

Professor Huabin Zhao

Personal Information

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Education

2002.12 B.Sc School of Life Sciences, Anhui Normal University, Wuhu, China
2006.6 M.Sc School of Life Sciences, Anhui Normal University, Wuhu, China
2009.7 PhD Institute of Zoology, Chinese Academy of Science, Beijing, China

Employment

2009.8 – 2012.1 Postdoctoral Fellow, Department of Ecology and Evolutionary Biology, University of Michigan, Ann Arbor, MI, USA
2012.2– present Professor, College of Life Sciences, Wuhan University, Wuhan, China

Research Interests

I teach zoology and study animals at Wuhan University in the central China. Generally, I am broadly interested in molecular evolution and ecological genomics in animals. Specifically, my major interests are as follows.

First, we decipher genetic and genomic bases of the evolutionary processes that have generated enormous diversity of form and behaviour well-known in nature, using bats as a model study group. Bats account for around 22% of extant mammal species and represent one of the world's most fascinating yet least-understood animals. They are mammals but possess many unique features distinctive from other mammals, such as powered flight, laryngeal echolocation, and unique immunity conferring greater capacity to co-exist with many deadly viruses. Meanwhile, bats exhibit enormous diversity in diet, behaviour, and morphological and physiological traits. We attempt to uncover molecular

evolutionary history of all these traits by comparing bats with other mammals. In this line of research, we attempt to focus on bats, but we are open to study birds, reptiles, and other mammals in rare cases.

Second, we develop or test evolutionary hypotheses on the evolution of sensory systems across vertebrate animals within a phylogenetic framework. Humans and other mammals use the five traditional senses of taste, sight, smell, sound, and touch to perceive the world around us. Much of our current work is to discover molecular basis of functional evolution of sensory genes, using vertebrate taste receptor genes as a model study system. We use an interdisciplinary approach that includes molecular evolution, comparative genomics, population genetics, protein engineering, cell culture, and calcium mobilization assay. In this line of research, we are not limited to a particular group of animals, but we are most familiar with birds and mammals in general, and bats in particular.

Honors and Rewards

- 2013 Distinguished professor of "Chutian Scholar Program" sponsored by the Hubei Province
- 2015 Excellent Young Scholar of "Changjiang Scholar Program" sponsored by the Ministry of Education
- 2017 Recipient of National Natural Science Fund for Excellent Young Scholars

Conferences attended or organized

- Annual Meeting of Society for Molecular Biology and Evolution (poster presentation). July 21-25, 2019, Manchester, UK
- The 11th International Symposium of Integrative Zoology (oral presentation). December 2-7, 2019, Auckland, New Zealand
- Bat1K satellite meeting at Biodiversity Genomics 2020 (oral presentation). September 28, 2020, online.
- The 16th Annual Meeting of the International Conference on Genomics (oral presentation). October 25-31, 2021, Qingdao, China.
- The 2nd AsiaEvo Conference (Symposium organizer: Bats as a model for understanding mechanisms underpinning evolutionary innovations). August 16-19, 2021. Online.
- Annual Meeting of Society for Molecular Biology and Evolution (Symposium organizer: Intrinsic molecular drivers of biodiversity evolution). July 3-8, 2021. Online.
- International symposium of Mountain Ecology and Evolution (plenary talk). December 10, 2022, online.

Professional memberships

- Society for the Study of Evolution, USA
- Society for Molecular Biology and Evolution, USA
- Society for Mammalian Ecology, China
- Society for Ornithology, China