



Feeding Ecology & Taste Receptor Evolution in Bats

Date	28 th Oct 2022
Time	16:00 (UTC+8)
Venue	Zoom



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The sense of taste provides key information on diet. Here we use behavioral experiments and functional assays to demonstrate the loss of sweet taste despite the conservation of sweet receptor genes in insectivorous bats. Functional assays showed that sweet taste receptors of frugivorous bats are able to respond to natural sugars, whereas those of insectivorous bats are not, which is consistent with the behavioral experiments, suggesting that the ability to sense sweetness is strongly correlated with diet in extant bats. Following this correlation, we performed the first resurrection and functional assessment of the properties of ancient sweet receptors from ancestral bat taxa. We found that the ability to sense natural sugars was present in the common ancestor of all extant bats, suggesting that ancestral bats were likely omnivorous, feeding on a mixture of fruits and insects.

All are welcome!



About speaker:

I received my PhD in ecology at Institute of Zoology, Chinese Academy of Sciences. From Sept. 2009 to Jan. 2012, I worked as a postdoctoral fellow at University of Michigan. In Feb. 2012, I joined Wuhan University and started my lab as a professor. I am broadly interested in molecular evolution and comparative genomics in animals. My research interests are to (1) decipher the evolutionary processes that have generated enormous diversity, using bats as a model study group, (2) develop or test evolutionary hypotheses on the evolution of sensory systems, using vertebrate taste receptor genes as a model study system