

Best Poster

Host genotype in explaining within-host virus communities in a transplant experiment.

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Individuals are often simultaneously infected by multiple pathogenic microbes. However, host pathogen research has traditionally been conducted in the “single host—single pathogen” framework, and the role of host resistance in shaping pathogen communities remains largely unexplored. To test whether host resistance is the key determinant of within-host pathogen communities, we performed a field transplant experiment where we placed healthy replicates of multiple cloned *Plantago lanceolata* individuals to wild *P. lanceolata* populations in the Åland Islands to acquire natural virus infections. We sampled these experimental plants multiple times over the growing season to detect five common viruses with specific PCR-primers, and to track temporal changes in the within-host virus communities. We found differences in virus infections among genotypes and plants kept in different populations. Our results suggest that host genotype is important but does not alone determine the composition of pathogen communities.

Keywords: *Plantago lanceolata*, host resistance, pathogen community, coinfection, plant virus, transplant experiment