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IN BRIEF

BONE

miR-106b promotes osteoporosis in mice

The microRNA miR-106b contributes to osteoporosis by negatively regulating osteoblast differentiation and bone formation via the bone morphogenic protein 2 (BMP2) signalling pathway, according to new research. *In vitro*, miR-106b negatively regulated osteogenic differentiation of mesenchymal stem cells. Mice with glucocorticoid-induced osteoporosis (GIOP) expressed higher levels of miR-106b than healthy mice, and silencing miR-106b signalling protected mice from GIOP by a combination of inhibiting bone resorption and promoting bone formation.

ORIGINAL ARTICLE Liu, K. *et al.* Silencing miR-106b accelerates osteogenesis of mesenchymal stem cells and rescues against glucocorticoid-induced osteoporosis by targeting BMP2. *Bone* http://dx.doi.org/ 10.1016/j.bone.2017.01.014 (2017)

THERAPY

Retreatment with rituximab is beneficial in RA

Data on 1,530 patients with rheumatoid arthritis (RA) in a real-life cohort from the CERERRA collaboration show that repeated cycles of rituximab provides clinical improvements. A significant ($P < 0.0001$) reduction in mean 28-joint disease activity score (DAS28) occurred between each round of retreatment, suggesting an improvement in disease. In a second analysis of 800 patients from the cohort, a fixed-interval treatment strategy was more effective than on-flare treatment, with the former yielding a lower average DAS28 (3.8 versus 4.6).

ORIGINAL ARTICLE Chatzidionysiou, K. *et al.* Rituximab retreatment in rheumatoid arthritis in a real-life cohort: data from the CERERRA collaboration. *J. Rheumatol.* http://dx.doi.org/10.3899/jrheum.160460 (2017)

RHEUMATOID ARTHRITIS

S100A9 does not predict response to etanercept

Pretreatment serum levels of protein S100A9 in a UK cohort of 236 patients with RA did not correlate with EULAR response to etanercept, despite promising results from a previous small-scale study. Levels of S100A9 were not associated with moderate response ($P = 0.957$ versus non-response) or good response ($P = 0.316$ versus non-response) to etanercept. Pretreatment levels of S100A9 also did not correlate with any clinical parameters of disease activity ($P > 0.05$).

ORIGINAL ARTICLE Smith, S. L. *et al.* The predictive value of serum S100A9 and response to etanercept is not confirmed in a large UK rheumatoid arthritis cohort. *Rheumatology (Oxford)* http://dx.doi.org/10.1093/rheumatology/kew387 (2017)

UNDIFFERENTIATED ARTHRITIS

Features of UA that develops into RA revealed

After 2 years, only 47 (9.8%) of 277 patients with undifferentiated arthritis (UA) from the Norwegian Very Early Arthritis Clinic study went on to fulfil the 2010 ACR–EULAR criteria for rheumatoid arthritis (RA). Characteristics of patients with UA that progressed to RA include older age, female sex, ever smoking, rheumatoid factor or anticitrullinated protein antibody positivity and initial presentation with polyarticular arthritis with small-joint involvement and a swollen shoulder joint. Patients with UA that developed into RA were also more likely to use DMARDs than those with UA that did not develop into RA ($P < 0.001$).

ORIGINAL ARTICLE Brinkmann, G. H. *et al.* Disease characteristics and rheumatoid arthritis development in patients with early undifferentiated arthritis: a 2-year followup study. *J. Rheumatol.* http://dx.doi.org/10.3899/jrheum.160693 (2017)