# Mapping of the Ur-7 Gene for Specific Resistance to Rust in Common Bean. (C01-park170657-Poster)

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## Abstract:

Bean rust, caused by Uromyces appendiculatus, is a major disease of common bean (Phaseolus vulgaris L.). Our objectives were to identify RAPD markers linked to the Ur-7 gene for specific resistance to rust race 59 using bulked segregant analysis in an F2 population from the Middle American (MA) common bean cross GN1140 (resistant) x GN Nebr. #1 (susceptible) and to map the Ur-7 gene on an existing linkage map constructed using recombinant inbred lines (RILs) from the MA cross GN BelNeb RR-1 x A55. A single dominant gene controlling specific resistance to race 59 was found in the F2 and confirmed in the F3. Coupling-phase markers OAD12.550 and OAF17.900 with no recombination to the gene were found. These coupling-phase markers were also present in Pinto US-5 from which the rust resistance of GN1140 was derived. Repulsion-phase marker OAB18.650 was the most closely linked to the gene at a distance of 7.6 cM. All linked markers detected in the F2 population also segregated in the RILs and were located on linkage group 11 of the existing linkage map.

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