ABSTRACTS

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viable cells were determined using plate count method in three replicates on YMA plates [1]. The effect of molasses (5 g/l) and trace element (2 ml/l) supplements on proliferation dynamics of *Bradyrhizobium* strains in YMB culture was studied as well. 80 kg of soybean seeds were inoculated with 0.5 kg of peat based inoculum. Six weeks after sowing, the height of plants; shoot and root dry weight; and the number of nodules were determined. Soil physical and chemical parameters were also analysed. Bacteria were isolated from root nodules of plants for further comparative studies. There was no significant difference in vitro between the two inocula in the number of colony forming units (CFU). The number of CFU’s of both products were higher than 1011 without any contamination. At the end of the investigation period, at both inocula, the number of CFU’s in the YMB medium supplemented with trace elements was significantly higher compared to the control. In the medium supplemented with molasses there were two orders of decrease in the number of CFU’s of the simple inocula. The number of CFU’s of complex inocula rose up to 109. As an effect of both supplements (molasses and trace elements) the maximum number of CFU’s exceeded 1011; however, there was no significant difference between the effects of the two supplements used.

On the basis of field experiment it was established that complex inocula had a positive effect on soybean plants. The number of nodules ranged between 5 and 10 pieces on the taproots investigated. The height and shoot dry weight of the inoculated plants were 20 % higher compared to the control; the measured differences were significant. The trace element treatment enhanced the positive effect of inoculation, however, the increment was not significant. The simple inocula did not have positive effect on soybean plants. There were no nodules detected on the roots of the inoculated plants. The plant height was 30%, while shoot dry weight was 50% lower compared to plot treated with complex inoculum. Results showed that despite of the high number of CFU’s and the purity of both inocula, only strains originated from the complex inoculum were able to infect soybean plants.

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**EFFECT OF FERMENTED WHEAT GERM EXTRACT ON FELINE VIRUSES (A PILOT STUDY)**

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Several, differently processed wheat germ extracts available through pharmacies have immunostimulant effects. As dietary supplements in chronic diseases they improve life quality. A fermented wheat germ extract (FWGE) having Hungarian and FDA approvals increases cellular immunity, natural killer cell activity, IL-2 production, hematological parameters, results in weight gain, but decreases production of autoimmune antibodies. It facilitates programmed cell death of tumorous and leukemic cells. These results suggest its possible benevolent effects in virus infections. In the feline AIDS model, MBM feline lymphoid cells were infected with feline immunodeficiency virus (FIV) strains Petaluma (Pet) and Pisa-M2 (M2). HeLa human cervical cancer cells and CRFK normal feline kidney cells were infected with feline adenovirus (FeAdV) and treated with serial dilutions of FWGE subsequently cytopathic effects and virus titres were monitored. FL-4 feline lymphoid cells continuously producing FIV-Pet were similarly treated and followed. It was established that FWGE exerts cellular toxicity at ≥2000 microg/ml, but MBM cells are unusually sensitive to streptomycin. FWGE in a concentration dependent manner slightly increased replication of MBM cells, did not alter that of CRFK, but reduced both growth rate and viability of HeLa cells.
Upon treatment FL-4 cells rapidly died showing morphological signs of apoptosis and their virus production significantly diminished. A single dose of FWGE reduced apoptosis induction of both FIV strains in MBM cultures up to 17 days, and FIV-M2 showed higher sensitivity to FWGE. A single FWGE dose inhibited FeAdV production but facilitated destruction of infected cells up to 6 days postinfection. Among the same conditions its inhibitory effect on HeLa cells lasted up to 3 days, only. FeAdV produced in HeLa or CRFK cells also showed different sensitivity to FWGE. Preceding FIV infection also reduces replication of FeAdV. It is concluded that FWGE exerts its effect on the cells primarily, which are different in uninfected and infected cultures. Consequently the latter effects reduce their virus producing capacity. Exploration of the exact pathomechanism and immunological effects by FWGE might determine whether it could be applied along with antiviral drugs in human and feline AIDS to improve life quality for a longer period.

NEW AGRICULTURAL PESTS EMERGING: THE GREEN MOULD DISEASE OF CULTIVATED OYSTER MUSHROOM

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During the last two decades, several case reports have been published world-wide about green mould infections of cultivated Agaricus bisporus, and the causative agents were identified as Trichoderma aggressivum. In the latest years the green mould disease of oyster mushroom caused by Trichoderma has also been reported in several countries. Pleurotus ostreatus is the third most important commercially grown basidiomycete world-wide, and the production of it is getting increasingly affected by green mould infections resulting in great crop losses. The fungi responsible for the green mould disease of P. ostreatus proved to be different from T. aggressivum based on their cultural, morphological, physiological and molecular properties, and therefore have recently been described as the new species Trichoderma pleurum and Trichoderma pleuroticola.

The aim of this presentation is to make an overview of the global situation of Pleurotus green mould disease, covering recent experimental data about extracellular enzyme production and epidemiology (potential sources and spreading) of the causative agents as well as possibilities for their fast diagnosis by specific PCR and biological control with antagonistic bacteria.

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CULTIVABLE SPECIES DIVERSITY OF THE SEDIMENT OF LAKE HÉVÍZ

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Lake Hévíz is the deepest, biologically active, peat bedded thermal lake of Europe. The mud of the

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