

ORAL 4

HUMAN CORD BLOOD LEUKOCYTE METALLOTHIONEIN-2A MRNA EXPRESSION IS ASSOCIATED WITH PRIMIPAROUS AND MULTIPAROUS CHILDBIRTH

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Metallothionein (MT), a metal and stress-induced protein, provides transport and storage of metal ions. The current study analyzed the influence of human cord blood leukocyte [Zn] and gravida on leukocyte MT-2A mRNA expression. Samples (n= 47) were collected at the labor rooms of a Government hospital in Kuantan, Malaysia. [Zn] in plasma, erythrocytes, and leukocytes were measured by AAS ($\lambda=213.9$ nm). MT-2A isoform specific mRNA was quantified by real-time PCR using total leukocyte RNA. Quantification of MT-2A gene transcription was normalized to the housekeeping gene, β -actin. Significant correlations were found between plasma [Zn] and erythrocyte [Zn] ($r = .304$; $p < .05$) and between leukocyte [Zn] and plasma [Zn] ($r = .295$; $p < .05$). Leukocyte [Zn] exhibited a significant correlation with MT-2A mRNA level ($r = .765$; $p < .001$). Higher levels of MT-2A mRNA was found in primiparous mothers (n= 16; M= 1.108, SD= 1.273) compared to multiparous mothers (n= 30; M= 0.581, SD= 0.711). Path analysis showed that leukocyte [Zn] has a greater influence (regression weight .84; $p = .000$) on MT-2A mRNA expression compared to gravida (regression weight -.18; $p = .021$). It is concluded that, in addition to circulatory Zn, gravida contributes to the MT-2A mRNA expression. Finally, it is hypothesized that gravida related stress hormones might be the inducing factor for higher MT-2A transcription.

38TH ANNUAL CONFERENCE OF THE MALAYSIAN SOCIETY FOR BIOCHEMISTRY AND MOLECULAR BIOLOGY



28th - 29th August 2013

Putrajaya Marriott Hotel & Spa,
Putrajaya

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CONFERENCE PROGRAMME
28th August 2013

TIME	TOPIC	VENUE
08:00 – 09:00	Registration and welcome coffee	Ballroom 1 Foyer
09:00 – 09:10	Welcome remarks by Professor Dr. Sheila Nathan (President of the Malaysian Society for Biochemistry and Molecular Biology)	Ballroom 1
Chairperson: Saad Tayyab		
09:10 – 09:50	Plenary 1: Alessandro Desideri Human topoisomerase I: a target enzyme not only in cancer disease	Ballroom 1
09:55 – 10:15	Oral 1: Mohd Firdaus Raih (ASM-YSN session) Extending protein structure comparisons beyond fold level similarities to specific 3D side chain superpositions	
10:20 – 10:30	Oral 2: Aisbah Mohd Rehan Characterisation of F420 gamma-glutamyl liase from <i>Mycobacterium tuberculosis</i>	
10:30 – 11:00	Coffee Break/Poster Viewing/Scientific Exhibition	Ballroom 1 Foyer
Chairperson: Amyza Saleh		
11:00 – 11:40	Plenary 2: Mohammed Noor Embi Glycogen synthase kinase-3 β and inflammatory response to <i>Burkholderia pseudomallei</i> infection	Ballroom 1
11:40 – 11:50	Oral 3: Nur Abri Syarina Pauzi Topical treatment of blue-green algae aqueous extract promotes healing of diabetic wound	
11:50 – 12:00	Oral 4: Mohammad Tariqur Rahman Human cord blood leukocyte metallothionein-2A mRNA expression is associated with primiparous and multiparous child/birth	
12:00 – 12:20	Invited 1: Shaharum Shamsuddin Biochemical characterization of a multivalent transcription factor CTCF and the emergence of its paralogue, BORIS	
12:20 – 13:00	Poster Viewing/Judging Session/Scientific Exhibition	Ballroom 1 Foyer
13:00 – 14:00	Lunch	Lobby Lounge, Level 1

Chairperson: Shaharum Shamsuddin		
14:00 – 14:20	Invited 2: Anthony Ho 2-methoxy-1,4-naphthoquinone (MNQ) inhibits the invasion and migration of a human metastatic breast cancer cell line (MDA-MB-231) <i>in vitro</i>	Ballroom 1
14:20 – 14:40	Oral 5: Abhi Veerakumarasivam (ASM-YSN session) miRNA modulation of oncogenic <i>KDM3B</i> represses the malignant phenotype of bladder cancer	
14:40 – 14:50	Oral 6: Thamivaani Manoharan Ginger oil induces apoptosis and inhibits proliferation of breast cancer cells	
14:50 – 15:00	Oral 7: Hasmah Abdullah Antiproliferative effect of <i>Quercus infectoria</i> gall extract	
15:00 – 15:10	Oral 8: Mohd Hafis Yuswan Antioxidant activity and identification of antioxidant metabolites from <i>Boletus griseipurpureus</i> via LC-QTOF-MS	
15:10 – 15:30	Invited 3: In-Seob Han Investigations on the photoregulation of chloroplast movement and leaf positioning in <i>Arabidopsis</i>	
15:30 – 16:00	Coffee Break/Poster Viewing/Scientific Exhibition	
16:00 – 17:00	39 th MSBMB Annual General Meeting	Ballroom 1
19:30 – 22:00	8 th MSBMB Annual Dinner	Garden Ballroom 1, Level 1