STATIONARY FLIES: An optical fiber affixed to a fruit fly holds the animal in place for surgery and imaging (top left). The fiber holding the fly is attached to a silicon fixture, which is affixed to a portable brass mount (above). Once the fly is secured in the mounting rig, cold air immobilizes the insect and a weak vacuum prevents it from rolling over (top right). Stanford neuroscientist Mark Schnitzer and his colleagues are currently devising silicon mounts that hold multiple flies at once and will allow surgeries and imaging to be performed on large groups rapidly (right).