

## Assoc. Prof. Barbara Apolinarska

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### Research interests

Biology, genetics, cytogenetics of plants, plant breeding

### Field of specialization

- Construction wheat-rye hybrids on different ploid level.
- Introgression wheat and different *Aegilops* species chromatin into rye.
- Introgression *Aegilops* chromosomes into hexaploid triticales and *Agropyron* chromosomes into triticales and wheat.
- Cytogenetic analysis chromosome constitution of wheat-rye hybrids, wheat and triticales with introgression fragments of *Aegilops*, *Agropyron* genomes, chromosome identification C-banding method.

### Main recent publications

APOLINARSKA B., WIŚNIEWSKA H., WOJCIECHOWSKA B. 2010. *Aegilops*-rye amphiploids and substitution rye used for introgression of genetic material into rye (*Secale cereale* L.)

SODKIEWICZ W., SODKIEWICZ T., APOLINARSKA B. 2008. Chromosomal location in triticales of the new leaf rust resistance genes introduced from *Triticum monococcum*. *Plant Breed.* 127: 364-367.

APOLINARSKA B. 2008. Introgression of wheat chromosomes into diploid rye by use of a hexaploid triticales with an ABRRRR genome. *Cereal Res. Commun.* 36(1): 33-42.

APOLINARSKA B. 2006. Chromosome pairing in diploid substitution rye and addition rye with wheat chromosome. *Cereal Res. Commun.* Vol. 34: 1223-1229.

APOLINARSKA B. 2003. Chromosome pairing in tetraploid rye with monosomic-substitution wheat chromosomes. *J. Appl. Genet.* 44: 119-128.

APOLINARSKA B. 2003. The influence of rye cytoplasm on meiotic stability of tetraploid *Secalotriticum*. *J. Appl. Genet.*: 129-137.

APOLINARSKA B., WOJCIECHOWSKA B. 2003. Production of diploid rye/wheat chromosome additions and substitutions. *Cereal Res. Commun.* 31: 73-79.

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APOLINARSKA B., SODKIEWICZ W. 2002. Substitution of B-genome chromosomes into tetraploid triticales with a complete A-genome. *Proc. 5<sup>th</sup> Inter. Triticales Symposium.* June 30 – July 5, 2002, Radzików, Poland, vol. II: 27-31.

ROGALSKA S. M., ACHREM M., SŁOMIŃSKA-WALKOWIAK R., FILIP E., SKUZA L., PAWŁOWSKA J., APOLINARSKA B. 2002. Polymorphism of heterochromatin bands on chromosomes of rye *Secale vavilovii* Grossh, lines. *Acta Biologica Cracoviensia, Series Botanica* 44: 111-117.

ROGALSKA S. M., APOLINARSKA B., ACHREM M., SŁOMIŃSKA-WALKOWIAK R., SKUZA L., FILIP E. 2002. Meiotic behavior of chromosomes in PMCs in plants of *Secale vavilovii* Grossh, lines with additional heterochromatin in chromosome 2R. *Acta Biologica Cracoviensia, Series Botanica* 44: 119-124.

APOLINARSKA B., SODKIEWICZ W. 2002. Tetraploid triticales with a complete A-genome – an attempt to introduce a single chromosome pair of the B-genome. *Triticales Topics*, ISSN 1325-2003, 18: 4-7.

APOLINARSKA B., SODKIEWICZ W. 2002. Substitution of B-genome chromosomes into tetraploid triticales with a complete A-genome. *Proc. 5<sup>th</sup> Inter. Triticales Symposium*. June 30 – July 5, 2002, Radzików, Poland, vol. II: 27-31.

GRZESIK H., WĘGRZYN S., WAGA J., APOLINARSKA B. 2001. Genetic, cytogenetic and electrophoretic analysis of hybrid of Lasko variety with dwarf triticales mutant Tm 1300. *Eucarpia*, Section Genetic Resources, Broad variation and Precise Characterization – Limitation for the Future. (Święcicki W., Naganowska B., Wolko B. eds): 186-189.

APOLINARSKA B. 2001. Secalotriticum 4x – production, chromosome constitutions and fertility. *Cereal Res. Commun.* 29: 61-68.

APOLINARSKA B., GRUSZECKA D. 2001. Transfer genów z *Dasypyrum villosum* (*Haylandia villosa* L.) do *Secale cereale* L. *Biotechnologia* 2: 63-65.