Molecular mechanisms mediating chemical control of breathing

This talk will describe our ongoing work into the molecular sensors involved in central respiratory chemosensitivity -- the homeostatic mechanism that adjusts breathing to regulate arterial CO2 and tissue acid-base balance. Specifically, we will present new evidence implicating both a proton-activated G protein-coupled receptor and a proton-inhibited background K+ channel in mediating pH sensitivity of a phenotypically-defined group of brainstem chemoreceptor neurons that control breathing.