



HEALTHGRAIN

## EXPLOITING BIOACTIVITY OF EUROPEAN CEREAL GRAINS FOR IMPROVED NUTRITION AND HEALTH BENEFITS

1 (2)

PRESS RELEASE May 5, 2010

### **Evidence for health potential of wheat aleurone as part of ready-to-eat cereals and bread**

**Wheat aleurone is a novel wheat grain fraction with high levels of potentially health-promoting compounds. New clinical trials with ready-to-eat cereals and bread containing wheat aleurone have been performed, and showed increased blood concentrations of tentatively beneficial compounds such as betaine, and decreased homocysteine and LDL-cholesterol which are both associated with heart disease risk.**

It is important for the food industry to understand and to demonstrate the health benefits of foods, so that consumers can be offered foods with scientifically proven health benefits. This needs effective collaborations across the food chain, from growers to processors to food production, and further to the researchers who study the physiological responses and clinical outcome.

Buhler produced aleurone fractions in their pilot production plants in Switzerland, which were then incorporated into ready-to-eat cereal by Buhler, and into bread rolls by Barilla in Italy. These products contained 9 g aleurone per portion. The University of Ulster in Northern Ireland, UK conducted a 4-week randomised controlled clinical study with human subjects, who consumed two portions of bread rolls, and one portion of ready-to-eat cereal as part of their diets. The study showed that, compared to control products, the consumption of the products, which provided 27 g aleurone per day, led to significant changes in a number of plasma biomarkers. Betaine increased, and there were decreases in homocysteine and LDL-cholesterol, which are both associated with heart disease risk. Furthermore, there was a decrease in C-reactive protein (CRP) which is a biomarker for inflammation.

The test foods were produced in collaboration with Walter von Reding and Caecilia Spöerndli from Buhler AG, and Roberto Ranieri and Giancarlo Riboldi from Barilla G. e R. Fratelli SpA.

#### **The EU Integrated Project HEALTHGRAIN**

The HEALTHGRAIN project has substantially strengthened the scientific basis for a new generation of cereal based products with enhanced health benefits. The project also has formed a network of research organizations, industries and organizations communicating to consumers that will continue as the HEALTHGRAIN Forum.

*Results of the project will be presented in  
the HEALTHGRAIN Conference on May 5-7 in Lund, Sweden:  
[www.healthgrain.org](http://www.healthgrain.org)*

**Northern Ireland Centre for Food and Health (NICHE)** is part of the School of Biomedical Sciences, at the University of Ulster, Coleraine, UK. With 24 academic staff, including 4 professors, NICHE is among the largest university-based nutrition research units in Europe. Human studies are conducted in the state-of-the-art Human Intervention Studies Unit.



HEALTH GRAIN

EXPLOITING BIOACTIVITY OF  
EUROPEAN CEREAL GRAINS  
FOR IMPROVED NUTRITION AND  
HEALTH BENEFITS

2 (2)

**Key references:**

Keaveney, EM, Hamill, LL, Price, RK, Wallace, JMW, McNulty, H, Ward, M, Strain, JJ, Ueland, PM, Scott, JM, Molloy, AM, Welch, RW (2009) Evaluation of the uptake of bioactive components from wheat-bran and wheat-aleurone fractions in healthy adults. *Proceedings of the Nutrition Society*, 67, (OCE7), E244.

Price, RK, Keaveney, EM, Hamill, LL, Wallace, JM, McNulty, H, Ward, M, Strain, JJ, Ueland, PM, Scott, JM, Molloy, AM, Welch, RW (2007) Plasma uptake of methyl donors from wheat fractions by human subjects. *Proceedings of the Nutrition Society*, 66: 114A.

**Further information:**

Dr. Ruth Price, University of Ulster  
+44 (0) 28723515, [rk.price@ulster.ac.uk](mailto:rk.price@ulster.ac.uk)

Professor Rob Welch, University of Ulster  
+44 (0) 287232 4205, [rw.welch@ulster.ac.uk](mailto:rw.welch@ulster.ac.uk)