 patients received 2 $\times$ 5 mg and 15 patients received 2 $\times$ 10 mg tofacitinib daily for 12 months. Assessments were performed at baseline, month 6 and 12. Levels of CRP and IgM rheumatoid factor (RF) antibodies were measured by quantitative nephelometry and levels of anti-CCP assessed by ELISA. Lymphocyte subsets (CD3⁺, CD4⁺, CD8⁺ T cells, CD19⁺ B cells and CD56⁺/CD3⁻ NK cells) were assessed by cytofluorimetry. In addition, disease activity (DAS28), age and disease duration were also measured.

Results Tofacitinib therapy was clinically effective, significant improvements in physical function were observed in 26 patients. 4 patients (two from both arms) quit the study due to inefficacy. There were significant decrease in levels of DAS28 ($p<0.001$), CRP ($p<0.001$) and HAQ value ($p<0.05$) in 12 months. There were no changes in levels of RF and anti-CCP. Numbers and ratio of CD3⁺ and CD4⁺ T cells were significantly decreased ($p<0.05$), however significant increase was seen in the numbers and ratio of CD19⁺ B cells after 12 months ($p<0.05$). There were no significant changes in numbers and ratio of NK cells. There was significant correlation between absolute number of CD8⁺ T cells and disease