Omnia Yahia Ibrahim Abd El Dayem

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EDUCATION

- M.B.B.Ch, Faculty of Medicine , Cairo University(2004) – Excellent with honor.
- M.Sc. Clinical & Chemical Pathology, Faculty of Medicine , Cairo University (2010) – Very Good.
- M.D. in Clinical & Chemical Pathology (Hematology) ,Faculty of Medicine, Cairo University (2016) – Very Good.

PUBLICATIONS

- ***Incidence and association of 563 C/T Mediterranean and the silent 1311 C/T G6PD Mutations in G6PD- deficient Egyptian children***:Hanaa H Arnaout, Nesrine M. El-Gharbawy,Iman A.Shaheen, Reham A. Afifi and Omnia Y. Abd El-Dayem.in LABMEDICINE, volume 42,number 6,June 2011.

- ***Chondrogenic differentiation of human umbilical cord blood -derived mesenchymal stem cells in vitro*** : Ibrahim A M, El- Gharbawy N M., Makhlouf MM. and Ibrahim O Y. in microscopic research and techniques ,78(8):667-75,August 2015.

- ***Evaluation of Non-Invasive Hemoglobin Monitoring in Trauma Patients with Low Hemoglobin Levels:*** Gamal, Medhat; Abdelhamid, Bassant; Zakaria, Dina; Dayem, Omnia Abd El; Rady, Ashraf; Fawzy, Maher; Hasanin, Ahmed
  Shock: February 2018 - Volume 49 - Issue 2 - p 150–153

- ***Accuracy and tendency of non-invasive hemoglobin measurement during different volume and perfusion statuses:*** Abdelmoneim Adel, Wael Awada, Bassant Abdelhamid, Heba Omar, Omnia Abd El Dayem, Ahmed Hasanin, Ashraf Rady in Journal of Clinical Monitoring and Computing, 2018, Volume 32, Number 6, Page 1025

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- ***Efficacy of platelet-rich plasma plus fractional carbon dioxidelaser in treating posttraumatic scars.*** Mahmoud Makki, Abd El Khalek H Younes, Abdelrahman Fathy, Omnia Y. Abd ElDayem and Hanan Morsy. Dermatologic therapy 2019.DOI: 10.1111/dth.13031

SKILLS

Computer Skills:

- Excellent Knowledge of Internet searching and e-mail issues.
- Very Good Knowledge of Ms Office package.

Language Skills:

- Native language Arabic
- Very Good command of both written and spoken English

- Good command of French.

EXPERIENCE

Professional Experience

From: May 2006 – June 2009
Position: Resident of clinical & chemical pathology at Kasr el aini medical hospital.

From: March 2010 – September 2010
Position: Demonstrator of hematology in clinical & chemical pathology department, Faculty of medicine,Cairo University.

From: October 2010 – November 2016
Position: Assistant lecturer of hematology in clinical & chemical pathology department, Faculty of medicine,Cairo University.

From: November 2016- Now
Position: Lecturer of hematology in clinical &chemical pathology department, Faculty of medicine,Cairo University.

PERSONAL INFORMATION

- Date of Birth: 10/11/1980
- Marital Status: Married.
- Has two daughters.

- ***G6PD gene polymorphisms in Egyptian deficient patients***

Thesis Submitted For Fulfillment of *Master* Degree in Clinical & Chemical Pathology

ABSTRACT

Full molecular characterization of biochemical variants of *glucose-6-phosphate dehydrogenase (G6PD) deficiency*, using current techniques, is required as biochemical characterization has lost its significance as a means of identifying variants. In the present work, 50 G6PD deficient Egyptian children were subjected to quantitative G6PD enzyme assay, ***PCR-ARMS*** technique for detecting the G6PD Mediterranean mutation and ***PCR-RFLP*** for assessing the G6PD 1311T silent polymorphism. The G6PD *Mediterranean mutation* was found in 31 patients **(62%)** and the *G6PD 1311T silent polymorphism* was found in 26 patients **(52%)** and both mutations were statistically associated. A highly significant association of G6PD 1311 T allele in Mediterranean variant and male sex was detected. ***PCR- ARMS*** is an easy and rapid tool for diagnosis of G6PD Mediterranean mutation .This method suits the need for continuous and repeated assays for the changes in the incidence of Mediterranean mutation in the Egyptians, who are characterized by a dynamic state of migration.

Key words: G6PD deficiency, Mediterranean mutation, ARMS, 1311 T silent polymorphism.

- ***Chondrogenic Differentiation of Human Umbilical Cord Blood-Derived Mesenchymal Stem Cells in Vitro***

Thesis submitted for fulfillment **of** *M.D. Degree* in Clinical & Chemical Pathology

ABSTRACT

Different therapeutic techniques have been developed for regeneration of articular cartilage injuries, but none of them has provided an optimal solution to the treatment of articular cartilage lesions. MSCs have been considered as a promising alternative cell source for cartilage repair. Umbilical cord blood is one of the most perspective sources of stem cells used in clinical practice. In the present study, thirty umbilical cord blood samples were collected, in addition to 5 BM and 5 PB samples, taken as reference controls, being operated upon under the same conditions. The samples were used for MNCs isolation from which MSCs were expanded at 37 ºC with 5% humidified CO2 in the presence of suitable expansion media under complete aseptic conditions. The successfully expanded MSCs were verified morphologically and through the presence of their surface markers CD 44 and CD 105, and absence of haematopoeitic markers CD 34. Then, successfully expanded MSCs were subjected to chondrogenic differentiation in the presence of TGFβ1 and other growth factors in either pelleted micromass system or monolayer cell culture method. Differntiation was verified microscopically using special stains, in addition to by RT-PCR for expression of aggrecan and collagen II genes. The success rate of UCMSCs isolation was (25%) a rate that was lower than those of PB (40%) and BM (80%). Accordingly, certain parameters have been recommended for successful isolation of MSCs from umbilical cord blood. On selecting the samples in which the recommended parameters were fulfilled, the success rate was increased up to 72%. This was together with providing optimal experiment conditions; mainly the type of expansion medium, which when adjusted, the success rate reached 80%. MSCs cultured in pelleted micromass system, possessed the ability to undergo chondrogenesis in presence of chondrogenic medium devoid of FBS, as proved by RT-PCR and microscopically through special stains. Such differentiation potential opens the door for an easy and available method for the treatment of degenerative cartilage diseases.

Key words: MSCs - Umbilical cord blood - chondrogenic differentiation - degenerative cartilage disease.