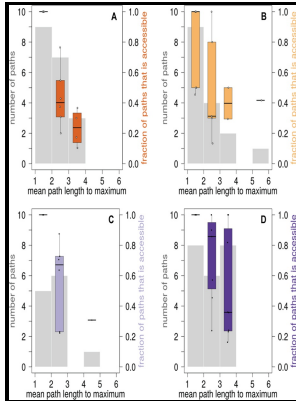


Study of quantitative variation in Arabidopsis thaliana

University of Birmingham - Induced mutations alter patterns of quantitative variation, phenotypic integration, and plasticity to elevated CO₂ in Arabidopsis thaliana



Description: -

-study of quantitative variation in Arabidopsis thaliana

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Tags: #Genotype #networks #of #80 #quantitative #Arabidopsis #thaliana #phenotypes #reveal #phenotypic #evolvability #despite #pervasive #epistasis

Natural Variation in Arabidopsis thaliana

B Nucleotides at positions significantly associated with a phenotype are concatenated into one nucleotide string. Gravitropic mutant seedlings were not able to reorient well in response to gravistimulation. Modeling evolutionary landscapes: Mutational stability, topology, and superfunnels in sequence space.

Arabidopsis thaliana

Another example is the ion phenotype calcium concentration phenotype 51 , where paths to the maximum phenotypic value have a mean number of 2. Studying mutational contributions to phenotypic variation can provide insights into the extent of potential variation on which selection may operate in future human-altered environments. A comparatively mild Cd treatment was chosen in order to avoid confounding effects through differences in the severity of stress for the two accessions.

Natural Variation in Arabidopsis thaliana

Molecular dissection of this variation can lead to new mechanistic insights into physiological or developmental processes and ideally yield an understanding of local adaptation to specific habitats. Panels D and E are analogous to panels B and C , but show the number of nucleotide differences between two accessions as a phylogenetic distance measure.

Natural variation of photosynthetic efficiency in Arabidopsis thaliana accessions under low temperature conditions

The ferroportin metal efflux proteins function in iron and cobalt homeostasis in Arabidopsis. A-D Histograms show the distribution of mutational path lengths horizontal axes for all mutational paths present in the genotype networks of the four example phenotypes from the main text, i.

Top PDF Identification and Characterization of Genes underlying Natural variation in Flowering Time in Arabidopsis thaliana

Diversity analysis of the response to Zn within the *Arabidopsis thaliana* species revealed a low contribution of Zn translocation to Zn tolerance and a new role for Zn in lateral root development. Bur-0 roots responded more strongly to Cd than Col-0 even though according to the PC accumulation data there was no difference in the degree of effective Cd exposure, i.

Arabidopsis thaliana

In the phenotype vegetative growth rate after vernalization phenotype 39 , an average of 3. SNPs were used to predict potentially non-functional AA exchanges in Bur-0 using the SIFT4G application Vaser et al. The annealing temperature X was chosen for each primer pair 2 °C below the lower T_m of the two primers.

Epigenetic and epigenomic variation in *Arabidopsis thaliana*

Flowering appropriate time is an essential trait for reproduction and survival of plant species that lead to pollination, development, evolution and suitable transmittal of seeds. Wang M, Jiang N, Jia T, Leach L, Cockram J, Waugh R, et al.

Epigenetic and epigenomic variation in *Arabidopsis thaliana*

Among the most extreme examples is the developmental phenotype primary dormancy after seven days of dry storage phenotype 20. We built a genotype network for each of these 80 phenotypes and characterized its structure.

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