

acid (HCl) hydrolysis in different concentrations, different times and different temperatures. In this study we used different concentrations such as 100%, 50%, 12/5%, 6/25%, 3/125% and 1/562% of HCl in different times such as 70, 100 and 115 centigrade and different temperatures such as 24 hours, 5 hours, 1 hour and 15 minutes that we optimized on Date Palm Leaf. We used of Lane-Eynons way to measurement of sugar percentage. Highest percentage of sugar(50%) obtained at concentration of 3/12% HCl at 70°C and time was 24 hours. Results exhibit, Palm wastes are very good for optimization in bioethanol production and acid(HCl) hydrolysis on this biomass has great effect in separating of sugar that can be changed into the bioethanol.

**Keywords:** Optimization, Date Palm Leaf, Bioethanol, Acid Hydrolysis.

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#### Abstract No.53

##### **Synthesis, Characterization, Cytotoxic and HSA Binding Studies of Palladium (II) Complex of Phenanthroline Derivative**

*Mahbobe Eslami Moghadam\*<sup>1</sup>, Adeleh Divsalar<sup>2</sup>, Lotfalli Saghatforosh<sup>3</sup>*

1. Dept. of Chemistry and Chemical Engineering Research Center of Iran, Tehran, IR
2. Dept. of Biological Sciences Tarbiat Moallem University, Tehran, IR
3. Dept. of Chemistry, Payame Noor University, IR  
(E-mail: eslami\_moghadam@yahoo.com)

Serum albumins are abundantly found in blood plasma and are often termed transport proteins. They are circulated in the body several times and act as carriers for numerous exogenous and endogenous compounds. The most popularly studied albumins are bovine serum albumin (BSA) and human serum albumin (HSA). Both BSA and HSA have very high conformational adaptability to a great variety of ligands. Two main approaches have been adopted in the ligand-protein binding studies. In this work, an antitumor complex of formula [Pd(phen)(FIT)]NO<sub>3</sub>, where phen is 1,10-phenanthroline and FIT is phenanthroline derivative, has been synthesized and characterized by spectroscopic methods such as UV-Visible, IR and <sup>1</sup>H-NMR as well as conductivity measurements and chemical analysis. This new complex has been interacted with HSA using UV-visible isothermal titration method in Tris-HCl buffer solution containing 10 mmol/L sodium chloride (pH=7.4) at 300 and 310K. It can denature HSA at very low concentrations (~10 μM). In addition, this water soluble complex has been tested for their in vitro anti-tumor activity against chronic

myelogenous leukemia cell line, K562. They show Cc50 values lower than that of cisplatin.

**Keywords:** Phenanthroline Derivative, Human Serum Albumin, Palladium Complex, Cytotoxicity.

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#### Abstract No.54

##### **Study on the Interaction of Palladium (II) Complex of Phenanthroline Derivative with Human Serum Albumin by Ultraviolet-visible Spectroscopic Methods**

*Mahbobe Eslami Moghadam\*<sup>1</sup>, Khalil Yosefi<sup>2</sup>, Ghafar Abolhoseini<sup>2</sup>, Saeid Shabane<sup>2</sup>, Mahdi Ejtehad<sup>2</sup>*

1. Chemistry and Chemical Engineering Research Center of Iran, Tehran, IR
2. Department of Chemistry, Payame Noor University, Tehran, IR  
(E-mail: eslami\_moghadam@yahoo.com)

Studies into the interactions between drugs and human serum albumin (HSA) are extremely important for drug discovery, since HSA behaves as a carrier for external drugs and internal biological molecules. In this study, we report synthesis of novel Pd(II) complex of formula [Pd(FIT)<sub>2</sub>]NO<sub>3</sub>, where FIT is phenanthroline derivative (see figure1). This complex has been characterized by spectroscopic methods such as ultraviolet-visible, infrared and <sup>1</sup>H-NMR as well as conductivity measurements and chemical analysis. This complex has been interacted with HSA (Human Serum Albumin) using UV-visible isothermal titration method in Tris-HCl buffer solution containing 10 mM sodium chloride (pH=7.4) at 27 and 37°C. The above compound can denature the protein at very low concentrations (~100 μM).

**Keywords:** HSA, Pd(II) Complex, Isothermal Titration, Phenanthroline Derivative.

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#### Abstract No.55

##### **Docking and Molecular Dynamics Simulation Study on Interaction of some Schiff Base Complexes with Human Serum Albumin**

*Najme Fani\*, Abdol Khalegh Bordbar, Yousef Ghayeb*

- Department of Chemistry, Isfahan University of Technology, Isfahan, IR  
(E-mail: n.fani@ch.iut.ac.ir)