



**Genome**Prairie

## News Release

### **Prairie Researchers Take Steps towards Developing More Cold Hardy Wheat Varieties**

*Saskatoon, Saskatchewan - July 31, 2009* – A recent publication in the Journal of Experimental Botany highlights key discoveries related to genetics of wheat development. These new discoveries reveal some of the different chromosomal regions associated with floral transition, length of vegetative growth, and flowering time.

“The results of this research provide us with a better understanding of the complex wheat genome” said Dr. Ravindra Chibbar, co-author of the recent study. “This knowledge gives us new insights into the function of important genomic regions.”

The findings announced in this paper can help plant breeders refine their breeding programs using marker-assisted selection. Accordingly, this new knowledge provides insights to help breeders develop new wheat varieties with improved traits such as increased tolerance to low-temperature or other abiotic stresses such as drought.

Wheat is a significant crop in Canada, where average annual production is nearly 23 million tonnes<sup>1</sup>. With a better understanding of the key genomic regions associated with important plant developmental stages, plant breeders will be better positioned to optimize wheat varieties in ways that enhance wheat production and benefit producers.

“A better understanding of the wheat genome will help move this crop forward through the development of superior varieties that meet the needs of Canadian stakeholders” said Dr. Wilf Keller, President and CEO of Genome Prairie.

This research was funded as part of Genome Prairie’s Crop Adaptation Genomics project which focuses on the use of genomic tools for crop improvement in temperate climates. This \$8.1 million project is funded in part by Genome Canada, Genome Prairie and the Province of Saskatchewan and is led by Dr. Brian Fowler, at the Crop Development Centre, University of Saskatchewan.

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**About Genome Prairie:**

Genome Prairie is a not-for-profit organization that collaborates with government, academia, and industry to lead large-scale genomics research projects in the provinces of Saskatchewan and Manitoba. The organization supports enhanced research capacity in the region while engaging stakeholders to explore the societal impacts of genomics. The ultimate goal is to foster world-class innovation and commercialization on the Prairies.

Genome Prairie was established in 2000 and is one of six Canadian genome centres. Since this time, the organization has facilitated more than \$188 million of research activity in microbial, plant, animal and human genomics, bioinformatics, technology development and bioethics. Genome Prairie also provides leadership in the coordination of innovation networks to expand and share the cumulative knowledge of research across sectors and value-chains. These coordinated networks link the diverse knowledge and skills of different stakeholders and enable technical progress by diffusing information and increasing synergies of expertise and resources.

**Article Information:**

Båga, M., Fowler, D.B., Chibbar, R.N. (June, 2009). Identification of genomic regions determining the phenological development leading to floral transition in wheat (*Triticum aestivum* L.), *Journal of Experimental Botany*, Advance Access, retrieved July 14, 2009, from:  
<http://jxb.oxfordjournals.org/cgi/content/abstract/erp199v1>

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<sup>i</sup> [http://www.agr.gc.ca/itpd-dpci/country/Wheat\\_brochure-2004\\_e.htm](http://www.agr.gc.ca/itpd-dpci/country/Wheat_brochure-2004_e.htm)