Abstract
Plant cell wall polysaccharides are structurally and chemically among the most technically challenging components found in nature to characterize. They are complex assemblies and vary in composition from one plant species to another and from tissue to tissue within a plant. Conventional methods of polysaccharide analysis are technically elaborate and require specialized techniques which differ from those used for the characterization of small molecules. A number of analytical methods have been used for the analysis of polysaccharides but, as a result of the wide variety of chemical properties and the complex structure, no single method is universally applicable. A crucial step in the analysis of polysaccharides is their partial degradation into smaller oligomers for they can be characterized more easily. To address this issue, a large suite of cloned carbohydrate-active enzymes which enables the specific and precise cleavage of polysaccharides has been developed. The availability of these pure enzymes, in conjunction with the development of improved analytical instruments, has opened up new approaches to the analysis of plant polysaccharides.

Biography
Before his current work that is focussing on the characterisation of milk proteins with respect to their suitability for production of enteral nutrition Dr. Bauer has spent an extended period of time working in plant cell wall research. During this time he was particularly interested in developing tools to improve cell wall analysis by combining the advantages of recombinant DNA technology with GC MS and MALDI TOF based methods. The result of this work is a set of highly pure cell wall diagnostic enzymes and protocols that have established new standards in cell wall analysis.


For further information see http://www.imperial.ac.uk/eeo