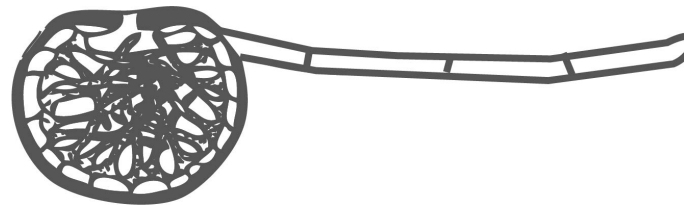


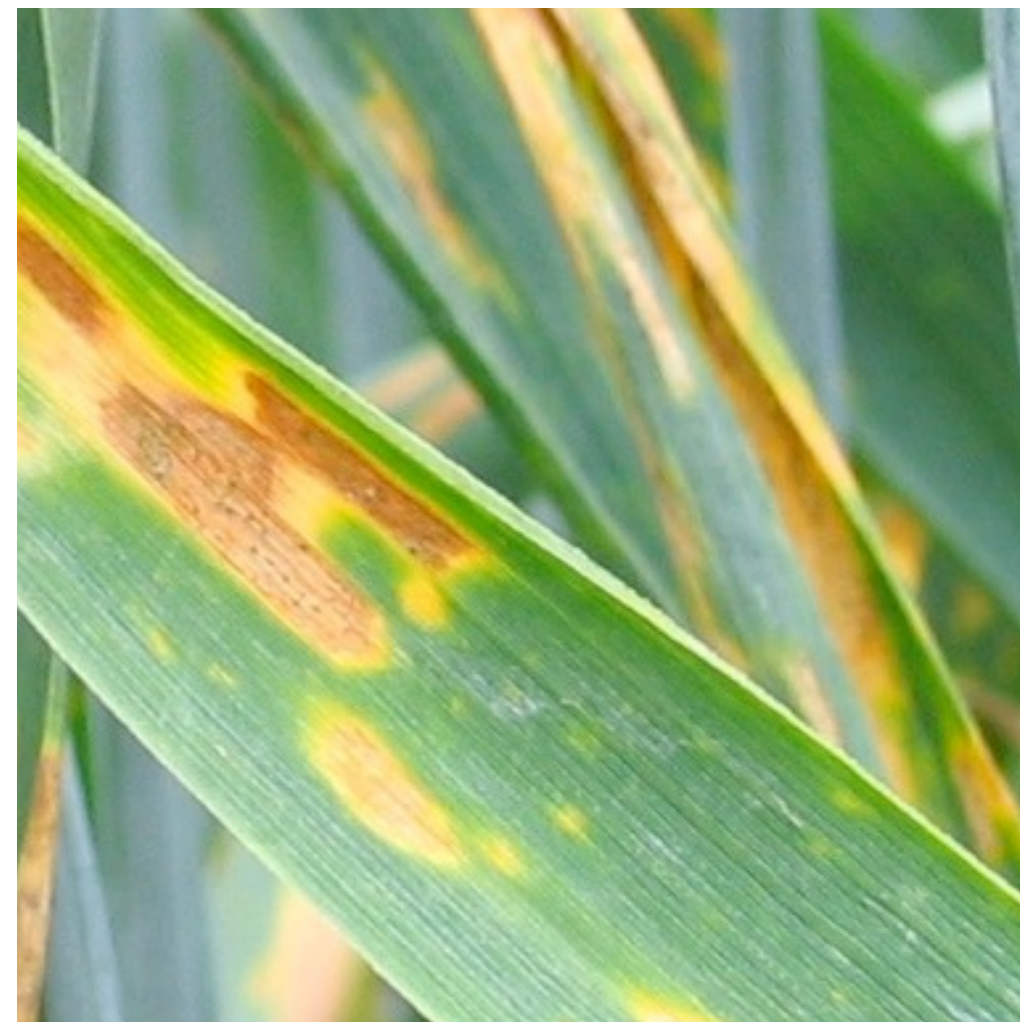
LABORATORY OF EVOLUTIONARY GENETICS



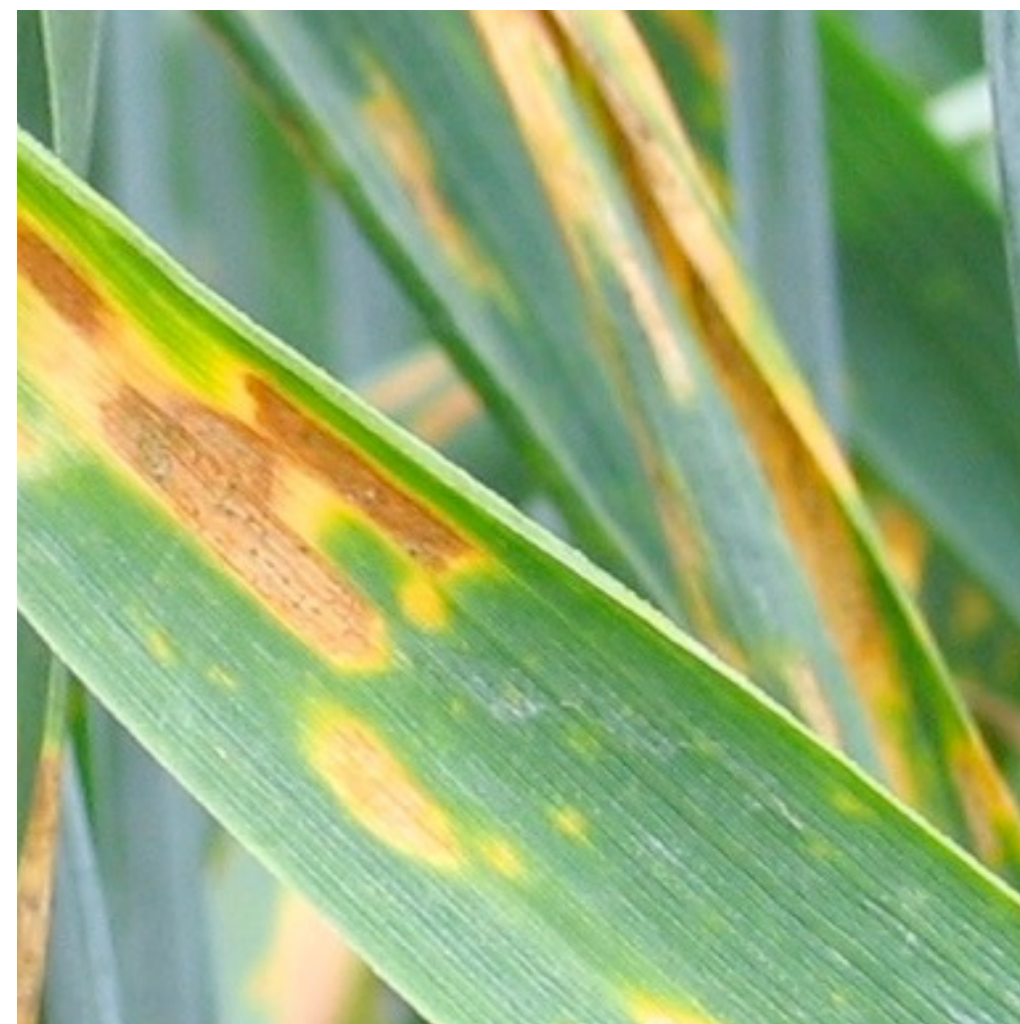
The Evolutionary Genetics lab



What do we work on?



Why do we face a crisis in agriculture with pathogens?



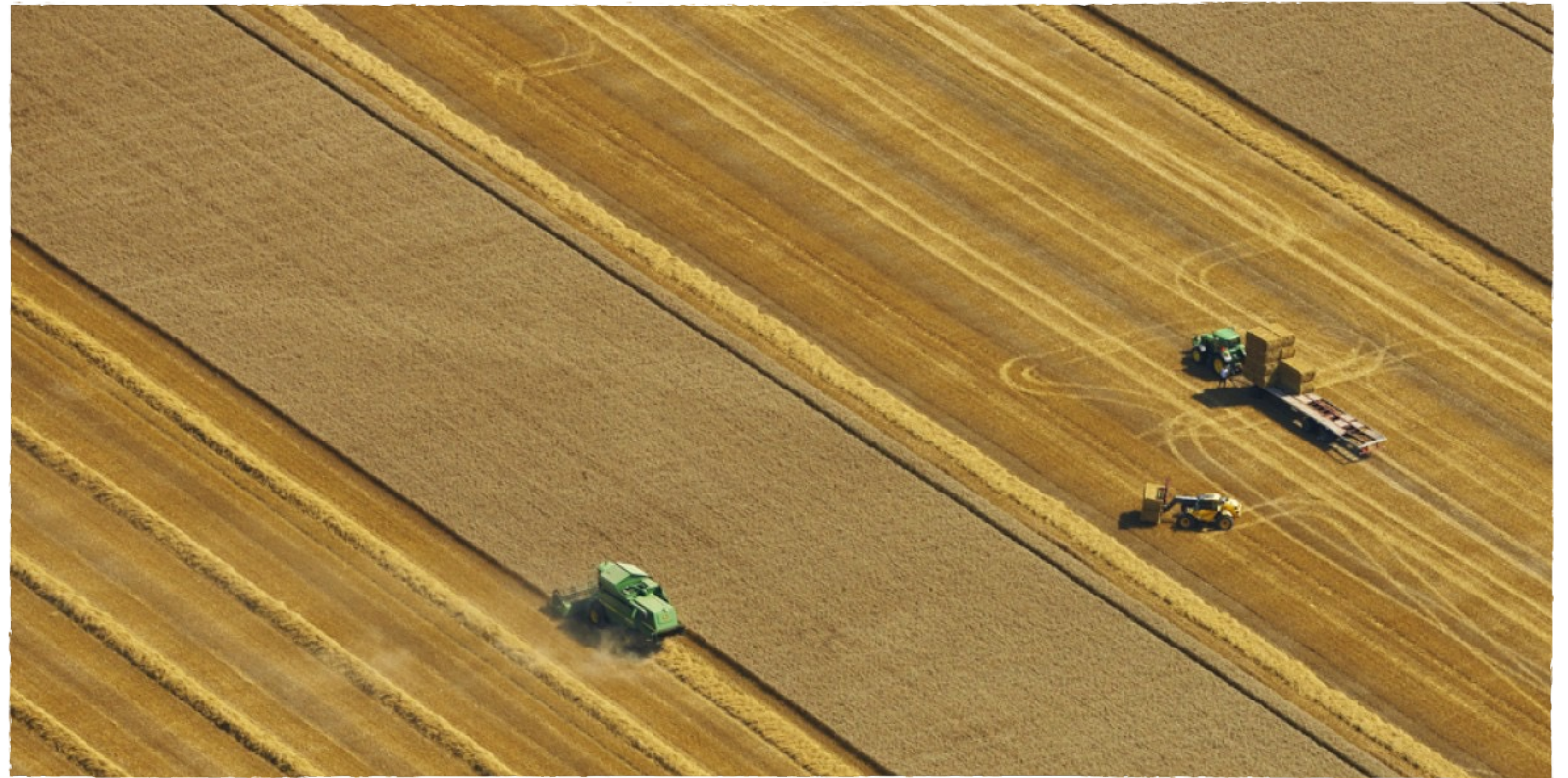
Natural ecosystems: Rare disease epidemics



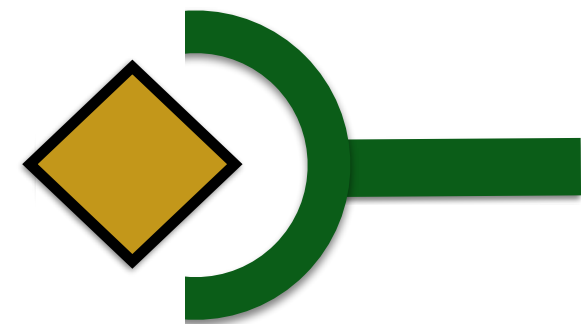
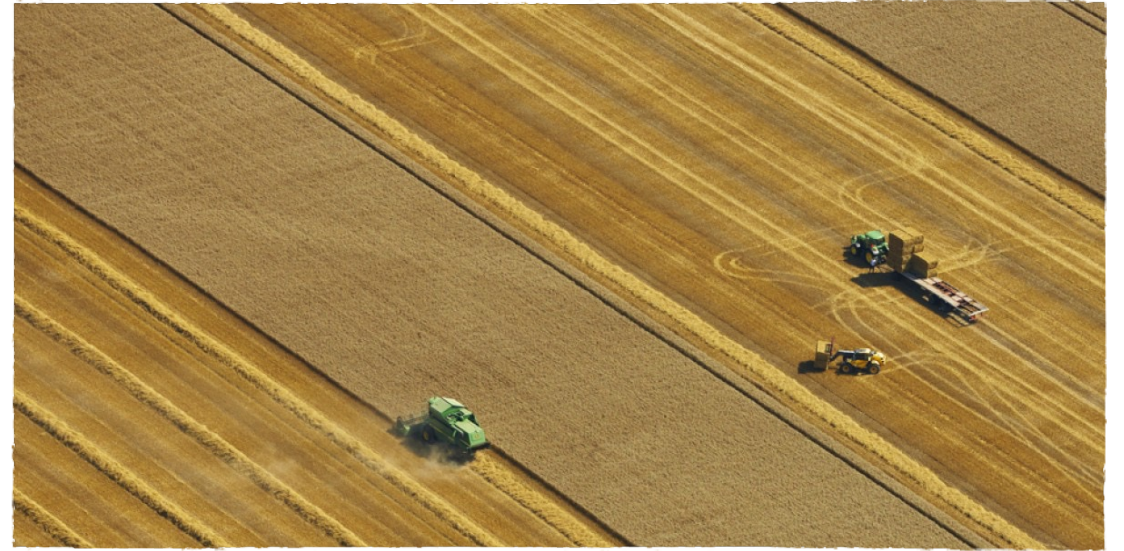
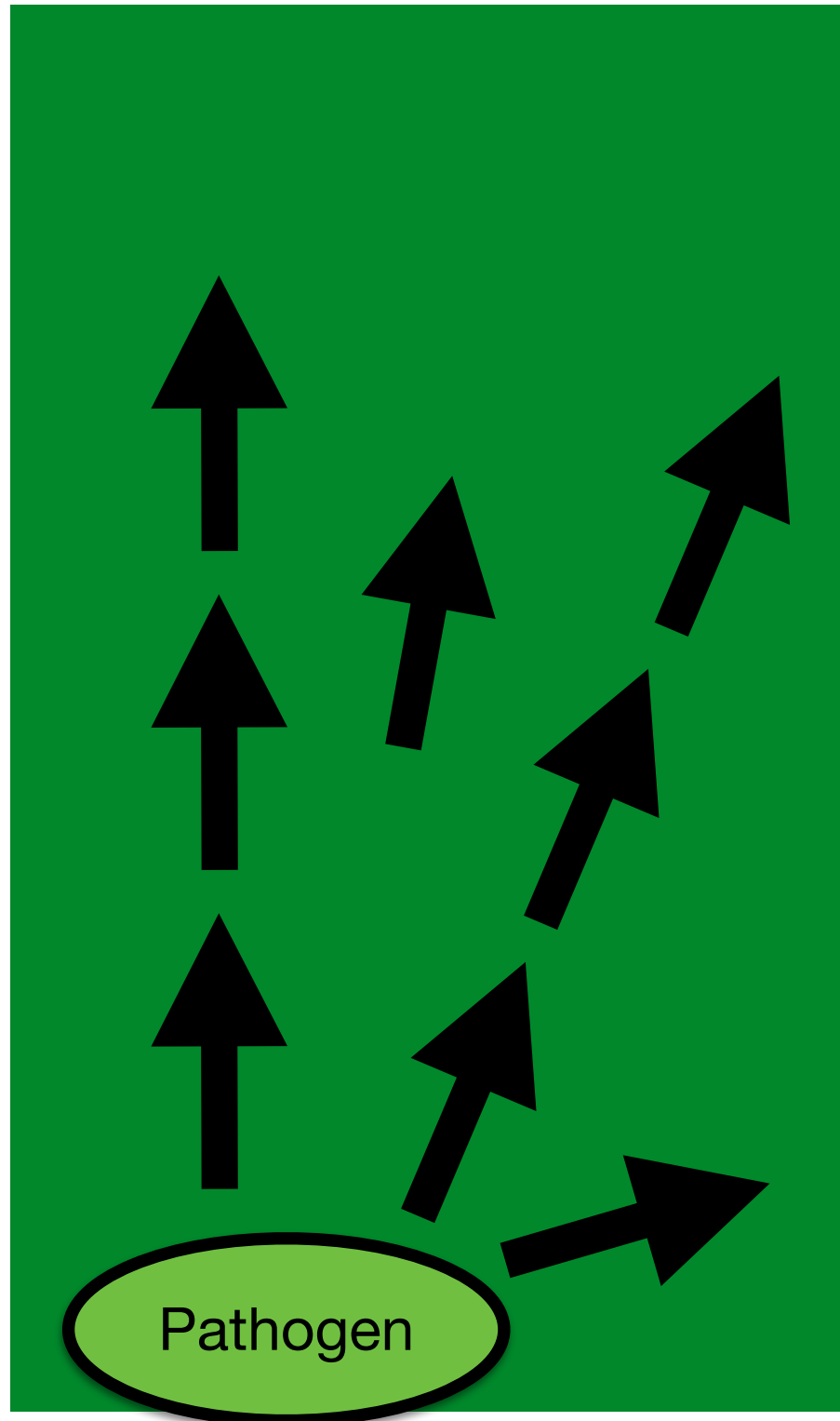
Host diversity slows down the spread



Agriculture: Frequent disease epidemics

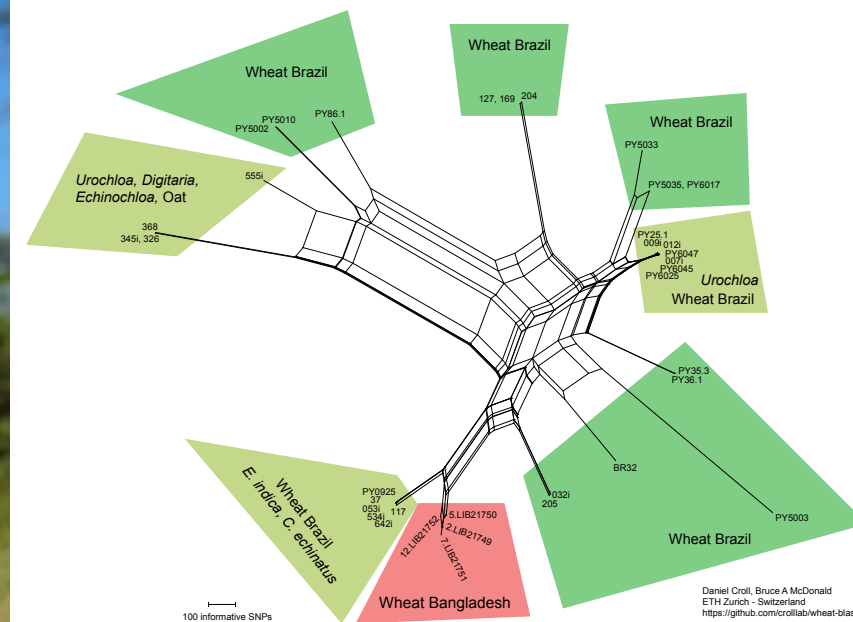


Monocultures favor rapid spread of pathogens



Outbreak of wheat blast in Bangladesh and India

(2016+2017)



Our contribution to “Open Wheat Blast”:
github.com/crolllab/wheat-blast



Wheat blast epidemic in South Asia

You Tube^{CH}

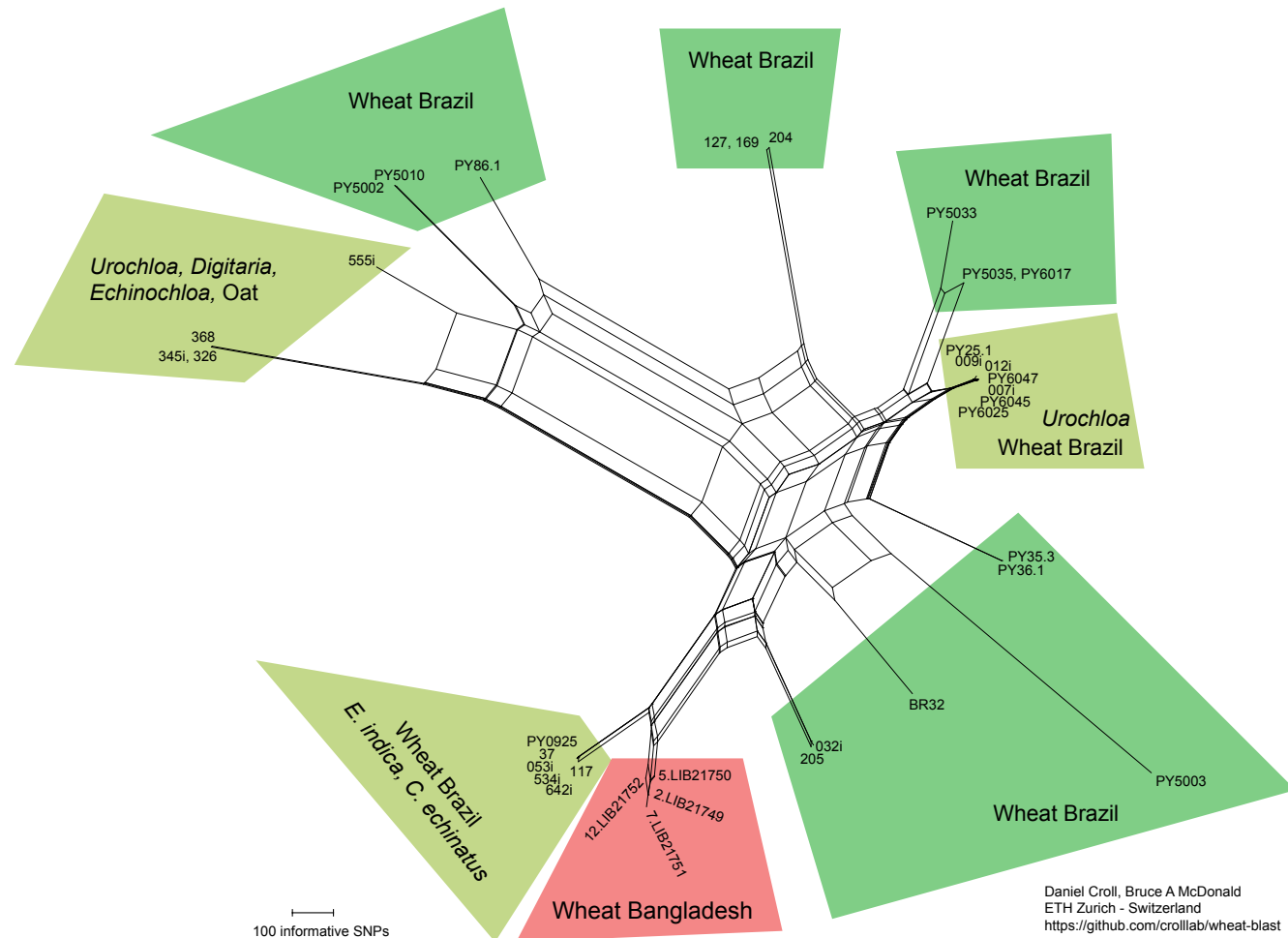
wheat blast bangladesh



Burning of blast affected wheat in BADC's Nurnagar Farm in Bangladesh in March 2016



Yann Jeanneret's MSc project



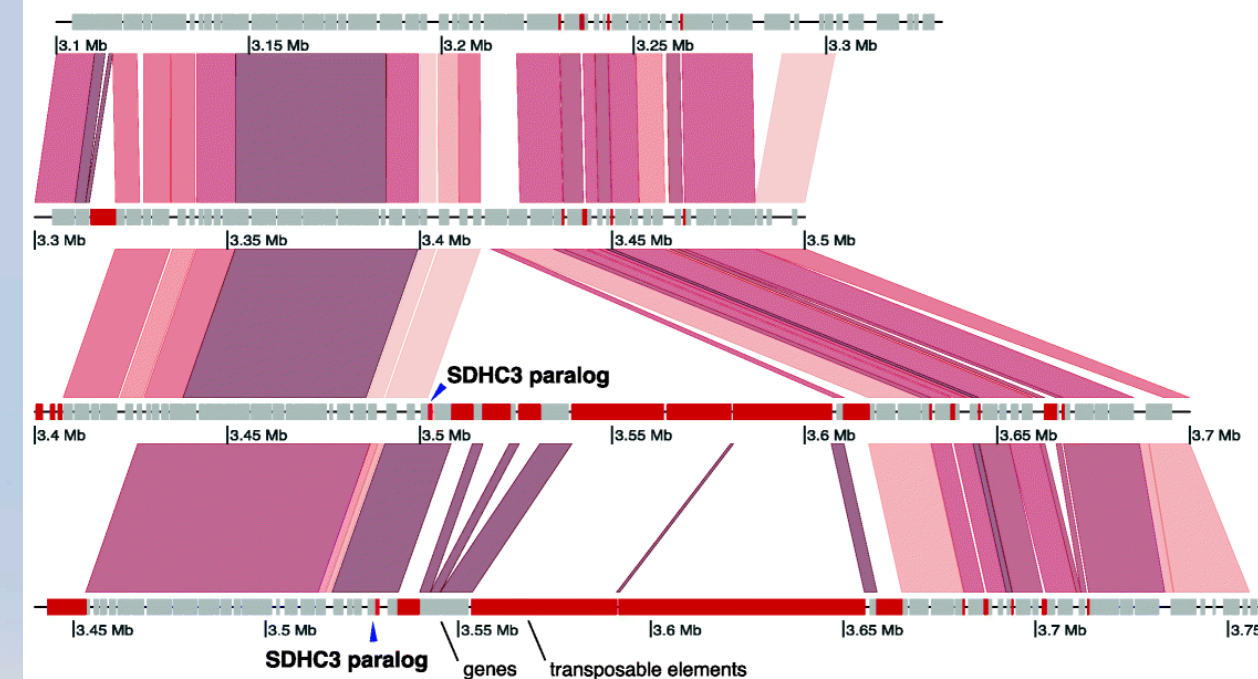
*Why is wheat blast so successful
on many hosts?*

What are its origins?

Where will future outbreaks occur?

Fanny Gagliardi's MSc project

How did a crop pathogen suddenly gain a major pesticide resistance factor?



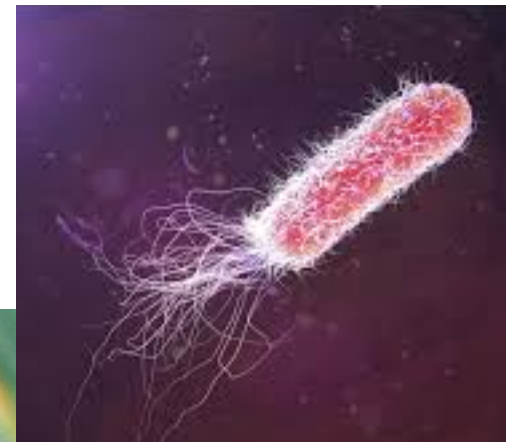
Pathogen genomes with
a new resistance gene

Laetitia Holzer and Nicolas Seiler's MSc projects

Competition in the phyllosphere:

Is it good or bad that multiple strains of the same species compete?

Are bacteria facilitators or antagonists? Can we make use of this?



Does a historic near extinction determine the fate of a species?



Near extinction in the ~1850s (~100 individuals)
Species restoration accomplished today (~50'000 individuals)

Camille Kessler's MSc project

How can we utilize next-generation sequencing technology to solve the challenge of long-term genetic health monitoring of Alpine ibex?



Field work site in Gran Paradiso park



An MSc in the Laboratory of Evolutionary Genetics



Get in touch with Daniel to discuss how we could create a project that matches your interests