Reviewer's report

Title: The potential role of phytochemicals in wholegrain cereals for the prevention of type-2 diabetes

Version: 1 Date: 13 March 2013

Reviewer: Annica Andersson

Reviewer's report:

General comments
The paper is well written and easy to follow. It is a review paper on content and bioavailability of phytochemicals in wheat, rye, barley, oats and rice. It evaluates the evidence for whole grain cereals and cereal fractions to increase plasma concentrations of phytochemicals and to reduce oxidative stress and inflammation in humans in a critical way. This is issue is both important and timely. The paper is well reasoned and relatively balanced. The standard of the writing is very good.

Specific comments
• Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
  Page 2, line 66: 3 should be written in letters (three)
  Page 3, line 121: Embro should be embryo?

• Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)
  Page 4, line 153 and 155: Explain “Superior” and “Roane”. Are they varieties or cultivars?
  How can bound flavonoids be higher than total? This is not clear.
  Page 4, line 156: Give more details about the genotypes. (Different genotypes from all over the world grown at the same site in Europe.) How many?
  Page 4, line 184-189: Only one reference is used for rye. If it is possible you could add some more.
  Page 5, line 216-217: There is another study on environmental factors to variation in phenolic acids (Fernandez-Orozco et al., 2010, JAFC).
  Page 6, line 257: Which whole grains?
  Page 8, line 342: 1 g of avenanthramides seems like a lot. How much oat extract is it?
  Page 9, line 409: ( is missing in the beginning of the line. It is not clear what you mean with cereal fibre intake (line 408) and total fibre.
Page 20, table 1: Avenanthramides in oats are missing. Maybe also lignans?

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests