As people age, their ability to swallow quickly and safely declines, but scientists are not clear why this deterioration occurs. Lever works with animals to better understand swallowing impairment, also known as dysphagia.

Dysphagia can also be caused by disorders including Alzheimer’s disease, Huntington’s disease, Parkinson’s disease, muscular dystrophy, spinal muscular atrophy, Down syndrome and fragile-X syndrome. Funded by the National Institutes of Health, Lever investigates mice with these conditions to determine whether they develop characteristics of human dysphagia, with the ultimate goal of finding new treatments to improve swallowing function for humans and companion animals.

Additionally, Lever has joined forces with School of Medicine colleagues and researchers from the College of Veterinary Medicine to create the MU Voice, Swallow and Airway Center (VSAC). The interdisciplinary research center has made strides in treatments for dysphagia, hoarseness, aspiration and other throat-related issues in animals and humans. Among other innovations, Lever and fellow VSAC researcher Joan Coates have invented a patented observation kennel in which dogs can be monitored voluntarily eating.

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