

Purification of Tetragalloylglucose 4-O-Galloyltransferase and Preparation of Antibodies against This Key Enzyme in the Biosynthesis of Hydrolyzable Tannins

Petra Grundhöfer and Georg G. Gross*

Abteilung Allgemeine Botanik, Universität Ulm, D-89069 Ulm, Bundesrepublik Deutschland. Fax: +49-731-502-2809. E-mail: georg.gross@biologie.uni-ulm.de

* Author for correspondence and reprint requests

Z. Naturforsch. **55c**, 582–587 (2000); received February 29/March 24, 2000

Polyclonal Antibodies, Hydrolyzable Tannins, Galloyltransferase, *Quercus robur* L. (*Q. pedunculata*)

The enzyme, β -glucogallin: 1,2,3,6-tetra-O-galloyl- β -D-glucose 4-O-galloyltransferase, which catalyzes the last common step in the biosynthesis of the two subclasses of hydrolyzable tannins, i.e. gallotannins and ellagitannins, was purified 868-fold from leaves of pedunculate oak (*Quercus robur*, syn. *Q. pedunculata*) to apparent homogeneity. Polyclonal antibodies against this pivotal enzyme were raised in rabbits and purified by protein-A chromatography, gel-filtration and affinity complexation. They were found to react specifically with acyltransferase from oak, displaying no cross-reactivity towards analogous enzymes from other plants synthesizing hydrolyzable tannins along the same biogenetic route, e.g. *Rhus typhina* or *Tellima grandiflora*.