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WITHDRAWN

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Prediction of glycaemic index of bread from starch swelling power of flour

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Background – Simple tests that reliably predict the glycaemic index (GI) of food products made from flour may facilitate the development of low GI formulations.

Objective – To explore the relationship between starch swelling power, a routine test in cereal chemistry and the final GI in 12 experimental wheat cultivars

Design – GI was measured accordingly to standard methodology in 10 healthy subjects when 12 novel wheat cultivars were milled and baked into domestic white bread. Amylose content of the milled flours was determined by starch swelling power (SSP) and compared to the GI when consumed as bread. A significant positive linear relationship was found between the glycaemic index of the white breads and the SSP of wheat flours of origin. (R^2 0.6225 $P < 0.05$). This demonstrates wheat with increasing amylose content has the effect of decreasing glycaemic index when baked into white breads. SSP may be a convenient, economic method to select new wheat varieties with enhanced nutritional qualities.

Conclusion – Starch swelling power may help the food industry predict the effect on glycaemic index of raw materials when used in the production of low GI processed cereal products