



# MOLDOVA STATE UNIVERSITY

Scientific Research Laboratory

Human and Animal Ecophysiology

65 A, Mihail Kogălniceanu str., Chisinau, MD-2009, Republic of Moldova

Tel.: +373 68082030

E-mail: [iurabacalov@mail.ru](mailto:iurabacalov@mail.ru)



HR EXCELLENCE IN RESEARCH

## BIOLOGICALLY ACTIVE SUBSTANCES AS A BASIS OF MODERN BIOTECHNOLOGIES APPRECIATION IN MODULATION AND ADAPTATION OF METABOLIC PROCESSES OF LIVING ORGANISMS

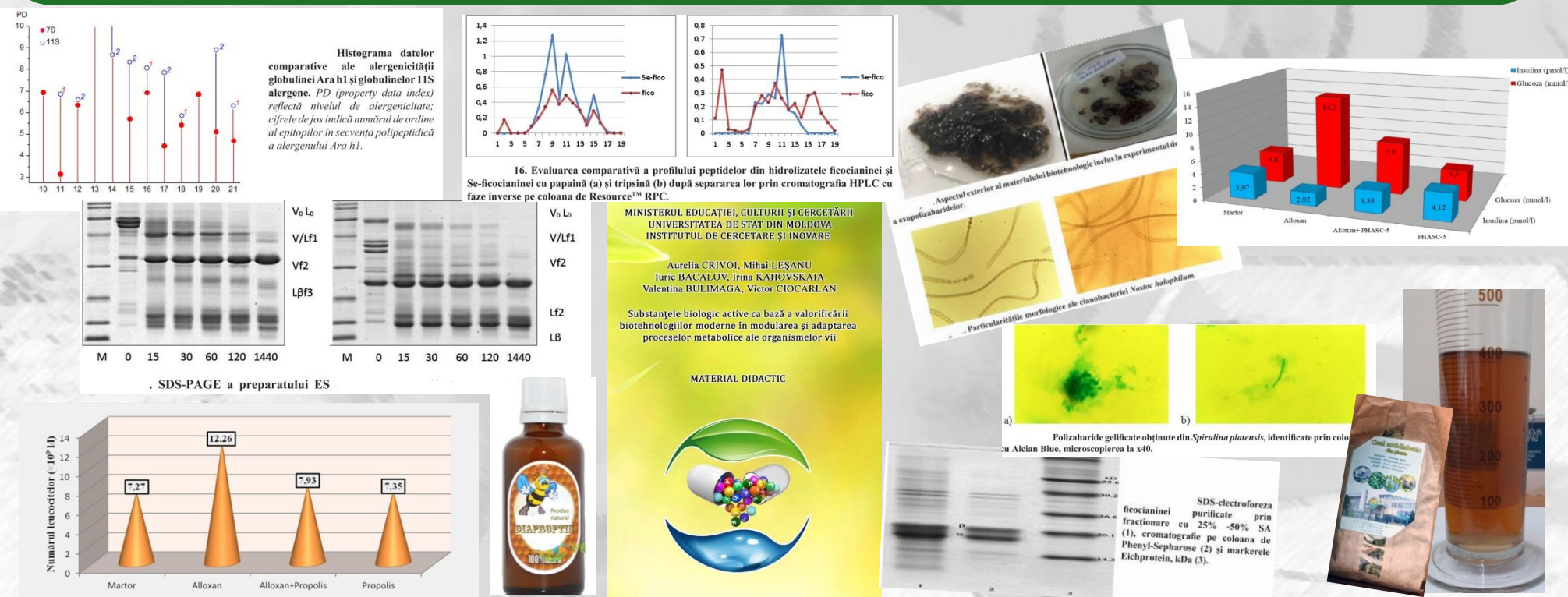
Project number: 15.817.05.02F

AUTHORS: Iurie BACALOV, Elena CHIRIȚA, Adriana DRUȚA, Ana BÎRSAN, Alina TROFIM, Victor CIOCÎRLAN, Aurelia CRIVOI.

APPLICATION FIELDS: Compartimentul II „Proiecte de inovare și transfer tehnologic. Proiecte de cercetare. Monografii”

AIM: Valorization of bioactive substances from plants, the development of biopreparations and their use in the functional disorders of organisms.

SOLUTION: This project represents a strategic research direction in the field of modern biotechnologies. The valorization of bioactive substances allows their use in medicine and agriculture. Many components from native plants demonstrate biological activity as important agents in the body's adaptive processes, which can be used as natural pharmaceutical and nutritional supplements. The assessment of the biochemical and physiological impact of bioactive compounds (allergens, peptides, phycocyanin, etc.) allows the deciphering of the processes of modulation and adaptation of organisms and the selection of new varieties to obtain them. The development of procedures for the isolation of bioactive compounds from plants allow their use for medicinal and food purposes, a fact that argues the importance of scientific studies within the addressed problem.



ADVANTAGES: The obtained results enriched the arsenal of bioactive preparations tested from a hematological, immune, biochemical point of view, which led to obtaining new compounds with stimulating effects on some biological processes of vital importance and argued the necessity of using compounds with regulatory properties in the normalization and maintenance of body functions under stress conditions. The physiological activity of the individual components of essential oils was determined for the selection of promising forms from the point of view of the content of biologically active substances used in the pharmaceutical, cosmetic, perfumery and food industries. Efficient procedures for extracting and purifying of the complex of polysaccharides from spirulina biomass were developed and technologies for obtaining multifunctional products with antioxidant, antiviral and antidiabetic effects were proposed.

IMPLEMENTATION STAGE: At the laboratory level.

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