Animal Imagers Unite! Lessons learned from working together and path forward

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How to best acquire rodent preclinical functional MRI data? Every laboratory has an opinion on this, but are they truly objective? It has become apparent that we work with different data quality, with different potentials to capture functional connectivity phenomena, and these discrepancies cannot only be linked to preprocessing differences and analysis schemes. In this paper, I describe our community effort to describe dataset performance, identify potential best practices, and test them out in laboratory conditions. Along the way, I describe the conceptual and software advances that we brought to the table to make this project work.