days. Today there are different methods for measuring Hb A1c, which their accuracy and sensitivity are different and use the appropriate methods is important for measuring this parameter to indicate the status of the sugar in the last three months. In this context, we compare Boronate affinity assay and HPLC (cation exchange)for measuring HbA1c and we obtained relation between fasting and two-hour blood glucose with HbA1c in both methods.
Methods: In this study, HbA1c level in 1153 patients was measured by chromatography HPLC(cation exchange) and in 410 patients by Boronate affinity assay. Also fasting blood sugar (FBS) and two hours blood sugar (2hpp) in patients were determined by using Autoanalyzer system and Biosystems glucose measurements kit.
Result: The range of HbA1c in patients was between 5.3 to 13.5 and the range of FBS was between 76 and 174 and 2hpp range was between 105 to 244. The correlation coefficient between HbA1c and FBS in the first group was 0.733 (r = 0.733) and with two-hour glucose (2hpp) was 0.771 (r = 0.771) and in second group was 0.770 (r = 0.770) and 0.785 (r = 0.785), respectively. Significant correlation between fasting blood glucose and HbA1c levels was observed in both groups ($P < 0.001$).Thus, the correlation coefficient is almost same in both groups and also Affinity chromatogeraphy method is a accurate method for measuring HbA1c and it's comparable with the standard HPLC method.
Discussion: Measuring the amount of glucose attached to Hb can be a very good quantitative assessment of the patient's blood glucose level within last 60 to 90 days. HbA1c in all people with diabetes should measure with a standard method during the initial assessment and as a part of comprehensive diabetes care every 2-3 month. So a reliable standard method with a good sensitivity is necessary for the accurate measurement of it.
Keywords: blood sugar, HbA1c, Boronate affinity assay, cation exchange (HPLC)

P-2-6170726-Strategies for simulation of tendon by human Adipose-Derived Mesenchymal Stem Cells seeded on engineered tendon matrix.
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The recent advances in stem cell biology and tissue engineering are becoming progressivly oriented toward biologically cellular microenvironments to improve stem cell growth, differentiation, and functional assembly. The ideal microenvironment for tendon engineering would possess the basic structure of the tendon, native extracellular matrix (ECM), and capability of cell seeding. The purpose of this study was to evaluate the potential of the engineered tendon matrix (ETM) as a suitable scaffold for seeding human adipose- derived mesenchymal stem cells on it.
tendon was decellularized by physical, enzymatic and chemical methods by using liquid nitrogen, trypsin and Triton X-100 respectively. In order to preparation biofilm, decellularized tendon matrix was treated with acid acetic and added to a Petri dish. The labeled human Adipose-Derived Mesenchymal Stem Cells (hASCs) with GFP (green fluorescent protein) were seeded on it.
The result of this study showed that hASCs could attach and preserved on the biofilm. Therefore the biofilm derived ETM has the ability to preserve the native extracellular matrix, and also has the capability for cell seeding.
Keywords: Cellular microenvironment, Tendon matrix, adipose derived mesenchymal stem cell.

P-2-9163974-A novel diagnostic approach for diseases; Selective detection of free thiols
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Back ground: the role of oxidative stress in the pathology of several diseases is recently well understood.Oxidative stress stimulates the production of reactive oxygen species (ROS) ,and reversible oxidative modifications are used as molecular mechanisms in some proteins to regulate their activity in response to the ROS. Free thiols included in the structure of several proteins may be the possible targets of these changes, leading to the disulfide bonds. Free thiols, are therefore suggested to act as diagnostic biomarkers for diseases with a pathological origin of oxidative modifications.This studyattempts toreview the studies done for free thiol detection in order to disease diagnosis.
Materials & Methods: The current study reviews the publications explaining the role of free thiols in health and disease, and discusses the prognostic value of these chemical groups in disease diagnosis.
Results: Recent developments in thiol trapping technology and mass spectrometric analyses have provided reliable evidences which show decreasing blood levels of free thiols in several disorders.
Conclusions: Redox status of protein thiols has central role for protein structure and folding. The decreased levels of free thiols have been found in diseases which are associated with oxidative stress. These findings demonstrate the significant role of thiol redox status in these conditions, and introduce the prognostic importance of these components in the related disorders.
Keywords: oxidative stress, free thiol, biomarker

P-2-60659-Study of mesenchymal stem cell behavior in mouse kidney-derived scaffolds in the presence of hyaluronic acid
Background: Biological properties of hyaluronic acid (HA) make it a suitable candidate for use in tissue engineering.
Objectives: In this study decellularized kidneys from Soori mice were used as a natural scaffold and the simultaneous effects of this scaffold and HA on the behavior of mesenchymal stem cells were investigated.
Materials & Methods: After removal of kidneys from Soori mice, a combination of physical and chemical methods of decellularization, including snap freeze-thaw and treatment with sodium dodecyl sulfate (SDS) 1% was used.After confirming the decellularization, washing and soaking the scaffolds in hyaluronic acid (HA) were performed. Scaffolds were divided into two groups of control and test4. Scaffolds in test group were soaked in 0.3% HA (3 mg/ml) for 24 hours. Then both groups, were cultivated with 3×10^5 human AD-MSCs for each decellularized kidney. Finally, histological studies were performed to investigate the attachment and migration of AD-MSCs at days 5, 10, 15, 20 and 25 after culture.
Results: Histological studies confirmed complete decellularization of kidneys using 1%SDS after 48 hours of treatment. Study of scaffolds revealed the migration of human AD-MSCs into glomeruli and the remainder of blood vessels, formation of epithelium like structure and also cell division. Evaluation of scaffoldS at days 5, 10, 15 and 20 of culture in both groups revealed enhanced cell density, penetration and migration, at day 10, 15 and reduced cell density, penetration and migration at days 20 and 25. Between the two groups with or without treatment HA No significant difference was observed.in cell attach ment and migration
Conclusions: According to the results decellularized kidney scaffold can have an inductive effect on behaviors such as cell adhesion, migration and proliferation, while HA, had no significant effect these cellular behaviors.
Key words: Kidney scaffold, decellularization , hyaluronic