

**EFFECTS OF SOME COMBINED TREATMENTS OF PVY
INFECTED POTATO PLANTLETS FROM ROMANIAN VARIETY
ROCLAS**

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Elimination of PVY from potato supply is essential for seed potato production. This is the reason because in this study, the efficiency of some techniques (chemotherapy, electrotherapy) in decreasing the infection level of PVY infected plants and producing virus-free plants was evaluated.

At the same time, the behaviour of the treated plants and their chlorophyll and anthocyanin content were estimated. Plantlets (variety Roclas) obtained from PVY (necrotic strains) infected material (mechanically inoculated) were used in the experiments. Electrotherapy was applied in several variants: the infected plantlets were exposed to either 40, 50 or 100 mA, for 5, 10 and 20 minutes, washed, divided into single node cuttings and multiplied in vitro. Chemotherapy was undertaken with ribavirin (RBV) and oseltamivir (OSMV) (RBV 40 mg l⁻¹ + OSMV 40mg l⁻¹). *Solanum tuberosum* L. plantlets regenerated were removed from the culture medium, acclimated in green house. The survivor plants were indexed (DAS ELISA). The variant leading to highest rates virus elimination and plant regeneration was estimate using the Therapy Efficiency Index (TEI). This study revealed that applying this combined therapy could have beneficial effects on PVY elimination from potato plant tissues.

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Foreword

The quality of each person's life, as well as the entire evolution of a society, depends on the nutrition and psychical health of the human being. The world is nowadays confronted with a demographic explosion, concomitantly with a planet-wide accentuation of agricultural and food deterioration. This is the reason why we have to be prepared, in the XXI-th century, to face the Global and Local Challenges in Food Science and Technology, generated by the quantitative and qualitative food-related needs.

Under this them, more than 100 papers were received on the topics of food production, food processing, food quality and safety, nutrition, engineering and design, innovative technologies.

*The **BIOATLAS Conference** aims to keep the quality of an integrated, multidisciplinary and interconnected international conference on the topic of agri-food fields and it also drawn the interest of numerous specialists who continuously attempt to identify solutions to difficult contemporary problems.*

*The impressive international participation encourages us to believe that the **BIOATLAS Conference** may have positive echoes emerged from the experience and contribution brought by all **international participants** from Italy, Bulgaria, Hungary, Republic of Moldova, Russia, Ukraine together with researchers from Romania.*

*This book of abstracts contains selected abstracts of papers presented during the **BIOATLAS Conference**.*

The program for this conference required the dedicated effort of many people. Firstly, we must thank the authors, whose research efforts are herewith recorded. Secondly, we thank the members of the Scientific Committee and the additional reviewers for their diligent and professional reviewing. Last but not least, we thank the invited speakers for their invaluable contribution and for taking the time to prepare their talks.

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