Low hanging fruit: What wild yeast collected from Colorado cacti tell us about climate change and human health

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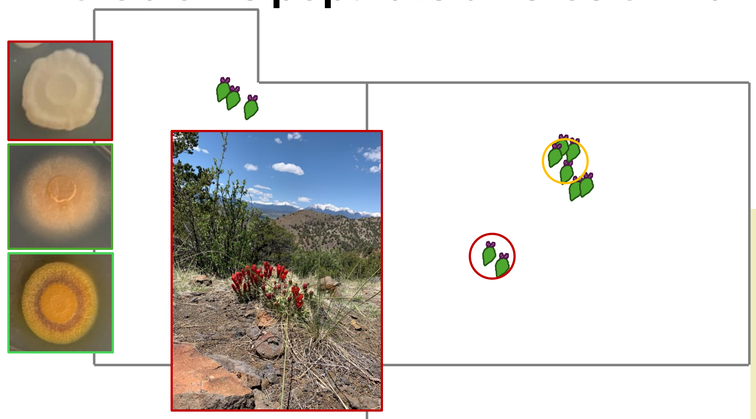
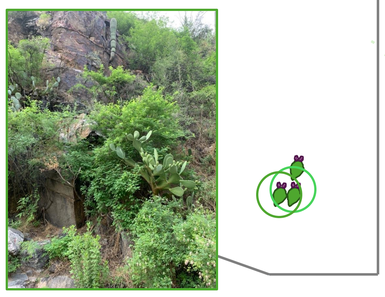
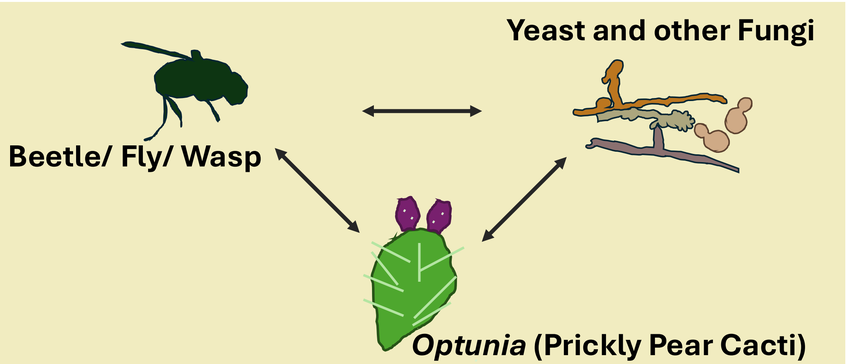
Prickly pear cacti and their fungal microbiome populate diverse climates



Kurtzmaniella species turn up on flowers



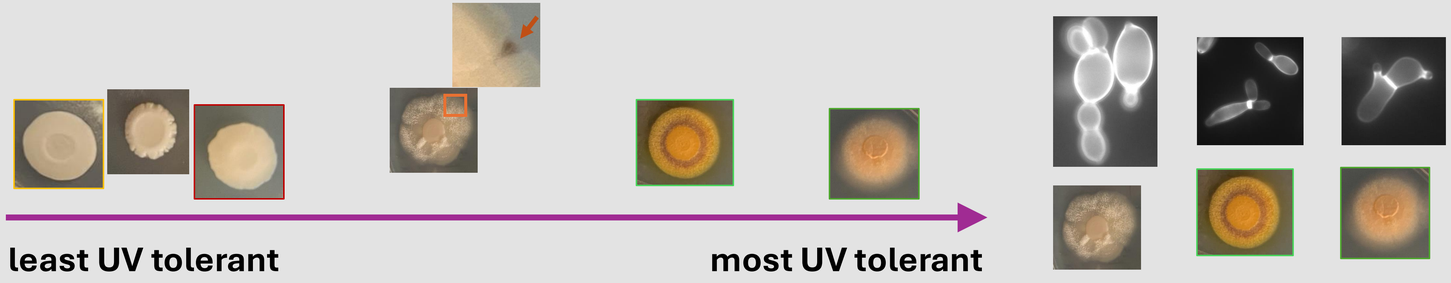
Sordariomycetes populations increase after wildfires



Fungi are essential to complex ecosystems

Fungal pigments allow for survival in sunny places.. and human infection!

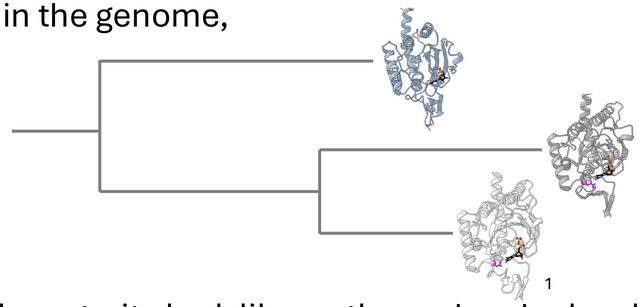
Protein structures involved in cell division, pigment, and cell walls help fungi adapt to stress.



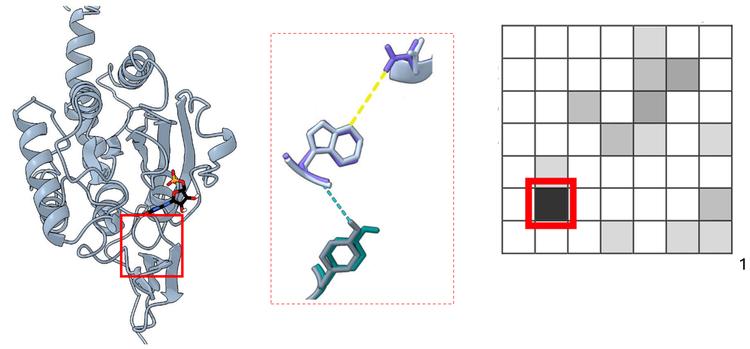
What can we learn from wild fungal DNA?

We use DNA sequencing to understand how fungal genomes adapt to changing stressors in the local ecosystem. Some of these adaptations to climate change have implications for human disease, agriculture, and environmental health.

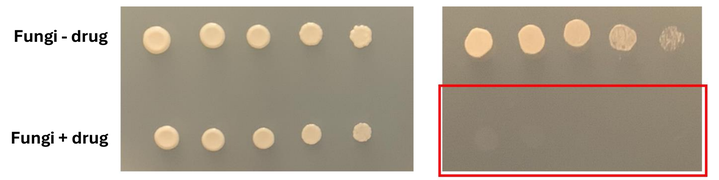
Using sequencing, we can see how pathogenic traits evolve in the genome,



What these traits look like on the molecular level,



and how we can design drugs to target pathogens.



[1]Hussain *et al* 2023

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