Laimer, M., Rücker, W. (ed.): **Plant Tissue Culture, 100 years since Gottlieb Haberlandt. -** Springer Verlag, Wien - New York 2003. 260 pp. EUR 78.00. ISBN 3-211-83839-2.

The book presents hommage to the Austrian plant physiologist Gottlieb Haberlandt. It was issued at the occasion of the hundreth anniversary of the appearance of his crucial publication.

Gottlieb Haberlandt wrote in 1902 an article where he discribed the growth and cytological changes in the isolated plant cells kept for a limited period in a droplet of nutrient solution. It contained the following nearly prophetic consideration: "Ohne mich auf weitere Fragestellungen einzulasen, glaube ich zum Schluss keine allzu kühne Prophezeiung auszusprechen, wenn ich auf die Möglichkeit hinweise, dass es auf diese Weise vielleicht gelingen wird, aus vegetativen Zellen künstliche Embryonen zu Züchten". However, that frontier breaking idea formulated already at the beginning of the 20th century, accomplished its purpose not earlier than by the end of the same century, after the totipotency of the plant cells had been convincingly demonstrated. The technique which Haberlandt used, *i.e* cultivation of isolated plant parts (explants) on nutrient media contributed to the development of contemporary plant tissue culture. He actually introduced a methodology which decisively enhanced progress in many fields of plant biology and became indispensable in biotechnologies.

Both, the work and personality of Gottlieb Haberlandt, deserve to be remembered and the book well fulfils this objective. In the first chapters of the volume a facsimile of Haberlandt´s original text is presented, together with its English translation. Further on, there are contributions evaluating scientific discoveries of Haberlandt by A.D. Krikorian and G.L Berquam, and by E. Höxtermann. He is appreciated not only as the founder of plant tissue culture but also as a scientist who anticipated existence of the plant hormones (wound-hormones). His work "Physiological Plant Anatomy" was one of the first interdisciplinary publications in plant biology. The biography of Gottlieb Haberlandt within a broader context of scientific milieu in Austria and Germany was written by O. Härtel. Haberlandt´s contribution to plant tissue culture is being treated in broader framework of the early experiments, together with complex history of develoment of that discipline by H.W. Kohlenbach, and a reprint of late Gautheret´s review from 1982 is also included. This part of the book not only provides deep understanding of the topic, but it is also able to pass it in a comprehensible way to the reader. It represents its undoubted value.

Following seven articles demonstrating contemporary applications of plant tissue cultures: Micropropagation of ornamental plants (W. Preil), The *in-vitro* conservation of valuable genetic resources (G. Mix-Wagner and H.M. Schumacher), Production of natural products by plant biotechnology: results, problems and perspectives (A.W. Alfermann, M. Petersen and E. Fuss), Genetic engineering technology against malnutrition (P. Lucca and I. Potrykus), Somatic embryogenesis – the gate to biotechnology in conifers (K. Zoglauer, U. Behrendt, A. Rahmat, H. Ross and Tarryono), Tissue culture of broad leafed forest tree species (E. Wilhelm) and The development of transformation of temperate woody fruit crops (M. Laimer) cover quite a wide range of topics and provide valuable summarizing overviews. However, it is not likely that the specialist would look into this source for that kind of information. I believe that it should have been more appropriate to add one or two general reviews evaluating in an unifying way all aspects of the past and present usage of tissue cultures in plant biotechnology and outline their future potential.

Each contribution of the book is accompanied by biblioghaphy and usually by a suitable illustration. Fine collection of colour photographs is annexed.

Gottfried Haberlandt, a lonely figure at his age of 91, died in January 1945 in Berlin. A vicious air raid during his funeral destroyed his house and much of his personal and scientific inheritance. However, his ideas and scientific ethos have survived all this destruction in order to provide evidence of a long and from time to time cumbersome path between discovery of fundamental research and its practical application. Younger generations of scientists have an opportunity to learn about importance of unifying concepts and about the rule that progress in science is always based on the continuity with the past.

The editors and authors of this volume should be congratulated for their timely and much welcome contribution. Needless to say that the book would be an interesting read not only for the plant tissue culture specialist but for every genuine biologist.

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