

Molecular diversity of α -gliadin expressed genes in genetically contrasted spelt (*Triticum aestivum* ssp. *spelta*) accessions and comparison with bread wheat (*T. aestivum* ssp. *aestivum*) and related diploid *Triticum* and *Aegilops* species

Molecular Breeding

Benjamin Dubois^{1,2}, Pierre Bertin², Dominique Mingeot¹

¹ Centre wallon de Recherches agronomiques (CRA-W), Département Sciences du vivant, Chaussée de Charleroi, 234, 5030 Gembloux, Belgium

² Université catholique de Louvain (UCL), Earth and Life Institute – Agronomy, Croix du Sud, 2 bte L7.05.11, 1348 Louvain-la-Neuve, Belgium

Corresponding author: Benjamin Dubois, b.dubois@cra.wallonie.be

Online Resource 2. (a) List of α -gliadin sequences from ancestral diploid species and from bread wheat used to confirm the genome assignments. (b) List of additional α -gliadin sequences from bread wheat used to conduct an overall phylogenetic analysis together with α -gliadin sequences from bread wheat and diploid species included in the Online Resource 2a and with spelt α -gliadins isolated in this work.

| a | | | |
|--------|---|--|---------------------------|
| Genome | Species | Accession number | Reference |
| A | <i>T. urartu</i> | KP405293, KP405294, KP405295, KP405296, KP405297, KP405298, KP405299, KP405301, KP405302, KP405303, KP405304, KP405305, KP405306, KP405307, KP405308 | Ozuna et al. 2015 |
| | var. Cheyenne | U08287 | Blechl and Anderson 1994* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Cheyenne | U50984, U51306, U51307 | Anderson et al. 1997 |
| | var. Chinese Spring | AB982242, AB982245, AB982249, AB982255, AB982272, AB982277, AB982278, AB982281, AB982288 | Noma et al. 2015 |
| S/B | <i>Ae. speltooides</i> | DQ002584, DQ002585, DQ002586, DQ002587, DQ002588 | Van Herpen et al. 2006 |
| | var. Cheyenne | K02068 | Kasarda et al. 1984 |
| | var. Cheyenne | M11073 | Okita et al. 1985 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Cheyenne | U51303 | Anderson et al. 1997 |
| | | X02540 | Sumner-Smith et al. 1985 |
| | var. Chinese Spring | AB982234, AB982236, AB982237, AB982241, AB982267, AB982273, AB982285, AB982286 | Noma et al. 2015 |
| D | <i>Ae. tauschii</i> | DQ002589, DQ002590, DQ002591, DQ002592, DQ002593, DQ002594, DQ002595, DQ002596, DQ002597, DQ002598, DQ002599 | Van Herpen et al. 2006 |
| | var. Cheyenne | M11075 | Okita et al. 1985 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Chinese Spring | X17361 | Garcia-Maroto et al. 1990 |
| | | AB982248, AB982253, AB982256, AB982260, AB982265, AB982276, AB982279, AB982284, AB982293 | Noma et al. 2015 |
| | var. Chinese Spring | | |
| b | | | |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Mjølner | AJ133602, AJ133604, AJ133605, AJ133612 | Arentz-Hansen et al. 2000 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Jimai20 | JN831386 | Li and Li 2011* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Zhengmai9023 | KC715927, KC715929, KC715930, KC715932, KC715940, KC715941, KC715944, KC715945, KC715950, KC715951, KC715952, KC715953 | Li et al. 2013* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Zhengmai9023 | JX828270 | Li et al. 2012* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. C273 | KJ410475 | Kaur et al.2016 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. GW273 | KJ410476 | Kaur et al.2016 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. HI617 | KJ410477 | Kaur et al.2016 |

| | | | |
|---|---|--|--------------------------|
| A, B, D | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Hyb65 | KJ410478 | Kaur et al.2016 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Lok1 | KJ410481 | Kaur et al.2016 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. NP4 | KJ410483 | Kaur et al.2016 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. NP824 | KJ410484 | Kaur et al.2016 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. VL404 | KJ410486 | Kaur et al.2016 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. WG377 | KJ410487 | Kaur et al.2016 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. WL711 | KJ410488 | Kaur et al.2016 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Zhengmai004 | KC715889, KC715890, KC715892, KC715896, KC715897, KC715901, KC715906, KC715907, KC715908, KC715910, KC715913, KC715917, KC715920, HM120221, HM120222 | Li et al. 2014 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Yamhill | K03074, K03075, K03076 | Sumner-Smith et al. 1985 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Wyuna | FN391140 | Sander et al. 2011 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Gaocheng 8901 | EF561274, EF561275, EF561276, EF561278, EF561279, EF561280 | Xie et al. 2010 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Zhongyou 9507 | EF561281, EF561283, EF561285, EF561287, EF561288 | Xie et al. 2010 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. AS1643 | DQ166376 | Chen et al. 2005* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Jinan177 | EU018291, EU018292, EU018295, EU018296, EU018297, EU018298, EU018299 | Chen et al. 2007* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Shaan253 | GQ891683, GQ891685 | Li et al. 2009* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Chinese Spring | JX141483, JX141484, JX141485, JX141486, JX141488, JX141489, JX141490, JX141492, JX141493, JX141494, JX141495 | Li et al. 2012* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Yumai50 | JX828260 | Li et al. 2012* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Zhengfeng5 | JX828284, JX828286, JX828291, JX828292, JX828293, JX828296, JX828298, JX828299, JX828300, JX828304, JX828306, JX828307, JX828310 | Li et al. 2012* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Zhengmai366 | JX828318 | Li et al. 2012* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> | DQ417343 | Liu et al. 2006* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Chuannong 16 | DQ246446, DQ246447, DQ246448 | Liu et al. 2005* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Chinese Spring | KJ137236, KJ137239, KJ137240, KJ137242, KJ137243 | Liu et al. 2014* |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Chinese Spring | AB982235, AB982282, AB982291, AB982292, AB982294, AB982296, AB982298, AB982299 | Noma et al. 2015 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Cheyenne | M10092 | Okita et al. 1985 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. Conil | KP405248, KP405249, KP405252, KP405254, KP405255, KP405260, KP405261, KP405262, KP405263, KP405266, KP405267, KP405268, KP405269, KP405270, KP405271, KP405272, KP405273, KP405275, KP405276, KP405277, KP405278, KP405279, KP405280, KP405281, KP405282 | Ozuna et al. 2015 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> | X02538, X02539 | Sumner-Smith et al. 1985 |
| | <i>T. aestivum</i> ssp. <i>aestivum</i> var. 96-212-2 | EF165553, EF165556 | Tang et al. 2006* |
| <i>T. aestivum</i> ssp. <i>aestivum</i> var. 96-132-1 | EF165554 | Tang et al. 2006* | |
| <i>T. aestivum</i> ssp. <i>aestivum</i> var. 96-137-3 | EF165555 | Tang et al. 2006* | |

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