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Preface

Pathogenesis-related (b) proteins are plant proteins that are induced in the leaves of several species in response to infection with a number of different viruses, fungi, or bacteria. Their appearance is associated with the development of acquired resistance, the state in which the plant reacts both faster and stronger to a subsequent, second infection and, consequently, the development of the pathogen is reduced. This reaction is aspecific as to both the inducing and the challenging pathogen and may be employed for increasing the general resistance level in crop plants.

After pathogenesis-related proteins were first spotted about 15 years ago, they have attracted the attention of researchers in areas as diverse as phytopathology, biochemistry, plant physiology, genetics, and molecular biology. Research is directed towards an understanding of their occurrence and specificity, their biochemical properties as proteins, the mechanism of their induction by either pathogens or specific chemicals, their physiological function in the plant and their role in resistance. The genetic information coding for these proteins is present in a latent form and is only expressed at the protein level by the triggering action of a pathogen or inducing chemical. Genetical and molecular studies are aimed at elucidating the regulation of the expression of pathogenesis-related proteins.

To facilitate communication between research workers actively engaged in investigations of all these various aspects, a workshop on pathogenesis-related (b) proteins was held in Wageningen from 17-19 May 1983, organized by S. Gianinazzi and L.C. van Loon. This workshop brought together for the first time 34 scientists from different fields to exchange information and perform experiments to directly compare the electrophoretic and serological properties of pathogenesis-related proteins isolated from different plant species at different locations. The results of these joint experiments are reported in these proceedings as an experimental paper between the invited reviews and the abstracts of contributed papers.

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L.C. van Loon

1 V. Conejero
2 J.F. Bol
3 R.F. White
4 W.S. Pierpoint
5 J.F. Antoniw
6 Y. Abu-Jawdah
7 A. Nassuth
8 R.N. Goodman
9 J.P. Carr
10 S. Winter
11 P. Ahl
12 M. Nücken
13 R.A.M. Hooft van Huysduynen
14 E. Maiss
15 L.C. van Loon
16 P.J.G.M. de Wit
17 T. Ersek
18 S. Gianinazzi
19 B. Cornelissen
20 J.C. Coussirat
21 A. Cornu
22. T. Boller
23 A. Camacho Henriquez
24 R.S.S. Fraser
25 R.H.A. Coutts
26 P. Redolfi
27 T.M.A. Wilson