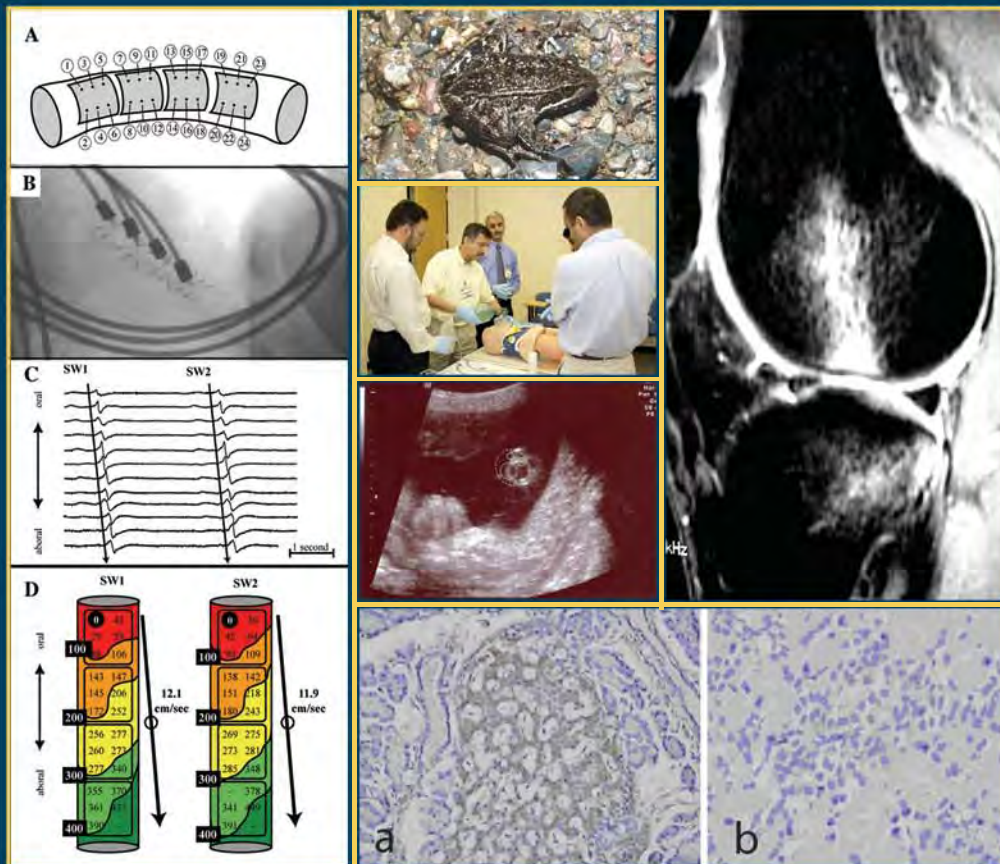




United Arab Emirates University
Faculty of Medicine and Health Sciences

Research Publications 2006 & Research Profiles





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Faculty of Medicine and Health Sciences

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Office of the Associate Dean of Research

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Preface

This is the 16th 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. We also included short reports on two major conferences this year; the International Conference on Advances in Diabetes Mellitus & its Complications, organized by the Diabetes Research Group, and the Cancer Research Day, organized by the Oncology Research Group. A special report on Student Medical Research is also included.

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 al 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
Associate Dean for Research

Dean's Message

Dear Colleagues,

A sincere thank you to faculty, students and technical staff for a very high level of research productivity during the calendar year 2006. Thanks again to Wim Lammers for editing the diverse information about our grants and publications into a cohesive document that enables FMHS research efforts to be communicated effectively both internally and externally.

Grant sponsorship at FMHS involves a wide range of benefactors, without whom the research could not be conducted. Despite budgetary constraints, internal funding at FMHS and UAE University happily remains a priority, vital to the attraction and retention of high quality investigators. Contributions from bodies such as Sheikh Hamdan Awards for Medical Science, Terry Fox Cancer Funds in Dubai and Abu Dhabi and the Michael J Fox Foundation are greatly appreciated. The British Council in the UAE continues to enable student research electives to the United Kingdom in partnership with FMHS.

The Diabetes and Cardiovascular Group held a very successful conference in the Spring of 2006. An important sequel to the 2005 International Neurosciences meeting was our acceptance as International Brain Research Organisation (IBRO) members and our convening the first IBRO School in the Middle East here in Al Ain.

The foundation cohort of Master of Medical Science graduate students has been accepted. They should begin their research activities shortly in both Medical Microbiology & Immunology and Pharmacology & Toxicology. We understand that a future PhD program in Microbiology has strong UAEU support.

Student research remains a distinguishing feature of this Medical College. Our dedicated students and their research mentors, both faculty and staff, should be suitably proud of their continued high level of achievement during 2006.

The UAE University Research Affairs sector led by Dr. Maitha Al Shamsi and the FMHS research administration team led by Professor Mio Lukic are warmly appreciated by all FMHS researchers!

It is the challenge of all good biomedical research to enhance the quality of patient care through improved diagnosis or better treatment. We must continually strive to enhance our clinical interface and to strengthen partnerships within and outside UAE if we are to achieve this objective.

*S George Carruthers, MD
Dean*

Research Publications by Department



Department of Anatomy

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

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May 6, 2006. Front row: Lakshmi Ravindranathan, R Padmanabhan, Khatija Parekh, Eric Mensah-Brown, Hessa AlQahtani, Rony John, Afaf Rifaat
 Back row: Saeed Tariq, TV Basheer, Sherif Karam, Gerald Buzzell, Dietrich Lorke, A Wanniarachi, Ernest Adeghate, Rasheed Hameed, Safa Shehab, Mohammed Madathil.

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 the structure and function of glands.

Dr. 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.

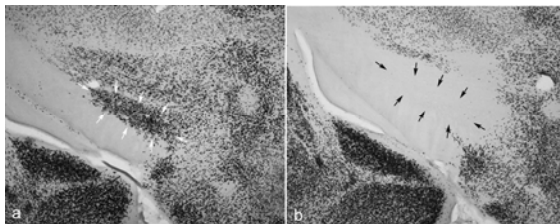


Figure: Coronal sections of the brain stained with NeuN antibodies (neuronal marker) showing the effect of excitotoxic lesion of the subthalamic nucleus (STN). Notice the complete neuronal loss in the STN of lesioned brain (between arrows in b) compared with control unlesioned brain (between arrows in a).

Prof. 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.

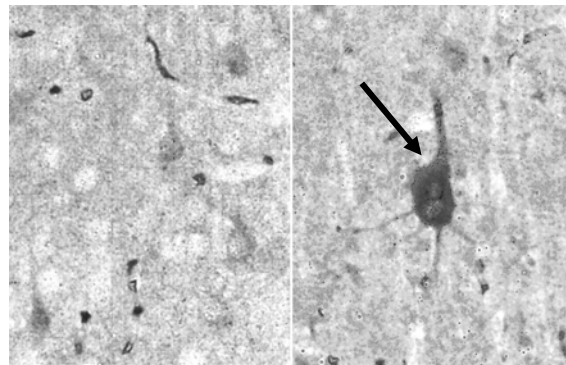
Neural tube research uses mouse models of exencephaly. Exencephaly is induced by maternal treatment with sodium valproate (VPA) or hyperthermia. VPA experiments are directed at the role of supplemental folate in prevention of exencephaly. Following successful prevention of VPA-induced exencephaly in 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.

Prof. Gerald Buzzell has continued to probe the structure and function of the nictitans gland and conjunctiva of the nictitating membrane of the dromedary camel. Recent studies have strongly suggested that the conjunctiva is a component of the mucosa-associated lymphoid tissues, with M-cells, lymphoid nodules, plasma cells, lymph capillaries, and high-endothelial venules. The nictitans gland produces at least one and possibly more than one glycoprotein secretions, as well as mucus which are secreted onto the conjunctival and corneal surfaces.

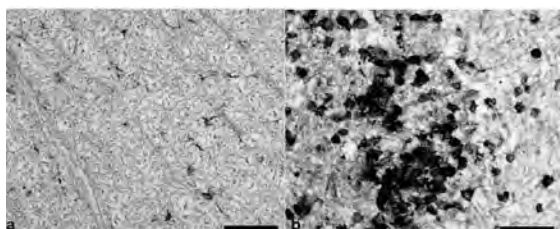
Prof. Dietrich E. Lorke's main research activities are in the area of neuroembryology. He studies developmental changes in the expression of neurotransmitters (GABA, catecholamines), of receptors (glycine receptor, nicotinic acetylcholine receptor, NMDA receptor, estrogen receptor-related receptor) and of functional parameters (functional MRI, c-fos) in different brain regions (cerebral cortex, cerebellum, hippocampus, brain stem) 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.



Caspase-3 immunoreaction in the cerebral motor cortex (area 4) of 4-year-old (a) and 20-year-old (b) rhesus monkeys. Note the appearance of strongly stained large pyramidal cells (arrow) in the aging brain, which are not present in young animals.

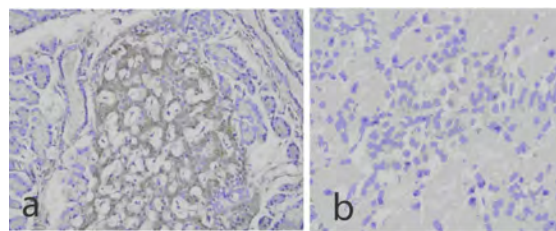
This collaboration also includes the investigation of altered brain development in mutant mouse strains, including knock-out mice, and studies on the reaction to injury in the spinal cord of mutant mice. In collaboration with his colleagues in Hong Kong, he recently characterised the visual system in different vertebrates, studied apoptotic cell death in the aging macaque brain and analysed apoptosis as well as neurotransmitter changes in the brains of Alzheimer patients. 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.

Dr. E 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 for the first time the effect of deletion of galectin-3 gene in the autoimmune diseases type I diabetes and experimental allergic encephalomyelitis at the level of the target tissues of the pancreas and spinal cord. Dr Mensah-Brown as in previous years continued his studies on the experimental allergic encephalomyelitis in the DA and AO rats. Dr. Mensah-Brown and his collaborators in the department of Physiology have published extensively on the urogenital complications of experimental diabetes.



Micrographs of spinal cord sections showing CD4+ T cells 14 days after induction of EAE in AO (a) and DA (b) rats. Most of the infiltrating cells in DA rats are CD4+, T cells. Bar = 50 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 glutamic acid decarboxylase decreased sharply in pancreatic islet cells after the onset of diabetes. Anti-GAD antibodies have been identified in the serum of patients suffering from type I diabetes.



Micrographs showing GAD immunoreactive islet cells in the pancreas of normal (a) and diabetic (b) Wistar rats. Note a large decrease in the number of GAD-positive cells in the islet of diabetic rats. X400.

The aim of **Dr. Sherif M. Karam's** research focuses on some fundamental aspects of stem cell biology. The mouse gastric gland is used as a model system to study factors that control stem cell proliferation, differentiation and migration in health and disease (ulcer or cancer). Also, the epithelial cells of the rat mammary gland are investigated during carcinogenesis.

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Adi M, Al-Khaili J, Al-Moharrami A, Kazim B, and Karam S (2006) Is smoking harmful to the stomach. Young European Scientists Meeting, Porto, Portugal Aldhaheiri W, Hassouna I, Al-Salam S, Karam SM (2006) Characterization of breast cancer progression in rats. Seventh Annual UAE University Research Conference, Al Ain.

Aldhaheiri W, Hassouna I, Karam SM (2006) Inhibition of Breast Cancer progression by Vinca Rosea. Seventh Annual UAE University Research Conference, Al Ain.

Al -HalHali F, Al-Awadhi A, Madathil M, Abdul-Kareem A, Shehab S (2006) The role of the subthalamic nucleus in suppressing tonic motor seizure in an animal model of epilepsy. Fourth Scientific Conference for Medical Students in GCC Countries, Muscat, Oman.

Buzzell GR. 2006. Histology of the Conjunctiva of the Nictitating Membrane in the Dromedary Camel, *Camelus dromedarius*. Seventh Annual UAE University Research Conference, Al Ain.

Buzzell GR. G.R. 2006. Histology of the Nictitans Gland in the Dromedary Camel, *Camelus dromedarius*. Seventh Annual UAE University Research Conference, Al Ain.

Karam SM (2006) Gastric epithelial progenitors are targets of *Helicobacter pylori*. Seventh Annual UAE University Research Conference, Al Ain.

Karam SM, John R, Tomassetto C, Rio MC (2006) Trefoil factor I controls the commitment program of gastric pre-pit cells. The 4th Annual meeting of the International Society of Stem Cell Research. Toronto, Canada.

RESEARCH GRANTS 2006

FMHS Grants

Prof GR Buzzell

Nictitans glands of the camel.

Prof S Karam

Role of trefoil factor I in the development of gastric glands.

Dr EMB Mensah-Brown

The role of Toll-like 2 receptor in autoimmune diabetes.

Prof R Padmanabhan

Neural tube defects: Potential role of Histone Deacetylase Inhibition in Valproic Acid (VPA)-Induced Exencephaly in Mouse Embryos.

Dr S Shehab

Unmyelinated primary afferents belonging to adjacent spinal nerves intermingle at the level of the spinal cord: A new hypothesis for the mechanism of neuropathic pain.

UAE University Individual Grants, 2006

Prof E Adeghate

Localization of gamma-aminobutyric acid and glutamic acid decarboxylase in the endocrine pancreas of Goto Kakizaki rats

Prof S Karam

Does cigarette smoke affect stem cell dynamics in the stomach?

Dr EMB Mensah-Brown

Microglial activation in modulation of inflammation in the central nervous system

UAE University Interdisciplinary Grants, 2006

Prof S Karam

Ghrelin and recovery after anti-neoplastic and cytotoxic therapy

Terry Fox Research Grants 2006

Prof S Karam

Analysis of normal & cancerous gastric epithelial cells

Prof S Karam

Role of gastric epithelial progenitors in gastric carcinogenesis

Department of Biochemistry

Prof J M Conlon	Chairman, Professor	Dr M Patel	Senior Laboratory Tech.
Dr H Raza	Professor	Ms M Mechkarska	Senior Laboratory Tech.
Dr S Galadari	Associate Professor	Mr M Qureshi	Laboratory Technician
Dr O M El-Agnaf	Associate Professor	Ms E Ahmed	Laboratory Technician
Dr A H Al-Marzouqi	Assistant Professor	Mr A Qader	Laboratory Assistant
Dr F Mustafa	Assistant Professor	Ms N Al-Gafari	Laboratory Technician
Dr M J Cabezudo	Teacher Outside Faculty	Ms A John	Laboratory Technician
Dr M T Al-Ali	Adjunct Assistant Professor	Ms K. Al-Bloushi	Secretary
		Mr TV Basheer	Office Assistant

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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 2006 has seen the promotion of Dr Maria Fernandez-Cabezudo from Teacher Outside Faculty to Assistant Professor. Dr Farah Mustafa was obliged for family reasons to take a one year leave of absence.

RESEARCH PROFILE

Molecular toxicology and chemical carcinogenesis (Prof. H. Raza)

Research Interest: My research is focused on oxidative stress, mitochondrial functions, drug metabolism, diabetes and cancer etiology and pathology using animal, cell culture and molecular models. I have also developed and strengthened international collaborations in this area and have visited University of Pennsylvania, Philadelphia, USA during the summer 2006 to conduct a collaborative research program. I am also investigating the chemoprotection effects of antioxidants on oxidative stress-related molecular complications in cancer and other toxicity.

Research Highlights: In our recent publications we have demonstrated using both animal and cell culture models, the regulation of oxidative stress-related metabolism and complications in cellular compartments. We have also demonstrated that mitochondrial redox and respiratory functions are playing a key role in oxidative stress-related complications in cardiac ischemia/ reperfusion. We are mainly investigating the role of mitochondrial oxidative stress and antioxidant defense mechanisms in normal and disease conditions.

Molecular pathways involved on activation and function of immune cells.

(Dr. M.J. Fernandez-Cabezudo)

My research interest is signal transduction in immunocompetent cells. For the last few years I have been working with T-lymphocytes, specifically studying the involvement of tyrosine kinases in T cell activation. Recently, my focus has shifted to investigating signaling pathways in macrophages, the principal cells involved in the innate immune response. In particular, my current interest concerns the biochemical mechanisms that govern the interaction between macrophages and bacterial pathogens. Macrophages are the principal phagocytic cells that first recognize and respond to various evolutionarily conserved microbial ligands through the utilization of a family of receptors known as toll-like receptors (TLR). Following activation, macrophages ingest the bacteria into phagosomes and initiate an inflammatory cascade that ultimately leads to the elimination of the pathogen. Over the past 12-18 months, it has become evident that the recognition of conserved microbial ligands does not take place via cell surface-expressed receptors only, but also via intracellular receptors. My focus is now on the delineation of the underlying recognition and signaling mechanisms by which cytokine-expressing bacterial strains influence the activation of phagocytic macrophages.

Research Highlights: We have analyzed the interaction between macrophages and three bacterial strains which differ only in their expression of eukaryotic cytokines. These are designated BRD509 (parental strain; no cytokine expression), GIDIL2 (a strain that expresses murine IL-2), and GIDIFN α (a strain expressing murine IFN γ). In a series of experiments, we demonstrated that the rate by which the three bacterial strains invade macrophages is similar. Yet, in terms of their ability to induce cell activation, cytokine-expressing strains were far superior than the parental strain. The mechanism by which this is occurring is the subject of our current investigation. Up to date, we have been able to show that the expression of IFN γ induces upregulation of cell surface-expressed molecules including CD86, CD40 and Ly-6A/E. At the level of gene expression, iNOS and IL-6 is induced earlier in macrophages infected with IFN γ expressing bacteria and consequently, an earlier secretion of their proteins is detected.

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: The importance of the bromodomains within chromatin-modifying proteins in binding to acetylated nucleosomes have been studied and abilities of various bromodomains to bind to histones have been compared.

Cellular regulation and signal transduction pathways in health & disease

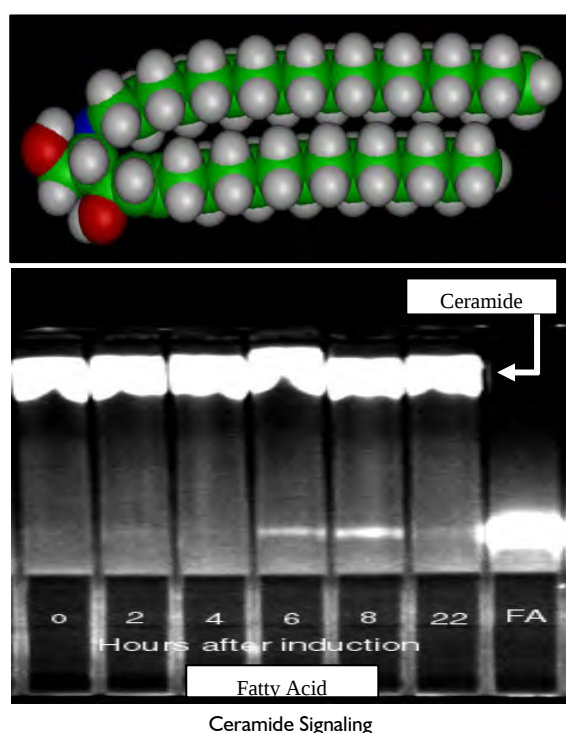
(Dr. S. Galadari)

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 role of sphingolipids, a novel group of putative second messengers, and the enzymes that produce them. In particular, our effort is focused on ceramide, sphingosine, and sphingosine 1-phosphate. 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. In particular, we are studying ceramidases, enzymes responsible for the inter-conversions of these important and putative messenger molecules.



Research Highlights: We have cloned and characterized the human neutral ceramidase that has an extended 12 amino acid N-terminus and we have

identified a Ser residue as a putative catalytic site for this enzyme.

Ceramide Molecule Time-Dependent Enzyme Induction Molecular basis of pathogenesis and novel gene-based therapies

(Dr. F. Mustafa)

My research interest lies in the area of molecular basis of disease and development of innovative approaches to therapy. Towards this end, I have extensively used retroviruses as model systems. Retroviruses are well-known pathogens that cause debilitating diseases such as immunodeficiency syndromes and a variety of cancers in both man and animals. Our recent focus has been on studying the fundamentals of retroviral RNA packaging into the virus particle and how this process can be exploited to develop better vectors for gene delivery into mammalian cells. These studies have resulted in the mapping of the packaging determinants of some important retroviruses such as Mason-Pfizer monkey virus (MPMV) and feline immunodeficiency virus (FIV). In my new role as an independent investigator, I would like to extend these studies to identify the packaging determinants of mouse mammary tumor virus (MMTV) since MMTV represents a retrovirus with a very different assembly process than those displayed by the type C retroviruses such as FIV or its human and simian counterparts, HIV and SIV. Additionally, I would like to investigate how MMTV can be used as a model system to study tumor development and progression for both breast cancer and leukemia, two very different cancers caused by the same virus, and how these processes could be modified by steroids and their antagonists as possible future therapeutics. Finally, I would like to extend the experience gained from these studies to other non-viral disorders, such as the neurodegenerative disorder Alzheimer's, to study the molecular basis of its pathogenesis.

Research Highlights: My laboratory has been focusing on mapping the genomic RNA packaging determinants of a pathogenic retrovirus, the mouse mammary tumor virus (MMTV). So far, work on the basic steps in MMTV replication has been hampered by the lack of appropriate systems to study virus replication in tissue culture. However, we have been able to overcome this hurdle by developing a classical *in vivo* packaging and transduction assay that has allowed us to map the packaging determinants of MMTV. Use of similar assays to map packaging determinants of other types of retroviruses has revealed interesting parallels and differences between MMTV - a type B, FIV a type C, and MPMV - a type D retrovirus.

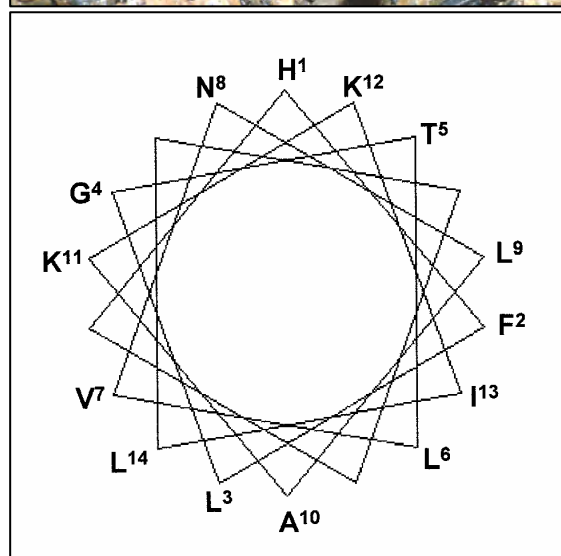
Protein Misfolding and Neurodegenerative Diseases (Dr. O. M. A. El-Agnaf)

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 that 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 Abeta 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 recognizes 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.



"Frog of the Year" *Rana draytonii* and a Schiffer-Edmundsen wheel representation of temporin-1DRA showing the amphipathic nature of its α -helical conformation.

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

The emergence of pathogenic microorganisms with resistance to commonly used antibiotics has necessitated a search for new sources of antimicrobial drugs. Bactericidal and fungicidal peptides synthesized in granular glands in the skins of certain frogs represent a promising source of such potential therapeutic agents. Peptides from a wide range of frog species are under investigation and synthetic analogues of the naturally occurring peptides with increased antimicrobial potency but with decreased toxicity towards mammalian cells are being studied. Similarly, peptides from frog skin have been identified that produce cytolysis of tumour cells at lower concentration than non-neoplastic cells and so have potential as anti-cancer agents.

Research Highlights: Peptidomic analysis of norepinephrine-stimulated skin secretions of the California red-legged frog *Rana draytonii* led to the identification of ten peptides with antimicrobial activity. Purification and structural characterization of the peptides showed that they belonged to the ranatuerin-2 family (2 peptides), brevinin-I family (4 peptides), temporin family (3 peptides), and a novel class of peptide that has limited structural similarity to the bee venom peptide, melittin. Temporin-IDRa (His-Phe-Leu-Gly-Thr-Leu-Val-Asn-Leu-Ala-Lys-Lys-Ile-Leu.NH₂) shows potent, broad spectrum growth inhibitory activity against a range of clinically relevant aerobic and anaerobic bacteria, including strains of methicillin-resistant *Staphylococcus aureus* (MRSA) and the opportunistic yeast pathogen, *Candida albicans*. The peptide is relatively easy to synthesize and is very soluble in physiological media and so represents a promising candidate for drug development.

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Conlon JM, Al-Ghaferi N, Abraham B, Jiansheng H, Cosette P, Leprince J, Jouenne T, Vaudry H. (2006). Antimicrobial peptides from diverse families isolated from the skin of the Asian frog, *Rana grahami*. *Peptides* 27: 2111-2117.

Conlon JM, Al-Ghaferi N, Abraham B, Sonnevend A, Coquet L, Leprince J, Jouenne T, Vaudry H, Iwamuro S. (2006). Antimicrobial peptides from the skin of the Tsushima brown frog *Rana tsushimensis*. *Comparative Biochemistry and Physiology* 143: 42-49, 2006.

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Conlon JM, Al-Ghafari N, Coquet L, Leprince J, Jouenne T, Vaudry, Davidson C. (2006). Evidence from peptidomic analysis of skin secretions that the red-

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BOOKS, CHAPTERS, REVIEWS, EDITORIALS

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Raza H, Avadhani, NG. (2006). Mitochondrial glutathione S-transferase pool in health and disease. In *Toxicology of glutathione transferases* by CRC Press, Taylor and Francis Ltd (ed. by Awasthi, Y.C., UT Medical Branch, Galveston, Tx, USA), Boca Raton, FL, USA, pp 277-291.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

Al-Marzouqi AH. (2006). *Molecular Methods and Diagnostic Techniques*. ArabLabs, Dubai, UAE.

Attoub S, Adem A, Petroianu G, Fernandez-Cabezudo MJ, al-Ramadi BK. (2006). Effect of Chamomile components on cell proliferation. *Proceedings of the International Symposium on Chamomile Research Development and Production*. Presov, Slovak Republic.

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Conlon JM. (2006). Insights from comparative genomics into the molecular and functional evolution of neuroendocrine peptides. *Comparative Biochemistry and Physiology* 143A: S61.

El-Agnaf OMA. A Strategy for Screening & Designing Inhibitors of α -Synuclein Oligomerization and Toxicity: Implications for Parkinson's and Related Disorders Therapy. *EMBO-FEBS workshop on amyloid formation*. Florence, Italy.

Fernandez-Cabezudo, M.J., H. El-Hasasna, M. Mechkarska, B. K. al-Ramadi. (2006). Reduced expression of Bcl-2 in Lck-deficient T cells predispose to apoptosis. *Gordon Research Conferences on Molecular Therapeutics of Cancer*, Oxford, UK

Fernandez-Cabezudo MJ, Mechkarska M, Petroianu G, Attoub S, al-Ramadi BK. (2006). Chamomile-derived flavonoids exert differential effects on nitric oxide production by macrophages. *Proceedings of the International Symposium on Chamomile Research Development and Production*. Presov, Slovak Republic.

Galadari S. (2006). Human neutral ceramidase. *Sheikh Hamdan Award for Medical Research Conference*, Dubai, UAE.

Galadari S, Thayyullathil FT, Hago AK, and Patel M. (2006) Akt degradation is an important determinant of L929 cell death following heat stress, Cold Spring Harbour Laboratory, NY, USA.

Galadari S, Wu B, Mao C, Roddy P, El Bawab S, Hannun Y. (2006) Identification of catalytically important residues in Neutral Ceramidases. 20th IUBMB International Congress of Biochemistry & Molecular Biology, Kyoto, Japan.

Kosanovic, M.J. Fernandez-Cabezudo, M.Y. Hasan, A. Adem & G. Petroianu. (2006). Effect of chamomile components on blood lipid peroxidation induced by paraquat *in vitro*. *Proceedings of the International Symposium on Chamomile Research Development and Production*. Presov, Slovak Republic.

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tensin-II in the trout. Proceedings of the 23rd Conference of European Comparative Endocrinologists. Manchester, U.K

Raza H, John A (2006). Modulation of oxidative stress by green tea catechins on PC12 cells in vitro. FASEB Annual Meeting, San Francisco, CA, USA.

Skovgaard N, Wang T, Conlon JM. (2006). Hemodynamic effects of the regulatory peptide neurotensin on the systemic and pulmonary circulation in the python, *Python regius*. Comparative Biochemistry and Physiology 143A: S61.

RESEARCH GRANTS

FMHS New Research Grants 2006

Dr AH Al-Marzouqi

Function of the bromodomain within the Swi2 subunit of the SWI/SNF complex.

Prof JM Conlon

Development of the naturally occurring peptide temporin-1DRA into a therapeutically useful antimicrobial agent.

Dr MJ Fernandez-Cabezudo

T cell activation through the CD43 surface molecule: independent or costimulatory pathway? (Seed Grant).

Dr Fernandez-Cabezudo MJ, Dr Mechkarska M,

Prof al-Ramadi BK

Involvement of Lck tyrosine kinase in apoptosis and metastasis of breast cancer cells.

Dr S Galadari

Purification of the human neutral ceramidase from HeLa cells.

Prof H Raza.

Attenuation of cellular oxidative stress by green tea catechins: protection of free radical induced degradation of biomolecules.

UAE University Individual Grants 2006

Prof JM Conlon

Purification and characterization of antimicrobial peptides with therapeutic potential from the skins of Asian and North American frogs of the genus *Rana*.

Dr F Mustafa

Mapping of the Genomic RNA Packaging Determinants of the Cancer-Causing Mouse Mammary Tumor Virus (MMTV): Potential Towards the Development of Novel Gene-Based Therapeutics for Cancer.

UAE University Interdisciplinary Grants 2006

Dr AH Al-Marzouqi.

Anti-cancer activities of herbs extracted by supercritical carbon dioxide: from identification to mechanisms of action.

Terry Fox Fund for Cancer Research Grant 2006

Dr AH Al-Marzouqi.

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

Prof JM Conlon.

Design of potent and selective anti-cancer agents derived from naturally occurring cytolytic peptides present in frog skin.

Dr OMA El-Agnaf.

Synucleins as biomarkers and potential targets for intervention in cancer progression.

Dr S Galadari.

What is the role of human neutral ceramidase in cancer?"

Prof H Raza.

Role of oxidative stress in etiology, pathology and prevention of chemical carcinogenesis: Use of cell culture models for the induction of metabolic defense.

Sheik Hamdan Award for Medical Research 2006

Dr S Galadari.

Biochemical and cell biological characterization of the human neutral ceramidase.

Michael J. Fox Foundation for Parkinson's Research, USA 2006

Dr El-Agnaf OMA, Prof A Adem, Prof JM Conlon.

Development of Lewy bodies MRI imaging agents for the early diagnosis of Parkinson's disease and related disorders.

Dr OMA El-Agnaf (Co-PI with Dr. Michael G. Schlossmacher, Harvard Medical School)

Quantification of plasma alpha-synuclein a biomarker for Parkinson's disease.

Parkinson's Disease Foundation, USA 2006

Dr OMA El-Agnaf

Designing novel inhibitors of α -synuclein oligomerization and toxicity as a novel treatment for Parkinson's and related disorders.

Arab Science & Technology Foundation 2006

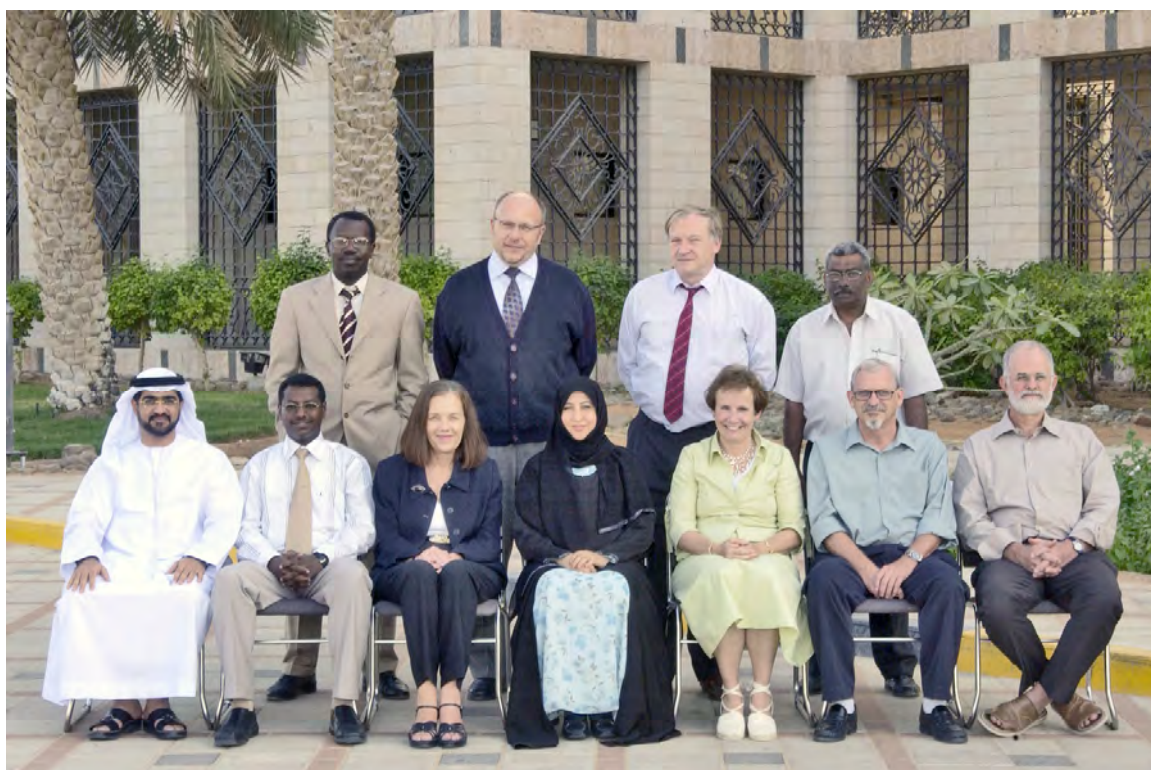
Dr F Torab, Dr H El Taji, Dr MJ Fernandez-Cabezudo, Prof BK al-Ramadi.

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.

Department of Community Medicine

Dr F Al-Maskari Prof N Nagelkerke Dr P Barss Dr R Bernsen Dr J Al-Mutawa Dr M Grivna Dr J Schneider	Acting Chair, Assistant Professor Professor Associate Professor Associate Professor Assistant 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
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Community Medicine Faculty and Staff 2006.

Back row (left to right): Dr M El Sadig, Dr Michal Grivna, Prof Nico Nagelkerke, and Mr Jamal CK
Front row (left to right): Dr Jamal Al Mutawa, Mr H El Agab, Ms Arlene Kaljee, Dr Fatma Al Maskari ,
Dr Roos Bernsen, Dr John Schneider and Dr Peter Barss.

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 and interventions were done for infectious diseases, including HIV/AIDS. Surveys were done for occupational blood-borne diseases to assess awareness about breast cancer, breast and other infant feeding practices, 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 restraints for adults and children, interventions at schools and with police to increase use of safety restraints for adults and children, 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.

Dr. Peter Barss: Public health specialist physician and scientist with special expertise in 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, smoking prevention, HIV/AIDS interventions, and mortality reporting. Dr. Barss is recognized internationally as an expert on epidemiology and prevention of injuries, and has collaborated internationally with the Canadian Red Cross and other organizations for national water safety and drowning prevention since 1992.

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 2006.

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 THE UAE UNIVERSITY

The Department collaborated on clinical research issues and worked closely with the General Authority of Health Services, particularly the Preventive Medicine Department of Al Ain, on projects assessing infectious diseases, including HIV/AIDS, chronic diseases, injury, mortality reporting and death certification, and occupational health. In addition, the Department has established academic and community service relations with the department of Medical services of ADCO-Abu Dhabi. This has resulted in training opportunities for students in occupational health. The Department also provides academic input to the UAEU Masters program of Environmental Sciences, the Arab Board Residency Programs, Medical Laboratory Technology (MLT) Bachelor Degree and various CME programs within and outside Al-Ain District.

The Department provides scientific input to the UAEU collaborative Road Safety Research Centre (RTTSRC) which undertakes collaborative research with agencies within and outside the UAE.

The Department continued to deliver Continuing Medical Education (CME) programs to health professionals in the UAE. In 2006 there were three workshops on biostatistics, two workshops on First Aid, two workshops on writing death certificates, a workshop on epidemiology and research methodology, a workshop on injury prevention, several interventional workshops to improve students' knowledge regarding HIV/AIDS, a course on WHO violence injury prevention (VIP), a course on Radiation Safety to FMHS staff, and "CME in Community Medicine for Health Care Professionals, FMHS", May 2006. There was extensive collaboration with the Centre for Global Health Research of the University of Toronto, the Department of Medical Microbiology of the University of Manitoba in Canada, and the Erasmus University Medical Center Department of General Practice in Rotterdam, Netherlands.

RESEARCH TRAINING

An essential function of training in community

medicine is field research on target populations to assess incidence, prevalence, and risk factors for health, disease, and injury. The department research training benefits final year and second year medical students, as well as residents in Family and Community medicine. The faculty members of the department invest considerable effort in supervision of field research projects of five senior clerkship groups every year. The following include the medical student and residency research projects for 2006, each of which included a scientific research report, oral presentation to faculty and students. Many research projects were also presented by students at the university research conference as oral presentations, and at local, regional and international conferences as posters and oral presentations.

SENIOR CLERKSHIP RESEARCH PROJECTS

Al-Atiq MAA, Awadhi HKSM, Hammadi MAAH. (2006). Evaluation of short educational sessions' efficacy in increasing the use of car safety restraints among government high schools' students in Al Ain district. Supervisors: Barss P (Principal), Grivna M, Bernsen R.

Al-Dahmani K, Al-Falasi O, Al-Eisaie K, Al-Ameri S. (2006). Knowledge, attitude and practice of usage of anabolic steroids among gym users in Al Ain district. Supervisors: Al Maskari F (Principal), Schneider J, Nagelkerke N.

Al-Dallal S, Al-Belooshi MA, Al-Kader MM, Peckett C. (2006). Prevalence of depressive and anxiety symptoms among UAE University female medical and information technology students. Supervisors: Schneider J (Principal), Grivna M, Bernsen R.

Al-Dhaheeri SM, Khouri AA, Al-Ketbi HK, Awadhi FA. (2006). Knowledge, attitude and beliefs among high school female students grade 12 regarding HIV/AIDS – Interventional Study. Barss P (Principal), Schneider J, Bernsen R.

Alhemd Mohd MAA, Nassir A, Helal I, Karami A. (2006). Water safety – drowning prevention in the eastern coast cities of the UAE. Supervisors: Barss P (Principal), Grivna M, Bernsen R.

Al-Kaabi AAMK, Al-Mazrooei AMO, Al-Dhaheeri HSO, Al-Dhaheeri AAM, Al-Shehhi BMM. (2006). Knowledge, attitude and practice of government high school students in Grade 10 regarding fast food consumption in Al Ain district, UAE. Supervisors: Barss P (Principal), Grivna M, Bernsen R.

Al-Kaabi SGS, Al Mansoori DSN, Al-Yammahi AA, Al-Neaimi WAR. (2006). Knowledge, attitude and beliefs among high school female students grade 12 regarding HIV/AIDS – Interventional Study. Al Maskari F (Principal), Grivna M, Bernsen R.

Al-Khatri FS, Al-Neaimi MM, Al-Darmaki SH, Al-Redha KY, Al-Tenaiji AM, Al-Hosani SI. (2006). Knowledge, attitudes and behaviour towards antibiotic use among

parents in Al Ain City, United Arab Emirates. Supervisors: Al Mutawa J (Principal), Nagelkerke N, El Sadig M.

Al-Muhairy SM, Balhamedh AS, Al-Dhaheer JSS. (2006). Knowledge, attitude and beliefs among high school female students grade 12 regarding HIV/AIDS – Interventional Study. Supervisors: Grivna M (Principal), Al Mutawa J, Nagelkerke N.

Al-Oraimi MJ, Al-Darmaki MH, Al-Saqqaf AM. (2006). Pool safety among vendors, installers and owners in the UAE Supervisors: Barss P (Principal), Grivna M, Schneider J, Bernsen R.

Al-Shaikh SA, Buhumaid RE, Al-Suwaidi ME, Al-Zaabi MR, Al-Ghardaqa KA. (2006). Knowledge, attitudes and practices of contact lens care among medical students at UAE University. Supervisors: Al Maskari F (Principal), Barss P, Bernsen R.

Al-Shamsi E, Al-Baloushi H, Al-Badawy A. (2006). Knowledge, attitude and beliefs among high school male students grade 12 regarding HIV/AIDS – Interventional study. Supervisors: Grivna M (Principal), Barss P, Al Mutawa J, Bernsen R.

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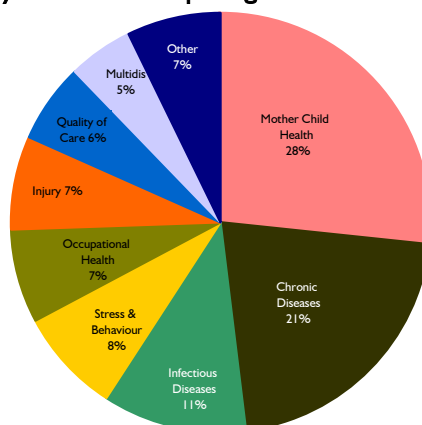
Others

Barss P. (2006). External Grant. National Search and Rescue Secretariat, Canada – Drownings and Other Water-Related Injuries in Canada – 10 Years of Research. Incidence, Risk Factors, and Trends.

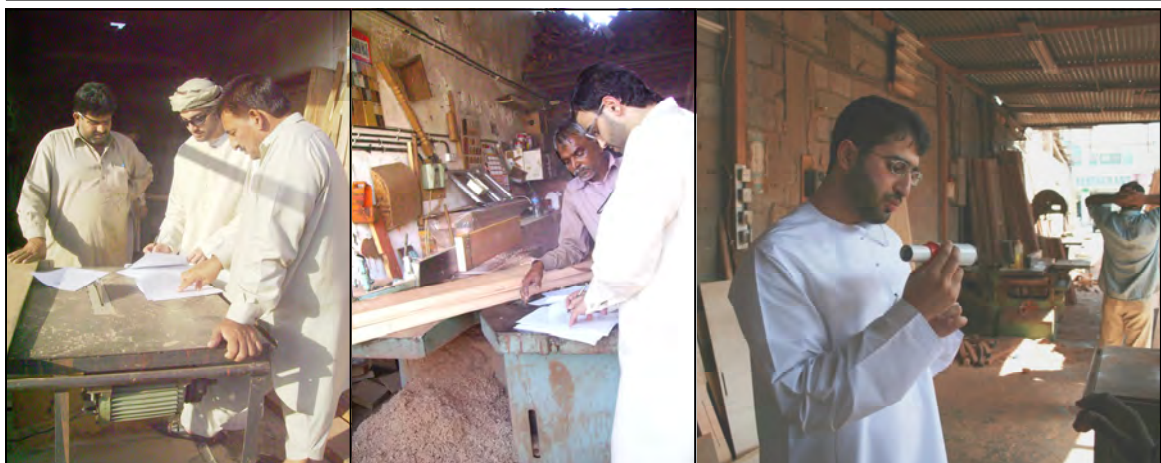
Benešová V, Grivna M. (2004-2006). External Grant. Research Grant Agency - Ministry of Health, Czech Republic (IGA MZ č. NR 8229-3; 2004-2006) The injuries in children at home and recreation, implications for prevention. 3 years.

Schneider J, Bates G (Curtin University, Australia), El Sadig M. (2005-2006). Hydration Status and Fatigue Levels in Outdoor Manual Workers.

Frequency Distribution of Topics of Field Research Projects in the Community Senior Clerkship Programme 1992-2007 (n=233)



Field Project by Final-year Community Medicine Clerkship Students, Sanaya Visit Project



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

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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, 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 2006.

The following staff joined us in 2006:

Dr A Shehab,
Assistant Professor, Cardiologist
Dr A Al-Fazari,
Assistant Professor, Gastroenterologist
Dr J Braun,
Associate Professor, Neurologist

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 III) 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 Assistant) has been funded by an external grant.

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

The Departmental laboratory is located on the 3rd floor and research interests and publications covered in 2006 were:

- *Genetics* *vasoactive peptides*
- *Dermatology* *diabetes*
- *cytokines* *hypertension*
- *cancer* *osteoporosis*
- *infections,*
 including fungi *cardiovascular disease*
- *lipids* *chronic renal failure*
- *pleural disorders* *rheumatic disease*

The Department members published 40 papers in peer-reviewed journals, 1 book, 11 abstracts and 27 conference presentations and 12 clinical grants are held.

ORIGINAL PEER-REVIEWED SCIENTIFIC ARTICLES

Aapro MS, Cameron DA, Pettengell R, Bohlius J, Crawford J, Ellis M, Kearney N, Lyman GH, Tjan-Heijnen VC, Walewski J, Weber DC, Zielinski C. (2006). EORTC Guidelines for the use of granulocyte-colony stimulating factors to reduce the incidence of chemotherapy-induced febrile neutropenia in adult patients with lymphomas and solid tumours. *Eur J Cancer* 42; 2433-2453.

Abdulle AM, Nagelkerke N, Abouchacra S, Pathan JY, Adem A, Obineche EN. (2006). Under-treatment and under-diagnosis of hypertension: A serious problem in the United Arab Emirates. *BMC Cardiovascular Disorders* 6(24); 6-24.

Afandi B, Ahmad S, Saadi H, Elkhumaidi S, Karkoukli MA, Kelly B, Assaf H, Matear D. (2006). Audit of a diabetes clinic at Tawam Hospital, United Arab Emirates, 2004-2005. *Ann N Y Acad Sci*. 1084; 319-324.

Al-Fouzan AW, Galadari I, Oumeish I, Oumeish OY. (2006). Herpes gestationis (Pemphigoid gestationis). *Clin Dermatol* 24(2); 109-112.

Alsowaidi S, Vadas P. (2006). Peanut allergy: An overview. *Allergy and Asthma* 2; 18-21.

Al-Muhairi S, Zoubeidi T, Ellis M, Nicholls MG, Safa W, Joseph J. (2006). Demographics and microbiological profile of pneumonia in the UAE. *Monaldi Archives for Chest Disease* 65; 13-18.

Al-Muhairia, Zoubeidi TA, Ellis ME, Safa W, Joseph J (2006). Risk factors predicting outcome in patients with pneumonia in Al-Ain, United Arab Emirates. *Saudi Med J* 27; 1044-1048

Bayoumi RA, Simsek M, Yahya TM, Benedict S, Al-Hinai A, Al-Barwani H, Hassan M.O. (2006). Insertion-deletion polymorphism in the angiotensin-converting enzyme (ACE) among Sudanese, Somalis, Emiratis and Omanis. *Human Biology* 78(1); 103-108.

Bener A, Adeyemi EO, Almelhdi AM, Ameen A, Beshwari M, Benedict S, Derballa MF. (2006). *Helicobacter pylori* profile in asymptomatic farmers and non-farmers. *Int J Environ Health Res* 16(6); 449-454.

Braun JS, Hahn K, Bauknecht H-C, Schielke E. (2006). Progressive facial asymmetry due to trigeminal motor neuropathy. *European Neurology* 55; 96-98.

Braun JS, Nolte CH, Einhäupl KM, Villringer A, Valdueza JM. (2006). One stroke - two triggers. *Journal of Neurology* 253; 1356-1357.

Denic S, Nicholls MG. (2006). Malaria and Alexander the Great: How important is family history? *Emirates Medical Journal* 24; 1-3.

Ellis M, Frampton C, Joseph J, Alizadeh H, Kristensen J, Hauggaard A, Shammas F. (2006). An open study of the comparative efficacy and safety of Caspofungin and lipop-

- somal amphotericin B in treating invasive fungal infections or febrile neutropenia in patients with hematological malignancy. *Journal of Medical Microbiology* 55; 1357-1365.
- Ellis M, Hedstrom U, Frampton C, Alizadeh H, Kristensen J, Shammas FV, al-Ramadi BK. (2006). Modulation of the systemic inflammatory response by recombinant human interleukin-11: A prospective randomized placebo controlled clinical study in patients with hematological malignancy. *Clinical Immunology* 120; 129-137.
- Galadari I, El-Karamany R, Al-Fouzani AW, El-Ansary M, El-Naby H, Lutfi L. (2006). Rapid detection of IgM and IgG antibodies to herpesviridae virus. *Allerg Immunol* 38(6); 198-202.
- Galadari I, Galadari S, Al-Saie L. (2006). Contact dermatitis in UAE. *Allerg Immunol* 38(6); 195-197.
- Galadari IH, Sheriff MO. (2006). The role of *Helicobacter pylori* in urticaria and atopic dermatitis. *Skinmed* 5(4); 172-176.
- Galadari I, Fowzan AW. (2006). A comparative study between viral isolation and indirect immunofluorescence in the diagnosis of herpes simplex virus. *Allerg Immunol* 38(2); 62-64.
- Galadari I, Sheriff MO. (2006). Cell typing of the scabetic lesion and its clinical correlation. *Allerg Immunol* 38(2); 55-58.
- Gariballa S, Forster S, Walters S, Powers H. (2006). A randomized, double-blind, placebo-controlled trial of nutritional supplementation during acute illness. *American Journal of Medicine* 119(8); 693-699.
- Gariballa S, Forster S. (2006). Effects of acute-phase response on nutritional status and clinical outcome of hospitalized patients. *Nutrition* 22(7-8); 750-757.
- Gariballa S, Forster S. (2006). Energy expenditure of acutely ill hospitalised patients. *Nutr J* 29;5:9.
- Gott M, Barnes S, Parker C, Payne S, Seamark D, Gariballa S, Small N. (2006). Prevalence of symptoms in a community-based sample of heart failure patients. *J Pain Symptom Manage* 32(3); 208-216.
- Gott M, Barnes S, Parker C, Payne S, Seamark D, Gariballa S, Small N. (2006). Communication in heart failure: perspectives from older people and primary care professionals. *Health Soc Care Community* 14(6); 482-490.
- Gott M, Barnes S, Parker C, Payne S, Seamark D, Gariballa S, Small N. (2006). Characteristics and views of family carers of older people with heart failure. *Int J Palliat Nurs* 12(8); 380-389.
- Gott M, Barnes S, Parker C, Payne S, Seamark D, Gariballa S, Small N. (2006). Predictors of the quality of life of older people with heart failure recruited from primary care. *Age Ageing* 35(2); 172-177. PMID: 16495294.
- Howarth FC, Al Shamsi N, Al Qaydi M, Al Mazrouei M, Qureshi A, Kazzam E, Adem A. (2006). Effects of brain natriuretic peptide on contraction and intracellular Ca²⁺ in ventricular myocytes from streptozotocin-induced diabetic rat. *Ann N Y Acad Sci* 1084; 155-165.
- Lindqvist P, Waldenström A, Wikström G, Kazzam E. (2006). Right ventricular myocardial isovolumic relaxation time and pulmonary artery systolic pressure. Pulsed doppler tissue imaging in resuscitation of Burstin's nomogram. *Clin Physiol Funct Imaging* 26; 1-8.
- Lindqvist P, Waldenström A, Wikström G, Kazzam E. (2006). Isovolumic contraction velocity is a potential measurement of left ventricular contractility. *Eur J Echocardiogr*. Jun 16; [Epub ahead of print].
- Obineche EN, Pathan JY, Fisher S, Nicholls MG. (2006). Natriuretic peptide and adrenomedullin levels in chronic renal failure and effects of peritoneal dialysis. *Kidney Int* 69(1); 152-156.
- Obineche EN, Abdulle AM, Bokhari AM, Yassin JY, Gillet MPT. (2006). Circulating levels of endothelin-1 (ET-1) in a homogenous Gulf Arab population. *Annals of Saudi Arabia Medicine* 26(5); 364-369.
- Obineche E, Chandranath I, Adeghate E, Benedict S, Fahim M, Adem A. (2006). Alterations in atrial natriuretic peptide and its receptor levels in long-term, streptozotocin-induced diabetes in rats. *Ann N Y Acad Sci* 1084; 223-234.
- Padmanabhan R, Shafiullah M, Benedict S, Nagelkerke N. (2006). Effect of maternal exposure to homocysteine on sodium valproate-induced neural tube defects in mouse embryos. *Eur J Nutr* 45(6); 311-319.
- Prass K, Braun JS, Dirnagl U, Meisel C, Meisel A. (2006). Stroke propagates bacterial aspiration to pneumonia in a model of cerebral ischemia. *Stroke* 37; 2607-2612.
- Pruss A, Heymann GA, Braun J, Kiesewetter HH, Salama A. (2006). Detection of a new weak A blood group allele (Aw11). *Vox Sanguinis* 90; 195-197.
- Saadi H, Kazzam E, Nicholls MG. (2006). Correction of vitamin D status will prevent heart failure, and improve cardiac function in established heart failure, among Arab women. *Eur J Heart Fail* 8; 694-6. [Epub Jul 7].
- Saadi H, Nagelkerke N, Benedict S, Qazak H, Zilahi E, Mohammadiyah M, Al-Suhaili A. (2006). Predictors and relationships of serum 25 hydroxyvitamin D concentration with bone turnover markers, bone mineral density, and vitamin D receptor genotype in Emirati women. *Bone* 39(5); 1136-1143.
- Saadi H, Kazzam E, Ghurbana BA, Nicholls G. (2006). Correction of low vitamin D status among Arab women will prevent heart failure and improve cardiac function in established heart failure. *European Journal of Heart Failure*, 8(7); 694-696.
- Saadi HF, Mohammadiyah MK, Al-Suhaili AI, Reed RL, Benedict S, Agarwal MM. (2006). Bone mineral density

of the spine and femur in United Arab Emirates women: Relation to anthropometric, reproductive, and lifestyle factors. *Emirates Medical Journal* 24(1); 21-27.

Ullegaddi R, Powers HJ, Gariballa SE. (2006). Antioxidant supplementation with or without B-group vitamins after acute ischemic stroke: a randomized controlled trial. *JPEN J Parenter Enteral Nutr* 30(2); 108-114.

BOOKS, CHAPTERS, REVIEWS AND EDITORIALS

Adeghate E, Saadi H, Adem A, Obineche E. (2006). Editors. *Diabetes mellitus and its complications: Molecular mechanisms, epidemiology, and clinical medicine*. Annals of New York Academy of Sciences. Volume 1084.

PUBLISHED ABSTRACTS, LETTERS AND CORRESPONDENCE

Ahmed M, Bashir M, Gariballa S. (2006). Refeeding syndrome: An interactive case report. *Emirate Medical Journal* 24(3); 251-253.

Anaissie EY, Ellis ME and 107 other authors. (2006). Clinical research in the Lay Press: Irresponsible journalism raises a huge dose of doubt. *CID* 43 ; 1031-1039.

Braun JS. (2006). Book review: Neurological examination made easy. *Emirates Medical Journal* 24; 260-261.

Torab FC, Wazz G, Massad I, Ghodrattollah N, Saadi H, El Taji H, Branicki F. (2006). The role of a bariatric surgery center in a country of high prevalence of obesity and diabetes. *Obesity Surgery* 16(8); 994.

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

Abdulle AM, Nagelkerke N, Abouchacra S, Pathan JY, Obineche EN. (2006). Hypertension, antihypertension treatment, and their correlates in the United Arab Emirates. *Proceedings of the Seventh Annual UAE University Research Conference, MHS* 133 – 140.

Abdulle AM, Nagelkerke N, Abouchacra S, Pathan JY, Adem A, Obineche EN. (2006). Under-treatment and under diagnosis of hypertension: A serious problem in the United Arab Emirates. *American Society of Nephrology 39th Annual Renal Week Meeting*. San Diego, California, USA. (PUB059).

Dawodu A, Saadi HF, Zayed R, Afandi B, Hossain M, Benedict S, Hollis BW. (2006). Extraordinarily low serum and human milk vitamin D status in lactating Arab women: Preliminary report. Presented at the 13th International Conference of the International Society for Research in Human milk and lactation. Ontario, Canada.

Denic S, Frampton C, Nagelkerke N, Nicholls MG. (2006). Consanguinity affects selection of alpha thalassemia genotypes and the size of populations under selection pressure from malaria. *Hamdan Award for Medical Sciences*. Dubai.

Ellis ME. (2006). Modulation of the systemic inflammatory response by human interleukin-11. A prospective randomized placebo controlled clinical study in patients with acute myeloid or lymphoblastic leukemia and non-Hodgkin's lymphoma. *FOCIS*. San Francisco, USA.

Ellis ME. (2006). Challenges in the management of febrile neutropenia. 7th Febrile Neutropenia Symposium. Ankara, Turkey.

Ellis ME. (2006). *Invasive Fungal Infections*. Federation of Royal Colleges of Physicians, UK. International Conference. Al-Ain, UAE.

Ellis ME. (2006). Intermittent dosing strategy for empiric therapy with liposomal amphotericin B. *Conference on New Insights, New Data, New Challenges in Invasive Fungal Infections*. Rome, Italy.

Galadari I. (2006). *Mesotherapy*. Dubai Derma. Dubai, UAE.

Galadari I. (2006). *Psoriasis in UAE*. World Congress of Psoriasis. Stockholm, Sweden.

Galadari I. (2006). *Biologic therapy in psoriasis*. Pan Arab League of Dermatology. Taiz, Yemen.

Gariballa SE. (2006). The Experts speak. *Ischaemic stroke and antioxidant supplementation*. <http://www.vitasearch.com/get/cp/experts/SEGariballaAT021407.htm>.

Obineche EN, Abdulle AM, Pathan JY, Abbas E, Suleiman MN, Mathews CM, Gillette MPT. (2006). The association between blood pressure, plasma lipids and endothelin-1 in a Gulf Arab population. *American Society of Nephrology 39th Annual Renal Week Meeting*. San Diego, California, USA.

Obineche EN, Pathan JY, Rizk D, Agarwal M. (2006). Prediction of total urinary protein excretion in hypertensive disorders of pregnancy with random urinary protein-creatinine ratio. *National Kidney Foundation, 2006 Meetings*, Chicago IL, USA.

Obineche EN. (2006). *Update Course in Nephrology*. National Kidney Foundation (Clinical Meeting). Chicago ILL, USA.

Obineche EN. (2006). *Diabetes in cardiovascular disease*. Consultants and practitioners. Abu Dhabi, UAE.

Obineche E, Nicholls MG, Benedict S, Chandranath I, Fahim M, Adeghate E, Adem A. (2006). Atrial natriuretic peptide (ANP) changes in streptozotocin (STZ) induced diabetic rats. *Nature Clinical Practice "Nephrology"*.

Obineche EN. (2006). *Arab Renal Transplant Association*. Amman, Jordan.

Saadi H. (2006). The first international conference on diabetes mellitus and its complications. Al Ain, UAE.

Saadi H, Nagelkerke N, Benedict S, Qazak H, Zilahi E, Mohammadiyeh M, Al-Suhaili A. (2006). *Predictors and*

relationships of serum 25 hydroxyvitamin D concentration with bone turnover markers, bone mineral density, and vitamin D receptor genotype in Emirati women. The Proceedings of the 87th Annual Meeting of The Endocrine Society. Boston, USA.

Saadi H, Nagelkerke N, Benedict S, Qazak H, Zilahi E, Mohammadiyah M, Al-Suhaili A. (2006). Predictors and relationships of serum 25 hydroxyvitamin D concentration with bone turnover markers, bone mineral density, and vitamin D receptor genotype in Emirati women. 87th Annual Meeting of the Endocrine Society. Boston, USA.

Saadi H. (2006). Prevention and treatment of vitamin D deficiency in Arabian women: Efficacy of high-dose vitamin D supplementation. 4th Dubai International Conference for Medical Sciences. Dubai, UAE.

Saadi H. (2006). Bone mineral density of UAE women: Relation to anthropometric, lifestyle, and reproductive factors. 4th Dubai International Conference for Medical Sciences. Dubai, UAE.

Saadi H. (2006). Nutrition and lifestyle in the prevention and management of diabetes mellitus.

Saadi H. (2006). Pituitary tumors. Harvard CME Practi-Med. Dubai, UAE.

Saadi H. (2006). Hypertension, diabetes mellitus and nephropathy. Emirates Diabetes Society Symposium for primary care physicians. Abu Dhabi, UAE.

Saadi H. (2006). Hypertension, diabetes mellitus and nephropathy. Emirates Diabetes Society Symposium for primary care physicians. Dubai, UAE.

Saadi H. (2006). Towards reducing the burden of diabetes mellitus. Satellite symposium, Dubai, UAE.

Saadi H. (2006). Predictors and associations between 250 HD and bone mineral density in Arabian women. MSD Osteoporosis Meeting. Dubai, UAE.

RESEARCH GRANTS 2005

FMHS New Research Grant 2006

Adem A, Obineche EN. (2006). The role of atrial natriuretic peptide and brain natriuretic peptide and their receptors on volume depletion and repletion in the one humped camel (*camelus dromedarius*).

Braun J. (2006). Pneumococcal meningitis: analysis of the functional relevance of the *lytA*-, *cbpG*- and *ccpA*-genes in brain injury and inflammation.

UAEU Individual Research Grant 2006

Gariballa S, Musa N, Abdulla A, Pathan J. (2006-2007). Effect of B vitamins & Antioxidant on Endothelial function in ischaemic stroke. 69,700 Dhs. FMHS Faculty Grant Scheme.

UAEU Interdisciplinary Research

Grant 2006

Obineche EN, Nicholls MG. (2006). Plasma levels of N-terminal prohormone brain natriuretic peptide, and its relation to cardiovascular risk factors in hypertensive patients among UAE nationals.

Ellis ME, al-Ramadi B. (2004-2006). A study of the serological changes in patients with acute leukaemia.

Hamdan Award Medical Research

Grant 2006

Adem A, Kazzam E, Obineche EN, Ali MAH. (2004-2006). Effect of volume depletion on neurohormones in the camel. Cardiovascular Metabolic Disorders and Hypertension.

Others

Braun J, Weber J. (2005-2007). Damage of the blood brain barrier - a key mechanism in bacterial meningitis. German Research Society.

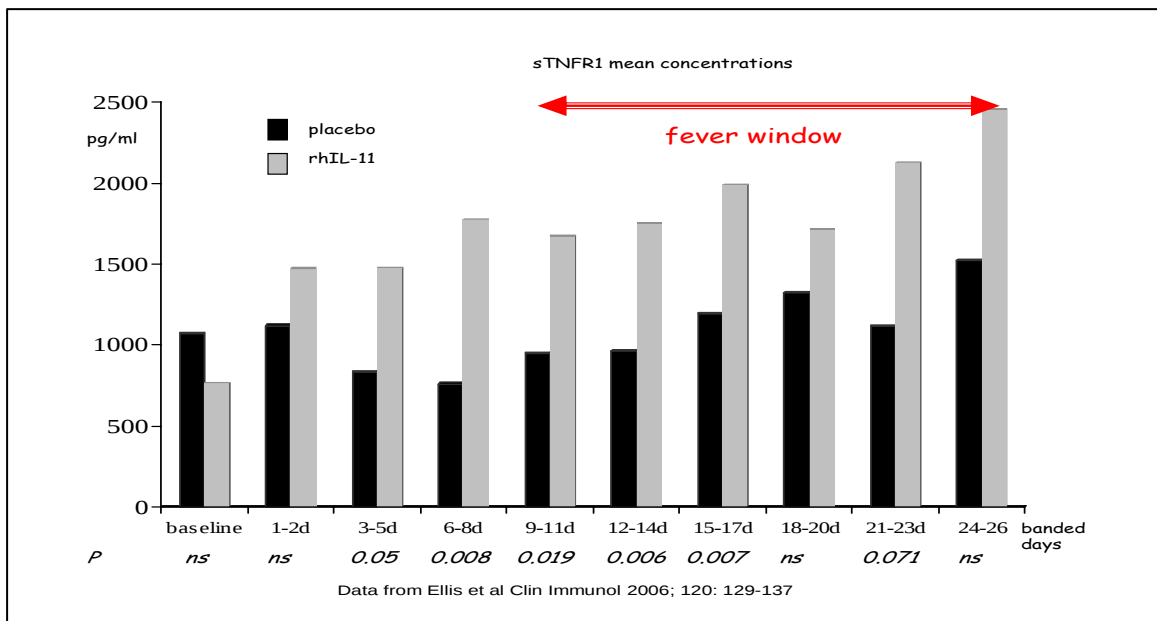
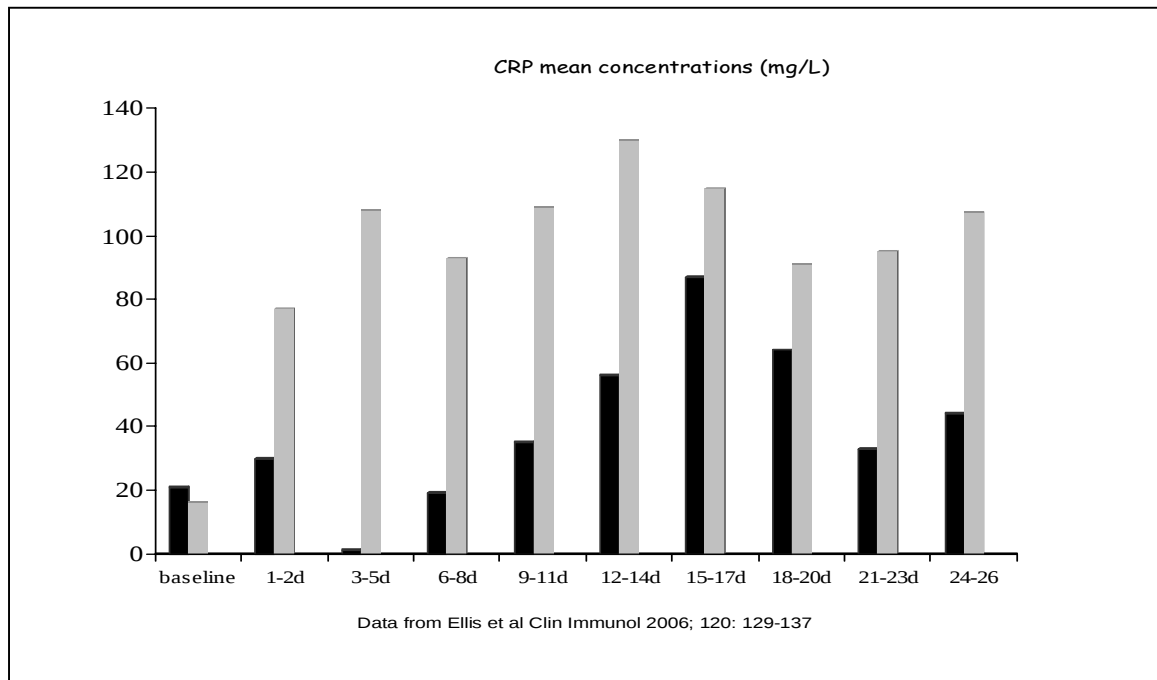
Gariballa S, Williams L, Pockley G. (2005-2008). Effect of diet on immune function and risk of infection in healthy subjects. Food Standard Agency (England).

Gariballa S. (2005-2006). Zinc, copper and selenium concentrations in hospitalised patients. National Health Service Research and Development (England).

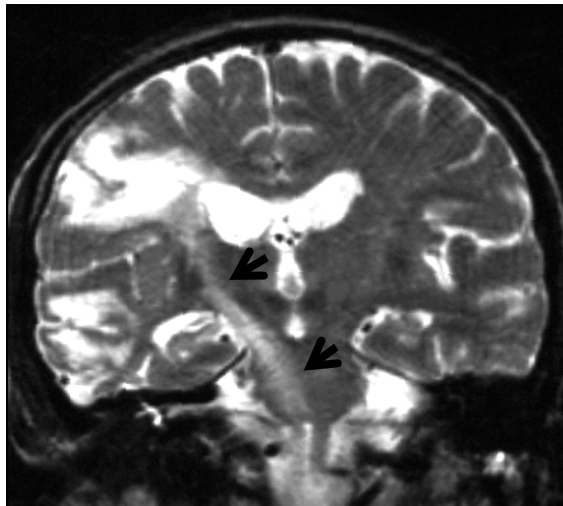
Gott M, Payne S, Gariballa S. (2005-2008). Symptoms burden and quality of life in hospitalised heart failure patients. Department of Health (England).

Ellis M, al-Ramadi B. (2006-2007). An intermittent dosing study of liposomal amphotericin B in neutropenic fever. Gilead Sciences.

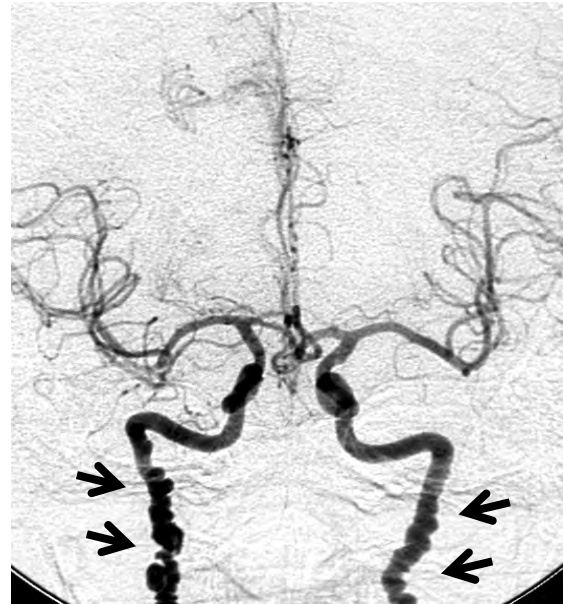
Ellis M. (2003-2007). A study of bacteraemia in patients with haematological malignancy. Wyeth.



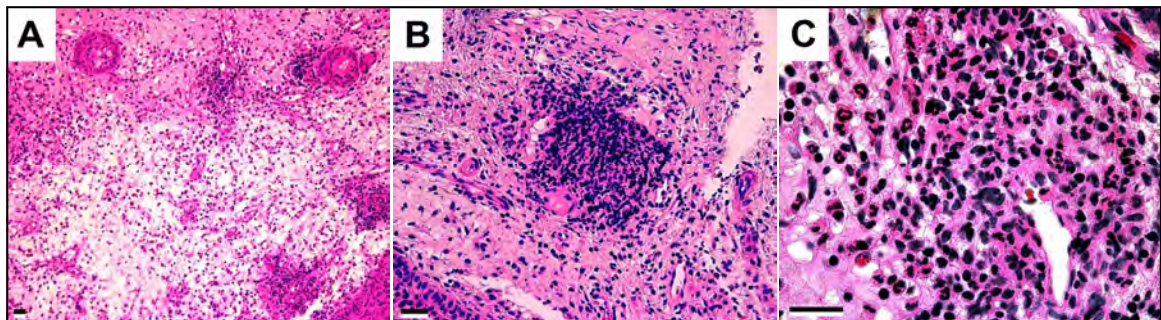
This study showed that a recombinant cytokine, rhIL-11 could increase shedding of the soluble receptor for TNF α (sTNFR1) and increase C-reactive protein concentrations in the absence of any bacterial trigger. This might present an advantageous immunological milieu for the patient with hematological malignancy.



Stroke with secondary pyramidal tract degeneration (MRI visualizes the infarct area and secondary degeneration of the right pyramidal tract = arrows)

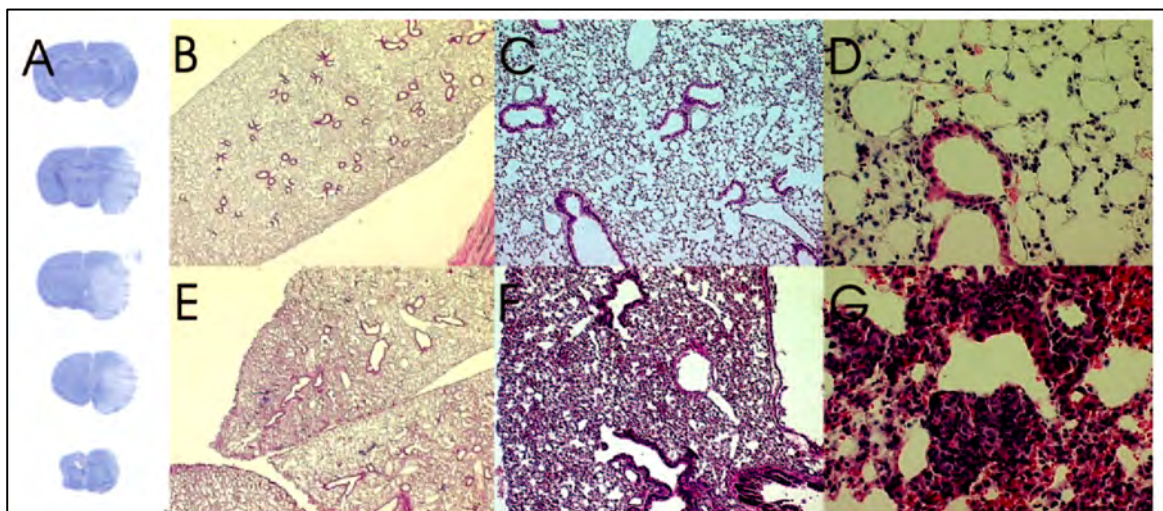


... in a patient with fibromuscular dysplasia (internal carotid arteries = arrows)



...and Wegener's granulomatosis (Biopsy samples of nasal mucosa and paranasal sinuses illustrate stromal edema (A), granuloma (B), and perivascular inflammatory infiltrate (C). Bars = 50 μ m. Hematoxylin&Eosin.).

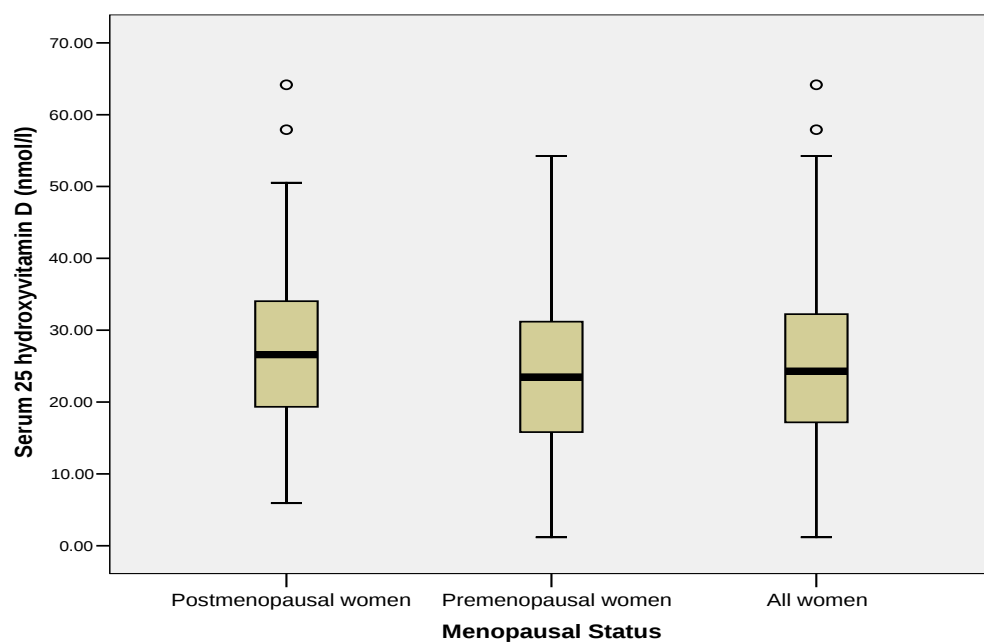
From: Braun JS, Nolte CH, Einhäupl KM, Villringer A, Valdeuza JM. (2006). One stroke - two triggers. *Journal of Neurology* 253; 1356-1357.



Aspiration pneumonia in stroke but not in sham mice. (A) Histologic examination of the brain. Coronal sections of a hematoxylin and eosin-stained mouse brain 72 hours after middle cerebral artery occlusion showing the infarction area. Lung histology of (B-D) sham and (E-G) stroke mice 18 hours after intranasal application of *S pneumoniae*. Representative 12- μ m sections of hematoxylin and eosin-stained lungs from (E-G) middle cerebral artery occlusion but not from (B-D) sham animals revealed signs of a severe bacterial pneumonia characterized by (E and F) lobar consolidation, edema, necrosis and neutrophilic infiltrates (E and F). Magnifications (B and E) 25-fold, (C and F) 100-fold, or (D and G) 400-fold.

From: Prass K, Braun JS, Dirnagl U, Meisel C, Meisel A. (2006). Stroke propagates bacterial aspiration to pneumonia in a model of cerebral ischemia. *Stroke* 37; 2607-2612. (K.P. and J.S.B. contributed equally to this work).

Box Plots of Serum 25OHD (nmol/L) by Menopausal Status in 259 Emirati Women



Saadi, et al. Bone 2006. This study shows that UAE women have very low mean 25-hydroxyvitamin D (normal range 50-150 nmol/L) mostly related to inadequate sunlight exposure.

Department of Medical Microbiology and Immunology

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

The members of the department are involved in several internally and externally funded research projects developing extensive collaborations with other departments in FMHS and institutions abroad. The development of national research and teaching staff remains priority. Dr Mariam Al-Shamisi returned from her postdoctoral fellowship in the Center for Experimental Rheumatology, University of Zurich and Mr Ahmed Al Qhatani is pursuing his doctoral studies at the University of California, Irvine.

In this year, the department lost two senior staff members. Professor N Nowotny returned to his alma mater, University of Vienna (Austria) and Dr Tibor Pal was appointed Professor and Chair of Department of Microbiology, University of Pec (Hungary). Both colleagues continued their collaboration with the department and FMHS as indicated in the list of publications.

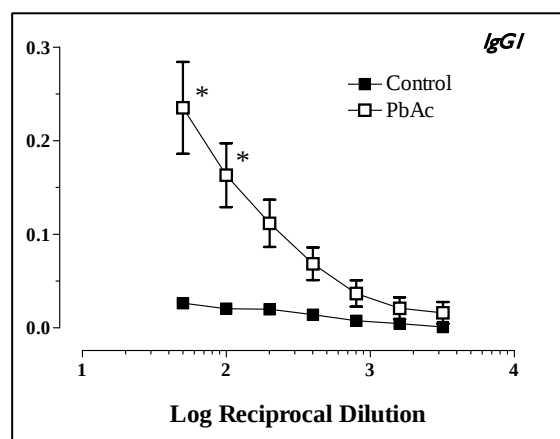
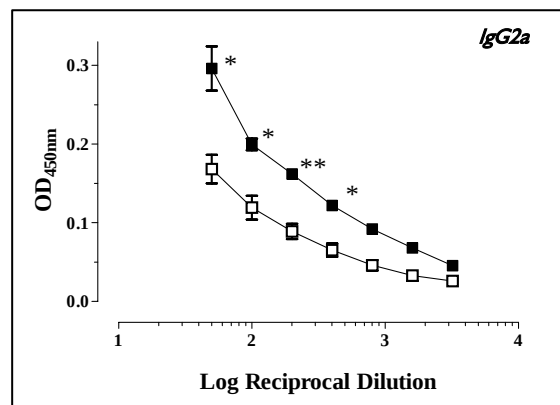
Members of the department were invited speakers at several international and FMHS organized meetings. Dr Tahir Rizvi was promoted to the rank of Professor based on high quality research contributions. Professors Ramadi and Eley were elected members of the editorial board of distinguished journals. The department was involved in promoting research activities of the medical students and their participation in the program of all departmental laboratories was noted and FMHS and international student research conferences.

Research interests of the departmental laboratories are as follows:

There are two main areas of research in **Professor Basel al-Ramadi's** laboratory. The first is aimed at characterizing the underlying mechanism(s) by which attenuated bacterial strains, engineered to express eukaryotic cytokines, can lead to suppression of tumor growth. The efficacy of such strains has been already demonstrated, but the exact way the bacterial strains function as anti-cancer agents is the present focus.

The second project is concerned with the role of innate immune response in regulating immunity to infection by an intracellular bacterial pathogen model. For this purpose, specific gene knock-out mouse strains are being utilized. Currently, mice deficient in a protein known as MyD88, which is a key molecule in signaling pathways from Toll-like receptors, are being examined. Other mouse strains which will be used are TLR2-deficient as well as TLR4-deficient mice. Each of these strains has a specific mutation that affects its ability to respond

early in the infection to highly conserved microbial antigens, such as lipopolysaccharide. The use of such experimental animal models should give important clues as to the importance of major components of the innate immune system on the overall control of immunity to infection.



Chronic exposure to inorganic lead induces a shift from a protective Th1-type to non-protective Th2-type immune response. Following a chronic oral exposure to lead acetate, mice were infected with a sublethal dose of *Salmonella typhimurium*. Analysis of sera for the presence of *Salmonella*-specific antibodies was done on day 38 post infection. Whereas IgG2a isotype antibodies (indicative of a protective Th1 type response) predominate in infected normal mice (left panel), IgG1 isotype antibodies (indicative of a poorly-protective response) predominate in infected mice exposed to lead (right panel). Since protection against intracellular bacterial infections requires a robust Th1-dominated immune response, the above data provide a compelling explanation for the increased susceptibility to infections observed in lead-exposed animals. (Published in Fernandez-Cabezudo et al, *Toxicol. Appl. Pharmacol.* 218:215, 2007; epub November 2006).

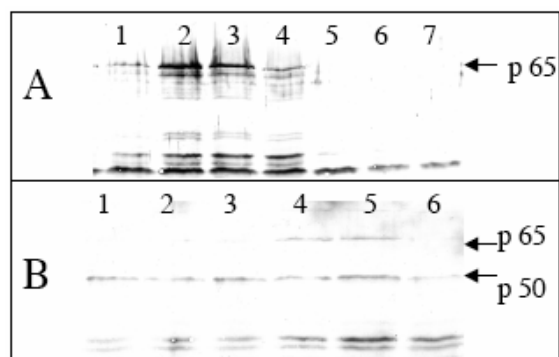
One of the highlights of research accomplished in 2006 was the completion and publication of work

related to a clinical project the effect of IL-11 on the systemic inflammatory response in cancer patients. This analysis was published in *Clinical Immunology*, one of the major journals in the field.

A second major achievement was the completion of the analysis related to a previous project in the lab concerning the exact mechanism of immunotoxicity induced by chronic exposure to the heavy metal lead. These data demonstrated that lead exposure results not so much as suppression of immune responsiveness, but rather to a shift in the immune system which effectively weakens its ability to handle a specific type of pathogens. Thus, inorganic lead should be considered as an immuno-modulator rather than an immunosuppressive compound. This work was published in the journal *Toxicology & Applied Pharmacology* (published online in November 2006 and in print form in February 2007).

Professor Senarath Dissanayake conducts research in two broad areas, immune regulation in parasitic infections and molecular epidemiology of tuberculosis. Both are of national and regional importance. The potential for increased incidence and transmission of helminth infections is increasing in the entire Middle East as a result of rapid urbanization and population growth. Tuberculosis is now well recognized as a major public health problem in these countries.

His research on immune regulation focuses on the role of parasite glycans in maintaining a dominant Th-2 environment which is seen in almost all helminth infections. He is also interested in defining the molecular basis for the down-regulation of the initial Th-1 (mostly IFN-g driven) responses in parasitic infections. These studies have shown that the relative positions of terminal galactosyl- and fucosyl residues in Lewis type glycans in parasite helminths play a major role.



Lewis X up-regulates NF-kB p65 expression in naïve mouse spleen cells. A and B are Western blots, probed with anti-mouse NF-kB p65 and p50 antibodies. A-1, A-2 and A-3 are 0 hrs and ~3 hrs culture. Blot B: NF-kB p65 and p50 expression. Lanes B1-B5, Lewis X stimulated 0, 1, 2, 3, and 4 hrs and B6, no stimulant, 4 hr cultures. *Molecular Immunology*, 44: 1623-30, 2007.

For example, while Lewis X type sugars with b (1-4) galactose residues induce IFN-g, Lewis Y type sugars with a (1-3) fucose residues are IL-6 stimulatory. However, the IFN-g response is self limiting. Further investigations showed that this effect was linked to up-regulated expression of the p65 component of the transcription factor NF-kB. Prolonged stimulation abolished the NF-kB p65 expression within few hours. Expression of IL-6 was unaffected. This appears a novel mechanism of immune regulation not described in literature.

Studies on molecular epidemiology of tuberculosis transmission in the Al Ain area have shown some interesting insights. Contrary to the commonly held view that increased incidence of tuberculosis in the U.A.E. is primarily due to the transmission from *M. tuberculosis* infected expatriate workers from tuberculosis endemic countries, our data showed that there are indigenous strains of *M. tuberculosis* in the country, affecting mostly the UAE national population. It appears that this tier of transmission is not influenced by expatriate workers and operates independently of the expatriate transmitted tuberculosis. Data also highlighted the possibility that tuberculosis in the majority of expatriate workers occurs after a prolonged stay, suggesting that reactivation of latent infection as more likely than new infections. Since only a small proportion of *M. tuberculosis* infected individuals develop disease immediately, the numbers of individuals harboring latent infections are very likely to be significant. This latter group of individuals is the most difficult to detect, as almost all of the currently available diagnostic tests including the *M. tb* specific IFN-g test which remains to be evaluated. The more important fundamental question is to determine what event(s) activate(s) the latent infection to clinical tuberculosis.

Professor Adrian Eley's main research interests are the impact of *Chlamydia trachomatis* on infertility, especially in males and the way in which *C. trachomatis* adheres to the human host. This infertility work on males was recognized in September 2006 by the Royan International Research Award in Reproductive Biomedicine awarded to Professor Eley for a study on "Apoptosis of ejaculated human sperm is induced by co-incubation with *C. trachomatis* lipopolysaccharide".

In May 2006, Professor Eley was Chairman of a Workshop on *Chlamydia* and Reproduction which was held at the Avesina Research Institute, Tehran, Iran.

Publications this year included an improvement in the way that *C. trachomatis* can be stored long-term (*Journal of Clinical Microbiology*) and a study on an LPS fragment having an unexpected damaging effect on the viability of human sperm (*Journal of Andrology*).

An on-going study is currently investigating the prevalence of *C. trachomatis* in couples attending the Infertility clinic at Tawam Hospital. Al Ain.

Professor Miodrag Lukic's laboratory is involved in the molecular and cellular analysis of proinflammatory and regulatory cytokines (IL-23, IL-27, IL-18) and galectins in the induction of T cell mediated autoimmunity. Immunohistological and histochemical analyses were done in close collaboration with Dr E Mensah-Brown (Department of Anatomy).

In 2006 the group published their studies which indicated for the first time that IL-23 – IL-17 axis may be involved in the development of type-1 diabetes highlighted in European Journal of Immunology.

In the same model of immune mediated diabetes they are now studying the possible regulatory or effector role of Interferon γ . The second project is related to the role of IL-27 in modulating Th-17 mediated immunopathology. Finally, in three models of Th-1 mediated autoimmunity, experimental allergic encephalomyelitis, MLD-STZ induced diabetes and Con A induced hepatitis. This group studied the role of Galectins-3 in the development of organ specific autoimmunity using galectins-3 “knock out mice” (collaboration with Dr. Daniel Hsu, University of California, Irvine). The results indicate that proinflammatory and antiapoptotic effects of galectins-3 favours in the expansion of autoimmune T cells and macrophages as documented by clinical, histological and histochemical criteria. Further, RT-PCR and intracellular cytokine FACS analysis indicate that both IL-12-IFN- γ and IL-23-IL-17 axis play a role in the induction of these autoimmune diseases.

Professor Tahir Rizvi's laboratory is involved in two major projects: a) *Packaging and Cross-Packaging of Retroviral RNAs*. These studies are

focused on how retroviral RNA is preferentially packaged into the nascent virus particles. They have recently defined the packaging determinants of MPMV and are currently defining the packaging signals for FIV. FIV is being solicited as the retrovirus of choice in efforts to develop safer vectors for human gene therapy over primate lentiviruses such as HIV and SIV since the greater phylogenetic distance from these lentiviruses should reduce the chances of generation of pathogenic variants by recombination between similar retroviruses.

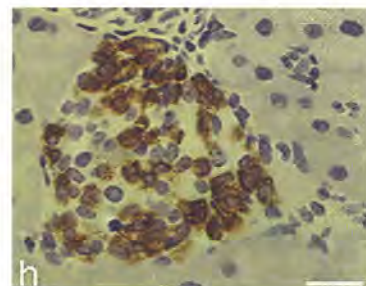
However, in the first safety study of FIV transfer vectors, they have shown that FIV RNA can be cross-packaged by both HIV and SIV. They are continuing investigations into the ability of the various retroviruses to cross-package each other's genomes. Recently, they have defined the packaging signal of FIV RNA in detail, revealing the nature and relative contribution of LTR and non-LTR sequences in packaging. In addition, they have predicted the secondary RNA structure of the sequences involved in packaging. Based on these observations, they are collaborating with Professor Andrew Lever of the University of Cambridge UK, to further investigate the secondary structure of the FIV packaging signal using genetic, biochemical, and X-ray crystallographic analyses. b) *Basic Steps in Retroviral Replication: mRNA transport, tissue-specific gene expression, transcript termination, and recombination*: Several projects in the laboratory are dedicated to the understanding of how retroviral genetic elements function and can be exploited for better gene delivery into humans. For example, their work on gene expression is focused on deciphering the mechanism of action of the constitutive transport element (CTE) encoded by MPMV. Use of CTE in retroviral vectors has allowed us to express heterologous genes that could not be expressed otherwise in an efficient

IL-23 and diabetes development

Pro-inflammatory cytokines of the IL-12 family (e.g. IL-12, IL-23, IL-27) are involved in a range of diverse autoimmune diseases but their role in diabetes has not been well established. Mensah-Brown *et al.* have administered multiple low doses of streptozotocin to induce diabetes in mice and use this model to specifically assess the role of IL-23 in disease generation. Their results demonstrate that *in vivo* administration of IL-23 induces acceleration of the onset of diabetes if the pathogenic process has

already begun. The observed effects of IL-23 correlate with increased expression of IFN- γ and IL-17 in the pancreatic islets and are also associated with the immunopathological manifestations of diabetes, such as enhanced numbers of infiltrating mononuclear cells and increased β cell loss in the islets. Although IL-23 has been implicated in a number of autoimmune diseases, such as allergic encephalomyelitis or rheumatoid arthritis, this is the first demonstration of its role in diabetes.

pp. 216–223



Highlight from European Journal of Immunology 36(1)2006.

manner without the need for other viral *trans*-acting proteins. Currently they are addressing the mechanism of CTE action in the regulation of viral gene expression.

Recently, they have shown that the structural *gag/pol* genes expression of another important mouse pathogen, MMTV, is also dependent upon MPMV CTE. MMTV seems to contain many unique genetic control elements that we would like to exploit as tools for specialized gene delivery. For example, MMTV contains multiple promoters for the expression of its accessory genes in a tissue-specific manner. Therefore, they would like to not only map the packaging determinants of this unique B type retrovirus, but also explore the use of its multiple promoters for differential gene expression, thus opening new avenues of research towards the use of MMTV promoters for targeted human gene therapy. Similarly, another project in the laboratory is exploring the relative strengths of the polyadenylation (poly A) sequences from different retroviruses. Readthrough transcription could lead to the “hijacking” of cellular genes or genetic elements found downstream of the integrated retroviruses, potentially resulting in cancer induction. Therefore, this study aims to identify the relative strengths of the poly A signals from different retroviruses to determine ways of manipulating these signals for better vector design that minimize the readthrough potential of the gene transfer vectors.

Finally, other projects are investigating the ability of retroviruses to undergo genetic recombination as a consequence of co-packaging of two different genomic RNAs into the same virus particle, resulting in viruses with unknown pathogenic potential. Such experiments should not only provide insights into how promiscuous different retroviruses are in their ability to co-packaging each others genomes, but also should provide valuable estimates of recombination frequencies in the event that co-packaging takes place. This is an important area of research, especially for gene therapy researchers who need to know the risks involved in the use of retroviral vectors for human gene therapy.

Dr Mariam Al-Shamisi has an interest in immunology of rheumatoid arthritis. A chronic autoimmune disease characterized by systemic inflammation and synovial hyperplasia with different activated effector immune cells accumulate to play part in the ongoing articular damage. Certain autoantigens have been defined as disease markers and/or implicated in the induction and maintenance of inflammatory reactions against the host tissues. Her work involved identifying new

autoantigens using a modified SEREX “Serological analysis of recombinant cDNA expression libraries” method. In this method the synovial fluid from RA patients is screened for autoantibodies.

In rheumatoid arthritis she is also trying to look closely at the abnormal activation the bone resorbing osteoclasts and study the possible potential involvement of the transcriptional repressor “Blimp=1” in the process of osteoclastogenesis. This molecule has been attributed as the master regulatory of B cell differentiation and was also found to play a very important role in driving activation of effector T lymphocytes.

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Al Amri D, Al Sari N, Mustafa F, Rizvi TA. (2006). Development of a Three-Plasmid Trans Complementation Assay to Study Mouse Mammary Tumor Virus (MMTV) Replication. Presented at the Fourth Scientific Conference for GCC Medical Students, Muscat, Oman.

Al Suwaidi S, Al Ali F, Rizvi TA, Mustafa F. (2006). Role of the 5' End Sequences in Mouse Mammary Tumor Virus (MMTV) Genomic RNA Packaging and Propagation. Presented at the Fourth Scientific Conference for GCC Medical Students, Muscat, Oman.

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Bakonyi T, Hubálek Z, Ivanics É, Erdélyi K, Ferenczi E, Weissenböck H, Nowotny N. (2006). Emergency and re-emergence of flaviviruses in eastern and central Europe. 4. European Conference on Viral Diseases (ConVir 4) in conjunction with the 8. Congress of Chemotherapy and Infection (ECC 8), Budapest.

F Mustafa, Jayanth P, Phillips PS, Ali J, Rizvi TA. (2006). Packaging And Propagation Determinants of the Mouse Mammary Tumor Virus (MMTV) Vector RNAs. Annual Retrovirus Meeting of the Cold Spring Harbor Laboratory, New York.

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Fernandez-Cabezudo MJ, El-Hasasna H, Panteva M, al-Ramadi BK. (2006). Mechanisms of apoptosis in Lck-deficient cells. The Seventh Annual Research Conference at UAE University, Al Ain, UAE.

Fernandez-Cabezudo MJ, Mechkarska M, Petroianu G, Attoub S al-Ramadi B. (2006). Chamomile-derived flavonoids exert differential effects on nitric oxide production by macrophages. International Symposium on Chamomile, Presov, Slovak Republic.

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Nowotny N. (2006). Recent knowledge on avian influenza. Invited Speaker; Sheikh Khalifa Hospital, Abu Dhabi.

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Nowotny N. (2006). Avian Influenza – review and update. 18. Conference of Veterinarians of the Republic of Serbia, Zlatibor (Serbia).

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RESEARCH GRANTS 2006

FMHS Grants

Prof B K al-Ramadi (PI)

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

Prof TA Rizvi (PI)

Readthrough Capabilities of Retroviral Polyadenylation Sequences and Consequences for Retroviral Vector Design.

Prof TA Rizvi (PI)

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

Prof S Dissanayake (PI)

Further characterization of leishmaniasis protective and immunomodulatory N-glycans of *Taenia crassiceps*.

UAE University Multidisciplinary Grant

Prof M L Lukic (PI)

The Role of Interleukin 23 (IL-23) a Novel IL-12 Family Members in the Development of Experimental Insulin Dependent Type-I Diabetes: Therapeutic Implications.

Hamdan Award Medical Research Grant

Prof TA Rizvi (PI)

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

Prof ML Lukic (PI)

Role of Galectin-3 in the Induction of Inflammatory Autoimmunity: An Analysis in Experimentally Induced Type -I Diabetes in Mice.

Terry Fox Cancer Research Grant

Prof B al-Ramadi (PI)

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

Prof TA Rizvi (PI)

Regulation of Retroviral Gene Expression by Cis-Acting Repressor Sequences (CRSs) and the Constitutive Transport Element (CTE).

Other Externally Funded Grants Projects

Prof TA Rizvi (PI)

Structure and Function Analysis of RNA Packaging in the Lentivirus FIV. Wellcome Trust Collaborative Project Grant.

Prof N Nowotny/ Dr T Pal

Identification of viral and bacterial pathogens in ticks, which may cause serious human diseases, at the offshore wellhead towers of Abu Dhabi Marine Operation. ADMA-OPCO

Department of Obstetrics and Gynaecology—

Prof M Ezimokhai Dr S Aswad Dr D Rizk Dr. Sami J George Dr H Mirghani Dr Munira Mohammed	Professor, Chair Associate Professor Associate Professor Associate Professor Assistant Professor Teaching Assistant	Dr N Osman Ms L Thomas Ms K Manickam Ms J George	Technician Technician Secretary Secretary
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Tel: 7137566 / Fax: 7672167 / <http://www.fmhs.uaeu.ac.ae/Departments/ObstetricsGynaecology>



standing from the left to right: Mr Abu Baker, Dr. D. Rizk, Dr. Sami J 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, Oncology, Fetal Medicine, Women's Health and Urogynecology and 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.

c) Women Health and Urogynecology

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

e) Oncology

Dr. S. G. Aswad is interested in Epidemiology of female genital cancer.

f) 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

community-based study in the Al-Ain district, United Arab Emirates. *J Obstet Gynaecol Res.* 2006 Feb;32(1):63-7.

Ghazal-Aswad S, Badrinath P, Sidky I, Gargash H (2006). Colposcopy services in the United Arab Emirates. *J Low Genit Tract Dis.* 2006 Jul;10(3):151-5.

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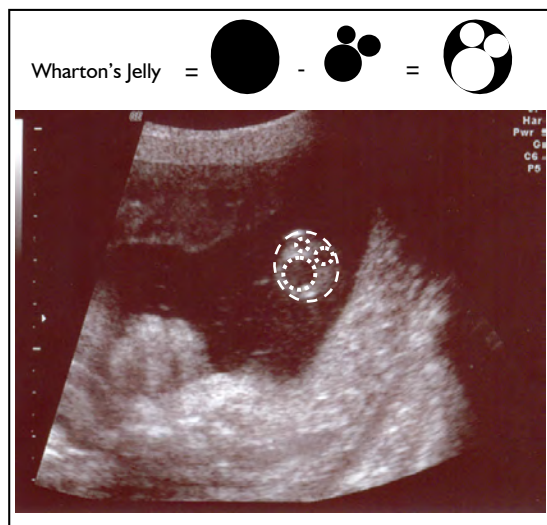
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RESEARCH GRANTS - 2006

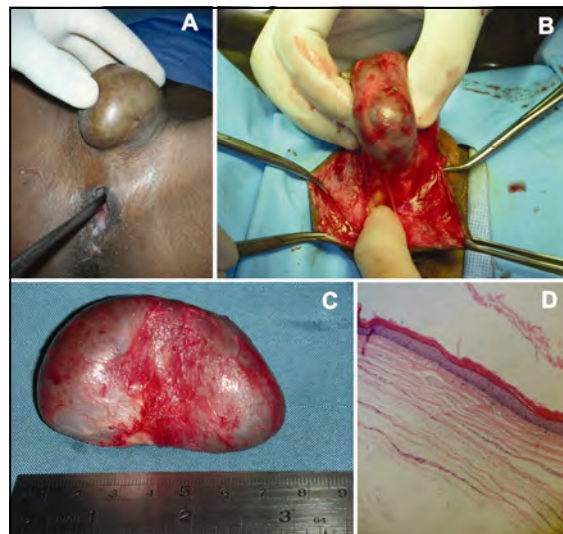
FMHS New Research Grant 2006

Dr. D Rizk

Light and electron microscopic studies on the levator ani of aged ovariectomized rats.



Wharton's jelly (umbilical cord) area measurement in gestational diabetes



A large clitoral epidermoid inclusion cyst first presenting in adulthood following childhood circumcision

Department of Pediatrics

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

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Standing from left to right: Ms. R Clemente, Dr R Al Mahmoud, Dr. H Narchi, Mr. J Kochiyil, Mr. Jamal and Mr. Pramathan

Seated from left to right: Dr S E Al-Hammadi, Prof. SA Uduman, Prof. L. Al-Gazali, Prof. P Sasidharan, Prof. Y. Abdulrazzaq, Dr. I. Amirlak and Dr B G Balhaj

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 differ-

ent 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.

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.

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

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RESEARCH GRANTS 2006

FMHS Research Grant 2006

Prof YM Abdulrazzaq

Ochronosis.

Prof YM Abdulrazzaq

Trace elements in breast milk lactating UAE mothers.

Prof Al-Gazali (CI)

Elucidation of the cellular mechanism underlying the loss of function of NPR- β in acromesomelic dysplasia, type Marateaux.

Prof Al-Gazali (PI)

Homozygosity mapping of four consanguineous Arab families with autosomal recessive Silver-Russell Syndrome.

UAE University Individual Research Grant 2006

Prof YM Abdulrazzaq

Pharmacokinetics of Vigabatrin in the mouse fetus.

Dr. S Al-Hammadi

Prevalence of Food Allergy Among Children in Al Ain, UAE.

UAE University Interdisciplinary Research

Grant 2006

Prof Al-Gazali (CI)

Homozygosity mapping and molecular characterization of recessive disorders in the UAE.

Others

Prof. C Walsh, Prof Al-Gazali (CI)

Genetics of Epilepsy and Cognitive Disorders

National Institute of Neurological Disorders and Stroke

Dr. J Gleeson, UCSD, Prof Al-Gazali (CI)

Investigation of the Genetic Causes of Cerebellar and Hind-brain Malformation

Prof SA Uduman

RSV Epidemiology and Palivizumab efficacy in preventing severe RSV among the high-risk children in the UAE. Primarily funded by the Abbott Laboratories of the Middle East. 1998 - 2003. Partially funded by the Department of Pediatrics, FMHS (2000 – current).

Dr H Narchi

Prospective longitudinal study of maternal and infant Vitamin D status. FMHS Seed grant 2006

Department of Pathology

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

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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.

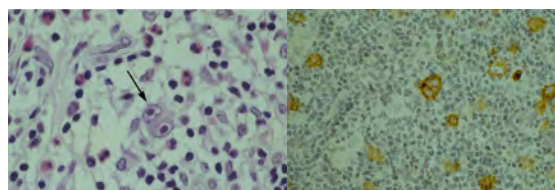


Figure: Left side, classic binucleated Reed-Sternberg cell in a case of Hodgkin's disease (arrow) (H & E x 40), right side, immunohistochemistry with CD30 antibodies highlights the Reed-Sternberg cells (dark brown color).

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.

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 I 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 I (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)

Single gene and multifactorial diseases are prevalent in UAE populations. In collaboration with other faculty members, I have initiated the following research projects:

I. Identification of genetic defects underlying single gene and multifactorial disorders in UAE and Arab populations

Recessive disorders are prevalent in UAE and other Arab populations, mainly due to the high level of consanguineous marriages, with serious

health and socioeconomic consequences. The molecular identification of the genetic aberrations responsible for those diseases is crucial for their effective prevention and possibly treatment. Prevention can be achieved by effective genetic counselling, offering pre-implantation and/or prenatal diagnosis to families with high risk. In addition, the incidence of multifactorial diseases such as type II diabetes, obesity, certain cancers and cardiovascular diseases has been steadily rising in the UAE over the past three decades indicating a genetic predisposition to those diseases revealed by changes in life style. We are currently establishing a molecular genetics research laboratory at the Faculty of Medicine and Health Sciences to establish the molecular defects causing recessive and multifactorial disorders found in UAE population.

2. Developing molecular diagnostic tests specific for mutations underlying genetic diseases prevalent in UAE and Arab populations

The practice of genetic testing for disorders prevalent in Arab populations is very limited despite the potential importance for the prevention of disease occurrence. This project aims to identify mutations responsible for common genetic diseases in the UAE and develop protocols for their detection. The most common genetic disorder in the UAE is alpha thalassemia. However, testing and mutation detection for this serious illness is routinely carried out by Dubai Genetic and Thalassemia Center and therefore will not be covered by this research programme. Instead, we will start by establishing the genetic defects responsible for familial hypercholesterolemia (FH) in UAE population. FH is a serious health problem in most populations including Arabs leading to increased mortality and morbidity rates. This illness is hereditary in an autosomal dominant manner affecting 1 in 500 people and is mainly caused by mutations in LDLR and Apolipoprotein B genes. The manifestation of this disease are preventable by medical intervention, if detection is made early in life. The most accurate and unequivocal method of diagnosing FH is by genetic testing. It is estimated that at least 600,000 Arabs are affected by this lipid metabolism disorder with the vast majority are not aware of their illness and thus leading to serious cardiovascular diseases in midlife and possibly death. Recent advances in molecular biology, biotechnology and genetics allow for the rapid and accurate genetic testing for FH. However, the spectrum of mutations causing FH in Arabs is likely to be different from those of other ethnic groups. Therefore, this proposal aims to identify more mutations in LDLR and Apolipoprotein B genes from Arab FH patients and develop genetic testing protocols for their detection.

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 established that retention in the endoplasmic reticulum of the mutant proteins is the underlying mechanism for Robinow syndrome, a recessive disorder 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 carrying out research to establish the cellular mechanisms of a number of diseases.

Departmental Undertaking:

Drs Alia Al Bawardi and Saeeda Al Marzooqi (resident trainees) have initiated a project under the guidance of the faculty members. A web-based "COM - Case of the Month" series on interesting cases recently diagnosed in the Al Ain Medical District (AAMD) is incorporated into the departmental listing under the FMHS website. These cases are presented as quizzes and are chosen to illustrate unusual diagnoses seen at Al Jimi and Tawam Hospitals. Classical pathological features and well as explanations with relevant recent publications are presented.

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Aldhaheeri W, Hassouna I, Al-Salam S, Karam Sh. (2006). Characterization of breast cancer progression in rats. Proceedings of the 7th annual UAEU research conference.

Al-Ramadi B, El-Hasasna H, Fernandez-Cabezudo M, Attoub S, Al-Salam S, Adeghate E. (2006). Development of cytokine-based immunotherapies for the treatment of cancer using live attenuated *Salmonella* as targeting carriers. Proceedings of the 7th annual UAEU research conference.

Al-Salam S. (2006). Pulmonary leiomyosarcoma. Invited Case Presentation at the 4th Emirates Pathology Meeting. Dubai, UAE.

Kaneez F, Hamza A, Al-Salam S. (2006). Sesame oil as a protective agent against doxorubicin induced cardiotoxicity in rat. Proceedings of the 7th annual UAEU research conference.

RESEARCH GRANTS 2006

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UAE University Individual Grant 2006

Ali B.R. (2006).

The genetic basis of familial hypercholesterolemia in the United Arab Emirates Arab populations.

Drs S Al-Salam (PI), H El-Teraifi, Ms A John. (2006).

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.

Department of Pharmacology_____

Prof G Petroianu	Professor, Chairman	Central Facilities	
Prof A Adem	Professor	Dr M Kosanovic	Chief Technician
Prof MY Hasan	Professor, Associate Dean, Student & Alumni Affairs and Program Director	Mr R Sheen	Senior Technician
	Graduate Studies	Dr M Al sultan	Veterinarian (Animal House)
Dr S Bastaki	Associate Professor	Mr M Shafiullah	Technician (Animal House)
Dr S Attoub	Assistant Professor	Mr M Elwasila	Technician (Animal House)
Dr I Chandranath	General Technician		
Ms K Arafat	General Technician		
Mr SM Nurulain	General Technician		
Ms S Duncan	Secretary		

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



Standing from left to right: Mr M Shafiullah, Dr M Al sultan, Mr SM Nurulain, Mr M Elwasila, Dr I Chandranath, Mr R Sheen, Prof Huba Kalasz and Mr C Saeed.
Seated from left to right: Prof A Adem, Ms S Duncan, Dr M Kosanovic, Prof G Petroianu, Ms K Arafat, Prof MY Hasan, Dr S Attoub.

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.

Diabetes

Mechanisms of Apoptotic Cell Death in Diabetes

Prof. Abdu Adem

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.

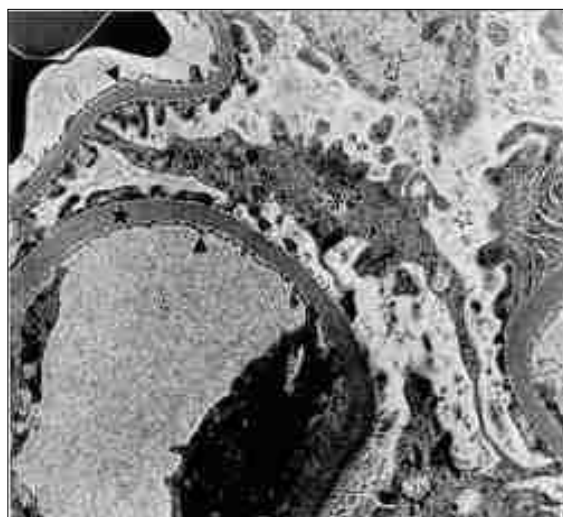


Figure I

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.

Neuroscience

Prof. MY Hasan

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.

Gastroenterology

Treatment of Peptic Ulceration

Dr. Salim Bastaki

Leptin is produced by fat cells (adipocytes), and is involved in the control of food intake and energy metabolism in humans. Recently, the role of Leptin as a growth factor has been appreciated, and our study investigates its role on the rate of healing of gastric ulcers in rats because some growth factors are known to protect the gastric mucosa.

In a second project the antisecretory and antiulcer activity of the new proton pump inhibitor esomeprazole (EP) are being investigated. The antiulcer properties of EP are being studied in an animal model of peptic ulceration and includes comparisons with other proton pump inhibitors, the role of prostaglandins and nitric oxide in its action, and the molecular site of action on gastric H⁺/K⁺-ATPase.

The antiulcer and antisecretory effects of PPI, PD-136450 and H₂-receptor antagonist are going to be investigated in Flinder sensitive and Flinder resistant rats.

In other studies, the foetal and maternal effects of antiepileptic drugs are being investigated.

Clinical toxicology

Therapy of acute poisoning, Organophosphates

Prof. Georg Petroianu

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.

Cancer research

Dr. Samir Attoub

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.

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Drug updates

Bastaki SMA. (2006). [Isotretinoin-avoid teratogenicity, levofloxacin-reports of tendinopathy, oestrogen only HRT- potential risk of ovarian cancer, omeprazole-interactions with clozapine, oral contraceptives-ectopic pregnancy following emergency oral contraceptive failure, quetiapine-potential for medication error-----]. *Drug Update: Em Med J*, 23 (1): 81-89.

Bastaki SMA. (2006). [Antidepressants-FDA warns of paediatric suicide risk, atypical antipsychotics-request class label change, bisphosphonates-ocular disorders, COX-2 inhibitors-CPMP advises stronger risk warnings, didanoside/lamivudine/tenofovir-virological failure with once-daily triple combination therapy, efalizumab-monitoring for thrombocytopenia recommended--]. *Drug Update: Em Med J*, 24 (2): 159-165.

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Petroianu GA, Hasan MY, Nurulain SM, Arafat K, Sheen R, Shafiullah M, Al-Sultan M. (2006). Comparison of two pre-exposure treatment regimens in acute organophosphate (Paraoxon) poisoning in rats: Tiapride vs. Pyridostigmine. Seventh Annual UAE University Research Conference - Al Ain.

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Petroianu G. (2006). To Be or Not to Be "Selective": Alpha-Blocker in BPH with LUTS. 3rd PAN-Arab Continence Society Congress, Manama – Bahrain.

RESEARCH GRANTS 2006

FMHS New Grant 2006

Prof G Petroianu (PI), MY Hasan.

Novel therapy of organophosphate compounds (OPC) intoxication using the benzamide derivative SULPIRIDE: Alternatives to oxime enzyme reactivators.

Prof A Adem (PI)

The role of atrial natriuretic peptide and brain natriuretic peptide and their receptors on volume depletion and repletion in the one humped camel (camelus dromedarius)

UAEU Individual Research Grant 2006

Profs G Petroianu (PI), MY Hasan, E Adeghate, Dr A Saleh, Mr AS Ponery, Mr SM Nurulain. PPAR activating effect of ACE Inhibitors. Cardio-vascular.

Prof A Adem (PI)

Mechanisms of neuronal cell death in the hippocampus after bilateral adrenalectomy.

Prof A Adem (PI)

Apolipoprotein E Isoform in Neurodegeneration.

Prof A Adem (PI)

The diverse roles of apolipoprotein E Isoforms in Neurodegeneration.

Prof G Petroianu (Co-PI)

Impact of the Angiotensin Converting Enzyme inhibitors Captopril and Moexipril on Invasive Growth of Human Cancer Cells.

Dr S Attoub (PI)

Impact of the Angiotensin Converting Enzyme inhibitors Captopril and Moexipril on Invasive Growth of Human Cancer Cells.

Dr S. Bastaki (PI)

To study the protective affects of omeprazole (or Lansoprazole)/ranitidine/CCK-B receptor antagonist on aspirin/NSAID/stress-induced ulcer in Flinder Rats.

UAEU Interdisciplinary Research Grant 2006

Prof A Adem, Dr. Ali Al-Marzouqi (PI)

Enhancement of Solubility, Stability, Dissolution Rate, and Bioavailability of Poorly Water-soluble Antifungal Drugs by Complexation with Cyclodextrins.

Prof A Adem, Dr. Fatima Shad Kaneez (PI).

In vitro and in vivo animal studies of Nigella sativa extract as an antioxidant in petrochemical pollutant induced oxidative stress.

Terry Fox Research Grant 2006

Dr S Attoub (PI)

Pharmacological Control of Lung and Colon Cancer Cell Invasion and Tumor Growth by the PI3K inhibitors p110a and b siRNA,

Dr S Attoub.

Luminometer.

Others

Prof A Adem, Dr. Omar El Agnaf (PI)

Development of Lewy bodies MRI imaging agents for the early diagnosis of Parkinson's disease and related disorders (The Michael J. Fox Foundation for Parkinson's Research)

Prof. MY Hasan.

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

Prof. MY Hasan.

Novel therapy of organophosphate compounds (OPC) intoxication using the benzamide derivative SULPIRIDE: Alternatives to oxime enzyme reactivators.

Prof. MY Hasan.

PPAR activating effect of ACE Inhibitors

Department of Physiology

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

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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.

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 electron microscopy 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.

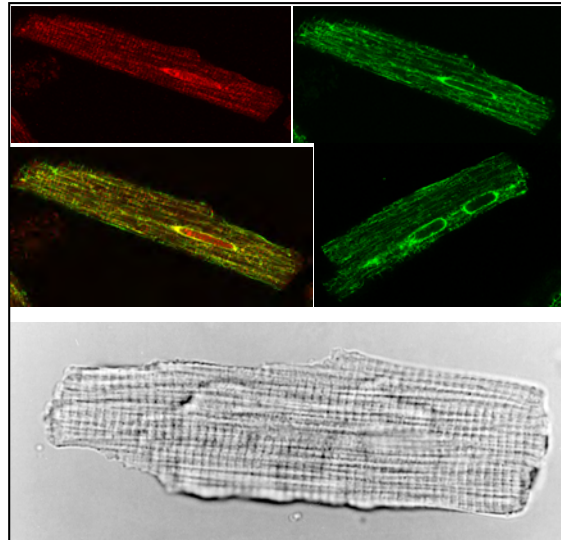
MUSCLE

The dynamics of the control of the muscles is another focus of activity involving electrophysiology and mathematical modelling, and seeks explain the influence of various physiological and pathological conditions on changes in muscle performance. In particular, the effects of chronic ischemia and muscle fatigue are currently being investigated. The model of chronic ischemia induced in vivo by femoral artery occlusion is employed; the effects of exogenously applied Neuropeptide-Y (NPY) are of interest because the angiogenesis and revascularisation it can induce are used as tools to alter the dynamic properties of skeletal muscle. Changes in muscle dynamics are estimated by monitoring various parameters i.e. EMG, twitch force, force/time integral, etc. during various non-fatiguing and fatiguing protocols induced by electrical stimulation of muscle nerves and ventral spinal roots. The results are relevant for better understanding of changes of intra-muscle dynamics in various conditions and probing the possibility that NPY may be a potential drug in treatment of ischemic disease.

DIABETES AND HEART FUNCTION

Human and animal studies have shown that diabe-

tes 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 contractility and heart rhythm defects in the diabetic heart. We employ a variety of techniques including biotelemetry, electrophysiology, molecular biology and confocal microscopy.



Use of immunofluorescence microscopy to label beta-tubulin (green) and microtubule-associated protein 4 (red) in ventricular myocytes.



Research Lab



Students in Research Lab

SMOOTH MUSCLE MAPPING LABORATORY.

Research in the electrical and mechanical activities of smooth muscle in general, and that in the gastrointestinal system in particular, has proceeded well in 2006. Several projects are ongoing such as recording and analyzing electrical activities in the isolated uterus (FMHS grant), the bladder (FMHS grant), the small intestine (former FMHS and Janssen Pharmaceutica grant), and the canine rectum (Janssen Pharmaceutica grant). Two highlights were achieved this year that deserve further illustration:

A. Electrophysiological Mapping in the Gastrointestinal System of the Conscious Dogs.

Although electrical recordings from isolated organs and from organs in anesthetized animals are vital for studying mechanisms, recordings from the conscious animal would provide a step further in expanding and solidifying concepts related to gastrointestinal motility. To this end, in the past years, a new electrode design was developed and tested, first as a prototype in Al Ain and later in Belgium, which would enable recordings from electrical signals from gastrointestinal organs in conscious animals.

In this design, silicone double layers of 12 x 14 mm were used with 6 electrode tips embedded. A silver ring around the leads provides for a local reference signal. In the ex-

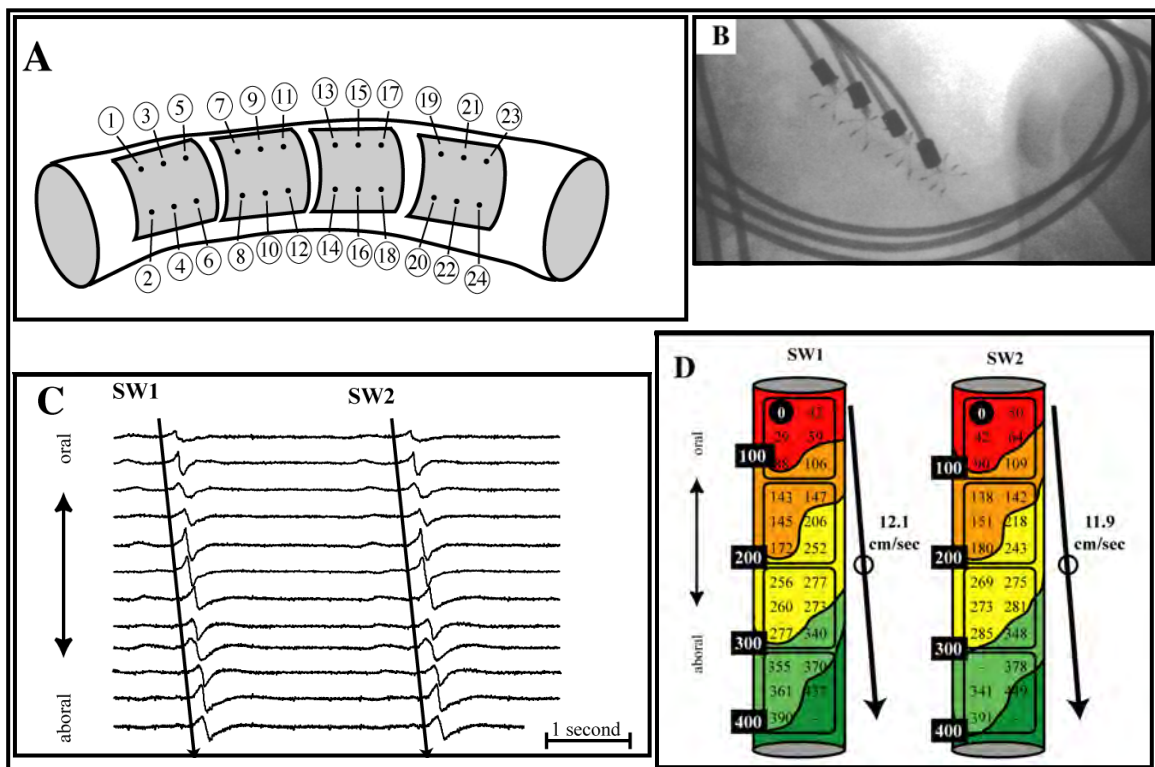
periment depicted in the figure (panel A), four such electrode arrays were implanted along the duodenum of a dog. After the implantation and the recovery procedure, an X-ray of the animal showed the chain of electrode arrays with the electrode wires projecting from their sites (panel B).

The reference electrodes are visible as large black squares close to the electrode tips. Panel C shows a typical set of slow waves recorded from a row of twelve electrograms. This recording was performed approximately 6 months after implantation. Panel D presents the propagation maps of the two slow waves shown in panel C, as recorded in the awake dog. From this data, direction and velocity of the slow wave can be quantified on a beat-to-beat basis.

B. Translation of Trendelenburg's Classic Paper.

In 1917, Paul Trendelenburg, working at the Pharmacological Laboratory in Freiburg, Germany, published a 79-page article describing his work on the physiology and pharmacology of the peristaltic reflex. This monumental work firmly placed the peristaltic reflex as a major pattern of contraction in the gastrointestinal system and described some of the major pharmacological aspects of that reflex.

Many years later, I was trying to map the electrical component of this reflex with little success. In frustration, I went back to the classic paper on this



subject and was surprised to discover how actual Trendelenburg's work still was. From the ICI database, I discovered that the paper had been referenced more than 400 times. However, a quick survey of my colleagues in the field revealed that not many had actually read this seminal paper as it had been written in German.

A small group was formed consisting of my wife, Marijke, who took care of the initial translation from German into English, of myself who adapted the English text to current scientific terminology, of George Petroianu who solved the myriad pharmacological nomenclature from old German to modern English and, finally, John Morrison, who made the translation more readable to a native English speaker.

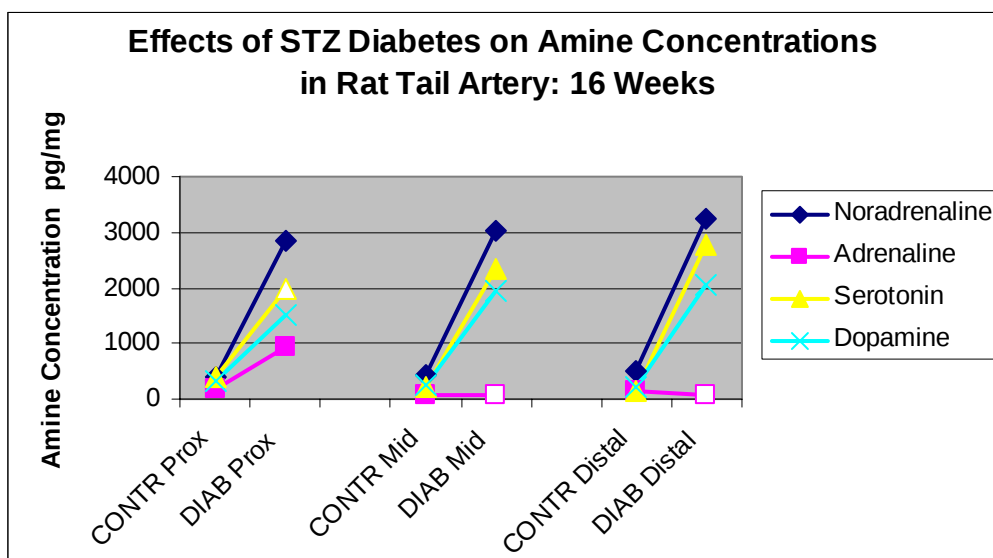
Needless to say, this type of work is not performed on a daily basis but rather in weekends and holidays. We started with this project in November 2001 and had the manuscript ready on March 2005. We submitted the translation to the journal that had published the original version in 1917 (now called Naunyn-Schmiedeberg's Archives of Pharmacology). The editors decided to print the whole translation together with a review describing the importance of the peristaltic reflex and its current scientific status. The figure below displays the frontispiece of the original paper (A) and that of the 2006 translation (B).

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 lipoxigenase 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.

DIABETIC NEUROPATHY

Peripheral neuropathy is a common complication of diabetes. The patient experiences tinglings and numbness, and/or pins and needles in the extremities, and the sensory disturbance may progress to a burning pain in



the hands and feet. The patient may also have difficulty in manipulating small objects because of muscle weakness in the hands. Typically diabetic neuropathy affects the longest nerve fibres in the body. In some patients the function of the autonomic nerves that control the heart, blood vessels and internal organs are also disturbed. These patients experience dizziness or fainting on standing, and may have functional disturbances in their gastro-intestinal or urogenital systems.

The aim of our research is to understand some of the changes in autonomic nerves that accompany prolonged high blood sugar or diabetes in an experimental model. Recently we have demonstrated a length-dependent changes in noradrenaline and other amines in the sympathetic nervous system. The long nerve fibres of the sympathetic nervous system show an increased concentrations and altered metabolism of the transmitter, noradrenaline, and its precursor, dopamine, as well as of other amines. The diagram below compares the effects of STZ diabetes on the amine concentrations in the rat tail artery in different sections of the vessel. Experiments are being conducted that look at the release of amines from these autonomic nerve terminals, supported by a grant from the Sheikh Hamdan Medical Research Foundation.

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Alshuaib WB, Cherian SP, Hasan MY, Fahim MA. (2006). Modulation of Neuronal $[Ca^{2+}]_i$ by caffeine is altered with aging. *Int J Dev. Neurosci*, 24(6): 389-94

Bracken N, Howarth FC, Singh J. (2006). Effects of streptozotocin-induced diabetes on contraction and on calcium transport in rat ventricular cardiomyocytes. *Annals New York Academy of Sciences*, 1084:208-222.

Faes C, Aerts M, Geys H, Bijmens L, Ver Donck L, Lammers WJEP. (2006). GLMM approach to study the spatial and temporal evolution of spikes in the small intestines. *Statistical Modelling* 6, 300-320.

Howarth FC, AL Shamsi N, Al Qaydi M, Al Mazrouei M, Qureshi A, Kazzam E, Adem A. (2006). Effects of brain natriuretic peptide on contraction and intracellular Ca^{2+} in ventricular myocytes from streptozotocin-induced diabetic rat. *Annals New York Academy of Sciences*, 1084:155-165.

Howarth FC, Qureshi MA. (2006). Effects of carbenoxolone on heart rhythm, contractility and intracellular calcium in streptozotocin-induced diabetic rat. *Molecular & Cellular Biochem*, 289: 21-29.

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temperature and physical activity in streptozotocin-induced diabetic rat. *Clinical & Experimental Pharmacology & Physiology*, 33: 327-331.

Lammers WJEP, Wahab A, Dhanasekaran S, Stephen B, S Singh. (2006). Construction and usage of multiple extracellular electrodes in biological tissues. *Int J Sci Res* 16, 305-309.

Lammers WJEP, Abazer F, Ver Donck L, Smets D, Schuurkes JAJ, Coulie B. (2006). Electrical activity in the rectum of anaesthetized dogs. *Neurogastroenterology & Motility* 18; 569-577.

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Ljubisavljevic M, Kacar A, Milanovic S, Svetel M, Kostic V. (2006). Changes in cortical inhibition during task-specific contractions in primary writing tremor patients. *Movement Disorders*, 21: 855-859.

Ljubisavljevic M. (2006). Transcranial Magnetic Stimulation and the motor learning associated cortical plasticity. *Experimental Brain Research*, 173:215-222.

Morrison J, Pallot D, Sheen R, Dhanasekaran S, Mensah-Brown E. (2006). The effects of age and streptozotocin diabetes on the sympathetic innervation in the rat penis. *Molecular and Cellular Biochemistry* (e-publication).

Morrison JFB, Dhanasekaran S, Sheen R, Frampton CM, Mensah-Brown E. (2006). The effect of streptozotocin-induced diabetes on the rat seminal vesicle: a possible pathophysiological basis for disorders of ejaculation. *Ann. N.Y. Acad. Sci.* 1084: 267-279.

Obineche DN, Nicholls MG, Benedict S, Chandranath I, Fahim M, Adeghate E, Adem A. (2006). Alterations in ANP & ANP receptor levels in STZ induced long-term diabetic rates. *New York Academy of Sciences*, 1084:223-234.

Padmanabhan R, Mohamed S, Singh S. (2006). Beneficial effect of supplement lipoic acid on diabetes induced pregnancy loss in the mouse. *Ann N Y Acad Sci*, 1084:118-31.

Rizk EE D, Hassan HA, Ramadan GA, Shafiullah M, Fahim MA. (2006). Estrogen and ghrelin increase the number of submucosal urethral and anal canal blood vessels in ovariectomized rats. *Urology*, 66(6):1343-8.

Salabat MR, Ding XZ, Flesche JB, Ujiki MB, Robin TP, Talamonti MS, Bell RH Jr, Adrian TE. (2006). On the mechanisms of 12-otetradecanoylphorbol-13-acetate-induced growth arrest in pancreatic cancer cells. *Pancreas*, 33:148-155.

Shehab SA, Ljubisavljevic M, Al-Halhal F, Al-Awadhi A, Madathil M, Abdul-Kareem A, Redgrave P. (2006). Experimental manipulations of the subthalamic nucleus fail

to suppress tonic seizures in the electroshock model of epilepsy. *Experimental Brain Research Research*.173:274-281.

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Ujiki MB, Ding XZ, Salabat MR, Bentrem DJ, Golkar L, Milam B, Talamonti MS, Bell RH, Iwamura T, Adrian TE. (2006). Apigenin inhibits pancreatic cancer cell proliferation through G2/M cell cycle arrest. *Mol Cancer*, 5:76.

Ver Donck L, Lammers WJEP, Moreaux B, Voeten J, Veckemans J, Schuurkes JA. Coulie B. (2006). Mapping slow waves and spikes in chronically instrumented conscious dogs: implantation techniques and recordings. *Med Biol Eng & Comp* 44; 170-178.

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Trendelenburg P. (2006). Physiological and Pharmacological investigations of small intestinal peristalsis. *Naunyn-Schmiedeberg's Archives of Pharmacology*, by Lammers WJEP, Lammers-van den Berg AM, Morrison JFB, Petroianu PA. *Naunyn-Schmiedeberg's Archives Pharmacol*, 373; 101-133.

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Howarth FC, Qureshi MA, Lei M. (2006). Rhythm disturbances in the streptozotocin-induced diabetic rat heart, *Physiological Society, University College, London*, PC89.

Howarth FC, Jacobson M, Shafiullah M, Adeghate E. (2006). Effects of insulin treatment on heart rhythm disturbances in streptozotocin-induced diabetic rat, *Acta Physiologica*, 186, OT02-10, 84.

Howarth FC, Al Shamsi N, Al Qaydi M, Al Mazrouei M, Qureshi A, Kazzam E, Adem A. (2006). Effects of brain natriuretic peptide on contraction and intracellular calcium in ventricular myocytes from streptozotocin-induced diabetic rat, *International Journal of Diabetes & Metabolism*, 14, 44.

Howarth FC, Adeghate E, Jacobson M. (2006). The effects of insulin treatment on heart rhythm, body temperature and physical activity in streptozotocin-induced diabetic rat, *Journal of Physiology*, 568P, PC66.

Lammers WJEP, Seerden TC, De Man JG, De Winter BY, Pelckmans PA. (2006). The many facets of intestinal peristalsis. Reply to Huizinga JA, McKay CM, White EJ. *Am J Physiol Gastrointest Liver Physiol* 290: G1347-G1349.

Lammers WJEP, Ver Donck L, Stephen B, Schuurkes JA, Coulie B. (2006). Slow wave circus movements and

re-entry in the cardiac stomach in vivo. *Gastroenterology*, 130, #242.

Lammers WJEP, Ver Donck L, Stephen B, Schuurkes JA, Coulie B. (2006). Secondary waves initiate gastric arrhythmias and reentry in the canine stomach in vivo. *Neurogastroenterology* A742, 80.

Lammers WJEP, Abazer F, Stephen B, Bernsen RMD. (2006). Slow wave frequency- and velocity gradients in mice and rats small intestines. *Neurogastroenterology* A387, 123.

Lammers WJEP, Bercik P, Huizinga JD. (2006). Rhythmic postprandial patterns of contraction in vivo explained by simulated spatio-temporal maps. *Neurogastroenterology* A388, 123.

Morrison JFB, Shafiullah M, Sheen R, Dhanasekaran S, Mensah-Brown E. (2006). Decreased cardiac and arterial noradrenaline and dopamine concentrations occur concomitantly with the development of Type II diabetes in rats treated neonatally with monosodium glutamate (MSG): a possible basis for Type II autonomic neuropathy? *Diabetic Medicine* 23: 657, P1866.

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Howarth FC, Shafiullah M, Adeghate E, Jacobson M. (2006). The effects of insulin treatment on heart rhythm in streptozotocin-induced diabetic rat, *The 7th Annual UAE University Research Conference*.

Howarth FC, Qureshi M, Dobrzynski H. (2006). Effects of streptozotocin-induced diabetes on electrical activity in the heart, *The 7th Annual UAE University Research Conference*.

Howarth FC, Jacobson M, Shafiullah M, Adeghate E. (2006). Long-term effects of streptozotocin (STZ) – induced diabetes on the electrocardiogram, physical activity and body temperature in rats, *The Physiological Society, University College London, Proceedings of the Physiological Society*, 1, PC32

Morrison JFB, Dhanasekaran S, Frampton CM, Nagelkerke N. (2006). 3H-noradrenaline uptake in the tail artery and seminal vesicle of the streptozotocin (STZ) -diabetic rat *Proceedings of the Australian Neuroscience Society*.

Singh S, Fahim MA. (2005). Ibuprofen can cancel the benefits of aspirin- A study based on photochemically induced platelet aggregation. *17th Iranian Congress of Physiology and Pharmacology, Kerman, Oct-2005* : P-714.

RESEARCH GRANTS 2006

FMHS Grants - 2006

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.

Prof TE Adrian
Effects of a Novel Gene Called TTMP on Pancreatic Cancer Growth

Prof W Lammers, Dr H Mirghani, Ms B Stephen.
Electrical propagation and contraction in the intact rat pregnant uterus.
FMHS NP/06/04

Prof JM Morrison
Synthesis and Release of Noradrenaline at 12-20 weeks of STZ diabetes. FMHS NP/06/6

UAEU individual Grant 2006

Drs FC Howarth, M Jacobson, M Graham (2005-2006).
Effects of streptozotocin-induced diabetes on heart rhythm

Dr H Kataya (PI), Prof M Fahim, Dr S Karam, Prof B Ramadi. (2005-2007).
Ghrelin and recovery after antineoplastic and cytotoxic therapy.

Prof TE Adrian
Expression of a Novel Gene in Pancreatic Cancer

Prof JM Morrison, Dr E Mensah-Brown (2006)
The effects of experimental diabetes on the expression of neuropeptide neurotransmitters and synthetic enzymes in tissues and of their mRNAs in dorsal root ganglia and sympathetic postganglionic cell bodies

UAEU Interdisciplinary Grant 2006

Dr D EE Rizk (PI), Prof M Fahim (2004-2006).
Effects of ageing versus ovariectomy on pelvic floor function in a female rat model.

Dr C Howarth (PI), Prof M. Ljubicavljjevic
Exercise induced remodeling of diabetic cardiomyopathy in STZ-induced diabetic rats.

Prof JM Morrison, Prof MG Nicholls, Prof C Pemberton (Otago University New Zealand) (2005-2007)
Ghrelin and other Vasoactive Hormones in Hypertensive and Diabetic Rats.

Hamdan Award Medical Research Grant 2006

Prof W Lammers, Dr H Mirghani, Ms B Stephen.
Mapping the mechanism of birth

Others

Profs G Sieck (PI), M Fahim
Plasticity in diaphragm neuromotor control
NIH Grant (2004-2009)

Prof W Lammers
High Resolution Mapping of Electrical and Mechanical Activities in Smooth Muscles.
Johnson & Johnson Pharmaceutical Research and Development, a Division of Janssen Pharmaceutica NV, Beerse, Belgium

Department of Psychiatry

Prof O El-Rufaie Prof M Sadeghi Prof R Ghubash Prof V Eapen Dr Ossama Osman Dr Mohammed Salem Dr. Hamdy Moselhy	Professor, Chair Professor (Clinical Psychology) Professor* Professor (Child & Adolescent) Associate Professor Assistant Professor Associate Professor	Dr L Amiri Mr Saeed Yousef Mr D Ranganathan Ms Aisha Al Shamsi Dr S Sabri Mr O Pocker	Teaching Assistant <i>(University of Toronto)</i> Technician Secretary Secretary Administrative Assistant Office Assistant
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**President, Arabian Gulf University, Bahrain.*

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RESEARCH PROFILE

1. Epidemiological aspects of common mental health conditions in the community and in primary care 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.

- d) 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.
- f) Molecular genetic study of Schizophrenia in an Arab population.

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

Bener A, El Rufaie OF, Kamran S, et al. (2006). Disability, Depression and Somatization in a Low Back Pain Population. *APLAR Journal of Rheumatology* 9; 257-263.

Robertson MM, Williamson F, Eapen V. (2006). Depressive symptomatology in young people with Gilles de la Tourette Syndrome: A comparison of self-report scales. *Journal of Affective Disorders* 91; 265-268.

Eapen V, Zoubeidi T, Yunis F, Gururaj AK, Sabri S, Ghubash R. (2006). Prevalence and Psychosocial Correlates of Developmental Disorders in 3-year old children in the UAE. *Journal of Psychosomatic Research* 61; 343-347.

Bayoumi R, Eapen V, Al-Yahyaee S, Al Barwani R, Hill RS, Al Gazali L. (2006). The Genetics of Primary Nocturnal Enuresis: A UAE Study. *Journal of Psychosomatic research* 61; 321-326.

Gururaj A, Sztriha L, Hertecant J, Eapen V. (2006). Clinical Predictors of Intractable Childhood Epilepsy. *Journal of Psychosomatic Research* 61; 281-282.

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Eapen V, Mabrouk A, Sabri S, Bin-Othman SA. (2006). A controlled study of psychosocial factors in young people with Diabetes in the United Arab Emirates. *Annals of the New York Academy of Sciences* 1084; 325-329.

Moselhy H, Abdalla A. (2006). Life Events: Comorbidity of psychiatric disorders and physical illnesses. *Arab Journal of Psychiatry* 17(2);157-184.

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Eapen V, Adem A. (2006). Research Strategies and Clinical Challenges in Neuroscience. Editorial, *Journal of Psychosomatic Research* 61; 281-282.

Eapen V. (2006). Guest Editor for the special issue of the *Journal Experimental Brain Research* 173 (2).

Eapen V. (2006). Guest Editor for the special issue of the *Journal of Psychosomatic Research* 61 (3).

Garey L, Eapen V, Adem A. (2006). International Neuroscience Conference on Research Strategies and Clinical Challenges in Neuroscience, Al Ain, UAE, November 2005, Editorial, *Experimental Brain Research* 173;195.

Kudlur NS, George S, Moselhy H, Rasheed S. (2006). 1001 Basic Sciences ISQs for MRCPsych Part II. Author House Publishing Company, UK, ISBN 1425957390.

Moselhy H (2006). Suicide by Burning (Commentary). *Arab Journal of Psychiatry* 17(1);93-95.

Salem MO. (2006). Religion, Spirituality and Psychiatry. *The Royal College of Psychiatrists SIG Newsletter* 21(10); 1-15.

Salem MO. (2006). The Spiritual Support Group. *The Royal College of Psychiatrists SIG Newsletter* 22; 2-7.

Salem MO. (2006). Spirituality: Uniqueness and Universality. *The Royal College of Psychiatrists SIG Newsletter* 22; 8-11.

Salem MO. (2006). The Key to Happiness – Self Help Book in Arabic (267 pages). University Book House, Al Ain.

PUBLISHED ABSTRACTS, LECTURES, CORRESPONDENCE

Eapen V, Mabrouk A, Sabri S, Bin-Othman S. (2006). Psychosocial Aspects of Juvenile Diabetes in the UAE: A controlled study. *International Journal of Diabetes and Metabolism*. 14(1); 57.

Eapen V, Zoubeidi T, Yunis F. (2006). Screening for Language Delay in the United Arab Emirates. *Linguistics and Language Behaviour Abstracts database, CSA*, 30, 5; 541-549.

Eapen V. (2006). Genetics of Obsessive Compulsive Disorder: Clues from clinical phenotypes. *Neuropsychiatric Disease and treatment* 2(3); 42.

Salem MO. (2006). Spiritual Strategies in Psychotherapy. *Proceedings of the World Psychiatric Association International Congress, Istanbul, Turkey. Turkish Journal of Psychiatry* 17(2); 225-226.

Salem MO. (2006). Religion in the Practice of Psychiatry. *Proceedings of the World Psychiatric Association International Congress, Istanbul, Turkey. Turkish Journal of Psychiatry* 17(2);136-137.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB-SITES AND OTHERS

- El Rufaie OEF. (2006). Physical presentation of diagnosable psychiatric disorder. International Conference of The Association of Psychology and Psychiatry for Adults and Children (A.P.P.A.C.). Athens, Greece, 2 – 5 May.
- Eapen V. (2006). Child psychiatric disorders in a primary care setting: A UAE study. First International Primary Health Care Conference. Abu Dhabi, 21-23 January.
- Eapen V. (2006). Hyperkinetic syndrome in children. 8th United Arab Emirates International Congress of Paediatrics. Dubai, 7-9 February.
- Eapen V. (2006). Childhood Behaviours Vs Disorders: Where do we draw the line?. Health and Wellness Conference. Al Ain, 14th February.
- Eapen V. (2006). Psychosocial aspects of juvenile diabetes in the UAE. A controlled study. International Conference on Recent Advances in Diabetes Mellitus and its Complications. Al Ain, 6-9 March.
- Eapen V. (2006). Attitudes, perceptions and family coping in pediatric cancer: A comparative study of children with juvenile diabetes and normal controls. UICC World Cancer Congress. Washington DC, 8-12 July.
- Eapen V. (2006). Attitudes, perceptions and family coping in children with physical illness: A controlled study. Annual Meeting of the Royal College of Psychiatrists. Glasgow, UK, 10-13 July.
- Eapen V. (2006). Depression in young people with Tourette Syndrome. 6th International Congress of Neuropsychiatry. Sydney, Australia, 10-14 September.
- Eapen V. (2006). School mental health screening: A model for developing countries. WPA section on psychiatry in developing countries. International Conference in Psychiatry. Dubai, 2-6 December.
- Moselhy H. (2006). Life events and addiction: Sociobiological factor in dysregulation of coping chemical mechanism. 8th World Congress in Innovative Psychiatry. Oxford, May.
- Moselhy H. (2006). History of addiction. Annual Conference of the British Arab Psychiatric Association. Northampton, April.
- Moselhy H. (2006). Sexual dysfunctions in opiate users. International Conference of South Asians Psychiatric Association and WPA section for developing country. Dubai, 2-6 December.
- Osman OT. (2006). Cultural based prevalence of premenstrual disorder in the Primary Health Care in Al-Ain. 159th Annual Conference of the American Psychiatric Association. Toronto, Canada, 25 May.
- Osman OT. (2006). Prevalence and socio-demographic correlates of PMDD in Al- Ain. The 6th UAEU Annual Research Conference. Al-Ain, 22-24 April.
- Osman OT. (2006). Assessment of suicide in the medically ill. Primary Health Care Center, Oud Al Touba. Al Ain, 2 May.
- Salem MO. (2006). Spiritual strategies in psychotherapy. World Psychiatric Association International Congress. Istanbul, Turkey, 12-16 July.
- Salem MO. (2006). Religion in the practice of psychiatry. World Psychiatric Association International Congress. Istanbul, Turkey, 12-16 July.
- Salem MO. (2006). Chair: Symposium on religion in the practice of psychiatry. World Psychiatric Association International Congress. Istanbul, Turkey, 12-16 July.
- Salem MO. (2006). First episode psychosis in Al-Ain: a retrospective study. Arab British Psychiatric Association Conference. Bahrain, April.
- Salem MO. (2006). Dreams and Precognition. Cultural Society. Bahrain, April.
- Salem MO. Hamdan A. (2006). Workshop on Spiritual aspects of psychiatry and psychotherapy. Arab Psychiatric Association Conference. Bahrain, April.
- Salem MO. El-Adl M. (2006). Chair: Symposium on Religious aspects of cognitive behaviour therapy. Arab British Psychiatric Association Conference. Bahrain, April.
- Salem MO. (2006). Help seeking behaviour of psychiatric patients before attending Al-Ain Psychiatric Department. The 6th UAEU Annual Research Conference. 22-24 April.
- Salem MO, El-Messery M. (2006). Workshop on Spiritual aspects of psychiatry and psychotherapy. Evidence Based International Conference. Saudi German Hospital, Jeddah, May.
- Salem MO. (2006). Workshop on Spiritual aspects of psychiatry and psychotherapy. Postgraduate Residency Training Programme, Hammad Medical Corporation. Qatar, 26 May.
- Salem MO. (2006). The spiritual support group. WPA South East Asia Regional Meeting. Dubai, December.
- Salem MO, Abdel-Latif M. (2006). Functions of dreams. Symposium organized by the Shariaah and Law Association, UAE University. Al-Ain, December.
- Sadeghi MR. (2006). Stress management for doctors and patients. Tawam Hospital Seminars. Al Ain, 20 January.
- Sadeghi MR. (2006). Stress management. Health and Wellness Conference. Higher Colleges of Technology, Al Ain Women's College. 14 February.
- Sadeghi MR. (2006). Organizational stress management. Zayed Libraries, Al- Ain, 10 May.
- Sadeghi MR. (2006). Psychological adjustment to cancer. Tawam Hospital Oncology Day Seminars. Al Ain, 20 May.

Sadeghi MR. (2006). Identifying, preventing and managing occupational stress. The 4th GCC Annual Occupational Health Conference. Dubai, 27-31 May.

Sadeghi MR. (2006). Behavior therapy and its origins. Ferdowsi University, Mashhad, 1 July.

Sadeghi MR. (2006). Behavioral assessment. Ferdowsi University, Mashhad, 2 July.

Sadeghi MR. (2006). Classical conditioning principles and anxiety-reduction procedures. Ferdowsi University. Mashhad, 3 July.

Sadeghi MR. (2006). Operant learning principles and behavior management procedures. Ferdowsi University, Mashhad, 4 July.

Sadeghi MR. (2006). Anxiety disorders. Ferdowsi University. Mashhad, 5 July.

Sadeghi MR. (2006). Stress, coping and behavioral medicine. Ferdowsi University. Mashhad, 8 July.

Sadeghi MR. (2006). Depression and suicide. Ferdowsi University. Mashhad, 9 July.

Sadeghi MR. (2006). Personality disorders. Ferdowsi University. Mashhad, 10 July.

Sadeghi MR. (2006). Application of personality and transtheoretical model of change to predict smoking cessation. FMHS Research Seminars. Al Ain, 19 February.

Sadeghi MR. (2006). Social learning and cognitive behavioral therapy. Ferdowsi University. Mashhad, 11 – 12 July.

Sadeghi MR. (2006). How to deal with posttraumatic syndrome? Ferdowsi University. Mashhad, 15 – 16 July.

Sadeghi MR. (2006). Obesity and eating disorders: Specific treatment and interventions. Ferdowsi University. Mashhad, 17 – 18 July.

Sadeghi MR. (2006). Behavioral couples therapy and treatment of sexual dysfunctions. Ferdowsi University. Mashhad, 22 – 23 July.

Sadeghi MR. (2006). Behavioral disorders of childhood: specific treatment and interventions. Ferdowsi University. Mashhad, 24 – 25 July.

Sadeghi MR. (2006). Stress management for urban managers. City Hall. Mashhad, 31 July.

Anxiety and Depressive Disorders among Women of Child-Bearing Age in Al-Ain Primary Care Setting: Prevalence, Comorbidity, Level of Functioning and Sociodemographic Correlates

Sheik Hamdan Award for Medical Research 2006

Prof V Eapen (PI), Prof M.M. Robertson (U.K.), Dr. T. Zoubeidi, Dr. A. Mabrouk, Dr. S. Sabri, S. Yousef. Prevalence, risk factors and co-morbidity of ADHD.

Others

Prof. M. R. Sadeghi

Occupational Stress Survey of ADMA-OPCO

Employees

Funding Organisation: ADMA-OPCO

Research Grants 2006

FMHS New Research Grant 2006

Prof V Eapen (PI), Prof Ljubisavljevic

Stimulation-induced plasticity in Gilles de la Tourette Syndrome: A transcranial magnetic stimulation study.

UAE University Individual Grants 2006

Dr. Ossama T. Osman, Prof Omer El-Rufaie (Co-I)

Department of Radiology

Prof P Corr
Prof R Langer
Dr K N van Gorkom
Dr T Al Mansoor
Ms R Al Qayad

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

Our research interests are focussed on common medical and health issues in the UAE.

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 been working 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.

Sports Injury Imaging

We have also started a project to establish 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.

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.

Three Dimensional Models of the Cerebral Cortex using Magnetic Resonance Imaging and Tensor Diffusion Imaging

This research with the Department of Physics 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 Alzheimers Disease and Parkinson's Disease. We will also examine the white matter tracts of the brain using a new technique called diffusion tensor imaging.

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.

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.

ARTICLES IN PEER-REVIEWED JOURNALS

Corr P. (2006). Pictorial Essay: Imaging of Cerebrovascular and Cardiovascular Diseases in AIDS Patients. *Am J Roentgenology*, 187:236-41.

Corr P. (2006). Management of severe hemoptysis from pulmonary aspergilloma using endovascular embolization. *Cardiovasc Interventional Radiology*, 29:807-10.

Corr P. (2006). Imaging of Neuro-AIDS. *Journal of Psychosomatic Research*, 61:295-99.

Corr P. (2006). Update on Thoracic Imaging. *South African J of Continuing Medical Education* 2006;24:296-298.

Czechowski J, Branicki F, Bobbili N, Langer R, Corr P. (2006). The role of multidetector CT in blunt abdominal trauma. *European J of Trauma*, 6:533-536.

Lockhat F, Corr P, Ramphal S, Moodley J. (2006). The value of MR imaging in the diagnosis and management of extrauterine abdominal pregnancy. *Clinical Radiology*, 61:264-269.

PUBLISHED ABSTRACTS AND LETTERS AND CORRESPONDENCE

Langer RD, Czechowski J, Branicki F, Wafic K, Bobbili N: Impact of multislice spiral CT (MSCT) on management of patients with abdominal trauma. *AJR (Suppl)* 2006,186,118.

Langer R, Al Kaabi H, Neidl v. Gorkom K, Czechowski J, Nagi M, Torab F: CCT protocol for the detection of acute stroke –Multimodality CCT vs. unenhanced CCT. *Fortschr Roentgenstr. (Suppl I)* 2006, 178, 157.

Langer R, Al-Gazali LI, Haas D, Raupp P, Varady E: Radiologische Befunde bei Patienten mit Stuewe-Wiedemann Syndrom bei Patienten > 2 J - 'survivors' *Fortschr Roentgenstr (Suppl I)* 2006, 178, 170.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS

Corr P. (2006). Imaging and intervention in Acute and Chronic Pancreatitis. Annual Scientific Meeting Singapore Radiological Society.

Corr P. (2006). Workshop on Medical Writing: how to write an introduction, how to convert a poster to a manuscript. Annual Scientific Meeting Singapore Radiological Society.

Corr P (2006). European Congress of Radiology. The value of magnetic resonance imaging in the diagnosis and management of abdominal extrauterine pregnancy. Vienna, Austria

Langer RD, Czechowski J, Branicki F, Wafic K, Bobbili N (2006). Impact of multislice spiral CT (MSCT) on management of patients with abdominal trauma. *ARRS Vancouver*, Canada

Langer RD, Obaid Al Kaabi H, Neidl van Gorkom K, Czechowski J, Torab F, Nagi M, Ashish M. (2006). Comparison of Two Imaging Protocols for Acute Stroke Unenhanced Computed Tomography (CT) and Contrast Material Enhanced CT with Perfusion Imaging - Preliminary Results. *Proceedings Seventh Annual UAEU Research Conference*, 2006

Langer RD (2006). Hochschulstruktur und Medizin-studium in den UAE (University structure and medical education in the UAE) Greifswald / Germany

Langer R, Hessa, Neidl van Gorkom K, Czechowski J, Torab F, Nagi M, Ashish M: Comparison of Two Imaging Protocols for Acute Stroke Unenhanced Computed Tomography (CT) and Contrast Material Enhanced CT with Perfusion Imaging -Preliminary Results. *UAEU Research Conference*, 2006.

RESEARCH GRANTS 2006

FMHS RESEARCH GRANT 2006

Prof P Corr (PI)

Bone mineral density, body mass index, and body composition

Dr KN van Gorkum (PI)

Skeletal 3D post-processing of primary trauma CT images



Figure 1a T1 weighted MR scan of osteochondral fracture of lateral femoral condyle (arrow)



Figure 1b Fat saturated T2 weighted MR scan demonstrates hyperintense (white area) of a bone marrow bruise

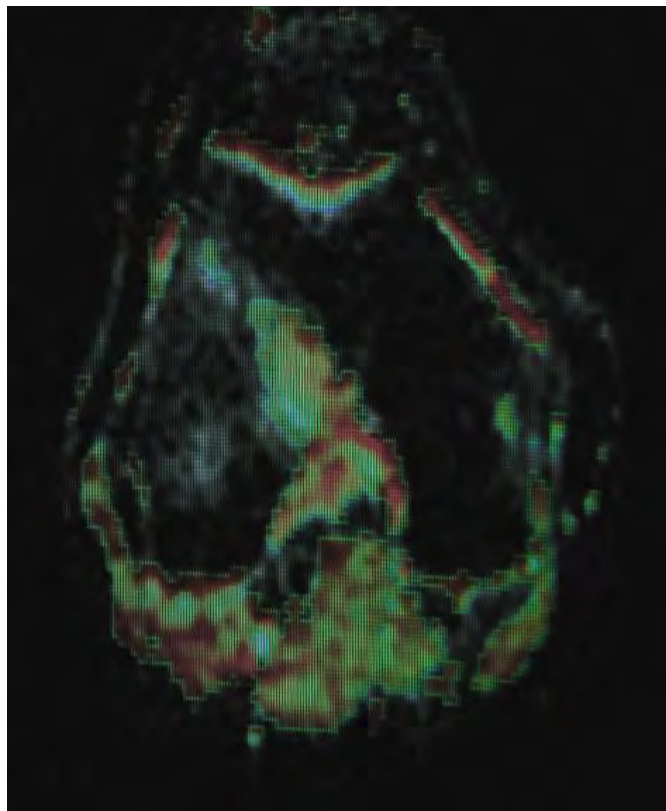


Figure 1c Transverse apparent diffusion map through the bone bruise demonstrates increased water diffusion within osteochondral injury of the lateral condyle (arrow)

Department of Surgery

Prof F J Branicki	Professor, Chairman	Dr S Al Bakr	Teaching Assistant
Prof F Safi	Professor	Dr Ali Al Belooshi	Teaching Assistant
Prof NO Tjernstrom	Professor	Dr Z Al Fardan	Teaching Assistant
Dr D Younge	Professor	Dr M Al Ali	Teaching Assistant
Dr F Abu-Zidan	Associate Professor	Dr. Hani Eid	Research Assistant
Dr F Torab	Assistant Professor	Dr. S Adam	Research Assistant
Dr Ali Jawas	Assistant Professor	Ms M Al Mansouri	General Technician
Dr S Al Thani	Assistant Professor	Ms M Thomas	Assistant Technician
		Mr H Hammash	Administrative Assistant
		Mr Abdulla Jamal	Department Secretary
		Mr C K Aboobacker	Office Assistant

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Standing from left to right: Mr. Aboobacker, Dr. Fawaz C Torab, Dr. Fikri Abu Zidan, Prof. Nils Tjernstrom, Dr. Khaled Al Mansouri, Dr. Hani Eid and Mr H Hammash
Seated from left to right: Dr M Ali Jawas, Prof. Derek Younge, Prof. Frank J Branicki, Ms M Al Mansouri, Ms. Maya Thomas, Prof. Farouk Safi and Mr. Abdulla Jamal.

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 and has been in post for 13 years. and Professor Derek Younge (August 2002) with expertise in the management of hand and brachial plexus injuries and musculoskeletal tumours in particular. The Faculty in the Department have now increased from four (1999) to ten currently with three advertised senior positions (breast/endocrine surgery, minimal access surgery and neurosurgery) yet to be filled. An offer has now been accepted by a Urologist who will join the Department in 2007.

All Faculty members have Consultant privileges at Al Ain and Tawam Hospitals. 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 Sports Injuries clinic in Tawam Hospital. In Canada Dr. Tahira Mahmoud completed Residency training at Mc Gill 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 who are still to complete Residency training in Canada include, Dr. Ali Al Bellooshi (Orthopaedics), Dr. Zuhair Al Fardan (Plastic and Reconstruction Surgery), and Dr. Saeed Al Bakir (Ophthalmology). The most recently appointed, Dr. Mohamad Ali Al Ali Teaching Assistant, has yet to find a suitable training opportunity for Otorhinolaryngology overseas. Dr. Ali has completed an attachment at Sheikh Khalifa Medical Centre in Abu Dhabi and is also undergoing training at Tawam Hospital. He is to undertake short term period of training in Toronto in March 2007.

Currently, the Department lacks a senior laboratory

position (not replaced after resignation of the incumbent in 1998). Following the resignation of an Assistant Technician, a General Technician Ms. Maya Thomas, is in post who is also working part time for the Department of Anatomy. 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.

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 has been reorganized with an emphasis on small group teaching and case discussion with new initiatives introduced by the 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.

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), Profs. Branicki, Tjernstrom and Drs. Torab and Fikri have been members of the Research Advisory Board. Prof. Branicki also chairs the Undergraduate Policy and Review Committee, Dr. Torab also holding membership of this Committee as well as the Health Informatics Group. Prof. Frank Branicki is currently a member of the Budget and Finance Committee, the Education Advisory Board and Faculty Council. Dr. Fawaz is also the Deputy Chair of the Research Ethics Committee for Al Ain Medical District. Prof. Safi is a member of various committees, including Research Grants Committee, Promotion Committee, Postgraduate Education Committee, Finance and Budget 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 Gastro-intestinal 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.

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 35 members, and has organized a number of 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 is also the Director of the Clinical Sciences Course and oversees activities of the Al Ain Orthopaedic Club. This was founded recently and was previously chaired by Associate Professor Karl Lunsjo, 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 has chaired the Organizing Committee for an International Conference –Recent Advances in Clinical Oncology Conference scheduled for 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.



Dr. Torab is completing studies to evaluate re-sorption 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 col-

laborating 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.



Dr. 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. Dr. 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 will also help 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 invited to organize 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 at an International Surgical Congress.



Prof. Safi has 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.

Dr. 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 will be the largest prospective series in the literature when published. Prof. Younge is currently writing up his experiences with novel operative procedures 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.

Drs. Fikri and 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.

Departmental research interests are thus diverse, currently encompassing general surgery and trauma. As the Department grows in stature with the appointment of surgeons with subspecialty 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. (2006). Focused Assessment Sonography for Trauma. *Bulletin of the Emirates Medical Association*; 1: 24-25.

Abu-Zidan FM. (2006). Evaluating the influence of focused assessment sonography for trauma (FAST) on

individual patient management in a major trauma center. *J Trauma* 61: 769.

Bashir MO, Abu-Zidan FM. (2006). Motor vehicle collisions with large animals (Review). *Saudi Med J*; 27:1116-20.

Bengtsson M, Lunsjo K, Hermodsson Y, Nordqvist A, Abu-Zidan FM. (2006). Patient satisfaction is high after arthroscopic subacromial decompression for shoulder impingement. *Acta Orthopaedica*. 77:138-42

Czechowski J, Branicki F, Bobbili NK, Langer R, Corr P. (2006). The role of multislice CT (MDCT) in abdominal trauma. *Eur J Trauma*, 32: 533-7.

Hefny AF, Joshi S, Saadeldin YA, Fadlalla H, Abu-Zidan FM. (2006). Primary anterior abdominal wall actinomycosis. *Singapore Med J* 2006;47:419-21.

Lunsjo K, Abu-Zidan FM. (2006). Does colostomy prevent infection in open blunt pelvic fractures?: A systematic review. *J Trauma*; 60: 1145-8

Olofsson P, Abu-Zidan FM, Wang J, Lennquist S, Wikstrom T. (2006) The effects of early rapid control of multiple bowel perforations after high-energy trauma to the abdomen: Implications for damage control surgery. *J Trauma*; 61: 185-91

Parmar KA, Rao S, Abu-Zidan FM. (2006). Minor head injuries in warfarinised patients. *Sing Med J*; 47:676-8.

Radwan M, Abu-Zidan FM. (2006). Focused Assessment Sonography for Trauma (FAST) and CT scan in blunt abdominal trauma: surgeon's perspective. *Afr Health Sci* 2006; 6: 187-90.

Weerasinghe S, Mirghani H, Revel A, Abu-Zidan FM. (2006). The use of cumulative sum analysis in assessment of trainee competence in fetal measurements. *Ultrasound Obstet Gynecol*. 28:199-203

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Abu-Zidan FM. (2006). Chest X-ray made easy (Book Review). *Emirates Medical Journal* 24: 93.

Al-Omran M, Lindsay T, Major J, Ali Jawas, Larry L, Verma Subodh, (2006). Perceptions of Canadian vascular surgeons toward pharmacological risk reduction in patients with peripheral arterial disease. *Annals of Vascular Surgery*, 20: (5), 555-563.

Langer R, Al Kaabi HH, Czechowski J, Nagi M, Torab F. (2006). "Studie zur Detektion der definitiven Infarktgröße bei Patienten mit akuten zerebralen Ischämien – Multimodales craniales Computertomographie (CCT)-Protokoll vs. alleiniges Nativ-CCT". *Fortschr Röntgenstr* 2006; 178.

Torab FC, Wazz G, Massad I, Saadi H, El-Taji H, Branicki F. (2006). The role of a bariatric (antiobesity) surgery centre in a country of high prevalence of obesity

and diabetes. *International Journal of Diabetes and Metabolism* 14, (Supp 11): 22.

Torab FC, Wazz G, Massad I, Ghodrattollah N, Saadi H, El Taji H, Branicki F. (2006). The role of a bariatric surgery center in a country of high prevalence of obesity and diabetes. *Obesity Surgery* August 2006, 16(8): 994.

Torab FC, Safi F, Beger HG. (2006). The safety of the Warren-Cattell pancreatico-jejunostomosis after pancreatic resection for malignant diseases. *EJSO* 2006, 32(9): 1061.

PROCEEDINGS, CONFERENCES, INVITED LECTURES, WEB SITES AND OTHERS.

Abu-Zidan FM. (2006). Is there a place for prehospital ultrasonography? 7th European Congress of Trauma and Emergency Surgery, September 2006, Malmö, Sweden.

Abu-Zidan FM. (2006). Clinical research in UAE. The First Clinical Research and Regulatory Professionals Group Meeting, February 2006, Dubai, UAE

Abu-Zidan FM. (2006). Role of FAST in blunt abdominal trauma. Emirates Emergency Surgery and Trauma Conference, May 2006, Fujairah, UAE. (Invited Lecture).

Abu-Zidan FM. (2006). Critical decision making in multiple trauma patients. 7th European Congress of Trauma and Emergency Surgery, September 2006, Malmö, Sweden.

Al-Ashaal Y, Abd K Al-Olama, Abu-Zidan FM. (2006). Trans-anal rectal injuries. Emirates Emergency Surgery and Trauma Conference, May 2006, Fujairah, UAE.

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Blair JD, Hodge WG, Jackson WB, Mintsoulis G, Munger R, Aeron S, Fergusson D, Mahmoud T, Sherif H. (2006). Comparison of Clinician's Estimate of Ulcer Size Versus Photographic Measurement. Canadian Ophthalmological Society, June 2006, Toronto, Canada

Branicki FJ. (2006). Laparoscopic antireflux surgery – here to stay despite PPIs and endoscopic therapies? Joint Meeting of the Oman Chapter of Royal College of Surgeons, Edinburgh and the Division of Surgery Royal Hospital, 6th International Surgical Update, January 2006, Muscat, Oman.

Branicki FJ. (2006). Staging for Gastric Cancer – the Key to Interventions, Joint Meeting of the Oman Chapter of Royal College of Surgeons, Edinburgh and the Division of Surgery Royal Hospital, 6th International Surgical Update, January 2006, Muscat, Oman.

Branicki FJ. (2006). Recent Advances in the Management of Gastric Cancer, Tawam Hospital CME Program. March 2006, Al Ain, UAE.

Branicki FJ. (2006). Surgical Intervention for peptic ulcer haemorrhage or perforation, Emirates Emergency Surgery and Trauma Conference, May 2006, Fujairah, UAE.

Branicki FJ. (2006). Pancreatic and duodenal trauma, Tawam Hospital, June 2006, Al Ain, UAE.

Branicki FJ. (2006). Pancreatic and duodenal trauma, Al Ain Hospital, June 2006, Al Ain, UAE.

Branicki FJ. (2006). Neoadjuvant and Adjuvant Therapy, Symposium: Gastric Cancer, 20th World Congress of Digestive Surgery, December 2006, Rome, Italy.

Branicki FJ. (2006). Free Paper Session 10.2 Basic Research, Adoption of a human quantitative Endotoxin Assay to measure Endotoxin in Plasma from the Rat. 20th World Congress of Digestive Surgery, December 2006, Rome, Italy.

Eid HO, Lunsjo K, Torab FC, Abu-Zidan FM. (2006). Trauma research in United Arab Emirates. The 7th Annual UAE University Research Conference, April 2006.

Eid HO, Lunsjo K, Torab FC, Abu-Zidan FM. (2006). Trauma research in United Arab Emirates. 7th European Congress of Trauma and Emergency Surgery, September 2006, Malmö, Sweden.

Eid H, Bashir MO, Muhammed OQ , Abu Zidan FM. Bicycle related injuries: a prospective study of 200 patients. Emirates Emergency Surgery and Trauma Conference, May 2006, Fujairah, UAE.

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Lunsjo K, Tadros A, Hauggaard A, Blomgren R, Kopke J, Abu-Zidan FM. (2006). Usefulness of AP pelvic X-ray in multiple-trauma patients: A prospective study. The 7th Annual UAE University Research Conference, April 2006.

Lunsjo K, Tadros A, Hauggaard A, Blomgren R, Kopke J, Abu-Zidan FM. (2006). Associated injuries predict mortality, not pelvic fracture instability: a prospective study of 100 patients Emirates Emergency Surgery and Trauma Conference, May 2006, Fujairah, UAE.

Lunsjo K, Tadros A, Hauggaard A, Blomgren R, Kopke J, Abu-Zidan FM. (2006). Usefulness of AP pelvic X-ray in multiple-trauma patients: A prospective study. 7th European Congress of Trauma and Emergency Surgery, September 2006, Malmö, Sweden.

Olofsson P, Abu-Zidan FM, Wang J, Nagelkerke N, Wikstrom T. (2006). Multiple bowel ligations in combined high-energy traumatic and hemorrhagic shock . 7th European Congress of Trauma and Emergency Surgery, September 2006, Malmö, Sweden.

Olofsson P, Abu-Zidan FM, Wang J, Nagelkerke N, Lennquist S, Wikstrom T. (2006). Early rapid control of multiple bowel perforations after high-energy trauma. 7th European Congress of Trauma and Emergency Surgery, September 2006, Malmö, Sweden.

Rizk DEE, Abu-Zidan F. (2006). Biomedical research in developing countries: New insights into an old problem. IIIrd Regional Conference on Medical Journals in the WHO Eastern Mediterranean Region, January 2006, Shiraz, Iran.

Safi F. (2006). Update in pancreas transplantation. International Conference on Recent advances in Diabetes Mellitus and its complications March, 2006, Al Ain, UAE.

Safi F. (2006). Wlimes S. Effect of Tumor follow-up in breast cancer, The 7th Annual UAE University Research Conference, April 2006.

Safi F, Torab FC, Rau M. (2006). Septic necroses are the most common cause of death in acute pancreatitis. The 7th Annual UAE University Research Conference, April 2006.

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Tadros A, Lunsjo K, Czechowski J, Abu-Zidan FM. (2006). Multiple region scapular fractures are related to severity of chest injury in blunt trauma: a prospective study of 107 patients. Emirates Emergency Surgery and Trauma Conference, May 2006, Fujairah, UAE.

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Torab FC, Amer M, Jamal A, Branicki FJ. (2006). Perforated peptic ulcer: different ethnic, climatic and fasting risk factors for morbidity in Al Ain Medical District, United Arab Emirates. Proc. The 7th Annual UAE University Research Conference, April 2006.

Torab FC. (2006). Ethics in Surgical Practice. 6th International Surgical Update, January 2006, Muscat, Oman.

Torab FC. (2006). Updates in laparoscopic anti-obesity surgery. 6th International Surgical Update, January 2006, Muscat, Oman.

Torab FC. (2006). Decision making in a Research Ethics Committee: How to improve application, performance and accountability. 1st Clinical Research & Regulatory Professionals Group Meeting, February 2006, Dubai, UAE.

Torab FC. (2006). The status of anti-obesity surgery in 2006: are the results of the bariatric centre in Al-Ain Medical District compatible? 1st International Medical Conference of Al-Noor Hospital, April 2006, Abu Dhabi, UAE.

Torab FC. (2006). General Surgery emergencies during pregnancy. Emirates Emergency Surgery and Trauma Conference, May 2006, Fujairah, UAE.

Torab FC. (2006). The impact of inexperienced surgeons on success of bariatric surgery. 1st National Congress of the Emirates Society of Laparo-Endoscopic Surgeons, May 2006, Dubai, UAE.

Torab FC. (2006). End of Life Issues. Oncology Day of Nurses of Tawam Hospital, May 2006, Al-Ain, UAE.

Torab FC. (2006). Bariatric Surgery, Gastric Banding. Obesity workshop during the International Symposium Pancreatic Cancer, May 2006, Ulm, Germany.

Torab FC, Branicki FJ, D Berger. (2006). Adoption of a human quantitative endotoxin assay to measure endotoxin in plasma from the rat. Preceding 20th World Congress of Digestive Surgery, December 2006, Rome, Italy.

Torab FC, Wazz G, Branicki FJ. (2006). When inexperienced surgeons perform bariatric surgery. 10th World Congress of Endoscopic Surgery, 266.

Torab FC, Safi F. (2006). The Safety of the Warren-Cattel Pancreatico – Jejunostomosis after pancreatic resection for malignant disease, Annual Scientific Meeting of BASO – The Association for Cancer Surgery, November 2006, London, UK.

Torab FC. (2006). Launching of the On-line CME in the UAE from the Faculty of Medicine & Health Science in the UAE. Emirates Medical Association Bulletin, 1, (04/2006):13.

RESEARCH GRANTS

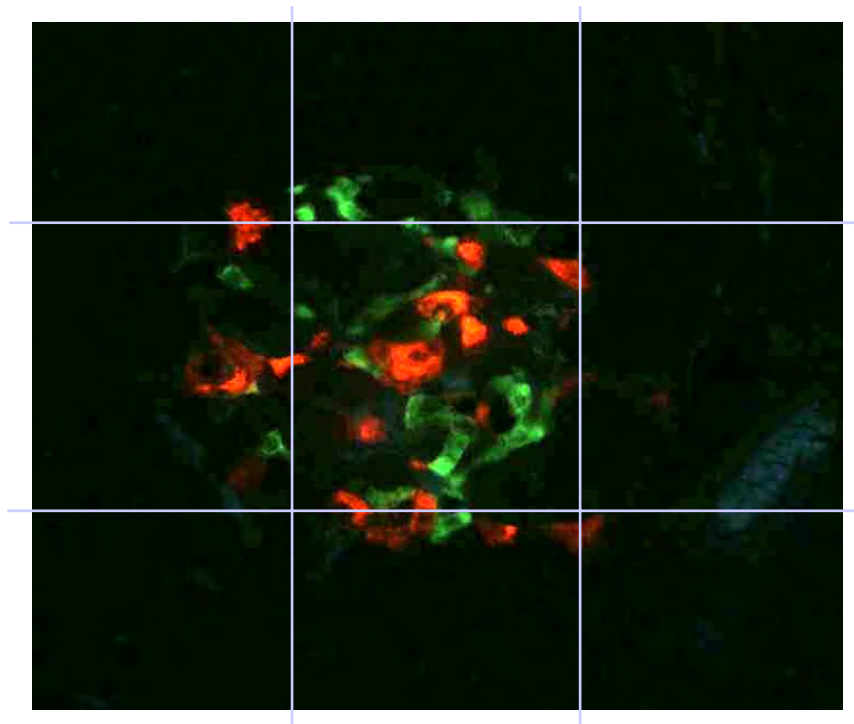
UAEU Individual Research Grant 2006

Drs F Torab (PI), S Rahman, K Salim, Y El Ashaal, K Ramadan, Prof FJ Branicki. Does laparoscopic approach improve outcome in patients with perforated duodenal ulcer? A prospective randomized study of open versus laparoscopic approach in with serial analysis of pro-inflammatory mediators.

UAEU Interdisciplinary Research Grant 2006

Drs FM Abu-Zidan (PI), S Shaban, F Torab, K Lunsjo, P Barss, M Grivna. Road Traffic Accident Injury Registry in Al-Ain City.

Research Priority Groups



Diabetes and Cardiovascular Research Priority Group

Core Members:

Prof. Enyioma Obineche
Dr. Chris Howarth
Dr. Hussain Saadi
Dr. Juma Al Kaabi
Prof. Thomas Adrian

Prof. Abdu Adem
Dr. Elsadig Kazzam
Prof. Farouk Safi
Prof. Ernest Adeghate (Group Representative)

In addition to the core members, group membership includes 33 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

International Conference on Recent Advances in Diabetes Mellitus and Its Complications, March 6 - 9, 2006

The DCRG organized an International Conference on Recent Advances in Diabetes Mellitus and its Complications held in Al Ain Intercontinental Hotel in March 2006. The conference attracted more than 650 delegates, including key diabetes experts from several countries including Algeria, Australia, Bahrain, Belgium, Canada, Cameroon, China, Egypt, Finland, Gambia, Ghana, Germany, Greece, Hungary, India, Iran, Iraq, Japan, Jordan, Kuwait, Morocco, Oman, Pakistan, Palestine, Qatar, Russia, Saudi Arabia, Spain, Sudan, Sweden, Tunisia, Ukraine, United Arab Emirates, United Kingdom and United States of America.

The conference covered different areas of diabetes including epidemiology, metabolic syndrome, nutrition and diabetes, immunology of diabetes and pancreas transplantation, diabetic retinopathy, nephropathy, and neuropathy. The proceeding of the conference was published in a volume of the Annals of New York Academy of Sciences (Volume 1084, November 2006).

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.

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

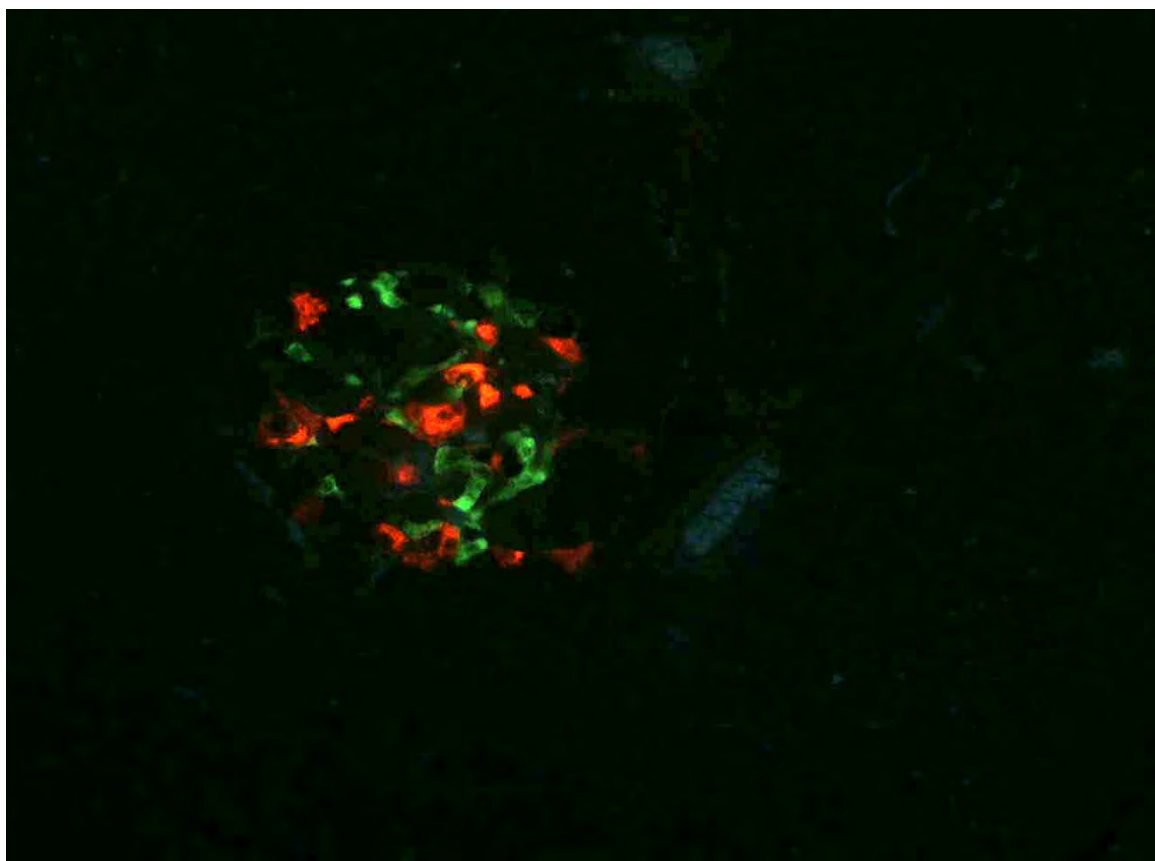
The group is planning to establish a Diabetes Research Centre. The centre will provide a facility that enables and facilitates a multidisciplinary approach to the study of diabetes and its complications and to provide the infrastructure for diabetes related undergraduate and post-graduate research and teaching activities.

Publications

Members of the DCRG published more than 47 diabetes-related papers in top quality peer-reviewed journals including but not limited to Diabetic Medicine, Kidney International, Journal of Biological Chemistry, Molecular and Cellular Biochemistry, Archives of Obstetrics & Gynecology, Clinica Chimica Acta, Peptides, Regulatory Peptides, Bone, General and Comparative Endocrinology, International Journal of Urogynecology and Journal of Pelvic Floor Dysfunction, Journal of Internal Medicine, Clinical and Experimental Physiology and Pharmacology, Gynecological Endocrinol-

ogy, European Journal of Heart Failure, Comparative Biochemistry C and American Journal of Physiology in 2006. The cumulative impact factors of these journals exceeded 84 (See Departments

of Anatomy, Biochemistry, Community Medicine, Pathology, Pharmacology, Physiology, Psychiatry, Internal Medicine and Medical Microbiology for relevant publications).



Light micrograph showing neuropeptide-Y immunoreactive cells (red) in the vicinity of insulin-positive cells in the islet of diabetic rat. X400.

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 in the country so far. Local population has a high frequency of alpha and beta thalassemia mutations and hemoglobin S. In addition, 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 socioeconomic 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. The 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.

Dr. B.R. Ali (Pathology Department); Associate

Professor and Leader of the Genetics and Development Research Group

Prof. Y.M. Abdulrazzaq (Paediatrics Department); Professor and Vice Dean of Faculty of Medicine and Health Sciences

Prof. T.E. Adrian (Physiology Department); Professor and Chair of Physiology

Prof. L.I. Al-Gazali (Paediatrics Department); Professor and Senior Consultant in Clinical Genetics

Dr. S. Al-Salam (Pathology Department); Assistant Professor

Dr. S. Attoub (Pharmacology and Therapeutics Department); Assistant Professor

Dr. S. Bastaki (Pharmacology and Therapeutics Department); Associate Professor

Dr. S. Denic (Internal Medicine Department); Associate Professor

Prof. V. Eapen (Psychiatry Department); Professor

Dr. O.M. El-Agnaf (Biochemistry Department); Associate Professor

Dr. S. Galadari (Biochemistry Department); Associate Professor

Dr. A.H. Hassan Al-Marzouqi (Biochemistry Department); Assistant Professor

Prof. Mohammad Y. Hassan (Pharmacology and Therapeutics Department); Professor and Associate Dean for Student Affairs

Prof. R. Langer (Radiology Department); Professor, Associate Dean for Clinical Affairs and senior consultant Radiologist

Prof. M. Lukic (Medical Microbiology Department); Professor, Chair of Medical Microbiology and Associate Dean for Research

Dr. H. Mirghani (Obs/Gyne Department); Associate Professor and Acting Chair

Dr. H. Narchi (Paediatrics Department); Associate Professor

Prof. R. Padmanabhan (Anatomy Department); Professor

Prof. T.A. Rizvi (Medical Microbiology Department); Professor

Dr. H. Saadi (Internal Medicine Department); Associate Professor and senior Consultant Endocrinologist

Group Activities

Organizing international conferences and CME workshops

The Group organized an international conference on Genetics in 2003. The conference included many international and local speakers and was attended by over 200 delegates from many parts of the world. The group is in the process of organizing a second international genetics conference in late 2008. The group has also organized several CME workshops on genetics issues for local physicians and health care workers.

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

Regional collaborations

Sultan Qaboos University, Muscat, Sultanate of Oman
University of Jordan, Jordan

International collaborations

- International Clearing House for Birth Defect Monitoring System [member]
- Harvard University
- University of California, San Diego
- Cambridge University, UK
- Birmingham University, UK
- Yale Child Center, Yale University
- 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 für Medizinische Genetik, Berlin, Germany

Current Research Projects and Interests

Prof. Lihadh Al-Gazali and Dr. Bassam R. Ali

1.Elucidation of the molecular defects underlying genetic disorders in the UAE and Arab popula-

tions. (Prof. L. Al-Gazali and Dr. B.R. Ali)

2. Developing molecular diagnostic tests specific for mutations underlying genetic diseases prevalent in UAE and Arab populations. (DR. B.R. Ali)
- 3.Establishing the cellular mechanisms underlying human genetic disorders. (Dr. B.R. Ali and Prof. Al-Gazali)
- 4.Delineation of the clinical aspects of congenital malformations in the UAE. (Prof. L. Al-Gazali)

Prof. Yousef M. Abdulrazzaq

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.
5. Aflatoxin effects on fetus.

Prof. Thomas E. Adrian Identification of diabetes susceptibility genes in Emirati nationals.

Dr. Omar El-Agnaf

Role of protein misfolding and aggregation in neurodegenerative disease.

Dr. Salim A. Bastaki

Oxidative phenotyping and genotyping UAE nationals using antidepressant drugs.

Prof. Valsamma Eapen

1. Association of polymorphisms and Schizophrenia.
- 2.Genetic studies in autism.

Prof. Mohamed Yousif Hasan

The roles of neurotransmitters in diabetes, epilepsy, aging and neurodegenerative diseases.

Dr. Sehammudin Galadari

Cell signaling and human disease.

Dr. Ahmad H. Hassan (Al-Marzouqi)

Transcriptional regulation by chromatin-modifying complexes.

Dr. Hussein F. Saadi

Common diseases in UAE and Arab populations.

Prof. Tahir A. Rizvi

Retroviral/lentiviral vectors for human gene therapy.

Dr. Samir Attoub

The roles of Akt in the mechanisms of cancer

Dr. Hassib Narchi

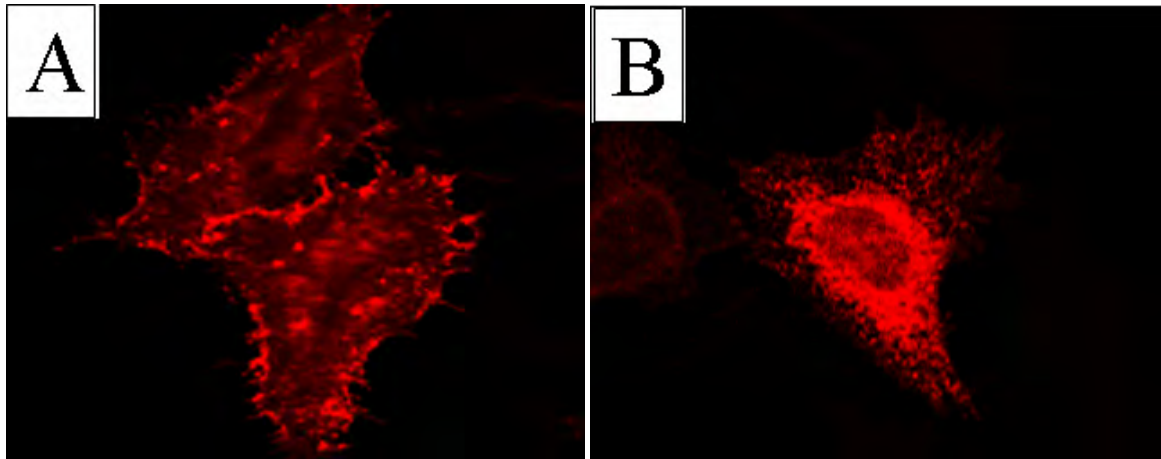
Causes and mechanisms of common diseases in Middle Eastern populations

Grants and Publications

Refer to departmental reports for individual members of the group

Dr. S. Denic

Effect of human inbreeding on selection of alpha-thalassemia



The Cellular Mechanism of Robinow Syndrome.

Robinow Syndrome is a recessive disease found in many parts of the Middle East including Oman and Saudi Arabia and is caused by mutations in ROR2 gene. Wild type ROR2 protein traffic normally to the plasma membrane of the cell (panel A) whereas Robinow Syndrome causing mutations result in the retention of the mutant proteins in the endoplasmic reticulum (panel B). This picture from Dr. B. Ali's work on the cellular mechanisms of genetic diseases.



MERGE (Medical Education Research Group)

Mission of the Group

To act as a co-ordinating body within the Faculty of Medicine and Health Sciences (UAEU) for individuals or groups interested in medical education in order to promote scholarly activities in teaching and learning locally, regionally and internationally.

PRIMARY AIMS include

- 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 within the Gulf region and internationally by establishing networks of collaborators.
- Securing funding for medical educational 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.

Members of the Group

Chair

Prof M McLean

Vice-chair

Ms E Kaplan

Core members

Prof E Adeghate

Dr M Grivna

Prof D Lloyd

Dr C Howarth

Prof D Lorke

Dr H Narchi

Prof N Nagelkerke

Dr R Sadeghi

Dr P Barss

Ms E Thorsteinsen

Dr S Gariballa

Research objectives of the Group

The major objective of medical education is to improve the health care of patients and communities. As members of the group represent different departments, current and proposed research encompasses several aspects of undergraduate, graduate and post-graduate medical education.

MERGE was resuscitated in July 2006 after almost 4 years of dormancy. The majority of the research is therefore currently in progress or in the planning stages. Medical education issues which will be researched include:

- Development of transferable/generic skills in the undergraduate medical programme
- Contribution of research on the development of these skills
- Perceptions of the practice of medicine for female students and graduates
- Psychological effects of students' first encounters with cadavers in Anatomy
- Predictors of student success in the FMHS
- Preparedness for clinical practice
- Perceptions of the clinical learning environment
- Student learning in Community Medicine

It is envisaged that some of these studies will be collaborative involving medical schools in Africa, Europe and the United Kingdom.

Meetings are held monthly with the aim of developing the scholarship of teaching. To date, meetings have included:

- How to do medical education research
- Quantitative and qualitative research
- Educational scholarship (journal club)
- Presentation of research results (for comment)
- Presentation of research proposals (for comment)

Medical Education conferences attended

Association for Medical Education in Europe (AMEE).
Genoa, Italy, September 2006

2nd International Medical Education Conference, Khartoum, Sudan, March 2007

Neuroscience Research Priority Group_____

MISSION

The mission of the Group shall be to:

- Support and promote neuroscience research in the UAE and the region.
- Give encouragement and assistance to, and strengthen collaborative research ties between, its members.
- Organise congresses, seminars, workshops and courses in the field of neuroscience.
- Participate in the scientific activities and collaborate with, other groups in the field of neuroscience nationally and internationally.
- Develop educational programs at the UAE University that lead to higher degrees in Neuroscience.

Major Achievements

One of the major achievements of the Group in 2006 was gaining membership to the International Brain Research Organization. Further to the **visit of Professor Albert Aguayo**, President International Brain Research organization (IBRO) and his discussions with Dr Hadeef Al Dhaheri, Vice Chancellor of the UAE University, the **UAEU Neuroscience Group** was officially formed. The terms of reference are outlined in a Decree from the Vice Chancellor, and the constitution and bye-laws were drafted in consultation with FMHS Governance committee. Subsequently, a formal application was made to IBRO and it is indeed a great honour and privilege to the Al Ain Neuroscience Community that we have been successful in obtaining the **membership of IBRO**.

IBRO Collaboration:

After our entry to the Governing Council of IBRO, there were two meetings of the Executive Council; the first one during the Federation of European Neuroscience Meeting in Vienna, Austria and the second with the American Society for Neuroscience meeting in Atlanta, USA. Prof. Adem represented UAEU group in the Vienna meeting where our Group was warmly wel-

comed, and Prof. Fahim represented the UAEU group in the Atlanta meeting.

1st UAE IBRO Neuroscience School:

This School, the first of its kind in the region, was made possible by the partnership between the International Brain Research Organization (IBRO) and the Faculty of Medicine and Health Sciences, UAE University. The 8-day School held at FMHS from 24th to 31st January 2007 was attended by 28 registered students from 13 countries. The program contained several lectures in 6 modules and 8 workshops, which was enriched by the contribution of five International IBRO faculty and 13 FMHS faculty. The School was indeed a great success and it provided a unique opportunity for young students from the region to foster collaboration among themselves, and to have exposure to scientists from leading Institutions. The feedback from the students has been overwhelmingly positive and there is no doubt that the School will help to develop new initiatives in the field of neuroscience in the region. Furthermore, it is hoped that this School will serve as the starting point for future collaborative activities with IBRO.

Master's & PhD Program:

Planning is underway for Masters & PhD program in Neuroscience, and we believe that linking our Programs to IBRO might make it feasible for IBRO to fund students from the region to pursue graduate program studies here in the UAE.

Scientific Meetings, Seminars and Workshops organized by the Group

Members of the group contributed to **The 4th Dubai International Conference for Medical Sciences** organized by the Sheikh Hamdan Award for Medical Sciences in Dubai from 19 -21 December 2006. In keeping with this year's theme on Neuroscience, the members participated actively in the organization and in the scientific program.

Seminars & Workshops Organized by the Group

“Epilepsy and Psychosis: Status of the evidence” by Professor Perminder Sachdev, President of International Neuropsychiatry Association & Professor, School of Psychiatry, The University of New South Wales, Sydney, Australia was held on Monday, 23 January 2006 at Hotel Intercontinental Resort, Al Ain.

“Diabetic neuropathy differs in type 1 and type 2 diabetes” by Professor Anders Sima, Department of Pathology, Wayne State University School of Medicine, Detroit, USA was held on Thursday, 9 March 2009 at Hilton Hotel, Al Ain.

“Searching for ways to repair the brain” by Professor Albert J. Aguayo, President, International Brain Research Organization, Director, Center for Research in Neuroscience, Professor of Neurology & Physiology, Mc Gill University, Montreal, Canada was held on Tuesday, 18 April 2006 at Hotel Intercontinental Resort, Al Ain.

“When cortical development goes wrong: Schizophrenia as a Neurodevelopmental disease of microcircuits” by Professor Laurence Garey, Centre for Psychiatric Neuroscience, Lausanne, Switzerland on Monday, 27 November 2006 at Hotel Intercontinental Resort, Al Ain.

“Effect of Atypical Antipsychotics on Cognition in Schizophrenic Role of Aripiprazole” by Dr. Youssef Abou-Allaban, Behavioral Sciences Pavilion, Sheikh Khalifa Medical city, Abu Dhabi on Monday, 27 November 2006 at Hotel Intercontinental Resort, Al Ain.

Summary of Grants and Publications, 2006

The members of the group have active collaborations with a number of groups, institutions and organizations within the UAE and abroad, and this has resulted in a number of joint grants and publications.

UAE:

Central Veterinary Research Laboratory, Dubai

Centre for Arab Genomic Study

Dubai Harvard Foundation for Medical Research (DHFMR)

Faculty of Science, UAEU

Hamdan Award for Medical Sciences

School Health Authority

Tawam Hospital, Al Ain

Al Ain Hospital, Al Ain

Zayed University, Dubai

Abroad:

Boston College, MA, USA

Conway Institute, Dublin, Ireland

Columbia University, NY, USA

Chinese University of Hong Kong, China

Center of Molecular Neurobiology, University of Hamburg, Germany

Harvard Medical School, USA

Humboldt University, Berlin, Germany

Imperial College, London

Institut Pasteur de Lille, Cedex, France

Institute of Virology, Vienna, Austria

Institutes for Medical Research and Neurology, Belgrade, Yugoslavia

Iowa Medical School, USA

James Cook University, Queensland, Australia

Janssen Research Foundation, Belgium

Lancaster University, UK

Laboratory of Neurogenetics, National Institute on Aging, Maryland, USA

Mayo Clinic, Florida, USA

McMaster University, Canada

National Academy of Sciences, Kiev, Ukraine

Royal Free & University College London Medical School, UK

SGHMS, University of London, UK

Sultan Qaboos University, Muscat, Oman

The Karolinska Institute, Sweden

The Queen's University of Belfast, UK

University of Manchester, UK

University of Aarhus, Denmark

Universita La Sapienza, Rome

University of Aalborg, Denmark

University of Amsterdam, Netherlands

University of Bonn, Germany

University of California and San Diego, USA

University of Gevle, Sweden

University of Glasgow

University of Groningen, Netherlands

University of Turin, Italy

Utrecht Medical Centre, Netherlands

Grants and Publications 2006

(refer to departmental reports as below)

Shehab S (Anatomy)

Padmanabhan R (Anatomy)
 Adeghate E (Anatomy)
 Mensah-Brown E (Anatomy)
 Lorke D (Anatomy)
 Conlon JM (Biochemistry)
 El-Agnaf O (Biochemistry)
 Galadari S (Biochemistry)
 Braun J (Internal Medicine)
 Lukic M (Medical Microbiology)
 Al-Gazali L (Paediatrics)
 Petroianu G (Pharmacology)
 Adem A (Pharmacology)
 Hasan MY (Pharmacology)
 Bastaki S (Pharmacology)

Attoub S (Pharmacology)
 Morrison J (Physiology)
 El-Sharkawy T (Physiology)
 Fahim M (Physiology)
 Lammers W (Physiology)
 Ljubisavljevic M (Physiology)
 El-Rufaie O (Psychiatry)
 Eapen V (Psychiatry)
 Osman O (Psychiatry)
 Sadeghi R (Psychiatry)
 Salem MO (Psychiatry)
 Moselhy H (Psychiatry)
 Corr P (Radiology)
 Gorkom van K (Radiology)



Valsa Eapen; Abdu Adem; Milos Ljubisavljevic and Safa Shehab
 For Neuroscience Research Priority Group

Oncology Research Group, ORG. _____

Introduction

ORG comprises colleagues at FMHS and the Abu Dhabi Health Authority, who share an interest in oncology research. An ad hoc Committee has previously overseen ORG activities and this has recently been replaced with definitive appointments within the Committee's membership. 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

- promote cancer research – being a catalyst for research activity
- 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.
- 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
 - act as an Advisory body to the Health Authority Abu Dhabi regarding cancer issues of national interest, e.g. breast cancer screening, cervical screening, risk factors
 - 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
 - promote quality control in the management of patients with cancer

Cancer Database

Support the cancer register at Tawam Hospital to improve infrastructure, enabling cancer diagnosis and registration.

Cancer research - Tissue Bank

ORG is focused on establishing a Tissue Bank for future research on cancer. We understand that the way forward for future cancer research involving both clinicians and basic scientists is the organization of such a resource. The Tissue Bank will create a focus for the collection, assessment, processing and storage of human tumors and appropriate control tissue for research. The Tissue Bank will function under the auspices of a Subcommittee, both from the FMHS and the Health Authority Abu Dhabi whose membership has been finalized. Dr. Fawaz Torab, an Ethics Advisor, will not be a regular member of the Subcommittee; but will be in attendance on request.

Registration of members' publications related to cancer

Prof. Tjernstrom had requested members to provide the ORG Committee with a list of personal publications, not more than 10 publications each, in order to upload them to the FMHS website and establish a database of relevant interests.

Cancer Research Day

ORG arranged a Research Conference which took place on November 30, 2005 and was sponsored by the FMHS, Julphar and Bristol-Meyers. The twelve speakers at the conference were all members of the Faculty of Medicine and Health Sciences, UAE University and were grant holders from the Terry Fox Cancer Research Fund. The meeting was an opportunity to thank the Terry Fox Research Fund organizers as well as the Canadian community represented by their Ambassador to the UAE, HE WD Hutton. The next Oncology Research Day is scheduled for 2008 since the FMHS has the upcoming Oncology conference and another planned activity in Oncology in 2007.

Oncology Conference

ORG is the organizing body responsible for the Conference "Recent Advances in Clinical Oncology" which is scheduled to take place in February 2007. In 2006 much time and effort was devoted to preparations for the meeting:

- Prof. Frank Branicki (Chair of the Core Organizing Committee)
- Prof. Nils Orjan Tjernstrom (Co-Chair)
- Dr. Saad Ghazal Aswad (Chair, Scientific Committee)
- Dr. Fawaz Torab (Chair, Sponsorship Committee)
- Prof. Abdu Adam (Co Chair Sponsorship Committee)
- Ms Dominique Corr, coordinator, public relation, social committee and secretariat
- Mr. Mahmoud Mohamed Mahmoud (Chair, Public Relations and Social Committee)
- Mr. Alsajir Mohamed Bashir (Chair, IT Committee)

The Conference has been organized by the Oncology Research Priority 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 and clinicians from Tawam Hospital. Johns Hopkins Medicine International now have 'operational oversight' for Tawam Hospital, which is now managed under its auspices on behalf of the Abu Dhabi Health Authority.

This International Conference will provide 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 will focus on recent advances and controversies through interaction with renowned international speakers. The Conference will be a full four day program, and will be structured in the form of workshops, plenary and parallel lectures in symposia, as well as short oral and poster presentations. It will provide a welcome opportunity to further continuous education in Oncology and to receive 'State of Art' reviews. Issues to be addressed include 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 will also be featured. Sessions will also focus on ethical and moral issues for staff caring for patients.

Thirty one overseas experts are participating as Invited Faculty, with speakers from Australia, Belgium, Canada, France, Germany, Italy, Japan, Korea, Qatar, Saudi Arabia, Spain, the UK and the USA. Thus, this is the largest group of internationally distinguished clinicians with Oncology interests ever to gather in the UAE. We are also delighted to have the participation of 17 Invited Faculty (local) based in the UAE (Al Ain, Abu Dhabi and Dubai), many of whom from the Faculty of Medicine and Health Sciences will highlight developments in molecular oncology and cell signaling. In addition, there are a number of excellent short oral (free paper) communications and poster presentations, basic science and clinical practice, to be made during the Conference with authors drawn from Africa, Europe, the Gulf Region and the Indian Subcontinent. Al Ain will play host to a visitors from far afield whose contributions will enrich the scientific program.

Invited Faculty from Johns Hopkins Medicine, Baltimore (USA) include Prof. Robert Arceci (Paediatric Oncology), Prof. Michael Choti (Surgical Oncology), Prof. David Ettinger (Head and Neck Oncology Service), Prof. Paul Christo (Anaesthesia and Intensive Care), Prof. Paul Ladenson (Chair, Endocrinology), and Associate Prof. Cynda Rushton (School of Nursing). Recognized speakers from elsewhere, who are in the forefront of the field, have confirmed participation include Prof. Masaki Kitajima, President, International Society of Surgery, Prof. Jaffer Ajani (M. D. Anderson Cancer Center), Prof. Ashok Shaha (Memorial Sloan Kettering Cancer Center), Prof. Eric Bouffet (University of Toronto), Prof. Greg Wiseman (Mayo Clinic), Prof. Mahmoud Ghanoum (Case Western Reserve University), Prof. Alan Burnett (University of Wales), Prof. Hilary Calvert (Northern Institute for Cancer Research, UK), Prof. Michael Baum (University College, London), Prof. Rodney Reznick and Dr. Nicholas Plowman (St. Bartholomew's Hospital, University of London), Prof. Markus Buechler (University of Heidelberg), Prof. Michael Höckel (University of Leipzig), Prof. Rolf Kreienberg (University of Ulm) and Prof. David Gotley (University of Queensland), Prof. Pann-Ghill Suh (Pohang University of Science and Technology, Pohang, South Korea.)

The Scientific program will feature many of the world's leading experts in the diagnosis and treatment of cancer. Sessions will also focus on ethical and moral issues for staff caring for patients. In

addition, panel discussion will take place, tackling such issues as “Cancer in the UAE, the way forward”. This session will draw on the expertise of Senior Administrators in the Healthcare sector with representation from the Abu Dhabi Health Authority, Johns Hopkins Medicine, the Department of Health and Medical Services in Dubai and

the Ministry of Health. Every effort will be made to explore ways to enhance services to provide a brighter future for patients with cancer. This International Conference now provides the best opportunity we have had to date in the UAE to develop and refine strategies for overcoming the disease.



Research by Medical Students

Academic Year 2006-2007



Medical Student Research 2006

2006 was a busy year for Medical Student research activities. Events included the Medical Sciences year 2 (MS2) and Clinical Sciences year 2 (CS2) curricular research projects, the "Fourth Scientific Conference for Medical Students in the GCC Countries", the "Eleventh UAE University Research Conference", the "First Scientific Creativity Exhibition" and Summer research activities which included the Research Scholarship Program.

Students in MS2 and CS2 are required to carry out extensive research projects as part of the curricular studies. During the academic year 2005-2006 twelve groups of MS2 students carried out a variety of laboratory- and community-based research projects. Academic Supervisors for these projects came from Departments of Anatomy, Biochemistry, Community Medicine, Internal Medicine, Microbiology, Physiology and Pharmacology. Thirteen groups of CS2 students carried out community-based research projects as part of the Community Medicine rotation. Abstracts from many of the MS2 and CS2 projects were published in the 2006 summer edition of the Emirates Medical Journal.

The "Fourth Medical Student Conference in the GCC Countries" was held in January at Sultan Qaboos University in Oman. More than 60 FMHS students attended the event and our contributions included 7 oral communications, 16 posters and a workshop on Evidence Based Medicine.

Prizes were awarded to:

Ismail FY & Al-Sharhan FY. Short and long-term functional outcome following unilateral or bilateral common carotid artery occlusion in rat models: behavioral and pathohistological correlates. Supervisor: Prof. Milos Ljubisavijevic, Department of Physiology.

Halhali F, Al-Awadhi A & Abdulkareem A. Role of the subthalamic nucleus in suppressing tonic seizure in an animal model of epilepsy. Supervisor: Dr. Safa Shehab, Department of Anatomy.

Harahara T, Al-Owais A & Al-Suwaidi S. Effects of

Red Bull energy drink on physiological parameters in rats. Supervisor: Prof. John Morrison, Department of Physiology.

The "Eleventh UAE University Research Conference" was held in April and FMHS students contributed 15 oral presentations. Academic Supervisors for these projects came from Departments of Anatomy, Biochemistry, Community Medicine, Internal Medicine, Microbiology and Physiology.

Prize awarded to:

Ismail F. Short and long-term functional outcome following unilateral or bilateral common carotid artery occlusion in rat models: behavioral and pathohistological correlates. Supervisor: Prof. Milos Ljubisavijevic, Department of Physiology.

The summer is always a busy time for student research and this year has been no exception with more than 50 students working on a wide variety of projects. In addition to research carried out in FMHS some students received funding to visit laboratories in the UK. The Research Scholarship Program is an initiative which is jointly funded by The British Council and FMHS and provides opportunities for students to participate in research activities in UK Research Laboratories.

In 2006 three students were awarded Research Scholarships to visit the UK. Khadeejah Al Murashdah visited the laboratory of Prof. Andrew Todd at the University of Glasgow, Iman Al-Shamsi visited the laboratory of Dr. Juan Martin-Serrano at Guy's Hospital and Mohammed Adi visited the laboratory of Prof. Jai Singh at the University of Central Lancashire. Mohammed also found time to attend the Young European Scientist Meeting at the Universidade Do Porto in Portugal. He received a prize in the subject of oncology for his presentation entitled: "Is smoking harmful to health". Supervisor: Prof. Sherif Karam, Department of Anatomy.



Khadeejah Al Murashdah, University of Glasgow, Summer 2006



Iman Al-Shamsi, Guy's Hospital, Summer 2006



Mohammed Adi, University of Central Lancashire, Summer 2006

Scientific Conferences

Academic Year 2006-2007



The International Conference on Advances in Diabetes Mellitus & its Complications

March 6-9, 2006

The International Conference on Advances in Diabetes Mellitus & its Complications was held under the patronage of His Excellency Sheikh Nahayan Mubarak Al Nahayan, Minister of Education and Chancellor, United Arab Emirates University on March 6 - 9, 2006 at the Hilton Hotel in Al Ain. This International Conference was organized by the Diabetes and Cardiovascular Research Group, Faculty of Medicine & Health Sciences, UAE University.

The conference attracted more than 650 delegates, including distinguished diabetes experts from several countries including Algeria, Australia, Bahrain, Belgium, Canada, Cameroon, China, Czech Republic, Egypt, Finland, Gambia, Ghana, Germany, Greece, Hungary, India, Iran, Iraq, Japan, Jordan, Kuwait, Morocco, Oman, Pakistan, Palestine, Qatar, Russia, Saudi Arabia, Spain, Sudan, Sweden, Tunisia, Ukraine, United Arab Emirates, United Kingdom and the United States of America.

This international conference was opened by His Excellency Sheikh Nahayan Mubarak Al Nahayan. Distinguished invited speakers gave keynote presentations on all areas of diabetes including but not limited to the epidemiology of diabetes, metabolic syndrome, nutrition and diabetes, immunology of diabetes and pancreas transplantation, diabetic retinopathy, nephropathy, and neuropathy. In addition to keynote presentations, workshops on current management issues were also organized.

The abstracts of the presentations were published in the International Journal of Diabetes and Metabolism while full length articles of the papers presented were published in the Annals of New York Academy of Sciences (Volume 1084, November 2006).

The conference had a rich social program which includes a tour of the garden city of Al Ain and its museums, a gala dinner at the Mercure Hotel in Jebel Hafeet and a cultural night at the Hilton Hotel.

There were also trips to Abu Dhabi and Dubai. The last day of the conference was capped by a dinner cruise in Dubai Creek prior to the departure of delegates.

The organization of the conference was able to succeed because of the relentless effort and support of the all members of the Organizing Committee, faculty, staff and the administration of the Faculty of Medicine & Health Sciences and the University. The support of all of our sponsors is much appreciated.

Prof Ernest Adeghate

on behalf of the committees

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Professor Yousef Abdulrazzaq – Vice Chair

Organizing Committee

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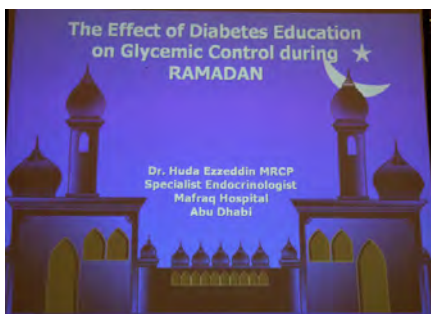
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Mr. Kunji Mohammed
Mr. Adnan Tahir
Mr. Usman

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Sarah Al Dalal
Mona Al Hamadi
Ruwaya Al Humodi
Amal Bastaki
Mawaheb Al Wedami

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Dr. Ali Bakir
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Dr. Bachar Afandi
Dr. Ali Khalil
Mr. Khalid Fadli



Impact Factor 2006



Impact Factor

Journal	Impact Factor		Journal	Impact Factor
Acta Cytol.	1.022		Clin Dermatol	1.106
Acta Microbiol Immunol Hung	-		Clin Exp Allergy	3.553
Acta Obs Gyn Scandinavica	1.549		Clin Exp Pharmacol & Physiol	1.437
Acta Orthopaedica	1.157		Clinical Immunol	3.217
Afri Health Sci	-		Clin Microbiol Infect	2.679
Age Ageing	2.196		Clin Physiol Funct Imaging	0.973
Allergy & Asthma	0.733		Clin Radiology	1.799
Allerg Immunol	-		Comparative Biochem & Physiol C	1.456
Am J Epidemiol	5.068		Congenital Anomalies (Kyoto)	-
Am J Hum Genet	12.649		Developmental & Comparative Immunology	3.261
Am J Med	4.388		Diabetic Medicine	2.725
Am J Perinatol	0.685		Emerging Infectious Diseases	5.308
Am J Roentgenology	2.209		Emirates Med J	-
Anal Bioanal Chem	2.695		Environmental Toxicology & Pharmacology	0.905
Annals of Clinical Microbiology and Antimicrobials	-		Epidemiol Infect	1.674
Annals New York Academy of Sci	1.971		Eur J Cancer	3.706
Ann Otol Rhinol Laryngol	0.970		Eur J Echocardiogr	-
Annals Saudi Arabia Medicine	0.176		Eur J Epidemiol	1.361
APMIS.	2.127		Eur J Heart Fail	3.546
APLAR Journal of Rheumatology	-		Eur J Immunol	4.876
Appl. Environ. Microb	3.818		Eur J Nutri	2.257
Arab J Psychiatry	-		Eur J Obs Gyn Reprod Biol	1.141
Archives of Gynecology and Obstetrics	-		Eur J Pain	2.460
Archives Pharmacol	1.129		Eur J Trauma	-
Arch Toxicol	1.663		Eur Neurology	1.056
Basic Clin Pharmacol Toxicol	1.489		Exp Brain Research	2.118
Behav Brain Res	2.865		Exp Neurol	3.767
Biochem & Biophys Res Comm	3.000		Eye	1.867
Biochem Journal	4.224		FASEB Journal	7.064
BMC Fam Pract	-		Forensic Sci Intl	1.577
BMC Cardiovascular Disorders	-		Free Radical Research	2.323
BMC Genet	1.769		General & Comparative Endocrinology	2.290
BMC Infect Dis	1.956		Gynecol Endocrinol	0.852
BMC Neurosci	2.733		Health Soc Care Community	-
BMC Public Health	1.658		Human Biology	0.960
Br Med J	9.052		Infectieziektenbulletin	-
Bone	3.939		Infect Control Hosp. Epidemiol	2.413
Cancer Epidemiol Biomarkers Prev	4.460		Infect Immun	3.933
Cancer Research	7.616		Int J Antimicrobial Agents	2.428
Cesko-Slovenska Pediatric	-			
Clin Chem Acta	2.149			

Int J Dev Neurosci	2.089	Nature Genetics	25.797
Int J Diabetes and Metabolism	-	NDT Nephrol Dial Transplant	1.094
Int J Environ Health Res	0.442	Nephrology	1.023
Int J Impot Res	2.186	Neurobiol Dis	4.048
Int J Inj Contr Saf Promot	-	Neurogastroenterology & Motility	2.566
Int J Palliat Nurs	-	Neurology	5.065
Int J Qual Health Care	1.138	Neurosignals	2.293
Int J Sci Res	-	Nutrition	2.064
Interventional Neuro Radiology	0.124	Oncogene	6.872
J Anat	2.010	Pancreas	2.337
J Andro	2.035	Pediatric Pulmonology	1.589
J Appl Toxicol	1.850	Peptides	2.231
J Biological Chemistry	5.854	Pharmazie	0.677
J Chromatogr A	3.096	Prakt Lek	-
J Chromatogr Sci	0.930	Protein & Peptide Letters	0.840
J. Clin Microbiol	3.537	Radiat Res	3.099
J Experimental Zoology (B	2.382	Regul Peptides	2.272
J Forensic Sci	1.026	Reprod Toxicol	1.636
J Hosp Infect	2.215	Saudi Med J	0.272
J Immigr Minor Health	-	Science	30.927
J Immunol	6.387	Sex Transm Dis	2.738
J Interprof Care	-	Singapore Med J	-
J Low Genit Tract Dis.	-	Skinmed	-
J Med Microbiol	2.318	Soc Sci Med	-
J Neural Transm	2.544	S Afri J Cont Med Edu	-
J Neurology	2.844	Stroke	5.855
J Neuroscience Methods	1.784	Tijdschrift voor Jeugdgezondheidszorg	-
J Obstetrics & Gynaecology Res	0.689	Toxicology & Applied Pharmacol	3.148
J Pain Symptom Manag	2.309	Trop Med Int Health	2.021
JPEN J Parenter Enteral Nutr	-	Tuberculosis	3.899
J Psychosomatic Research	2.052	Ultrasound Obstet Gynecol	2.430
J Trauma	1.722	Urology	2.139
J. Vet. Med (A)	0.756	Vaccine	2.822
J. Vet. Med (B)	1.505	Vet Microbiol	2.175
Kidney Int	4.927	Virchows Arch	2.224
Lancet	23.878	Vox Sanguinis	1.888
Leuk Lymphoma	1.295	World J Gastroenterol	-
Med Biol Eng & Comp	1.028		
Medical Hypotheses	0.920		
Med Sci Law	0.357		
Microbes Infection	3.154		
Microsc Res Tech	2.323		
Mol. Cancer	5.417		
Mol. Cancer. Ther	5.171		
Mol Cell Biochem	1.681		
Mol Immunol	4.307		
Monaldi Archive for Chest Disease	-		
Movement Disorders	2.830		
Nature	29.273		

الأستاذ الدكتور/ صموئيل جورج كرنس
عميد كلية الطب والعلوم الصحية

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يسرنا أن نضع بين أيديكم التقرير السنوي السادس عشر حول المنشورات العلمية لعام 2006 والاهتمامات البحثية بكلية 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 تطوير وتحسين مستوى هذا الدليل ليشمل كالمعتاد لمحات عامة عن مختلف الأقسام العلمية بالكلية بالإضافة إلى التقارير الصادرة عن فرق أولويات البحوث العلمية. كما أدرجنا كذلك ضمن هذا الإصدار تقارير موجزة حول اثنين من أبرز المؤتمرات العلمية لهذا العام وهي المؤتمر العالمي حول التطورات الحديثة في مرض السكري ومضاعفاته الذي تم تنظيمه من قبل فريق البحوث الخاصة بالسكري ويوم بحوث السرطان الذي تم تنظيمه من قبل فريق البحوث الخاصة بالأورام. وقد تم كذلك إدراج تقرير خاص حول البحوث الطبية للطلبة.

وكعادتنا دائما يسرنا أن نتوجه بالشكر إلى كل من السيدة شيخة البطي والسيدة إيفانا ليزاريتوري لما بذلنه من جهود في إعداد هذا التقرير وصياغة كافة أقسامه ضمن مجلد واحد. وقد تولى السيد راجاغبالان كعادته مراجعة محتوى مساهمات الأقسام العلمية والتنسيق بين جميع الأطراف. وتولى التقاط الصور المدرجة السيد أشوك وقام بالترجمة إلى العربية السيد محمد زقر.

أ.د. ويم لامرز
رئيس التحرير

أ.د. ميودراج لوكيتج
العميد المشارك لشؤون البحث العلمي

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منشورات مكتب العميد المشارك للبحث العلمي

- رئيس التحرير : أ.د. ويم لامرز
- الإدارة السكرتارية : السيد بي. راجاقوبالان
- الفنون التخطيطية : السيدة إيفانا ليزاريتوري
- تصميم و تنسيق : الأنسة شيخة المزروعي
- التصوير : السيد أشوك براساد
- الترجمة للغة العربية : السيد محمد زافر



جامعة الإمارات العربية المتحدة
كلية الطب والعلوم الصحية

المنشورات العلمية لعام 2006 والاهتمامات البحثية

مكتب العميد المشارك للبحث العلمي



A

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

B

C

SW1 SW2

ent

abnt

1 second

D

SW1 SW2

ent

abnt

12.1 cm/sec 11.9 cm/sec

a b