



## Project Summary

### **Promoting the regression of angiogenesis in the pathology of rheumatoid arthritis**

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Rheumatoid arthritis is a common disease, affecting more than 400,000 people over the age of 16 years old in the UK. Blood vessels grow into joints during the progression of rheumatoid arthritis. This blood vessel growth makes the damaging inflammation worse and increases joint pain.

Angiogenesis is the term used for the growth of blood vessels. Low oxygen is a major driver of angiogenesis. High oxygen, known as hyperoxia, reverses angiogenesis in a variety of tissues. It is unknown whether hyperoxia will reverse angiogenesis in arthritis.

We will establish a model in the laboratory to study blood vessel growth. We will use this model to identify key events that reverse this blood vessel growth in the joint. This study will use a range of techniques to understand the changes in the cells and the environment.

The identification of a new biological pathway is important for future medicines development. The findings of this pilot project will form the basis of larger clinical study. The end goal is to provide a new treatment to ease joint pain experienced by patients.