

C27-BRASSINOSTEROIDS BIOSYNTHESIS IN ARABIDOPSIS THALIANA

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Metabolic studies using a cell-free enzyme solution prepared from *A. thaliana* demonstrated that two parallel biosynthetic pathways to generate 28-norcastasterone, namely the early and late C-6 oxidation for C₂₇-brassinosteroids (BRs), are operative in the plants. In the presence of *S*-adenosylmethionine, the enzyme solution successfully mediated conversion of 28-norcastasterone to castasterone, indicating that the C₂₇-BRs biosynthesis is an alternative route to synthesize biologically active C₂₈-BRs, castasterone and brassinolide, in the plant. In the presentation, biosynthetic connections between C₂₈-BRs and C₂₇-BRs biosynthesis as well as between the early and late C-6 oxidation pathway for C₂₇-BRs will be explained. In addition, enzymes (genes) involved in the C₂₇-BRs biosynthesis will be discussed

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