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DO PLANT CELL WALLS HAVE A CODE?

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Highlights

1) Cell walls form a supramolecular complex generating architecture
2) In Code Biology signs are mapped into functions through an adaptor
3) Biosynthesis is the adaptor that encrypts the architectural message in the wall
4) The Glycomic Code can only be decrypted by hydrolysis
5) The Glycomic Code maintains plant biomass stability

Abstract

A code is a set of rules that establish correspondence between two worlds, *signs* (consisting of encrypted information) and *meaning* (of the decrypted message). A third element, the *adaptor*, connects both worlds, assigning meaning to a code. We propose that a Glycomic Code exists in plant cell walls where signs are represented by monosaccharides and phenylpropanoids and meaning is cell wall architecture with its highly complex association of polymers. Cell wall biosynthetic mechanisms, structure, architecture and properties are addressed according to Code Biology perspective, focusing on how they oppose to cell