

New Auxin Analogs. Possible Probes for Auxin Receptors

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Z. Naturforsch. **54c**, 1042–1048 (1999); received March 29/August 3, 1999

Auxin, Auxin Receptors, Molecular Modeling and 2,4-D Analogs

Based on structure-activity relationship studies, auxin analogs that can be covalently bound to a polymeric support are proposed. Molecular modeling studies were carried out by comparing different parameters of substituted phenoxyacetic acids with their auxin activity. A good correlation of the activity with the size and shape of the HOMO orbital of the acids was found. Accordingly, analogs with a substituent in the 5 position of the aromatic ring, capable to be bound to a polymeric matrix were synthesized and their auxin activity was evaluated with the wheat coleoptile elongation test. Compounds with a hydroxymethyl- and with a carboxymethoxy- substituent were active in this test. Their use as probes for the 2,4-D receptor is proposed.