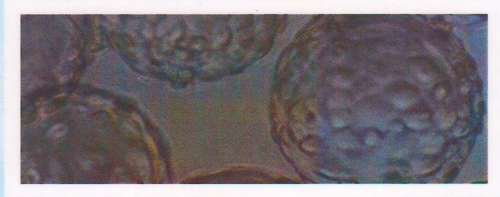
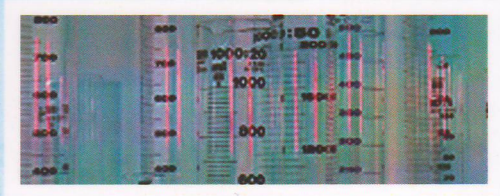
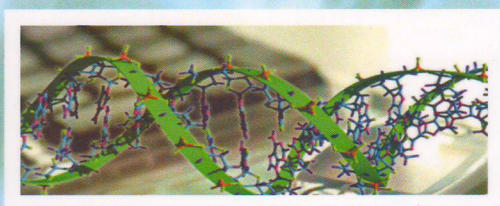
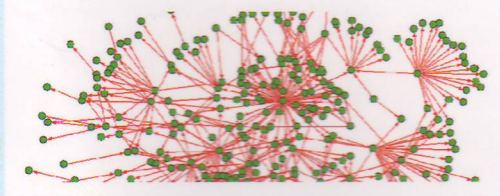


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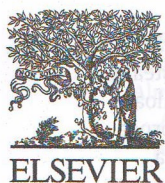


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Supplement Issue

**EUROPEAN BIOTECHNOLOGY CONGRESS 2015,
Bucharest**



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Editorial

Dear Colleagues,

It was our great pleasure to welcome you to the abstract volume of the European Biotechnology Congress 2015 held under the joint auspices of the European Biotechnology Thematic Network Association and The University of Agronomic Sciences and Veterinary Medicine during 07 – 09 May 2015 in Bucharest, Romania.

We hope that this journal will keep you updated on the latest developments in Biotechnology.

Munis Dündar
Editor

European Biotechnology Congress 2015 – 07 – 09 May 2015 – Bucharest – Romania

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Earlier it was shown that vegetable preparations "Asgipan", "Glabiloks" and "Sapanoks" are capable to increase of various vaccine preparations efficiency at various ways of administration.

The purpose of this research is to develop scaling technology of laboratory methods of obtaining plant immunostimulatory preparations "Asgipan", "Glabiloks" and "Sapanox".

Studied herbal preparations obtained by HPLC method from *Aesculus hippocastanum*, *Glycyrrhiza glabra* and *Saponaria officinalis* plant extracts. Scaling of HPLC process carried out in two ways: by increasing the amount of sorbent in preparative column and by varying the time of chromatography, gradient elution, the volume of eluent applied to the column per unit time. During the process of scaling carried out a permanent spectrometric control for the effectiveness of purification and quality of plant preparations "Asgipan", "Glabiloks" and "Sapanox" was carried out.

Studies have revealed that the change of eluent volume from 0.8 ml/min to 5 ml/min and the column type allow to increase the yield of the final product more than 12 times, due to the effective separation of the original plant increased in 6 times used for purification of "Asgipan", "Glabiloks" and "Sapanox".

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Evaluation of the biologic activity of some quaternary ammonium salts against non-pathogenic and pathogenic microorganisms



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We present herein the antimicrobial activity on non-pathogenic and pathogenic microorganisms of some heterocyclic compounds, synthesized by us using non-conventional "green" methods, which are one of the most used classes of disinfectants, with wide application in hospital environments, water treatment, textiles, paint and food industry.

The study on toxicity of heterocyclic compounds was performed by determining the biological activity on non-pathogenic and pathogenic microorganisms through the diffusion method and by studying the cell survival assay using 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT). MTT measures the mitochondrial function, being widely used to measure the cytotoxic potential of a chemical compound.

The antimicrobial activity was strongest against *Staphylococcus sp.*, *Streptococcus sp.*, and *E. coli*, and the lowest was against *Candida albicans*. Some compounds, whose *Staphylococcus* and *Streptococcus* MIC are very small (≤ 250 mg/mL), may be of therapeutic interest.

Acknowledgements: This work was supported by a grant of the Romanian National Authority for Scientific Research, CNCS-UEFISCDI project number PN-II-ID-PCE-2011-3-0226.

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The susceptibility of chicken embryo to endotoxin solution eliminated by carbonized material



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Bacterial endotoxin (LPS) removal from aqueous solutions is a challenging bioengineering task because of its ubiquity and high physical and chemical stability. Nowadays, adsorption methods of LPS removal are regarded as most advantageous with many different adsorbent materials being developed. In this work, low-cost nanostructured carbonized material (rice husks-CRH) designed by us in accordance for LPS-adsorption. The purpose of the present investigation was to determine the susceptibility of chicken embryos to an injection of endotoxin and CRH-treated endotoxin *in vivo* during the period of development. Endotoxin extracted from cell walls of *E. coli* by LPS extraction kid was injected intravenously into fertile eggs, of varying ages. It has been observed that the susceptibility (the development of provisional organs, pyrogenicity, blood analysis and lethal dose (LD50)) of chicken embryos to endotoxin decreased daily as the embryo matured from day 10 to hatching, while CRH-treated LPS had showed weak effect. These data show that the toxin effects of LPS solution was eliminated by CRH, according to the increased resistance of embryos. We consider the obtained results on the basis of novel advanced and economically efficient material CRH are very promising as the increasing number of biotechnological and biomedical applications supposed to be endotoxin-free, as well as still persisting problems with purification of complex mixtures.

<http://dx.doi.org/10.1016/j.jbiotec.2015.06.327>