

In vivo Pharmacology: Collagen Induced Arthritis (CIA) in Mice and Rats

Species, strain, sex:	mouse, DBA/1J, male / rat, Dark Agouti, male
Number of animals per group:	n=10
Pharmacological control:	Etanercept, Methotrexate, Dexamethasone, Indomethacin, Prednisolone
Routes of administration:	PO, IP, SC
Treatment mode:	prophylactic, therapeutic
Duration of dosing:	11-15 days

Main read-outs:

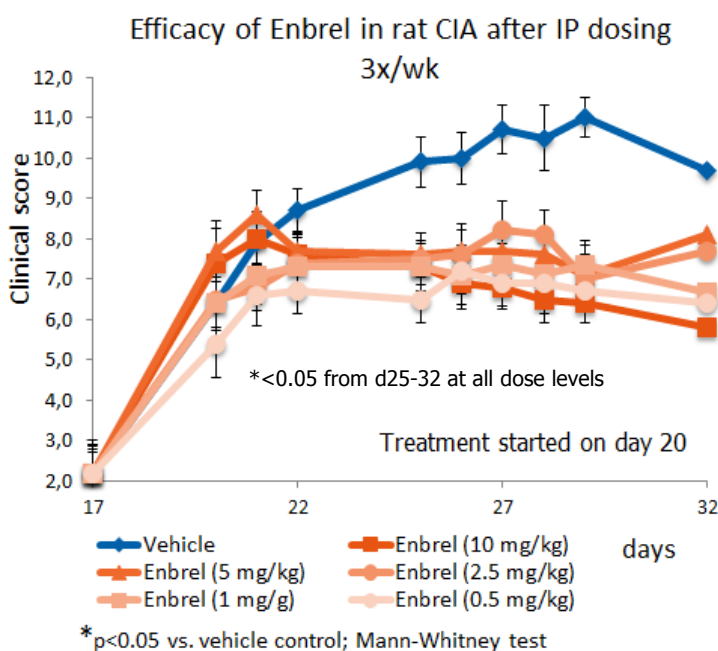
- Clinical score
- Paw swelling
- Body weight
- Haematology
- Histopathology

- Model is based on immunization with bovine collagen to develop antibodies against bone and cartilage
- Disease is fully developed 31-38 days in mice and 17 days in rats after the 1st immunization, and is clinically characterized by paw redness and swelling.

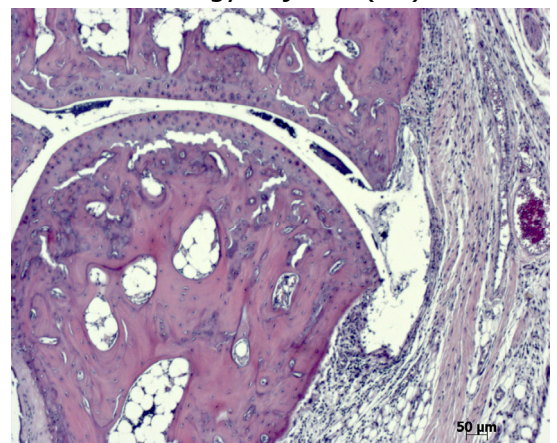
Facultative read outs:

- Immunohistochemistry
- Serum biomarkers and inflammatory mediators
- Target safety readouts

- Anti-arthritic activity of the test compounds is evaluated throughout the study (main read-outs), while joints and other selected tissues are collected at the end of the study to be subsequently analyzed or sent to the sponsor, as requested.

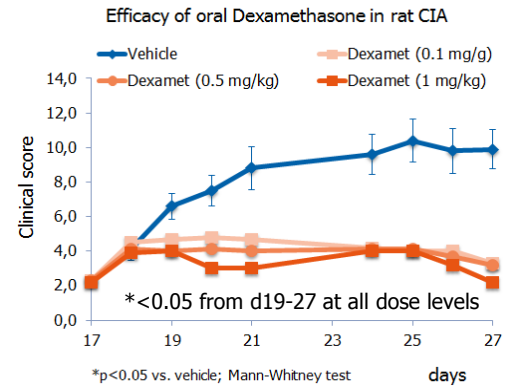
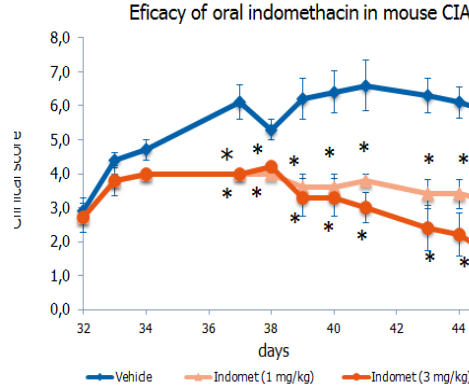
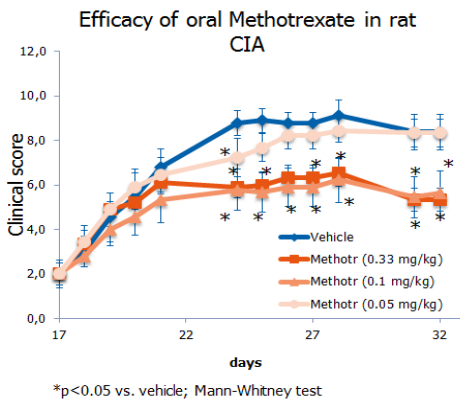


Histology of joints (HE)

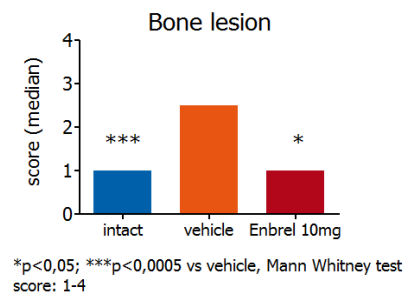
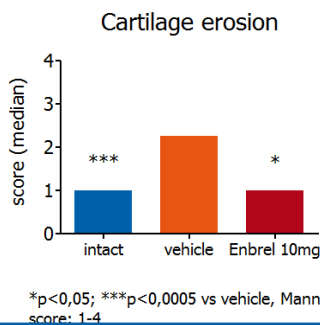
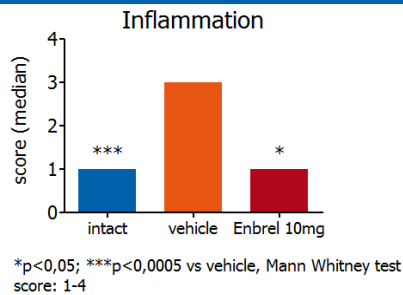
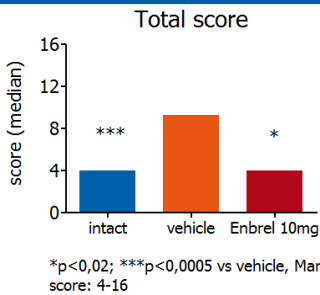


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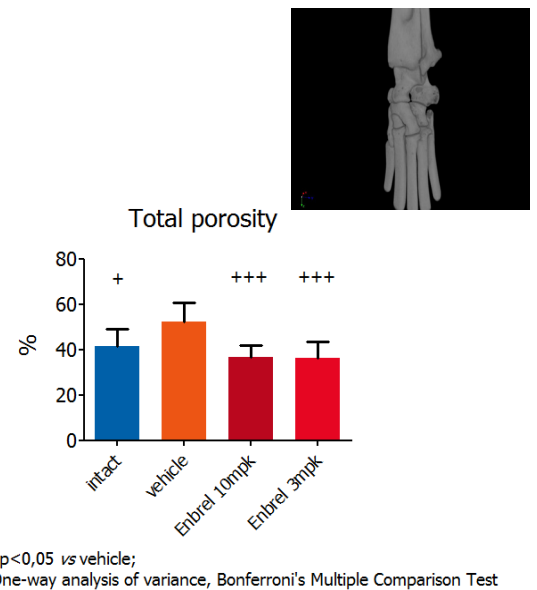
Efficacy of clinical benchmark drugs for rheumatoid arthritis in CIA – clinical score



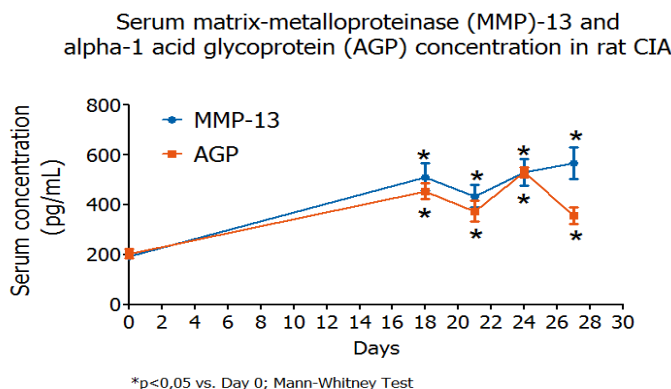
Histological assessment of anti-rheumatic activity



μCT analysis of rat joints



Profiling of serum biomarkers



Immunohistochemistry

