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3d micro-mr and micro-ct models for determining in-vivo function in the Guinea Pig knee model of Osteoarthritis (OA)

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Osteoarthritis (OA) is a debilitating disease that affects an estimated 27 million adults in the United States. This research project was based around helping to find a real solution to a real problem. Project goals were to determine necessary settings of micro-MR in order to be able to reproduce results in longitudinal studies. It was quickly realized that micro-MR would not work to create a 3D model of the joint but rather a combination of micro-MR and micro-CT. 3D renders of the imaging data were created and protocol written to create future renders of in-vivo knee scans. Data collection was completed on the first sets of force plate data and dual axis X-ray scans. Complete working models of the guinea pig knee model have yet to be completed however much progress has been made toward that end.

REFERENCES


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