## Quantitative Trait Loci Analysis of Adult Plant Resistance to Stripe and Leaf Rusts in Wheat. (C01-navabi180241-Poster)

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- Abstract:

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In order to map the quantitative trait loci (QTLs) contributing to adult plant resistance (APR) to stripe rust (YR), caused by Puccinia striiformis, and leaf rust (LR), caused by P. triticina, a population of 150 F5 recombinant inbred lines (RILs) derived from a cross between Cook, an Australian YR- and LRresistant cultivar, and Avocet-YrA, susceptible to both, was phenotyped in several locations in Mexico and Canada under artificial YR or LR epidemics. APR to YR and LR in cv. Cook appeared to be inherited by Yr18/Lr34, in addition to 2 and 1 genes of additive effects, respectively. Associated LR and YR resistance response indicated that the same genomic regions may be involved in APR to YR and LR. A total of 48 PstI-MseI AFLP and 40 microsatellite primer combinations were screened on the population. One hundred and fifty polymorphic markers have been mapped onto 9 linkage groups. Using an interval mapping approach, two independent genomic regions have been detected with significant effects (P < 0.01). Multiple OTL regression models (P < 0.01) explained up to 35% of the phenotypic variation for YR and LR severities.

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