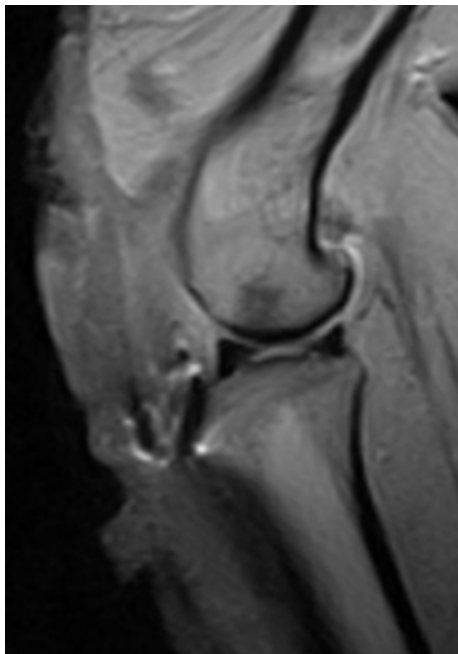




“European consortium awarded Euro 6 million to compare methods of tracking stem cells in arthritic joints – the STARSTEM project”.

A European grant has been awarded to a group of researchers to investigate new methods of tracking the fate of stem cells in the body. Dr Frances Henson is heading the UK team and working with the groups from Ireland, Spain, Italy and Germany. Regenerative medicine and stem cell therapies provide unique opportunities for treating a wide range of human and animal diseases. However, scientists do not yet fully understand how stem cells trigger healing, or indeed where the cells go after they are administered to the patient. The new STARSTEM project will address these challenges. Therapeutic stem cells will be ‘tagged’ with tiny gold star-shaped nanoparticles to make them much detectable with magnetic resonance imaging (MRI) and an exciting new imaging technology - *photoacoustic imaging*; this enables researchers to track the location of very small amounts of stem cells after they are administered. PAI will also make the healing effects of the stem cell therapy measurable by measuring oxygen levels in the blood and the formation of new blood vessels. These new insights will greatly help to take regenerative medicine into the clinic – a key aim of the Cambridge Research Team.



MRI image of a sheep knee. The bright white areas are labelled stem cells in the joint.