Mode of action

In this guide

24. The adverse effects of lectins are dependent on a) structure and carbohydrate binding activity, b) number of carbohydrate binding sites, c) overall lectin content, and d) arrangement of sub-units and their interaction with glycans. By binding to carbohydrate moieties within the gut epithelial cells, lectins can affect the microvilli, villi and crypts. It has further been suggested that as a result of lectin consumption, the exocrine pancreas may produce digestive juice and grow due to the release of cholecystokinin from enteroendocrine cells into the bloodstream.

25. Lectins have demonstrated that they are capable of binding to the gut epithelial cells. Lectins have also been thought to be involved in the induction of autoimmune and allergic responses as a result of their effect on the gut barrier and microbiota. The animal species and the amount of lectin within the circulation would thereby affect the type of immune response.

26. EFSA considered that lectins could modulate intracellular/intercellular signalling pathways by binding to gut receptors which may affect viability.