Stimulating sensory neurons with synovial fluids obtained after routine synovial fluid aspirations from arthritic patients can be used to identify new, clinically relevant targets of arthritic pain.

1. Knee inflammation decreases digging behavior

Experimental Timeline

2. Knee neurons from the inflamed side are more excitable than the control side

3. TRPV1 is upregulated in knee neurons from the inflamed side

4. A peripherally restricted TRPV1 blocker, A-425619, normalizes decreased digging behavior

5. Incubation with osteoarthritic, but not healthy synovial fluid increases excitability of knee neurons.

6. Incubation with osteoarthritic synovial fluid dysregulates TRP channel activity