The effect of boarfish protein hydrolysate on postprandial glycaemic response and satiety in healthy adults

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There have been increased efforts to find an added-value application for the currently underutilised pelagic fish species, Boarfish (Capros aper)(1). Recent in vitro and in vivo research has demonstrated that fish protein hydrolysate (BPH) has a beneficial effect on glycaemic control and reduced food intake(2). This study aims to investigate the effect of consuming boarfish on postprandial glycaemic control in human participants.

A randomised controlled human intervention crossover study was undertaken in a cohort of healthy adults (n = 20) to investigate the effect of consuming a BPH (3·5 g) drink on postprandial glycaemic control in comparison to a control drink. Blood samples were collected before (0 mins) and after the test drink was consumed over a 3-hour period (15, 30, 60, 90,120 and 180 mins). Collected blood samples were analysed for biomarkers of satiety (ghrelin, leptin) and glycaemic control (glucose, insulin, glucagon-like peptide 1 (GLP-1)). Visual analogue scales (VAS) were completed at each time point by participants to provide a subjective measure of their satiety.

Paired T test analysis revealed no significant difference between the area under the curve (AUC) for insulin or glucose, when the effect of BPH consumption was compared to the standard drink. A significant increase in satiety rating by 11·1% at 180 minutes (P = 0.034) was reported following BPH consumption in comparison to the control drink (Fig. 1).

This study showed that consuming 3·5 g of BPH had no effect on biomarkers of satiety or glycaemic control, albeit a higher dose may be required to see an effect. The BPH may have satiating effects which warrant further investigation.