SESSION LECTURE

No.1

Animal Evolution and Adaptation Mechanism in the Genomics Era
Room: Dong Yu Grand Ballroom 2

Co-Chairs: Fuwen Wei

Mike Levine

Day 3 October 21st (Monday) 09:00 – 12:15

Time	Speaker	Title
09:00-09:30	**Mike Levine** Princeton University, USA	Cranial neural crest and cardiopharyngeal mesoderm lineages in the proto-vertebrate model Ciona
09:30-10:00	**Michael Hiller** LOEWE Centre for Translational Biodiversity Genomics, Germany	Linking phenotypic differences between species to differences in their genomes
10:00-10:30	**Ren Lai** Kunming Institute of Zoology, Chinese Academy of Sciences, China	Venomous animals and animal toxins
10:30-10:45	**Tea Break**	
10:45-11:15	**Jiatang Li** Chengdu Instituteof Biology, Chinese Academy of Sciences, China	The origin and evolution of snakes
11:15-11:45	**Shunping He** Institute of Hydrobiology, Chinese Academy of Sciences,China	The origin of the deeps-sea fishes: their adaptation and invasion to hadal zone
11:45-12:15	**Fuwen Wei** Institute of Zoology, Chinese Academy of Sciences, China	Population genomics of Chinese endangered mammals

Fuwen Wei

weifw@ioz.ac.cn

CAS Academician and Professor of Institute of Zoology, Chinese Academy of Sciences (CAS). Using state of the art methods based on macro-ecology and micro (molecular, genomic, metagenomics)-ecology, he is interested in assessing the past, present and future status of endangered species in China, especially the giant and red pandas, inferring their evolutionary and demographic processes and proposing targeted strategies for their future survival.

Mike Levine

msl2@princeton.edu

NAS Academician, Professor of Lewis-Sigler Institute for Integrative Genomics, Princeton University. Levine co-discovered the homeobox domain, a critical DNA sequence found within genes that are involved in the regulation of patterns of anatomical development in multi-cellular organisms. This keystone discovery has had a very large conceptual significance for developmental biology and evolutionary biology. The Levine laboratory has continued to focus on developmental genetics, studying the gene networks that control animal development and disease.

Michael Hiller

michael.hiller@senckenberg.de

Professor of LOEWE Centre for Translational Biodiversity Genomics. He focuses on genomic underpinnings of exceptional traits in vertebrates based on large-scale genomes and bioinformatics, including dietary adaptations and adaptive gene losses in mammals and birds. The Hiller lab has a long-standing interest in developing new genomics methods. Over the last years, they have established a powerful toolbox to address the phenotype-genotype question.

Jiatang Li

lijt@cib.ac.cn

Professor of Chengdu Institute of Biology, Chinese Academy of Sciences. Prof. Li researches on the diversity and evolution of amphibians and reptiles, with a focus on snakes in recent years, including the analysis of the global distribution patterns of the Homalopsidae and other groups. His studies reveal the adaptive strategies of snakes to high-altitude, forest, and marine environments, and investigate the molecular mechanisms behind traits such as body color, body elongation, and limb loss in snakes. The research findings have contributed to the advancement of snake evolutionary genomics on an international scale.

Ren Lai

rlai@mail.kiz.ac.cn

Professor of Kunming Institute of Zoology, Chinese Academy of Sciences, New Cornerstone Investigator. The aims of his research are related to 1) human disease mechanisms and drug development; 2) biological survival strategies and environmental adaptation mechanisms, especially exploring the predation and defense strategies of venomous animals. His researches reveal the molecular mechanism of environmental adaptation for species, as well as produce new understanding of diseases treatment.

Shunping He

clad@ihb.ac.cn

Professor of Institute of Hydrobiology, Chinese Academy of Sciences, National Outstanding Young Scholar of China. Prof.He has continued to focus on the fish phylogeny and biogeography, and especially interested in the genetic basis of adaptive evolution of fishes in extreme environmentson the Tibetan Plateau and hadal habitat. The He lab discovered that the genetic mechanism of vertebrate transition from aquatic to terrestrial, providing insights for understanding the evolutionary pathway leading from fishes to humans.