Abstract Submitted
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***In Vivo* μPIV Measurements of Blood Flow in Small Vessels of a Rat Model.** TIMOTHY WEI, Rensselaer Polytechnic Institute, NADINE CONNER, JOHN RUSSELL, Univ. of Wisconsin Medical School, PAUL LEGAC, Rensselaer Polytechnic Institute — Ongoing research at the University of Wisconsin Medical School is addressing the effects of perfusion of glottal tissue on voice production. Building on the approach developed by Gharib's group at CalTech for embryonic zebra fish, we have modified μPIV to measure flow in capillaries and small blood vessels in a live rat model. In lieu of seeding particles, the DPIV correlation algorithm tracks the motion of red blood cells moving through these vessels. The methodology will be presented along with a video sequence showing measurements made from muscle tissue laid nominally flat on a microscope stage. Challenges of measurements in three-dimensional geometries, *i.e.* the throat, will be discussed.

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