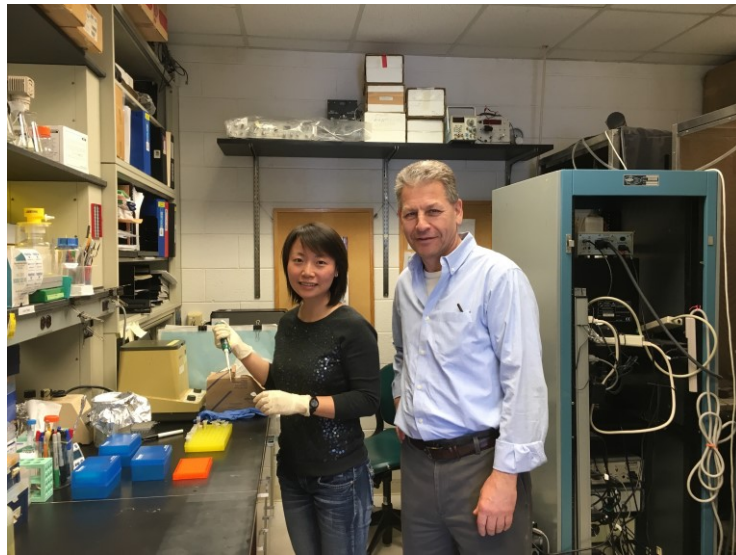


**GENE EXPRESSION PROFILE OF SPECIFIC RESPIRATORY BRAINSTEM NEURONS
SENSITIVE TO CCHS MUTATIONS IN MICE.**

“This work will provide new information regarding the molecular genetics of this vulnerable population of brain cells, and thus new understanding of how those cells perform their specific functions that are critical for breathing and disrupted in CCHS.”

A small cluster of excitatory brain cells (neurons) serve as an integrative nexus for control of breathing; these neurons express Phox2b, the transcription factor that is mutated in CCHS, and their dysfunction is implicated in the central hypoventilation associated with CCHS. The proposed work uses cutting-edge, single cell sequencing approaches to provide a first comprehensive examination of the genes that are uniquely expressed in these Phox2b-expressing neurons. This work will provide new information regarding the molecular genetics of this vulnerable population of brain cells, and thus new understanding of how those cells perform their specific functions that are critical for breathing and disrupted in CCHS.



Douglas Bayliss and team