

6-Hydroxyimino Derivatives of Castasterone as Haptens for Immunoenzymatic Analysis of Brassinosteroids

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Understanding the metabolic network of organisms and its response for environmental factors is one of the most fascinating challenges in natural sciences. In plants, this involves the physiological role of endogenous regulators and modulators of growth and developmental processes. This area is of particular interest for basic research in order to get insight into plant life and simultaneously it is of considerable economic importance. The discovery of brassinolide, which is still the most active brassinosteroid, was the starting point of brassinolide research. After identification of other members of this class of polyhydroxylated steroids, elaboration of the major pathways of the biosynthesis and physiological activities, current work in this field is focusing on molecular mode of action, brassinolide signaling and identification of receptor proteins. The need for rapid and selective techniques is of increasing importance for further studies on various aspects of brassinosteroids.

Many tasks connected with determination of brassinosteroids content in plant sources can be effectively solved by immunoassay method. An important prerequisite for development of the corresponding immunoassay system is the preparation of specially modified brassinosteroids.

The present work will deal with the synthesis of BSA derivative **3** which is intended for the preparation of the immunogenic conjugates. An improved synthesis of castasterone **2** starting from aldehyde **1** will be discussed also.

