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Resistance to stem rust race TTKS in wheat relative *Haynaldia villosa*

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Stem rust race TTKS and its derivatives have defeated several important stem rust resistance genes used in wheat, rendering much of the worldwide wheat acreage susceptible. Rapid genetic responses including gene discovery, germplasm development and accelerated breeding efforts are essential components of a global effort to safeguard wheat production. In order to identify additional sources of TTKS resistance, we screened the Wheat Genetic and Genomic Resources Center collection (95 accessions) of *Haynaldia villosa* with North American races of stem rust. All accessions were found to be nearly immune and likely contain novel genes for stem rust resistance. Selected accessions were screened with TTKS and maintained high levels of resistance. Screening of a set of *H. villosa* disomic addition stocks in cultivar Chinese Spring revealed that chromosome 6V harbours one or more stem rust resistance genes, temporarily designated as *SrHv6*. *SrHv6* conferred resistance to all North American races tested and TTKS. Development of compensating translocation stocks for *SrHv6* and further genetic manipulations to derive useful germplasm are underway.