

# *Btr1* genes and the evolution of wheat and *Aegilops* species

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# Non-brittle rachis 1 gene

**Non-brittle rachis 1 (*Btr1*)** gene involves in regulation of the brittle/non-brittle spike trait, which is one of the key domestication traits in *Triticum* species. In this study genetic variability of ***Btr1*** genes from di- and tetraploid wheat species and *Aegilops speltoides*, which is donor of B-genome for polyploid wheat species, were investigated.

# Analyzed species:

 *Triticum monococcum* L.

 *T. turanicum* Jakubz.

 *T. urartu* Thum. ex Gandil.



  *T. polonicum* L.

 *T. boeoticum* Boiss.

 *T. aethiopicum* Jakubz.


  *T. dicoccoides* (Körn. ex Asch. & Graebn.) Schweinf.

 *T. carthlicum* Nevski

  *T. dicoccum* (Schrank) Schuebl.

  *T. araraticum* Jakubz.

 *T. karamyshevii* Nevski

  *T. timopheevii* (Zhuk.) Zhuk.

 *T. turgidum* L.

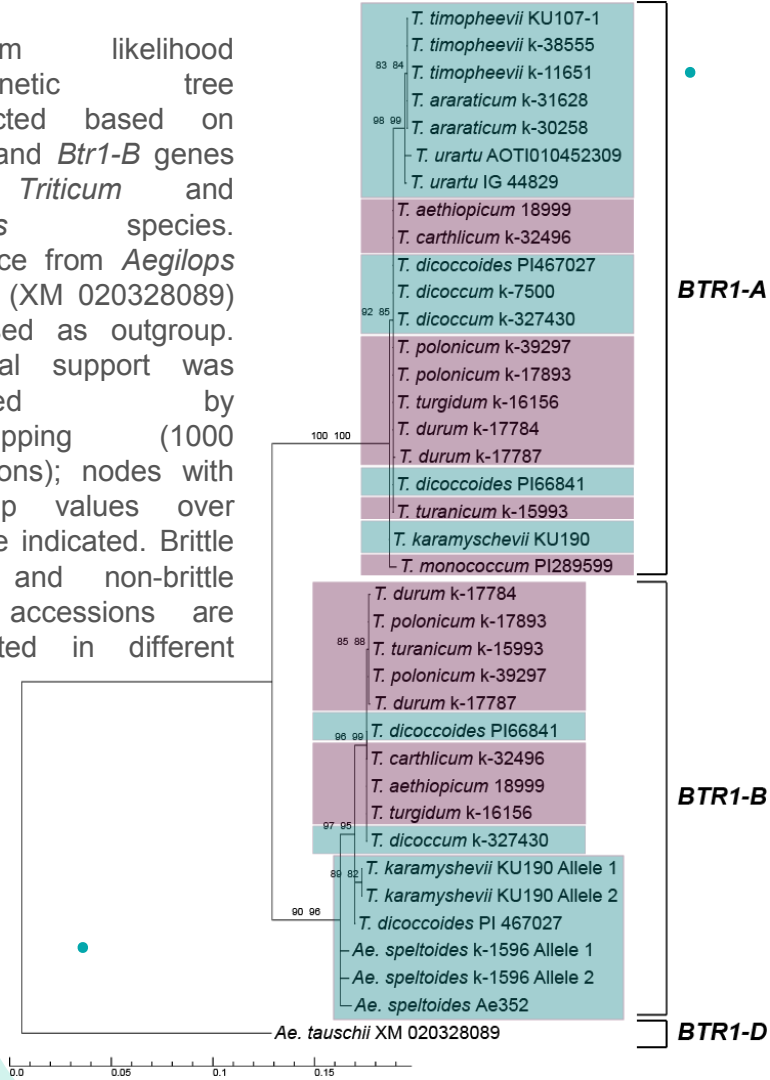
  *Aegilops speltoides* Tausch

  *T. durum* Desf.



Maximum likelihood phylogenetic tree constructed based on *Btr1-A* and *Btr1-B* genes from *Triticum* and *Aegilops* species.

Sequence from *Aegilops tauschii* (XM 020328089) was used as outgroup. Statistical support was evaluated by bootstrapping (1000 replications); nodes with bootstrap values over 50% are indicated. Brittle rachis and non-brittle rachis accessions are highlighted in different colors.



# Results

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