Expression of Chlorophyllase Is Not Induced during Autumnal Yellowing in Ginkgo biloba

Lei Tang, Atsushi Okazawa, Yoshiko Itoh, Ei-ichiro Fukusaki, and Akio Kobayashi*

Key words: Chlorophyllase, Ginkgo biloba, Chlorophyll Degradation

Department of Biotechnology, Graduate School of Engineering, Osaka University, 2-1 Yamadaoka, Suita, Osaka 565-0871, Japan. Fax: +81-6-6879-7426. E-mail: kobayashi@bio.eng.osaka-u.ac.jp

* Author for correspondence and reprint requests

Z. Naturforsch. **59 c**, 415–420 (2004); received October 27/December 5, 2003

Autumnal tints are one of the most fascinating natural phenomena, but the molecular mechanism of chlorophyll (Chl-)degradation in deciduous trees has not been fully understood. In this study, from the leaves of *Ginkgo biloba*, chlorophyllase-homologous *GbCLH* was cloned by RT-PCR with degenerated primers. The expression of *GbCLH* in different yellowing stages was analyzed by Northern hybridization. The expression level of *GbCLH* was highest in green leaves and significantly declined during the process of leaf yellowing. These results suggested that *GbCLH* should be involved in chlorophyll-homeostasis in *Ginkgo biloba*.