

The 2nd annual Symposium on the Evolutionary Genomics of Adaptation

University of Nebraska-Lincoln

October 11-13, 2019



Friday October 11

7:00-8:30 pm	Welcome	Morrill Hall Lecture Hall 141
	Keynote lecture: John Kelly	Genotype to fitness in natural populations of yellow monkeyflower

Saturday October 12

Wick Alumni Center Great Hall

8:00-8:30 am Breakfast catered

Oral Session 1

Evolutionary genetics and adaptation in natural populations

8:30-9:10 am	Featured speaker: Sarah Fitzpatrick	Linking evolution and demography through genetic rescue of small populations
9:10-9:30 am	Rena Schweizer	Genomic signatures of selection across the oxygen transport cascade in high-altitude deer mice
9:30-9:50 am	Zac Cheviron	A developmental delay in thermoregulation is associated with adaptive shifts in gene expression in high-altitude deer mice
9:50-10:10 am	Anthony Signore	Biochemical paedomorphosis and genetic assimilation in the hypoxia adaptation of Tibetan antelope
10:10-10:25 am	Arvind Pillai	The Origin of Hemoglobin
10:25-10:40 am	Break	
10:40-11:00 am	Jeff Good	The evolution of seasonal camouflage
11:00-11:20 am	Claire Mérot	How are inversions involved in adaptation to heterogeneous environments? Population genomics using low-coverage whole-genome sequencing in a seaweed fly
11:20-11:40 am	Jeff Mower	Parallel cooption of an alternative holocytochrome c synthesis pathway in diverse plants and algae
11:40-12:00 pm	Carolyn Wessinger	Floral divergence despite widespread shared variation in a Penstemon species complex
12:00-12:15 pm	Tom Nelson	Phylogenomics untangles species relationships in a classic adaptive radiation in plants
12:15-1:30 pm	Lunch catered	

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Oral session 2

Evolutionary genetics and adaptation in domesticated systems

1:30-2:10 pm	Featured speaker: Justin Fay	Diversification and domestication of yeast
2:10-2:30 pm	Jinliang Yang	Epigenetic selection reshapes gene regulation and affects adaptation during maize domestication
2:30-2:50 pm	Chi Zhang	Genome-Wide Discovery of Genotype-specific Alternative Splicing Variation Linking to Salt Tolerance in a Rice Diverse Population Using VASP
2:50-3:10 pm	Sara Signor	Evolution of plasticity in response to ethanol between sister species with different ecological histories (<i>Drosophila melanogaster</i> and <i>D. simulans</i>)
3:10-3:30 pm	Mike Herman	Genomic analysis of natural <i>Stenotrophomonas</i> bacteria and their effects on wild and domesticated <i>C. elegans</i>
3:30-3:45 pm	Lianna Walker	Signatures of adaptive evolution emphasize potential role of Synaptogyrin-2 variant in PCV2b susceptibility
3:45-4:00 pm	Break	
4:00-4:20 pm	Rob Unckless	The genetic basis of evolutionary divergence in immune defense in <i>Drosophila</i>
4:20-4:40 pm	Brandon Cooper	The evolutionary genetic basis of <i>Wolbachia</i> spread in a hybridizing host clade
4:40-4:55 pm	Michael Hague	Imperfect maternal transmission and unexpected effects on host fitness underlie fluctuating frequencies of the endosymbiont <i>Wolbachia</i>
5-8:00 pm	Poster session	Nebraska State Museum at Morrill Hall Catered reception with cash bar

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Sunday October 13

Wick Alumni Center Great Hall

8:00-8:30 am Breakfast catered

Oral Session 3

Highlighting evolutionary genetics research with application in conservation, agriculture and animal science, resource management and science communication

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| 8:30-9:10 am | Featured speaker:
Maurine Neiman | Sex in the Wild (and Community Engagement in Iowa) |
| 9:10-9:30 am | Charles Fenster | The Natural History of Mutations |
| 9:30-9:50 am | Jessica Petersen | Genetic diversity and relationships among populations of the domestic horse: applications for management and in understanding the genetic basis of various traits |
| 9:50-10:05 am | Guoqing Lu | Preadapted Genomes and Post-introduction Hybridization Likely Associated with the Success of Asian Carp Invasions in the Mississippi River Basin |
| 10:05-10:20 am | Break | |

Oral session 4

Evolutionary genetics and adaptation in natural populations

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| 10:20-10:40 am | Shabnam Mohammadi | Functional mechanisms of adaptive resistance to dietary toxins in a lineage of Neotropical frogs |
| 10:40-11:00 am | Nick Barts | Mitochondrial evolution underlies convergent adaptation to hydrogen sulfide-rich environments |
| 11:00-11:20 am | Enoch Ng'oma | Diverse biological processes coordinate resource allocation responses to nutritional changes in <i>Drosophila melanogaster</i> |
| 11:20-11:35 am | Omera Matoo | Ethanol, flies and metabolism: linking genotypes to phenotypes |



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