# RESEARCH HIGHLIGHTS

## **IN BRIEF**

#### METABOLIC BONE DISEASES

The effectiveness of treatment with strontium ranelate to prevent vertebral fractures in the long term has been demonstrated in a study of 1,649 postmenopausal osteoporotic women. After 4 years, the risk of fracture was significantly lower in those who received strontium ranelate as opposed to placebo. The treatment was also associated with improvements in quality of life and bone mineral density.

**Original article** Meunier, P. J. et al. Effects of long-term strontium ranelate treatment on vertebral fracture risk in postmenopausal women with osteoporosis. *Osteoporosis Int.* **60**, 578–583 (2009).

#### **AUTOIMMUNITY**

Germinal center-like follicular structures found in the rheumatoid arthritis synovium contribute to inflammation by supporting the production of pathogenic antibodies, and could influence the outcome of B-cell depletion therapy by promoting the survival of B-cell niches. Activation-induced cytidine deaminase, an enzyme expressed by the ectopic structures, could represent a therapeutic target.

**Original article** Humby, F. et al. Ectopic lymphoid structures support ongoing production of class-switching autoantibodies in rheumatoid synovium. *PLoS Med.* **6**, e1 (2009).

#### **THERAPY**

A systematic review of five trials involving 2,876 patients has concluded that the interleukin-1 receptor agonist anakinra is only moderately effective for the treatment of rheumatoid arthritis. Specifically, the analysis revealed only a 15% increase in the number of patients achieving American College of Rheumatology criteria for 20% improvement with anakinra compared with placebo. Although head-to-head comparisons are needed, anakinra does not seem to produce the same degree of improvement as other biologic therapies.

Original article Mertens, M. & Singh, J. A. Anakinra for rheumatoid arthritis. Cochrane Database of Systematic Reviews, Issue 1. Art. No.: CD005121 doi:10.1002/14651858.CD005121.pub3 (2009).

### **INFLAMMATION**

Levels of expression of glucocorticoid receptor are not downregulated *in vivo* and *ex vivo* following prolonged treatment with the receptor-activating Compound A. By contrast, long-term dexamethasone treatment leads to decreased receptor expression and the loss of inflammatory gene regulation. These results suggest Compound A is less likely than classical glucocorticoids to induce resistance to therapy.

**Original article** Gossye, V. *et al.* A plant-derived glucocorticoid receptor modulator attenuates inflammation without provoking ligand-induced resistance. *Ann. Rheum. Dis.* [doi: 10.1136/ard.2008.102871] (2009).