Supplementary Figure 1. The non-linear pharmacokinetic profile of a single ascending dose of CAM-3003, an anti-mouse GM-CSFR monoclonal antibody. Data are plotted as mean ± SEM (n=4/group/time point).

Supplementary Figure 2 shows representative images of the areas of quantification typically observed in a non-inflamed paw (A) and an arthritic inflamed paw (B). The area of synovial tissue analysed was determined using the Aperio Scanscope XT digital image scanning. The numbers of clearly distinguishable macrophages present within the annotated synovial membrane of the tibia-calcaneum were counted (see article figure 4).
Supplementary Figure 3. Characterisation of the effect of either GM-CSF or TNF-α inhibition in established arthritis. a) Mice were treated daily for 14 days post the onset of arthritis with either an anti-GM-CSF antibody (Clone 22E9) at 100mcg daily or CAT-004 (100μg) as an isotype control. Mean clinical score was plotted daily to map disease progression. b) Mice were treated daily for 14 days post the onset of arthritis with either etanercept at 0.5mg/kg daily or CAT-004 (10mg/kg) as an isotype control. Mean clinical score was plotted daily to map disease progression.

Supplementary Figure 4. Characterisation of the effect of GM-CSFR inhibition on lymphoid organ weights in established arthritis. Mice were treated daily for 14 days post onset of arthritis with either anti-GM-CSFR antibody (CAM-3003) at 1 or 10 mg/kg, isotype control (CAT-004) at 10mg/kg and 3mg/kg Prednisolone by oral gavage. A) Spleen weights were measured at Day 14 post...
onset of arthritis and B) Lymphnodes, 2 thoracic and 2 inguinal, were pooled and weighed at Day 14. Data shown are represented as mean weight ± SEM. Data were analysed using an ANOVA with Dunnet's multiple comparison test comparing vehicle versus all groups. *p<0.05, **p<0.01 & ***p<0.001.

Supplementary Figure 5. Characterisation of the effect of GM-CSFR inhibition on peripheral blood neutrophil counts in established arthritis. Mice were treated daily for 14 days post onset of arthritis with either anti-GMCSFR antibody (CAM-3003) at 1 or 10 mg/kg, isotype control (CAT-004) at 10mg/kg and 3mg/kg Prednisolone by oral gavage. Peripheral blood was sampled at Day 14 by cardiac puncture under terminal anaesthesia for differential blood cell
count (ADVIA; Manufacturer) including neutrophil cell counting. Data was analysed using a Two-tailed unpaired T-Test comparing isotype control versus 10mg/kg CAM-3003 group. *p<0.05.

Supplementary Figure 6. Characterisation of the effect of GM-CSFR inhibition on anticollagen type II antibody responses. Mice were treated daily for 14 days post onset of arthritis with either anti-GM-CSFR antibody (CAM-3003) at 10 mg/kg, isotype control (CAT-004) at 10mg/kg and 3mg/kg Prednisolone by oral gavage. Sera was collected from peripheral blood and analysed for levels of anti-collagen II antibodies by ELISA as per manufactures protocol (Chondrex Inc, Redmond, WA). As the variances between groups were significantly different a non-parametric Mann-Whitney test was used between Naive and Vehicle groups. No significant difference was observed between Vehicle, prednisolone, CAM-3003 and isotype control groups. **p<0.01