



**United Arab Emirates University
Faculty of Medicine and Health Sciences**

Research Publications 2007 & Research Profiles





United Arab Emirates University
Faculty of Medicine and Health Sciences

Research Publications 2007 & Research Profiles

Office of the Associate Dean for Research and Graduate Studies

Publication of The Office of The Associate Dean for Research

Editor: Prof. Wim Lammers

Secretarial Management: Mr. P Rajagopalan

Graphic Design: Ms. Ivanna Lizarriturri

Formatting & Layout: Ms. Shaikha Al Mazrouei

Photography: Mr. Ashok Prasad

Arabic Translation: Mr. Mohammed Zaggar

Table of Contents

Preface -----	V
Dean's message -----	VII
Research Publications by Department	
Anatomy-----	3
Biochemistry-----	8
Community Medicine-----	14
Family Medicine -----	22
Internal Medicine -----	23
Medical Education -----	31
Medical Microbiology & Immunology -----	34
Obstetrics & Gynaecology-----	39
Pediatrics-----	42
Pathology-----	46
Pharmacology-----	51
Physiology-----	57
Psychiatry-----	64
Radiology-----	67
Surgery-----	70
Research Priority Groups	
Diabetes and Cardiovascular-----	81
Genetics and Development-----	84
MERGE -----	87
Oncology-----	89
Trauma -----	93
Medical Student Research -----	99
Third Al Ain International Immunology Meeting -----	103
UAE's First Integrated Allergy Symposium -----	106
Impact Factors -----	111

Preface

This is the 17th yearly report on Research Publications and Research Profiles for the Faculty of Medicine & Health Sciences, United Arab Emirates University. This volume is a continuation of a series of annual reports, dating back to our very first report in 1991.

As usual, every year, we also try to upgrade and maintain the quality of this directory and this year is no exception. We have continued to include the Departmental Profiles and the Reports from the Research Priority Groups, included a report from the Third Al Ain International Immunology Meeting, organized by the Immunology Research Group, UAE's First Integrated Allergy Symposium, and a report on Student Medical Research.

As always, it is a pleasure to thank those individuals, who have put this report together, to cater to the individual layouts and to consolidate all the sections into one book. Mrs Ivanna Lizarriturri and Ms Shaikha Butti ably performed that work. Mr Rajagopalan, as always, took care of editing the initial departmental contribution and the communication between all parties. Mr Ashook took numerous pictures and Mr Mohamed Zaggar took care of the translation.

Professor Wim Lammers, Editor

Professor M Lukic, former Associate Dean for Research

Dr S Galadari, Associate Dean for Research and Graduate Studies.

Dean's Message

Dear Colleagues,

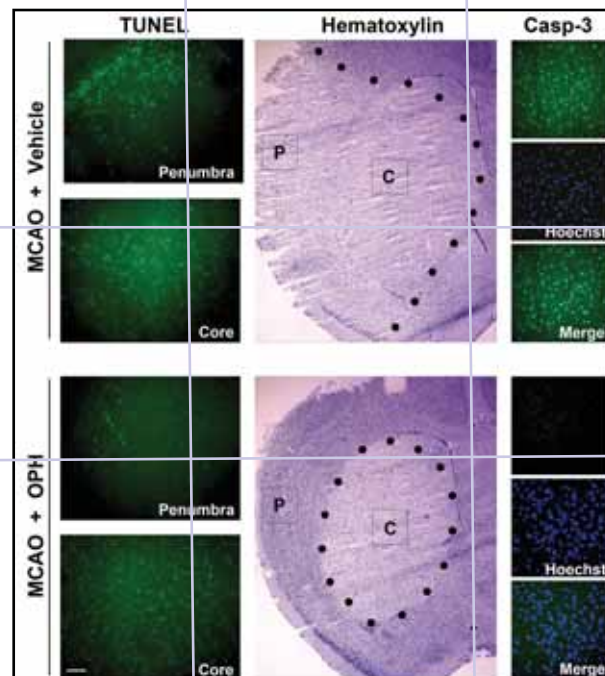
Researchers at FMHS continue to make important contributions to the biomedical and clinical literature and are to be congratulated on their productivity. This is a welcome opportunity to thank technical staff, secretaries and other support staff as well as many dedicated medical student researchers who have contributed to FMHS publications. Professor Wim Lammers has once again done a superb job of editing the reports. We all owe a special word of appreciation to Associate Dean and Chair of Microbiology & Immunology, Professor Mio Lukic, who has been a powerful advocate for research at FMHS and a superb role model for our entire academic staff. We wish every success to Dr. Sehamuddin Galadari who follows Professor Lukic as Associate Dean, Research & Graduate Studies from September 2008. Again we express our continuing gratitude to Research Affairs at UAE University and especially to HE Dr. Maitha Al Shamsi.

United Arab Emirates University has made a commitment to joining the leading universities of the world. In his Annual Convocation speech for the 2008-09 Academic Year, His Excellency the Chancellor Sheikh Nahayan Mubarak Al Nahayan has described the blueprint for this aspiration. His Excellency identified UAEU as the flagship university of the country and stressed the importance of high quality research. The arrival in Al Ain within days of the Chancellor's speech of a new Provost, Dr. W. Rory Hume, was practical evidence of the Chancellor's intentions that UAEU move to a new and exciting level of achievement. Dr. Hume, a dentist by profession and a longtime researcher and academic administrator through the entire gamut of Department Chair, Dean, Provost and University President in his native Australia and in the University of California system, has already demonstrated that he is determined to implement the Chancellor's vision.

This is both a great opportunity and a worthy challenge for FMHS investigators. The foundations have been laid within Departments and within Research Priority Groups for the next strides forward. It is vital that we be prepared for initiatives like the UAE National Research Foundation. Chances to secure research and infrastructure funding must be seized with all the energy we can muster. There is a great deal of work involved but the rewards will be great. The Chancellor's vision depends for its implementation on the efforts of individual researchers and their teams. We at the Faculty of Medicine & Health Sciences enthusiastically affirm our commitment to this great initiative.

*S George Carruthers, MD
Dean*

Research Publications by Department



Department of Anatomy _____

Prof G Buzzell	Professor, Chairman	Mr W Wanniarachi	Technician (DR)
Prof E Adeghate	Professor	Mr RS Hameed	Technician
Prof S Karam	Professor	Ms K Parekh	Technician
Prof DE Lorke	Professor	Mr M Madathil	Technician
Prof R Padmanabhan	Professor	Ms A Rifaat	Technician
Dr E Mensah-Brown	Associate Professor	Ms L Ravindranathan	Secretary
Dr S Shehab	Associate Professor	Ms H Ahmed	Administrative Assistant
Mr S Tariq	Technician (EM)	Mr TV Basheer	Office Assistant
Dr RR John	Technician		

Tel: 7137490 / Fax: 7672033 / <http://www.fmhs.uaeu.ac.ae/Departments/Anatomy>



April 16, 2007. Front row: Lakshmi Ravindranathan, Afaf Rifaat, Khatija Parekh, Eric Mensah-Brown, Hessa AlQahtani, R Padmanabhan, Rony John, Back row: Mohammed Madathil, Safa Shehab, TV Basheer, RS Hameed, Sherif Karam, Dietrich Lorke, Saeed Tariq, Gerald Buzzell, Ernest Adeghate, A Wanniarachi.

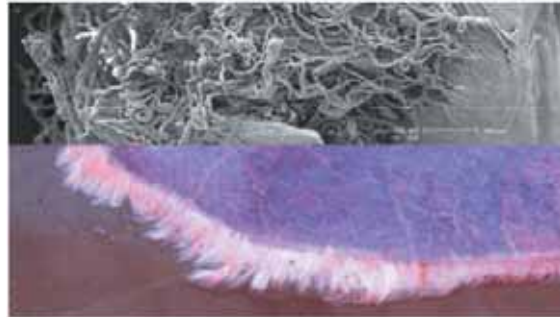
RESEARCH PROFILE

The Department of Anatomy pursues several lines of research in a variety of disciplines. We show considerable strength in the fields of neurobiology, cell renewal, teratology, diabetes, and structure and function.

Dietrich E. Lorke's main research activities are in the area of neuroembryology. He studies developmental changes in the expression of neurotransmitters (GABA, catecholamines), of receptors (glycine receptor, nicotinic acetylcholine receptor, NMDA receptor, estrogen receptor-related receptor) and of functional parameters (functional MRI, c-fos) in different brain regions of rodents and humans. Together with his collaborators in Hamburg, he demonstrated that the transcription factor *Nkx6.1* is not only required for the early specification of cranial motoneuron progenitors, but also controls their migration and axonal pathfinding. This collaboration also includes the investigation of altered brain development in mutant mouse strains, including knock-out mice, and studies on the reaction to injury in the spinal cord of mutant mice. His second research interest is concerned with the blood-brain barrier. In collaboration with the Department of Pharmacology, FMHS, he analyses factors influencing the passage of oximes into the brain. Oximes are important adjunct therapeutics in the treatment of organophosphorus poisoning. Together with his colleagues in Hong Kong, he characterises neurotransmitter expression in the central nervous system of different vertebrates and studies apoptotic cell death as well as neurotransmitter changes during aging and in Alzheimer's disease. In addition, he is involved in cooperative clinical research, performing experimental studies on the development, imaging and therapy of malignant tumours and on the morphological basis of injuries of the musculoskeletal system.

Safa Shehab studies the reorganisation of the neuronal circuitry in the dorsal horn of the spinal cord after peripheral nerve section. His findings do not support the notion that peripheral nerve section causes sprouting of either injured or adjacent uninjured primary afferents in the dorsal horn. He is currently investigating the pain pathways that are likely to be critical in the production of the neuropathic pain. He is also investigating the role of the basal ganglia in suppressing epileptic seizures. His recent findings showed that the subthalamic nucleus might not have critical role in suppressing tonic seizure. He is currently investigating whether high frequency stimulation of substantia nigra can produce anticonvulsant effects using an animal model of epilepsy.

During the past year, **Gerald Buzzell** has begun a collaboration with scientists at the Central Veterinary Research Laboratory in Dubai to investigate the structure and function of a unique pleural curtain of the dromedary camel. This curtain is seen as a fringe of thread-like processes extending from the visceral pleura into the pleural cavity along the edge of the lung.

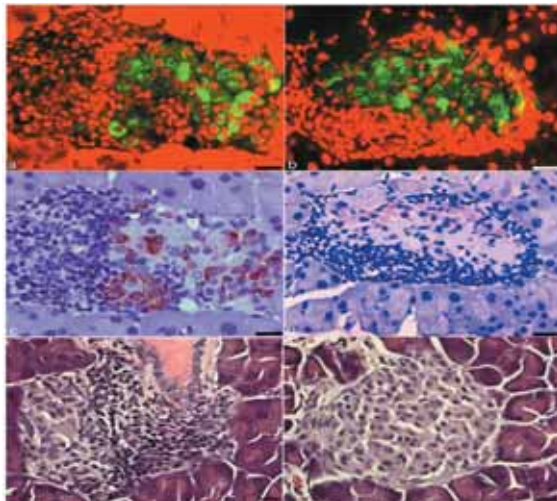


Lower frame: photograph of the edge of a camel lung, showing the pleural curtain. Upper frame: Scanning electron micrograph of the pleural curtain.

R. Padmanabhan's current research focuses on mechanisms of abnormal fetal development in two major areas: (1) Neural tube defects and (2) maternal diabetes and fetal development. Neural tube research uses mouse models of exencephaly. Exencephaly is induced by maternal treatment with sodium valproate (VPA) or hyperthermia. VPA experiments are directed at the role of supplemental folate in prevention of exencephaly. Following successful prevention of VPA-induced exencephaly in a significant number of embryos, newer efforts are directed at how exogenous FA administered at critical stages of neural tube formation. Recent work in this direction indicates that FA action involves homocysteine. Maternal hyperhomocysteinemia augments VPA-induced exencephaly and supplemental FA substantially limits this augmentation. Additionally the ability of VPA as a neuroteratogen seems to be determined by the pH of the dosing solution. Maternal hyperthermia-induced exencephaly is associated with intense apoptosis in the neuroepithelium which involves mitochondrial damage as revealed by electron microscopy. Recent work on maternal diabetes on embryonic development focuses on implantation failure in the STZ model of diabetes and the rescue role of exogenous alpha lipoic acid.

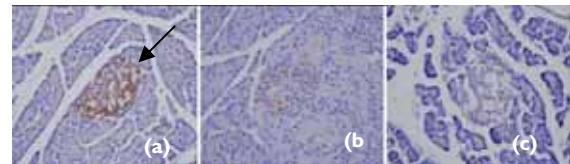
Eric Mensah-Brown's research interests this year have been on the mechanisms underlying autoimmune type I diabetes using the model of multiple low doses of streptozotocin and the complications of diabetes of the urogenital system following a

single large dose of STZ. Together with his collaborators in the Medical Microbiology and Immunology Department, they have shown that removal of galectin-3 and T1/ST2 genes drives organ specific autoimmune process towards a Th1/Th17 axis. The group is presently examining the role of Toll-like receptor-2 in diabetogenesis. Together with Prof Morrison, the group is deciphering the effect of autoimmune diabetes on the sympathetic system in the male reproductive system.



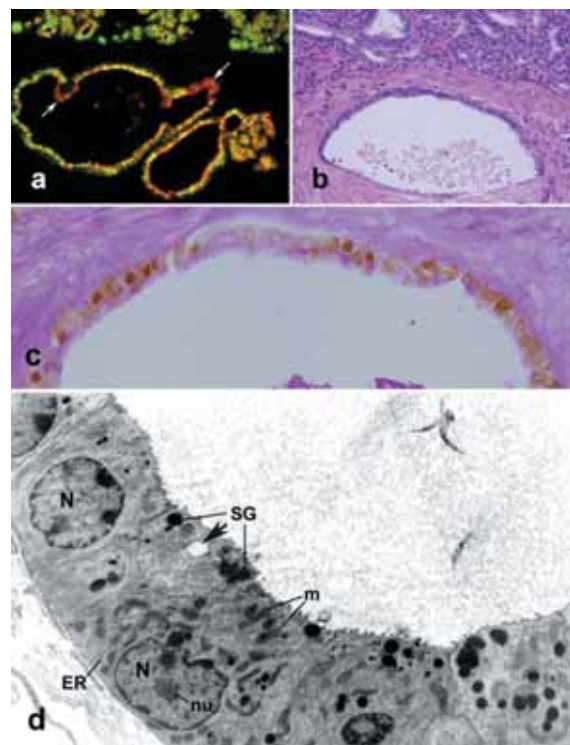
Micrograph showing islets of diabetic mice with significantly lower percentage of insulin containing β cells (a) most of which were also apoptotic (c) compared to those of similarly treated BALB/c (b). Islets of T1/ST2^{-/-} mice (c) contained significantly-more apoptotic β cells as compared to their wild type counterparts (d) and were infiltrated by significantly greater number of mononuclear cells compared to wild type (f) which showed very low number of infiltrating cells but a very significant peri-insulitis (b). Bar= 20 μ m

Ernest Adeghate's major research interest is on the effect of pancreas transplantation on the metabolic parameters in experimental diabetes. He also examines the role of neuropeptides on insulin and glucagon secretion from the pancreas, especially in diabetic condition. Recent results from his laboratory showed that the number of γ aminobutyric acid (GABA) and glutamic acid decarboxylase (GAD) decreased significantly in pancreatic islets of animal models of type I and type II diabetes. Antibodies against GAD and GABA have been shown in the sera of patients suffering from type I diabetes. GAD, especially the GAD65 isoform is a target of early autoimmune T-cell response associated with beta cell damage in non-obese-diabetic mouse model of type I diabetes. Our present results show that GABA and GAD, which has been implicated in the aetiology of type I diabetes, may also have a role to play in the pathogenesis of type II diabetes.



Light micrographs showing GAD-immunopositive cells (arrow) in the pancreatic islet of normal Wistar (a), diabetic Wistar (b) and Goto Kakizaki (c) rats. Note that GAD-immunoreactive cells are observed in both the peripheral and central regions of the islet of Langerhans in normal Wistar (a) but absent in diabetic (b) and GK (c) rats.

The aim of **Sherif Karam's** research focuses on some fundamental aspects of stem cell biology and their role in carcinogenesis particularly in the gastrointestinal tract and mammary glands. The epithelial lining of these tissues is characterized by continuous production of new cells and loss of old cells by apoptosis. The source of this continual cell renewal is a small population of stem cells that are able to proliferate and differentiate as required into the appropriate cell types. We are interested in defining the molecules that regulate stem cells in the steady state which are also those that are perturbed during cancer development.



Characterization of the invasive cancer cells in the stomach trefoil factor I-knockout mouse. The invasive cells are uncommitted progenitors binding both UEA-I (red) and GSII (green) lectins and appear yellowish (a). In H&E stained section, they are small and tend to form a cyst-like structure (b). Many of them are proliferative and PCNA-positive (c). Electron microscopy confirms the immature nature of the invading cells (d).

ARTICLES IN PEER-REVIEWED JOURNALS

Adeghate E. (2007). Serotonin, obesity and diabetes mellitus: is there any link? *Biogenic Amines* 21 (Suppl): 15-22.

Ali MA, Nyberg FJ, Chandranath IS, Sekaran DS, Tariq S, Petroianu G, Hasan MY, Adeghate EA, Adem A. (2007). Distribution of neuro-endocrine cells in the small and large intestines of the one-humped camel (*Camelus dromedarius*). *Neuropeptides*, 41: 293-299.

Al Shamsi M, Amin A, Adeghate E. (2007). The effect of vitamin C on the metabolic parameters of experimental diabetes mellitus. *American Journal of Pharmacology and Toxicology* 2: 4-9.

Jacobson M, Howarth FC, Adeghate E, Fatima-Shad K. (2007). Heart rate variability time analysis of the streptozotocin-induced diabetic rat. *Journal of Engineering Research* 4: 64-68.

John R, El-Rouby NM, Tomasetto C, Rio RC, Karam SM. (2007). Expression of TFF3 during multistep colon carcinogenesis. *Histology & Histopathology* 22:743-751.

Lorke DE. (2006/07). Development and Aging of the Vertebrate Visual System. *Neuroembryology and Aging* 4:5-7.

Lorke DE, Hasan MY, Nurulain SM, Sheen R, K Kuča, Petroianu GA. (2007). Entry of two new asymmetric bispyridinium oximes (K-27 and K-48) into the rat brain: comparison with obidoxime. *J Appl Toxicology* 27:482-490.

Morrison JFB, Pallot DJ, Sheen R, Dhanasekaran S, Mensah-Brown EP. (2007) The effects of age and streptozotocin diabetes on the sympathetic innervation in the rat penis. *Mol Cell Biochem* 29:53-8.

Morrison JFB, Sheen R, Dhanasekaran S, Mensah-Brown EP. (2007). Long-term changes in sympathetic innervation in the corpus cavernosum of the STZ-diabetic rat. *Int J Impot Res* 19:509-16.

Morrison, JFB, Shehab, S, Sheen, R, Dhanasekaran, S., Shaffiullah, M. and Mensah-Brown, E. (2007). Sensory and autonomic nerve changes in the monosodium glutamate-treated rat: a model of type II diabetes. *Experimental Physiology* 93: 213-22.

Petroianu GA, Lorke DE, Hasan MY, Adem A, Sheen R, Nurulain SM, Kalasz H. (2007). Paraoxon has only a minimal effect on pralidoxime brain concentration in rats. *J Appl Toxicology* 27:350-357.

Riess FC, Poetzsch B, Madlener K, Cramer E, Doll KN, Doll S, Lorke DE, Kormann J, Mueller-Berghaus G. (2007). Recombinant hirudin for cardiopulmonary bypass anticoagulation: a randomized, prospective, and heparin-controlled pilot study. *Thorac Cardiovasc Surg.* 55:233-238.

Shehab, S. Alzigali, L, Madathil M, Redgrave, P. (2007). Pharmacological evidence for an anticonvulsant relay in

the rat ventromedial medulla. *European Journal of Neuroscience* 26:2585-2594.

Wai MS, Lorke DE, Zhang A, Kung H-F, Yew DT. (2007). Study of the spinal cords of the sturgeon *Acipenser schrenckii*, gar *Lepisosteus oculatus*, and goldfish *Carassius auratus* by morphological, immunohistochemical, and biochemical approaches. *Microsc Res Tech.* 70:1079-1090.

PUBLISHED ABSTRACTS, LETTERS AND CORRESPONDENCE

Adeghate E, Rashed H (2007). The effect of resitin on metabolic parameters of an animal model of type 2 diabetes. *Hormone Res* 68 (Suppl 1): 99A.

Amin A, Lotfy M, Adeghate E. (2007). The protective effect of *Tribulus terrestris* in diabetes. *Endocrine Abstracts* 14: P26.

Hasan MY, Petroianu GA, Sheen R, Nurulain SM, Lorke D, Kalasz H. (2007). Paraoxon and atropine do not increase pralidoxime (PXX) passage through the blood brain barrier (BBB). *J Clin Pharmacol*, 47:1206.

Padmanabhan R, Shafiullah M. (2007). Developmental stage-dependent effect of supplemental lipoic acid on mouse embryos in streptozotocin-induced diabetes. *FASEB J* 21(5):A225.

Shehab S, Al Mrashdah K, Shames A, Abdul-Kareem A. (2007). Unmyelinated primary afferents from adjacent spinal nerves intermingle in the spinal dorsal horn: a possible mechanism contributing to neuropathic pain. *Society for Neuroscience* 185.21.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES, ETC.

Adeghate E, Rashed H, Al Kuwaiti A, Fayez Al Qassimi A, Al Shehhi F, Al Sayeri N. (2007). Localization of gamma-aminobutyric acid and glutamic acid decarboxylase in the endocrine pancreas of Goto Kakizaki rats. 8th Annual UAEU Research Conference, Al Ain, UAE, April 23-25.

Adeghate E, Rashed H. (2007). The effect of resitin on metabolic parameters of an animal model of type 2 diabetes. 46th Annual Meeting of the European Society for Paediatric Endocrinology, Helsinki, Finland, June 27-30.

Aldhaderi W, Hassouna I, Mahmoud S, Abdullah S, Karam, SM. (2007). Characterization of breast cancer progression in rats. The International Conference Recent Advances in Clinical Oncology, Al Ain, UAE.

Al-Senani A, Al-Marzouqi K, Al-Hosani M, Al-Mazrouei S, Al-Awadh H, John R, Vinzce A, Branicki F, Karam SM. (2007). Expression of TTF3 during gastric carcinogenesis. The International Conference Recent Advances in Clinical Oncology, Al Ain, UAE.

AlSenani A, AlMarzouqi K, AlHosaini M, AlMazrouei S, Vinzce A, Branicki F, Karam SM. (2007). Expression of TFF3 during gastric carcinogenesis. Eighth Annual UAE University Research Conference, Al Ain, UAE.

Karam SM. (2007). Cellular origin of gastric cancer. The International Conference Recent Advances in Clinical Oncology, Al Ain, UAE.

Karam, SM, Leblond, CP. (2007) Radioautographic evidence for the heterogeneity of gastric parietal cells. The 6th International Symposium on Radioautography, Chengde, China.

Karam SM, Tomassetto C, Rio MC. (2007). Evidence in support of the stem cell origin of gastric cancer. EMBO Conference on Advances of Stem Cell Research, Stockholm, Sweden.

Lorke DE, Schreiber J, Schumacher U. (2007). Changes in neurons, glia and ECM molecules after spinal cord hemisection in Tenascin C-deficient mice. Society for Neuroscience, 37th Annual Meeting, San Diego, California, USA.

Mensah-Brown E, Shahin A, Al Shamsi M, Lukic ML. (2007). IL-17 is responsible for MLD-Streptozotocin-induced diabetes in IFN- γ $-/-$ mice. 13th International Congress of Immunology, Rio de Janeiro, Brazil.

Padmanabhan R, Shafiullah M, Tariq S, Singh S. (2007). Developmental stage-dependent effects of supplemental lipoic acid on diabetes-induced pregnancy outcome in the mouse. 12th Annual Workshop on Diabetes Mellitus and its Complications, Al Ain, UAE.

Padmanabhan R, Shafiullah M. (2007). Developmental stage-dependent effect of supplemental lipoic acid on mouse embryos in streptozotocin-induced diabetes. American Association of Anatomists at Experimental Biology, Washington, USA.

Shehab SAS, Al-Halhali F, Al-Awadhi A, Madathil M, Abdul-Kareem A, Ljubicavljovic, M. (2007). The role of the subthalamic nucleus in suppressing epileptic seizures. The 8th Annual UAE University Research Conference, Al Ain, UAE.

Shehab S. (2007). Anticonvulsant circuitry. First Emirates Hellenic Medical Conference, Dubai, UAE. December 6-8.

RESEARCH GRANTS 2007

FMHS Grants

Prof E Adeghate

Insulin Growth Factors: Cellular distribution and effect in the endocrine pancreas of streptozotocin-induced diabetic rats.

Prof D Lorke (Col)

Development of ERR γ knock-out mice.

Pneumococcal meningitis: analysis of the functional relevance of the *lytA*-, *cbpG*- and *ccpA*-genes on brain injury and inflammation.

Dr E Mensah-Brown

The role of Toll-like 2 receptor in autoimmune diabetes

Prof R Padmanabhan

Maternal diabetes-drug interactions in congenital malformations: The effect of fluconazole treatment on fetal development and growth in experimentally induced diabetes in the mouse.

UAE University Individual Grants

Prof E Adeghate

Effect of glucagon-like peptide-I and exenatide on insulin release in diabetic rats.

Dr E Mensah-Brown

Temporal changes in the expression of some genes involved in noradrenaline synthesis, release and reuptake as sympathetic nerve terminals during the development of diabetic autonomic neuropathy.

Immunoregulatory role for IL-27 in the pathogenesis of experimentally induced diabetes

Prof R Padmanabhan

The effect of 5-Fluorocytosine treatment on fetal development in experimentally induced diabetes in the mouse.

UAE University Interdisciplinary Grants

Prof S Karam

Ghrelin and recovery after anti-neoplastic and cytotoxic therapy

Dr E Mensah-Brown

The role of T1/ST2/IL-33, a interleukin -1 receptor family member in experimental allergic encephalomyelitis: A target for therapeutic implications for multiple implications.

Terry Fox Research Grants

Prof S Karam

Role of gastric epithelial progenitors in gastric carcinogenesis.

Characterization of the early stages of mammary gland carcinogenesis.

Hamdan Award Medical Research Grant

Prof E Adeghate

Effect of pancreatic beta cell transplantation on the metabolic parameters of diabetic rats.

Dr E Mensah-Brown

Roles of Th-1 and Th-17 cells in the pathogenesis of diabetes: an analysis in multiple low dose streptozotocin induced diabetes ad spontaneous diabetes in NOD mice.

Prof R Padmanabhan

Reproductive toxicological studies on Lamotrigine in the mouse: Effect of folate supplementation.

Dr S Shehab

Does high frequency stimulation of the substantia nigra suppress tonic epileptic seizures?

Department of Biochemistry_____

Prof J M Conlon	Chairman, Professor	Dr M Patel	Medical Research Specialist I
Dr H Raza	Professor/Acting Chair	Ms M Panteva	Medical Research Specialist I
Dr S Galadari	Associate Professor	Mr M Qureshi	Medical Research Specialist II
Dr O M El-Agnaf	Associate Professor	Ms E Ahmed	Medical Research Specialist II
Dr A H Al-Marzouqi	Assistant Professor	Ms N Al-Gafari	Medical Research Specialist II
Dr M Fernandez Cabezudo	Assistant Professor	Ms M John	Medical Research Specialist II
		Mr A Qader	Medical Research Technician
		Ms K Al-Bloushi	Secretary

Tel: 7672000 / Fax: 7672033 / <http://www.fmhs.uaeu.ac.ae/Departments/Biochemistry>



Standing left to right: H. Raza, J.M. Conlon, A. Qader, S. Galadari, O.M.A. El-Agnaf Seated left to right: A.H. Al-Marzouqi, M. Patel, A. John, M. Fernandez-Cabezudo, M. Mechkarska, M. Qureshi.

The year 2007 has seen the departure of Prof M. Conlon, Chairman of the Department. Dr Farah Mustafa has resigned from her position as an Assistant Professor. In order to cover the teaching responsibilities, we have invited Prof. Kate Hammond, a former Professor of Biochemistry at the FMHS, from the Faculty of Health Sciences, University of the Witwatersrand, South Africa, for 4 weeks in March 2008, who kindly agreed to share the teaching load of the Department.

RESEARCH PROFILE

Molecular toxicology and cellular oxidative stress (Prof. H. Raza)

I am working on mitochondrial dysfunction in oxidative stress caused by chemicals, drugs, diseases and toxicity. I am using animals, cell culture and molecular models in our studies. I have developed international collaborations in this area. I am also investigating the chemoprotection mechanisms of phytochemicals and dietary antioxidants on oxidative stress related molecular complications in cancer and other toxicity.

Research Highlights: In our recent publications, we have demonstrated that mitochondrial respiration is tightly coupled with cellular redox metabolism in controlling the oxidative stress. In collaboration, at the University of Pennsylvania, Philadelphia, USA, we have shown that mitochondria play a critical role in ischemia/reperfusion induced oxidative stress, associated with cell death/survival.

Peptide-based antimicrobial and antidiabetic agents (Prof. J.M. Conlon)

Research Highlights: The Department of Biochemistry at UAE University and the Department of Biomedical Sciences, University of Ulster, UK, are involved in an ongoing program of research that aims to screen extracts of the skins of frogs from various regions of the world for the presence of peptides and proteins that will stimulate the release of insulin from the beta-cells of the pancreas. This work has direct relevance of the treatment of diabetes, particularly the Type 2 disease that is prevalent in the GCC countries. In a study involving the skin of the South American paradoxical frog, *Pseudis paradoxa*, a peptide of 24 amino-acid-residues, termed pseudin-2, was identified and shown to stimulate insulin release from rat pancreatic beta-cells in culture at very low concentrations that were not toxic to the cells. Once the structure of the naturally-occurring peptide had been determined, a series of analogs were synthesized containing different amino acid substitutions at selected sites in the

molecule. It was found that changing the amino acid at position 18 (leucine) into lysine produced a peptide that was more potent and gave a stronger maximum response than the natural peptide but remained non-toxic to the cells. Further studies are underway to study the glucose-lowering properties of the analogue in healthy and diabetic mice. A preliminary account of the study has appeared and the work was featured on the cover of the journal. This research has recently been highlighted on BBC (<http://news.bbc.co.uk/go/em/fr/-/2/hi/health/7270714.stm>), and in the BELFAST TELEGRAPH daily (<http://www.belfasttelegraph.co.uk/health/article3485057.ece>).

Protein misfolding and neurodegenerative diseases (Dr. O. M. A.El-Agnaf)

Pathological studies in human neurodegenerative diseases such as Alzheimer's disease (AD), Parkinson's disease (PD), dementia with Lewy bodies (DLB), the prion dementias (e.g. mad cow disease and its equivalent, CJD, in humans), British dementia and Huntington's disease, have revealed abundant protein deposits ('amyloid') in the affected neurones. There is now substantial evidence from molecular genetics, transgenic animal and the biochemical studies to suggest that the conversion of these amyloid proteins from soluble monomers to aggregated, insoluble forms in the brain is a key event in the pathogenesis of these diseases. This led us to hypothesize those small molecules that can block and/or reverse amyloid protein aggregation, particularly in its early stages, would provide an attractive therapeutic approach for targeting the underlying disease progression of neurodegenerative disease.

Our research is concerned with the mechanism of formation and deposition of protein aggregates in these various diseases, and on the potential relationship between protein aggregation, neurodegeneration and cell loss. We are also very interested in novel approaches to improved diagnosis and therapy of these diseases. A further aspect of our research is the development of novel techniques for detecting amyloid aggregates, particularly in their early stages. We are assessing these methods for the detection of aggregated forms of A β and alpha-synuclein in CSF and plasma samples from AD, PD and DLB patients as an aid to diagnosis of these diseases. Our work also involved in the development of peptide and non-peptide inhibitors of amyloid aggregation and toxicity as potential novel therapeutics for these neurodegenerative diseases.

Research highlights: We recently developed a simple and novel ELISA method that specifically recog-

nizes only oligomeric species of alpha-synuclein. We employed this method to probe for oligomeric forms of alpha-synuclein in human CSF and plasma. Interestingly, based on our preliminary results, the ELISA was able to detect alpha-synuclein oligomers in post mortem CSF from some PD and DLB patients, but, in contrast, only a very low signal was obtained from all control samples tested. These promising results led us to carry out a larger study on the more accessible peripheral blood plasma. We found that there was a highly statistically significant difference between PD samples and controls, with most of the PD samples giving high signals, whereas only a few control samples gave a high signal. These observations offer new opportunities for developing diagnostic tests for PD and related diseases, and for testing therapeutic agents aimed at preventing or reversing the aggregation of alpha-synuclein.

Mechanisms of transcriptional regulation by chromatin-modifying complexes

(Dr. A. H. Al-Marzouqi)

The overall goal of my research is to understand the basic concepts of how genes are controlled and how that affects cancer development. Our genome is under the control of multiple mechanisms. One of them is the control of the packaging of the DNA in our cells and involves the chromatin-modifying protein complexes. Defaults in these proteins lead to the development of cancers such as leukemias and lymphomas and some others. These protein complexes have been found to interact with some known tumor suppressors and oncogenic proteins showing that the chromatin remodeling is important for cell regulation. We have been studying the functions of these modifying complexes in order to understand how they regulate genes and how their misregulation lead to cancer formation. We are also interested in identifying new chromatin-remodeling proteins. These findings might be used to help cure some types of cancers in the future.

Research Highlights: We have been able to identify a novel chromatin-remodeling protein. We are now in the process of characterizing it biochemically and genetically.

Molecular pathways involved on activation and function of immune-competent cells

(Dr. M. J. Fernandez-Cabezudo)

My main research interest is signal transduction in immune-competent cells. My current interest is to investigate signaling pathways in macrophages, the

principal cells involved in the innate immune response. We are trying to elucidate the biochemical mechanisms that govern the interaction between macrophages and bacterial pathogens. Macrophages are the cells that first recognize and respond to microbial ligands through the toll-like receptors (TLR). Following activation, macrophages ingest the bacteria into phagosomes and initiate an inflammatory cascade of events leading to the elimination of the pathogen.

Another area of interest in my laboratory is immunotoxicology where we study the effect of different compounds, mainly organophosphate insecticides, on the immune system.

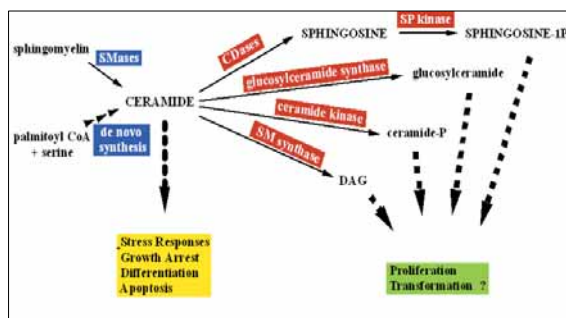
Research Highlights: Our latest findings showed that cytokine-expressing bacterial strains are able to manipulate the macrophage response by modulating the activation of macrophages independently of their entry into cells. The intracellular events that follow this extracellular activation are the subject of our current investigation. In the immunotoxicology field we had showed that chronic exposure to high levels of lead, a common environmental pollutant, results in a state of immunodeficiency due to a shift in immune responsiveness to Th2-type reactions.

Signal transduction pathways in health, stress and disease

(Dr. Sehamuddin Galadari)

Normal cellular function is dependent upon an array of intracellular communication pathways. Cells need to receive signals and send signals, and in that way they communicate with one another at the molecular level. This is achieved by an intricate network of enzymatically regulated biochemical signal pathways prone to regulation by specific messages. If one or more of these enzymes are abrogated or over subscribed, then disease is set. Indeed, this is what happens at the molecular level of diseases such as cancer, where normal cell growth runs out of control due to over subscription of the growth signaling pathway that results following deregulated activity of some enzymes in that pathway, thus leading to tumor formation. Our research effort is focused on studying the following:

Sphingolipids, a novel group of putative second messengers, the enzymes that produce them, and their putative targets. In particular, our effort is focused on ceramide, sphingosine, and sphingosine 1-phosphate, as well as, their targets. This group of messengers play vital signaling role in apoptosis, angiogenesis and stress responses. We are applying the



tools of molecular cell biology as well as classical biochemistry to elucidate the function of these messengers.

Phytochemicals, are naturally occurring compounds that are extracted from fruits, vegetables, and herbs. Increasingly, evidence is being provided as to their importance in health. To that end, we are investigating the effects of different natural products on signaling pathways.

Research Highlight: We have been investigating ceramidases which regulate the levels of ceramide, sphingosine, and sphingosine 1-phosphate. Recently, we have purified the human neutral ceramidase from Hela cells and we are currently characterizing this enzyme.

ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Abdel-Wahab YH, Marenah L, Flatt PR, Conlon JM. (2007). Insulin releasing properties of the temporin family of antimicrobial peptides. *Protein and Peptide Letters* 14:702-707.

Ahmad MM, Attoub S, Singh MN, Martin FL, El-Agnaf OMA. (2007). Gamma-synuclein and tumor progression. *FASEB J*. 21: 3419-3430.

Al-Natour Z, Hassan AH. (2007). Effect of salt on the binding of the linker histone H1 to DNA and nucleosomes. *DNA Cell Biology* 26: 445-452.

Bossmar T, Osman N, Zilhai E, El Haj MA, Nowotny N, Conlon JM. (2007). Expression of the oxytocin gene, but not the vasopressin gene, in the rat uterus during pregnancy: influence of oestradiol and progesterone. *Journal of Endocrinology* 193: 121-126.

Conlon JM, Al-Dhaheri A, Al-Mutawa E, Al-Kharrge R, Ahmed E, Kolodziejek J, Nowotny N, Nielsen PF, Davidson C. (2007). Peptide defenses of the Cascades frog, *Rana cascadae*: implications for the evolutionary history of frogs of the Amerana species group. *Peptides* 28: 1268-1274.

Conlon JM, Al-Ghaferi N, Abraham B, Leprince J. (2007). Strategies for development of naturally occurring antimicrobial peptides into therapeutically valuable anti-infective agents. *Methods* 42: 349-357.

Conlon JM, Al-Kharrge R, Ahmed E, Raza H, Galadari S, Condamine E. (2007). Effect of aminoisobutyric acid (Aib) substitutions on the antimicrobial and cytolytic activities of the frog skin peptide, temporin-1DRa. *Peptides* 28: 2075-2080.

Conlon JM, Bevier CR, Coquet L, Leprince J, Jouenne T, Vaudry H, Hossack BR. (2007). Peptidomic analysis of skin secretions supports separate species status for the tailed frogs, *Ascaphus truei* and *Ascaphus montanus*. *Comparative Biochemistry and Physiology* 2D: 121-125.

Conlon JM, Coquet L, Leprince J, Jouenne T, Vaudry H, Kolodziejek J, Nowotny N, Bevier C, Moler PE. (2007). Peptidomic analysis of skin secretions from *Rana heckscheri* and *Rana okaloosae* provides insight into phylogenetic relationships among frogs of the *Aquarana* species group. *Regulatory Peptides* 138: 87-93.

Conlon JM, Kolodziejek J, Nowotny N, Leprince J, Vaudry H, Coquet L, Jouenne T, Iwamuro S. (2007). Cytolytic peptides belonging to the brevinin-1 and brevinin-2 families isolated from the skin of the Japanese brown frog, *Rana dybowskii*. *Toxicon* 50: 746-756.

Conlon JM, Woodhams DC, Raza H, Coquet L, Leprince J, Jouenne T, Vaudry H, Rollins-Smith LA. (2007). Peptides with differential cytolytic activity from skin secretions of the lemur leaf frog *Hylomantis lemur* (Hylidae: Phyllomedusinae). *Toxicon* 50:498-506.

Conlon JM. (2007). Purification of naturally occurring peptides by reversed-phase HPLC. *Nature Protocols* 2: 191-197.

Conlon M, Vaudry H. (2007). Novel neuroendocrine peptides and their receptors and action. *General and Comparative Endocrinology*, 153:97-98.

Davidson C, Benard MF, Shaffer HB, Parker J, O'Leary C, Conlon JM, Rollins-Smith LA. (2007). Effects of chytrid and carbaryl exposure on survival, growth, and skin peptide defenses in foothill yellow-legged frogs. *Environmental Science and Technology* 41: 1771-1776

Fang JK, Prabu SK, Sepuri N, Raza H, Anandatheerthavarada HK, Gallati N, Spear J, Avadhani NG. (2007). "Site Specific Phosphorylation of Cytochrome c Oxidase Subunits I, IVi1 and Vb in Rabbit Hearts Subjected to Ischemia/Reperfusion. *FEBS Letter* 581:1302-1310.

Fernandez-Cabezudo MJ, Petroianu G, al-Ramadi BK, Speck U, Langer R. (2007). Iosimenol, a new nonionic dimeric contrast material, does not induce immunoreactivity in the popliteal lymph node assay. *The British Journal of Radiology* 80: 713-718.

Fernandez-Cabezudo MJ, Ali SE, Ullah A, Hassan MY, Fahim MA, Adem A, al-Ramadi BK. (2007) Pronounced susceptibility to infection by *Salmonella enterica* serovar Typhimurium in mice chronically exposed to lead correlates with a shift to Th2-type Immune responses. *Toxicology and Applied Pharmacology*. 218:215-226.

Hassan AH, Awad S, Al-Natour Z, Othman S, Mustafa F, and Rizvi TA. (2007). Selective recognition of acetylated histones by bromodomains in transcriptional co-activators. *Biochemical Journal* 402: 125-133.

Le Mével JC, Lancien F, Mimassi N, Conlon JM. (2007). Ventilatory and cardiovascular actions of centrally administered trout tachykinins in the unanesthetized trout. *Journal of Experimental Biology* 210: 3301-3310.

Masad A, Hayes L, Tabner BJ, Turnbull S, Cooper LJ, Fullwood NJ, German M J, Kametani F, El-Agnaf OMA, Allsop D. (2007). Copper-mediated formation of hydrogen peroxide from the amylin peptide: a novel mechanism for degeneration of islet cells in type-2 diabetes mellitus? *FEBS Letts*. 581: 3489-3493.

Nakada T, Ishizuka Y, Iwata T, Toyoda F, Kato T, Conlon JM, Kikuyama S. (2007). Evidence for processing enzymes in the abdominal gland of the newt, *Cynops pyrrhogaster*, that generate sodefrin from its biosynthetic precursor. *Zoological Science* 24: 521-524.

Nakada T, Toyoda F, Iwata T, Yamamoto K, Conlon JM, Kato T, Kikuyama S. (2007). A region-specific pheromone, [Val8] sodefrin from the newt *Cynops pyrrhogaster*: isolation, characterization and bioactivity. *Peptides* 28: 774-780.

Ohnuma A, Conlon JM, Yamaguchi K, Kawasaki H, Coquet L, Leprince J, Jouenne T, Vaudry H, Iwamuro S. (2007). Antimicrobial peptides from the skin the Japanese mountain brown frog *Rana ornativentris*: evidence for polymorphism among preprotemporin mRNAs. *Peptides* 28: 524-532.

Raza H, John A. (2007) In vitro protection of reactive-oxygen species-induced degradation of lipids, proteins and 2-deoxyribose by tea catechins. *Food and Chemical Toxicology* 45:1814-1820.

Rizk DE, Al-Marzouqi AH, Hassan HA, Al-Kedrah SS, Fahim MA. (2007). Estrogen and ghrelin decrease cytoplasmic expression of p27kip1, a cellular marker of ageing, in the striated anal sphincter and levator muscle of ovariectomized rats. *Int Urogynecology Journal Pelvic Floor Dysfunction*, 18:413-418.

Rizk DE, Fahim MA, Hassan HA, Al-Marzouqi AH, Ramadan GA, Al-Kedrah SS, Al-Ghafri LS. (2007). The effect of ovariectomy on biomarkers of urogenital ageing in old versus young adult rats. *Urogynecology Journal Pelvic Floor Dysfunction*, 18:1077-1085.

Salem SA, Allsop D, Mann DMA, Tokuda T, El-Agnaf OMA. (2007). An investigation into the lipid binding properties of alpha-, beta- and gamma-synucleins in human brain and cerebrospinal fluid. *Brain Research*, 1170: 103-111.

Skovgaard N, Conlon JM, Wang T. (2007). Evidence that neurotensin mediates post-prandial intestinal hyperemia in the python, *Python regius*. *American Journal of Physiology* 293: R1393-R1399.

Spear JF, Prabu SK, Galati D, Raza H, Avadhani NG. (2007). Beta 1 Adrenoreceptor activation contributes to ischemia/reperfusion damage as well as plays a role in ischemic preconditioning. *American Journal of Physiology: Heart and Circulation Physiology* 292:H2459-2466.

Suzuki H, Conlon JM, Iwamuro S. (2007). Evidence that the genes encoding the melittin-related peptides in the skins of the Japanese frogs *Rana sakuraii* and *Rana tagoi* are not orthologous to bee venom melittin genes: developmental- and tissue-dependent gene expression. *Peptides* 28: 2061-2068.

Suzuki H, Iwamuro S, Ohnuma A, Coquet L, Leprince J, Jouenne T, Vaudry H, Taylor CK, Abel PW, Conlon JM. (2007). Expression of genes encoding antimicrobial and bradykinin-related peptides in skin of the stream brown frog *Rana sakuraii*. *Peptides* 28: 505-514.

Urban E, Nagy E, Pal T, Sonnevend A, Conlon JM. (2007). Activities of four frog skin-derived antimicrobial peptides (temporin-1DRa, temporin-1Va and the melittin-related peptides AR-23 and RV-23) against anaerobic bacteria. *International Journal of Antimicrobial Agents* 29: 317-321.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

al-Ramadi BK, El-Hasasna H, Fernandez-Cabezudo MJ, Attoub S, Al-Salam S, Xu D, Liew FY, Chouaib S. (2007). Oral administration and multiple low-dose regimens are associated with a reduction in treatment failures of experimental tumors by attenuated *Salmonella* strains. The Eighth Annual Research Conference at UAE University, Al Ain, UAE.

al-Ramadi BK, Fernandez-Cabezudo MJ, Ali SA, Ullah A, Hasan MY, Adem A, Fahim M. (2007). Consequences of chronic lead exposure on the immune system: immunomodulatory vs immunotoxic mechanisms? The Eighth Annual Research Conference at UAE University, Al Ain, UAE.

al-Ramadi BK, Fernandez-Cabezudo MJ, El-Hasasna H, Bashir G, Attoub S, Al Salam S, Xu D, Liew FY, Chouaib S. (2007). Cytokine-expressing *Salmonella* strains in immunotherapy of experimental tumors. The 13th International Immunology Congress, Rio De Janeiro, Brazil.

El-Agnaf O. (2007). Reduction of alpha-synuclein levels in cerebrospinal fluid of patients with Parkinson's disease and normal aging. 8th International Conference on Alzheimer's and Parkinson's Diseases, Salzburg, Austria.

El-Agnaf O. (2007). Development of Lewy Bodies MRI Imaging Agents for the Early Diagnosis of PD & Related Disorders. The Michael J. Fox Foundation for Parkinson's Research & The New York Academy of Sciences. Parkinson's disease Therapeutics Conference. New York, NY, USA.

Fernandez-Cabezudo MJ, Mechkarska M, Bashir G, al-Ramadi B K (2007). Activation of macrophages by cyto-

kine-expressing strains of *Salmonella enterica* serovar Typhimurium. 13th International Congress of Immunology, Rio de Janeiro, Brazil.

Fernandez-Cabezudo, MJ, Mechkarska M, Bashir G, al-Ramadi B K. (2007). Invasion-independent activation of macrophages by recombinant cytokine-expressing bacteria. The 8th Annual Research Conference at UAE University, Al Ain, UAE.

Galadari S, Thayullathil F, Hago AK, Patel M., and Chathoth S. (2007). Akt depletion is an important determinant of L929 cell death following heat stress. Gordon Research Conference, Magdalen College, Oxford, UK.

Galadari S. (2007). Ceramidase and its Role in Cancer International Conference on Recent Advances in Clinical Oncology, Al Ain. UAE.

Hassan AH, Awad S, Prochasson P, Owen-Hughes T. (2007). Fun 30 is a chromatin-remodeling protein with similar activities to the SWI/SNF. EMBL conference. Heidelberg, Germany.

Hassan, AH, Awad S, Prochasson P. (2007). Binding of Modified Nucleosomes to Chromatin-Remodeling Complexes. 8th UAEU conference, Al-Ain, UAE.

John A, Raza H. (2007). Green tea catechins induce oxidative stress and apoptosis in cancer cells. International Conference on Recent Advances in Clinical Oncology, Al Ain, UAE.

Langer R, Fernandez-Cabezudo MJ, al-Ramadi BK, Petroianu G, Speck U. (2007) Tierstudien zur evaluierung potentieller immunreaktionen eines neuen nichtionischen dimeren kintrastmittels IOSIMENOL-vergleich mit Iodixanol. German Roentgen Conference. Berlin, Germany.

Langer, RD, Fernandez-Cabezudo MJ, al-Ramadi, B K, Petroianu G, Speck U. (2007). Iosimenol, a new non-ionic dimeric contrast material, does not induce immunoreactivity in the popliteal lymph node assay. The 8th Annual Research Conference at UAE University, Al Ain, UAE.

Raza H, John A, Brown EM, Benedict S, Kambal A. (2007). Oxidant and antioxidant-induced perturbation in redox metabolism and apoptosis in PC12 cells. 100th Annual Meeting of American Association for Cancer Research, Los Angeles, Ca, US. Proc. Am. Assoc. Cancer Research. 48:4584.

RESEARCH GRANTS - 2007

FMHS New Research Grant

Raza H: Recipient of FMHS grant as a PI "4-Hydroxynonenal impairs mitochondrial functions, redox metabolism and oxidative stress in PC12 cells".

El-Agnaf OMA: Detection of A β Protein Oligomers In Plasma as a Biomarker for Alzheimer's Disease.

Fernandez-Cabezudo MJ: Mechanisms of immunotoxic-

ity induced by organophosphorus compounds.

Hassan AH: DNA and Nucleosome Binding Properties of the Chromatin-Remodeling Protein Fun30.

Galadari S: Characterization of the Human Neutral Ceramidase from Hela Cells.

UAE University Individual Grants

El-Agnaf OMA: The Role of Synucleins In The Pathogenesis of Parkinson's Disease and Related Disorders

UAE University Interdisciplinary Grants

Hassan A H: Anti-cancer Activities of Indigenous UAE Herbs Extracted by Supercritical Carbon Dioxide: From Identification to Mechanisms of Action.

Terry Fox Fund for Cancer

Research Grants

El-Agnaf OMA: Synucleins as biomarkers and potential targets for intervention in cancer progression.

al-Ramadi BK, **Fernandez-Cabezudo MJ**, S. Chouaib, A. Ullah, H. El-Hasasna, M. Mechkarska & G Bashir. Cytokine-expressing *Salmonella* strains as effective biological therapy against cancer: analysis of the mechanisms underlying the inhibition of tumor growth.

Hassan AH: Analyzing the functional interaction of the SWI/SNF chromatin-remodelling complex with histone acetyltransferases and histone deacetylases and their link to cancer.

Galadari, S: What is the role of human neutral ceramidase in cancer?

Sheikh Hamdan Award for Medical Research

El-Agnaf OMA: Testing Inhibitors of α -Synuclein Aggregation and Toxicity in Cell and Animal Models: Implications for Parkinson's and related disorders therapy.

Hassan AH: Characterization and Functional Analysis of the Putative Chromatin Remodelling Protein Fun30.

Michael J. Fox Foundation for Parkinson's Research, USA

El-Agnaf OMA: Development of Lewy bodies MRI imaging agents for the early diagnosis of Parkinson's disease and related disorders.

El-Agnaf OMA: Validation of CSF α -synuclein as a biomarker for the diagnosis of Parkinson disease.

Arab Science & Technology Foundation

Torab, F., H. El Taji, **Fernandez-Cabezudo MJ** & B.K. al-Ramadi. Evaluation of the effect of honey alone or in combination with standard chemotherapy on inhibition of proliferation and viability of Estrogen Receptor-Negative Breast Cancer cell line: A potential new treatment strategy. *Arab Science & Technology Foundation (ASTF)*.

Department of Community Medicine_____

Prof. TC. Aw* Dr F Al-Maskari* ** Dr J Al-Mutawa* ** Prof N Nagelkerke Dr P Barss Dr R Bernsen Dr M Grivna Dr J Schneider	Chair Assistant Professor Assistant Professor Professor Associate Professor Associate Professor Assistant Professor Assistant Professor	Dr M El Sadig Mr H El Agab Ms A Kaljee Mr M Jamal	Academic Assistant Medical Research Specialist Executive Secretary Office Assistant
--	--	--	--

* Joined FMHS September 2007

** Acting Chair from January to September 2007

*** Departed FMHS June 2007

Tel: 7137483 / Fax: 7672022 / <http://www.fmhs.uaeu.ac.ae/cmd/>



Community Medicine Faculty and Staff. Back row (left to right): Mr H El Agab, Dr Michal Grivna, Dr Peter Barss, Dr Mohamed El Sadig, Prof Nico Nagelkerke, Dr John Schneider and Mr Jamal.
Front row (left to right): Dr Roos Bernsen, Prof Tar-Ching Aw (Chair),
Dr Fatma Al Maskari and Ms Arlene Kaljee.

RESEARCH PROFILE

The Department of Community Medicine has a mission to train health professionals to protect and improve the health of the population of the United Arab Emirates, with special reference to the vulnerable. The World Federation for Medical Education's goal for medical education is the improved health of all peoples.

A key element in achieving our department's mission and in contributing to the World Federation's goal is providing good information about the main threats to health, particularly lifestyle-related chronic diseases, injury, and infectious diseases. Research methodologies are drawn from epidemiology, public health, occupational health and biostatistics, with emphasis on areas of special need in the UAE. The following research areas were covered for the UAE:

General Public Health Research: Surveys for infectious diseases included HIV/AIDS prevention, and occupational blood-borne diseases. Health surveys to assess awareness about breast cancer, breast and other infant feeding, antenatal care, school hygiene, premarital screening, oral contraceptives, alternative medicine, folic acid intake during pregnancy, smoking hazards, healthy diet and physical activity. Health care administration research included patients' satisfaction with primary health care services, perinatal services and doctor-patient relationship.

Chronic Diseases Prevention Research: Incidence, prevalence and risk factors analysis of asthma, obesity, osteoporosis, anemia, ischemic heart disease, stroke, hypertension, diabetes mellitus and DM complications.

Injury Prevention Research: Incidence and risk factor research of school related traffic injury, home injury, road crashes and use of safety belts, and drowning.

Occupational Health Research: Incidence, risk factors analysis and control of occupational eye injury, sharp and needle-stick injury, occupational asthma, occupational lung diseases, noise related disorders among exposed workers and control of air quality.

Biostatistics: Statistical advice to FMHS and GHAS members.

Research Interests Of Faculty and Staff (Alphabetical)

Dr. Fatma Al Maskari: Public health physician

and epidemiologist with interest in non-communicable chronic diseases epidemiology and prevention, lifestyle and health and evidence-based medicine.

Dr. Jamal Al-Mutawa: Public health physician specialized in preventive medicine, public health and environmental health with focus on infection control and hygiene including hospital hygiene. He is also interested in ozone, oxygen therapy, and complementary medicine.

Prof. Tar-Ching Aw: Occupational medicine specialist with expertise in occupational toxicology and preventive medicine. His main areas of research are on toxicology of metals, physical and chemical workplace hazards, healthcare workers, and occupational health training and education.

Dr. Peter Barss: Public health specialist physician and scientist with special expertise in injury epidemiology, surveillance, and prevention of unintentional injuries such as drowning, traffic, and home injury. His main research in the UAE has focused on drowning surveillance and prevention, prevention of school traffic injuries by assessing environmental risk factors in the school traffic environment, home safety and falls, smoking prevention, HIV/AIDS, and mortality reporting. Dr. Barss collaborates internationally with the Canadian Red Cross and other organizations for national water safety and drowning prevention and is a member of the WHO expert committee on injury for the 11th revision of the ICD.

Dr. Roos Bernsen: Epidemiologist and biostatistician with special interest in the epidemiology of childhood allergy and asthma.

Dr. Mohamed El-Sadig: Epidemiologist and health economist, with special interest in traffic safety and non-communicable diseases. He is currently coordinating a collaborative research project with Monash University Accident Research Center (MUARC) and co-investigating several safety research projects in collaboration with stakeholders in the UAE.

Dr. Michal Grivna: Public health specialist physician with a special interest in child injury control, school and community safety, bicycle-related and playground injuries and more recently school traffic safety, trauma registration and HIV/AIDS prevention in the UAE. A founding member of the European Child Safety Alliance and the Centre for Childhood Injury Epidemiology and Prevention in the Czech Republic. Dr. Grivna is a leading figure in the promotion and implementation of "WHO –

Safe Community Programs”.

Prof. Nico Nagelkerke: Senior Biostatistician with a special interest in statistical methodology and infectious disease modeling. Prof. Nagelkerke has provided input in biostatistics to a number of projects which resulted in peer reviewed publications during 2007.

Dr. John Schneider: Occupational health physician, and a fellow of the Australasian Faculty of Occupational Medicine and the Royal Australasian College of Physicians. His main research interests are occupational rehabilitation, organization and planning of occupational health services in rural and remote work sites, work in hot environments, and impairment assessment at the workplace.

Academic Collaboration within and outside UAE University

The Department collaborated on clinical research issues and worked closely with the Health Authority of Abu Dhabi (HAAD), and particularly the Preventive Medicine Department of Al Ain. Research and service projects encompassed HIV/AIDS and other infectious diseases, preparedness for an avian flu epidemic, chronic non-infectious illnesses, occupational health, injury, mortality reporting and death certification. Academic and community service links were established with several industrial partners including the medical departments of Emirates National Oil Company, Dubai Petroleum, Abu Dhabi National Oil Company, Emirates Airlines, and ADCO-Abu Dhabi. This has resulted in training and research opportunities for students in occupational health. The Department also provides academic input to the UAEU Masters program in Environmental Sciences, the Arab Board Residency Programs, Medical Laboratory Technology (MLT) degrees and several Continuing Medical Education (CME) initiatives within and outside Al-Ain. Collaboration with colleagues outside the university has resulted in several research projects, such as heat stress in construction workers, and transport safety. Regular scientific support is provided to the UAEU Road Safety Research Centre (RTTSRC).

During November 2007, the Department arranged the first of a series of regular video-conferences with the Faculty of Occupational Medicine of the Royal College of Physicians (Ireland). Time was allocated during the event for reviews and discussions on recent published research in the field of occupational and public health. Attendees for the video-conference included multidisciplinary professionals from within the University, local hospitals

and regional healthcare establishments. Our Department of Community Medicine Website has been expanded to feature an Occupational Health and Safety (OHS) Section. This is intended to provide news of forthcoming events and to facilitate communication between Occupational Health Practitioners in the GCC countries.

A joint bid for research funding was initiated during 2007. Our partners in the bid were the Department of Environmental Sciences and Engineering of the University of North Carolina, Chapel Hill, and the Rand Corporation. The bid for research into Environmental Health was submitted to His Excellency Mr. Majid Al Mansouri, Secretary General of the Environmental Agency in Abu Dhabi. The project is aimed at gathering information to develop a strategy for environment and health for the UAE.

Research Training

An essential function of training in community medicine is field research on target populations to assess incidence, prevalence, and factors related to health, disease, and injury. The department delivers research training to medical students and doctors in Family and Community Medicine residency programs. Faculty academic staff supervise field research projects conducted by five senior clerkship groups every year. The following list highlights the range of research projects for 2007. Each project includes preparation and presentation of a research report to faculty and students. Opportunities were also available for students to present the findings from their research efforts at the annual university research conference, and at local, regional and international conferences.

Senior Clerkship Research Projects

Al-Halhali FS, Al-Tenaiji KE, Al-Mulla TA. (2007). Traditional views on causality and treatment of diseases and injuries in Al Ain, United Arab Emirates. Supervisors: Barss P (Principal), Grivna M, Nagelkerke N.

Al-Hamrooni SSE, Bin Refea HSJ, Al-Shehhi FSM, Al-Mazrooei KAS. (2007). Knowledge and attitude towards common hereditary hemolytic anemia and HIV infection among High School students Grade 12 in Al Ain City, UAE. Supervisors: Grivna M (Principal), Barss P, Nagelkerke N.

Al-Hayayi EMAAM, Al-Wedami MMN, Al-Darei MMS. (2007). Perceptions regarding doctors' professional appearance and the effect on doctor-patient relationship by Governmental Hospitals' patients. Supervisors: Schneider J (Principal), Aw TC, Grivna M, Bernsen R.

Al-Khaldi KH, Sultan MA, Al-Suwaidi MN, Askar AA, Al-Shamsi FI. (2007). Health and safety survey of carpenters and carpentry workshops in Al Ain industrial area: Supervisors: Barss P (Principal), Schneider J, Bernsen R.

Al-Mazrooei WSSM, Al-Dhaheri HSM, Al-Emadi BAA, Al-Shehhi BMM. (2007). Knowledge, attitude and practice of females in Grade 10 towards menstruation in Al Ain Government Schools. Supervisors: Schneider J (Principal), Aw T-C, Al Maskari F, Bernsen R.

Al-Shehhi KRA, Al-Shamsi HRH, Al-Kaabi NSS, Al-Suwaidi AM. (2007). Attitude and knowledge of first year university students towards smoking and its impact on health. Supervisors: Barss P (Principal), Grivna M, Bernsen R.

Family Medicine and Community Medicine Residency Research Projects

Al-Ghaithi MAK, Al-Braiki LM, Al-Zarouni S. (2007). Knowledge, attitude and practice of doctors towards preventive methods of cervical cancer in women in Al Ain City. Supervisors: Al Mutawa J (Principal), Schneider J, Sheek-Hussein M, Nagelkerke N, Al-Ketbi L.

Al-Mehairbi MR, Al-Kuwaiti OH, Al-Tunaiji MOM. (2007). Domestic violence in children – a cross-sectional survey of school children in Al Ain City. Supervisors: Al Maskari F (Principal), Grivna M, Barss P, Bernsen R, Ellis C.

Rashed A, Al-Mansour F, Al-Shamsi F. (2007). Awareness of mothers regarding the importance of car seats: an interventional study. Supervisors: Grivna M (Principal), Barss P, Bernsen R, Raasch B.

ARTICLES IN PEER-REVIEWED JOURNALS

Abdulle AM, Nagelkerke NJ, Adem A, Abouchacra S, Pathan JY, Al-Rukhaimi M, Suleiman MN, Mathew MC, Nicholls MG, Obineche EN. (2007). Plasma N terminal pro-brain natriuretic peptide levels and its determinants in a multi-ethnic population. *J Hum Hypertens*. 2007 Aug;21(8):647-53.

Abu-Zidan FM, Nagelkerke N, Rao S. (2007). Factors affecting severity of bicycle-related injuries: the role of helmets in preventing head injuries. *Emerg Med Australas*. 2007 Aug;19(4):366-71.

Adam SH, Eid HO, Barss P, Lunsjo K, Grivna M, Torab FC, Abu-Zidan FM. (2007) Epidemiology of geriatric trauma in United Arab Emirates. *Arch Gerontol Geriatr*. 2007 Oct 11; [Epub ahead of print]

Al-Maskari F, El-Sadig M, Norman JN. (2007). The prevalence of macrovascular complications among diabetic patients in the United Arab Emirates. *Cardiovasc Diabetol*. Sep 19;6:24.

Al-Maskari F, El-Sadig M. (2007). Prevalence of diabetic

retinopathy in the United Arab Emirates: a cross-sectional survey. *BMC Ophthalmol*. Jun 16;7:11.

Al-Maskari F, El-Sadig M. (2007). Prevalence of risk factors for diabetic foot complications. *BMC Fam Pract*. Oct 10;8:59.

Barss P, Djerrari H, Leduc BE, Lepage Yves, Dionne CE. (2007). Risk Factors and Prevention for Spinal Cord Injury from Diving in Swimming Pools and Natural Sites in Quebec, Canada: a 44-year Study. *Accident Analysis & Prevention*; (2007), doi:10.1016/j.aap.2007.09.017.

Benesova V, Grivna M, Krejci F. (2007). Childhood injuries and their prevention. *Prakt. Léč*. 2007;1(87):39-42.

Benesova V, Krejci F, Grivna M, Capkova M, Cihlova J, Milacek V, Rambousek V. (2007) Childhood injuries in four Czech Regions. *Ces-slov. Pediat* 2007;62(6):371-375.

Boks SS, Vroegindewij D, Koes BW, Bernsen RM, Hunink MG, Bierma-Zeinstra SM. (2007). MRI follow-up of posttraumatic bone bruises of the knee in general practice. *Am J Roentgenol*;189:556-62.

Boks SS, Vroegindewij D, Koes BW, Bernsen RM, Hunink MG, Bierma-Zeinstra SM. (2007). Clinical Consequences of Posttraumatic Bone Bruise in the Knee. *Am J Sports Med*;35:990-5.

Brouwer GM, Tol AW, Bergink AP, Belo JN, Bernsen RM, Reijman M, Pols HA, Bierma-Zeinstra SM. (2007). Association between valgus and varus alignment and the development and progression of radiographic osteoarthritis of the knee. *Arthritis Rheum*; 56:1204-11.

Chen L, Jha P, Stirling B, Sgaier SK, Daid T, Kaul R, Nagelkerke N; for the International Studies of HIV/AIDS (ISHA) Investigators. (2007). Sexual Risk Factors for HIV Infection in Early and Advanced HIV Epidemics in Sub-Saharan Africa: Systematic Overview of 68 Epidemiological Studies. *PLoS ONE*. 2007 Oct 3;2(10):e1001.

Denic S, Frampton C, Nagelkerke N, Nicholls MG. (2007). Consanguinity affects selection of alpha-thalassemia genotypes and the size of populations under selection pressure from malaria. *Ann Hum Biol*. 2007 Nov-Dec;34(6):620-31.

Duerink DO, Lestari ES, Hadi U, Nagelkerke NJ, Severin JA, Verbrugh HA, Keuter M, Gyssens IC, van den Broek PJ; Study Group Antimicrobial Resistance in Indonesia: Prevalence and Prevention (AMRIN). (2007). Determinants of carriage of resistant *Escherichia coli* in the Indonesian population inside and outside hospitals. *J Antimicrob Chemother*. 2007 Aug;60(2):377-84.

Feleus A, van Dalen T, Bierma-Zeinstra SM, Bernsen RM, Verhaar JA, Koes BW, Miedema HS. (2007). Kinesiophobia in patients with non-traumatic arm, neck and shoulder

- complaints: a prospective cohort study in general practice. *BMC Musculoskelet Disord.* 2007 Nov 28;8:117.
- Gańczak M, Barss P, Alfaresi F, Almazrouei S, Muraddad A, Al-Maskari F. (2007). Break the Silence – HIV/AIDS Knowledge, Attitudes, and Educational Needs Among Arab University Students in the United Arab Emirates. *J Adolescent Health* 2007;40, pages 572.e1-572.e8.
- Gańczak M, Barss P, Al-Marashda A, Al-Marzouqi A, Al-Kuwaiti N. (2007). Use of the haddon matrix as a tool for assessing risk factors for sharps injury in emergency departments in the United Arab Emirates. *Infect Control Hosp Epidemiol.* 2007 Jun;28(6):751-4.
- Gańczak M, Barss P. (2007). Fear of HIV Infection and Impact of Training on the Attitudes of Surgical and Emergency Nurses Towards Inpatient HIV Testing. *Infect Control Hosp Epidemiol.* 2007 Feb;28(2):230-3.
- Kaul R, Nagelkerke NJ, Kimani J, Ngugi E, Bwayo JJ, Macdonald KS, Rebbapragada A, Fonck K, Temmerman M, Ronald AR, Moses S; Kibera HIV Study Group. (2007). Prevalent herpes simplex virus type 2 infection is associated with altered vaginal flora and an increased susceptibility to multiple sexually transmitted infections. *J Infect Dis.* 2007 Dec 1;196(11):1692-7.
- Luijten M, Verhoef A, Dormans JA, Beems RB, Cremers HW, Nagelkerke NJ, Adlercreutz H, Peñalvo JL, Piersma AH. (2007). Modulation of mammary tumor development in Tg.NK (MMTV/c-neu) mice by dietary fatty acids and life stage-specific exposure to phytoestrogens. *Reprod Toxicol.* 2007 Apr-May;23(3):407-13.
- Manniën J, van Kasteren ME, Nagelkerke NJ, Gyssens IC, Kullberg BJ, Wille JC, de Boer AS. (2007). Effect of optimized antibiotic prophylaxis on the incidence of surgical site infection. *Infect Control Hosp Epidemiol.* 2006 Dec;27(12):1340-6.
- Nagelkerke NJ, Bernsen RM, Rizk DE. (2007). Authors should publish their raw data. *Int Urogynecol J Pelvic Floor Dysfunct.* 2007 Dec;18(12):1387-90.
- Nagelkerke NJ, Moses S, de Vlas SJ, Bailey RC. (2007). Modelling the public health impact of male circumcision for HIV prevention in high prevalence areas in Africa. *BMC Infect Dis.* 2007 Mar 13;7:16.
- Petroianu GA, Hasan MY, Nurulain SM, Arafat K, Sheen R, Nagelkerke N. (2007). Comparison of two pre-exposure treatment regimens in acute organophosphate (paraoxon) poisoning in rats: tiapride vs. pyridostigmine. *Toxicol Appl Pharmacol.* 2007 Mar;219(2-3):235-40.
- Petroianu GA, Nurulain SM, Nagelkerke N, Shafiullah M, Kassa J, Kuca K. (2007). Five oximes (K-27, K-48, obidoxime, HI-6 and trimedoxime) in comparison with pralidoxime: survival in rats exposed to methyl-paraoxon. *J Appl Toxicol.* 2007 Sep-Oct;27(5):453-7.
- Prodanov D, Nagelkerke N, Marani E. (2007). Spatial clustering analysis in neuroanatomy: applications of different approaches to motor nerve fiber distribution. *J Neurosci Methods.* 2007 Feb 15;160(1):93-108.
- Röder E, Berger MY, Hop WCJ, Bernsen RM, de Groot H, van Wijk RG. (2007). Sublingual immunotherapy with grass pollen is not effective in symptomatic youngsters in primary care. *J Allergy Clin Immunol*;119:892-8.
- Saadi H, Carruthers SG, Nagelkerke N, Al-Maskari F, Afandi B, Reed R, Lukic M, Nicholls MG, Kazam E, Al-gawi K, Al-Kaabi J, Leduc C, Sabri S, El-Sadig M, Elkhumaidi S, Agarwal M, Benedict S. Prevalence of diabetes mellitus and its complications in a population-based sample in Al Ain, United Arab Emirates. *Diabetes Res Clin Pract.* 2007 Dec; 78(3):369-377.
- Saadi HF, Dawodu A, Afandi BO, Zayed R, Benedict S, Nagelkerke N. (2007). Efficacy of daily and monthly high-dose calciferol in vitamin D-deficient nulliparous and lactating women. *Am J Clin Nutr.* 2007 Jun;85(6):1565-71.
- Sedlak M, Grivna M, Cihlova J. (2007). On the bicycle only with helmet. *Pediatr. pro Praxi* 2007;2:122-124.
- Stern BR, Solioz M, Krewski D, Aggett P, Aw TC, Baker S et al. (2007). Copper and human health: biochemistry, genetics, and strategies for modelling dose-response relationships. *Journal of Toxicology & Environmental Health* 10; 157-222.
- Van Hest NA, Smit F, Baars HW, De Vries G, De Haas PE, Westenend PJ, Nagelkerke NJ, Richardus JH. (2007). Completeness of notification of tuberculosis in The Netherlands: how reliable is record-linkage and capture-recapture analysis? *Epidemiol Infect.* 2007 Aug;135(6):1021-9.
- Van Rijn RM, van Os AG, Kleinrensink G-J, Bernsen RM, Verhaar JA, Koes BW, Bierma-Zeinstra SM (2007). Supervised exercises for adults with acute lateral ankle sprain: a randomised controlled trial. *Br J Gen Practice*; 57:793-800.
- Wensveen C, Kagie M, Nagelkerke N, Trimbos B. (2007). Interobserver agreement on interpreting hand drawings of colposcopy in women with borderline cytology to predict high-grade lesions. *Eur J Obstet Gynecol Reprod Biol.* 2007 Nov;135(1):123-6.

BOOKS, CHAPTERS, REVIEWS, EDITORIALS, PUBLISHED RESEARCH REPORTS

Aw TC, Gardiner KG, Harrington JM. (2007). Occupational Health: Pocket Consultant. Blackwell Science, Oxford.

Aw TC, Koh DSQ (2007). Medical surveillance. In: Fitness for work, 4th edition. Editors: Palmer K, Cox RAF, Brown I. Oxford University Press, Oxford.

Barss P. (2007). Immersion Fatalities during Fishing in

Canada: Special Research Report. Ottawa, ON: The Canadian Red Cross (also published in French), 2007.

PUBLISHED ABSTRACTS, LETTERS AND CORRESPONDENCE

Al Dhaheeri HS, Al Mazrooei AM, Al Kaabi AA, Al-Shehhi BM, Al Dhaheeri AA, Al-Maskari F, Barss P, Nagelkerke N. (2007). Knowledge, attitudes and practices of fast food consumption among Grade 10 Students at Government Schools Al-Ain, United Arab Emirates. *Emirates Medical Journal*, 25(2):269.

Al Khalidi K, Sultan M, Al Suwaidi M, Askar A, Al-Shamsi F, Barss P, Schneider J, Bernsen R. (2007). Health and safety survey of carpenters and carpentry workshops in the Al-Ain industrial area. *Emirates Medical Journal* 25;2.

Al Zahmi F, Al Ali N, Ali N, Hamoudi R, Al Mutawa J, Schneider J, Grivna M, Bernsen R. (2007). Knowledge and attitude towards childhood vaccination among mothers in Al Ain city, UAE. *Emirates Medical Journal* 2007;25(2):272.

Bernsen RM, Nagelkerke NJ. (2007). Assessing participation bias in a population-based study of measles-mumps-rubella vaccine immunity in children and adolescents aged 12-18. *Paediatr Perinat Epidemiol*;21:550-1.

Bernsen RM, Nagelkerke NJ. (2007). Walking decreased risk of cardiovascular disease mortality in older adults with diabetes. *J Clin Epidemiol*. 2007 Oct;60(10):1090; author reply 1090-1.

Bernsen RM, van der Wouden JC, Dharmage SC, Matheson M, Nakajima K, Carlin JB, Wharton C, Jenkins MA, Giles G, Hopper J, Walters EH, Abramson M. (2007). Is childhood immunisation associated with atopic disease from age 7 to 32 years? *Thorax*; 62:925-6.

Bernsen RM, van der Wouden JC. (2007). Complications at birth and subsequent wheeze: risk of attrition bias. Letter to the Editor. *Am J Respir Crit Care Med*;175:859.

Buhumaid R, Shaikh S, Al-Ghardaqa K, Al-Zaabi M, Al-Suwaidi M, Al-Maskari F, Barss P, Bernsen R. (2007). Knowledge, attitudes, practices, and complications of contact lenses among Medical Students in the United Arab Emirates. *Emirates Medical Journal*, 25(2):270-271.

Van der Wouden JC, Bernsen RM. (2007). Neonatal BCG vaccination protective for wheeze: Residual confounding? *J Allergy Clin Immunol*, 120:1226.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

Abu-Zidan FM, Adam SH, Eid HO, Torab FC, Lunsjo K, Barss P, Grivna M. (2007). Geriatric trauma in United

Arab Emirates. 8th Annual University Research Conference, Al-Ain, 23-25 April.

Abu-Zidan FM, Eid HO, Adam SH, Torab FC, Lunsjo K, Barss P, Grivna M. (2007). Factors affecting mortality in motor vehicle collisions in Al-Ain City. 8th Annual University Research Conference, Al-Ain, 23-25 April.

Al-Dhaheeri H, Al-Mazrooei A, Al-Kaabi A, Al-Shehhi B, Al-Dhaheeri A, Al-Maskari F, Barss P, Nagelkerke N. (2007). Knowledge, Attitudes and Practices for Fast Food Consumption among Grade 10 Students at Government Schools of Al-Ain, United Arab Emirates. 8th Annual University Research Conference, Al-Ain, 23-25 April.

Al-Dhaheeri S, Al-Kitbi H, Khoury A, Al-Awadhi F, Barss P, Grivna M, Gańczak M, Al-Maskari F, Bernsen R. (2007). HIV/AIDS knowledge and attitudes among female grade 12 students in Al-Ain, United Arab Emirates – An interventional study. 8th Annual University Research Conference, Al-Ain, 23-25 April, 2007.

Al Hammadi M, Al Atiq M, Al Awadhi H, Barss P, Grivna M, Al Maskari F. (2007). Evaluation of efficacy of short educational sessions in improving knowledge and attitude towards car safety restraints among students at government high schools in Al Ain, United Arab Emirates. 8th Annual University Research Conference, Al-Ain, 23-25 April.

Al-Kaabi J, Al-Maskari F, Saadi H, Afandi B, Barker H. (2007). Assessment of Physical Activity and Dietary Practices among Diabetic Patients in Al-Ain District, UAE. 8th Annual UAE University Research Conference, Al-Ain, 23-25 April.

Al-Maskari F, El-Sadig M, Al-Kaabi J, Afandi B. (2007). Knowledge, Attitude and Practices of Diabetic Patients in Al-Ain Medical District, UAE. 8th Annual University Research Conference, Al-Ain, 23-25 April.

Al-Mutawa J, Barss P, Al-Maskari F, Grivna M. (2007). Professional Responsibilities of UAE University Medical Graduates: Met and Unmet Needs from Undergraduate Public Health and Research Training. Second International Conference on Medical Education, Khartoum, Sudan, 25-26 March, 2007.

Aw TC. (2007). Emerging Issues in Occupational health. Invited keynote lecture at Occupational Disease and Workplace Health 2007 Conference. London, UK, 2007.

Aw TC. (2007). Ethics in occupational health. Invited speaker for the Society of Occupational Medicine's seminar on 'Occupational health in a nutshell'. Birmingham, UK, 2007.

Aw TC. (2007). Evidence and extrapolation for carcinogenicity. Presentation at University of Kent Occupational Health seminar. Canterbury, UK, 8 February, 2007.

Aw TC. (2007). Risk management and quality of life in the home, workplace and environment. Invited speaker

- for plenary symposium at the 4th Asia-Pacific conference on Risk Management for Preventive Medicine, Kuala Lumpur, Malaysia, 20-22 November, 2007.
- Aw TC. (2007). Risk management for chemical safety: the client's perspective. Invited speaker for symposium on Health, Safety and Environment at the 4th Asia Pacific conference on Risk Management for Preventive Medicine, Kuala Lumpur, Malaysia, 20-22 November, 2007.
- Aw TC. (2007). The Hand-Arm Vibration syndrome (HAVS). Invited speaker for the Society of Occupational and Environmental Medicine – Malaysian Medical Association CPD event on Occupational Medicine, Kuala Lumpur, Malaysia, 9 July, 2007.
- Aw TC. (2007). The interface between occupational health and public health. Invited speaker for 2nd Asia Pacific Conference on Public Health, Subang Jaya, Malaysia, 3-5 July, 2007.
- Barss P, Grivna M, Al-Maskari F. (2007). Knowledge and Attitudes about Smoking Among High School Students, and their Impact on Spousal Preference. 8th Annual University Research Conference, Al-Ain, 23-25 April 2007.
- Barss P, Al-Darmaki MH, Al-Saqqaf AM, Al-Jenaibi, Grivna M, Al Maskari F. (2007). Knowledge of swimming pool safety among vendors and home pool owners and provision of safety devices and information by vendors in United Arab Emirates. World Water Safety Conference, Porto, Portugal, 27- 29 Sept., 2007.
- Barss P, Al-Obthani M, Al-Hammadi A, Al-Shamsi H, El-Sadig M, Grivna M. (2007). Prevalence and issues in non-use of safety belts and child restraints in United Arab Emirates. 7th IEA-EMR Scientific Meeting on: Epidemiology: Translation Research to Health Care, Riyadh, Saudi Arabia, 27-28 November, 2007.
- Barss P, Ganczak M, Grivna M, El-Agab H. (2007). Acceptance of various types of mandatory HIV testing, particularly premarital, among the high-school students in United Arab Emirates. 7th IEA-EMR Scientific Meeting on: Epidemiology: Translation Research to Health Care, Riyadh, Saudi-Arabia, 27-28 November, 2007.
- Barss P, Grivna M, Al-Maskari F. (2007). Key Elements and Evaluation of a Community Medicine Clerkship in United Arab Emirates. Second International Conference on Medical Education, Khartoum, Sudan, 25-26 March, 2007.
- Barss P, Grivna M. (2007). Concepts of Causality and Preventability of Injury and HIV in United Arab Emirates: Personal, Equipment, and Environment factors, Including Destiny, Evil Eye, Jinns. WHO Collaborating Centre on Community Safety Promotion, Karolinska Institute Stockholm, 16th International Conference on Safe Communities, Tehran, Iran, 11-13 June, 2007.
- Barss P, Mercier M. (2007). A Practical Approach to Identifying and Counting Cold-water Immersion Deaths, and Assessing Associated Activities and Risk Factors. World Water Safety Conference, Porto, Portugal, 27- 29 Sept., 2007.
- Barss P. (2007). The Epidemiologic Basis for Injury Prevention. Invited guest lecturer: 2-hour presentation and discussion for Faculty, MPH and PhD students, Faculty of Public Health, Tehran University of Medical Sciences, Tehran, 12 June, 2007
- Barss P. (2007). The Epidemiologic Basis for Injury Prevention. Invited Plenary Keynote Speaker, International Epidemiological Association, Eastern Mediterranean Region Conference, King Faisal Hospital and Research Centre, Riyadh, Saudi-Arabia, 27-28 November, 2007.
- Barss P. (2007). The Epidemiologic Basis for Injury Prevention: Concepts and Some Practical Examples from the Middle East. 7th IEA-EMR Scientific Meeting on: Epidemiology: Translation Research to Health Care, Riyadh, Saudi-Arabia, 27-28 November, 2007.
- Bernsen RM. (2007). Does paternal antigen-induced secretion of interleukin-10 by T regulatory cells mediate the birth order effect? A hypothesis. World Immune Regulation Meeting, Davos, 11-15 April, 2007.
- Bernsen, R.M. (2007). Reported pertussis infection and risk of atopy in 8-12 year old vaccinated and non-vaccinated children. XX World Allergy Congress, Bangkok, 2-6 December 2007.
- Buhumaid R, Shaikh S, Al-Ghardaqa K, Al-Zaabi M, Al-Suwaidi M, Al-Maskari F, Barss P, Bernsen R. (2007). Knowledge, Attitude and Practices of Contact Lens Care among Medical Students in the United Arab Emirates. 8th Annual University Research Conference, Al-Ain, 23-25 April 2007.
- El-Sadig M. (2007). Environmental and Socioeconomic Exposures to Vulnerable Road Users in the United Arab Emirates: Implications on Health and Safety. WHO-EMRO Specialist Workshop at Center for Social Studies (SRC) of the American University in Cairo, Egypt, 28 April-5 May, 2007.
- El-Sadig M. (2007). Roadway Safety Priorities in the UAE. Symposium on Traffic Safety Awareness in the UAE by RTTSRC in collaboration with the UAE Women Association and Abu Dhabi Police Directorate, UAEU Social Club, Al-Ain, 27 February, 2007.
- Grivna M, Barss P, Al-Maskari F. An HIV/AIDS. (2007). Educational Intervention among High-School Students in Al Ain, United Arab Emirates. 8th Annual University Research Conference, Al-Ain, 23-25 April 2007.
- Grivna M, Barss P, Al Dhahab A, Al Hanaee A, Al Kaabi F, Al Muhairi S, Frampton C. (2007). Prevalence of baby walkers and frequency of associated injuries in the United Arab Emirates: a population survey. 7th IEA-

EMR Scientific Meeting on: Epidemiology: Translation Research to Health Care, Riyadh, Saudi-Arabia, 27-28 November, 2007.

Grivna M, Barss P, Al Saridi A, Al Darmaki A, Anoohi R, Al Echtibi S. (2007). Unintentional home injuries in United Arab Emirates: Incidence, Risk Factors, and Preventability among Families of Arab School Girls. 16th International Conference on Safe Communities, Tehran, Iran, 11-13 June, 2007.

Grivna M, Barss P, Al-Maskari F. (2007). Population Field Research in the Community Medicine Clerkship: Nature of Projects and Evaluation. Second International Conference on Medical Education, Khartoum, Sudan, 25-26 March, 2007.

Nagelkerke NJ. (2007). A Coefficient of Determination for Conditional Logistic Regression and Cox's Proportional Hazards Model. 28th Annual Conference of the International Society for Clinical Biostatistics, Alexandroupolis, Greece. 29 July-2 August, 2007.

Saadi H, Carruthers G, Nagelkerke N, Al-Maskari F, Afandi B, Reed R, Lukic M, Nicholls G, Kazam E, Algawi K, Al-Kaabi J, Leduc C, Sabri S, El-Sadig M, Elkhumaiddi S, Agarwal M, Benedict S. (2007). National Survey of Diabetes and its Complications- A Pilot Study. 8th Annual UAE University Research Conference, Al-Ain, 23-25 April 2007.

Schneider J. (2007). A Survey of Hand and Upper Limb Injuries in Carpenters in Al Ain, United Arab Emirates. Joint Conference Australasian Faculty of Occupational Medicine & Australasian Faculty of Public Health Medicine, Melbourne, Queensland, Australia, 3-5 May, 2007.

Schneider J. (2007). Case Presentation – Occupational Asthma, Training Course – Spirometry in the Workplace, Dept Community Medicine, UAE University, Al Ain, UAE, 11-12 February, 2007.

Schneider J. (2007). Hydration Status and Physiological Work Load of UAE Construction Workers. 5th Annual GCC Occupational Health Conference. Dubai, UAE, 25-26 June, 2007.

Schneider J. Occupational asthma. Invited Lecture: 6th Annual Workshop in Asthma Allergy and Pulmonology, Emirates Respiratory Society and Asthma and Allergy Research Group. Al Ain, UAE, Feb., 2007.

Barss P. (2005). The Epidemiological Basis for Injury Prevention. National Conference, Traffic Safety in UAE, Reality and Vision, March.

RESEARCH GRANTS 2007

FMHS New Grant

Al Mutawa J (Principal Investigator), Barss P (Co-investigator), Al-Maskari F (Co-investigator), Grivna M (Co-investigator). (2007). Undergraduate Public Health and Research Training; Does it meet the professional

needs of UAE medical graduates?

UAEU Grant

Barss P (Principal investigator), Grivna M (Co-investigator), Al Maskari F (Co-investigator). (2007). Incidence and risk factors for falls presenting to emergency departments in the two main hospitals of Al Ain region, United Arab Emirates.

Hamdan Award Medical Research Grant

Abu-Zidan F (Principal investigator), Barss P, Grivna M. (2007). Road Traffic Crash Injury Registry in Al Ain City.

Others

Barss P. (2007). National Drownings and Other Water-Related Injuries in Canada – 10 Years of Research. Incidence, Risk Factors, and Trends. Search and Rescue Secretariat, Canada.

Grivna M (Principal Investigator), Barss P (Co-investigator), El-Sadig M (Co-Investigator). (2007). The Magnitude and risk factors of childhood injuries in UAE. A project funded by Johnson&Johnson Middle East and SafeKids Worldwide through the Scientific Research Affairs Sector of the UAE University.

Department of Family Medicine

Dr C Leduc Dr C Ellis Dr B Raasch	Associate Professor, Acting Chairman Associate Professor Associate Professor	Ms MCT Cetra Ms H Mustafa Mr J Cherian	Medical Secretary Research Assistant Technician
--	--	---	---

Tel: 7137432 / Fax: 7672022 / [http://www.fmhs.uaeu.ac.ae/Departments/Family Medicine](http://www.fmhs.uaeu.ac.ae/Departments/Family%20Medicine)

RESEARCH PROFILE

Research is an integral part of the Department of Family Medicine's activities. Faculty research themes include the epidemiology and natural history of common problems seen in primary care, interventions to improve management of chronic diseases within family medicine practices and research on evaluation and the improvement of medical education.

Current projects in Primary Care include research on the vascular complications of diabetes, guidelines implementation in Primary Health Care Centers.

Emphasis on medical education research is on the evaluation of the quality of communication skills and the confounding effect of language.

The Department counts on a research assistant for its projects as well as a research clinic in the University building at the Oud al Toba Primary Health Care Center.

ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Saadi H, Carruthers SG, Nagelkerke N, Al-Maskari F, Afandi B, Reed R, Lukic M, Nicholls MG, Kazam E, Algawi K, Al-Kaabi J, Leduc C, Sabri S, El-Sadig M, Elkhumaidi S, Agarwal M, Benedict S. (2007). Prevalence of diabetes mellitus and its complications in a population-based sample in Al Ain, United Arab Emirates. *Diab. Res. Clin. Pract.*, 78(3):369-377.

Saleh S., Lam A King-Yin, Buettner PG, Glasby M, Raasch B. (2007). Telomerase activity of basal cell carcinoma in patients living in North Queensland, Australia. *Human Pathology*, 38(7):1023-29.

Youl PH, Raasch B, Janda M, Aitken JF. (2007). The effect of an educational program to improve the skills of General Practitioners in diagnosing melanocytic/pigmented lesions. *Journal of Clinical and Experimental Dermatology*, 32(4):365-370.

PUBLISHED ABSTRACTS, LETTERS AND CORRESPONDENCE

Raasch B, Buettner P. (2007). Knowledge and perceptions about sunburn and solar keratoses in Australia. *Annals of the ACTM*, 8;1:22.

Department of Internal Medicine

Prof M Ellis	Professor and Chairman	Dr A Al-Dhanhani	Teaching Assistant
Prof E N Obineche	Professor	Dr S Al-Karam	Teaching Assistant
Dr E E Kazzam	Associate Professor	Dr H Galadari	Teaching Assistant
Dr I Galadari	Associate Professor	Dr G Al Mansouri	Teaching Assistant
Dr W Conca	Associate Professor	Dr M Al Houqani	Teaching Assistant
Dr S Gariballa	Associate Professor	Dr S Benedict	Medical Research Specialist I
Dr I Hassan	Associate Professor	Dr A M Abdulle	Medical Research Specialist II
Dr H Saadi	Associate Professor	Mr J Yasin	Medical Research Specialist II
Dr J Braun	Associate Professor	Mr A Alessa	Research Nurse
Dr S Denic	Associate Professor	Ms M Kutty	Research Nurse
Dr A Al-Fazari	Assistant Professor	Ms S Al Marar	Medical Research Assistant
Dr J Al Kaabi	Assistant Professor	Mr H Hassan	Administrative Assistant
Dr S Al Suwaidi	Assistant Professor	Ms R John	Secretary
Dr A Shehab	Assistant Professor	Ms S Ogilvie	Medical Secretary

Tel: 7137421 / Fax: 7672995 / [http://www.fmhs.uae.ac.ae/Departments/Internal Medicine](http://www.fmhs.uae.ac.ae/Departments/Internal%20Medicine)



Back row, left to right: Mr Srinivas, Mr Abubaker, Mr H Hassan, Dr J Braun, Mr A Al-Essa, Dr A Al Fazari, Mr J Yasin

Middle row, left to right: Professor D Lloyd, Dr H Saadi, Dr J Alkaabi, Dr S Gariballa, Dr E Kazzam, Dr S Denic, Dr W Conca, Dr A M Abdulle

Front row, left to right: Dr I Galadari, Professor E Obineche, Professor S G Carruthers, Professor M Ellis, Dr S Benedict, Ms S Ogilvie, Ms R John, Dr I Hassan

This Department has been highly active in the three fields of Teaching, Research and Clinical Duties through 2007.

The following awards/achievements were received by departmental members in 2007:

- Distinguished Service Award (**Professor M Ellis**).
- Honorary Lecturer, Cardiff School of Medicine (**Dr H Saadi**).
- Academic Tutor, Postgraduate Online Diploma in Diabetes (**Dr H Saadi**).

The following is a list of continuing education activities organised by departmental members in 2007:

- Multidisciplinary Diabetes Care Education Program -Phase II. Al Wasl Hospital Ladies Club, Dubai, United Arab Emirates. (Dr H Saadi).
- Certified Diabetes Educator Examination. FMHS, Al Ain, United Arab Emirates. (Dr H Saadi).
- 12th Annual Workshop on Diabetes Mellitus. Intercontinental Hotel, Al Ain, United Arab Emirates. (Dr H Saadi).
- Lecture given by visiting Professor PW Armstrong, University of Alberta, Canada - New horizons in ST elevation myocardial infarction. (Dr E Kazzam).

The MRCP(UK) PACES Centre at Al Ain Hospital is firmly established and is providing 2 diets per year.

In relation to Teaching Assistants, we have five who are studying abroad. They are as follows:

- Dr A Al-Dhanhani / Teaching Assistant (Canada)
- Dr S Al-Karam / Teaching Assistant (Canada)
- Dr H Galadari / Teaching Assistant (USA)
- Dr G Al Mansoori / Teaching Assistant (Canada)
- Dr M Al Houqani / Teaching Assistant (Canada)

Dr S Benedict (Medical Research Specialist I), Dr A M Abdulle (Medical Research Specialist II) and Mr J Yasin (Medical Research Specialist II) have been enmeshed in the research activities of various faculty within and outside the Department. Their workload increases steadily with time. Mr Awad Al-Essa (Research Nurse), is busily occupied with several research projects. Ms Mary Kutty (Research Nurse) has been funded by an external grant.

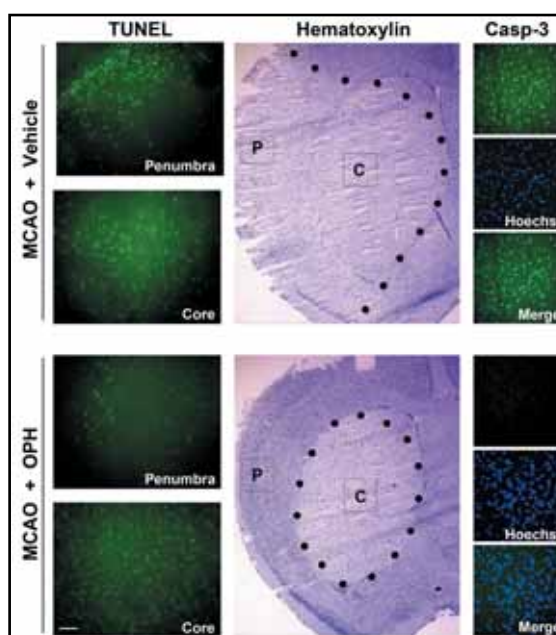
Ms Sheena Ogilvie and Ms Reena John continue to provide secretarial services and Mr Hisham Hassan administrative services for the Department.

The Departmental laboratory is located on the 3rd floor and research interests and publications covered in 2007 were:

<i>genetics</i>	<i>vasoactive peptides</i>
<i>Dermatology</i>	<i>diabetes</i>
<i>Cytokines</i>	<i>hypertension</i>
<i>cancer</i>	<i>osteoporosis</i>
<i>infections, including fungi</i>	<i>cardiovascular disease</i>
<i>lipids</i>	<i>chronic renal failure</i>
<i>pleural disorders</i>	<i>rheumatic disease</i>

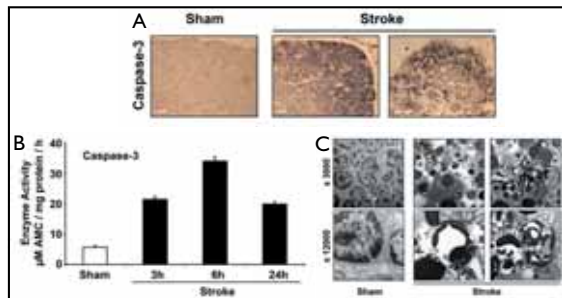
The Department members published 28 papers in peer-reviewed journals, 4 book chapters, reviews or editorials, 9 abstracts and 61 conference presentations and 22 clinical grants are held.

Braun JS et al. (2007). Protection from both brain damage and bacterial infection in murine stroke by the novel non-toxic caspase-inhibitor Q-VD-OPH. *Experimental Neurology* 206; 183-191



The novel non-toxic caspase-inhibitor Q-VD-OPH protects from stroke-induced brain damage. Stroke was induced by MCAO (middle cerebral artery occlusion) for 45 minutes. Mice were treated intraperitoneally with vehicle or Q-VD-OPH (500 μ g). Hematoxylin staining shows reduction of stroke volume in Q-VD-OPH treated animals. Squares in the hematoxylin images indicate the penumbra (P) and core (C) where TUNEL and caspase-staining were chosen from. TUNEL staining of DNA fragments and immunohistochemical staining of active caspase-3 were massively reduced in the ischemic penumbra in Q-VD-OPH treated animals. Bar = 50 μ m.

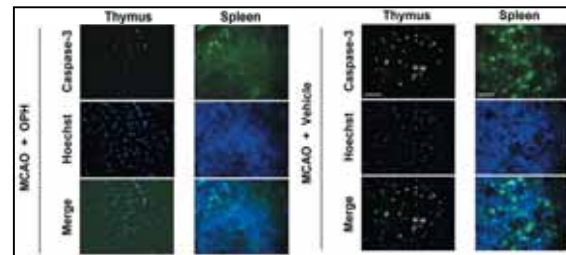
Braun JS et al. (2007). Protection from both brain damage and bacterial infection in murine stroke by the novel non-toxic caspase-inhibitor Q-VD-OPH. *Experimental Neurology* 206; 183-191



Stroke induces apoptosis in thymus. (A) Active caspase-3 in the thymic cortex of MCAO, but not of sham mice was detected by immunohistochemistry; bars = 50 μ m. (B) In accordance with immunohistochemistry, active caspase-3 in thymic homogenates at 3, 6 and 24 hours following MCAO or at 6 hours after sham-surgery was detected by caspase-3 activity assay. (C) Sham mice showed regular thymic cellular ultrastructure, whereas thymic tissue from mice 24 hours after MCAO surgery showed massive shrinkage of cells and nuclei as well as condensation, marginalization, and fragmentation of nuclei.

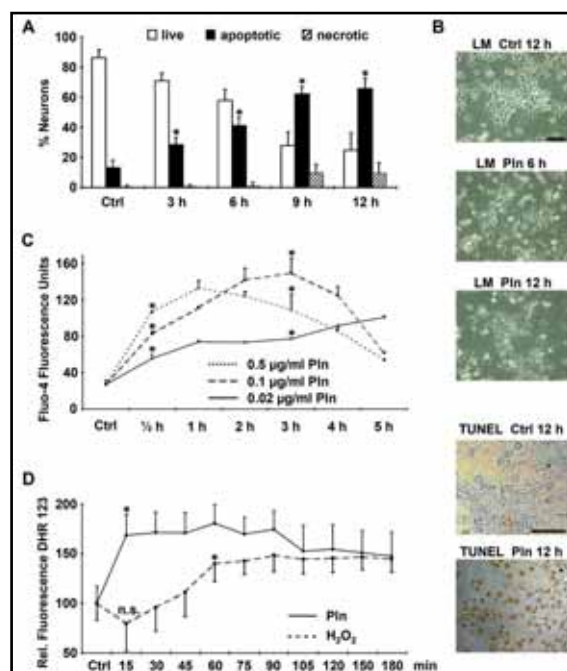
Braun JS et al. (2007). Pneumolysin causes neuronal cell death through mitochondrial damage. *Infection and Immunity* 75; 4245-4254

Braun JS et al. (2007). Pneumolysin causes neuronal cell death through mitochondrial damage. *Infection and Immunity* 75; 4245-4254

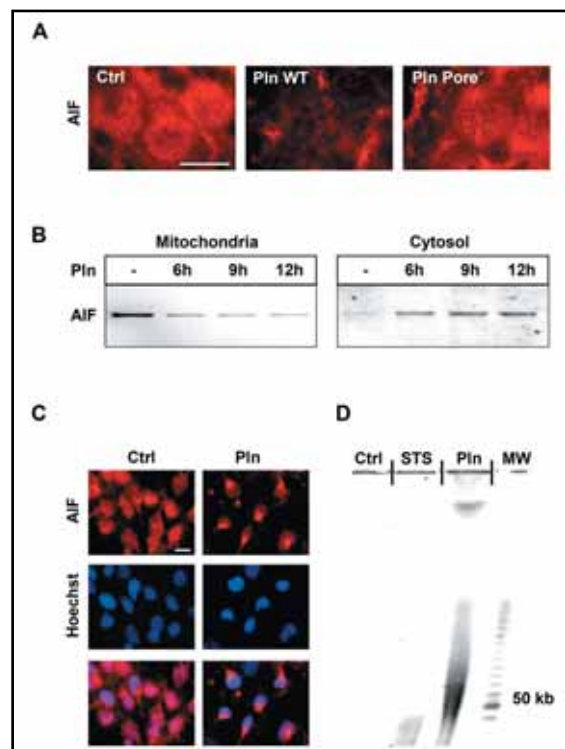


The novel non-toxic caspase-inhibitor Q-VD-OPH reduces caspase-3 activation in thymus and spleen of stroked mice. Stroke was induced by MCAO (middle cerebral artery occlusion) for 45 minutes and treatment with Q-VD-OPH. Thymus and spleen were harvested 24 hours after MCAO and stained with an antibody against active caspase-3. Bars = 50 μ m.

Braun JS et al. (2007). Pneumolysin causes neuronal cell death through mitochondrial damage. *Infection and Immunity* 75; 4245-4254

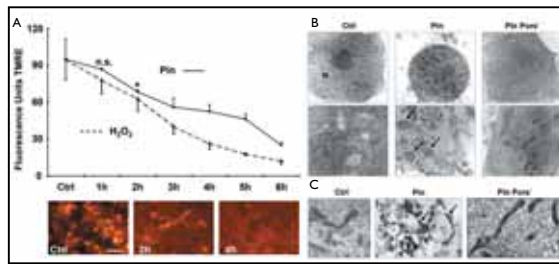


Pneumolysin induces an increase of intraneuronal calcium and ROS and causes cell death. Primary rat cortical neurons were incubated with pneumolysin or untreated for control (ctrl). (A) Apoptosis and necrosis were differentiated and quantified with the nuclear dyes acridine orange and ethidium bromide. (B) Evidence of apoptosis in light microscopy (LM) and terminal transferase mediated nick and labeling (TUNEL) of neurons treated with pneumolysin (Pin, 500 ng/ml), bars = 30 μ m. (C and D) Intraneuronal levels of Ca^{2+} (C) and reactive oxygen species (ROS) (D) were visualized by fluorescence of the dyes Fluo-4 and DHR 123, respectively. Results (means + standard deviation SD) shown are representative for three independent experiments performed in triplicate, * = $p < 0.05$ vs. control, t-test; n.s. = not significant vs. control.



Pneumolysin induces release of mitochondrial apoptosis-inducing factor AIF (A) Immunocytochemistry of neurons using an anti-AIF antibody. AIF was released from mitochondria following incubation of neurons with pneumolysin (200 ng/ml, 9 h) but not with equal concentrations of its mutant deficient in pore-formation. Bar = 10 μ m. (B) AIF was released from mitochondria into the cytosol shown by Western blot of mitochondrial and cytosolic fractions. (C) AIF translocated to the nucleus shown by AIF-immunocytochemistry and Hoechst nuclear staining. Bar = 10 μ m. (D) Pulse-field gel electrophoresis of genomic DNA prepared from neurons exposed to pneumolysin detected large scale DNA fragmentation.

Braun JS et al. (2007). Pneumolysin causes neuronal cell death through mitochondrial damage. *Infection and Immunity* 75; 4245-4254



Pneumolysin damages neuronal mitochondria. (A) Primary rat neurons were incubated with pneumolysin. Mitochondrial membrane potential integrity was assessed by measuring uptake of the TMRE dye (* = $p < 0.05$ vs. control, t-test; n.s. = not significant vs. control). Bar = 20 μ m. (B) Neurons were incubated with pneumolysin and ultrastructure was monitored by transmission electron microscopy. Pneumolysin (Pln) caused nuclear shrinkage, chromatin condensation and massive swelling of cell organelles (arrows). In contrast, in neurons exposed to the pneumolysin mutant defective in pore-formation, nuclear shrinkage, chromatin condensation and mitochondrial swelling were markedly impaired. N = nucleus. Magnification $\times 4\,000$ and $\times 12\,000$. (C) Following incubation with pneumolysin (200 ng/ml, 5 h), immun-electron cytochemistry was performed applying a pneumolysin-specific antibody. Binding sites of the antibody were visualized with the DAB reaction (arrows). Inset shows a late exposure to pneumolysin (200 ng/ml, 10 h). The pneumolysin mutant defective in pore-formation did not bind to mitochondrial membranes. Magnification $\times 24\,000$.

ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Abdulle AM, Gillett MP, Abouchacra S, Sabri SM, Rukhaimi MA, Obineche EN, Singh J. (2007). Low IGF-I levels are associated with cardiovascular risk factors in haemodialysis patients. *Molecular and Cellular Biochemistry* 302(1-2); 195-201.

Abdulle AM, Nagelkerke NJ, Adem A, Abouchacra S, Pathan JY, Al-Rukhaimi M, Suleiman MN, Mathew MC, Nicholls MG, Obineche EN. (2007). Plasma N terminal pro-brain natriuretic peptide levels and its determinants in a multi-ethnic population. *Journal of Human Hypertension* 21(8); 647-653.

Alkaabi JM, Ghazal-Aswad S, Sagle M. (2007). Babies as desired: Ethical arguments about gender selection. *Emirates Medical Journal* 25(1); 1-5.

Andersen GN, Nilsson K, Pourazar J, Hackett TL, Kazam E, Blomberg A, Waldenström A, Warner J, Rantapää-Dahlqvist S, Mincheva-Nilsson L, Sandström T. (2007). Bronchoalveolar matrix metalloproteinase 9 relates to restrictive lung function impairment in systemic sclerosis. *Respiratory Medicine* 101(10); 2199-2206. Epub 2007 Jul 20.

Bashir MH, Mushtaque A, Gariballa SE. (2007). Hyponatraemia. *Emirates Medical Journal* 25(3); 325-327.

Bener A, Ehlayel MS, Alsowaidi S, Sabbah A. (2007). Role of breast feeding in primary prevention of asthma and allergic diseases in traditional society. *European Annals of Allergy and Clinical Immunology* 39-n 10-2007.

Braun JS, Hoffmann O, Schickhaus M, Freyer D, Dagand E, Bermpohl D, Mitchell TJ, Bechmann I, Weber JR. (2007). Pneumolysin causes neuronal cell death through mitochondrial damage. *Infection and Immunity* 75; 4245-4254 (JSB and OH contributed equally to this work).

Braun JS, Prass K, Dirnagl U, Meisel A, Meisel C. (2007). Protection from both brain damage and bacterial infection in murine stroke by the novel non-toxic caspase-inhibitor Q-VD-OPH. *Experimental Neurology* 206; 183-191 (JSB and KP contributed equally to this work).

Denic S, Nicholls MG. (2006). Malaria and Alexander the Great: How important is family history? *Emirates Medical Journal* 24; 197-199.

Denic S, Nicholls MG. (2007). Genetic benefits of consanguinity through selection of genotypes protective against malaria. *Human Biology* 79; 145-58.

Denic S, Frampton C, Nagelkerke N, Nicholls MG. (2007). Consanguinity affects selection of alpha-thalassemia genotypes and the size of populations under selection pressure from malaria. *Annals of Human Biology* 34; 620-631.

Denic S, Frampton C, Nicholls MG. (2007). Risk of cancer in an inbred population. *Cancer Detection and Prevention* 31; 263-269.

Dirnagl U, Klehmet J, Braun JS, Harms H, Meisel C, Ziemssen T, Prass K, Meisel A. (2007). Stroke-induced immunodepression: experimental evidence and clinical relevance. *Stroke* 38; 770-773.

Gariballa S, Forster S. (2007). Effects of dietary supplements on quality of life in older patients: A randomised double-blind placebo-controlled trial. *Journal of American Geriatrics Society* 55; 2030-2034.

Gariballa S, Ullegaddi R. (2007). Riboflavin status in acute ischaemic stroke. *European Journal of Clinical Nutrition* 61; 1237-1240.

Gariballa S, Forster S. (2007). Effects of dietary supplements on depressive symptoms in older patients: A randomised double-blind placebo-controlled trial. *Clinical Nutrition* 26; 545-551.

Gariballa S, Forster S. (2007). Malnutrition is an independent predictor of 1-year mortality following acute illness. *British Journal Nutrition* 98; 332-336.

Gariballa S, Forster S. (2007). Associations between underlying disease and nutritional status following acute illness. *Clinical Nutrition* 26; 466-473.

Gott M, Barnes S, Payne S, Parker C, Seamark D, Gariballa S, Small N. (2007). Dying trajectories in heart failure. *Palliative Medicine* 21(2); 95-99.

Gott M, Barnes S, Payne S, Parker C, Seamark D, Gariballa S, Small N. (2007). Patient views of social service provision for older people with advanced heart failure. *Health & Social Care in the Community* 15(4); 333-342.

Herzog KH, Schulz A, Buerkle C, Gromoll C, Braun JS. (2007). Radiation-induced apoptosis in retinal progenitor cells is p53-dependent with caspase-independent DNA-fragmentation. *European Journal of Neuroscience* 25; 1349-1356.

Hoffmann O, Braun JS, Becker D, Halle A, Freyer D, Dagand E, Lehnardt S, Weber JR. (2007). TLR2 mediates neuroinflammation and neuronal damage. *Journal of Immunology* 178; 6476-6481.

LinksMörner S, Lindqvist P, Waldenström A, Kazzam E. (2007). Right ventricular dysfunction in hypertrophic cardiomyopathy as evidenced by the myocardial performance index. *International Journal of Cardiology* 124(1); 57-63. Epub 2007 Mar 26.

Mushtaque A, Bashir MH, Gariballa SE. (2007). Severe intravascular haemolysis due to a brown recluse spider. A life threatening but treatable condition. *Emirates Medical Journal* 25(1); 77-78.

Rizk DE, Agarwal MM, Pathan JY, Obineche EN. (2007). Predicting proteinuria in hypertensive pregnancies with urinary protein-creatinine or calcium-creatinine ratio. *Journal of Perineonatology* 27(5); 272-277.

Rizk DEE, Obineche EN. (2007). Female pelvic floor disorders and impaired renal function: An appraisal. *International Urogynecological Journal* DOI 10.1007/s00192-007-0423-8.

Saadi HF, Dawodu A, Afandi BO, Zayed R, Benedict S, Nagelkerke N. (2007). Efficacy of daily and monthly high-dose calciferol in vitamin D deficient nulliparous and lactating women. *American Journal of Clinical Nutrition* 85; 1565-1571.

Saadi H, Carruthers SG, Nagelkerke N, Al-Maskari F, Afandi B, Reed R, Lukic M, Nicholls MG, Kazam E, Algawi K, Al-Kaabi J, Leduc C, Sabri S, El-Sadig M, Elkhumaidi S, Agarwal M, Benedict S. (2007). Prevalence of diabetes mellitus and its complications in a population-based sample in Al Ain, United Arab Emirates. *Diabetes Research and Clinical Practice* 78 (3); 369-377.

BOOKS, CHAPTERS, REVIEWS AND EDITORIALS

Abdulle AM. (2007). Hypertension in the United Arab Emirates. Review: *Healthcare Middle East* (cover story) 2; 23-28.

Denic S, Agarwal MM. (2007). Nutritional iron deficiency: An evolutionary perspective. Review: *Nutrition* 23; 603-14.

Obineche EN. (2007). Membranoproliferative glomerulonephritis. Book Chapter: *Glomerular Diseases* (3rd Edition), pp 349-364.

Saadi H, Dawodu A. (2007). Vitamin D deficiency in Arabian women and children: Now is the time for action. Review: *Emirates Medical Journal* 25(2); 201-207.

PUBLISHED ABSTRACTS, LETTERS AND CORRESPONDENCE

Abdulle AM, Pathan JY, Abouchacra S, Nagelkerke NJD, Obineche EN. (2007). Benefits of controlling classical cardiovascular risk factors in the bedouin Arab population of the United Arab Emirates. 61st Annual High Blood Pressure Conference: Hypertension, Oct 2007; 50: e75 - e155 (P187).

Al Hammadi AAK, Ghufli HK, Gariballa S. (2007). Evaluation of handgrip strength as a nutritional marker in acutely ill patients. *Emirates Medical Journal* 25(2); 265.

Ellis M. (2007). Febrile Neutropenia: Current challenges. *Emirates Medical Journal* 25(1 Suppl); 47.

Obineche EN, Nagelkerke N, Pathan JY, Nicholls MG, Abdulle AM. (2007). Hyperhomocysteinaemia and type IV hypertriglyceridaemia are common cardiovascular risk factors in hypertensives. National Kidney Foundation (NKF) Spring Clinical Meetings (Abstract), Orlando, Florida, USA. *American Journal of Kidney Diseases* 49; (4) April.

Obineche EN, Nagelkerke N, Pathan JY, Nicholls MG, Abdulle AM. (2007). The relationship between blood pressure, obesity, endothelin-I and plasma lipids in a Gulf Arab population. National Kidney Foundation (NKF) Spring Clinical Meetings (Abstract), Orlando, Florida, USA. *American Journal of Kidney Diseases* 49; (4) April.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES (ONLY NEW) AND OTHERS

Abdulle AM, Abouchacra S, Nagelkerke NJD, Obineche EN. (2007). Benefits of controlling classical cardiovascular risk factors in the bedouin Arab population of the United Arab Emirates. 61st Annual High Blood Pressure Conference: American Heart Association, Tucson, Arizona, USA

Abdulle AM, Adem A, Nagelkerke N, Pathan JY, Rukhaimi M, Suleiman MN, Mathew MC, Nicholls MG, Obineche EN. (2007). Plasma N terminal - pro Brain natriuretic peptide levels and its determinants in a multi ethnic population. World Congress of Nephrology, Reo do Jeneiro, Brazil.

Abdulle AM, Adem A, Nagelkerke N, Pathan JY, Rukhaimi M, Suleiman MN, Mathew MC, Nicholls MG, Obineche EN. (2007). Plasma N terminal - pro brain natriuretic peptide levels and its determinants in a multi

ethnic population. The 8th annual UAE University research conference, Al Ain, United Arab Emirates. MHS-113-119.

Abdulle AM, Nagelkerke NJ, Adem A, Abouchacra S, Pathan JY, Al-Rukhaimi M, Suleiman MN, Mathew ML, Nicholls MG, Obineche EN. (2007). Plasma N terminal pro-brain natriuretic peptide levels and its determinants in a multi-ethnic population. 8th Annual UAE University Research Conference, Al Ain, United Arab Emirates.

Abu-Zidan FM, Czechowski J, Corr P, Kazzam E. (2007). A practical FAST course. 3rd Abu Dhabi Annual International Surgical Conference, Abu Dhabi, United Arab Emirates.

Abu-Zidan FM, Czechowski J, Corr P, Kazzam E. (2007). A practical FAST course. 1st Joint Congress - European Association for Trauma and Emergency Society - EATES, European Trauma Society - ETS, Graz, Austria.

Abu-Zidan FM, Czechowski J, Corr P, Kazzam E. (2007). A practical FAST course. Third World Congress of Ultrasound, Paris, France.

Alsowaidi S. (2007). Allergy sensitisation among patients in Allergy Clinic of Tawam Hospital. American College of Allergy, Asthma and Immunology.

Alsowaidi S. (2007). Insect sting allergies of emergency department visits in Al Ain Hospital, United Arab Emirates. World Allergy Congress, Bangkok, Thailand.

Alsowaidi S, Mohamed A, Baner A, Alessa A, Bernsen R, Abdulle A. (2007). Insect sting allergies of emergency department visits in Al Ain Hospital, United Arab Emirates. World Allergy Organisation journal, Bangkok, Thailand, WAC; S216 Nov.

Awad MA, Denic S, Taji H, Khatib F, Kouatly M, Khalil R. (2007). Quality of life of Arab women three months after treatment of breast cancer. International Oncology Conference: Recent Advances in Clinical Oncology, Al Ain, United Arab Emirates.

Barnes S, Gott M, Payne S, Parker C, Seamark D, Gariballa S, Small N. (2007). Coping with death & bereavement. 10th Congress of the European Association for Palliative Care, Budapest, Hungary.

Bener A, Ehlal MS, Alsowaidi S, Sabbah A. (2007). Role of breast feeding in primary prevention of asthma and allergic disease in traditional society. World Allergy Congress, Bangkok, Thailand.

Braun JS, Noura Saif Al Nuaimi, Fatima Yousif Ismail. (2007). One syndrome different locations and diagnoses. United Arab Emirates University Congress, Al Ain, United Arab Emirates.

Braun JS. (2007). Causes and symptoms of stroke. Stroke Symposium, Al Ain Hospital, Al Ain, United Arab Emirates.

Braun JS. (2007). Clinical epilepsy. First UAE Neuroscience IBRO School, Al Ain, United Arab Emirates.

Braun JS. (2007). Cryptococcal meningitis. Hellenic Emirates Conference, Dubai, United Arab Emirates.

Braun JS. (2007). Experimental epilepsy. First UAE Neuroscience IBRO School, Al Ain, United Arab Emirates.

Braun JS. (2007). Neuroprotection in stroke - hope or frustration? Research Seminar, Faculty of Medicine and Health Sciences, UAE University, Al Ain, United Arab Emirates.

Braun JS. (2007). New insights into the neurotoxicity of pneumolysin. United Arab Emirates University Congress, Al Ain, United Arab Emirates.

Braun JS. (2007). Protection from brain damage and infection in murine stroke. World Congress on Controversies in Neurology, Berlin, Germany.

Conca W. (2007). Pathogenesis, diagnosis and management of systemic lupus erythematosus. 1st Emirates Hellenic Conference and Exhibition, Dubai, United Arab Emirates.

Dawodu A, Saadi HF, Zayed R, Benedict S, Hollis BW. (2007). The effect of maternal vitamin D supplementation on human milk vitamin D content in a population with high prevalence of vitamin D deficiency. 25th International Congress of Pediatrics in Athens, Greece.

Denic S, Frampton C, Nagelkerke N, Nicholls MG. (2007). Human inbreeding and selection of alpha-thalassemia. The Eighth Annual UAE University Research Conference, Al Ain, United Arab Emirates.

Denic S, Frampton C, Nicholls MG. (2007). Consanguinity and the risk of cervical carcinoma: A case control study. 18th International Congress on Anti Cancer Treatment, Paris, France.

Ellis M, Hedstrom U, Al-Ramadi B, Alizadeh H, Kristensen J, Kshirsagar S, Blaschke T, Stevens DA, Klingspor L, Poughlas L. (2007). Standard dosing (3mg/kg/day for 14 days) versus intermittent high dosing (10 mg/kg day 1, 5mg/kg days 3 and 6) of liposomal amphotericin B for treating febrile neutropenia: A comparative prospective clinical trial of safety, efficacy and kinetics. 8th Congress European Association for Clinical Pharmacology and Therapeutics, Amsterdam, Holland.

Ellis M, Hedstrom, U, Al-Ramadi, B, Alizadeh H, Kristensen J, Shammas V, Kshirsagar S, Blaschke T, Stevens D, Klingspor L. (2007). Standard dosing versus Intermittent high dosing of liposomal amphotericin B for treating febrile neutropenia. The Eighth Annual UAE University Research Conference, Al Ain, United Arab Emirates.

- Ellis M. (2007). Aspergillosis and mucormycosis: Differential diagnosis and treatment. Gilead Sciences Workshop, Dubai, United Arab Emirates.
- Ellis M. (2007). Emerging strategies for invasive fungal infections. Symposium 'Optimising Treatment Nosocomial Infections', Singapore.
- Ellis M. (2007). Febrile neutropenia. International Conference on recent Advances in Clinical Oncology, Al Ain, United Arab Emirates.
- Ellis M. (2007). Fungal endocarditis. 3rd Trends in Medical Mycology (TIMM-3), Torino, Italy.
- Ellis M. (2007). Management of febrile neutropenia. The 1st Hellenic Medical Conference and Exhibition, Dubai, United Arab Emirates.
- Ellis M. (2007). New dosing strategies in high risk patients. EBMT Satellite Symposium, Lyon, France.
- Forster S, Powers H. Gariballa S. (2007). Plasma selenium, copper and glutathione peroxidase concentrations during acute illness & recovery. Nutrition Society meeting, London, England. (Presented by Dr Sarah Forster).
- Galadari I. (2007). Incidence of psoriasis in UAE. Kuwait Derma Conference, Kuwait.
- Galadari I. (2007). Mesotherapy. Dubai Derma and Boston University Conference, Dubai, United Arab Emirates.
- Galadari I. (2007). Molluscum contagiosum. World Congress of Dermatology, Argentina.
- Gariballa S, Forster S. (2007). A randomised, double blind, placebo-controlled trial of the effects of dietary supplementation on clinical outcome during acute illness. 6th Congress European Federation of Internal Medicine, Lisbon, Portugal.
- Gariballa S, Ullegaddi R. (2007). Riboflavin in acute ischaemic stroke patients. 6th Congress European Federation of Internal Medicine, Lisbon, Portugal.
- Gariballa SE. (2007). B-group vitamins supplements following acute ischaemic infarction. UAE University Research Conference, Al Ain, United Arab Emirates.
- Gariballa SE. (2007). Obesity and cardiovascular diseases epidemic in the Middle East: Time to wake up. UAE Cardiac Society, Al Ain, United Arab Emirates.
- Gariballa SE. (2007). Nutrition and disability. UAE University Disability Awareness Week. Al Ain, United Arab Emirates.
- Henein MJR, Lam YY, Kazzam E, Henein MY. (2007). Asymmetrical longitudinal left atrial myocardial systolic velocities: Speckle tracking echocardiography. European Society of Cardiology Euroecho 07, Lisbon, Portugal.
- Henein MJR, Lam YY, Kazzam E, Henein MY. (2007). Atrial cross talk in patients with left and right ventricular outflow tract obstruction. European Society of Cardiology Euroecho 07, Lisbon, Portugal.
- Obineche E, Nagelkerke N, Elhadi A, Pathana J, Yahya T, Obineche R, Abdulle A. (2007). Plasma endothelin-1, homocysteine, and nitric oxide levels in a multiethnic hypertensive cohort from the United Arab Emirates. 48th Annual Meeting of the American Society of Nephrology, San Francisco, USA.
- Obineche EN, Abdulle AM, Nagelkerke NJ, Adem A, Abouchacra S, Pathan JY, Al-Rukhaimi M, Suleiman MN, Mathew ML, Nicholls MG. (2007). Plasma N terminal pro-brain natriuretic peptide levels and its determinants in a multi-ethnic population. World Congress of Nephrology (WCN), Rio de Janeiro, Brazil.
- Obineche EN. (2007). 9th Congress of the African Association of Nephrology in collaboration with the International Association of Nephrology (ISN), Khartoum, Sudan.
- Obineche EN. (2007). Cardiovascular disease in chronic kidney disease (Hypertension). African Association of Nephrology (AFRAN). 9th Congress in collaboration with the International Society of Nephrology (ISN), Khartoum, Sudan.
- Saadi H. (2007). A national survey of diabetes and its complications - A pilot study in Al Ain. UAE University Research Conference, Al Ain, United Arab Emirates.
- Saadi H. (2007). Osteoporosis and vitamin D deficiency in Arab women. World Osteoporosis Day Celebration organized by the Emirates Osteoporosis Society, Dubai, United Arab Emirates.
- Saadi H. (2007). Osteoporosis in Arab women. Sheikh Khalifa Medical City Medicine, Abu Dhabi, United Arab Emirates.
- Saadi H. (2007). Prevention and treatment of vitamin D deficiency in Arabian women: Efficacy of high-dose vitamin D supplementation. UAE University Research Conference, Al Ain, United Arab Emirates.
- Saadi H. (2007). Vitamin D deficiency and calcium metabolism. The 1st Emirates Hellenic Medical Conference & Exhibition, Dubai, United Arab Emirates.
- Saadi HF, Dawodu A, Afandi BO, Zayed R, Benedict S, Nagelkerke N. (2007). Efficacy of daily and monthly high-dose calciferol in vitamin D deficient nulliparous and lactating women. The Proceedings of the 89th Annual Meeting of The Endocrine Society, Toronto, Canada.
- Saadi, H. (2007). Nutrition and lifestyle in the prevention and management of diabetes mellitus. Al Ain Annual Diabetes Workshop, Al Ain, United Arab Emirates.
- Shehab A. (2007). ACEi or ARB for cardiovascular disease. World Heart Day, Dubai, United Arab Emirates.

RESEARCH GRANTS 2007

FMHS RESEARCH GRANT

Drs Alkaabi JM, Afandi B, Saadi H.

Predictors and prevalence of diabetic foot among diabetic patients in Al-Ain Medical District. Seed Money Grant.

Drs Alkaabi JM, Al-Maskari F, Afandi B, Saadi H. Compliance to diet and physical activity among diabetic patients in Al Ain District.

Dr Al-Sowaidi S.

Prevalence rate of insect allergy and allergic disease among Al Ain population, UAE. Seed Grant.

Dr Braun J.

Pneumococcal meningitis: analysis of the functional relevance of the *lytA*-, *cbpG*- and *ccpA*-genes in brain injury and inflammation.

Professor Corr P, Drs van Gorkum K, Martinez, Conca W, Czechowski J, Gariballa S.

Bone mineral density, body mass index and body composition measurements perimenopausal women living in Al Ain.

Dr Gariballa S, Professor Corr P, Dr Pathan J.

The relationship between visceral fat, inflammatory state and endothelial dysfunction in obese subjects with or without cardiovascular disease risk factors.

Dr Hassan IB.

Assessment of cardiac toxicity in patient with chronic myeloid leukaemia during Imatinib therapy.

Professor Obineche EN, Drs Abdulle AM, Pathan JY.

Plasma N-terminal prohormone brain natriuretic peptide (NT-proBNP) and hormones of the renin angiotensin-aldosterone system in a Gulf Arab hypertensive population.

UAEU Individual Research Grant

Dr Alsowaidi S.

Features of patients with anaphylaxis in Emergency Unit and Allergy Clinic in Tawam Hospital.

Dr Hassan IB.

Retrospective study of clinical and laboratory data of patients with acute leukemia (AL) diagnosed and / or treated at Oncology Department at Tawam Hospital, Al Ain, United Arab Emirates, between year 2000-2006.

Professor Obineche EN, Dr Abdulle A, Dr Pathan J.

Plasma N-terminal prohormone brain natriuretic peptide (NT-proBNP) and hormones of the renin angiotensin-aldosterone system in a Gulf Arab hypertensive population.

UAEU Interdisciplinary Research Grant

Drs Alsowaidi S, Abdulle AM, Bernsen R, Alzaabi A, Baki H.

Type I allergies, their causative allergens and possible risk factors among nationals of the United Arab Emirates.

Drs Braun J, Idrissi, van Gorkom KN.

Linguistic units in brain-damaged Emirati-Arabic speaking

patients: Implications for linguistic theory, language deficit assessment and speech-language therapy.

Dr Hassan IB.

A study for the use of multi parameter flow cytometry (MPFC) for minimal residual disease (MRD) detection in patients with acute leukaemia (AL).

Dr Kazzam E.

Pulmonary hypertension in patients with thalassemia: Relation to neurohormones and collagen markers.

Dr Saadi H.

A national survey of the prevalence of diabetes and its complications in the United Arab Emirates - A pilot study.

Hamdan Award Medical Research Grant

Dr Hassan IB.

Immune response versus molecular responses in patients with chronic myeloid leukaemia (CML) treated with Imatinib (a tyrosine kinase inhibitor): influence of BCR-ABL kinase mutation.

Dr Kazzam E.

Cardiac remodeling in patients with thalassemia major: Detailed echocardiographic and magnetic resonance imaging evaluation.

Others

Professors Ellis M, al-Ramadi B.

An intermittent dosing study of liposomal amphotericin B in neutropenic fever. Gilead Sciences.

Professor Ellis M.

A study of bacteremia in patients with hematological malignancy. Wyeth.

Professor Obineche EN, Dr Abdulle AM, Dr Abouchakra S, Dr Al Obaidly A, Dr Al Rukhaimi Professor M, Nagelkerke N, Dr Curhan G, Dr. Seyegh MH. Characteristics of chronic kidney disease patients and their cardiovascular risk profile in the United Arab Emirates. The Project is in collaboration with Harvard University and Abu Dhabi Health Authority, Tawam Hopkins Hospital and Dubai Hospital.

Drs. Gariballa S, Williams L, Pockley G.

Effect of diet on immune function and risk of infection in elderly people. Food Standard Agency, England.

Department of Medical Education

Prof David Lloyd	Associate Dean, Medical Education	Media Center:	
Prof Michelle McLean	Professor	Mr Ivanna Lizarriturri	Graphic Designer
Dr Sami Shaban	Assistant Professor	Ms Shaikha Butti	Graphic Assistant
Ms Geraldine Kershaw	Medical Skills and Communication	Mr Ashok Prasad	Medical Photographer
Mr Kevin Neumann	Medical Skills and Communication	Mr M Aboobacker	Reprographic Technician
Ms Hoda Mansour	Administrative Assistant	Mr Musa Yassin	Audio-visual Specialist
Mr CP Nair	MSC Administrative Assistant	Information	
Mr M Nazimuddin	OSC Administrative Assistant	Technology:	
Ms Soni Lal	Secretary: Continuing Medical Education Office	Mr Alsajir MB	IT Supervisor
Mr T Usman	Office Assistant	Ms Aisha Al Shamsi	Microcomputer Specialist
Learning Resource Center:		Ms Latifa Mohammed	Microcomputer Specialist
Ms Beth Thorsteinson	Director	Ms Shaika Al Shamsi	Microcomputer Specialist
Mr Ahmad Fathy	Medical Resource Specialist	Ms Moza Al Baloushi	Microcomputer Specialist
Ms Widad El Gaili	Medical Resource Specialist	Skills and Teaching Laboratories:	
		Mr K Unnikrishnan	Clinical Skills Laboratory Supervisor
		Mr S Pandian	Clinical Skills Laboratory Assistant
		Mr Athiq Wahab	Teaching Laboratory Supervisor
		Mr B Abubakkar	Teaching Laboratory Assistant

Tel: 7672000 / Fax: 7672167/ <http://www.fmhs.uaeu.ac.ae/departments.asp>



Back row, from left to right: Mr K Pandian, Mr A Wahab, Mr B Abubakkar, Mr A Prasad,
Mr M Nazimuddin, Mr CP Nair, Mr Musa Yassin, Mr M Aboobacker, Mr K Neumann,
Mr A Fathy, Mr K Unnikrishnan, Mr T Usman, Mr Alsajir MB
Front row: Ms Hoda Mansour, Ms Beth Thorsteinson, Ms G Kershaw,
Professor D Lloyd, Professor M McLean, Ms W El Gaili, Ms I Lizarriturri, Ms S Lal

RESEARCH PROFILE

With the addition of two more faculty members to the Department of Medical Education, research activities have begun in earnest. Professor Michelle McLean joined the Department in June 2006, while Dr Sami Shaban, a health informatist, joined in August 2007. The activities and the research interests of the Department members vary from issues related to student learning to archiving of student records. Research that has either been completed or is currently in progress includes:

- Development of transferable/generic skills in undergraduate medical students (McLean, Shaban). Incoming MSC1 students are surveyed and followed up in MSC2 to check for skills development. The project is in its second year. Results for the first cycle are currently being analysed
- Contribution of research to the development of generic skills (McLean, Howarth). This project was completed by two MSC2 students for their research project during the 2006/2007 academic year
- Perceptions of the practice of medicine for FMHS male and female students and graduates (McLean, Al Maskari, Al Sowaidi). This project began in 2007 and will run for three years. Sixth year students will be traced through their internships and into their post-graduate studies
- Predictors of student success in the FMHS. By looking at a number of variables, such as high school grades, interview scores, NBME examination results, it may be possible to find predictors of academic success (Shaban, Lloyd, McLean).
- Contributions of student research to scholarship in the FMHS. This project looked at the contribution of student research to the scholarship of discovery (McLean, Howarth)
- Psychological effects of students' first encounter with cadavers in Anatomy (Sadeghi, Lorke, McLean)
- Mapping medical school curricula (Shaban, Lloyd)
- Development of a trauma registry (Abu-Zidan, Shaban)

SIGNIFICANT ACHIEVEMENTS

The LRC, Audiovisual and IT units provide support for many FMHS academic activities, including conferences, international visitors and speakers as well as student activities.

The IT and Audiovisual sections supported a number of medical conferences and workshops

during 2007 through website design and maintenance, audiovisual computer and simulator assistance and maintaining the registration database. Support was provided for the following conferences and workshops during 2007:

- International Conference on Recent Advances in Clinical Oncology (February)
- Evidence Based Paediatrics Conference (March)
- Postgraduate Basic Laparoscopic Cholecystectomy Course – Virtual Reality and Animal Laboratory, in association with European Association for Endoscopic Surgery (March, April & November)
- IDF Multidisciplinary Diabetes Care Education Program Phase II (April)
- Advanced Trauma and Life Saving Workshop (June)
- Focused Assessment Sonography for Trauma Workshop (June, October)
- Postgraduate Basic Gynaecological Laparoscopic Course, in association with European Association for Endoscopic Surgery (June, December)
- Gynaecology Ultrasound Workshop (November)

The Media Center provides technical assistance for research and researchers through the production of high quality graphics and photography. These services are particularly relevant in terms of journal submissions, poster presentations at professional conferences and other Faculty reports. A selection of posters and PowerPoint presentation templates are available for FMHS members on the FMHS intranet. During the 2006-2007 academic year, 71 scientific posters were prepared for Faculty members and 24 posters for students. The Center electronically archives these posters. The Photography section of the Center services events such as international conferences, faculty research seminars and student research activities. A photographic record of these events is published on a daily basis on the FMHS website. This section also produces a significant number of laboratory specimen photographs and is responsible for digitizing radiology material for journal publication.

ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Head C and Shaban S. (2007). A heuristic approach to simultaneous course/student timetabling. *Journal of Computers & Operations Research* 34(4): 919-933.

McLean M, Howarth FC. (2007). Recognising the role of medical science educators in undergraduate medical

education. *Journal of International Association of Medical Science Educators* 17(2): 78-82.

McLean M, Naidoo SS. 2007. Medical students' views on the white coat: A South African perspective on ethical issues. *Ethics & Behaviour* 17(4): 387-402.

McLean M, Watson HK, Muswema A. (2007). Aspects of veterinary waste in a South African city: A case study (2001- 2003). *Waste Management* 27: 902-911.

Naiker M, McLean M, Peters EM. (2007). Poor peak dorsiflexor torque: An additional possible risk factor for ankle injury in elite female hockey players. *Journal of Science and Medicine in Sport* 10: 363-371.

Shaban S. (2007). Multiple authorship trends in prestigious journals from 1950 to 2005. *Saudi Medical Journal* 28: 477-482.

van Wyk JM, McLean M, Futre EM. (2007). Using evaluation in a problem-based learning curriculum to promote transformation. *Review of Further & Higher Education and Training* 1: 45-60.

van Wyk JM, McLean M. (2007). Maximising the value of feedback for individual facilitator and faculty development. *Medical Teacher* 26(1): e26-e31.

McLean M. (2007). PBL in resource-constrained settings. 2nd International Medical Education Conference, Sudan, Khartoum, 21-26 March 2007.

McLean M. (2007). Internationalising the medical curriculum. ASME Golden Jubilee Conference, Dublin, Ireland, October 2007.

McLean M. (2007). Educational scholarship and teaching portfolios. Second International Conference on Medical Education. Khartoum, Sudan, 21-26 March 2007.

McLean M. (2007). Diversity and Education. Second International Conference on Medical Education. Khartoum, Sudan, 21-26 March 2007.

Shaban S. (2007). Mapping medical school curricula using the MeSH tree. *Proceedings of the American Medical Informatics Association 2007 Annual Symposium*. Chicago, USA, Nov. 10-14, 2007.

BOOKS, CHAPTERS, REVIEWS, EDITORIALS

McLean M. 2007. Spotlight – Part I. AMEE, Genoa 2006. Theme I. Spotlight on Undergraduate medical education. *Medical Teacher* 27: 67-68.

McLean M, Howarth C. 2007. Biomedical science research: from humble beginnings to an integral part of the undergraduate medical curriculum at the Faculty of Medicine and Health Sciences, United Arab Emirates University. *Physiology News* 68 (Autumn 2007): 13-15. <http://www.physoc.org/publications/pn/>

PUBLISHED ABSTRACTS, LETTERS AND CORRESPONDENCE

Al-Kaabi E, Zahmi, S, McLean, Howarth FC. (2007). Impact of undergraduate research on the development of generic skills in medical students. *Emirates Medical Journal* 25: 263.

Lloyd DA. (2007). Tutoritis in a non-clinical tutor in problem-based learning. *Medical Education* 41 (10): 1017.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

Kershaw G. (2007) Materials for tackling plagiarism. 7th Annual ELT Conference, Sultan Qaboos University Language Centre, Muscat, Oman. April 2007.

Department of Medical Microbiology and Immunology

Prof M Lukic	Professor, Chairman	Mr A Al Haj	General Technician
Prof S Dissanayake	Professor	Mr M K Jahabar	Assistant senior Technician
Dr B al-Ramadi	Professor	Mr H Hasasna	General Technician
Dr T Rizvi	Professor	Ms M Ibrahim	General Technician
Dr M B Al Shamsi	Assistant Professor	Ms G Bashir	Assistant Technician
Mr A Shahin	Senior Technician	Ms G Dawood	Secretary
Dr E Zilahi	Senior Technician	Ms N J S Al Dhafri	Secretary
		Mr M H Majeed	Office Assistant

Tel : 7137488 / Fax : 7671966 / <http://www.fmhs.uaeu.ac.ae/Departments/Microbiology>



Seated: Professor M L Lukic (Chairman), Pretty Susan Philip, Nawal Juma, Maureen Dawood, Erika Zilahi, Preethi Jayanth, Senarath Dissanayake,
Standing: Jahabar Ali, Allen Shahin, Ahmed El-Haj, Ahmed Al-Hakim, Tibor Pal, Basel al-Ramadi, Tahir Rizvi, Hashik Majeed

RESEARCH PROFILE

In this year the department obtained and/or initiated research on several major projects in virology and immunology. Dr M Al-Shamsi came back from her postdoctoral training in Center for Experimental Rheumatology, University of Zurich and Dr. Ahmed Al Qahtani obtained his PhD thesis and postdoctoral fellowship at the University of California, Irvine.

Department did not have any bacteriologist in place in this academic year and our virology position was also vacant. This had an impact on departmental research activities despite continuous collaboration with previous members Professors Pal and Nowotny.

Members were invited speakers at several international and FMHS organized meetings and have significantly contributed to student research activities as mentors of awarded projects.

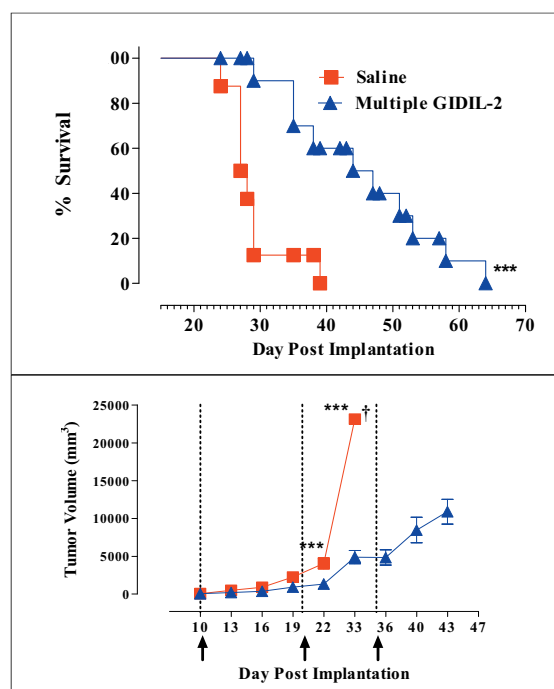
Research activities and achievements of the departmental laboratories were as follows:

Professor Tahir Rizvi's laboratory. The focus of Professor Rizvi's research concerns the basic steps in retroviral replication with the ultimate goal of developing improved retroviral vector systems for human gene therapy. Specifically Prof. Rizvi's laboratory is attempting to unravel how retroviruses/lentiviruses package their genomic RNAs into a virus particle and what are some of the underlying differences in RNA packaging among retroviruses/lentiviruses. Over the years, these studies have included a number of retroviruses/lentiviruses including, HIV, SIV, FIV, and MPMV. These studies have been further expanded to include analyses of cross- and co-packaging among retroviruses/lentiviruses. Over the years, Prof. Rizvi has been able to successfully compete for and acquire both intramural and extramural grant support for his work on retroviruses. Currently Prof. Rizvi holds a prestigious Wellcome Trust Grant in collaboration with Professor Andrew Lever of Addenbrooke's Hospital, University of Cambridge, UK. Prof. Rizvi has been very active in supervising and mentoring both the graduate and undergraduate student. His current studies on RNA packaging have been published in journals of international repute. Prof. Rizvi is a member of the editorial board of a leading journal of his field of "Retrovirology" and work as an ad hoc reviewer for several national/international journals.

Dr Mariam Al-Shamsi: The main focus of Dr. Mariam Al-Shamsi's research is in dissecting the role of the newly identified cytokine interleukin-27 (IL-27) in a model of type I diabetes. The role of this cyto-

kine is still controversial in autoimmunity and inflammation but has not been studied in type I diabetes. Our findings showed that IL-27 treatment only exacerbates the pathological findings of the disease. However, specific interactions between IL-27 and other mediators in the milieu is not yet clear in this disease model, nor does the sequence of events that result in disease progression following IL-27 treatment.

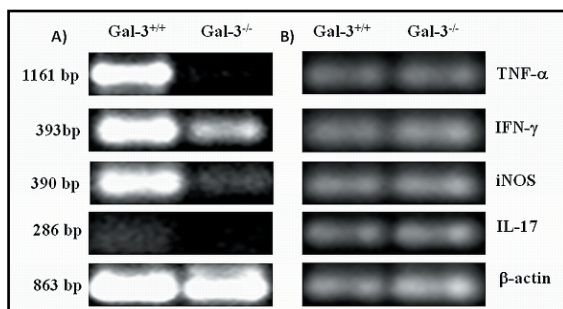
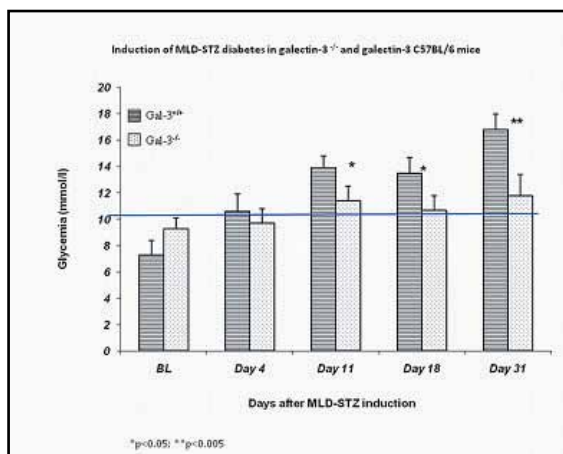
Professor Basel al-Ramadi's laboratory. The focus has been on identifying means by which innate immunity can be manipulated to boost immunity in experimental cancer model. Using attenuated strains of *Salmonella* genetically engineered to express cytokines, they have demonstrated the efficacy of this approach in inhibiting tumor growth. To date, they have demonstrated that this form of immunotherapy is also active when given orally, which is of significant benefit as it decreases the toxicity often associated with systemic cytokine therapies. They have also begun to study the anti-tumor properties of some natural products with known immunopotentiating properties. They believe both approaches exploit the innate immune system to enhance overall protective host immunity. This work is being carried out with the aim of characterizing the exact underlying mechanisms using a number of gene-deficient mouse lines, such as TLR2-, TLR4-, and MyD88-deficient mice.



Multiple low dose treatment with systemic GIDIL2 *Salmonella* strain prolongs host survival and retards tumor growth. Tumor-bearing mice were given three i.p. injections at the indicated days of either saline or low doses (10^3 - 10^4 CFUs/m) of GIDIL2 strain. Tumor volume (top graph) and host survival (bottom) were then followed over the next 50 days. Each data point represents the mean $\pm$ SEM of 8-10 mice per group. Asterisks denote statistically significant differences from saline control group (***, $p < 0.001$).

Professor Miodrag Lukic's laboratory is focused in two projects: a) dissection of the role of Interferon- γ and Interleukin-17 in an experimental model of type-1 diabetes and b) cellular and molecular basis of attenuated organ specific T-cell mediated autoimmunity in mice genetically deficient in Galectin-3. The first project stems from their recent observation that IL-23-IL-17 pathway enhances diabetogenesis. However, IFN- γ appears to be also pathogenic rather than suppressive in this model. To dissect out this phenomenon, in collaboration with Professor Iwakura (Tokyo), they are studying disease susceptibility in IFN- $\gamma^{-/-}$, IL-17 $^{-/-}$ and their F₁ hybrids.

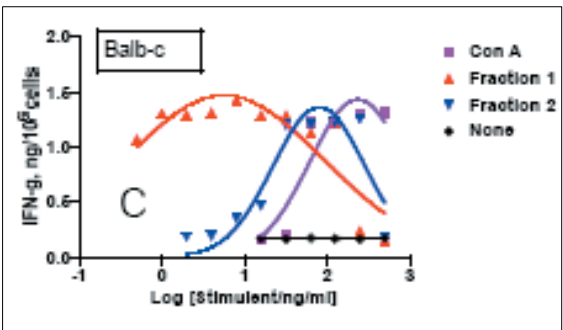
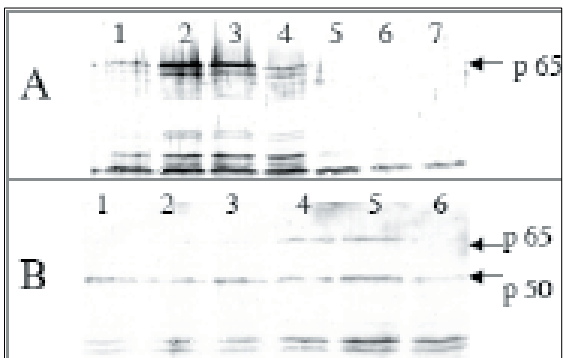
Recently this laboratory has demonstrated that multiple dose streptozotocin induced diabetes attenuated in Gal-3 mice and have also obtained similar data in the model of experimental allergic encephalomyelitis. The study on mechanism of the cellular and molecular basis of this phenomenon is under investigation.



Diabetes induction in Galectin-3^{-/-} mice

Upper panel indicate that sustained and progressive hyperglycemia was induced in Galectin-3^{+/+} ("wild" type) but not "knockout" Gal-3^{-/-} mice. Interestingly lymphoid cells from both types are able to respond similarly to nitrogen challenge (ConA) as evaluated by the expression of proinflammatory cytokines (lower panel, B). However, lymphocytes derived from draining pancreatic lymph node expressed TNF- α , IFN- γ , iNOS and IL-17 in wild type (Gal-3^{+/+}) while cell derived from Gal-3^{-/-} mice shows only weaker expression of IFN- γ and iNOS (lower panel, A).

Professor Senarath Dissanayake's research interests are in parasite glycan immunobiology and molecular epidemiology of tuberculosis in the UAE. Current emphasis in glycan immunobiology is on molecular (epitope level) characterization of parasite glycans with respect to upregulation of the transcription factor NF- κ B and signaling effects and mechanisms leading to IFN- γ and IL-6 expression. With respect to IFN- γ , one specific area of research is negative regulation of TLR signaling. Long-term objective is development of synthetic immunoadjuvants with defined Th-1 and Th-2 immunomodulatory properties. Based on the previous finding that terminal β -(1-4) galactose residues on GlcNAc backbones is an epitope regulating IFN- γ (a Th-1 cytokine), a panel of synthetic glycans is being investigated for further development as adjuvants. In tuberculosis research, epidemiological studies are being carried out to determine the source(s) of infection, patterns of transmission and the possible causes of likely re-activation in long-term residents of UAE.



Data showing immune modulation by parasitic glycans. NF- κ B is a transcription factor that regulates the gene expression of many cytokines. IFN- γ is a key Th-1 type cytokine.

Glycan Lewis X up-regulates of NF- κ B p65 expression in naïve mouse spleen cells. A and B are Western blots of spleen cell probed with anti-mouse NF- κ B p65 and p50 antibodies. Blot A: NF- κ B p65 expression. Lanes A1-A3 are Lewis X stimulation of 1 hr, 3 hrs and 4 hrs A4 and A5; Lewis Y, 2 and 4 hrs, A6 and A7; no stimulant, 0 hrs and 3 hrs culture. Bolt B: NF- κ B p65 and p50 expression. Lanes B1-B5, Lewis X stimulated, 0, 1, 2, 3 and 4 hrs and B6, no stimulant, 4 hr culture.

C shows stimulation of IFN- γ secretion by naïve mouse spleen cells, when stimulated with different factions of *Taenia crassiceps* glycan Fractions 1 and 2.

ARTICLES IN PEER REVIEWED JOURNALS

Berényi, O., Bakonyi T., Derakhshifar I., Köglberger H., Topolska G., Ritter W., Pechhacker H., Nowotny N. (2007). Phylogenetic analysis of deformed wing virus genotypes from diverse geographic origins indicates recent global distribution of the virus. *Appl Environ Microb* 73:3605-3611.

Bossmar T., Osman N., Zilahi E., El Haj MA, Nowotny N, Conlon J.M. (2007). Expression of the oxytocin gene, but not the vasopressin gene, in the rat uterus during pregnancy: influence of oestradiol and progesterone. *J Endocrinol* 193:121-126.

Dissanayake S, Shahin A. (2007). Induction of interferon -gamma by *Taenia crassiceps* glycans and Lewis sugars in naive BALB/c spleen and peritoneal exudate cells. *Mol Immunol* 44(7):1623-30.

Dürwald R, Kolodziejek J, Herzog S, Nowotny N. (2007). Meta-analysis of putative human bornavirus sequences fails to provide evidence implicating Borna disease virus in mental illness. *Rev Med Virol* 17:181-203.

Fernandez-Cabezudo MJ, Ali SE, Ullah A, Hassan MY, Fahim MA, Adem A, al-Ramadi BK. (2007). Pronounced susceptibility to infection by *Salmonella enterica* serovar Typhimurium in mice chronically exposed to lead correlates with a shift to Th2-type immune responses. *Toxicology & Applied Pharmacology* 218:215-226.

Fernandez-Cabezudo MJ, Petroianu G, al-Ramadi B, Langer RD. (2007). Iosimenol, a new nonionic dimeric contrast material, does not induce immuno-reactivity in the popliteal lymph node assay. *British Journal of Radiology* 80(957):713-718.

Grabensteiner E, Bakonyi T, Ritter W, Pechhacker H, Nowotny N. (2007). Development of a multiplex RT-PCR for the simultaneous detection of three viruses of the honeybee (*Apis mellifera* L.): *Acute bee paralysis virus*, *Black queen cell virus* and *Sacbrood virus*. *J Invertebr Pathol.* 94:222-225.

Gruber A, Grabensteiner E, Kolodziejek J, Nowotny N, Loupal G. (2007). Poxvirus infection in a Great Tit (*Parus major*). *Avian Dis.* 51:623-625.

Hassan AH, Awad S, Al-Natour Z, Othman S, Mustafa F, Rizvi TA. (2007). Selective recognition of acetylated histones by bromodomains in transcriptional co-activators. *Biochem J* 402:125-33.

Howarth FC, Nowotny N, Zilahi E, El Haj MA, Lei M. (2007). Altered expression of gap junction connexin proteins may partly underlie heart rhythm disturbances in the streptozotocin-induced diabetic rat heart. *Mol. Cell. Biochem.* 305:145-151.

Saadi H, Carruthers SG, Nagelkerke N, Al-Maskari F, Afandi B, Reed R, Lukic M, Nicholls MG, Elsadig K, Algawi K, Al-Kaabi J, Leduc C, Sabri S, El-Sadig M, Elkhumaidi S, Agarwal M, Benedict S. (2007). Prevalence of diabetes mellitus and its complications in a population-based sample in Al Ain, United Arab Emirates. *Diabetes Res Clin. Pract.* 78: 369-377.

Urbán E, Nagy E, Pál T, Sonnevend A, Conlon JM. (2007). Activities of four frog skin-derived antimicrobial peptides (temporin-1DRa, temporin-1Va and the melittin-related peptides AR-23 and RV-23) against anaerobic bacteria. *Int J Antimicrob Agents* 29:317-21.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

Al Ali F, Al Amri D, Al Sari N, Al Suwaidi S, Mustafa F, Rizvi TA. (2007). Mouse Mammary Tumor Virus (MMTV) Gene Expression is Mediated by a Heterologous Retroviral Transport Element. Seventh UAE University Research Conference Al Ain.

Al Ali F, Al Suwaidi S, Al Amri D, Al Sari N, Mustafa F, Rizvi TA. (2007). Role of a Heterologous Retroviral Transport Element in the Development of Genetic Complementation Assay for Mouse Mammary Tumor Virus (MMTV) Replication. Leiden International Medical Student Conference Leiden, Netherland.

Al Suwaidi S, Al Ali F, Al Amri S, Al Sari N, Rizvi TA, Mustafa F. (2007). Genetic Mapping of Sequences at the 5' End that Affect Efficient Packaging and Propagation of Mouse Mammary Tumor Virus (MMTV) Genomic RNA. Leiden International Medical Student Conference Leiden, Netherland.

al-Ramadi B. (2007). Attenuated bacteria as effectors in cancer immunotherapy. International Conference on Recent Advances in Clinical Oncology, Al-Ain, UAE.

al-Ramadi B. (2007). Cancer immunotherapy. 2nd Euro-Mediterranean Congress on Cancer-targeted therapies: Biology and Clinical Applications, Hammamet, Tunisia.

al-Ramadi B. (2007). Consequences of Chronic Lead Exposure on the Immune System: Immunomodulatory vs. Immunotoxic Mechanisms? 8th Annual Research Conference of UAE University, Al-Ain, UAE.

al-Ramadi B. (2007). Human Papilloma Virus Infections and Related Diseases. Symposium on Cervical Cancer: Prevention and Beyond, Abu Dhabi, UAE.

al-Ramadi B. (2007). Immunotherapy in Cancer. 2nd Emirates Pathology Society Meeting, Al-Ain, UAE.

al-Ramadi B. (2007). Oral Administration and Multiple Low-Dose Regimens are Associated with a Reduction in Treatment Failures of Experimental Tumors by Attenuated *Salmonella* Strains. Speaker, 8th Annual Research Conference of UAE University, Al-Ain, UAE.

al-Ramadi BK, El-Hasasna H, Fernandez-Cabezudo MJ, Attoub S, Al Salam S, Xu D, Liew FY, Chouaib S. (2007). Oral Administration and Multiple Low-Dose Regimens are Associated with a Reduction in Treatment Failures of Experimental Tumors by Attenuated *Salmonella* Strains. The Eighth Annual Research Conference at UAE University, Al Ain, UAE.

al-Ramadi BK, Fernandez-Cabezudo MJ, Ali SA, Ullah A, Hasan MY, Adem A, Fahim M. (2007). Consequences of Chronic Lead Exposure on the

Immune System: Immunomodulatory vs. Immunotoxic Mechanisms? The Eighth Annual Research Conference at UAE University, Al Ain, UAE.

al-Ramadi BK, Fernandez-Cabezudo MJ, El-Hasasna H, Bashir G, Attoub S, Al Salam S, Xu D, Liew FY, Chouaib S. (2007). Cytokine-expressing *Salmonella* strains in immunotherapy of experimental tumors." The 13th International Immunology Congress, Rio De Janeiro, Brazil.

Al-Shamisi M, Mensah-Brown EPK, Shahin A, Al Hakim A, Lukic ML. (2007). Potent role of Galectin-3 in mediating pathogenesis of multiple low dose streptozotocin induced type I diabetes. The 13th International Immunology Congress, Rio De Janeiro, Brazil.

Ellis M, Hedstrom U, al-Ramadi B, Alizadeh H, Kristensen J, Shammash V, Kshirsagar S, Blascke T, Stevens D, Klingspor L. (2007). Standard dosing (3mg/kg/day for 14 days) versus Intermittent High dosing (10mg/kg day 0, 5mg/kg days 2 and 5) of liposomal amphotericin B for treating febrile neutropenia: a comparative prospective clinical trial of safety, efficacy and kinetics. The Eighth Annual Research Conference at UAE University, Al Ain, UAE.

Fernandez-Cabezudo MJ, Mechkarfka M, Bashir G, al-Ramadi BK. (2007). Invasion-independent activation of macrophages by recombinant cytokine-expressing bacteria. The Eighth Annual Research Conference at UAE University, Al Ain, UAE.

Fernandez-Cabezudo MJ, Mechkarfka M, Bashir G, al-Ramadi BK. (2007). Activation of macrophages by cytokine-expressing strains of *Salmonella enterica* serovar Typhimurium. The 13th International Immunology Congress, Rio De Janeiro, Brazil.

Kenyon JC, Mustafa F, Rizvi TA, Lever AML. (2007). Structural analysis of the FIV 5' UTR. The Annual Retrovirus Meeting of the Cold Spring Harbor Laboratory, New York.

Langer RD, Fernandez-Cabezudo MJ, al-Ramadi B, Petroianu G. (2007). Iosimenol, a New Nonionic Dimeric Contrast Material, Does Not Induce Immunoreactivity in the Popliteal Lymph Node Assay. The Eighth Annual Research Conference at UAE University, Al Ain, UAE.

Lukic ML, Mensah-Brown E, Shahin A, Al-Hakim H. (2007). Galectin-3 is required for the Induction of EAE and Expression of IL-17 in the Central Nervous System. 13th International Congress of Immunology, Rio de Janeiro-Brazil.

Lukic ML. (2007). New and Old cytokines in pathogenesis of specific autoimmunity. Serbian Immunological Society, Belgrade. (September).

Maciejewska H, Al-Shamisi M, Bouton M, Gay R.E, Michel B, Knuth A, Neidhart, Gay S, Jungel A. (2007). SERPINE2 - A novel autoantigen in Rheumatoid arthritis, Barcelona, June.

Mensah-Brown EPK, Shahin A, Al-Shamsi M, Lukic ML. (2007). IL-17 is responsible for MLD-Streptozotocin-

induced diabetes in INF- γ ^{-/-} Mice. 13th International Congress of Immunology, Rio de Janeiro-Brazil.

RESEARCH GRANTS 2007

FMHS New Grants

The role of Toll-like receptors in host defence against microbial infections.

Principal Investigator: Prof. B. K. al-Ramadi.

Read through Capabilities of Retroviral Polyadenylation Sequences and Consequences for Retroviral Vector Design. Professor T A Rizvi.

Identification and Characterization of the Mouse Mammary Tumor Virus mRNA Transport Element.

Professor T A Rizvi.

UAEU Individual Grant

Galectin-3 in Autoimmune Inflammation in the Central Nervous System.

Principal Investigator: Professor M L Lukic

UAEU Interdisciplinary Grant

T cell mediated immunopathology in ST2 deficient mice: an analysis in experimentally induced autoimmune diabetes and encephalomyelitis.

Principal Investigator: Professor M L Lukic

Hamdan Award Medical Research Grant

Genetic Recombination among Lentiviral Vector RNAs: Implications for the Development of Retroviral Vectors for Gene Therapy.

Principal Investigator: Professor T A Rizvi

Role of Interferon- γ in Interleukin-23 potentiated diabetes induction.

Principal Investigator: Professor M L Lukic

Terry Fox Cancer Research Grant

Development of cytokine-based immunotherapies for the treatment of cancer using live attenuated *Salmonella* as targeting carriers.

Principal Investigator: Professor B al-Ramadi

Cytokine-expressing *Salmonella* strains as effective biological therapy against cancer: analysis of the mechanisms underlying the inhibition of tumor growth.

Principal Investigator: Prof. B. K. al-Ramadi

Others

Wellcome Trust Collaborative Project Grant

Structure and Function Analysis of RNA Packaging in the Lentivirus FIV.

Department of Obstetrics & Gynaecology

Prof M Ezimokhai Dr H Mirghani Dr D Rizk Dr Sami J George Dr M Mohammed	Professor, Chairman Associate Professor Associate Professor Assistant Professor Teaching Assistant	Dr N Osman Mrs Flora D Lone Ms K Manickam Ms J George	Medical Research Specialist II Research Nurse Executive Medical Secretary Secretary
--	--	--	--

Tel: 7137566 / Fax: 7672167 / [http://www.fmhs.uaeu.ac.ae/Departments/ ObstetricsGynaecology](http://www.fmhs.uaeu.ac.ae/Departments/ObstetricsGynaecology)



standing from the left to right: Mr Aboobacker, Dr. D. Rizk, Dr. Sami George, Dr. S. G. Aswad,
seated from left to right: Dr. Munira Mohammed, Dr. H. Mirghani, Professor M Ezimokhai,
Ms Kamala Manickam, Ms Jiji George,

RESEARCH PROFILE

The Research interests in the department are in Obstetrics, Fetal Medicine, Women's Health Urogynecology, Minimal Access Gynaecology Surgery, Women's Health Education and Awareness

Obstetrics

a) Pathophysiology of Pregnancy

Professor M. Ezimokhai is interested in Pathophysiology of Pregnancy and medical disorder in Pregnancy. Expertise is in working with vascular and uterine smooth muscles.

b) Fetal Medicine

Dr. H. Mirghani's major area of research interest is

- Fetal response to maternal fasting and maternal blood glucose
- Research interest in Fetal changes in GDM.
- Interest in ultrasound training and assessment. We have demonstrated for the first time the use of cumulative sum (CUSUM) analysis in assessing trainees' proficiency at fetal biometry measurements.
- Fetal anomalies

c) Women Health and Urogynecology

Dr. D. Rizk is interested in Women's Health with major focus on Urogynecology.

d) Minimal Access Gynaecology Surgery, Women's Health Education and Awareness.

Dr. S. George is interested in women's Health Education and awareness. Special interest in Endometriosis, Polycystic Ovary Syndrome, Contraception and Urogynecology, and all Gynecologic laparoscopic and hysteroscopic surgeries.



ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Lammers WJ, Mirghani H, Stephen B, Dhanasekaran S, Wahab A, Al Sultan MA, Abazer F. (2007). Patterns of electrical propagation in the intact pregnant guinea pig uterus. *Am J Physiol Regul Integr Comp Physiol*, Nov 28.

Mirghani HM, Salem M, Weerasinghe SD. (2007). Effect of maternal fasting on uterine arterial blood flow. *J Obstet Gynaecol Res*, Apr;33(2):151-4.

Mirghani H, Zayed R, Thomas L, Agarwal M. (2007). Gestational diabetes mellitus: fetal liver length measurements between 21 and 24 weeks' gestation. *J Clin Ultrasound*, Jan;35(1):34-7.

Nagelkerke NJ, Bernsen RM, Rizk DE. (2007). Authors should publish their raw data. *Int Urogynecol J Pelvic Floor Dysfunct.*, Dec;18(12):1387-90.

Rizk DE. (2007). Medical education in developing countries: the way forward. *J Pak Med Assoc.*, Oct;57(10):525-6.

Rizk DE, Hassan HA, Al-Marzouqi AH, Ramadan GA, Al-Kedrah SS, Daoud SA, Fahim MA. (2007). Combined estrogen and ghrelin administration restores number of blood vessels and collagen type I/III ratio in the urethral and anal canal submucosa of old ovariectomized rats. *Int Urogynecol J Pelvic Floor Dysfunct.*, Sep 18.

Rizk DE, Obineche EN. (2007). Female pelvic floor dis-

orders and impaired renal function: an appraisal. *Int Urogynecol J Pelvic Floor Dysfunct*, Nov;18(11):1253-5.

Rizk DE, Mohammed KH, Joshi SU, Al-Shabani AY, Boss-mar TR. (2007). A large clitoral epidermoid inclusion cyst first presenting in adulthood following childhood circumcision. *J Obstet Gynaecol*, May;27(4):445-8.

Rizk DE. (2007). Health care administration: is it really important? *J Egypt Soc Parasitol. Apr*;37(1):341-2.

Rizk DE, Agarwal MM, Pathan JY, Obineche EN. (2007). Predicting proteinuria in hypertensive pregnancies with urinary protein-creatinine or calcium-creatinine ratio. *J Perinatol*, May;27(5):272-7.

Rizk DE. (2007). Publication ethics: science at its best and always informative. *Int Urogynecol J Pelvic Floor Dysfunct.*, Jul;18(7):715-7.

Rizk DE, Fahim MA, Hassan HA, Al-Marzouqi AH, Ramadan GA, Al-Kedrah SS, Al-Ghafri LS. (2007). The effect of ovariectomy on biomarkers of urogenital ageing in old versus young adult rats. *Int Urogynecol J Pelvic Floor Dysfunct.*, Sep 18(9):1077-85.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

George S. (2007). Polycystic Ovary Syndrome, Al Corniche Hospital, Abu Dhabi, United Arab Emirates, March 1.

Mirghani H. (2007). The effect of maternal fasting on uterine arterial blood flow. 3rd Asia Pacific Congress in Maternal Fetal Medicine, Nanjing, China. August, 29-31.

Mirghani H. (2007). Fetal Renal Pelvis Dilatation; Midtrimester fetal liver length in patients with gestational diabetes. International Fetal Medicine Congress, Cairo, Egypt, May, 2-7.

Mirghani H. (2007). The effect of maternal fasting on human fetus. 7th International Symposium in Riyadh Military Hospital, Riyadh, Saudi Arabia, October 27-29.

Department of Pediatrics

Prof. P Sasidharan	Professor, Chairman	Ms A Al Kendi	Research Assistant
Prof S A Uduman	Professor	Mr T Pramathan	Research Medical Specialist I
Prof L Al Gazali	Professor	Mr J Kochiyil	Research Medical Specialist I
Prof Y Abdulrazzaq	Professor	Ms R Clemente	Secretary
Dr I Amirlak	Associate Professor	Ms M Al Badwawi	Department Secretary
Dr H Narchi	Associate Professor		
Dr S E Al-Hammadi	Assistant Professor		
Dr B G Balhaj	Assistant Professor		
Dr M Al Samri	Assistant Professor		
Dr Fatma Al-Jasmi	Assistant Professor		
Dr RAM Mahmoud	Assistant Professor		
Dr AD Al Suwaidi	Assistant Professor		

Tel: 7137332 / Fax: 7672022 / <http://www.fmhs.uaeu.ac.ae/Departments/Pediatrics>



Standing from left to right: Mr. Pramathan, Ms. R Clemente, Dr. H Narchi, Dr. Gururaj, Dr. S Al-Hammadi, Mr. J Kochiyil, Mr. Jamal
Seated from left to right: Prof. L. Al-Gazali, Prof. SA Uduman, Prof. Y. Abdulrazzaq, Dr. I. Amirlak.

RESEARCH PROFILE

GENETICS/BIRTH DEFECTS (INCLUDING NEURO-GENETICS)

The department has a strong research interest in the area of birth defect/dysmorphology and brain malformations including nervous system dysgenesis. Several disorders have been studied at the clinical and molecular level. For example, familial and sporadic forms of cerebral dysgenesis were studied and a new type of agyria-pachygyria associated with agenesis of corpus callosum was characterized, a severe form of a syndrome of myotonia and bone dysplasia [Stüve-Wiedemann Syndrome (SWS)] was identified to be common in the population of the UAE. Founder mutation in the Leukemia inhibitory factor receptor (LIFR) was found in all families affected with SWS in this population. A birth defect registry for Al Ain Medical District was established by the department, which has gained membership of the International Clearing House for Birth Defects. Several studies from this register were published identifying the incidence and pattern of the various types of birth defects in this population together with establishing risk factors involved in their etiology.

In addition, the group has been investigating the reasons why some anti-epileptic drugs (vigabatrin, lamotrigine) ingested by women during pregnancy cause neural tube and other defects. Departmental researches have already established that these drugs are teratogenic. It was established that methionine was 5 times lower in embryo of treated pregnant mice than in non-treated controls. Studies are ongoing to determine the impact of folic acid and vitamin B12 supplementation on the frequency of occurrence of anomalies in animal models.

Aflatoxins are commonly found in nuts, grains and have been found to be increased in pregnant women and their offspring. Study is ongoing to determine teratogenic effects of aflatoxins in mice.

The department is also interested in mapping recessive genetic disorders using the concept of homozygosity mapping, particularly disorders which are common or unique to this population. For example, a gene for Joubert syndrome, which seems to be common in Arabs, was mapped to chromosome 9q34.3 and genetic heterogeneity was established. Subsequently other genes for Joubert Syndrome were mapped and mutations were identified in families from UAE. Another new type of epiphyseal dysplasia was described in a family from UAE and a gene was mapped to chromosome 15q26. Several other disorders are currently being investigated using the same concept.

Metabolic disorders are common in the UAE. The department is active in establishing the prevalence of different metabolic disorders in the UAE population.

An ongoing study aims to determine prevalence of alcaptonuria within UAE population.

PERINATAL NUTRITION AND NUTRITIONAL DISORDERS

The department is involved in studies on micronutrients abnormalities in pregnancy and the effect on the fetus/newborn. The preliminary results suggest that micronutrient deficiency is common in pregnancy and outcome studies are in progress.

The department has been active through the years in experiments involving amino acids levels at different ages in the UAE population and showed that some amino acids were abnormally high in newborn infants using the then available parenteral amino acid solution. This led to a change in the solutions use in the Medical District.

The group working on reproductive toxicology has established that aflatoxin (a fungus toxin) contamination of foods is very common, and that aflatoxins have been detected in blood of pregnant women and their offspring in larger amounts than is acceptable. Measurement of aflatoxin in breast milk of lactating mothers is in progress. The results give a much clearer picture of exposure of infants to aflatoxins.

VITAMIN D STATUS AMONG PEDIATRIC POPULATION IN UAE

This population based study will reveal the status of Vitamin D levels among adolescents and female pediatric patients in UAE. Since Vit. D has a pluripotent role in the body and has been found to be deficient among women and newborns in UAE (from previous studies from our department), this important project will provide information which will lead to interventional studies in the future.

Role of Vitamin D in Lung Development

Since majority of the alveolar development occurs postnatally, the interaction between Vit. D and factors responsible for alveolarization, particularly VEGF will be studied. Thus the role of Vit. D in the epithelial and mesenchymal interactions during early lung development will be investigated. This study has significant clinical implications in Pediatrics as abnormal lung development and airway reactivity frequently lead to significant morbidity in

later life. We have observed a very high incidence of asthma among pediatric population in Al Ain.

OTHER AREAS OF RESEARCH

Other areas of research include clinical and immunological aspects of hepatitis C, seroepidemiology and neonatal screening of CMV and other congenital infections. Clinical research in neurology includes profile of epilepsy and drug therapy of epilepsy in the UAE as well as brain imaging and epidemiology of cerebral palsy.

Other activities of the department include establishing normal growth charts for children from the UAE from ages 0-18 years, and the size at birth of infants born to UAE nationals. These growth charts will provide the first standards for assessing intrauterine and postnatal physical growth of UAE newly born infants and children. Role of food allergy and airway reactivity is another area of interest in our department. This is being investigated in a population based approach.

Factors responsible for inflammatory bowel disease in pediatric population is an area of interest and studies on animal models are being initiated now.

Outcomes of prematurity, especially in the very-low birthweight and extremely low birthweight groups in the local population.

ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Al-Gazali L, Nath R., Iram D, Al Malik H. (2007). Hypotonia, developmental delay and features of scalp-ear-nipple syndrome in an inbred Arab family. *Clin Dysmorphol.*, 16:105-7.

Al-Gazali L, Eapen V, Guru Raj A, Pramathan T. (2007). Subtelomeric chromosome abnormalities in children with unexplained mental retardation in the population of the UAE. *Em Med Journal*, 25:23-28.

Al-Najjar FY, Uduman SA. (2007). Clinical utility of a new rapid test for the detection of group A Streptococcus and discriminate use of antibiotics for bacterial pharyngitis in an outpatient setting. *International J Infect Dis.*, 2007.

Amirlak I, Narchi H, Al-Gazali L. (2007). Renal tubular acidosis. *Current Pediatr Rev*; 3:103-107.

Amirlak I, Narchi H. (2007). Isolated orbital pseudotumor as the presenting sign of systemic lupus erythematosus. *J Pediatr Ophthalmol Strabismus*, 45:51-54.

Amirlak I, Amirlak B. (2007). Urinary Tract Infection in Different Pediatric Age Groups: An Overview of Diagnosis, Investigation, Management and Outcome. *International Pediatrics*, 22 (3).

Bhuiyan ZA, Hamdan M, Shamsi E, Postma AV, Mannens MM, Wilde A, Al-Gazali L. (2007). A novel early onset lethal form of catecholaminergic polymorphic ventricular tachycardia maps to chromosome 7p14-p22. *J Cardio-vasc Electrophysiol*, 8:1060-1066.

Brancati F, Barrano G, Silhavy JL, Marsh SE, Travaglini L, Bielas SL, Zablocka D, Kayserili H, Al-Gazali L, Bennett C, Bertini E, Boltshouser E, DHooghe M, Fazzi E, Fenerci EY, Hennekam RCM, Kiss A, Lees M, Leventre R, Marco E, Phadke SR, Rigoli L, Romano S, Salpietro CD, Sherr EH, Signorini S, Stromme P, Stuart B, Sztriha L, Viskochil DH, Walsh CA, Woods G, Yuksel A, Dallapiccola B. (2007). The International J.S.R.D. Study Group, Valente, E.M., Gleeson, J.G. "CEP290 mutations are frequently identified in the Oculo-Renal form of joubert syndrome related disorders." *Am J Hum Genet*. 81:104-113.

Dagoneau N, Bellais S, Blanchet P, Srda P, Al-Gazali L, Di Rocco M, Huber C, Le Goff C, Munnich A, Cormier-Daire V. (2007). Mutations in Cytokine-Like Factor 1 (CRLF1) account for both Crisponi and Cold Induced Sweating syndromes." *Am J Hum Genet*, 80:966-970.

Kantarci S, Al-Gazali L, Hill R, Donnai D, Black G, Bieth E, Chassaing N, Lacombe D, Devriendt K, Teebi A, Loscertales M, Robson C, MacLaughlin DT, Noonan K, Russell M, Walsh C, Donahoe PK, Pober B. (2007). Mutations in megalin, a multiligand receptor, cause Donnai-Barrow syndrome and facio-oculo-acoustic-renal syndromes. *Nat. Genet.*, 39:957-959.

Langer R, Al-Gazali L, Raupp P, Varady E. (2007). Radiological manifestations of the skeleton, lungs, and brain in Stuve-Wiedemann syndrome. *Australian Radiology*, 51:203-210.

Narchi H. (2007). Febrile convulsions: When is a lumbar puncture indicated? *J Pediatr Neurol*, 5:87-92.

Narchi H, Amirlak I. (2007). Juvenile Systemic Lupus Erythematosus. *Current Pediatr Rev*; 3:225-232.

Simpson MA, Hsu R, Keir LS, Hao J, Sivapalan G, Ernst LM, Zackai EH, Al-Gazali LI, Hulskamp G, Kingston HM, Prescott TE, Ion A, Patton MA, Murday V, George A, Crsby, AH. (2007). Mutations in FAM20C are associated with lethal osteosclerotic bone dysplasia (Raine syndrome), highlighting a crucial molecule in bone development. *Am J Hum Genet*, 81:906-912.

Tewary K, Narchi H, Basak R. (2007). Bacterial tracheitis- When croup is not what it seems. *Emirates Medical Journal*, 25:69-71.

Taban M, Memoracion-Peralta DSA, Wang H, Al-Gazali L, Traboulsi EI. (2007). Cohen syndrome: report of nine cases and review of the literature with emphasis on ophthalmic features. *J AAPOS*, 11:431-43.

PUBLISHED ABSTRACTS, LETTERS, CORRESPONDENCE

Narchi H. (2007). Concerns with logistic model. *Arch Dis Child*;92:559.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

Abdulrazzaq YM. (2007). Sudden Infant Death Syndrome. Annual Pediatric Conference, Al Ain, 3 March 2007.

Abdulrazzaq YM. (2007). Neonatal Gastroenterology and Nutrition. IPOKRATES Clinical Seminar, Dubai, 7-9 March 2007.

Abdulrazzaq YM. (2007). Growth charts for the UAE. 25th International Congress of Pediatrics, Athens, Greece, 25-29 August 2007.

Abdulrazzaq YM. (2007). Acute presentation of inborn error of metabolism. Pediatric Conference, Sharjah, UAE, 8 September 2007.

Al-Gazali L. (2007). Autosomal recessive disorders: the Middle East perspective. British Hum Genet Conference, Sept 17-19, 2007, University of York, UK, J. Med. Genet.

Al-Gazali L, Ali B. (2007). Clinical and molecular delineation of some new recessive syndromes from UAE. Pan Arab Genet Conference, Dubai, Nov – 22, 2007.

Al-Hammadi S. (2007). Infectious Diseases: Pediatric review and educational program (PREP)® the course. July 2007, Chicago, IL, USA.

Al-Hammadi S. (2007). Anaphylaxis to Peach. World Allergy Congress, Bangkok, December 2007.

Balhaj G. (2007). IPOKRATES Clinical Seminar, Dubai 7-9 March, 2007.

Balhaj G. (2007). 29th Annual Aspen Conference on Pediatric Gastrointestinal disease and intestinal transplantation. Snowmass Village, Aspen, Colorado, USA, July 22, - 27, 2007.

Bhuiyan ZA, Hamdan MA, Shamsi ETA, Postma AV, Mannens MMAM, Wilde AAM, Al-Gazali L. (2007). A novel early onset lethal form of catecholaminergic polymorphic ventricular tachycardia maps to chromosome 7p14-p22. Heart Rythem, Denver, USA.

Dagoneau N, Bellais S, Blanchet P, Sarda P, Al-Gazali L., Di Rocco M, Huber C, Djoudi F, Le Geoff C, Munnich A, Cormier-Daire V. (2007). Identification of Cytokine-Like Factor (CRLF1) mutations in Crisponi syndrome. Eur Soc Hum Genet.

Kantarci S, Al-Gazali L, Hill R, Donnai D, Black G, Bieth E, Chassaing N, Lacombe D, Devriendt K, Teebi A, Loscertales M, Robson C, MacLaughlin DT, Noonan K, Russell M, Walsh C, Donahoe PK, Pober B. (2007). Mutations in megalin, a multiligand receptor, cause Donnai-Barrow syndrome characterized by corpus callosum, ocular, neurosensory, craniofacial, and diaphragmatic defects. Eur Soc Hum Genet.

Narchi H. (2007). Survey of Management Urinary Tract Infections in Children. 2007 International Congress of Pediatrics. Tewary K, Narchi H. Athens, Greece.

Narchi H. (2007). Antibiotic Resistance Trends in Paediatric Community-acquired first Urinary Tract Infections. 5th World Congress of the World Society for Pediatric Infectious Diseases – WSPID. Bangkok, Thailand.

Narchi H. (2007). Clinical factors associated with antibiotic resistance in community-acquired paediatric first urinary tract infection. 5th World Congress of the World Society for Pediatric Infectious Diseases – WSPID. Bangkok, Thailand.

Uduman SA. (2007). Management of a Child with Acute Otitis Media. Symposium on Infectious Diseases Medicine, GAHS Auditorium, Abu Dhabi. February 17, 2007.

UAE University Individual Grant

Professor Yousef M. Abdulrazzaq
Pharmacokinetics of Aflatoxin (2007)
Deleterious effect of Aflatoxin on mice embryo

Collaborative Research

Professor Lihadh Al-Gazali
Identification of genes for human cognition. A collaborative project of Harvard Medical School, United Arab Emirates and Kingdom of Saudi Arabia.
(Principle Co-investigator) 2007.

Department of Pathology

Dr A Castella	Associate Professor, Acting Chairman	Ms A Mathew	General Technician
Dr M Agarwal	Professor	Ms M Sud-	General Technician
Dr SM Chong	Associate Professor	hadevi	Secretary
Dr Bassam Ali	Associate Professor	Ms K Al	
Dr S Al Salam	Assistant Professor	Ghanem	
Dr A Al Bawardi	Teaching Assistant		
Dr S Al Marzooqi	Teaching Assistant		

Tel: 7137468 / Fax: 7671966 / <http://www.fmhs.uaeu.ac.ae/Departments/Pathology>

RESEARCH PROFILE

Pathology is a wide-ranging discipline of laboratory medicine. It covers several research fields, including histopathology, cytology, laboratory hematology, clinical chemistry, genetics and molecular biology.

Hematopathology: (Dr. Antonio Castella)

Lymphomas are malignant monoclonal disorders of the lymphatic system, which show diverse clinical features, pathology and outcome. The pathological classifications are controversial, especially with regard to non-Hodgkin's lymphomas (NHL). In recent years new classifications have been proposed which are based on modern concepts of lymphocyte function. The latest classifications of lymphomas (REAL) and (WHO) are an attempt to resolve the lack of uniformity in the reporting of malignant lymphomas by defining the different types according to morphology and immunology as well as cytogenetics.

Although lymphomas show a worldwide distribution, geographical variations in their histopathologic pattern, especially NHL, are well recognized. However, in the Middle East, and specifically in the Gulf countries, there was a paucity of data concerning the patterns of histopathologic subtypes of lymphomas.

The Pathology department undertook a project,

in collaboration with Tawam and Al Ain Hospitals, to study the pattern of lymphomas in the UAE.

The aim of this study was to analyze the distribution of the various pathologic types of lymphoma in a native Arab population of the UAE. More than 200 native patients with lymphoma were studied. The cases were examined morphologically and immunohistochemically with an extensive panel of monoclonal antibodies, and are classified according to the revised European-American classification of lymphoid neoplasms (REAL). The results were compared with the distribution of lymphomas in other Asian and Western countries.

In addition, a second project studied the differences of the distribution pattern of NHL between native UAE cases and a similar number of cases diagnosed in expatriates living in the UAE. No differences are found between the two population groups suggesting that environmental factors may play a role in the developing of NHL in the UAE.

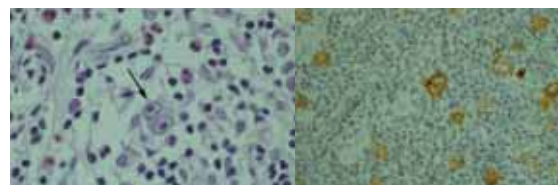


Figure: Left side, classic binucleated Reed-Sternberg cell in a case of Hodgkin's disease (arrow) (H & E x 40), right side, immunohistochemistry with CD30 antibodies highlights the Reed-Sternberg cells (dark brown color).

The results of some of this work have already been published in peer-reviewed journals and presented in International Pathology and Oncology conferences.

Another project is under way which will study the presence of Epstein-Barr virus (EBV) in Hodgkin's disease cases in the UAE. The presence of EBV will be determined by immunohistochemistry for the latent membrane protein 1 and in situ hybridization for EBV encoded RNA (EBER).

Clinical chemistry:

(Dr. Mukesh M. Agarwal)

The prevalence of diabetes mellitus in the UAE is the second highest in the world. Type 2 diabetes is occurring in young children and diabetes in pregnancy (GDM) is emerging as a major epidemiological challenge. Much of our research effort is directed at GDM. How to screen a large population in a cost-effective manner? Are the occidental criteria for diagnosis valid for the local population? These are some of the many questions we have been trying to answer. All research is directed at practical patient problems confronting us on a day-to-day basis.

Histopathology/lymph node and bone marrow pathology: (Dr. S.M. Chong)

The incidence of malignant lymphomas is increasing worldwide. Curiously, however, there are pronounced differences in the incidence of the different types of lymphoma in different parts of the world.

A pilot study has been performed of the differences between lymphoma in the UAE and in Singapore and the findings presented at the 23rd World Congress of Pathology and Laboratory Medicine in Istanbul in May 2005.

In collaboration with Dr. Suhail Abdullah from the Department and Dr YC Lim of the Department of Pathology of the National University of Singapore, I am studying the role of leukotriene B₄ in malignant lymphoma growth and survival; the role of lipid mediators, LTB₄ and LXA₄ as inflammatory and immune modulators in Hodgkin lymphoma; and the expression of CD137 on Hodgkin and Non-Hodgkin lymphoma Cells. Dr. Lim and I are also continuing our previous studies on lymphoma cell interactions with endothelial adhesion molecules under flow.

Histopathology/ lymphoma/ Breast pathology / Gastrointestinal pathology/ Molecular biology (Dr. Suhail Al-Salam)

The epidemiology of Hodgkin's lymphoma (HL)

shows wide geographic variation in histological subtypes and in its association with the Epstein-Barr virus (EBV). The proportion of EBV positive HL is low in industrialized countries, high in non-industrialized countries and intermediate in early-industrialized countries. Reports from the Arabian Gulf and Middle East are few. The aim of our study was to determine the epidemiology of HL in The population of United Arab Emirates (UAE) nationals, an early industrialized country in the Arabian Gulf, and to delineate the extent of its association with EBV. We will review the cases of HL for the period 1988 through 2004 for histological classification and demographic data. All Cases diagnosed as Hodgkin's lymphoma will be examined for the presence of EBV using immunohistochemistry (IHC) for the latent membrane protein 1 (LMP1) and in-situ hybridization (ISH) for EBV encoded RNA (EBER) to determine the prevalence of EBV in Hodgkin cells and its possible role in the pathogenesis of Hodgkin's lymphoma.

In addition a second project is under way studies (Types of mutations in BRCA 1 and BRCA 2 genes in breast carcinoma among United Arab Emirates nationals and their correlation with P53, Ki 67, bcl2, nm2, c-erb-B2, estrogen receptors and progesterone receptors expression)

Breast carcinoma is the most common malignant tumor and the leading cause of cancer death in women all over the world. It is the commonest cancer among UAE population and the most common cancer among females. The age specific incidence ratio for females in UAE was 19.4 per 100,000 population. It is currently estimated that 5 –10% of all breast cancers are hereditary and attributable to mutations in several high penetrance susceptibility genes, of which only two have been identified BRCA1 and BRCA2. Earlier estimates suggested that BRCA1 and BRCA2 mutations were responsible for 75% of site-specific breast cancer families and the majority of breast and ovarian cancer families. The aim of this study is to identify the types of mutations in BRCA 1 and BRCA 2 genes in breast carcinoma among United Arab Emirates nationals and their correlation with the expression P53, Ki 67, bcl2, nm2, c-erb-B2, estrogen receptors and progesterone receptors.

The Genetic and Molecular Bases of Diseases prevalent in UAE

(Dr. Bassam R. Ali)

1. **Identification of the molecular defects underlying genetic disorders in UAE and Arab populations.** I am developing a molecular genetics research laboratory to look at the mo-

lecular defects causing recessive disorders found in UAE population. Recessive disorders are highly prevalent in Arab populations mainly due to high level of consanguinity and lack of prenatal and/or pre-conception diagnosis.

2. Developing molecular diagnostic tests for genetic diseases found in UAE and Arab populations. The practice of genetic testing for disorders prevalent in Arab populations is very limited despite the potential importance for prevention of occurrence of new cases. I am establishing protocols and facilities to design and carry out molecular diagnostic testing for some of those diseases.

3. Establishing the cellular mechanisms underlying human genetic disorders. I am interested in protein trafficking and quality control within eukaryotic cells. The protein quality control at the endoplasmic reticulum level is responsible for the development of several human genetic diseases including cystic fibrosis and emphysema. I recently elucidated the cellular mechanism underlying Robinow syndrome, a recessive disease that has been found in several parts of the Middle East including Oman and Saudi Arabia. I believe that many other diseases, mainly recessive, are caused by cellular trafficking defects and therefore, I am looking at a number of them including Acromesomelic Dysplasia, Familial Hypercholesterolemia and Hereditary Hemorrhagic Telangiectasia. In addition, we are exploring ways of manipulation ER quality control for potential therapy of such diseases.

4. Pharmacogenetics. With Dr. S. Bastaki and Prof. Y. Abdulrazzaq, I am looking at the CYP2D6 gene and other drug metabolizing enzymes alleles frequencies in UAE population.

Departmental Undertaking:

Drs Alia Al Bawardi and Saeeda Al Marzooqi (resident trainees) are completing their training in Pathology at McGill University, Montreal, Canada.

ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Abdulhathi MB, Al Salam S, Kassis A, Ghazal-Aswad S. (2007). Unusual presentation of cervical cancer as advanced ovarian cancer. *Archives of Gynecology and Obstetrics*, 276:387-90.

Agarwal MM, Dhatt GS, Zayed R, Bali N. (2007). Gestational diabetes: relevance of diagnostic criteria and preventive strategies for Type 2 diabetes mellitus. *Archives*

of Gynecology and Obstetrics, 276:237-243.

Agarwal MM, Dhatt GS, Punnose J, Zayed R. (2007). Gestational diabetes: fasting and post-prandial glucose as first prenatal visit screening tests in a high-risk population. *Journal of Reproductive Medicine*, 52:299-305.

Agarwal MM, Dhatt GS. (2007). Fasting plasma glucose as a screening test for gestational diabetes mellitus. *Archives of Gynecology and Obstetrics*, 275:81-87.

Ali BR, Jeffery S, Patel N, Tinworth LE, Meguid N, Patton MA, Afzal AR. (2007). Novel Robinow syndrome causing mutations in the proximal region of the frizzled-like domain of ROR2 are retained in the endoplasmic reticulum. *Human Genetics*, 122:389-395.

Al Salam S, AlAshari M. (2007). Psammoma bodies in medulloblastoma. *Histopathology*, 50:527-9.

Al Salam S, Al Ashari M, Ghazal-Aswad S. (2007). Expression of Insulin-like growth factor-I receptors, Wilm's tumor-I protein, c-kit and p16 in Primary Fallopian tube carcinoma in diabetic patients. *Archives of Gynecology and Obstetrics*.

Denic S, Agarwal MM. (2007). Nutritional Iron Deficiency: an evolutionary perspective. *Nutrition*, 23:603-614.

Dhatt GS, Agarwal MM, Bishawi B, Gill J. (2007). Implementing the Stockholm Conference hierarchy of objective quality criteria in a routine laboratory. *Clinical Chemistry and Laboratory Medicine*, 45:549-552.

Eley A, Al Salam S. (2007). Is there a role for Chlamydia trachomatis in the development of cervical cancer? *Reviews in Medical Microbiology*, 18:55-62.

Kaneez FS, Al Salam S, Alaaeldin AH (2007). Sesame oil as a protective agent against doxorubicin induced cardio toxicity in rat. *American Journal of Pharmacology and Toxicology*, 2:159-163.

Leung KF, Baron R, Ali BR, Magee AI, Seabra MC. (2007). Rab GTPases containing a CAAX motif are processed post-geranylgeranylation by proteolysis and methylation. *Journal of Biological Chemistry*, 282:1487-1497.

Mirghani H, Zayed R, Thomas L, Agarwal MM. (2007). Gestational diabetes mellitus: Fetal liver measurements between 21 and 24 weeks' gestation. *Journal of Clinical Ultrasound*, 35:34-37.

Rizk DE, Agarwal MM, Pathan JY, Obiniche EN. (2007). Predicting proteinuria in hypertensive pregnancies with urinary protein-creatinine or calcium-creatinine ratio. *Journal of Perinatology*, 27:272-7.

Saadi H, Carruthers SG, Nagelkerke N, Al-Maskari F, Afandi B, Reed R, Lukic M, Nicholls MG, Kazam E, Al-gawi K, Al-Kaabi J, Leduc C, Sabri S, El-Sadig M, Elkhumaidi S, Agarwal MM, Benedict S. (2007). Prevalence of diabetes mellitus and its complications in a population-based sample in Al Ain, United Arab Emirates. *Diabetes*

PUBLISHED ABSTRACTS, LETTERS, CORRESPONDENCE

Agarwal MM, Dhatt GS, Bali N. (2007). Fasting capillary glucose as a screening test for gestational diabetes mellitus. *British Journal of Obstetrics and Gynecology*, 114:237-238.

Ali BR. (2007). Retention of mutated proteins in the endoplasmic reticulum and their degradation by ERAD is the most common mechanism of monogenic loss-of-function diseases. *British Human Genetics Conference*, York, UK. *J. Med. Genetics*, Vol. 44, Supplement 1. S81.

Ali BR, Afzal AR. (2007). The Pathogenic Cellular Mechanisms of the Orphan Receptor Tyrosine Kinase ROR2: One gene, two diseases. *Proceedings of the 8th UAE University Annual Research Conference MHS-158 -162*, Al-Ain, UAE.

Ali BR, Al-Gazali L. (2007). ER retention and degradation of mutated proteins is a common mechanism in numerous loss-of-function recessive diseases. *L7*, p. 62. *2nd Pan Arab Human Genetics Conference*, 20-22 November 2007, Dubai, UAE.

Al-Gazali L, Ali BR. (2007). Delineation of the clinical and molecular basis underlying several new recessive disorders in the UAE. *L4*, p. 60. *2nd Pan Arab Human Genetics Conference*, 20-22 November 2007, Dubai, UAE.

Al Ramadi B, El Hasasna H, Fernandez-Cabezudo M, Attoub S, Al Salam S, Xu D, Liew Y, Chouaib S. (2007). Oral administration and multiple low-dose regimens are associated with a reduction in treatment failure of experimental tumors by attenuated *Samonella* strains. *8th UAE University research conference*.

Al Salam S, Castella A, John A. (2007). Expression of Epstein Barr Virus, P16, Cox-2 and P53 in Hodgkin's lymphoma in a population of United Arab Emirates Nationals. *An Immunohistochemical and In Situ Hybridization study*. *8th UAE University research conference*.

Attoub S, Gaben AM, Al Sultan M, John A, Al Salam S, Nicholls G, Mester J, Petroianu G. (2007). Captopril as a new inhibitor of lung tumor growth and metastasis. *5th International Symposium on Targeted Anticancer Therapies*, Amsterdam, Netherlands. Page no: 50.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

Agarwal MM (2007). Gestational diabetes: the ideal diagnostic criteria to prevent subsequent Type 2 diabetes mellitus. *Diabetes mellitus and its complications: 12th Annual workshop*, Al Ain, UAE.

Agarwal MM, Dhatt GS. (2007). Fasting plasma glucose

as a screening test for gestational diabetes mellitus. *4TH International Symposium on Diabetes and Pregnancy*, Istanbul, Turkey.

Ali BR. (2007). Applications of PCR in Molecular Diagnosis of Genetic Diseases. *1st Emirates Hellenic Medical Conference*, Dubai, UAE.

Ali BR. (2007). Design of PCR Primers. *1st Emirates Hellenic Medical Conference*, Dubai, UAE.

Ali BR. (2007). The Molecular Basis of Genetic Diseases in the UAE. *Dubai Harvard Foundation for Medical Research Partners in Research Conference*, Boston, USA.

Al Ramadi B, El-Hasasna H, Fernandez-Cabezudo M, Attoub S, Al Salam S, Xu D, Liew Y, Chouaib S. (2007). Oral administration and multiple low-dose regimens are associated with a reduction in treatment failure of experimental tumors by attenuated *Samonella* strains. *8th UAE University research conference*.

Al Salam S, Castella A, John A (2007). Expression of Epstein Barr Virus, P16, Cox-2 and P53 in Hodgkin's lymphoma in a population of United Arab Emirates Nationals. *An Immunohistochemical and In Situ Hybridization study*. *8th UAE University research conference*.

Attoub S, Gaben AM, AlSultan M, John A, Al Salam S, Nicholis G, Mester J, Petroianu G. (2007). Captopril as a new inhibitor of lung tumor growth and metastasis. *8th UAE University research conference*.

Chong SM, Lim YC, Al Salam S, Quek BZ, Lee CK, Tan LHC, Castella A, Schwarz H. (2007). Expression of CD137 in Lymphomas. *24th World Congress of Pathology and Laboratory Medicine*, Petaling Jaya, Malaysia.

Lim JT, Tan L, Chong SM, Lim YC. (2007). Leukotriene B4 Acts as a Survival Factor in Hodgkin and Reed-Sternberg Cells in Classical Hodgkin's Lymphoma. *24th World Congress of Pathology and Laboratory Medicine*, Petaling Jaya, Malaysia.

Safraou MF, Agarwal MM, Parat S et al. (2007). Gestational diabetes mellitus: advantages of an intensive educational program using e-consulting. *European Association for the Study of Diabetes (EASD) 43rd annual meeting*, Amsterdam.

RESEARCH GRANTS 2007

FMHS Research Grant

Ali BR, Al-Gazali L; UAE University, UAE, Walsh C A; Harvard Medical School, USA, Meyer B, KFRC, Saudi Arabia (2007). Identification of genes for human cognition (Dubai Harvard Foundation for Medical Research. Total fund approved 1,750,000 US Dollars). 5 years starting January 2008.

Ali BR, Bastaki S (2007). The occurrence of mutant alleles at the CYP2D6 gene locus in UAE Nationals and its implications for psychiatric practice in the UAE (UAE Individual grant, approved 2007/2008, 30,000 AED, Co

-Investigator with Dr. Salim Bastaki).

Ali BR, Eapen V (2007). Association of Serine racemase gene, PDLIM 5 gene and PICK 1 gene polymorphism and schizophrenia (Co-investigator with Prof. Valsamma Eapen; UAE University Interdisciplinary Research Grant; amount approved AED 200,000; 3 years) Approved 2007.

Ali BR, Al-Gazali L (2007). Elucidation of the Cellular Mechanism Underlying the Loss of Function of NPR-B in Acromesomelic Dysplasia, Type Maroteaux. (Principal Investigator: Dr. Bassam Ali, Co-Investigator: Prof. L. Al-Gazali; FMHS grant 2006/2007; 36,000 Dhs), 1 Year.

Department of Pharmacology

Prof G Petroianu Prof A Adem Dr MY Hasan Dr S Bastaki Dr S Attoub Ms K Arafat Mr SM Nurulain Mr A Shamsllisam Ms N Amir Ms S Duncan	Professor, Chairman Professor Associate Professor Vice Dean, Associate Dean, Student & Alumni Affairs Associate Professor Assistant Professor Medical Research Specialist Medical Research Specialist Medical Research Specialist Medical Research Specialist Medical Research Specialist Medical Secretary	Central Facilities Dr M Kosanovic Dr M Al Sultan Mr M Shafiullah Mr M Elwasila	 Medical Research Specialist Veterinarian (Animal House) Medical Research Specialist (Animal House) Medical Research Specialist (Animal House)
--	--	---	--

Tel: 7137510 / Fax: 7672033 / <http://www.fmhs.uaeu.ac.ae/Departments/Pharmacology>



Standing from left to right: Mr C Saeed, Prof A Adem, Dr M Al Sultan, Mr Azim, Mr M Elwasila, Dr S Attoub, Dr. Murat Oz, Dr Huba, Mr SM Nurulain
Seated from left to right: Ms Sumia, Ms Naheed, Ms S Duncan, Prof M Y Hasan, Prof G Petroianu, Dr M Kosanovic, Ms K Arafat and Dr S Bastaki.

RESEARCH PROFILE

The Pharmacology Department has special interests in Diabetes and Degenerative Diseases, Neuroscience, Clinical Toxicology, Gastroenterology and Oncology. The research is done with state of the art equipment in purpose-built laboratories with good technical and other support.

Prof. Abdu Adem

Diabetes

Mechanisms of Apoptotic Cell Death in Diabetes

In almost all multicellular organisms, cell suicide or apoptosis appears to play an important role in the maintenance of cellular homeostasis. Apoptosis is tightly regulated by a set of genes that either promote apoptosis or promote cell survival. Although a number of stimuli appear to trigger the process of apoptosis, there are two major signaling pathways of apoptosis: the death receptor pathway and the death receptor-independent or mitochondrial pathway. Mechanisms of apoptotic cell death are being studied in kidneys of an animal model of diabetes. The ultra structural features in the tubules seem to implicate apoptosis in the pathology of renal nephropathy. In addition we reported, for the first time, a significant loss of foot processes of podocytes (*) in the diabetic rat kidney (Fig. I left). These findings could contribute to the understanding of the pathophysiology of diabetic nephropathy.

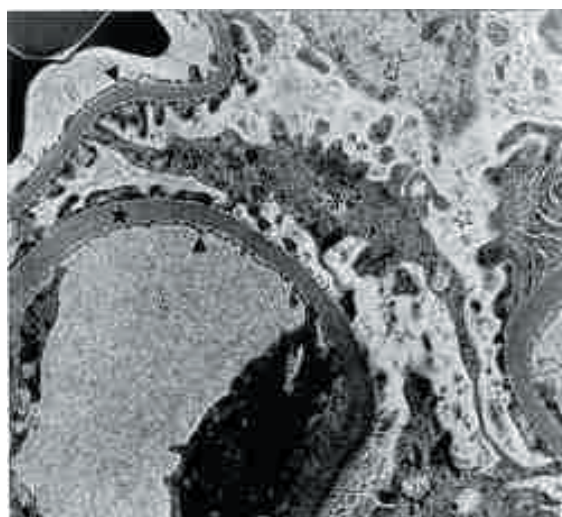


Figure I

Neurodegenerative Diseases

Novel Selective Ligands for Muscarinic Acetylcholine Receptors

Five muscarinic acetylcholine receptor subtypes (M1- M5) have been cloned and are found in the brain. However, the pharmacological identification of the subtypes responsible for the various central

effects of the muscarinic drugs is difficult due to the lack of highly selective muscarinic agonists and antagonists. We have isolated muscarinic M1 and M4 receptor subtype selective toxins from mamba snake (*Dendroaspis*) venoms. At present the status of M1 and M4 receptors in health and disease states in humans are being investigated. Our results show significant decrease of M4, but not of M1 receptors in the hippocampus of Alzheimer's patients compared to controls. Moreover, changes in these receptors in adrenalectomized animal models which have been shown to have a selective loss of hippocampal neurons. Attempts to isolate and characterize M2, M3, and M5 selective toxins is also in progress. Behavioral, biochemical and electrophysiological techniques are also used in understanding the role of other neurotransmitters in diabetes, epilepsy, aggressive behavior, aging, and degenerative diseases.

Prof. MY Hasan

Neuroscience

The main line of research has been focusing on neurotransmission. We have been applying behavioral, biochemical and electrophysiological and morphological techniques in understanding the role of neurotransmitters in various disorders (diabetes, epilepsy, aging, neurodegenerative diseases). Findings indicated significant modification of specific neurotransmitters in many of the disorders. It appears that alteration in calcium mobilization and free radical system may be a common factor accounting for some of the changes observed in aging, diabetes and Parkinson's disease. Another line of research has been toxicological studies and impact of toxins on muscle the nervous system. We have investigated the effects of heavy metal Intoxication in relation to degenerative diseases. We studied impact of heavy metal toxicity on nervous system and muscle and observed that free radicals may be involved in metal toxicity and antioxidants like ascorbic acid & alpha-tocopherol may have a protective role against metals effects Also we have been looking and neurotoxicity and general toxicity from organophosphates and nerve gases. We have been screening antidotes for organophosphate poisoning and implication for treating exposure to nerve gas agents. Furthermore my interest covered broad areas in medical education and community health. Some of the projects performed included; drug utilization and rational use of antibiotics and analgesics in health care centers and community, developing Sickness Impact Profile for studying quality of life in infertile patients, studying views of medical students and physicians of clinical skills teaching at the medical colleges and surveying patient's attitudes towards students involvement in medical practice.

Dr. Salim Bastaki
Gastroenterology

Research on gastrointestinal secretion and the mechanism of action of PPIs and other acid inhibitors on acid secretion. Published the work on new proton pump inhibitor, esomeprazole, Astra-Zeneca (accepted for publication (2008)). Study the interactions of Aspirin in combination with ibuprofen on Gastric acid and Ulcer formation in the rat in vivo and in Vitro (manuscript in preparation). Study the effect of stress on the mucosa of FSL and FRL rats and the healing rate of alcohol- and indomethacin-induced ulcers in the same rats. Study the effects of the AED gabapentine in mice. Study on the effect of folic acid supplementation to antiepileptic drugs on the foetus of rats.

Prof. Georg Petroianu
Clinical toxicology
Therapy of acute organophosphate poisoning

Organophosphorus cholinesterase inhibitors (organophosphates) are widely used in agriculture, in industry and technology, and in military technology. According to the WHO, more than one million casualties per year are due to organophosphates exposure. Countries of the Indian sub-continent and adjacent regions top the list. While use of atropine in the therapy of acute organophosphate poisoning is well-established clinical practice, the use of oxime enzyme reactivators (pralidoxime, obidoxime) is a hotly debated issue. Recent in vivo data from our laboratory shows that oximes produce a spurious signal when ChE activity is determined photometrically. True enzyme protection/reactivation is thus less than assumed. Furthermore high dose oxime increases the "time-to-extubation (TTE)" and mortality as compared to identical therapy without oxime (animal data). The paradigm of enzyme reactivation in organophosphate poisoning must be reassessed and alternatives developed. Screening of benzamide compounds with cholinesterase protective capabilities is a present priority of our group. Preliminary experiments performed in our laboratory in vitro and in vivo suggest that the benzamide compound tiapride is partially protective against esterase inhibition by organophosphates. In addition newly synthesized oximes with superior reactivating properties are tested in conjunction with benzamides to increase survival in exposed animals.

Dr. Samir Attoub
Cancer research

Lung cancer is the most common form of cancer worldwide with one of the highest mortality rates

(90% of lung cancer patients die from their disease). Colorectal cancer is the second cause of cancer related deaths after lung cancer in men and breast cancer in women. The protein kinase Akt/PKB family has three members (Akt1, -2 and -3). Akt1 and -2 but not Akt3 over-expression has been seen in many human cancers. Akt is activated downstream of the growth factor receptors and oncogenes implicated in human cancer. Akt plays also a critical role in normal development.

My current research is focused on the identification of the role of different isoforms of Akt in colon and lung cancer progression including cell growth, survival, invasion and angiogenesis using siRNA technology. The results of this study will determine the importance of developing the Akt isoform-selective inhibitors for human lung and colon cancer therapy.

ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Abdulle AM, Nagelkerke NJ, Adem A, Abouchacra S, Pathan JY, Al-Rukhaimi, M, Suleiman MN, Mathew MC, Nicholls MG, Obineche EN. (2007). Plasma N terminal pro-brain natriuretic peptide levels and its determinants in a multi-ethnic population. *J Hum Hypertens*, 21(8):647-53.

Adeghate E, Sotonyi Jr. P, Kalász H. (2007). Chronic experimental diabetes accelerates urinary elimination of deprenyl and its metabolites. *The Open Medicinal Chemistry Journal*, 1, 24-28.

Ahmad M, Attoub S, Singh MN, Martin FL, El-Agnaf OM. (2007). Gamma-synuclein and the progression of cancer. *FASEB J.*, 21(13):3419-30.

Ali MA, Nyberg F, Chandranath SI, Dhanasekaran S, Tariq S, Petroianu G, Hasan MY, Adeghate EA, Adem A. (2007). Distribution of neuroendocrine cells in the small and large intestines of the one-humped camel (*Camelus dromedarius*). *Neuropeptides*. Oct;41(5):293-9.

Benko B, Kalász H, Ludányi K, Petroianu G, Kuca K, Darvas F, Tekes K. (2007). In vitro and in vivo metabolisms of K-48. *Anal Bioanal Chem*, 389(4):1243-7.

Csermely T, Petroianu G, Kuca K, Fűrész J, Darvas F, Gulyás Z, Laufer R, Kalász H. (2007). TLC of quaternary pyridinium aldoximes, antidotes of organophosphorous esterase inhibitors. *JPC-Journal of Planar Chromatography*, 20, 30-42.

Duan RS, Jin T, Yang X, Mix E, Adem A, Zhu J. (2007). Apolipoprotein E deficiency enhances the antigen-presenting capacity of Schwann cells. *Glia*. 55(7):772-6.

Duan RS, Zhang, XM, Mix E, Quezada HC, Adem A, Zhu J. IL-18 deficiency inhibits both Th1 and Th2 cytokine production but not the clinical symptoms in

experimental autoimmune neuritis. *J Neuroimmunol*, 183(1-2):162-7.

Fernandez Cabezudo MJ, Petroianu G, Al-Ramadi B, Langer RD. Iosimenol, a new non-ionic dimeric contrast medium, does not induce immunoreactivity in the popliteal lymph node assay. *Br J Radiol*, 80(957):713-8.

Fernandez-Cabezudo MJ, Ali SA, Ullah A, Hasan MY, Kosanovic M, Fahim MA, Adem A, al-Ramadi BK. Pronounced susceptibility to infection by *Salmonella enterica* serovar Typhimurium in mice chronically exposed to lead correlates with a shift to Th2-type immune responses. *Toxicol Appl Pharmacol*. 2007 Feb 1;218(3):215-26. Epub 2006 Nov 18.

Gyenge M, Kalász H, Petroianu GA, Laufer R, Kuca K, Tekes K. (2007). Measurement of K-27, an oxime-type cholinesterase reactivator by high-performance liquid chromatography with electrochemical detection from different biological samples. *J Chromatogr A*, 1171:1161(1-2):146-51.

Jatzko A, Stegmeier-Petroianu A, Petroianu G.A. (2007). Alpha-2-delta ligands for singultus (hiccup) treatment: three case reports. *J Pain Symptom Manage*, 33(6):756-60.

Kalász H, Petroianu G, Tekes K, Klebovich I, Ludányi K, Gulyás Z. (2007). Metabolism of moexipril to moexiprilat: determination of in vitro metabolism using HPLC-ES-MS. *Med Chem.*, 3(1):101-6.

Kosanovic M, Hasan MY, Subramanian D, Al Ahbab AA, Al Kathiri OA, Aleassa, EM, Adem A. (2007). Influence of urbanization of the western coast of the United Arab Emirates on trace metal content in muscle and liver of wild Red-spot emperor (*Lethrinus lentjan*). *Food Chem Toxicol.*, 45(11):2261-6.

Laufer R, Báthori M, Csermely T, Petroianu G, Kuca K, Tóth N, Kalász, H. (2007). TLC determination of hydrophilicity parameter of some pyridinium aldoximes. *J. Liquid Chromatogr*, 30, 2337-2344.

Lorke DE, Hasan MY, Nurulain SM, Sheen R, Kuca K, Petroianu GA. (2007). Entry of two new asymmetric bispyridinium oximes (K-27 and K-48) into the rat brain: comparison with obidoxime. *J Appl Toxicol.*, 27(5):482-90.

Petroianu G, Stegmeier-Petroianu A. (2007). The 10-minute-consultation: chronic singultus. *MMW Fortschr Med.*, 22;149(12):39-40.

Petroianu GA, Arafat K, Nurulain SM, Kuca K, Kassa J. (2007). In vitro oxime reactivation of red blood cell acetylcholinesterase inhibited by methyl-paraoxon. *J Appl Toxicol*, 27(2):168-75. 2007.

Petroianu GA, Lorke DE, Hasan MY, Adem A, Sheen R, Nurulain SM, Kalasz H. (2007). Paraaxon has only a minimal effect on pralidoxime brain concentration in rats. *J Appl Toxicol.*, 27(4):350-7.

Petroianu GA, Nurulain SM, Nagelkerke N, Shafiullah M, Kassa J, Kuca K. (2007). Five oximes (K-27, K-48, obidoxime, HI-6 and trimedoxime) in comparison with pralidoxime: survival in rats exposed to methyl-paraoxon. *J Appl Toxicol*, 27(5):453-7.

Petroianu, GA, Kalász, H. (2007). Comparison of the ability of pyridinium aldoximes to reactivate human RBC cholinesterase inhibited by ethyl- and methyl-paraoxon. *Current Organic Chemistry*, 11, 1624-1634.

Szilágyi A, Barta C, Boór K, Székely A, Demetrovics Z, Csorba J, Kalász H, Sasvári-Székely M. (2007). [The potential role of childhood ADHD in the development of heroin dependence at a young age]. *Neuropsychopharmacol Hung.*, 9(2):69-75. Hungarian.

Zhu W, Mix E, Jin T, Adem A, Zhu J. (2007). B cells play a cooperative role via CD40L-CD40 interaction in T cell-mediated experimental autoimmune neuritis in Lewis rats. *Neurobiol Dis*. 2007 Mar;25(3):642-8.

PUBLISHED ABSTRACTS, LETTERS, CORRESPONDENCE

Adem A, Duan Rui-Sheng, Jin T, Yang X, Mix E, Zhu J. Apolipoprotein E deficiency enhances the antigen-presenting capacity of Schwann cells. 32nd FEBS Congress, Molecular Machines, FEBS 2007, Vienna, Austria, July 7-12, 2007.

Fahim MA, Petroianu GA, Adem A, Alshuaib WB, Hasan MY. (2007). Paraquat exposure induces dorsiflexor muscle dysfunction and dopaminergic modification resembling Parkinson's disease features. Program No. 482.11/T25, 2007 Neuroscience Meeting Planner. San Diego, CA: Society for Neuroscience, 2007.

Drug updates

SMS Bastaki. (2007). [Ibuprofen-skin reactions warning to labels; morphine sulphate extended release capsules-alcohol promotes rapid release; pemoline-withdrawal due to liver toxicity; tamsulosin hydrochloride- risk of Intraoperative Floppy Iris Syndrome (IFIS); estrogen/progestin weekly patches-high levels of oestrogens than birth control pills-----] *Em Med J*, 2007, 25 (1): 79-84.

SMS Bastaki. (2007). [Nimodipine-serious events due to IV use of oral formulations; oseltamivir- safety update; nevirapine-serious liver adverse reaction: implications for fixed dose combinations; WHO- adverse drug reaction-----]. *Em Med J*, 2007, 25 (2): 245-249.

SMS Bastaki. (2007). [Acetylcysteine New paediatric dosing information; Anabolic steroids- Not to be sold as dietary supplements; Denileukin diftitox - Label to include reports of visual loss; L-Arginine- Not for heart patients; Pegaptanib sodium- Reports of anaphylaxis/anaphylactoid reactions; Bowel cleansing oral sodium phosphates - Risk of renal damage]. *Em Med J*, 2007, 25 (3): 319-323.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

Abdulle, A.M., Adem, A., Nagelkerke, N., Pathan, J.Y., Rukhaimi, M., Suleiman, M.N., Mathew, M.C., Nicholls, M.G. and Obineche, E.N. (2007). "Plasma N terminal – pro Brain natriuretic peptide levels and its determinants in a multi ethnic population." World Congress of Nephrology, Rio de Janeiro, Brazil.

al-Ramadi BK, El-Hasasna H, Fernandez-Cabezudo MJ, Attoub S, Al Salam S, Xu D, Liew FY, Chouaib S. (2007). Oral Administration and Multiple Low-Dose Regimens are Associated with a Reduction in Treatment Failures of Experimental Tumors by Attenuated Salmonella Strains. The 8th UAEU Annual Research Conference, Al-Ain, United Arab Emirates, April 23-25.

al-Ramadi BK, Fernandez-Cabezudo MJ, El-Hasasna H, Bashir G, Attoub S, Al Salam S, Xu D, Liew FY, Chouaib S. (2007). Cytokine-expressing Salmonella strains in immunotherapy of experimental tumors. The 13th International Immunology Congress, August 21-25, Rio De Janeiro, Brazil.

Attoub S, Gaben AM, Al-Salam S, Al Sultan MAH, John A, Nicholls MG, Mester J, Petroianu G. (2007). Captopril as a potential inhibitor of lung tumor growth and metastasis. 5th International Symposium on Targeted Anticancer Therapies. March 8-10, Amsterdam, Netherlands.

Attoub S, Gaben AM, Al-Salam S, Al Sultan MAH, John A, Nicholls MG, Mester J, Petroianu G. (2007). Captopril as a potential inhibitor of lung tumor growth and metastasis. The 8th UAEU Annual Research Conference, Al-Ain, United Arab Emirates, April 23-25, 2007.

Attoub S. (2007). Akt1 & 2 targeting in human colon & lung cancer cell lines inhibits tumor growth and metastasis in vitro and in vivo. International Conference on Recent Advances in Clinical Oncology, 19-22 February, Al Ain, United Arab Emirates.

Attoub S. (2007). Small Interfering RNA-targeting Akt Reduced Human Cancer Cell Invasion and Tumor Growth: Potential Applications in Cancer Therapy. 1st Emirates Hellenic Medical Conference, December 6-8, DUBAI, United Arab Emirates.

Gaben AM, De Wever O, Bruyneel E, Bracke M, Gerspach C and Attoub S. (2007). Akt1 & 2 depletion by RNA interference reduced tumor growth and invasion in human colon cancer cells. 9th World Congress on Gastrointestinal Cancer, June 27-30, 2007. Barcelona, Spain.

Hasan MY, Petroianu GA, Sheen R, Nurulain SM, Lorke DE, Kalasz HJ. (2007). Paraoxon and atropin do not increase pralidoxime (PRX) passage through the blood brain barrier (BBB). Thirty Sixth Annual ACCP Meeting, 2007.

Langer R, Fernandez-Cabezudo MJ, Al-Ramadi BK, Petroianu G, Speck U. (2007). Tierstudien zur

Evaluierung potentieller Immunreaktionen eines neuen nichtionischen dimeren Kontrastmittels IOSIMENOL – Vergleich mit Iodixanol. Deutscher Röntgenkongress. Poterpreis Summa Cum Laude

Obineche, E.N., Abdulle, A.M., Nagelkerke, N.J., Adem, A., Abouchacra, S., Pathan, J.Y., Al-Rukhaimi, M., Suleiman, M.N., Mathew, M.L. and Nicholls, M.G. (2007) "Plasma N terminal pro-brain natriuretic peptide levles and its determinants in a multi-ethnic population." World Congress of Nephrology (WCN), Rio de Janeiro, Brazil.

Petroianu GA, Hasan MY, Nurulain SM, Sheen R, Lorke DE. (2007). Site of action of oxime cholinesterase reactivators.: Clinical Science: Therapeutics. Critical Care Medicine: Volume 34 (12) Abstract supplement December 2006p A 149.

Petroianu, G. (2007). Drugs in Seizures. The 1st Emirates Hellenic Medical Conference & Exhibition, December 6-7th 2007, Crown Plaza, Dubai, UAE.

Petroianu G. (2007). Neuropharmacology review: The Newer AEDs 9th Carior International Neurology Conference, Cairo Marriott Hotel, 14th Feb 2008, Cairo, Egypt.

Petroianu G. (2007). OPIOID Rotation: Exercises Fourth Annual Workshop on Management of Chronic Pain, May 26th 2007, Pain Therapy Research Group, Al Ain, UAE.

Petroianu G. (2007). Pharmacology of the Alpha 2 Delta Ligands Fourth Annual Workshop on Management of Chronic Pain" May 26th 2007, Pain Therapy Research Group, Al Ain, UAE.

Petroianu G. (2007). The 2nd International EMINS Congress & 1st Emirates League. Against Epilepsy (EMILAE) Symposium. LYRICA (Pregabalin): The latest in neuropathic pain management. March 6th-8th 2007, Dubai – United Arab Emirates.

RESEARCH GRANTS 2007

FMHS New Grant

Prof. Abdu Adem

Renin, arginine vasopressin and aldosterone levels in the one humped camel (*Camelus dromedarius*): Effect of long term dehydration and rehydration.

UAEU Individual Grant

Prof. Georg Petroianu

Evaluation of the ability of novel oxime derivatives (K-series) to penetrate the brain; is it necessary for therapeutic efficacy of organophosphate compounds (OPC) intoxication.

Prof. Abdu Adem

Changes in atrial natriuretic peptide and brain natriuretic peptide and their receptors in the dehydrated one humped camel (*Camelus dromedarius*).

Dr. Samir Attoub

Pharmacological Control of Lung Cancer Cell survival and tumor growth by thymoquinone.

Prof. MY Hasan

Effects of antioxidants (α -tocopherol and ascorbic acid) on behavioral and neurochemical manifestations of paraquat-induced Parkinson's disease

UAEU Interdisciplinary Grant

A Adem (2005-7). Enhancement of Solubility, Stability, Dissolution Rate, and Bioavailability of Poorly Water-soluble Antifungal Drugs by Complexation with Cyclodextrins. (PI: Dr. Ali Al-Marzouqi).

A Adem (2005-7). In vitro and in vivo animal studies of *Nigella sativa* extract as an antioxidant in petrochemical pollutant induced oxidative stress.

(PI: Dr. Fatima Shad Kaneez).

FMHS Equipment Grant

Dr. Samir Attoub

Inverted Microscope

Hamdan Award Medical Research Grant

Prof. Georg Petroianu

New oximes for reactivation of red blood cell (RBC) acetylcholinesterase (AChE) inhibited by organophosphorus compounds (OPC)

Organophosphate compounds (OPCs)

Prof. Abdu Adem

Potential role of immune response and inflammatory molecules in pathogenesis of excitotoxic neurodegeneration: a model of Alzheimer's disease.

Dr. Samir Attoub

Pharmacological Control of Lung and Colon Cancer Cell Invasion and Tumor Growth by the NF- κ B pathway inhibitors.

Department of Physiology

Prof TE Adrian	Professor, Chairman	Ms K Parekh	Senior Technician
Prof J Morrison	Professor	Mr S Dhanasekaran	General Technician
Prof M Fahim	Professor	Ms B Stephen	General Technician
Prof W Lammers	Professor	Mr M Qureshi	General Technician
Dr M Ljubisavijevic	Professor	Ms Fadwa A Almugaddam	Research Assistant
Dr C Howarth	Associate Professor	Mr P Rajagopalan	Secretary
Dr A Nemmar	Associate Professor	Mr Saeed	Office Assistant

Tel: 7137528 / Fax: 7671966 / <http://www.fmhs.uaeu.ac.ae/Departments/Physiology>



Front row: Mr S Singh, Ms Fadwa A Almugaddam, Ms B Stephen, Prof TE Adrian, Prof M Fahim, Prof T El-Sharkawy, Mr P Rajagopalan
Back row: Mr MA Qureshi, Mr C Saeed Ali Kutty, Prof JM Morrison, Dr FC Howarth, Prof W Lammers, Prof M Ljubisavijevic, Mr S Dhanasekaran.

RESEARCH PROFILE

Members of Staff of the Physiology Department have interests in neuroscience and muscle (including skeletal, cardiac and smooth muscle). The experimental work includes normal physiology as well as patho-physiology, particularly in relation to the peripheral nerves, autonomic nervous system, and heart in the diabetic state, which is a common disorder in the United Arab Emirates. The work requires complex electrophysiological and cellular methodologies, as well as electron microscopy, using in vitro and in vivo techniques. Other departmental research interests include uterine smooth muscle physiology, cardiovascular and pulmonary effects of particulate air pollution and cancer biology.

AGING AND NEURODEGENERATIVE DISORDERS

Studies on **aging and neurodegenerative disorders** have focused on synaptic plasticity and synaptic remodelling, particularly at the nerve-muscle junction in various peripheral neuropathies including those caused by diabetes, aging and heavy metal poisoning. Electrophysiological techniques and electronmicroscopy are used in combination to focus on changes in muscular performance in these conditions. It is hypothesised that free radicals are involved in these nerve injuries and antioxidants like vitamin E & C may have a protective role. Studies on the cerebral microcirculation include changes in the susceptibility to thrombus formation in the brain, and the effects of metals, aspirin and heat.

ELECTROPHYSIOLOGY AND CLINICAL NEUROPHYSIOLOGY LABORATORIES

The research activities of the electrophysiology laboratory focuses on skeletal muscle function and muscle pain. The main techniques employed are classical electrophysiological techniques (EMG, ENG, muscle force and velocity, single fiber and single unit-extracellular/intracellular recordings). We have also recently introduced at FMHS the set of small animal behavioral techniques including Morris Water Maze, T and Y maze, coordination and balance motor testing etc. We are also planning to introduce multiunit recording by implementing multisite cell recordings in order to investigate in more details the plasticity changes of spinal cord pain processing neural networks. We are particularly interested to elucidate differences between cervical and spinal neural networks as they may exhibit differential processing in chronic muscle pain conditions which are clinically quite different in these two regions. Currently we are particu-

larly interested in the effects of Neuropeptide-Y (NPY) on skeletal muscle in diabetes as it has been shown earlier that it induces angiogenesis and revascularization under ischemic condition. We are probing whether NPY can be used to remodel skeletal muscle properties in diabetes so that it could be developed into therapeutic agent in treatment of ischemic disease.

The newly formed Clinical neurophysiology laboratory will use transcranial magnetic stimulation (TMS) and other classical Clinical neurophysiology methods to investigate mechanisms of human nervous system plasticity and the possibilities to remodel these processes in healthy subjects and several diseases primarily focusing on movement disorders. Dr. Ljubisavljevic's special interest over the years were cortical processes related to volition in exercise and fatigue. We will look further into these mechanisms focusing on those associated with sensorimotor integration and maladaptive plasticity in central fatigue. In collaboration with colleagues from the Institute for Neurology, University Clinical Center Belgrade, we are investigating the character of pathophysiological maladaptive cortical processes in dystonia and tremor. Finally, in collaboration with neurology division and ENT department of Tawam Johns Hopkins hospital we are currently developing a set of clinical experimental and therapeutic TMS protocols for Multiple Sclerosis, stroke and chronic idiopathic tinnitus patients.

SMOOTH MUSCLE MAPPING LABORATORY

As in previous years, work has steadily progressed in the mapping laboratory. The major achievement this year has been that we finalized and published a study on the patterns of electrical propagations in the guinea-pig uterus at term. In the past 5 years or so, together with Dr Hisham Mirghani from the department of Obstetrics and Gynaecology, and the help of Betty Stephen, Sekar Dhanasekaran, Athiq Wahab and Mahmoud Al Sultan, we developed a model in which we isolated the whole pregnant uterus organ in a tissue bath. For this we built a double-walled aquarium-size tissue bath. New electrode arrays were built which were positioned along the length and the circumference of the pregnant horn (the guinea-pig, like many other animals, has two horns). Finally, we devised a method to open the uterus from the cervical end, remove the fetuses and replace them with a equivalent amount of Tyrode to regain the original size and shape of the uterus.

Many experiments were performed with this model, electrical recordings were performed both at high resolution from small areas of the uterus

and at lower resolution with electrodes located all over the uterus. After much analysis, the results became clear. The unit of electrical propagation is the spike that propagates anisotropically in the longitudinal direction. These spikes occur in bursts that may last up to 5 minutes and occur every 20 minutes or so. As shown in the accompanying maps, the spatial organization of these bursts is highly reproducible. Uterine bursts start at the ovarian end along the antimesometrial border and propagate very quickly along this border towards the cervix. Propagation from the antimesometrial border in the circumferential direction is much slower and reaches the mesometrial border, where the placenta's and the blood vessels are located after more than 30 seconds. These maps show for the first time the temporal and spatial organization of the spontaneous electrical activity in the pregnant uterus at term.

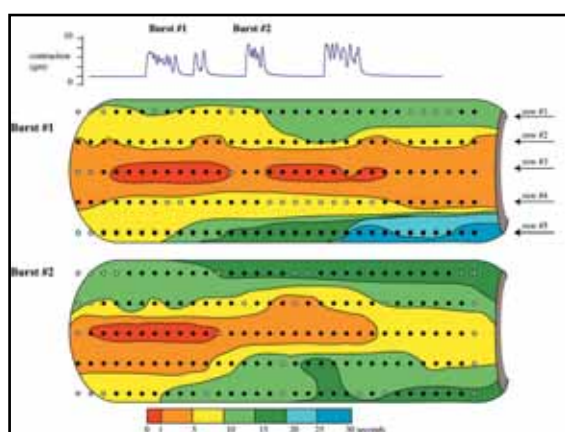


Figure: Spatial plot of the migration of a burst along a guinea pig horn. The horn has been virtually cut open along the mesometrial border. Two migration maps are shown from two bursts indicated in the upper tracing. The first isochrone (red) indicates excitation during the first second while the other isochrones are drawn in steps of 5 seconds. The initiation of the two bursts occurred along the anti-mesometrial border (= row #3), occasionally at several sites, within one second (red isochrone). Other areas were activated later while the mesometrial border was excited 25-35 seconds after the initiation of the burst.

THE CANCER LABORATORY

The overall thrust of the pancreatic cancer program is elucidating the molecular mechanisms underlying its rapid growth and invasion and in developing novel strategies to treat it. Prof. Adrian investigates various aspects of this pancreatic cancer, including growth and differentiation signaling pathways, the role of the lipoxygenase pathways in tumor growth and escape from apoptosis, the interactions between pancreatic cancer cells and the pancreatic endocrine islet tissue, as well as the reasons for the severe metabolic disturbance and cachexia that accompany this devastating disease. With his collaborators, he has developed some novel therapeutic agents, one of which recently

entered clinical trials. New anti-cancer compounds have been isolated from marine organisms, including the sea cucumber. The mechanisms by which these agents cause cell cycle arrest and induce apoptosis in cancer cells are currently under investigation. Recently, he has used oligonucleotide microarrays to identify novel growth-related genes from their expressed sequence tags and this has led to the discovery of a new tumor suppressor gene in the endoplasmic reticulum.

PATHOPHYSIOLOGIC MECHANISMS OF PARTICULATE AIR POLLUTION

The main research topic of Dr Nemmar is related to the pathophysiologic mechanisms underlying the respiratory and cardiovascular effects of air pollution. Within the last two decades, environmental factors such as air pollution have been shown to contribute to cardiorespiratory morbidity and mortality. A growing body of epidemiological data implicates particulate matter air pollution (PM) as yet another factor in the pathogenesis of respiratory and cardiovascular diseases. PM influences susceptibility to hard events and may be particularly harmful to high-risk groups such as people with diabetes, people with hypertension, and elderly people. However, the pathophysiologic mechanisms underlying these associations are not fully understood. Recently, through a series of experimental studies, with his collaborators, Dr Nemmar provided biological plausibility for the associations between particulate air pollution and cardiorespiratory events. In this context, Dr Nemmar has investigated the translocation of inhaled ultrafine pollutant particles in humans and hamsters, and the mechanisms of their acute cardiopulmonary effects. Dr Nemmar intends to further clarify the acute and chronic cardiopulmonary effects of pollutant particles, and to develop pharmacological approaches capable of preventing particle-induced cardiorespiratory complications. Moreover, epidemiological studies indicate that the effects of air pollution are more pronounced in "susceptible" subjects, such as the elderly, diabetics or hypertensive. Dr Nemmar will verify this hypothesis by extending his experiments in a relevant animal model of enhanced susceptibility (spontaneously hypertensive and diabetic animals).

DIABETIC NEUROPATHY

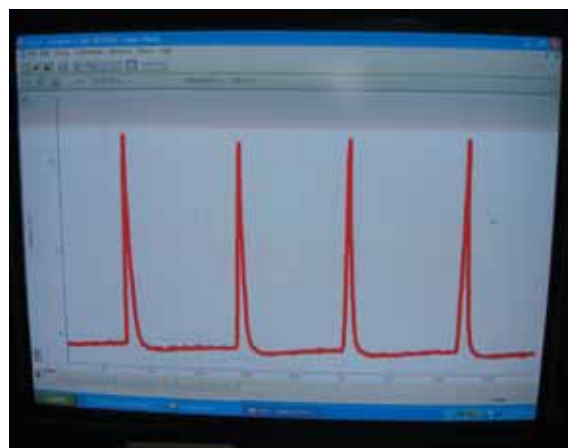
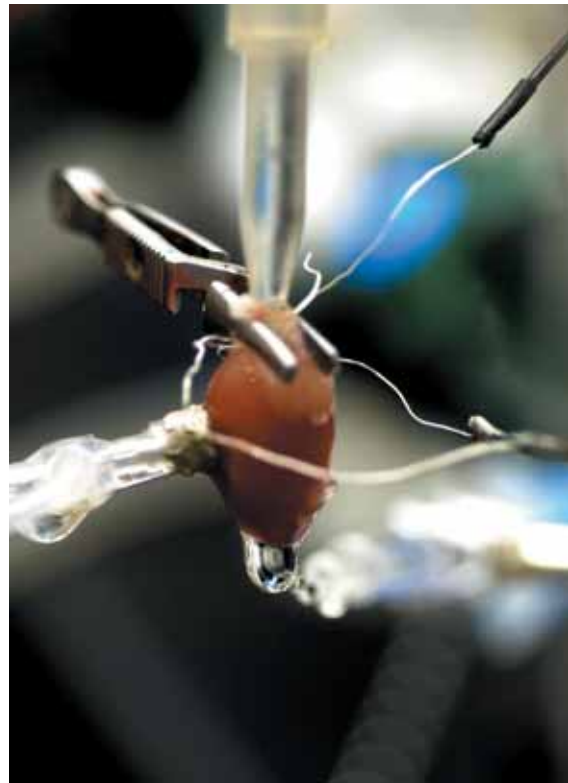
Professor John Morrison is interested in the physiology and patho-physiology of the autonomic nervous system and its various target organs, particularly those in the lower urinary tract. He is PI on a grant for Sheikh Hamdan Medical Awards (together with Professor Wim Lammers) on the generation of spontaneous activity in the bladder, and the relative roles of intramural nerves and

spontaneous smooth muscle activity. These investigations map the spread of electrical activity in the bladder, the sites of pacemakers and the effects of distension on the spread of excitation. Another long-term interest is in diabetic neuropathy, and the STZ-model of Type I diabetes and the MSG and GK models of Type II diabetes have been studied. For the STZ model it takes about 12 weeks for clear significant changes in peripheral nerve markers to appear, while in the Type II models, these changes appear around the time that glucose tolerance becomes evident, usually around one year of age in the rat. These investigations have included studies on catecholamine metabolism and handling at nerve endings, the levels of peptide markers as well as sensory testing. More recently changes in gene expression in sympathetic and dorsal root ganglia have been studied using real time RT-PCR. There have been dramatic differences in the expression of genes encoding neurotransmitter synthesis, transport, metabolism and reuptake in different parts of the sympathetic chain.

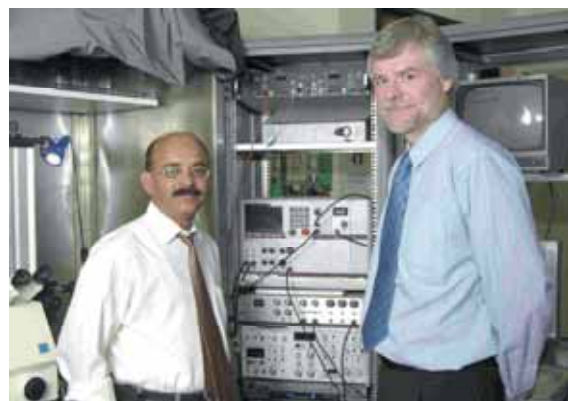
DIABETES AND HEART FUNCTION

Human and animal studies have shown that diabetes mellitus can be associated with altered cardiac function that is independent of vascular complications.

We are investigating the cellular and sub-cellular mechanisms which may be responsible for defects in cardiac muscle contraction in a variety of drug-induced, diet-induced and genetic animal models of diabetes mellitus. These defects include altered amplitude and prolonged time course of cardiac muscle contraction. During the process of excitation-contraction coupling depolarization of the cardiac muscle cell membrane opens L-type Ca^{2+} channels. There is a small entry of Ca^{2+} which triggers a large release of Ca^{2+} from the sarcoplasmic reticulum. The transient rise of Ca^{2+} in the cytosolic compartment initiates and regulates myofilament contraction. During the process of relaxation Ca^{2+} is effluxed from the cell, primarily via the $\text{Na}^+/\text{Ca}^{2+}$ exchange, and is pumped back into the sarcoplasmic reticulum. Ca^{2+} signalling pathways are a major focus of our research. Heart rhythm disturbances including altered heart rate and heart rate variability are also a frequent complication of diabetes mellitus and is another important focus of our research. We are using a variety of techniques including *in vivo* biotelemetry, isolated heart and single cell electrophysiology, molecular biology and confocal microscopy to investigate cardiac muscle contraction and heart rhythm defects in the diabetic heart. Other studies include investigation of alterations in gene expression for ion channels and other proteins in diabetic heart.



Recording action potentials with an extracellular suction electrode.



Research Lab



Students in Research Lab

ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Ali BH, Al Moundhri MS, Tag Eldin M, Nemmar A, Tanira MO. (2007). The ameliorative effect of cysteine prodrug L-2-oxothiazolidine-4-carboxylic acid on cis-platin-induced nephrotoxicity in rats. *Fundam Clin Pharmacol*, 21:547-53.

Fernandez-Cabezudo MJ, Ali Sumaya AE, Ullah A, Hasan MY, Kosanovic M, Fahim MA, Adem A, al-Ramadi, BK. (2007). Pronounced susceptibility to infection by *Salmonella enterica* serovar typhimurium in mice chronically exposed to lead correlates with a shift to Th2-type immune responses. *Toxicology and Applied Pharmacology*, 218:215-226.

Golkar L, Ding XZ, Ujiki MB, Salabat MR, Kelly DL, Scholtens D, Fought AJ, Bentrem DJ, Talamonti MS, Bell RH, Adrian, TE. (2007). Resveratrol inhibits pancreatic cancer cell proliferation through transcriptional induction of macrophage inhibitory cytokine-1. *J Surg Res*, 138:163-169.

Hennig R, Kehl T, Noor S, Ding XZ, Rao SM, Bergmann F, Fürstenberger G, Büchler MW, Friess H, Krieg P, Adrian TE. (2007). 15-Lipoxygenase-1 Production is Lost in Pancreatic Cancer and Overexpression of the Gene Inhibits Tumor Cell Growth. *Neoplasia*, 9:917-26.

Howarth FC, Al-Sharhan R, Al-Hammadi A, Qureshi MA. (2007). Effects of streptozotocin-induced diabetes on action potentials in the sinoatrial node compared with other regions of the rat heart. *Molecular & Cellular Biochemistry*, 300:39-46.

Howarth FC, Jacobson M, Shafiullah M, Adeghate E. (2007). Long-term effects of type 2 diabetes mellitus on heart rhythm in the Goto-Kakizaki rat. *Experimental Physiology*, Dec 2007.

Howarth FC, Nowotny N, Qureshi MA, Zilahi E, El Haj MA, Lei M. (2007). Altered expression of gap junction connexin proteins may underlie heart rhythm disturbances in the streptozotocin-induced diabetic rat heart. *Molecular & Cellular Biochemistry*, 305:145-151.

Howarth FC, Shafiullah M, Qureshi MA. (2007). Chronic effects of type 2 diabetes mellitus on cardiac muscle contraction in the Goto-Kakizaki rat. *Experimental Physiology*, 92:1029-1036.

Jacobson M, Howarth FC, Adeghate E, Fatima-Shad K. (2007). Heart rate variability time analyses of the streptozotocin-diabetic rat. *Journal of Engineering Research*, 1:64-68.

Lammers WJEP, Ver Donck L, Schuurkes JAJ, Stephen B. (2007). The effects of cholinergic stimulation and of nucleoside transport inhibition on spikes and spike patches in the canine small intestine in vivo. *Eur J Pharmacology* 568, 234-241.

Lammers WJEP, Mirghani H, Stephen B, Dhanasekaran, Wahab A, Sultan MAH, Abazer F. (2007). Patterns of electrical propagation in the intact pregnant guinea-pig uterus. *Am J Physiol Regul Integr Comp Physiol*. Nov 28; [Epub ahead of print] with an editorial focus by Garfield RE.

Mantilla CB, Rowley KL, Zhan WZ, Fahim MA, Sieck GC. (2007). Synaptic vesicle pools at diaphragm neuromuscular junctions vary with motoneuron soma, not axon terminal, activity. *Neuroscience*, 146(1):178-189.

McLean M, Howarth FC. (2007). Recognising the role of medical scientists in undergraduate medical education: The experiences of one medical faculty. *Journal of International Medical Science Educators*, 17(2):78-82.

Morrison J, Pallot D, Sheen R, Dhanasekaran S, Mensah-Brown E. (2007). The effects of age and streptozotocin diabetes on the sympathetic innervation in the rat penis. *Molecular and Cellular Biochemistry*, 295:53-58.

Morrison JFB, Sheen R, Dhanasekaran S, Mensah-Brown EPK. (2007). Long term changes in sympathetic innervation in the corpus cavernosum of the STZ-diabetic rat. *Int J Impot Res.*, 19:509-16.

Morrison JF, Shehab S, Sheen R, Dhanasekaran S, Shafiullah M, Mensah-Brown E. (2007). Sensory and autonomic nerve changes in the monosodium glutamate-treated rat: a model of type II diabetes. *Exp Physiol*, Epub, Oct 2:213-22.

Neves K, Lammers WJEP. (2007). Growth in biomedical publications and scientific institutions in the Emirates (1998-2004); an Arabian renaissance? *Health Info Libr J*. 24:41-49.

Rizk EED, Al-Marzouqi AH, Hassan HA, Al-Kedrah SS, Fahim MA. (2007). Estrogen and ghrelin decrease the cytoplasmic expression of p27kip1, a cellular marker of ageing, in the striated anal sphincter and levator muscle of ovariectomized rats. *International Urogynecol J Pelvic Floor Dysfunct.*, 18(4):413-8.

Rizk DEE, Fahim MA, Hassan HA, Al Marzouqi AH, Ramadan GA, Alkedra SS, Al-Ghafri LS. (2007). The effect of ovariectomy on biomarkers of urogenital ageing in old versus young adult rats. *Int Urogynecol J*, 18(9):1077-1085.

Shiels HA, O'Connell AD, Qureshi MA, Howarth FC, White E, Calaghan SC. (2007). Stable microtubules contribute to cardiac dysfunction in the streptozotocin-induced model of type I diabetes in the rat. *Molecular & Cellular Biochemistry*, 294:173-180.

Singh B, Murphy RF, Ding XZ, Roginsky AB, Bell RH, Adrian TE. (2007). On the role of transforming growth factor-beta in the growth inhibitory effects of retinoic acid in human pancreatic cancer cells. *Mol Cancer*, 6:82.

Stratimirović Dj, Milošević S, Blesić S, Ljubisavljević M. (2007). Wavelet transform analysis of time series generated by the stimulated neuronal activity. *Physica A*, 374, 699-706.

Tong WG, Ding XZ, Talamonti MS, Bell RH, Adrian TE. (2007). Leukotriene B4 receptor antagonist LY293111 induces S-phase cell cycle arrest and apoptosis in human pancreatic cancer cells. *Anticancer Drugs*, 18:535-541.

BOOKS, CHAPTERS, REVIEWS, EDITORIALS

Adrian TE. (2007). Inhibition of pancreatic cancer cell growth. *Cell Mol Life Sci.*, 64:2512-2521.

Adrian TE (2007). Novel marine-derived anti-cancer agents. *Curr Pharm Des.*, 13:3417-26.

Melstrom LG, Melstrom KA Jr, Ding XZ, Adrian TE. (2007). Mechanisms of skeletal muscle degradation and its therapy in cancer cachexia. *Histol Histopathol.*, 22:805-14.

PUBLISHED ABSTRACTS, LETTERS, CORRESPONDENCE

Fahim MA, Rizk DEE, Hassan HA, Al-Marzouqi AH, Ramadan GA, Alkedra SS. (2007). The effect of ovariectomy on biomarkers of urogenital ageing in old versus young adult rats. *The FASEB Journal*.

McLean M, Howarth FC. (2007). Biomedical science research: From humble beginnings to an integral part of the undergraduate medical curriculum at the Faculty of Medicine & Health Sciences, United Arab Emirates University. *Physiology News*, 68:13-15.

Morrison JFB, Sheen R, Dhanasekaran S. (2007). Effects of STZ-diabetes on Noradrenaline and NPY concentration in sympathetic nerve terminals in the rat tail artery. *Autonomic Neuroscience*, 135: 73-74.

Morrison JFB, Dhanasekaran S. (2007). Effects of STZ - diabetes on CGRP and NPY concentrations along the rat tail artery. *Life Sciences*, 15-16P.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

Adrian TE. (2007). Development and Exocrine and Endocrine Physiology. Karolinska Institute Pancreas 2000 Conference, Angavallen, Sweden, Sept 7-9.

Adrian TE. (2007). Apoptosis signaling pathways provide novel targets for cancer therapy. International Conference on Recent Advances in Clinical Oncology, Al Ain, United Arab Emirates, Feb 19-22.

Adrian TE. (2007). Characterization of a novel growth-related gene in pancreatic cancer. International Conference on Recent Advances in Clinical Oncology, Al Ain, United Arab Emirates, Feb 19-22.

Adrian TE. (2007). New insights into the treatment of pancreatic cancer. First Emirates Hellenic Medical Conference, Dubai, United Arab Emirates, Dec 6-8.

Blesic S, Maric J, Dragasevic N, Milanovic S, Kostic VS, Ljubisavljevic, M. (2007). The effect of muscle loading on tremor dynamical characteristics in the essential tremor patients. 11th International Congress of Parkinson's disease and Movement Disorders, 937, June 3-7, Istanbul, Turkey.

Gurney AM and Howarth FC. (2007). Pharmacological reactivity of pulmonary arteries in streptozotocin-induced diabetes. *Life Sciences*, Glasgow, PC365.

Howarth FC, Qureshi M, Nowotny N, Zilahi E, Al Haj A, Lei M. (2007). Altered expression of ion transport genes may partly underlie heart rhythm disturbances in the streptozotocin-induced diabetic rat heart. *Life Sciences*, Glasgow, PC165.

Howarth FC, Qureshi MA, Nowotny N, Zilahi E, El Haj MA, Lee M. (2007). Heart rhythm disturbances in the streptozotocin-induced diabetic rat. The 8th Annual UAE University Research Conference.

Morrison J. (2007). Sensitization of bladder afferents by endogenous mediators. International conference dedicated to the late Professor AS Paintal, Vallabhbhai Patel Chest Institute, Delhi, 22 February.

RESEARCH GRANTS 2007

FMHS New Grants

Prof TE Adrian, Prof F Safi
Effects of a Novel Gene Called TTMP on Pancreatic Cancer Growth.

Dr FC Howarth (PI), Profs A Adem, G Nicholls, Drs H Dobrzynski, S Benedict, Mr A Qureshi. (2005-2007). Effects of brain natriuretic peptide on cardiac muscle function in the streptozotocin-induced diabetic rat.

Dr FC Howarth
Progressive effects of type 2 diabetes mellitus on heart function in the Goto-Kakizaki rat.

Prof W Lammers, Ms B Stephen.
Gastric arrhythmias in rabbit and guinea-pig stomach

Dr A Nemmar
Evaluation of diesel exhaust particles translocation across the alveolo-capillary barrier in rats: effect of ageing and endotoxin [seed grant]

Dr A Nemmar (PI), Dr S AL-Salam (Co-investigator)
Mechanisms of the acute inflammatory and thrombotic effects of pulmonary exposure to particulate air pollution.

UAEU Individual Grants

Prof TE Adrian, Dr R Hennig

Expression of a Novel Gene in Pancreatic Cancer.

Dr C Howarth

Sinoatrial node dysfunction in the streptozotocin-induced diabetic rat heart.

Prof J Morrison (PI), Drs Mensah-Brown, Mariam al Shamsi (Co-investigators)

Temporal changes in the expression of some genes involved in noradrenaline synthesis, release and reuptake at sympathetic nerve terminals during the development of diabetic autonomic neuropathy.

Dr A Nemmar (PI), Prof M. Fahim, Dr S. Al-Salam (Co-investigators)

Pulmonary and extrapulmonary effects of diesel exhaust particles in spontaneously hypertensive rats.

UAEU Interdisciplinary Grants

Profs TE Adrian, Prof F Branicki, Dr J Permert, Dr D Kelly

Expression of Genes Predisposing to Type II diabetes in the UAE. [2007-2009]

Dr C Howarth

Exercise induced remodelling of diabetic cardiomyopathy in STZ-induced diabetic rats.

Hamdan Award Medical Research Grant

Prof J Morrison, Prof WJEP Lammers

The generation and spread of electrical activity in smooth muscles of the lower urinary tract and the effects of aging and diabetes.

Terry Fox Cancer Research Grant

Prof TE Adrian, Prof F Safi, Dr P Collin

Effects of and Mechanism of Frondoside A, a Novel Anti-Cancer Agent. [2007-2009].

Others

Dr C Howarth

Women in Education, Technology and Science, UK Resource Centre. Awarded to Dr Xin Wang, RCUK Academic Research Fellow, Faculty of Life Sciences, University of Manchester to support a visit to my laboratory to learn about the operation of biotelemetry systems.

Prof WJEP Lammers

Use of neurocrest cell derived neuronal stem cells (NCCNSC) for the cellular therapy of congenital neuropathic motility disorders of the gastrointestinal tract

PI: KH Schafer

Arbeitsgruppe Enterisches Nervensystem Kinderchirurgie Mannheim und FH Kaiserslautern, University of Zweibrücken, Germany.

Department of Psychiatry

Prof Omer El-Rufaie	Professor, Chairman	Dr Leena Amiri	Teaching Assistant
Prof M Reza Sadeghi	Professor	Dr Sufyan Sabri	Administrative Assistant
Prof Rafia Ghubash	(Clinical Psychology)	Mr Saeed Yousef	Research Technician
Prof Valsa Eapen	Professor*	Mr D Ranganathan	Secretary
	Professor	Ms Aisha Al Shamsi	Secretary
	(Child & Adolescent)	Mr O Pocker	Office Assistant
Dr Ossama Osman	Associate Professor		
Dr Hamdy F Moselhy	Associate Professor		
Dr Mohamed O Salem	Assistant Professor		

*President, Arabian Gulf University, Bahrain.

Tel: 7137445 / Fax: 7672995 / <http://www.fmhs.uaeu.ac.ae/Departments/Psychiatry>

RESEARCH PROFILE

1. Epidemiological aspects of common mental health disorders in primary health care and community settings

- Psychosocial aspects of children with Metabolic Syndromes in the UAE (in collaboration with School Health Department).
- ADHD and tics among school children in the UAE.
- Child psychiatric disorders in primary health care.
- First-episode psychosis presenting at the psychiatric department of Al-Ain Hospital.
- A study on primary care referrals to the psychiatric department of Al-Ain Hospital.
- A study of the prevalence, socio-demographic correlates and co-morbidity of premenstrual dysphoric disorder in the primary care.
- A 10-year Retrospective study of the prevalence and correlates of various psychiatric diagnoses among inpatient admissions to Al-Ain Hospital.

2. Personality, psychosocial and transcultural aspects of physical illness

Psychosocial aspects of chronic physical illness in children (Childhood cancer, Juvenile Diabetes).

3. Cultural aspects of psychiatry

- Help seeking behaviour of psychiatric patients before attending the psychiatric services at Al-Ain Hospital.
- Dream pattern of psychiatric patients attending Al-Ain Hospital.
- Colour preference of patients attending the psychiatric Department of Al-Ain Hospital.
- Time estimation of patients with psychiatric disorders attending Al-Ain Hospital.

4. Psychiatric Genetics

- Family and phenomenological aspects of Obsessive Compulsive Disorder in collaboration with Obsessive Compulsive Foundation Genetics Collaborative and Neurodevelopmental Genetic Unit, Harvard, USA.
- A study examining the genetic aspects of nocturnal enuresis in collaboration with the Department of Biochemistry and Medical Genetics, Sultan Qaboos University, Muscat.
- Studies on mitochondrial DNA sequences of autistic children from different geographic regions in collaboration with Institute of Virology, Vienna, Austria.
- Family and phenomenological study on

Tourette Syndrome: Ongoing collaborative projects with Prof. M. Robertson at University College London Medical School, London, UK.

- e) Research regarding the genetics of brain malformations, autism and non-syndromic mental retardation in collaboration with Prof. C. Walsch, Howard Hughes Medical Institute, Harvard, Boston, USA.

5.Recent translation, development and validation of psychiatric instruments for use among Arabic speaking population.

- a) Child Behaviour Checklist 2-3 years.
- b) PRIME-MD Primary Health Questionnaire (PHQ).

ORIGINAL ARTICLES IN PEER REVIEWED JOURNALS

Al-Gazali L, Eapen V, Gururaj A, Pramathan T. (2007). Subtelomeric chromosome rearrangements in children with unexplained mental retardation in the U.A.E. *Emirates Medical Journal* 25(1); 23-28.

Al-Gomer O, Shelles G, Abdelghani M, Moselhy H. (2007). Pathway to criminal behaviours: a profile of drug dependent offenders enforced for treatment by a court order. *Journal of Addictive Disorder and their Treatment*, 6(2); 73-76.

Al-Gomer O, George S, Moselhy H. (2007). Pattern of sexual dysfunction in male patients with opiate dependence syndrome. *Journal of Addictive Disorder and Their Treatment* 6(3); 137-143.

Eapen V, Mabrouk AA, Zoubeydi T, Yunis F. (2007). Prevalence of pervasive developmental disorders in preschool children in the UAE. *Journal of Tropical Pediatrics* 53(3); 202-5.

Moselhy H. (2007). Ethics in the West versus the moral system in Islam in addiction. *The Arab Journal of Psychiatry*, 18(20); 63-69.

Rasheed S, Gazi K, Moselhy H. (2007). Dexamphetamine prescribing in a community drug team. *Journal of Addictive Disorder and Their Treatment* 6(2); 85-89.

Sobhi A, Moselhy H. (2007). Methadone as an adjuvant treatment of paranoid Schizophrenia with comorbidity of opiate dependence. *Journal of Addictive Disorder and Their Treatment* 6(1); 51-53.

Yunis F, Eapen V, Zoubeydi T, Yousef S. (2007). Psychometric properties of the Child Behavior Checklist/2-3 in an Arab population. *Psychological Reports* 100; 771-6.

BOOKS, CHAPTERS, REVIEWS AND EDITORIALS

Eapen V, Joshy EV. (2007). *Mental Status Examination in Neurology*. Paras Publishing, Hyderabad, India.

Eapen V. (2007). Genetics of OCD: Current Understanding and future directions. in *OCD: Current Understanding and Future Directions*. Eds: J. Reddy & S. Srinath, NIMHANS Monograph, National Institute of Mental Health and Neurosciences, Bangalore, India, pp 43-50.

Moselhy H. (2007). *Pass key to psychiatric exams*. Dar Naged, Benha, Egypt.

Osman OT (2007). The Psychological Aspects of Skin Diseases. In *Skin and Cosmetics*, Galadari I (edit.), pp 300-318, Port Seed Printing Press, Dubai, 2007.

Salem MO. (2007). Cultural Bias and the Necessity to Review the Local Psychiatric Curricula. In: *Academic Civilization Dialogue: Interdisciplinary Pathways*, Al-Missiry, A., (Ed.), Madbouli publications, Cairo, Egypt.

Salem MO. (2007). Heart, Mind and Spirit. *The Royal College of Psychiatrists SIG Archives*, March (15); 1-6.

Salem MO.(2007). The Decent Psychopath: Case History. *Our Word Vol. 7*, 24.

PUBLISHED ABSTRACTS, LECTURES, CORRESPONDENCE

Al Ameri K, Al Safi M, Al Hebsi R, Ghubash M, Kamalboor H, Moselhy H, Sabri S. (2007). Psychopathology of hypertension: association of depression, anxiety, and suppression of emotions to hypertension in an outpatient clinic in Al-Ain, UAE. *Emirates Medical Journal* 25(2); 264-265.

Eapen V, Mabrouk A, Bin-Othman S (2007). Attitudes, perceptions and family coping in pediatric cancer: a comparative study of children with juvenile diabetes and normal controls, *International Oncology Conference - Recent Advances in Clinical Oncology*. 19-22 February. *Emirates Medical Journal*, Vol. 25, Number 1 (Suppl.).

Moselhy HF, Salem MO, Yousif S. (2007). First Episode Psychosis: Medications and Clinical presentation in Al-Ain, UAE. *Australian and New Zealand Journal of Psychiatry* Vol. 41, Supplement 2, A338.

Salem MO. (2007). Cognitive Behaviour Therapy, with Religious Content. *Faith Healing in Religion and Medicine Conference*, 79-80, Abu Dhabi, April.

Salem MO. (2007). First Episode Psychosis: a Trans-cultural Experience. *European Psychiatry* Vol. 22- (suppl. 1); S79-80, March.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB-SITES AND OTHERS

Eapen V. (2007). Psychosocial correlates and coping in young people with Diabetes: *Pan Arab Conference in Diabetes*, Cairo, Egypt, March 27-31.

Eapen V. (2007). OCD: Current understanding and future directions. *International symposium on OCD*.

National Institute of Mental Health and Neuroscience, Bangalore, India, November 10-11.

Eapen V. (2007). Attention Deficit Hyperactivity Disorder: Current Status. John Hopkins International Pediatric Conference, Al Ain, UAE, 25-26 May.

Eapen V. (2007). Depressive and Anxiety Disorders in Adolescence: Mental Health for Primary Care Physicians. Harvard Medical School International, Dubai, UAE, 8-9 November.

Eapen V. (2007). Neurobiology of Autism. Seminar, Education Series. Dubai Harvard Foundation for Medical Research, Dubai, UAE, 12 June.

Eapen V. (2007). Risk factors & psychological effects of metabolic syndrome in the UAE. Metabolic Syndrome & Associated Diseases, Abu Dhabi, UAE, September 2-4.

Eapen V. (2007). Update on ADHD. Expert meeting on ADHD, Eli Lilly, Dubai, UAE, 3 November.

Eapen V. (2007). What makes us Tic? Pathogenesis of Tourette Syndrome as a developmental model. SAF International and WPA Section on Psychiatry in Developing Countries International Conference in Psychiatry, Goa, India, August 2-5.

El Rufaie OEF. (2007). Missed Psychiatric Morbidity Among Primary Care Patients: Training Models to Address It. International Medical Education Conference (IMEC – 2007). Kuala Lumpur, Malaysia 20 – 21 April.

Moselhy H. (2007). First episode psychosis in United Arab Emirates. World Psychiatric Association International Conference. Melbourne, Australia, November.

Moselhy H. (2007). Going to faith healers in first episode psychosis. Treatment with Quraan conference, Abu Dhabi, March.

Osman OT. (2007). Cognitive Deficits in Schizophrenia. Symposium on Schizophrenia Update, Abu Dhabi, April 21.

Osman OT. (2007). Schizophrenic Disorders – Evidence Based Approach to Assessment and Management. Lundbeck Institute, Dubai, November 15.

Osman OT (2007). Transcultural Women's Mental Health Issues in the United Arab Emirates. Symposium on Transcultural Arab Psychiatry. Proceedings of the 160th Annual Meeting of the American Psychiatric Association. San Diego, California U.S.A. May 23rd.

Osman OT (2007). Prevalence and Correlates of PMDD Among Arab Primary Care Patients in the United Arab Emirates. Cross Cultural Psychiatry Symposium. Proceedings of the 160th Annual Meeting of the American Psychiatric Association. San Diego, California, May 22nd.

Osman OT (2007). Cognitive Therapy in the Spiritual Treatment of Substance Abuse and Dependence. Faith

Healing In Religion and medicine Conference, Emirates Palace, Abu Dhabi, April.

Sadeghi MR. (2007). Constructive dialogue between Christians and Muslims. Community of Christ, Baltimore, USA, 20 May.

Sadeghi MR. (2007). Health, disease and spirituality. Fifth Annual Medical Science and Healing of Spirit Workshop, Baltimore, USA. 19 May.

Sadeghi MR. (2007). Hope in times of emotional and spiritual distress. Fifth Annual Medical Science and Healing of Spirit Workshop, Baltimore, USA. 19 May.

Sadeghi MR. (2007). Occupational stress, psychological strain, and coping resources. Harvard/Otago University Workshop. Dubai, 17 May.

Sadeghi MR (2007). The effect of stress, social support and coping on psychological distress of cardiac patients. Fifth Annual Medical Science and Healing of Spirit Workshop. Baltimore, USA, May 19th.

Osma T (2007). Practice guidelines for the management of substance abuse problems. Occupational Medicine. Harvard/Otago University Workshop, Dubai, May 17.

Salem MO. (2007). Outcome of first episode psychosis in the UAE. 15th Association of European Psychiatrists Congress, Madrid, Spain, 17-21 March.

Salem MO. (2007). Updates of Managing Anxiety Disorders. 3rd Lundbeck Institute Conference, Sharm El-Sheikh, Egypt, 29-31 August.

Salem MO. (2007). Workshop on Cognitive Behaviour Therapy, with Religious Content. Faith Healing in Religion and Medicine Conference, Abu Dhabi, April.

Research Grants 2007

FMHS Research Grant

Eapen V [PI], et al.

Stimulation-induced plasticity in Gilles de la Tourette syndrome: A Transcranial magnetic stimulation study.

UAE University Interdisciplinary Grant

Eapen V, Moselhy H [PI], Ali Basam.

Association of serine racase gene, PDLIM5 gene and PICK 1 gene polymorphism and schizophrenia. Interdisciplinary Grant, UAE University (2007-2009).

Sheikh Hamdan Bin Rashid Al Maktoum Award

Eapen V [PI], et al.

Prevalence, Risk factors and Comorbidity of Attention Deficit Hyperactivity Disorder: A comparison between UAE and UK (2006 – 2008).

Department of Radiology

Prof P Corr
Prof R Langer
Dr K N van Gorkom
Dr T Al Mansoor
Ms R Ahmed

Professor, Chairman
Professor & Associate Dean, Clinical Affairs
Associate Professor
Teaching Assistant
Administrative Assistant

Tel: 7137542 / Fax: 7670767 / <http://www.fmhs.uaeu.ac.ae/Departments/Radiology>

RESEARCH PROFILE

Trauma

Trauma imaging is an important part of our daily work and road traffic accidents a major cause of morbidity and mortality in the UAE. We have worked with colleagues in orthopaedic surgery to establish the role of radiographs and three dimensional computed tomographic models of the skeleton have in assessing the type and extent of fractures. We have reviewed our experience in imaging blunt abdominal trauma using computed tomography (CT) scanning and emergency sonography (FAST) with the trauma research group.

Sports Injury Imaging

We have investigated the natural history of bone marrow contusion or bone bruise in knee injuries in sports players. Bone marrow contusion is a focal injury to the bone marrow without any signs of fracture. Bone marrow contusions are demonstrated on magnetic resonance imaging scans of the knee. Contusions to the bone marrow cause considerable bone pain and disability and what is not clear from the literature is what happens to them, do they disappear completely or are they associated with subsequent cartilage and meniscal degeneration.

We are studying the biomechanics of ankle injuries specifically tendinopathy and impingement syndromes in football players. These are chronic disabling syndrome common in professional football players. We are using ultrasound and magnetic resonance imaging to investigate these little understood disorders.

Osteoporosis and Body Fat Composition in Peri-Menopausal Women

Osteoporosis is an under recognized health problem in UAE national women and is the major cause of bone fractures in older women. We are currently measuring the bone density and body fat composition of peri-menopausal women living in Al Ain to determine if there is a direct correlation between the body composition values (percentage body fat and lean mass) and bone mineral density using dual energy X-ray absorption (DEXA) scans. This study will provide a databank of bone mineral density measurements for women living in Al Ain and we hope this study will confirm the correlation between percentage body fat and bone density in women older than 40 years.

Contrast medium research

With the department of Pharmacology we have investigated a new nonionic dimeric contrast agent Losimenol to establish its immunoreactivity in an animal model.

We are investigating the possible pathophysiological mechanism of gadolinium contrast induced nephrogenic systemic fibrosis (NSF) in patients with chronic renal impairment using an animal model. This is a newly recognized disorder in which the underlying mechanism of injury is unknown.

Endothelial Dysfunction and Stroke

With our colleagues in Internal Medicine we are examining endothelial function of blood vessels in

patients who have suffered a recent stroke using Doppler ultrasound.

Three Dimensional Models of the Cerebral Cortex using Magnetic Resonance Imaging and Tensor Diffusion Imaging

This research will allow us to build three dimensional models of the human brain surface from raw data derived from patient's magnetic resonance scans. These models will be used to further our understanding of common neurological disorders such as Alzheimer's Disease and Parkinson's Disease. We will also examine the white matter tracts of the brain using a new technique called diffusion tensor imaging.

ARTICLES IN PEER-REVIEWED JOURNALS

Corr P. (2007). Cirroid Aneurysm of Scalp, Singapore M J, 48:1-2.

Fernandez Cabezudo M, Petroianu G, Ramadi B, Langer R. (2007). Iosimenol, a new non-ionic dimeric contrast medium, does not induce immunoreactivity in the popliteal lymph node assay. Published online before print September 3, 2007; Br J Radiol, 80:713-718.

Jeena PM, Minkara AK, Corr P, Bassa F, McNally L, Coovadia HM, Fox M, Hamer D, Thea D. (2007). Impact of HIV-1 status on the radiological presentation and clinical outcome of children with WHO defined community-acquired severe pneumonia. Arch Dis Child, 92:976-979.

Langer RD, Neidl van Gorkom K, Obaid Al Kaabi H, Torab F, Czechowski J, Nagi M, Ashish GM. (2007). Comparison of two imaging protocols for acute stroke: unenhanced cranial computed tomography (CCT) vs. a multimodality CCT protocol with perfusion imaging. Australas Radiol, 5:532-537.

Langer R, Al-Gazali LI, Raupp P, Varady E. (2007). Radiological Manifestations of the Skeleton, Lungs, and Brain in Stueve-Wiedemann Syndrome (SWS) - Pictorial Review. Australas Radiol, 51:203-210.

Poncyjusz W, Czechowski J, Corr P, Falkowski A, Rac ME. (2007). MR-angiography as a method for evaluating endovascular coiled cerebral aneurysms. Med Sci Monit, 13:59-64.

Tadros AM, Lunsjo K, Czechowski J, Corr P, Abu-Zidan F. (2007). Usefulness of differing imaging modalities in the assessment of scapular fractures caused by blunt trauma. Acta Radiologica 2007;48:71-5.

Langer R, Fernandez-Cabezudo M, al-Ramadi B, Petroianu G, Speck U. (2007). Iosimenol, a new nonionic dimeric contrast medium does not induce immunoreactivity in the PLNA, 8th UAEU Research Conference.

PUBLISHED ABSTRACTS AND LETTERS AND CORRESPONDENCE

Czechowski J, Khalek W, Brannicki F, Elashal N, Bobilli, Langer R. (2005). CT and ultrasound guided interventions in patients with abscess formation. Emirates Med J, 23 (supp): 80-81.

Langer RD, Obaid Al Kaabi H, Neidl van Gorkom KFW, Czechowski J Torab F. (2007). Prospective study of two imaging protocols in patients with acute stroke. Europ Radiol, 17(S):472.

Langer R, Al-Gazali LI, Raupp P. Survey of typical radiographic findings in survivors with SWS. AJR, 188 (S):198-199.

Langer RD, Obaid Al Kaabi H, Neidl van Gorkom KFW, Nagi M, Torab F. (2007). Comparative study of two imaging protocols in patients with acute stroke. AJR, 188 (S):176.

Langer RD, van Gorkom KFW, Obaid Al Kaabi H, Nagi M, Torab F. (2007). Vergleich von zwei Untersuchungsprotokollen zur Detektion von akuten zerebralen Ischaemien. Fortschr Roentgenstr, 179(S 1), 290.

Langer R, Fernandez-Cabezudo M, al-Ramadi B, Petroianu G, Speck U. (2007). Tierstudien zur Evaluierung potentieller Immunreaktionen eines neuen nichtionischen dimeren Kontrastmittels-Iosimenol. Fortschr Roentgenstr, 179(S 1), 28.

Langer R, Al-Gazali L, Raupp P, Varady E. (2005). Radiological findings in patients with Stueve Wiedemann syndrome after 2 years of age. Fortschr Roentgenstr, (supp 1) 288.

Langer R, Raupp P, Varady E. (2005). Unusually presentation of TS in newborns. Fortschr Roentgenstr (supp 1), 324.

Langer R, Czechowski J, Nagi M, Torab F. (2005). Unenhanced CCT vs new multi-modality CCT protocol for detecting acute stroke. Fortschr Roentgenstr (supp 1), 329.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

Corr P, Czechowski J. (2007). Apparent Diffusion Coefficient Measurements in Knee Injuries. 8th Annual UAE University Research Conference.

Corr P. (2007). Imaging of Neuro-AIDS. 7th Annual Arab Health Congress Dubai January 2007.

Corr P. (2007). Diffusion weighted MR imaging of Knee Injuries. European Musculoskeletal Radiology Society 14th Annual Meeting.

Langer R, Fernandez-Cabezudo M, al-Ramadi B, Petroianu G, Speck U. (2007). Iosimenol, a new non-ionic dimeric contrast medium does not induce immu-

noreactivity in the PLNA 8th UAEU Research Conf 2007, Al Ain.

Langer RD, Al-Gazali L, Raupp P. (2007). Radiological findings in patients with SWS surviving infancy. *Europ Radiol* 2007;17(S):489.

Langer RD, Al-Gazali L, Raupp P. (2007). Radiological findings in patients with SWS surviving infancy. *ECR 2007, Vienna*.

Langer RD, Obaid Al Kaabi H, Neidl van Gorkom KFW, Czechowski J, Nagi M, Torab F. (2007). Prospective study of two imaging protocols in patients with acute stroke. *ECR 2007, Vienna*.

Langer R, Al-Gazali LI, Raupp P. (2007). Survey of typical radiographic findings in survivors with SWS. *ARRS, Orlando*.

Langer RD, Obaid Al Kaabi H, Neidl van Gorkom KFW, Czechowski J, Nagi M, Torab F, Bobilli N. (2007). Prospective comparative study of two imaging protocols in patients with acute stroke *ARRS, Orlando*.

Langer RD, van Gorkom KFW, Obaid Al Kaabi H, Nagi M, Czechowski J, Torab F. (2007). Vergleich von zwei Untersuchungsprotokollen zur Detektion von akuten zerebralen Ischaemien. *DRK, Berlin*.

Langer R, Fernandez-Cabezudo M, al-Ramadi B, Petroianu G, Speck U. (2007). Tierstudien zur Evaluierung opotentieller Immunreaktionen eines neuen nichtionischen dimeren Kontrastmittels – Iosimenol *DRK, Berlin*.

Department of Surgery

Prof F J Branicki	Professor, Chairman	Dr A Al Belooshi	Assistant Professor
Prof F Safi	Professor	Dr S Al Bakr	Teaching Assistant
Dr D Younge	Professor	Dr Z Al Fardan	Teaching Assistant
Dr F Abu-Zidan	Professor	Dr T Mahmoud	Teaching Assistant
Dr F Hammad	Associate Professor	Dr M Al Ali	Teaching Assistant
Dr F Torab	Associate Professor	Ms M Al Mansouri	General Technician
Dr A Jawas	Assistant Professor	Mr A Jamal	Secretary
Dr S Al Thani	Assistant Professor	Mr C K Aboobacker	Clerk II
Dr T Mahmoud	Assistant Professor		

Tel: 7137584 / Fax: 7670767 / <http://www.fmhs.uaeu.ac.ae/Departments/Surgery>



Seated from left to right: Prof Frank Branicki, Ms Mahra Al Mansouri, Dr Tahra Mahmoud and Prof Derek Younge.
Standing from left to right: Dr Hani Eid, Mr. Aboobacker, Dr Fawaz Torab, Dr Faiz Hammad, Mr Abdulla Jamal, Mr L Lubbad, Prof. Fikri Abu Zidan and Dr Ali Jawas.

RESEARCH PROFILE

From 1999 until 2001 Prof. Branicki was the sole General Surgeon in the Faculty. The appointments of Dr. Fawaz Torab (March 2001) and Dr. Fikri Abu Zidan (July 2001) and Professor Farouk Safi (September 2002) have now enabled the pursuit of subspecialty interests in upper gastrointestinal/ bariatric surgery, trauma care and hepatobiliary/ colorectal surgery. Prof. Tjernstrom, an Otorhinolaryngologist, has expertise in Head and Oncology retired in August 2007 having been in post for 13 years. Professor Derek Younge (August 2002) has expertise in the management of hand and brachial plexus injuries and musculoskeletal tumours in particular. Dr. Fayez Hammad joined the Department in August 2007, being the first Faculty appointee in Urology. The Faculty in the Department have now increased from four (1999) to ten currently with five advertised senior positions (breast/endocrine surgery, minimal access surgery, neurosurgery, orthopaedics and otorhinolaryngology) yet to be filled.

All Faculty members have Consultant privileges at Al Ain and Tawam Hospitals. Teaching Assistant Dr. Ali Jawas successfully completed Residency training at the University of Toronto in 2004 and was appointed Assistant Professor in December 2004. Following his training in Vascular Surgery he has also completed a Fellowship in Toronto and rejoined us in Al Ain in October 2005. He is actively involved in the provision of vascular services. Teaching Assistant Dr. Saeed Al Thani completed Residency Training in Orthopaedics at the University of Toronto and was appointed Assistant Professor in July 2004. He has completed Fellowship training in 'sports injuries, hand and joint replacement surgery' at the same institution in Toronto and rejoined the Faculty in Al Ain in January 2006 and has been able to establish a busy Sports Injuries clinic in Tawam Hospital. In Canada, Teaching Assistant Dr. Tahira Mahmoud completed Residency training at McGill University, Montreal and a Fellowship period in Ottawa concerned with disease of the anterior chamber of the eye. Appointed Assistant Professor, Dr. Tahra returned to Al Ain and is now practising at Al Ain and Tawam Hospitals.

Our Teaching Assistants include Dr. Zuhair Al Fardan (Plastic and Reconstruction Surgery), and Dr. Saeed Al Bakir (Ophthalmology) who are still to complete examination following Residency training in Canada. Dr. Ali Al Belooshi (Orthopaedics) has completed his Residency training and has been appointed as an Assistant Professor, he is undertaking an extended period of subspecialty Fellowship training. Dr. Mohamad Ali Al Ali the most recently appointed, Teaching Assistant, completed an attachment at Sheikh Khalifa Medical Centre in

Abu Dhabi and is also undergoing training at Tawam Hospital. He undertook short term period of training in Toronto for three months in 2007 and has now found a Residency training opportunity for Otorhinolaryngology in Gothenberg, Sweden.

A General Technician Ms. Maya Thomas, recently resigned from her post. Currently, a senior medical laboratory specialist has been recommended for appointment in the Department. Ms. Mahra Al Mansouri is also a General Technician and assists with other duties relating to teaching as well as research. Mr. Abdulla Jamal has been acting as Departmental Secretary and, in particular, facilitates both teaching activities in the Clerkships and workshops with dedicated secretarial services to a high standard with assistance from Mr. Aboobacker in office duties. Mr. Hisham Hammash, an Administrative Assistant, joined the Department in 2005 following a period of excellent service in the National Medical Library in the Faculty of Medicine and Health Sciences and resigned his post in December 2007 to take up a post as a web page designer in Dubai.

The Department has computerized its teaching materials (Blackboard) and is involved in clinical and as well as basic science research activities. The Junior Surgical Clerkship was reorganized with an emphasis on small group teaching and case discussion with new initiatives introduced by the then Clerkship Coordinator, Dr. Fawaz Torab, who has been succeeded in this role by Dr. Fikri Abu Zidan. A question bank that has been established is now being consolidated. Dr. Torab, a member of the Faculty CME Committee, has also been a member of a Committee which has developed a course in ethics in the General Basic University Teaching Year (UGRU). He has also functioned as a Subcommittee member for implementation of Ethics and Professionalism in the Curriculum and has recently accepted appointment as Chair of the Research Ethics Committee for the Al Ain Medical District. Currently, he has also recently accepted appointment to the Research Committee of the Harvard Medical Foundation in Dubai.

Many Faculty are also heavily involved in administration of research activities – these include the Chairs of Research Grants Committee, (Prof. Branicki, 2000-2004), Research Ethics Committee (Dr. Fawaz Torab, 2002-2004), Trauma Strategic Research Priority Group (Dr. Fikri Abu Zidan, 2002-to date) and Oncology Strategic Research Priority Group (Prof. Tjernstrom, 2002-2007), and the Postgraduate Education Committee (Prof. Farouk Safi, 2007 – to date), Prof. Branicki and Drs. Torab and Fikri are members of the Research Advisory Board. Prof. Branicki also chairs the Under-

graduate Policy and Review Committee (2006 – to date), Dr. Torab also holding membership of this Committee as well as the Health Informatics Group. Prof. Branicki has been a member of the Budget and Finance Committee and currently sits on the Education Advisory Board and Faculty Council. Prof. Safi also sat as a member of the Budget and Finance Committee and is a member of various committees, including Research Grants Committee, Promotion Committee, Health and Welfare Committee and the Oncology Research Group, Prof. Branicki and Torab also being members of this Strategic Research Priority Group for Oncology. Drs. Fawaz and Fikri are members of the Medical Education Research Group. Prof. Safi is the Coordinator of the Gastrointestinal Module. Dr. Fikri Abu Zidan, also a member of the Medical Informatics Committee, was awarded the Faculty's Distinguished Performance Award for Teaching and Research for 2004 and Special Endeavours in Human Services Prize at 5th Annual Research Conference, April 2004. Dr. Fawz Torab received the Faculty Award for Teaching in April 2007.

At Tawam Hospital Prof. Branicki is a member of the Ethics and Consultation Committee, the Trauma Committee and also chairs the Quality Improvement Committee for the Department of Surgery, Dr. Fawaz Torab also being a member of this Committee. He is also a member of the Infection Control Committee and the Nutritional Committee at Tawam. Dr. Fikri is Co-chair of the Trauma Committee.



The Department has organized a number of CME/CPD activities including an International Surgical Conference with more than 600 delegates held in Abu Dhabi in October 2003. This was highly successful with fourteen invited international Faculty and 72 free paper presentations of research activity from the UAE and elsewhere. The Department raised 75% of funding required for the meeting from corporate sponsorship. Members of the Department were involved in Pre-conference Surgical

Skills workshops in January and November 2004 and Dr. Fawaz also organized the 1st Middle East Forum and Workshop on "Virtual Reality for Skills Training in Medicine" in May 2004. The Department is now designated a training centre for laparoscopic surgery simulation and practice by the European Association of Endoscopic Surgeons (EAES). Dr. Torab is the Founding President of a newly established entity – the UAE Chapter of the European Association for Endoscopic Surgery (EAES-UAE), with 42 members, and has organized 13 basic and advanced laparoscopic workshops involving bench top trainers, surgery in animal models and 'Virtual Reality' surgical simulations.



Prof. Derek Younge holds nationwide responsibilities for the Terry Fox Fund for Cancer Research and has also been the Director of the Clinical Sciences Course (2005 – 2007) and oversees activities of the Al Ain Orthopaedic Club. This was founded recently and was previously chaired by Associate Professor Karl Lunsjö, who returned to Sweden in April 2006 after four successful years in the Department. Prof. Safi and Prof. Tjernstrom organized an Oncology Research Day held in Al Ain in November 2005 with presentations from holders of Terry Fox Cancer Fund awards. Prof. Branicki chaired the Organizing Committee for a highly successful International Conference – Recent Advances in Clinical Oncology Conference which took place in February 2007, Prof. Tjernstrom, Prof. Safi, Prof. Younge and Dr. Torab, Chair of the Sponsorship Committee, also being involved in the organization of the Conference and its program.



An International Conference entitled Recent Advances in Clinical Oncology, was held in Al Ain United Arab Emirates, from February 19-22, 2007. The meeting was organized by the Oncology Research Group, an initiative of the Faculty of Medicine and Health Sciences at the United Arab Emirates University. The Group comprises those with a particular interest in Oncology and membership includes basic scientists and clinical faculty at the Faculty of Medicine and Health Sciences (FMHS) and clinicians from Tawam Hospital in affiliation with Johns Hopkins Medicine.

Invited Faculty included eminent overseas speakers, many of whom are in the forefront internationally of their respective fields of interest. Those emanating from North America included clinicians from Johns Hopkins Hospital (Baltimore), MD Anderson Cancer Center (Houston), Memorial Sloan Kettering Cancer Center (New York), Case Western Reserve University (Cleveland), the Mayo Clinic (Rochester), and the University of Toronto (Canada). Invited Faculty from the UK came from the University of London (St Bartholomew's Hospital and University College), Cardiff University and the University of Newcastle (Northern Institute of Cancer Research). Speakers from continental Europe came from Belgium (University of Leuven), France (Hospital Center of Le Havre), Germany (University of Heidelberg, University of Leipzig), Italy (University of Turin), and Spain (University of Navarra). Invited Faculty also traveled from Japan (Keio University), Korea (Pohang University of Science and Technology) and Australia (University of Queensland). In all, presentations were made by 31 International Overseas Faculty from Australia, Belgium, Canada, France, Germany, Italy, Spain, Japan, Korea, the UK, the USA and regionally from Saudi Arabia and Qatar. Sixteen UAE based speakers participated by invitation from Abu Dhabi (two), Dubai (three), Al Ain (eleven), all being Faculty members at FMHS. This was the largest group of Invited Internationally distinguished clinicians with Oncology interests ever to gather in the UAE. The meeting attracted 1000 delegates from around the world.

The Conference was deemed a great success thanks to the dedication of the Organizing Committee chaired by Prof. Branicki. Financial assistance to host the meeting came from a variety of sources, substantial support came from the Faculty of Medicine and Health Sciences, UAE University, Tawam Hospital in affiliation with Johns Hopkins Medicine, and the General Authority for Health for Health Services for the Emirate of Abu Dhabi. We are most grateful for the help of many of our colleagues in the Oncology Research Group, UAE University and Tawam/Johns Hopkins. Abstracts of Invited Faculty presentations, free papers and posters were published in a special supplement of the Emirates Medical Journal [EMJ 2007; Vol 25(1 suppl.)] with the support of the Sheikh Hamdan Foundation. The Proceedings of the

meeting are to be published in a volume of the Annals of the New York Academy of Sciences (in press).

Dr. Torab is completing studies to evaluate resorption capacity of inflamed peritoneum in the pathogenesis of systemic sepsis in an acute peritonitis model. This work involves measurement of endotoxin and cytokines, the gastrointestinal tract being the primary source of endotoxin as a result bacterial translocation. The work was facilitated by summer electives undertaken in 2003 and 2004 by female medical students at the Faculty. Results were presented in the GCC Students Conference in January 2004. One of his supervised students won a poster award at the GCC Medical Students Conference held in Kuwait (January 2005). One student also presented the findings, under the supervision of Dr. Torab, at a meeting in Germany in March 2005. Studies to measure endotoxin in both human and rat plasma and sera using the Limulus Amoebocyte Lysate Test (LAL) are also underway. This involves a quantitative spectrophotometric assay for endotoxin in human plasma, modified and standardized for murine plasma. Dr. Torab is collaborating with Prof. Ellis (Department of Medicine) and Dr. Ramadi (Department of Microbiology) in an analysis of the tolerability and efficacy of human recombinant interleukin II in the management of sepsis in leukemia patients undergoing consolidation chemotherapy.

Prof. Fikri has a major interest in research concerning trauma and has recently presented initial results following the establishment of the first Trauma Registry in the UAE. The project has received international attention when findings have been presented national and overseas. Prof. Fikri has received two ultrasound machines donated by the Red Crescent Society to the Department of Surgery which are to be used for the detection of free intrabdominal fluid (FAST) in trauma. The machines have also helped to facilitate teaching and research activities in trauma and other fields. Two FAST workshops for training in ultrasonography have been conducted by Dr. Fikri Abu Zidan and colleagues in 2004, 2005, and again in 2006. Dr. Fikri was organized a FAST workshop at a meeting of the 7th European Congress of Trauma and Emergency Surgery which took place in Malmo, Sweden in September 2006.



In April 2004 the Department hosted inaugural back to back Provider and Instructor courses in the UAE for the Advanced Trauma Life Support (ATLS). Four invited Faculty and staff from the USA and one from Canada participated in the teaching and Provider courses have since been held again in the Faculty and in Fujairah. These courses are training Emirati graduates and others in trauma care and will help reduce the burden of disabling illness and mortality from motor vehicle crashes. In 2005 the Department hosted two ATLS courses in Al Ain and members also participated as Instructors in two courses held in Fujairah. Courses were held in the Faculty in March, April, November and December 2006. In addition, Prof. Branicki participated as Faculty for two Instructor Courses held in Abu Dhabi in May 2006. Dr. Ali Jawas and Prof. Derek Younge successfully completed the Instructor Course. In 2006 participation in Courses (teaching activities and assessments) conducted over 2½ days at weekends was as follows: Dr. Fikri Abu Zidan (4), Prof. Derek Younge (5), Assistant Professors Fawaz Torab (4), Ali Jawas (2) with Frank Branicki who is a Course Director for the Emirate of Abu Dhabi, directing and teaching courses in Al Ain (6), Sheikh Khalifa Medical City (5) and Fujairah (1). A number of Interns and Residents in the General Surgery training program have successfully completed Provider Courses. Several Faculty also participated in an international Emirates Trauma and Emergency Surgery Conference which took place in Fujairah in May 2006. Data relating to ATLS courses and training have been presented nationally and at an International Surgical Congresses. In 2007 ATLS activities continued with participation of Faculty members as follows: Prof. Fikri Abu Zidan (2), Prof. Derek Younge (4), Prof. Frank Branicki (6) being the Course Director and Faculty for courses in Al Ain as well as teaching courses in Fujairah (2). More than 560 doctors have now been trained in 36 Provider and Instructor courses – all of this made possible with active participation of Instructors at Tawam Hospital.



Prof. Safi had taken on the role as Director of Postgraduate Training in the Department with the establishment in June 2005 of a local Residency

training program in General Surgery under the auspices of the Arab Board with the future possibility of Associate MRCS accreditation by the Senate of Surgery in the United Kingdom. The Program has been accredited by the Arab Board in Surgery and five Residents were appointed to the first year of the program in October 2005 and four more joined the program in 2006. In 2007 Prof. Safi has become the Chair of the Postgraduate Medical Education Committee. Professor Branicki assumed the role of Acting Program Director in April 2007 in a revitalized program which has been restructured along North American lines. Five new Residents joined the program in July 2007 and following some earlier attrition the complement of the Residents in the Program is now twelve, with more highly organized Viva Voce and MCQ assessments during "In Service" training. A Residency Advisory Committee was established in August 2007 for the new Integrated Training Program with membership of surgeons from both Sheikh Khalifa Medical City and Mafraq Hospital in Abu Dhabi and Tawam and Al Ain Hospitals. The Program is thus expanding to other sites with a strong spirit of enthusiasm for these collaborative efforts to provide training opportunities for Residents in General Surgery.



A Proposal for a Residency Training Program in Urology has been presented to the Postgraduate Education Committee by Dr. Fayez Hammad. A proposal for Residency training in Ophthalmology prepared by Dr. Tahra Mahmoud has been tabled for consideration by the Committee for presentation at its April 2008 meeting.

Prof. Fikri and Prof. Younge have collaborated with former colleague Assoc. Prof. Lunsjo in prospective studies of patients treated in Al Ain Hospital having sustained scapular or pelvic fractures. These have come to fruition and are now the two largest prospective series in the literature. Prof. Younge is currently writing up his experiences with novel operative proce-

dures he has devised for the management of musculoskeletal tumours.

Several research projects and activities have been fruitful and these include endotoxin and cytokine measurement in chemical peritonitis with intraperitoneal injection of interleukin 6, similar studies in gram positive peritonitis with endotoxin and interleukin 6 injections, as well as measurement of endotoxin, interleukin 6 and tumour necrosis factor alpha in patients with critical limb ischaemia. Studies also involve the investigation of endotoxaemia and inflammatory conditions in patients with peritonitis and treatment of infection in the feet of diabetic patients.

Prof. Fikri and Dr. Fawaz are Principal Investigators for research projects funded from different sources – the Research Grants Committee (Faculty of Medicine and Health Sciences) Individual and Interdisciplinary Research Proposals (United Arab Emirates University) and the Sheikh Hamdan Awards. More recently, Dr. Torab has been awarded a Individual Faculty Research Grant by the UAE University for research relating to laparoscopic treatment of perforated peptic ulcer. He has also collaborated in studies with Faculty in Medical Microbiology regarding in vitro investigations of breast cancer. Prof. Branicki acted as Chair of three Subcommittees for Sheikh Hamdan Awards in 2004, and Prof. Tjernstrom and Dr. Torab acted as Subcommittee members for the consideration of various Awards. Prof. Branicki was again involved as Chair of a Subcommittee for the 2006 Awards and Dr. Torab is also involved as a Subcommittee member. Prof. Branicki is again acting as a Subcommittee Chair for the 2008 Awards with Dr. Torab being a Subcommittee member.



With the support of Faculty Administration it has been possible to establish a Clinical Skills and Procedural Training Centre which is a multidisciplinary venture to foster training for undergraduates and particularly Residents in a variety of clinical disciplines. Dr. Fawaz Torab is the Director of the Center with basic and advanced laparoscopic courses planned in collaboration with

industry who have strongly supported the project financially. It is anticipated that both FAST and ATLS courses will be accommodated as need be, and also courses in laparoscopic gynaecological surgery and fetal ultrasonography. Trainers include, cardiologists, nephrologists, obstetrician/gynaecologists, radiologists and surgeons. This exciting initiative has been made possible with donations from instrument and equipment manufacturers.

Back to back inaugural Provider and Instructor Advanced Trauma Courses for Nurses (ATCN) are scheduled to take place in the Faculty of Medicine and Health Sciences in March 2008. These activities run in concert with ATLS courses are made possible with the enthusiastic participation of Instructors from Tawam Hospital.

Departmental research interests are thus diverse, currently encompassing general surgery and trauma. As the Department grows in stature with the appointment of a senior laboratory manager and surgeons with subspeciality interests, it is perceived that experimental research initiatives will expand in keeping with strategic themes which have been adopted in the Faculty.

ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Abu-Zidan FM, Ramdan K, Czechowski J. (2007). A camel bite breaking the neck and causing brain infarction. *J Trauma*. 63:1423.

Abu-Zidan FM, Nagelkerke N, Rao S. (2007). Factors affecting severity of bicycle-related injuries: the role of helmets in preventing head injuries. *Emerg Med Australas*. 19:366-71.

Adam SH, Eid HO, Barss P, Lunsjo K, Grivna M, Torab FC, and Abu-Zidan FM. (2007). Epidemiology of geriatric trauma in United Arab Emirates, *Achieves of Gerontology and Geriatrics*, 1785:1-6.

Alghamdi A, Jawas A, Hart R. (2007). Use of Octreotide for the Prevention of Pancreatic Fistula after Elective Pancreatic Surgery: A Systematic Review & Meta-Analysis. *Can J Surg*. 50(6): 459-66.

Alnaqbi KA, Joshi S, Ghazal-Aswad S, Abu Zidan FM. (2007). Primary umbilical adenocarcinoma. *Singapore Med J*. 48:e308-10.

Botden SM, Torab F, Buzink SN, Jakimowicz JJ (2007). The importance of haptic feedback in laparoscopic suturing training and the additive value of virtual reality simulation. *Surg Endosc*. Oct 18; [Epub ahead of print]

Eid HO, Bashir MM, Muhammed OQ, Abu-Zidan FM. (2007). Bicycle-related injuries: a prospective study of 200 patients. *Singapore Med J*. 48:884-6.

Eid HO, Abu-Zidan FM. (2007). Biomechanics of road traffic collision injuries: a clinician's perspective. *Singapore Med J*. 48:693-700. Review.

Hammad FT. (2007). TVT may also cause urethral diverticulum. *International Urogynecology Journal & Pelvic Floor Dysfunction*. 18(4):467-9.

Hefny AF, Eid HO, Al-Hussona M, Idris KM, Abu-Zidan FM. (2007). Necrotizing fasciitis: a challenging diagnosis. *Eur J Emerg Med*. 14:50-2.

Jawas A, Alghamdi A, James S, Chan R, Lossing AG. (2007). Is endovascular main renal artery embolization with kidney sacrifice a safe option? A case report of renal artery aneurysm. *Eur J Radiol*. 63(3): 131-34.

Langer RD, van Gorkom K, Al Kaabi HO, Torab F, Czechowski J, Nagi M, Ashish GM. (2007). Comparison of two imaging protocols for acute stroke: unenhanced cranial CT versus a multimodality cranial CT protocol with perfusion imaging. *Australas Radiol*. 51(6):532-7.

Lunsjo K, Tadros AM, Hauggaard A, Blomgren R, Kopke J, Abu-Zidan FM. (2007). Acute plain anteroposterior radiograph of the pelvis is not useful in detecting fractures of iliac wing and os sacrum: a prospective study of 73 patients using CT as gold standard. *Australas Radiol*. 51:147-9.

Lunsjo K, Tadros A, Hauggaard A, Blomgren R, Kopke J, Abu-Zidan FM. (2007). Associated injuries and not fracture instability predict mortality in pelvic fractures: a prospective study of 100 patients. *J Trauma*. 62:687-91.

Radwan MM, Ramdan K, Abu-Azab I, Abu-Zidan FM. (2007). Botulinum toxin treatment for anal fissure. *Afr Health Sci*. 7:14-7.

Shirodkar S, Hammad FT, Qureshi NA. (2007). Male genital self-amputation in the Middle East: a simple repair by anterior urethrostomy. *Saudi Medical Journal*. 28(5):791-3.

Shawish F, Hammad F, Kazim E. (2007). Placenta percreta with bladder invasion: A plea for multidisciplinary approach. *Saudi Medical Journal*. 28(1):139-41.

Tadros AM, Lunsjo K, Czechowski J, Abu-Zidan FM. (2007). Multiple-region scapular fractures had more severe chest injury than single-region fractures: a prospective study of 107 blunt trauma patients. *J Trauma*. 63:889-93.

Tadros AM, Lunsjo K, Czechowski J, Corr P, Abu-Zidan FM. (2007). Usefulness of different imaging modalities in the assessment of scapular fractures caused by blunt trauma. *Acta Radiol*. 48:71-5.

PUBLISHED ABSTRACTS, LETTERS, CORRESPONDENCE

Branicki FJ, Torab FC. (2007). Neoadjuvant and Adjuvant Therapy for Gastric Cancer. 7th International Gas-

tric Cancer Congress. Sao Paulo, Brazil, May 2007. *Journal of the Brazilian Medical Association* 2007, Suppl.

Hammad FT. (2007). Radical Prostatectomy: Oncological Outcomes. *Emirates Medical Journal*; 25 (1)-Supp, p: 26.

Shirodkar SS, Hammad FT, Kazim EM. (2007). Prostatic Lymphoma mimicking a common urinary symptom, *Emirates Medical Journal*; 25 (1)-Supp, p: 80.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS.

Abu-Zidan FM, Czechowski J, Corr P, Kazzam E. (2007). A practical FAST course. 3rd Abu Dhabi Annual International Surgical Conference. March 2007, Abu Dhabi, UAE.

Abu Zidan FM. (2007). Recent advances in trauma management. Al-Bureimi Surgical Meeting. March 2007, Buraimi, Oman.

Abu-Zidan F.M., Czechowski J., Corr P., Kazzam E. (2007). A practical FAST course. 3rd World Congress on ultrasound in Emergency and Critical Care Medicine. May 2007, Paris, France.

Abu Zidan FM. (2007). Basic physics of ultrasound. Basic Ultrasound in Emergency Medicine Course. 3rd World Congress on Ultrasound in Emergency and Critical Care Medicine. Paris, France, May 2007.

Abu-Zidan FM, Czechowski J, Corr P, Kazzam E. (2007). A practical FAST course. 1st Joint Congress - European Association for Trauma and Emergency Society (EATES) and European Trauma Society (ETS), Graz, Austria, May 2007.

Abu Zidan FM. (2007). Ultrasound in Thoraco-abdominal trauma. Workshop on Ultrasound in Thoraco-abdominal Trauma. 3rd World Congress on Ultrasound in Emergency and Critical Care Medicine, Paris, France, May 2007.

Abu Zidan FM. (2007). WINFOCUS recommendations for the use of ultrasound in thoraco-abdominal trauma. 3rd World Congress on Ultrasound in Emergency and Critical Care Medicine, Paris, France, May 2007.

Abu Zidan FM. (2007). Basic physics of ultrasound. Pre-congress Postgraduate Surgical Ultrasound Course. 1st Joint Congress - European Association for Trauma and Emergency Society (EATES) and European Trauma Society (ETS), Graz, Austria, May 2007.

Abu Zidan FM. (2007). WINFOCUS recommendations for the use of ultrasound in thoracoabdominal trauma. Pre-congress Postgraduate Surgical Ultrasound Course. 1st Joint Congress - European Association for Trauma and Emergency Society (EATES) and European Trauma Society (ETS), Graz, Austria, May 2007.

- Abu-Zidan FM, Eid HO, Adam SH, Torab FC, Lunsjo K. Factors affecting mortality in motor vehicle collisions. The 8th Annual UAE University Research Conference, Al-Ain, UAE. April, 2007.
- Abu Zidan FM, Eid H, Bashir M, Branicki FJ. (2007). Camel related injuries in the UAE. Glasgow Surgical Forum. Royal College of Physicians and Surgeons of Glasgow. Glasgow, UK, October 2007.
- Adam SH, Eid HO, Torab FC, Lunsjo K, Barss P, Michal Grivna M, Abu-Zidan FM. (2007). Geriatric Trauma in United Arab Emirates. 3rd Abu Dhabi Annual International Surgical Conference, Abu Dhabi, UAE, March 2007.
- Adam SH, Eid HO, Torab FC, Lunsjo K, Barss P, Michal Grivna M, Abu-Zidan FM. (2007). Geriatric Trauma in United Arab Emirates. The 8th Annual UAE University Research Conference, April, 2007, Al-Ain, UAE.
- Adam SH, Eid HO, Torab FC, Lunsjo K, Barss P, Michal Grivna M, Abu-Zidan FM. (2007). Geriatric Trauma in United Arab Emirates. 1st Joint Congress - European Association for Trauma and Emergency Society (EATES) and European Trauma Society (ETS), Graz, Austria, May 2007.
- Ahmed I, Ramadhan K, Branicki F, El-Ashal Y, Abu-Zidan FM. (2007). Management of Pancreatic Injuries in Al-Ain Hospital. 3rd Abu Dhabi Annual International Surgical Conference. Abu Dhabi, UAE, March 2007.
- Ahmed I, Ramadhan K, Branicki F, El-Ashal Y, Abu-Zidan FM. (2007). Management of Pancreatic Injuries in Al-Ain Hospital. Al-Buraimi Surgical Meeting, Buraimi, Oman. March 2007.
- Branicki FJ, Abu Zidan FM, Torab FC, Albarracin F, Kazim S, Gautam SC. (2007) Advanced Trauma Life Support Courses in the United Arab Emirates. Session 3 -A-2, Surgical Education/Training/Ethics. 3rd Abu Dhabi Annual International Surgical Conference, Abu Dhabi, UAE March 2007.
- Branicki FJ., Ahmed I, Ramadan K, El Ashaal Y, Abu Zidan F. (2007). Pancreatico-duodenal Injury. Surgical Day 2007, General Surgery Department and Staff Development Unit, Al Buraimi Hospital, Al Buraimi, Al Dhahira, Oman, March 2007.
- Branicki FJ, Abu Zidan FM, Torab FC, Albarracin F, Kazim S, Gautam SC (2007). Advanced Trauma Life Support courses in the United Arab Emirates. 3rd Abu Dhabi Annual International Surgical Conference. Abu Dhabi, UAE. March 2007.
- Branicki FJ, Torab FC. (2007). Neoadjuvant and Adjuvant Therapy for Gastric Cancer. Surgical Day 2007, General Surgery Department and Staff Development Unit, Al Buraimi Hospital, Al Buraimi, Al Dhahira, Oman. March 2007.
- Branicki FJ. (2007). Gastric Cancer. Glasgow Surgical Forum. Royal College of Physicians and Surgeons of Glasgow. October 2007. Glasgow, UK.
- Branicki FJ. (2007). Management of early Complications following Gastroduodenal Surgery. Glasgow Surgical Forum. Royal College of Physicians and Surgeons of Glasgow, Glasgow, UK, October 2007.
- Branicki FJ. (2007). Gastroesophageal Reflux Disease – medical, endoscopic or laparoscopic intervention? Glasgow Surgical Forum. Royal College of Physicians and Surgeons of Glasgow, Glasgow, UK, October 2007.
- Branicki FJ. (2007). Pancreatico-duodenal Injury: Diagnosis and Treatment . First Hellenic – Emirates Medical Conference, Dubai, UAE, December 2007.
- Branicki FJ, (2007). Chemotherapy Neoadjuvant and Adjuvant Therapy for Gastric Cancer. 7th International Gastric Cancer Congress, Sao Paulo, Brazil, May 2007.
- Branicki FJ, Abu Zidan FM, Torab F, Albarracin F, Kazim S, Gautam SC. (2007). Advanced Trauma Life Support Courses in the United Arab Emirates. Proceedings 1st Joint Congress - European Association of Trauma and Emergency Surgery (EATES) European Trauma Society (ETS), Graz, Australia, May 2007.
- Eid HO, Adam SH, Torab FC, Lunsjo K, Barss P, Michal Grivna M, Abu-Zidan FM. (2007). Factors affecting mortality in motor vehicle collisions in AL-Ain City. 3rd Abu Dhabi Annual International Surgical Conference, Abu Dhabi, UAE, March 2007.
- Eid HO, Adam SH, Torab FC, Lunsjo K, Barss P, Michal Grivna M, Abu-Zidan FM. (2007). Factors affecting mortality in motor vehicle collisions in AL-Ain City. The 8th Annual UAE University Research Conference, Al-Ain, UAE, April, 2007.
- Eid HO, Adam SH, Torab FC, Lunsjo K, Barss P, Michal Grivna M, Abu-Zidan FM. (2007). Factors affecting mortality in motor vehicle collisions in AL-Ain City. 1st Joint Congress - European Association for Trauma and Emergency Society (EATES) and European Trauma Society (ETS), Graz, Austria, May 2007.
- Hammad FT. (2007). Radical Prostatectomy: Oncological Outcomes. Recent Advances in Clinical Oncology, Al-Ain, United Arab Emirates, February 2007.
- Jawas A. (2007). Atherosclerosis a surgical look. General Surgery Department and Staff Development Unit, Al Buraimi Hospital, Al Buraimi, Al Dhahira, Oman. March 2007.
- Mahmoud, T., Mansour, M., et al. (2007). Intra-Operative Echographic Localization for Radioactive Ophthalmic Plaques in Choroidal Melanoma. International Conference Recent Advances in Clinical Oncology, Al Ain, UAE, February 2007.

Mahmoud, T., Mansour, M., et al. (2007). Intra-Operative Echographic Localization for Radioactive Ophthalmic Plaques in Choroidal Melanoma. Canadian Ophthalmological Society, Montreal, Canada, June 2007.

Mahmoud T, Jackson WB. (2007). Comparison of Wave-front-Guided Iris Registration with Manual Registration LASEK for the Correction of Myopia and Myopic Astigmatism. European Society of Cataract and Refractive Surgeons, Stockholm, September 2007.

Potemkowski A, Trab M, Jawas A. (2007). Brachial artery-concomitant brachial vein arteriovenous fistula for hemodialysis; another way to avoid prosthetic graft. 25th Annual Meeting of the International Association of Vascular Surgeons, Aosta Valley, Italy, March 2007.

Safi F. (2007). Liver Surgery in the UAE. Second International Conference of Al Noor Hospital, Liver Diseases, Abu Dhabi, UAE, February, 2007.

Safi F, Sayah S. (2007). Colorectal Cancer Session, Recent Advances in Clinical Oncology Conference, Al Ain, UAE, February, 2007.

Safi F. (2007). Updates in Liver Surgery. 7th UAE University Research Conference, Al Ain, UAE, April, 2007.

Safi F. (2007). Updates in Treatment of Hepatocellular Cancer; International Meeting for Hepatology; Health Authority of Abu Dhabi (HAAD), Abu Dhabi, UAE, May 2007.

Safi F. (2007). Early Diagnosis and Treatment of Hepatocellular Cancer. CME Program, Al Ain, UAE, June 2007.

Safi F. (2007). Monitoring the Pancreaticojejunostomosis after Head Resection using the Estimation of Amylase in Drainage Fluid. 16th Asian Congress of Surgery, Chinese Surgical Week, Grand Epoch City, Beijing, China, October 2007.

Safi F. (2007) Pancreaticojejunostomosis using Cattell Technique in the Remnant Pancreas after Duodeno-pancreatectomy. 16th Asian Congress of Surgery, Chinese Surgical Week, Grand Epoch City, Beijing, China, October 2007.

Shirodkar SS, Hammad FT & Kazim EM. (2007). Prostatic Lymphoma mimicking a common urinary symptom, Recent Advances in Clinical Oncology, Al-Ain, United Arab Emirates, 19-22 February 2007.

Torab FC. (2007). Evaluation of the role of a bariatric center in a country with high prevalence of obesity and diabetes. 15th European Association for Endoscopic Surgery (EAES) Meeting, Athens, Greece.

Torab FC, Wazz G, Massad I, Ghodratollah N, Branicki FJ. (2007). Obesity surgery in a country of high prevalence of obesity and diabetes. International Surgical Week. Montreal, Canada.

Torab FC. (2007). Laparoscopic bariatric surgery in the UAE. General Surgery Department and Staff Development Unit, Al Buraimi Hospital, Al Buraimi, Al Dhahira, Oman, March 2007.

Younge D, Abed R. (2007). Surgical Management of Large Musculo-skeletal Sarcomas. Recent Advances in Clinical Oncology, Al Ain, UAE, February 2007.

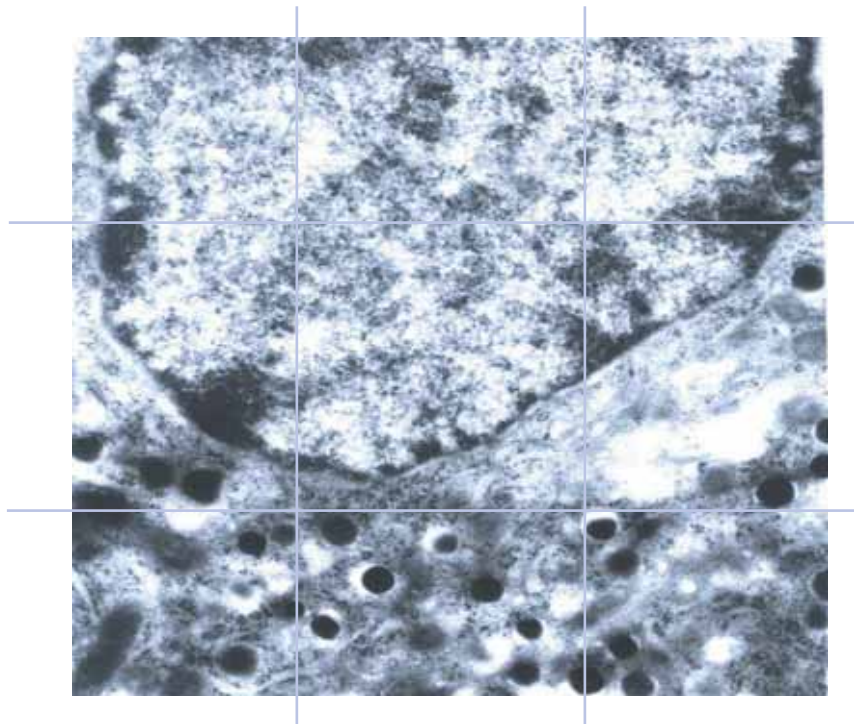
Younge D, Abed R. (2007). Musculo-skeletal Sarcomas, How and When to Refer. 8th Twam Orthopedic Congress on Modern Methods of Orthopedic Management, Faculty of Medicine, Al Ain, UAE, March 2007.

RESEARCH GRANTS 2007

UAE University Individual Grant

Hammad FT. (2007). The effect of NSAIDs (nonsteroidal antiinflammatory drugs) on the obstructed kidney. (Seed Money).

Research Priority Groups



Diabetes and Cardiovascular Research Priority Group

Core Members:

Prof. Enyioma Obineche
Dr. Chris Howarth
Dr. Hussain Saadi
Prof. Abdu Adem

Dr. Elsadig Kazzam
Prof. Farouk Safi
Prof. Ernest Adeghate (Chair)
Dr. Juma Al Kaabi
Prof. Thomas Adrian

In addition to the core members, group membership includes 37 other faculty members from within the FMHS.

Introduction

The Diabetes and Cardiovascular Research Priority Group (DCRG) was established on January 27, 2002, after an initial meeting called by the Dean in the autumn of 2001. The DCRG works closely with the Al Ain Diabetes Research Group.

Aims of the Group

- Facilitate diabetes and cardiovascular research in the faculty.
- Enhance the clinical and basic research capabilities of established diabetes investigators.
- Act as a channel for research funding.
- Act as a resource for new faculty members and for those who may want to start research in diabetes/cardiovascular diseases.
- Present scientific research at national and international scientific conferences.
- Publish scientific research in national and international scientific journals.
- Cooperate and liaise with any local, national or international agency with similar research interests.
- Train post-doctoral, doctoral, masters and bachelors degree students.
- Act as a resource unit on diabetes and cardiovascular diseases.

Activities

Annual Workshop on Diabetes Mellitus and Its Complications, April 21, 2007

The DCRG organized a one-day Annual Workshop on Diabetes Mellitus and Its Complications on April 21, 2007 at the Al Ain Intercontinental Hotel. The Workshop attracted more than 350 delegates across the UAE and abroad. In addition to local delegates, Professor Prof. Philippe Halban, University of Geneva, Switzerland and past President, European Association for the Study of Diabetes a prominent figure in the field diabetes gave the keynote speech.

Other international speakers include Dr. Marg McGill, University of Sydney, Australia, Dr. Sheridan Waldron, University of Leicester, England, UK and Dr. Anne Belton, from Canada.

The Workshop covered different areas of diabetes including the metabolic syndrome, diabetes in children and adolescents, and diabetes education.

Themes of research include the following

Neuropeptides and neurotransmitters in diabetes
Trace elements in diabetes
Immunology of diabetes
Clinical pharmacology of diabetes
Insulin and glucagon secretion
Effects of diabetes on cardiac muscle function
Epidemiology of diabetes
Diabetic complications (nephropathy, neuropathy and angiopathy)
Lipids in human and experimental diabetes
Metabolic syndrome and obesity

Pancreas transplantation
Hypertension
Gestational diabetes

Grants obtained by members

- Exercise induced remodelling of diabetic cardiomyopathy in STZ-induced diabetic rats. UAEU University
- Prevention and treatment of vitamin D deficiency in Arabian women: Efficacy of high dose vitamin D supplementation. Research Grant funded by Hamdan Award for Research in Medical Sciences
- A national survey of the prevalence of diabetes and its complications in the United Arab Emirates. Research funded by UAE University and Red Crescent
- Effects of streptozotocin-induced diabetes on heart rhythm. FMHS, UAE University
- Effects of ageing complicated by diabetes on heart function in the streptozotocin-induced rat. FMHS, UAE University
- Mechanisms underlying the progressive long-term effects of type 2 diabetes on heart muscle function. UAEU Interdisciplinary Grant
- Knowledge, Attitude and Practices of Diabetic Patients in Al-Ain Medical District. FMHS, UAE University
- Prevalence of Obesity (using BMI) and its Risk factors among adults in Al-Ain City, UAE, FMHS, UAE University
- Localization of gamma-aminobutyric acid and glutamic acid decarboxylase in the endocrine pancreas of Goto Kakizaki rats. UAE University
- Pulmonary artery function in diabetes mellitus: role of potassium channels. Royal Society International Outgoing Short Visit grant
- Effects of brain natriuretic peptide on cardiac muscle function in the streptozotocin-induced diabetic rat. FMHS, UAE University
- Progressive effects of type 2 diabetes mellitus on heart function in the Goto-Kakizaki rat
- Sinoatrial node dysfunction in the streptozotocin-induced diabetic rat heart

- Plasma N-terminal prohormone brain natriuretic peptide (NT-proBNP) and hormones of the renin angiotensin-aldosterone system in a Gulf Arab hypertensive population.

- Characteristics of chronic kidney disease patients and their cardiovascular risk profile in the United Arab Emirates.

Collaboration with local and international institutions

Local

Al Ain Diabetes Research Group
Emirates Diabetes Society (Emirates Medical Association)
Tawam and Jimi Hospitals, Al Ain, UAE
Neuroscience Research Group, FMHS, UAEU
Faculty of Science, UAEU
Faculty of Engineering, UAEU

International

University of Manchester, UK
James Cook University, Queensland, Australia
University of Bristol, UK
University of Leeds, UK
University of Central Lancashire, UK
Karolinska Institut, Sweden
Semmelweis University, Hungary
CNRS, France

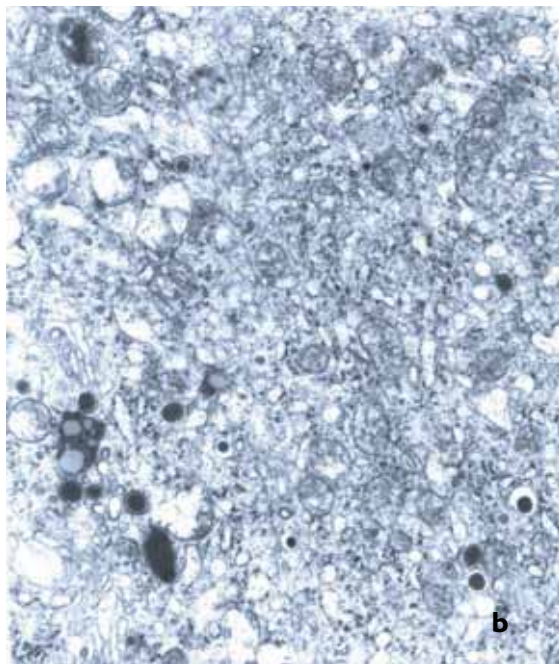
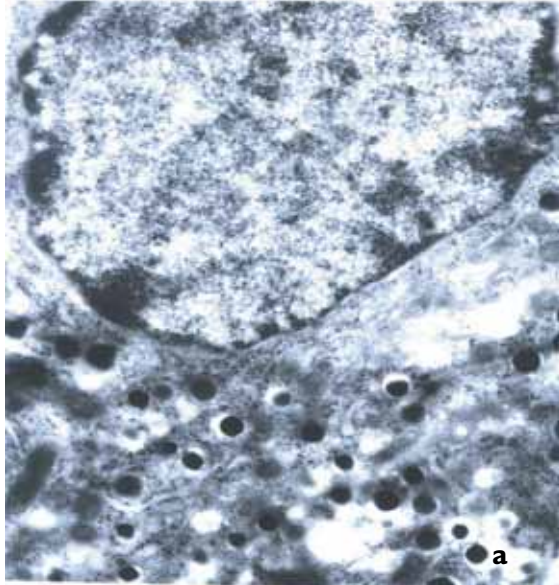
Future plans

Establishment of a Diabetes research Centre
The group is planning to establish a Diabetes Research Centre. The centre will provide a facility that enables and facilitates a multidisciplinary approach to the study of diabetes and its complications and to provide the infrastructure for diabetes related undergraduate and post-graduate research and teaching activities.

Publications

Members of the DCRG published more than 36 diabetes-related papers in top quality, peer-reviewed journals including but not limited to Respiratory Medicine, International Journal of Cardiology, Journal of Human Hypertension, Biogenic Amines, Molecular and Cellular Biochemistry, Archives of Obstetrics & Gynecology, Peptides, Diabetes Research & Clinical Practice, International Journal of Urogynecology, Journal of Internal Medicine, Experimental Physiology, Gynecological Endocrinology, Journal of Reproductive Medicine, British Journal of Obstetrics & Gynecol-

ogy in 2007. The cumulative impact factor of these journals exceeded 84 (See Departments of Anatomy, Biochemistry, Community Medicine, Pathology, Pharmacology, Physiology, Psychiatry, Internal Medicine and Medical Microbiology for relevant publications).



Electron micrographs showing pancreatic beta cells of
(a) normal and
(b) diabetic rat. Note the changes in the secretory granules.

Genetics and Development Research Priority Group

Mission of the Group

UAE is a young modern society, with traditional customs and beliefs, in which consanguineous marriages are common. As a result, autosomal recessive disorders occur more frequently in the UAE than in other populations with over 150 recessive disorders have been reported so far. In addition, local population has a high frequency of alpha and beta thalassemia mutations and hemoglobin S. Furthermore, the incidence of multifactorial diseases such as type II diabetes, obesity, certain cancers, neurodegenerative and cardiovascular diseases has been steadily rising in the UAE over the past three decades. This is mainly due to the rapid socio-economic growth and a significant rise in life expectancy. The rapid increase in the prevalence of multifactorial diseases also suggest genetic predisposition to those diseases revealed by rapid changes in lifestyle and diet.

The mission of the Genetics and Development Research Group is to provide the highest quality research into the bases of genetic diseases, provide high quality health care and education. In support of its mission, the group strives to (1) define the extent of genetic, developmental and multifactorial disorders in the country; (2) to be the leading source of research into the causes and pathogenesis of these disorders and (3) to seek new approaches to diagnosis, treatment and prevention of such disorders. Our mission is also to educate the next generation of health care leaders by providing continuing professional development to physicians with up to date courses and to educate the public by providing information on different genetic disorders and ways of prevention.

The Group Principal Investigators

Principal investigators members of the Genetics and Development Research Group are affiliated to different departments within the Faculty of Medicine and Health Sciences of the UAE University. Here is a list of the current members with their departmental affiliations and research interests.

Dr. Bassam R Ali (Pathology Department); Associate Professor of Molecular Genetics and Leader

of the Genetics and Development Research Group. Research interests: (1) Elucidation of the molecular defects underlying genetic disorders in the UAE and Arab populations (2) Developing molecular diagnostic tests specific for mutations underlying genetic diseases prevalent in UAE and Arab populations and (3) Establishing the cellular mechanisms underlying human genetic disorders.

Prof. Yousef M Abdulrazzaq (Paediatrics Department); Professor. Research interests: (1) The genetics of truncus arteriosus (2) Establishing prevalence and identifying genes for alkaptonuria (3) Amino acid metabolism (4) Birth defects with vigabatrin, lamotrigine and gabapentin and (5) Aflatoxin effects on fetus.

Prof. Thomas E Adrian (Physiology Department); Professor and Chair of Physiology. Research interests: Identification of diabetes susceptibility genes in Emirati nationals.

Prof. Lihadh Al-Gazali (Paediatrics Department); Professor and Senior Consultant in Clinical Genetics. Research interests: Delineation of the clinical and molecular aspects of congenital malformations in the UAE.

Dr. Ahmad Hassan Al-Marzouqi (Biochemistry Department); Assistant Professor. Research interest: Protein Complexes that Modify Chromatin for Transcription Regulation.

Dr. Suhail Al-Salam (Pathology Department); Assistant Professor. Research interests: Molecular basis of cancers in UAE.

Dr. Samir Attoub (Pharmacology and Therapeutics Department); Assistant Professor. Research interest: The roles of Akt in the mechanisms of cancer.

Dr. Salim Bastaki (Pharmacology and Therapeutics Department); Associate Professor. Research interests: 1) Oxidative phenotyping and genotyping UAE nationals using antidepressant drugs 2) Teratogenic effects of antiepileptic drugs in collaboration with Professors Abdulrazzaq and Padmanabhan.

Dr. Srdjan Denic (Internal Medicine Department); Associate Professor. Research interests: Effect of human inbreeding on selection of alpha-thalassemia.

Dr. Omar M El-Agnaf (Biochemistry Department); Associate Professor. Research interest: Role of protein misfolding and aggregation in neurodegenerative diseases.

Dr. Sehamuddin Galadari (Biochemistry Department); Associate Professor. Research interest: Cell signaling and human disease.

Prof. Mohammad Y Hassan (Pharmacology and Therapeutics Department); Professor and Vice Dean of Faculty of Medicine and Health Sciences. Research interest: The roles of neurotransmitters in diabetes, epilepsy, aging and neurodegenerative diseases.

Prof. Ruth Langer (Radiology Department); Professor, Associate Dean for Clinical Affairs and senior consultant Radiologist.

Prof. Miodrag Lukic (Medical Microbiology Department); Professor, Chair of Medical Microbiology and Associate Dean for Research.

Dr. Hisham Mirghani (Obs/Gyne Department); Associate Professor and Acting Chair.

Dr. Hassib Narchi (Paediatrics Department); Associate Professor. Research interests: Causes and mechanisms of common diseases in Middle Eastern populations.

Prof. Rengasamy Padmanabhan (Anatomy Department); Professor. Research interest: Teratogens and embryonic development.

Prof. Tahir A Rizvi (Medical Microbiology Department); Professor. Research interest: Retroviral/lentiviral vectors for human gene therapy.

Dr. Hussain Saadi (Internal Medicine Department); Associate Professor and Senior Consultant Endocrinologist. Research interest: Common diseases in UAE and Arab populations.

Activities

Organizing international conferences and CME workshops

The Group organized an international conference on Genetics in 2003. We are currently preparing for the 2nd Al-Ain International Genetics Conference, 27-30th October 2008. Most of the group

activities for this year have been focused on this conference. In addition, the group organizes research seminars by visitors to the faculty and this year we hosted two speakers from Harvard Medical School:

Dr. Ganeshwaran Mochida: Genetic Control of Human Brain Size: From Disease to Brain Evolution.

Dr. Wen-Hann Tan: Some Applications of Microarray Comparative Genomic Hybridization

Collaboration with UAE, regional and international organizations

Members of the group are active in collaborating with local, regional and international academic and health care organizations.

Local collaborations

- Ministry of Health
- School Health Authorities
- Sheikh Hamdan Awards for Medical Sciences
- Center for Arab Genomic Studies
- Central Veterinary Research Laboratory

Regional collaborations

- Sultan Qaboos University, Muscat, Sultanate of Oman
- University of Jordan, Jordan
- King Faisal Specialist Hospital and Research Center, Saudi Arabia

International collaborations

- International Clearing House for Birth Defect Monitoring System [member]
- Harvard University
- University of California, San Diego
- Cambridge University, UK
- Birmingham University, UK
- Imperial College London
- University College London Medical School
- National Human Genome Research Institute
- National Institute of Health, Bethesda, USA
- Institute of Human Genetics, Erlangen, Germany
- Mount Sinai School of Medicine, New York
- Telethon Institute of Genetics and Medicine Naples, Italy
- UT Southwestern Medical Center at Dallas, USA
- Institute fur Medizinische Genetik, Berlin, Germany
- Cincinnati Children's Hospital, OH, USA
- University of Ottawa, Canada
- Medical University of South Carolina, Charleston, South Carolina

Grants and Publications

Refer to departmental reports for individual mem-

bers of the group.

Major achievements in 2007:

Prof. Lihadh Al-Gazali has won the L'OREAL UNESCO Women in Science Award for Africa and Arab countries, 2008 for her contribution to characterization of inherited disorders.

Prof. Yousef M. Abdulrazzaq was awarded the Emirates Appreciation Award for Science, Arts and Literature by His Highness Shaikh Khalifa Bin Zayed Al Nahyan the president of the United Arab Emirates. Prof. Abdulrazzaq was awarded this prestigious honor for his contributions to medicine in the UAE.

Dr. Hussein Saadi in collaboration with Professor Adekunle Dawodu (Cincinnati Children's Hospital, OH, USA) has won a research grant entitled "High prevalence of rickets and sub-clinical maternal and childhood vitamin D deficiency in the Middle East: a randomized controlled trial of prenatal vitamin D supplementation to prevent vitamin D deficiency

in mothers and their infants" from the Thrasher Research Fund (U.S.A.) for the amount of \$377,974. The study will be done in collaboration with the department of Obstetrics and Gynecology at Tawam Hospital.

Dr. Omar El-Agnaf got awarded another Michael J Fox Foundation grant (over US \$175,000) on Parkinson Disease. The project is in collaboration with Dr. Michael Schlossmacher (University of Ottawa in Canada).

Dr. Bassam Ali and Lihadh Al-Gazali in collaboration with scientists from Harvard Medical School and the Kingdom of Saudi Arabia got awarded the first Dubai Harvard Foundation for Medical Research (DHFMR) research center award. Their project is on: Identification of genes involved for human cognition. Total grant: 1,750,000 US dollars over 5 years.



**1998
2008**

**L'ORÉAL - UNESCO AWARDS
FOR WOMEN IN SCIENCE**

Lihadh Al-Gazali - United Arab Emirates.
2008 Laureate for Africa & the Arab States.
For her contributions to the characterization of inherited disorders.

www.forwomeninscience.com

 **L'ORÉAL**
FONDATION
D'ENTREPRISE

United Nations
Educational, Scientific and
Cultural Organization

Prof. Lihadh Al-Gazali winning the 2008 LOREAL-UNESCO for Women in Science Award for Africa and Arab States



MERGE (Medical Education Research Group)

Mission of the Group

To act as a co-ordinating body within the Faculty of Medicine and Health Sciences (UAUEU) for individuals or groups interested in medical education in order to promote scholarly activities in teaching and learning locally, regionally and internationally.

Primary Aims

- Developing an ethos of medical education research within the FMHS
- Providing staff development to promote medical education research through workshops, journal clubs, etc.
- Providing guidance and resources for those interested in medical education research
- Promoting and facilitating teaching and learning scholarship by publishing research in peer-reviewed journals, conference attendance, etc.
- Co-ordinating medical education research activities within the FMHS
- Promoting medical education research with the Gulf region and internationally by establishing networks of collaborators
- Securing funding for medical research activities
- Establishing focus areas in research in terms of the current and future trends in medical education
- Communicating results of research activities to decision- and policy-makers
- Involving students in the activities of MERGE, wherever appropriate

Activities

MERGE meetings are scheduled for the first Wednesday of every month, where the issues such as research in progress, completed research, and teaching scholarship are discussed. In the 2007 academic year, a debate on authorship took

place. It was generally accepted that for medical education research, an authorship agreement was required.

Research that has either been completed or is currently in progress includes:

- Development of transferable/generic skills in undergraduate medical students (McLean, Shaban). Incoming MSC1 students are surveyed and followed up in MSC2 to check for skills development. The project is in its second year. Results for the first cycle are currently being analysed)
- Contribution of research on the development of generic skills (McLean, Howarth). This project was completed by two MSC2 students for their research project during the 2006/2007 academic year.
- Perceptions of the practice of medicine for FMHS male and female students and graduates (McLean, Al Maskari, Al Sowaidi). This project began in 2007 and will run for three years. Sixth year students will be traced through their internships and into their post-graduate studies.
- Predictors of student success in the FMHS (Shaban, McLean).
- Student research: supervisors and scholarship (McLean, Howarth)

Research in the planning stages

Psychological effects of students' first encounters with cadavers in Anatomy (Sadeghi, Lorke, McLean)

ORIGINAL PEER-REVIEWED ARTICLES

McLean M, Naidoo SS. (2007). Medical students' views on the white coat: A South African perspective on ethical issues. *Ethics & Behaviour* 17(4): 387-402.

McLean M, Howarth FC. (2007). Recognising the role of medical science educators in undergraduate medical education. *Journal of International Association of Medi-*

cal Science Educators 17(2): 78-82.

van Wyk JM, McLean M. (2007). Maximising the value of feedback for individual facilitator and faculty development. *Medical Teacher* 26(1): e26-e31.

van Wyk JM, McLean M, Futre EM. (2007). Using evaluation in a problem-based learning curriculum to promote transformation. *Review of Further & Higher Education and Training* 1: 45-60.

Shaban S. (2007). Multiple authorship trends in prestigious journals from 1950 to 2005. *Saudi Medical Journal* 28: 477-482.

BOOKS, CHAPTERS, REVIEWS, EDITORIALS

McLean M. 2007. Spotlight – Part I. AMEE, Genoa 2006. Theme I. Spotlight on Undergraduate medical education. *Medical Teacher* 27: 67-68.

McLean M, Howarth C. 2007. Biomedical science research: from humble beginnings to an integral part of the undergraduate medical curriculum at the Faculty of Medicine and Health Sciences, United Arab Emirates University. *Physiology News* 68 (Autumn 2007): 13-15. <http://www.physoc.org/publications/pn/>

PUBLISHED ABSTRACTS, LETTERS AND CORRESPONDENCE

Al-Kaabi E, Zahmi, S, McLean, Howarth FC. (2007). Impact of undergraduate research on the development of generic skills in medical students. *Emirates Medical Journal* 25: 263.

Lloyd DA. (2007). Tutoritis in a non-clinical tutor in problem-based learning. *Medical Education* 41 (10):1017.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHER

Al Mutawa J, Barss P, Al-Maskari, Grivna M. (2007). Professional responsibilities of UAE University Medical Graduates: Met and Unmet Needs from Undergraduate Public Health and Research Training. Second International Conference on Medical Education. Khartoum, Sudan, 21-26 March 2007.

Barss P, Grivna M, Al-Maskari F. (2007). Key elements and evaluation of a community medicine clerkship in the United Arab Emirates. Second International Conference on Medical Education. Khartoum, Sudan, 21-26 March 2007.

Elzubeir M, Rizk DEE, Al-Khalil K. (2007). Are senior UAE medical and nursing students ready for interprofessional learning? Second International Conference on Medical Education. Khartoum, Sudan, 21-26 March 2007.

Grivna M, Barss P, Al-Maskari F. (2007). Population field research in the community medicine clerkship: Nature of projects and evaluation. Second International Conference on Medical Education. Khartoum, Sudan, 21-26 March 2007.

Kershaw G. (2007) Materials for tackling plagiarism. 7th Annual ELT Conference, Sultan Qaboos University Language Centre, Muscat, Oman. April 2007.

McLean M. (2007). PBL in resource-constrained settings (co-facilitated workshop with Professor E Kwizera, Walter Sisulu University, Mthatha, South Africa), Second International Medical Education Conference, Sudan, Khartoum, March 2007.

McLean M. (2007). Internationalising the medical curriculum (co-facilitator: Professor D Murdoch Eaton, University of Leeds, UK), ASME Golden Jubilee Conference, Dublin, Ireland, October 2007.

McLean M. (2007). Educational scholarship and teaching portfolios. Second International Conference on Medical Education. Khartoum, Sudan, 21-26 March 2007. Invited

McLean M. (2007). Diversity and Education. Second International Conference on Medical Education. Khartoum, Sudan, 21-26 March 2007. Invited

McLean M. (2007). IDEAL Consortium Experienced Constructed Response Item-writing Workshop, Bandung, Indonesia, April, 2007. Workshop

Shaban S. (2007). Mapping medical school curricula using the MeSH tree. Proceedings of the American Medical Informatics Association 2007 Annual Symposium. Chicago, USA, Nov. 10-14, 2007. Poster

Oncology Research Group, ORG

Introduction

The ORG comprises colleagues at the FMHS and the Abu Dhabi Health Authority, who share an interest in oncology research. The group organization was recently changed. Early in 2007 Prof. Thomas Adrian and Prof. Frank Branicki were appointed to positions of Chair and Vice Chair, Dr. Jorgen Kristensen at Tawam Hospital being appointed Deputy Chair.

Objectives

- To promote cancer research – being a catalyst for research activity
- To create a forum for collaboration between Faculty members, basic scientists and colleagues in clinical disciplines, Faculty staff and colleagues of the Abu Dhabi Health Authority dealing with oncology.
- To create and maintain an inventory of
 - research activities
 - resources available
 - basic research expertise
 - available clinical services
 - specialty interests – subspecialties
 - individuals – registry of interest in Oncology
- To act as a reference group regarding cancer research and funding
- To act as an Advisory body to the Abu Dhabi Health Authority regarding cancer issues of national interest, e.g. breast cancer screening, cervical screening, risk factors
- In collaboration with other hospitals to create a unified list of all cancer-related educational activities countrywide
- To act as an advisory body for education regarding cancer, organizing lectures on cancer, cancer conferences and meetings at a local and national level

- To promote quality control in the management of patients with cancer

National Cancer Registry

Members of the group are supporting efforts to improve the national cancer register at Tawam hospital. This is considered to be the cornerstone of cancer surveillance in the UAE and will provide the tool to measure the nation's progress against cancer. A committee has been set up under the leadership of Dr. Jorgen Kristensen to work on all aspects of the registry. In the future all government and private healthcare providers in the UAE will contribute to the registry.

The National Cancer Registry is the only population-based source of information on cancer incidence in the United Arab Emirates which is unique in the medical field in that they bridge an information gap, by capturing a summary of a patient's cancer journey and outcome through their lifetime.

The National Cancer Registry has expanded in recent years to collect and maintain a population based longitudinal database of all UAE population diagnosed with cancer. In future, the registry could be providing benchmarking services and information to monitor quality of care and clinical practice guidelines, assess patterns of care and referrals and monitor adverse outcomes including mortality and comorbidity. Registry information could be used by researchers to evaluate the effectiveness of new treatments and by public health professionals to implement and monitor prevention efforts.

Due to inadequate staffing of cancer registry personnel, accurate, dependable and timely cancer research and statistics reporting has been compromised in the country. With the increased demand for current, comprehensive cancer data and with changes within the health system itself, the need for cancer registry and cancer registry staffing has increased markedly, with a need for appropriate training.

New National Cancer Registry initiatives being developed this year are designed to enhance the value of cancer data and its relationship with contributing bodies. The registry will enable programs to identify access-to-care issues, physician practice concerns, and improvements in cancer registry data collection activities. The extension of data set will be designed to raise the understanding of evidence based clinical care. The National Cancer Registry will continue to expand educational resources for cancer registry professionals once the current issues are solved by other stakeholders mainly by Ministry of Health.

The FMHS/Tawam Tissue Bank

The ORG considers this to be a valuable resource for oncology research in the UAE. The bank will provide for the collection, processing and storage of human tumors and appropriate control tissues for research. The bank will help to foster collaborations between clinical oncologists and basic scientists at the FMHS. Approval for the tissue bank from the human ethics committee is in place, although approval for individual projects utilizing tissue will have to be obtained by the project investigators. The equipment and staff for the tissue procurement bank are now in place. A subcommittee is currently developing protocols for tissue collection and storage as well as other issues, such as ethical approval, consent, maintenance of records, authorship recognition for surgeons and pathologists participating in tissue collection, etc.

Cancer Research Day

A second cancer research day is being planned for the autumn of 2008.

Recent Advances in Clinical Oncology Conference

An International Conference entitled Recent Advances in Clinical Oncology, was held in Al Ain, United Arab Emirates, from February 19-22, 2007. The meeting was organized by the Oncology Research Group, an initiative of the Faculty of Medicine and Health Sciences at the United Arab Emirates University. The Group comprises those with a particular interest in oncology and membership includes basic scientists and clinical faculty at the Faculty of Medicine and Health Sciences (FMHS) and clinicians from Tawam Hospital in affiliation with Johns Hopkins Medicine.

This International Conference provided a forum for the exchange of ideas and knowledge concerning cancer prevention and patient education, as

well as strategies for optimization of clinical care. The meeting focused on recent advances and controversies through interaction with renowned international speakers. The Conference was a full four day program, structured in the form of workshops, plenary and parallel lectures in symposia, as well as short oral and poster presentations. It provided a welcome opportunity to further continuous education in Oncology and to receive 'State of Art' reviews. Issues addressed included evidence based oncology, molecular biology, diagnosis, staging and treatment encompassing chemotherapy, radiation therapy, surgery and novel experimental and therapeutic strategies, palliative care, and today's challenges in cancer care. Specific topic sessions related to common disorders in the UAE such as breast, hematological, colorectal, pediatric, upper gastrointestinal, gynecological, prostatic and endocrine malignancy as well as lung and bone tumors were also featured, sessions also considered on ethical and moral issues for staff caring for patients.

The Conference proved to be of interest to Anaesthetists, Endocrinologists, Gynaecologists, Haematologists, Internists, Paediatricians, Pathologists, Radiologists, Respiratory Physicians, and Surgeons involved in various aspects of General Surgery and subspecialty practice. Basic scientists from FMHS also actively participated in the Conference. By arrangement, the FMHS Alumni Association held its Annual meeting at the Intercontinental Resort coincident with the first full day of the Conference. Nurses, particularly those based locally at Al Ain and Tawam Hospitals, also participated with two Workshops arranged specifically for Nursing Education. One of these was entitled 'Oncology for Nurses' and the other dealt with 'Setting up a Breast Cancer Support Group'.

Invited Faculty included eminent overseas speakers, many of whom are in the forefront internationally of their respective fields of interest. Those emanating from North America included clinicians from Johns Hopkins Hospital (Baltimore), MD Anderson Cancer Center (Houston), Memorial Sloan Kettering Cancer Center (New York), Case Western Reserve University (Cleveland), the Mayo Clinic (Rochester), and the University of Toronto (Canada). Invited Faculty from the UK came from the University of London (St Bartholomew's Hospital and University College), Cardiff University and the University of Newcastle (Northern Institute of Cancer Research). Speakers from continental Europe came from Belgium (University of Leuven), France (Hospital Center of Le Havre), Germany (University of Heidelberg, University of Leipzig), Italy (University of Turin), and Spain

(University of Navarra). Invited Faculty also traveled from Japan (Keio University), Korea (Pohang University of Science and Technology) and Australia (University of Queensland). In all, presentations were made by 31 International Overseas Faculty from Australia, Belgium, Canada, France, Germany, Italy, Spain, Japan, Korea, the UK, the USA and regionally from Saudi Arabia and Qatar. Sixteen UAE based speakers participated by invitation from Abu Dhabi (two), Dubai (three), Al Ain (eleven), all being Faculty members at FMHS. This was the largest group of Invited Internationally distinguished clinicians with Oncology interests ever to gather in the UAE. The meeting attracted more than 1000 delegates from around the world.

A Basic Sciences session featuring two presentations from an eminent Korean scientist was held with new research initiatives being highlighted in a series of presentations made by Basic Scientists at FMHS, this session being very well received.

Two preconference plenary session workshops were held on 19 February. The morning session was oriented towards Oncology Nursing and the afternoon session dealt with Clinical Aspects of Cancer Diagnosis, Staging and Treatment. On the morning of 20 February HE Sheikh Nahayan Bin Mubarak Al Nahayan officiated at the Opening Ceremony and delivered a stimulating address identifying issues of concern in the field of Oncology, encouraging the medical community to rise to the challenges encountered in the prevention, diagnosis and treatment of cancer, including quality of life considerations. This captured the imagination of all present and his remarks were reported nationally in the press. This was followed by a plenary session entitled 'Evidence Based Oncology'. Subsequently, the Program included fifteen sessions held over a three day period culminating

in a Closing Ceremony which took place at the end of the last afternoon of the Conference on 22 February. Six free paper sessions were held with 19 abstracts selected for Oral Presentations, and 41 for Poster Display. A satellite symposium was also held. One invitee, Dr. Burstein from Harvard Medical School, delivered an invited lecture by Video Conference transmission.

The Conference was deemed a great success thanks to the dedication of the Organizing Committee chaired by Prof. Branicki. Financial assistance to host the meeting came from a variety of sources, substantial support came from the Faculty of Medicine and Health Sciences, UAE University, Tawam Hospital in affiliation with Johns Hopkins Medicine, and the General Authority for Health for Health Services for the Emirate of Abu Dhabi. We are most grateful for the help of many of our colleagues in the Oncology Research Group, UAE University and Tawam/Johns Hopkins. Abstracts of Invited Faculty presentations, free papers and posters were published in a special supplement of the Emirates Medical Journal [EMJ 2007; Vol 25(1 suppl.)] with the support of the Sheikh Hamdan Foundation.

The Proceedings of the meeting are to be published in a volume of the Annals of the New York Academy of Sciences (in press). Interacting with the very helpful Editorial Department of the Annals has been enlightening and rewarding. Special thanks are due to Linda Mehta, Acquisitions Editor and Steven Bohall, Project Manager for their advice and encouragement. Mr. Abdulla Jamal, at the Department of Surgery, UAE University has worked tirelessly with enthusiasm, his secretarial expertise in liaising with authors, etc has proved invaluable in bringing these submissions to print.







Trauma Research Group

Summary

During 2007 the Trauma Group has made major contributions in trauma education and research both nationally and internationally. The “hands on training” in trauma management continued to flourish with increased demand. The number of courses is planned to increase from two courses to five courses in 2008. The group has recently run the Focused Assessment Sonography for Trauma Course in Kuwait at November 2007. The group has published 13 papers related to trauma in international refereed journals and has presented more than thirty abstracts and oral presentations at national and international meetings. A major interdisciplinary grant to establish a Road Traffic Collision Registry was successfully completed with full details of 1007 motor vehicle collisions collected over one and half years.

Mission

Our mission is to promote and perform research and education of a high standard in the field of trauma so as to improve patient care.

Major achievements of the Trauma Group in 2007 include:

A) Road Traffic Collision Registry

This project has run as planned and was successfully completed. Two full time Research Assistants were appointed to collect data from Al-Ain and Tawam Hospitals. We have collected detailed information on 1007 patients involved in road traffic collisions and pre-events information over one and half years. A web-based road traffic collision registry has been developed and will be posted on the web soon.

B) Participation in Scientific Courses

The Trauma Group was actively involved in the organization and conduct of numerous courses.

ATLS Provider and Instructor Courses: It was deemed essential to train UAE doctors using ATLS

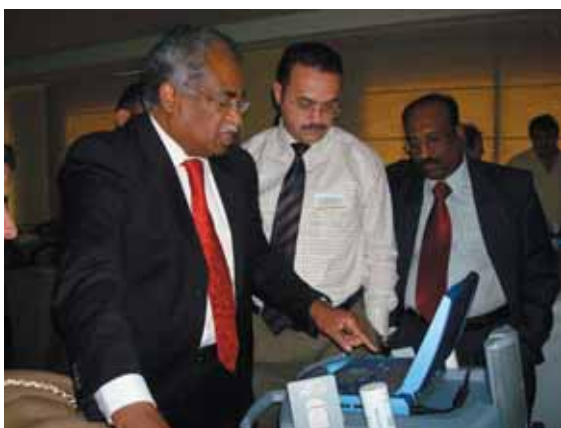
principles to improve the management of trauma patients. More than 560 doctors have taken the Provider Course to date in UAE. We have been encouraged by the increasing support and popularity of ATLS in the UAE. This course is run at the Faculty of Medicine and Health Sciences four times every year. A greater awareness of the value of ATLS enhancement of the early management of severe trauma is more evident in our setting.

Course on Focused Assessment Sonography (FAST) for Trauma.

Eight courses have been run since the establishment of this course. More than 160 doctors have received “hands on” training on the use of FAST. The majority were from Al-Ain city followed by Abu Dhabi and Dubai. We have noticed increasing support and popularity for FAST in clinical practice in our setting. We are planning to increase the number of courses next year to run 5 courses each year. The demand from participants, local and overseas, is increasing. Sonosite has kindly agreed to donate an Educational Grant of 100 000 Dirhams to support our courses and to lend us four advanced Sonosite hand-held ultrasound machines to help us run our courses. These activities are encouraged by establishment of The Clinical Skills Training Centre at the Faculty of Medicine and Health Sciences, UAE University.



Professor Abu-Zidan teaching FAST at Kuwait in November 2007



Professor Kazzam teaching FAST at Kuwait in November 2007

C) Preparation of an International Conference on Recent Advances in Trauma Management and Prevention

The Trauma Group is actively involved in planning an international Conference entitled '*Recent Advances in Trauma Prevention and Management*' to be held in Al-Ain from 16-19 February 2009. The Trauma Group, Tawam Hospital in affiliation with Johns Hopkins Medicine, and the International ATLS/American College of Surgeons have agreed to jointly organize this conference. This conference will provide a forum for the exchange of ideas and knowledge concerning trauma prevention and training, as well as strategies for optimization of clinical care. The meeting will focus on recent advances and controversies through interaction with renowned international speakers. The Conference will be of interest in particular to Emergency Physicians, Critical Care Physicians, Radiologists, Surgeons, Nursing Staff, Prehospital Staff as well as Epidemiologists, Basic Scientists, and Law Makers in the United Arab Emirates as well as those from other GCC and Middle East Countries. The Conference will be a full three-day program, and will be structured in the form of plenary and parallel lectures and symposia, as well as oral and poster presentations. Furthermore, there will be full day Pre-congress Workshops on different aspects of Trauma Diagnosis and Management.

D) Successful Grants

National Grants

Road Traffic Collision Injury Registry in Al-Ain City, Interdisciplinary University Research Grant.

Causes and Preventability of Fall Injuries treated at Emergency Departments in Al Ain Hospitals, University Individual Grant.

International Grants

Drowning and Other Water-Related Injuries in

Canada, National Search and Rescue Secretariat, Canada

The magnitude and risk factors of childhood injuries in the UAE. SafeKids

Worldwide

Details of these grants are to be found in the relevant Departmental Reports (Department of Surgery and Department of Community Medicine).

E) Publications and Abstracts

In 2007, the group has published 13 papers related to trauma in international referred journals and two research monographs. Both quality and quantity of research has improved. These papers stemmed from collaborative work with Tawam and Al-Ain Hospitals crossing the bridges between the University and these two institutions. The group has presented more than thirty abstracts and oral presentations at national and international meetings in 2007. Details of these publications and presentations are also to be found in the relevant Departmental Reports (Department of Surgery, and Department of Community Medicine).

F) International recognition

1. Dr Peter Barss has been an invited Consultant on prevention of water-related injuries to Canadian Red Cross, 2007.
2. Dr Peter Barss has been an invited plenary speaker, International Epidemiological Association, Eastern Mediterranean Region Conference. Epidemiologic Basis for Injury Prevention. King Faisal Hospital and Research Centre, Riyadh Saudi Arabia. November 2007.
3. Dr Peter Barss has been an invited guest lecturer at Faculty of Public Health, Tehran University of Medical Sciences, Tehran, June 2007
4. Dr Peter Barss has been an invited guest lecturer at the World Water Safety Conference, Porto, Portugal, September, 2007. He gave two talks on Swimming Pool Safety and Cold-water Immersion Deaths.
5. Dr Peter Barss has been an invited guest lecturer on the World Safe Communities Conference, Tehran, June 11-13, 2007. He gave a talk on Concepts of causality and preventability of injury and HIV in United Arab Emirates.
6. Professor Branicki was invited to the Surgical Glasgow Forum (November 2007). He gave a talk on camel bites at the Royal College of Surgeons of Glasgow and was honored to be admitted as a Fellow for the College.

7. Professor Abu-Zidan has been selected as a Member of the Educational Committee of the 3rd World Congress on ultrasound in Emergency and Critical Care Medicine, 9-11 May 2007, Paris, France.
8. Professor Abu-Zidan has been selected to present the WINFOCUS recommendations for the use of ultrasound in thoracoabdominal trauma during the 3rd World Congress on ultrasound in Emergency and Critical Care Medicine, 9-11 May 2007, Paris, France.
9. Professor Abu-Zidan has been elected as a Member of the Board of Directors of WINFOCUS 2007 (World International Network for Critical Ultrasound)
10. Professor Abu-Zidan has been selected to be the Chair for the Course on Basic Ultrasound in Emergency Medicine that was held on the 8th May 2007 at Paris, France as part of the 3rd World Congress on Ultrasound in Emergency and Critical Care Medicine.
11. Professor Abu-Zidan has been selected to be the Chair for Workshop on Ultrasound in Thoraco-abdominal Trauma which was held at Paris, France as part of the 3rd World Congress on Ultrasound in Emergency and Critical Care Medicine 9-11 May 2007.
12. Professor Abu-Zidan has been an examiner for a PhD Thesis for The University of Auckland, New Zealand 2007.

G) Clinical Service Role

Professor Branicki (member) and Professor Abu-Zidan (Co-Chair) continue to serve on the Trauma committee of Tawam Hospital. The members of the Trauma Group are actively participating in the Trauma CME program of Tawam Hospital. Furthermore, The Trauma Group is actively involved in establishing a hospital-based trauma registry in Tawam Hospital. Dr Hani Eid has moved to Tawam hospital to start this registry. The Trauma Group is also helping Rashid Hospital in Dubai to start such a Registry. This is a step forward for a National Trauma Registry. The Trauma Services at Tawam Hospital are planned to start in the near future in which Professor Abu-Zidan will be more clinically involved.

H) Media attraction:

The activities of the group members have attracted Media attention in 2007 in different areas:

The educational activities of the Trauma Group in teaching FAST in International Defence Exhibition

2007 (IDEX 2007) was acknowledged in Khaleej Times Online, 19 February 2007, (<http://www.khaleejtimes.com>).

The Trauma Group has developed a 9 minute DVD highlighting the FAST Course developed by the Group which was promoted in IDEX 2007. The group has made a mock demonstration using simulated patients to show the value of emergency ultrasound in multiple casualty situations. This demonstration was highly attractive for the media.



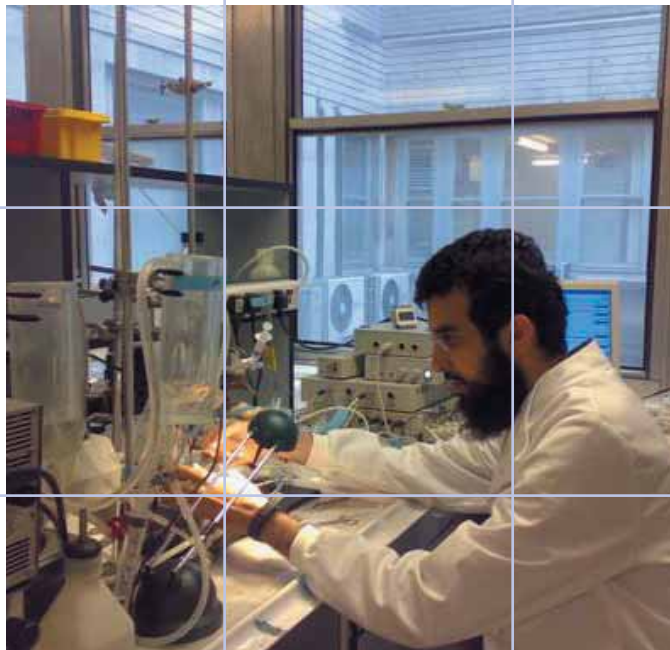
A moulaged simulated multiple trauma patient with a penetrating wound to the left thigh.

The importance of the Trauma Group findings on trauma in the elderly in United Arab Emirates was highlighted by Gulf News (10/Nov/2007).

Blackwell Publishing Press Room has made an interview highlighting the findings of Professor Abu-Zidan on the value of bicycle helmets in preventing head injuries (July 2007, <http://www.blackwellpublishing.com/press/pressitem.asp?ref=1355>).

Medical Student Research

Academic Year 2007-2008



Medical Student Research

2007-2008 has been a very busy year for student research. Events have included the “Leiden International Medical Student Conference” in March 2007, the “Medical Students Research Day” in April 2007, the “UK Research Scholarship Program” during the summer of 2007 and the “5th Scientific Conference for Medical Students in the GCC Countries” in February 2008.

More than 30 of our students attended the “Leiden International Medical Students’ Conference” which was held in Leiden, 15-17 March, 2007. Our students contributed 6 oral and 6 poster presentations. Noura Al Maqboul won a prize for her poster entitled: “Teratogenic mechanisms of craniofacial malformations in mouse embryos” (Academic Supervisor - Professor Padmanabhan, Department of Anatomy).

A Medical Student Research Day was held on 2 April, 2007. The event included a keynote presentation by Prof David Eisner (University of Manchester, UK) entitled: “Calcium in the heart: in and out of control” and a selection of oral (18) and poster (17) presentations which came mainly from Medical Science year 2 research projects and Clinical Science year 2 Community Medicine research projects.

During the summer of 2007 three students were selected to join the UK Research Scholarship Program. This initiative is supported by the British Council and FMHS and provides opportunities for selected students to participate in research activities in ‘cutting-edge’ research laboratories in the UK. Khaled Al-Bahri visited the laboratory of Dr Halina Dobrzynski, Cardiovascular & Endocrine Sciences at the University of Manchester; Shamma Ahmed Al Ali visited the laboratory of Dr Yasser Abdel-Wahab, Diabetes Research Group at the University of Ulster and Ahmed Al Hammadi visited the laboratory of Dr Saadeh Suleiman at the Bristol Heart Institute, University of Bristol.

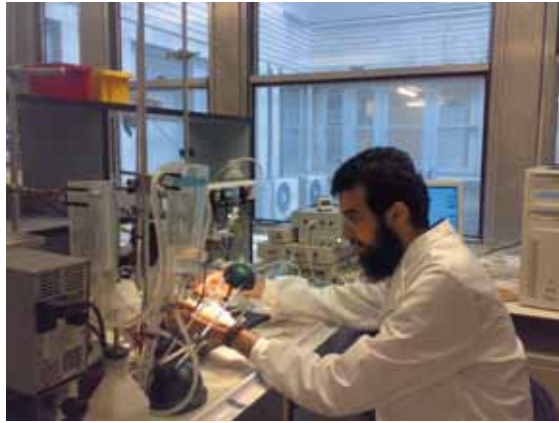
More than 80 of our students attended the “5th

Scientific Conference for Medical Students in the GCC Countries” which was held in Bahrain, 6-9 February, 2008. We contributed 8 oral and 12 poster presentations. Two of our students won prizes, Mariam Saleh Al-Harbi (UAE) for her talk entitled: “Long-term effects of low-dose organophosphorus compounds on special learning and memory” (Academic Supervisor - Professor Milos Ljubisijevic, Department of Physiology) and Abdullah Saif Al Harbi (UAE) for his talk entitled: “Apoptosis in early stages of breast cancer” (Academic Supervisor - Professor Sherif Karam, Department of Anatomy).

Our students also made contributions to the Chancellors Undergraduate Research Awards (CURA) and the “8th Annual UAE University Research Conference”. Khawla Al Dhufairi, Noura Al Mansoori and Amna Essadi won a prize for an oral presentation entitled: “Extended spectrum beta-lactamase production of Escherichia coli strains isolated at Tawam Hospital, Al Ain, UAE” (Academic Supervisor - Doctor Tibor Pal, Department of Microbiology).



Khaled Al-Bahri – Cardiovascular & Endocrine Sciences, University of Manchester



Ahmed Al Hammadi, Bristol Heart Institute, University of Bristol



Shamma Ahmed Al Ali, Centre for Molecular Biosciences, University of Ulster



Some of the delegates who attended the '5th Scientific Conference for Medical Students in the GCC Countries' - Bahrain



Abdullah Saif Al Harbi receiving his award in Bahrain



Mariam Saleh Al-Harbi receiving her award in Bahrain

Scientific Conferences

Academic Year 2007-2008



Third Al Ain International Immunology Meeting

The 3rd Al-Ain International Immunology Meeting was held over the period 17-20 March 2008 under the title "Immunoregulation in Chronic Inflammatory Disorders". The meeting was held under the patronage of HE Sheikh Nahayan Mubarak Al Nahayan, Minister of Higher Education and Scientific Research and Chancellor of the UAE University, and represented the third in a series, the first two having been held in 1993 and 2002 in Al-Ain, United Arab Emirates. The meeting was held under the umbrella of the International Union of Immunological Societies and was supported by *Nature Immunology*, the premium scientific journal in the field. Twenty eight international speakers from USA, UK, Switzerland, France, Germany, Austria, Egypt, Tunisia, Australia, Finland, India, & Brazil participated in the conference. In addition, 15 local speakers from FMHS, Tawam hospital, and Department of Preventive Medicine participated in the conference.

Meeting Summary:	#
Total registrations:	423
Invited Speakers (International):	28
Invited Speakers (Local):	15
Plenary Talks:	53
Short Presentations:	18
Accepted Abstracts:	89

Meeting Report

A report on the meeting was commissioned by *Nature Immunology*. The report summarized the major scientific findings discussed during the conference. The meeting report was published in the July 2008 issue of *Nature Immunology* and was accompanied by a short editorial praising the positive steps taken by the UAE authorities in promoting the culture of scientific inquiry {Ref: al-Ramadi, B., A. Hayday, and W. Schwaeble. (2008). Immunology in the Arabian desert. *Nature Immunology* 9:699-703}.

Meeting Proceedings: Special Issue of Clinical Immunology

A special, regular, issue of the journal *Clinical Immunology*, will be devoted for the publication of selected reviews and original articles contributed by invited speakers at the conference. The journal *Clinical Immunology* is the official journal of the USA-based "Clinical Immunology Society" and has an impact factor of 3.6. The special edition will be published in January 2009 and will be guest edited by Profs. Basel al-Ramadi and Miodrag Lukic.

Poster Awards

The meeting organizers and *Nature Immunology* co-sponsored 2 awards for the best poster presentation at the conference. The award consists of a special plaque and a cash price of \$150 for each winner. The two winning posters were:

- "Small peptide suppresses multiple immune mediated inflammatory disorders"
by M. Srinivasan, Indiana University, USA.
- "Galectin-3 is required for the induction of experimental allergic encephalomyelitis"
by Z. Al-Rasebi, ML Lukic, A. Al-Awadhi, N. Saif, and E. Mensah-Brown, UAE University, UAE.

Sponsors

The conference was generously supported by Tawam Hospital/Johns Hopkins Medicine, Al-Ain Hospital/Vamed, and the FMHS, UAE University. Sponsorship was received from "BD" and "Damas and Society" (platinum sponsors), Al-Nawras Medi-lab (gold Sponsor), and Novartis, Wyeth, GSK, Roche, JLM, Gilead, Al-Khayat, Alphamed, & Gulf scientific Corp. (silver sponsors).

INTERNATIONAL SPEAKERS

Dr. David A. Brenner, MD (University of California San Diego, San Diego, USA).

Dr. Richard A. Flavell, PhD FRS (Yale University School of Medicine, New Haven, USA).

Dr. Adrian Hayday, PhD (King's College London, London, UK).

Dr. Leonard C Harrison, MD (The Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia).

Dr. Foo Y Liew, PhD (University of Glasgow, Glasgow, UK).

Dr. Ruslan Medzhitov, PhD (Yale University School of Medicine, New Haven, USA).

Dr. Noel Rose, MD PhD (Johns Hopkins Bloomberg School of Public Health, Baltimore, USA).

Dr. Giorgio Trinchieri, MD (National Cancer Institute, Bethesda, USA).

Dr. Marc Y Donath, MD (University Hospital Zürich, Zurich, Switzerland).

Dr. Emad Alnemri, PhD (Thomas Jefferson University, Philadelphia, USA).

Dr. Yang Liu, PhD (University of Michigan Health System, Ann Arbor, USA).

Dr. Fiona Powrie, PhD (University of Oxford, Oxford, UK).

Dr. Salem Chouaib, PhD (Institute Gustave-Roussy, INSERM, Paris, France).

Dr. Mercedes Rincon, PhD (University of Vermont, Burlington, USA).

Dr. Jorge Kalil, MD (University of Sao Paulo, Sao Paulo, Brazil).

Dr. Pierre Miossec, MD PhD (Hopital Edouard Herriot, Lyon, France).

Dr. Graham A. W. Rook, MD (University College London, London, UK).

Dr. Hamid Rabb, MD (Johns Hopkins University School of Medicine, Baltimore, USA).

Dr. Ridha Barbouche, MD PhD (University of Tunis, Tunisia, Tunisia).

Dr. Paolo Casali, MD PhD (University of California, Irvine, USA).

Dr. Hannes Stockinger, PhD (Medical University of Vienna, Vienna, Austria).

Dr. Yuri Sykeluv, MD PhD (Thomas Jefferson University, Philadelphia, USA).

Dr. Wilhelm Schwaeble, PhD (University of Leicester, Leicester, UK).

Dr. Ahmed El Gohary, MD (Suez Canal University, Cairo, Egypt).

Dr. Malcolm Richardson, PhD (University of Helsinki, Helsinki, Finland).

Dr. Narinder Mehra, MD (All India Institute of Medical Sciences, New Delhi, India).

Dr. Martin Herrmann, MD (University Hospital Erlangen, Erlangen, Germany).

Dr. Zacharie Brahmi, PhD (Indiana University School of Medicine, Indianapolis, USA).

LOCAL SPEAKERS

Dr. Miodrag L. Lukic, MD PhD (Dept. of Microbiology & Immunology, FMHS, UAE University, Al-Ain, UAE).

Dr. Michael Ellis, MD (Dept. of Internal Medicine, FMHS, UAE University, Al-Ain, UAE).

Dr. Walter Conca, MD (Dept. of Internal Medicine, FMHS, UAE University, Al-Ain, UAE).

Dr. Sen Dissanayake, PhD (Dept. of Microbiology & Immunology, FMHS, UAE University, Al-Ain, UAE).

Dr. Zaher Al-Koutoubi, MD (Dept. of Medicine, Tawam Hospital/Johns Hopkins Medicine, Al-Ain, UAE).

Dr. Sherif Karam, MD PhD (Dept. of Human Anatomy, FMHS, UAE University, Al-Ain, UAE).

Dr. Ahmed Al-Qahtani, PhD (Dept. of Microbiology & Immunology, FMHS, UAE University, Al-Ain, UAE).

Dr. Eric Mensah-Brown, MD (Dept. of Human Anatomy, FMHS, UAE University, Al-Ain, UAE).

Dr. Haytham Hassoun, MD (Dept. of Surgery, Tawam Hospital/Johns Hopkins Medicine, Al-Ain, UAE).

Dr. Mohamud Sheek-Hussein, MD (Department of Preventive Medicine, Ministry of Health, Al-Ain, UAE).

Dr. Maria J. Fernandez-Cabezudo, PhD (Dept. of Biochemistry, FMHS, UAE University, Al-Ain, UAE).

Dr. Johann Braun, MD (Dept. of Internal Medicine, FMHS, UAE University, Al-Ain, UAE).

Dr. Saifaddin Alsalamah, MD (Dept. of Medicine, Tawam Hospital/Johns Hopkins Medicine, Al-Ain, UAE).

Dr. Salah Gariballa, MD, FRCP (Dept. of Internal Medicine, FMHS, UAE University, Al-Ain, UAE).

Dr. Basel al-Ramadi, PhD FRCPath (Dept. of Microbiology & Immunology, FMHS, UAE University, Al-Ain).



UAE's First Integrated Allergy Symposium_____

UAE's First Integrated Allergy Symposium was an integrated scientific week that was held in Faculty of Medicine and Health Sciences in UAEU in Feb 16-22 .This symposium brought experts in the field from government, private and academic organizations nationwide to foster cooperation and coordination in allergy diagnosis, prevention and management to prompt joint reaction to allergy prevalence in UAE and to promote information sharing among family practitioners, physicians, specialists, allergy patients and the UAE community at large.

The program included lectures, workshops and educational exhibition where clinicians health-care providers, leading allergy experts and patients met to discuss and update their knowledge and ideas about recent advances in allergic diseases, diagnosis, management and prevention techniques.

UAE's First Integrated Allergy Symposium activities included:

- 1.Satellite booths: Stands displays in Abu Dhabi, AlAin and Dubai malls as a community outreach program for allergy awareness.
- 2.Allergy Hotline: Allergy questions and short consultation were answered by allergy specialist.
- 3.Workshop: For Health professionals provided by allergy consultants and specialists
- 4.Symposium Exhibition: Educational booths covered different allergic diseases using advanced illustration
- 5.Continued Medical Educations: For Health professionals an update in allergy.





Impact Factors & Publication Analysis



Impact Factors

Journal	Impact Factor		Journal	Impact Factor
Accident Analysis and Prevention	-		Current Org Chem	3.961
Acta Orthopaedica	1.285		Current Pharm Des	4.868
Acta Radiologica	0.972		Current Pediatr Rev	-
Afri Health Sci	-		Diabetes Res Clin Pract	1.823
Am J Clin Nutri	6.603		DNA Cell Biol	1.861
Am J Hum Genet	11.092		Emergency Med Australas	-
Am J Pharm & Toxicol	-		Emirates Med J	-
Am J Physiol Heart & Circulation	3.973		Env Sci & Tech	4.363
Am J Physiol Regul Integr Com	3.661		Ethics & Behav	-
Am J Roentgenology	2.470		Eur Annals of Allergy & Clin Immun	-
Am J Sports Med	3.397		Eur J Clin Nutri	2.326
Anal Bioanal Chem	2.867		Eur J Emerg Med	-
Ann Hum Biol	1.060		Eur Neurol	2.580
Anti Cancer Drugs	2.357		Eur J Neurosci	3.673
Appl Environ Microb	4.004		Eur J Obs Gyn Reprod Biol	1.432
Arab J Psychiatry	-		Eur J Pharmacol	2.376
Arch Dis Child	2.786		Eur J Radiol	1.915
Archives of Gerontology & Geriatrics	1.289		Exp Physiol	3.014
Archives of Gynecology & Obstetrics	0.666		FASEB Journal	6.791
Arian Dis	-		FEBS Letter	3.263
Arthritis Rheum	7.677		Food & Chem Toxicol	2.186
Australas Radiol	-		Fundam Clin Pharmacol	2.129
Biochem Journal	4.009		Glia	5.380
Biogenic Amines	-		Health Info Library J	-
BMC Fam Pract	-		Histol & Histopathol	2.007
BMC Musculoskeletal Disorder	1.323		Histopathol	3.791
BMC Ophthalmol	-		Human Biol	0.904
Brain Res	2.218		Human Genet	3.974
Br J Gen Pract	2.229		Human Pathol	3.034
Br J Nutrition	2.339		Infect Control Hosp Epidemiol	2.989
Br J Radiol	1.773		Int J Antimicro Agents	2.338
Can J Surgery	0.917		Int J Cardiol	2.878
Cancer Detection & Prevention	1.600		Int J Impot Res	2.059
Cardiovascular Diabetol	-		Int J Infection	2.250
Cell Mol Life Sci	5.239		Int Pediatrics	-
Clin Chem & Lab Med	1.741		Int Urogynecol J	2.523
Clin Dysmorphol	0.523		Int Urogynecol J Pevic Flr Dysfunction	-
Clin Nutrition	2.878		J AAPOS	0.983
Comparative Biochem & Physiol C	2.345		J Addictive Disorder & their Treatment	-

J Adolescent Health	2.387	Methods	3.667
J Allergy Clin Immunol	8.115	Microsc Res Tech	1.644
J Am Geriatrics Soc	3.539	MMW Fortschr Med	-
J Antimicrob Chemother	4.038	Mol Cancer	3.693
J Appl Toxicol	1.942	Mol Cell Biochem	1.707
J Biological Chemistry	5.581	Mol Immunol	3.742
J Cardiovascular Electrophysiol	3.475	Nature Genetics	25.556
J Chromatogr A	3.641	Nature Protocols	1.671
J Clin & Exp Dermatology	-	Neoplasia	5.674
J Clin Ultrasound	0.645	Neurobiol Dis	4.377
J Com & Operation Research	-	Neuroembryology and Aging	-
J Egypt Soc Parasitol	-	Neuropeptides	2.492
J Endocrinol	2.636	Neuropsychopharmacol Hung	-
J Engg Res	-	Neuroscience	3.352
J Exp Biol	2.972	Nutrition	2.104
J Human Hypertens	2.244	Open Medicinal Chem J	-
J Immunol	6.068	Pallative Med	1.652
J Infect Dis	6.035	Pediatr	4.473
J Int Assoc Med Sci Educators	-	Pediatr Pro Praxi	-
J Invertebr Pathol	1.463	Peptides	2.368
J Liquid Chromatogr	-	Physica A	1.430
J Neuroimmunol	2.920	PLoS ONE	-
J Neurosci Methods	1.884	Prakt Lek	-
J Obs & Gyn	-	Protein & Peptide Letters	1.097
J Obs & Gyn Res	0.833	Psychological Reports	-
J Pain Symptom Manag	2.324	Regul Peptides	2.422
J Pakistan Med Assoc	-	Reprod Toxicol	2.157
J Pediat Neurol	-	Resp Med	2.235
J Pediat Ophthalmol. Strabismus	0.765	Review of Further & Higher Education & Training	-
J Perinatology	2.086	Rev Med Microbiol	1.000
J Planar Chromatography	-	Rev Med Virol	7.174
J Reprod Med	0.734	Saudi Med J	0.329
J Sci & Med in Sport	1.091	Singapore Med J	-
J Surg Res	1.836	Stroke	6.296
J Tox & Env Health	1.805	Surg Endosc	2.242
J Trauma	2.334	Thorac Cardiovas Surg	0.741
J Tropical Paediatrics	1.018	Toxicology & Applied Pharmacol	3.846
Med Chem	0.606	Toxicon	2.246
Med Sci Monitor	1.607	Waste Management	1.338
Med Teacher	1.229	Zoological Sci	1.125

الزملاء الأعزاء

لا يزال الباحثون بكلية الطب والعلوم الصحية يساهمون بشكل كبير في إثراء البحوث العلمية في مجالي الطب الحيوي والعلوم السريرية وهم يستحقون أن نتوجه لهم بالشكر والثناء على ما يبذلونه من جهد في هذا الصدد. كما أغتنم هذه الفرصة لأشكر كافة الفنيين وموظفي السكرتارية وغيرهم من موظفي الدعم بالإضافة إلى الطلبة الذين يساهمون بكل توفيق في البحوث الصادرة بكلية الطب. لقد قام الأستاذ الدكتور ويم لامرز مرة أخرى بعمل رائع لأعداد وصياغة كافة التقارير. وإننا جميعاً ندين بشكر خاص للعميد المشارك ورئيس قسم الأحياء الدقيقة والمناعة، الأستاذ الدكتور ميودراغ لوكيتش الذي يعتبر من أبرز المتحمسين للبحث العلمي بكلية الطب ومثالاً يحتذى لكافة أعضاء هيئة التدريس بكليتنا. نتمنى النجاح والتوفيق للدكتور سهام الدين كلداري الذي يخلف الأستاذ الدكتور لوكيتش في منصب العميد المشارك لشؤون البحث العلمي والدراسات العليا ابتداءً من شهر سبتمبر 2008. كما لا يفوتنا أن نعرب ثانياً عن امتناننا وعرفاننا العميق لقطاع البحث العلمي بجامعة الإمارات العربية المتحدة وعلى وجه الخصوص سمو الدكتورة ميثاء الشامسي.

لقد أخذت جامعة الإمارات العربية المتحدة على نفسها عهداً بالالتحاق بمصاف الجامعات المرموقة في العالم. وقد تناول سمو الرئيس الأعلى للجامعة الشيخ نهيان مبارك آل نهيان في خطابه بمناسبة اللقاء السنوي للعام الجامعي الجديد 2008 – 2009، الخطة اللازمة من أجل بلوغ هذه الغاية. حيث أشار سموه إلى المكانة المتميزة لجامعة الإمارات العربية المتحدة بوصفها الجامعة الأم في الدولة وأكد على أهمية البحوث العلمية ذات المستوى الرفيع. ولعل وصول نائب مدير الجامعة الجديد الدكتور وايت روري هيوم إلى مدينة العين في غضون أيام من خطاب الرئيس الأعلى أحسن دليل على عزم الرئيس الأعلى الارتقاء بجامعة الإمارات العربية المتحدة والانتقال بها إلى مرحلة جديدة من الإنجاز والتميز. لقد برهن الدكتور هيوم بالفعل وهو طبيب الأسنان والباحث والإداري المحنك عبر تقلبه في كافة المناصب الجامعية في موطنه الأم أستراليا وفي جامعة كاليفورنيا بدءاً بمنصب رئيس قسم، ثم عميد، ثم نائب مدير الجامعة وانتهاءً برئيس الجامعة، أنه عازم على تحقيق رؤية الرئيس الأعلى للجامعة.

إن أمام الباحثين بكلية الطب اليوم فرصة هامة وتحد كبير في نفس الوقت. فقد تم وضع الآليات والأسس الضرورية بالأقسام العلمية وفرق أولويات البحوث من أجل المضي قدماً إلى الأمام. من الضروري أن نكون على استعداد لاستغلال كافة المبادرات التي تظهر أمامنا من حين لآخر مثل إنشاء المؤسسة الوطنية للبحوث بدولة الإمارات. علينا أن نحشد كل طاقاتنا لاغتنام كافة الفرص المتاحة للحصول على الدعم المالي لتمويل بحوثنا العلمية وتعزيز هياكلنا الأساسية. أمامنا الكثير من العمل والجهد ولكن في المقابل سوف تكون في انتظارنا مكاسب عظيمة. إن تحقيق رؤية الرئيس الأعلى رهن بتضافر الجهود الفردية للباحثين والجهود الجماعية لفرق البحوث. ونحن هنا بكلية الطب والعلوم الصحية نؤكد بكل حماس عزمنا على الالتزام بهذه المبادرة العظيمة.

الأستاذ الدكتور/ صموئيل جورج كزدرس
عميد كلية الطب والعلوم الصحية

يسرنا أن نضع بين أيديكم التقرير السنوي السابع عشر حول المنشورات العلمية والاهتمامات البحثية لكلية الطب والعلوم الصحية بجامعة الإمارات العربية المتحدة. ويعد هذا الإصدار بمثابة امتداد لسلسلة من التقارير السنوية التي دأبنا على إصدارها منذ نشر أول تقرير لنا سنة 1991.

وكما جرت العادة في كل عام فقد سعينا إلى الرفع من مستوى هذا الدليل وتحديثه ليشمل كالمعتاد نبذات عامة عن مختلف الأقسام العلمية بالكلية بالإضافة إلى التقارير الصادرة عن فرق أولويات البحوث. كما أدرجنا كذلك ضمن هذا الإصدار تقرير حول مؤتمر العين الدولي الثالث للمناعة الذي نظمه فريق بحوث المناعة، وتقرير حول الندوة الأولى المتكاملة للحساسية بدولة الإمارات العربية المتحدة وتقريراً آخر حول البحوث الطبية للطلبة .

وكعادتنا دائماً يسرنا أن نشكر كل من السيدة إيفانا ليزاريتوري والأنسة شيخة بطي لما بذلنه من جهد في إعداد هذا التقرير وصياغة كافة أقسامه ضمن مجلد واحد. وقد تولى السيد راجاغوبالان كعادته مراجعة محتوى المساهمات الأولية للأقسام العلمية والتنسيق بين جميع الأطراف. وتولى التقاط جميع الصور المدرجة السيد أشوك وقام بالترجمة إلى العربية السيد محمد زقر.

أ.د. ويم لامرز، رئيس التحرير

أ.د. ميودراغ لوكيتش، العميد المشارك لشؤون البحث العلمي سابقاً

د. سهام الدين كلداري، العميد المشارك لشؤون البحث العلمي والدراسات العليا

فهرس المحتويات

V	المقدمة-----
VII	كلمة عميد الكلية-----
	المنشورات العلمية للأقسام
3	علم التشريح-----
8	الكيمياء الحيوية-----
14	طب المجتمع-----
22	طب الأسرة-----
23	الطب الباطني-----
31	التعليم الطبي-----
34	علم الأحياء الدقيقة والمناعة-----
39	أمراض النساء والتوليد-----
42	طب الأطفال-----
46	علم الأمراض-----
51	علم العقاقير-----
57	علم وظائف الأعضاء-----
64	الطب النفسي-----
67	علم الأشعة-----
70	الجراحة-----
	فرق أولويات البحوث العلمية
81	فريق بحوث السكري وأمراض القلب والأوعية الدموية-----
84	فرق بحوث علم الوراثة والتطور-----
87	فريق بحوث التعليم الطبي-----
89	فريق بحوث علم الأورام-----
93	فريق بحوث الرضوض-----
99	بحوث طلبة الطب-----
103	مؤتمر العين العالمي الثالث للمناعة-----
106	الندوة الأولى المتكاملة للحساسية بدولة الإمارات العربية المتحدة-----
111	عوامل التأثير-----

منشورات مكتب العميد المشارك لشؤون البحث العلمي والدراسات العليا

رئيس التحرير : أ.د. ويم لامرز
الإدارة السكرتارية : السيد بي. راجاقوبالان
الفنون التخطيطية : السيدة إيفانا ليزاريتوري
تصميم و تنسيق : الأنسة شيخة بطي
التصوير : السيد أشوك براساد
الترجمة للغة العربية: السيد محمد زقر



جامعة الإمارات العربية المتحدة
كلية الطب والعلوم الصحية

المنشورات العلمية لعام 2007 والاهتمامات البحثية

مكتب العميد المشارك لشؤون البحث العلمي والدراسات العليا



جامعة الإمارات العربية المتحدة
كلية الطب والعلوم الصحية

المنشورات العلمية لعام 2007

والاهتمامات البحثية



مكتب العميد المشارك لشؤون البحث العلمي والدراسات العليا