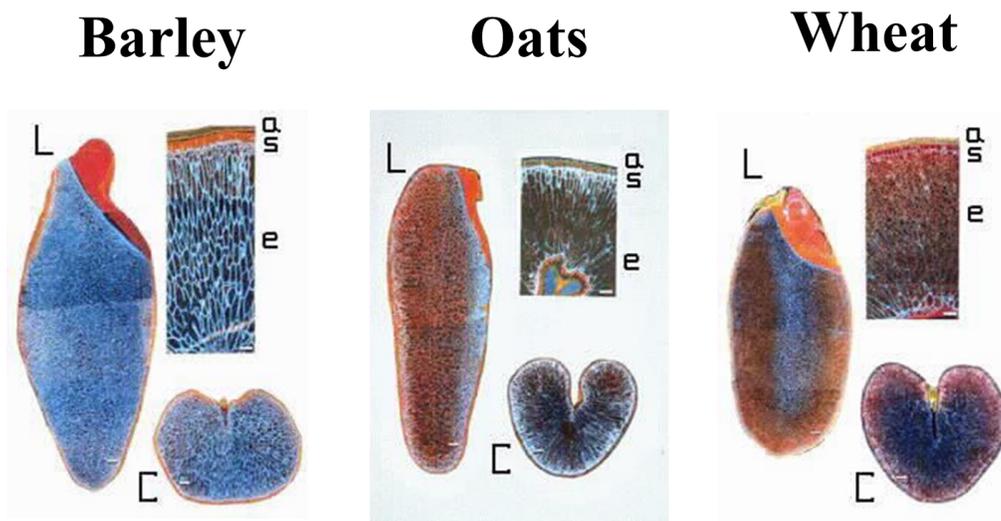


## Immunofiber 2021

The role of cereal (1→3),(1→4)-β-D-glucan in oats and barley as an immunological stimulating molecule has been confirmed over the past 20 years many times (J.K Czop and K.F Austen 1985, N. V. Cheung et al 2002, V. Vetvicka and J. Vetvickova 2007, V. Vetvicka and J. Vetvickova 2008, C. Daou and H. Zhang 2012, S. Modak et al 2013, L. Han et al 2019, C. de Olivera et al 2019, V. Vetvicka et al 2019, K. Saravanakumar 2020).

The beta glucan in oats and barley is the same molecule with essentially the same activity. However, there is less beta glucan in oats and it is associated with the bran fraction. Whereas in barley, especially high beta glucan waxy hullless barley (WHB) it is more copious and spread evenly throughout the entire seed and freely comes into solution with eating. This can be clearly seen in the figure below (Autio 2000) where the blue stained beta-glucan dominates the barley cross section, much less in oats, found in the bran fraction, and less in wheat. WHB is an Immuno powerhouse.



A wide variety of high beta glucan foods can be made from WHB, cereals, breads, pastries, soups, pasta, and juicy meat extenders providing gentle stimulation of the immune system with every meal. 100-500 mgs activates the immune system of the GI tract.



There are 3600 mgs in the bowl of Hot Barley Cereal, and 120 mg in a slice of 10% WHB bread. This immunological action extends to all vertebrates so WHB is great for Fido too.

For more information see “Immunofiber” <http://www.barleyfood.com/immunofiber.html> and the 2021 Barley Foods Short Course, Northern Crops Institute, NDSU, Fargo ND.

## **Immunological Benefits of Barley $\beta$ -glucan References**

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