WildCare is very excited to be participating in this reciprocal research partnership with renowned cognitive researcher, Dr. Lucia Jacobs and The Jacobs Lab of Cognitive Biology at UC Berkeley.

Each year, WildCare admits over 150 wild squirrel orphans, of all three species found in our area: Western Gray, Eastern Gray and Eastern Fox Squirrels. These orphaned squirrels are raised in captivity (to be as wild as possible), and they stay in care for an average of 10-14 weeks, until they have the skills required to be released back into the wild.

By partnering with WildCare's foster care squirrel program, the researchers gain the unique advantage of access to a large number of individual squirrels per year, of all three species, to monitor, with the added benefit of knowing the squirrels were not bred in captivity specifically for research purposes and that they will be released when they are ready and able to enjoy their natural free lives.

There are currently three major aspects of study underway. One incorporates quantitative science to understand squirrel behavior and mechanics, which may have applications in advancing robotics.

Another is looking at characterizing emotion, expression and individual personalities of squirrels within each of the three species. This is exciting because, as most animal people know, all animals have individual personalities and preferences, but this is not an area scientists typically explore.

The aspect of the study the one with the most benefit to squirrels in rehabilitation settings is discovering how the squirrels learn to find food, build nests, cooperate with others, and avoid predators. The hope is that, by understanding these learning processes, we can use these data to determine if individual differences in captivity predict long-term success after they are re-released, and develop ways to help improve those odds while raising them.

These research aspects are undertaken via WildCare Foster Care Volunteers filling out forms that ask specific questions about the squirrels in their care as they grow over the weeks, and with the use of remote cameras. There is no direct contact between the researchers and the squirrels, as it is imperative to not skew the studies, and to also ensure that the squirrels stay wild.

The work is funded by a MURI grant from the Army Research Office for the consortium "The Science of Embodied Cognition". Helmed by roboticist Dan Koditschek (Penn), the group comprises teams led by material scientist Shu Yang (Penn), biomechanicist Bob Full (The Polypedal Lab, Berkeley), neuroethologist/engineer Noah Cowan (Johns Hopkins), behavioral neuroscientist Jim Knierim (Johns Hopkins) and mathematician Yuliy Baryshnikov (Univ Illinois Urbana).

WildCare and our squirrels benefit in that all of the knowledge gained will be used to improve rehabilitation protocols in order to order offer our hand-raised orphans the best chance at survival possible.

And, of course, all of this information will be shared nationally, and even internationally, to help squirrels and wildlife hospitals worldwide.