

LOW MOLECULAR WEIGHT GLUTENIN SUBUNITS IN *TRITICUM TURGIDUM* SSP. *TURANICUM*, *POLONICUM* AND *CARTHLICUM*

DE ANGELIS E., COLAPRICO G. URBANO M., MARGIOTTA B.

Institute of Plant Genetics – CNR, Via Amendola 165/A Bari (Italy)

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The low-molecular weight glutenin subunits (LMW-GS) affect viscoelastic properties of dough. They have been subdivided, according to their biochemical properties, into B-, C- and D-types: the B types are typical LMW-GS, the C- and D-types correspond to modified monomeric proteins, similar to the so called gliadins. The LMW-GSs, mainly encoded by a multigene family present at the *Glu-3* loci located on the short arms of the group 1 chromosomes closely linked to the *Gli-1* loci, have not been completely isolated and characterized in tetraploid wheat.

In order to study the polymorphism of these proteins, seventy-five accessions of *T. turgidum* ssp. *turanicum*, ssp. *polonicum*, ssp. *carthlicum*, previously selected by electrophoretic (1DE) and chromatographic (RP-HPLC) techniques, have been evaluated by two-dimensional electrophoresis (2DE) and polymerase chain reaction (PCR). Comparison of 2DE and PCR results have permitted the identification of B- and C-type LMW-GSs and of unknown putative C-type LMW-GSs in the tetraploid species and the designation of corresponding genes.