1. Record Nr. UNINA9910812642303321 Recent advances in polyphenol research . Volume 4 / / edited by Titolo Annalisa Romani, Vincenzo Lattanzio, Stephane Quideau; contributors Nickolas A. Anderson [and twenty eight others] Chichester, England:,: Wiley Blackwell,, 2014 Pubbl/distr/stampa ©2014 **ISBN** 1-118-32963-5 1-118-32966-X 1-118-32965-1 Descrizione fisica 1 online resource (468 p.) Collana Recent Advances in Polyphenol Research Disciplina 581.192 Soggetti **Botanical chemistry** Polyphenols Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto Cover; Title Page; Copyright; Acknowledgments; Contents; Contributors: Preface: Chapter 1 Monolignol Biosynthesis and its Genetic Manipulation: The Good, the Bad, and the Ugly; 1.1 Introduction; 1.2 Function and distribution of lignin in plants; 1.3 Targets for modification of lignin biosynthesis; 1.3.1 Gene targets 1. Biosynthetic enzymes: 1.3.1.1 L-phenylalanine ammonia-lyase (PAL): 1.3.1.2 Cinnamate 4-hydroxylase (C4H); 1.3.1.3 4-coumarate: coenzyme-A ligase (4CL); 1.3.1.4 Enzymes of the coumaroyl shikimate shunt; 1.3.1.5 Caffeoyl-CoA 3-O-methyltransferase (CCoAOMT) 1.3.1.6 Ferulate 5-hydroxylase (F5H)1.3.1.7 Caffeic acid 3-Omethyltransferase (COMT); 1.3.1.8 Cinnamoyl-CoA reductase; 1.3.1.9 Cinnamyl alcohol dehydrogenase (CAD); 1.3.2 Gene targets 2. Transcription factors; 1.4 Impacts of lignin modification through targeting of the monolignol biosynthetic pathway; 1.4.1 Lphenylalanine ammonia-lyase (PAL); 1.4.2 Cinnamate 4-hydroxylase (C4H); 1.4.3 4-coumarate: coenzyme-A ligase (4CL); 1.4.4 Hydroxycinnamoyl-CoA: shikimate hydroxycinnamoyl transferase

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Sommario/riassunto

Plant polyphenols are secondary metabolites that constitute one of the most common and widespread groups of natural products. They express a large and diverse panel of biological activities including beneficial effects on both plants and humans. Many polyphenols, from their structurally simplest representatives to their oligo/polymeric versions (also referred to as vegetable tannins) are notably known as phytoestrogens, plant pigments, potent antioxidants, and protein interacting agents. Sponsored by the scholarly society Groupe Polyphenols, this publication, which is the fourth volume in th