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ABSTRACTS



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the rats were intraperitoneally injected with streptozotocin at a dose of 60 mg/kg body weight, freshly dissolved in distilled water (5%). Animals with fasting blood glucose of 120 to 250 mg/dl were considered diabetic. Results showed a significant difference among animals of groups 3 and 4 with control group during 3rd week. Results showed that blood glucose level on weeks 3 and 6 in groups 3 and 4 was higher than control group significantly. Increased cholesterol level in group 3 was observed on weeks 3 and 6 compared with prior the study. A significant increase in serum triglycerides was observed on weeks 3 and 6 in group 3 compared with prior the study. Measurement of HDL has revealed that this parameter in rats of group 3 decreased significantly in compared with prior the study and LDL levels were increased in rats of group 3 in compared with control group.

P16-015
Specific expression of O-glycoprotein glycans in cholangiocarcinoma cell lines

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Protein glycosylation is the most common posttranslational modifications in mammalian cells. It is involved in many biological pathways and molecular functions. Aberrant protein glycosylation may be associated with the disease processes, including cancer. We have identified and quantified the glycan structures of O-linked glycoprotein from Cholangiocarcinoma (CCA) cell lines and compared their profiles with normal biliary cell line by nano-spray ionization-linear ion trap mass spectrometry (NSI-MSⁿ). Five human CCA cell lines, K100, M055, M139, M213, M214 and the normal biliary cell line, MMNK1 were characterized. The results showed that the O-linked glycan profiles of the CCA cell lines and the normal biliary cell line were consisted of tri- to hexa-saccharide with the terminal galactose and sialic acid; NeuAc₁Gal₁GalNAc₁, Gal₂GlcNAc₁GalNAc₁, NeuAc₂Gal₁GalNAc₁, NeuAc₁Gal₂GalNAc₂ and NeuAc₂Gal₂GalNAc₂. All five CCA cell lines showed a similar glycan profiles with the normal biliary cell line, but with the different in their quantities. The NeuAc₁Gal₁GalNAc₁ is the most abundant structures in poorly differentiated adenocarcinoma (K100; 57.0%), moderately differentiated adenocarcinoma (M055; 42.6%) and squamous cell carcinoma (M139; 43.0%) while moderately to poorly differentiated adenocarcinoma (M214; 40.1%) and adenosquamous cell carcinoma (M213; 34.7%) are dominated by NeuAc₂Gal₁GalNAc₁. These results suggested the differential expression of the O-linked glycans in different histological types of the cancer. Interestingly, all five CCA cell lines are abundant with the O-linked glycans with the terminal sialic acid, suggesting the important role of sialic acid in the cancer cells. These glycans structural analyses may provide important information leading to the development of disease-related glycoprotein of CCA.

P16-016

Lectin activity among *Phaseolus vulgaris* cultivars

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Since recently to generate highly effective pharmaceuticals lectins extracted from various plant sources are investigated for anticancer, antimicrobial, and immunomodulatory properties. The most abundant source of lectins is generally plants, and especially the phabaccous species. In order to pave way towards implicating bean lectins, more profound knowledge related to medical and biological research on biological activities and effect on human body of lectins diagnostic and therapeutic preparations are required. These investigations are of high scientific and practical meaning for Kazakhstan, as mobilization of domestic plant resources, and perspective common bean accessions. As shown in our experiments, four cultivars have revealed rather high lectin activity. Highest activity is intrinsic for the seeds of these cultivars. Based on the dynamics of lectin accumulation in different organs of common bean cultivars with high lectin activity have been determined for the first time among Kazakhstan, Russian and other foreign brands. By descending order of lectin activity, organs of common bean may be arranged as follows: seeds, stems, leaves, and roots. Lectin isolation method has been modified to study common bean brands forementioned. During the step of lectin extraction buffer volume as time of elution should be increased. The yield of lectins from bean seeds depending on the genotypes has ranged between 13 and 39 mg/100 g.

The data obtained could be used in the future for the development of the lectin isolation technology, studying and modeling of their effect on cells as subsequent design of pharmaceuticals with different action spectrum.

P16-017

The role of the mmp2 and mmp9 in progression of atherosclerosis with type ii diabetes mellitus patients

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Inflammatory process is essential for the initiation and progression of vascular remodeling, entailing degradation and reorganization of the extra-cellular matrix (ECM) scaffold of the vessel wall, leading to the development of atherosclerotic lesions. Matrix metalloproteinases (MMPs) are zing dependent endo-peptidases found in most living organisms and act mainly by degrading ECM components. Diabetes increase the production of matrix metalloproteinase (MMP2,MMP9) that lead to breakdown of collagen. Collagen is responsible from mechanical stability to the plaque's fibrous cap. When collagen breakdown increases and synthesis decreases, plaque may rupture more readily, a trigger to thrombus formation. So, atherosclerosis also occurs rapidly. In this study, diabetes patients, serum MMP2 and MMP9 levels are measured by elisa method and serum LDL, HDL, triglycerid, cholesterol, fasting blood glucose by enzymatic method. According to our results in Group II (before treatment) and Group III (after three mounts 10 mg/day dose statin (rosuvastatin) therapy) patients, MMP2, MMP9, Lipid profile levels were higher than Group I (control Group). Although serum