

In the presence of His Excellency
**Lieutenant General Dr Shaikh
Mohammed bin Abdulla Al Khalifa**
Chairman of the Supreme Council of Health

RCSI Medical University of Bahrain
Annual Research Conference 2024



RCSI
MEDICAL
UNIVERSITY
OF BAHRAIN





Welcome Note

I am delighted to welcome you all to the 2024 research conference at RCSI Medical University of Bahrain.

I would like to extend my sincere appreciation and gratitude to His Excellency Lieutenant General Dr Shaikh Mohammed bin Abdulla Al Khalifa, Chairman of the Supreme Council of Health, for his presence at this event.

We are very grateful for Her Excellency Dr Diana Abdulkarim Al Jahrami and the HEC's support for the research programme that we have here at RCSI Bahrain, which has helped make it the success that it is and that has led to international recognition of the work that we do. We are very grateful for your continued support through the expansion of the research expertise with the application for the MD doctorate programme to train academic clinicians so they can contribute to first class healthcare to Bahrain.

Reflecting on the time since our last conference, the research office now employs 18 personnel working on research in metabolic diseases, cancers, stem cells, tissue regeneration and polymer encapsulation. In addition, we have an established clinical trials unit at the Bahrain Oncology Centre, which was opened in 2022, under the patronage of his Excellency Lieutenant General Dr Shaikh Mohammed bin Abdulla Al Khalifa, Chairman of the Supreme Council of Health that has undertaken the National clinical trials, supervises clinical research and is now undertaking international pharmaceutical clinical trials to the highest international regulatory standards.

RCSI Bahrain invests more than the mandatory 3% spend into research that, in real terms, is more than \$1.5M per year.

The research output for the last year was in excess of 77 international, peer reviewed publications, the majority of which were in Quartile 1 journals, with a mean impact factor of 7.1.

Student research opportunities are central to the ethos of the University and are led by the director of undergraduate research, with opportunities to participate in research throughout the school year in addition to the successful Research Summer School programme.

I am grateful to our eminent speakers and the researchers who have submitted over 120 abstracts, which will enrich our learning experience today. I hope that this conference will provide a forum for new ideas and new collaborations, and act as inspiration for future projects.

Thank you to ExpressMed Laboratories and Alfaihi Scientific Equipment for their kind sponsorship of the conference posters.

Ms May Maher, Head of Student Services and Events, and her team, have my sincere thanks for their outstanding organisation of the conference, which we are sure will be a great success.

I am confident that this event will facilitate and encourage greater collaboration between us, and in turn, will foster greater science and learning in Bahrain.

Best wishes,



Professor Stephen Atkin
Head of School of Postgraduate Studies & Research



Tuesday, 5th March 2024 at 8.45am (Bahrain time) – **The Hub, RCSI Bahrain**

08:45-09:00	Introduction to the Day and Opening Address	Professor Stephen Atkin, Head of School of Postgraduate Studies and Research, RCSI Bahrain
09:00-09:10	Patron's Address	His Excellency Lieutenant General Dr Shaikh Mohammed Bin Abdulla Al Khalifa, Chairman of the Supreme Council of Health
09:10-09:25	Break	
09:25-09:45	'Assessing glycaemic control in diabetes: more than just glucose'	Keynote Speaker: Prof Eric Kilpatrick Division Chief in Clinical Biochemistry, Sidra Medicine Professor of Pathology and Laboratory Medicine, Weill Cornell Medicine Honorary Professor in Clinical Biochemistry, Hull York Medical School
09:45-10:00	'Relationship between endocrine disrupting chemicals (EDCs) and vitamin D in female subjects'	Dr Edwina Brennan, Senior Lecturer and Director of Medical Commencement Program RCSI Bahrain
10:00-10:15	'The initiation, promotion and progress to VIN and beyond'	Prof Uwe Torsten, Professor and Head of Department Obstetrics and Gynaecology RCSI Bahrain
10.15-10.30	Induced Pluripotent Stem Cell-Based Technology in Diabetes Therapy and disease modelling.	Dr Manjula Nandakumar, Postdoctoral Research Supervisor RCSI Bahrain
10.30-10.45	“Enablers and barriers for a successful transition to Higher Education as perceived by First-year Undergraduate nursing students”	Ms. Maryam Yaqoob, Lecturer in Nursing RCSI Bahrain
10.45-11.00	Question and Answer Session	

Programme

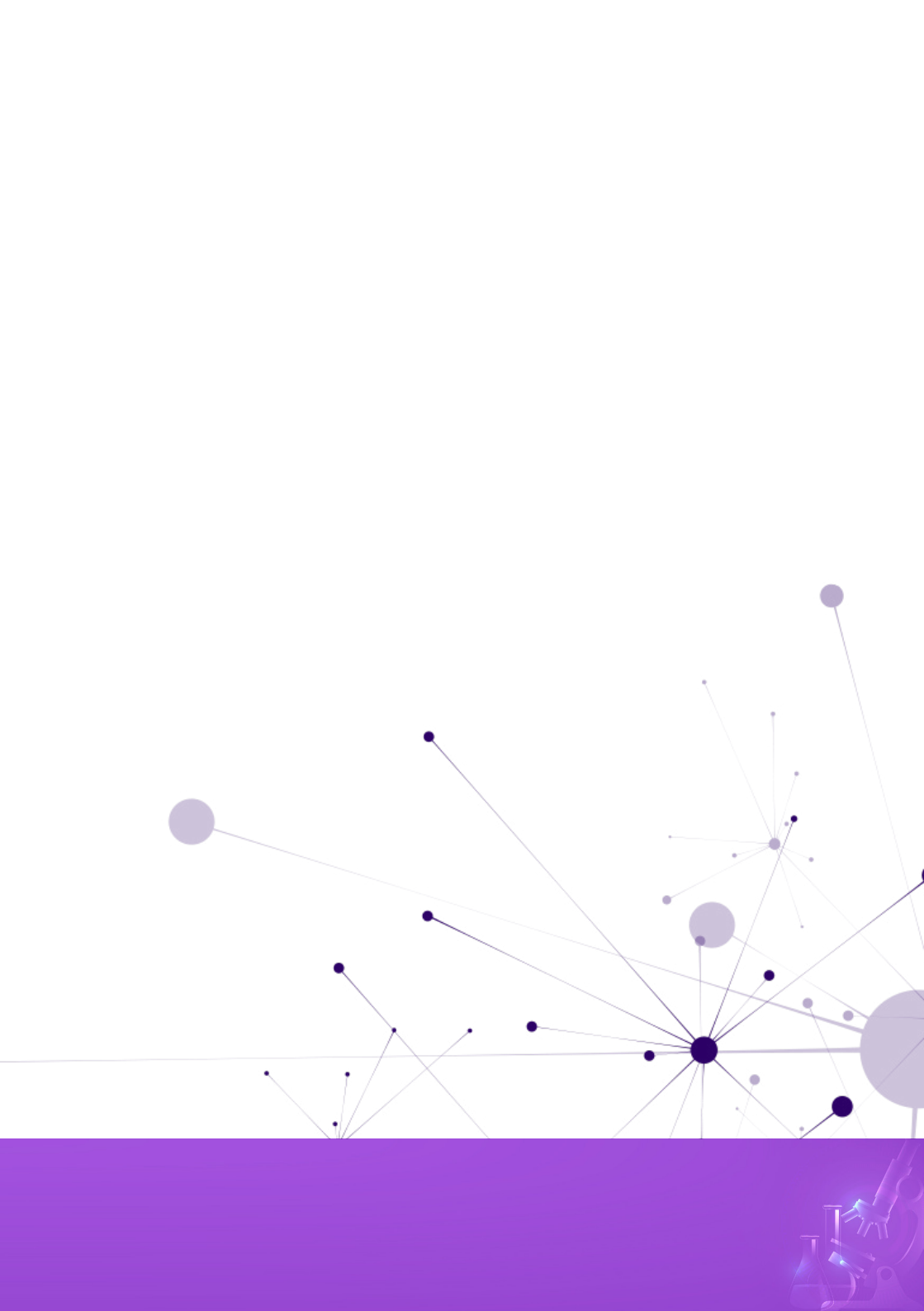


11.00-11.15	Break	
11:15-12:15	Oral Presentations	
11:15-11:25	In vivo investigation of the wound healing ability of a novel bilayered antimicrobial collagen chitosan-based scaffold	Dr Priya Das, Post Doctoral Researcher, RCSI Bahrain
11.25-11.35	Humoral and innate immunological profile of paediatric recipients of Pfizer-BioNTech BNT162b2 mRNA vaccine	Dr Sundararaj Stanleyraj Jeremiah, Post Doctoral Researcher, RCSI Bahrain
11:35-11:45	Chinese herb (Ginseng)-derived compound (Ginsenoside Rg5) protects pancreatic β -cells from macrophage-mediated inflammation	Dr Abu Saleh Md Moin, Research Fellow, RCSI Bahrain
11:45-11:55	Cardiac Manifestations in Post COVID-19 Pediatric Patients with MIS-C in Salmaniya Medical Complex, Governmental Hospitals, Bahrain	Dr Salsabeel Abdulkarim Ebrahim, Salmaniya Medical Complex, RCSI Alumni
11:55-12:05	Verification of 2021 IDF-DAR risk assessment tool for fasting Ramadan in patients with diabetes attending primary health care in the Kingdom of Bahrain: The DAR-BAH study	Dr Najla Mahmood Shamsi, Clinical Educator, RCSI Bahrain
12:05-12:15	The Imprint of Shift Work on Nurses	Ms Jumana Tawash, Government Hospitals, RCSI Alumni
12:15-12:30	Prayer	
12:30-13:00	Soapbox Presentations	
12:30-12:35	Alteration of BNIP3 expression in humans with Type 2 Diabetes	Sara Anjum Niinuma Med Yr 3 Student RCSI Bahrain



12:35-12:40	Spinach-Mediated Synthesis of Silver Nanoparticles/Nanoclusters and Fabrication of Reuseable Polymer Beads and Membranes for Antimicrobial and Photocatalytic Applications	Al Khulood Al Zakwani Med Yr 3 Student, RCSI Bahrain
12:40-12:45	Self-management interventions for common long-term conditions in Low- and Middle-Income Countries: A Synthesis of Current Evidence.	Margherita Gabra Med Yr 2 Student, RCSI Bahrain
12:45-12:50	The Effect of Intra-operative Ciprofloxacin vs. Ciprofloxacin-Hydrocortisone Otic Drops on Tympanoplasty Healing and Hearing Outcomes.	Taim Akhal Med Yr 3 Student, RCSI Bahrain
12:50-12:55	An Exploration of the Perceived Needs of Nurses When in a Preceptor Role for Newly Graduated Nurses, in a Specialist Center in Bahrain. A Qualitative Descriptive Study.	Malak Dinar, MSc Nursing Student, RCSI Bahrain
12:55-13:00	Closing Remarks	Professor Stephen Atkin, Head of School of Postgraduate Studies and Research, RCSI Bahrain
13:00-14:00	Lunch and open poster session	Poster Session sponsored by ExpressMed Laboratories and Al-Faiha Scientific Equipment





Main Speakers

Professor Eric Kilpatrick,

Division Chief in Clinical Biochemistry, Sidra Medicine

Professor Eric Kilpatrick is the Division Chief in Clinical Biochemistry at Sidra Medicine, Qatar and is clinically responsible for delivering a quality Clinical Biochemistry and Point of Care testing service at Sidra Medicine. He is a Professor of Pathology and Laboratory Medicine with Weill Cornell Medicine and an Honorary Professor in Clinical Biochemistry with Hull York Medical School, UK.

Professor Kilpatrick is also the former President of the UK's main professional body in his specialty, the Association for Clinical Biochemistry and Laboratory Medicine, and previous Chair of the Science Committee of the European Federation of Clinical Chemistry and Laboratory Medicine.

He graduated in Medicine from Glasgow, trained there and in Manchester and then led the laboratory service in Hull, UK, before joining Sidra Medicine in 2015. He spent 2020-23 working in Manchester before returning to Sidra Medicine. Professor Kilpatrick has published over 180 papers and has taken on numerous national and international roles.

Dr Edwina Brennan,

Senior Lecturer and Director of the Medical Commencement Programme (MCP)

Dr Edwina Brennan is a Senior Lecturer and Director of the Medical Commencement Programme (MCP) in the School of Medicine at RCSI Medical University of Bahrain. Dr Brennan holds a PhD in Biotechnology, Molecular and Environmental Science and a PGDip in Health Professions Education. She maintains an active research agenda in the field of environmental pollutants. Dr Brennan has published in high impact peer reviewed journals, is editorial board member of local journals and reviewer for esteemed international journals. She

previously held the role of Research Summer School (RSS) lead in RCSI Bahrain coordinating local and international research opportunities for undergraduate students.

Professor Uwe Torsten,

Professor and Head of Department of Obstetrics & Gynaecology

Professor Uwe Torsten is the Professor and Head of the Department of Obstetrics and Gynaecology at RCSI Medical University of Bahrain and an Associate Clinical Professor at the University Hospital Charité in Berlin.

Prior to joining RCSI Bahrain, Professor Torsten held numerous senior positions in hospitals, universities and quality assurance committees, including Consultant in Obstetrics and Gynaecology, University Hospital Benjamin Franklin, University of Berlin as well as being appointed to the University of Berlin Board of Obstetrics and Gynaecology. With his vast clinical experience and research interests in different types of gynaecological cancer, Professor Torsten is involved with treating oncology patients at the Bahrain Oncology Centre at King Hamad University Hospital (KHUH). His contributions also include clinical trials and follow-up studies in patients with gynaecological cancer with the European Society of Gynecological Oncology (ESGO), as well as the Pan-Arabian Society of Gynecological Oncology (PARSGO), where he is Board Member of the Steering Committee and Head of the Bahrain Office. In December 2023, Professor Torsten joined as a member of the NHRA Clinical Trials Committee in Bahrain and obtained the Fellowship from Advance HE, Learning & Teaching support in Higher Education, UK.



Professor Eric Kilpatrick



Dr Edwina Brennan



Professor Uwe
Torsten



Dr Manjula
Nandakumar



Ms Maryam Yaqoob

Dr Manjula Nandakumar,
Postdoctoral Research Supervisor

Dr Manjula Nandakumar, joined as Postdoctoral Research Supervisor at the School of Postgraduate Studies and Research, RCSI Medical University of Bahrain last year. Dr Nandakumar obtained her PhD from National Taiwan University, Taiwan and later pursued her postdoctoral research at Weill Cornell Medicine, Qatar and Qatar Biomedical Research Institute, Qatar before joining RCSI Bahrain. Her research interest focuses on application of induced pluripotent stem cells (iPSC) in diabetic research and therapy.

Currently Dr Nandakumar is working on projects involving generation of iPSC derived beta cells to study the mechanistic link between diabetes and its co-morbidities and beta cell encapsulation.

Ms Maryam Yaqoob,
Lecturer in Nursing

Ms Maryam Yaqoob, is a Nursing Lecturer at RCSI Medical University of Bahrain and joined the University in 2011 as a lecturer for Health Care Assistance. In 2012, she became a Lecturer in Nursing after obtaining her MSc in Nursing from RCSI Bahrain and held the position of Nursing Year One Level Director from 2013 -2022. During her academic career, Ms Yaqoob published two articles and had the opportunity to attend conferences and present papers and posters nationally and internationally.

She is currently pursuing her doctoral studies at Glasgow Caledonian University. Before joining RCSI Bahrain, Ms Yaqoob worked as an Intensive Care Unit (ICU) senior staff nurse at Bahrain Defence Force Hospital (BDF).

Research Committee

We are grateful to the following colleagues for scoring the abstracts for Oral and Soapbox Presentations selection.

Professor Stephen Atkin
Head of School of Postgraduate Studies & Research

Professor Stephen Safrany
Associate Professor of Pharmacology

Professor Michael Keogh
Associate Professor in Human Biology & Director of Research Laboratories

Professor Uwe Torsten
Head of Department of Obstetrics & Gynaecology

Dr Maryam Alaradi
Senior Lecturer in Nursing

Dr Edwina Brennan
Senior Lecturer & Director of MCP

Dr Maikki Cullen
Lecturer in Science - MCP & Academic Director of Undergraduate Research



In vivo investigation of the wound healing ability of a novel bilayered antimicrobial collagen chitosan-based scaffold

Dr Priya Das

Post Doctoral Researcher, RCSI Medical University of Bahrain

Title: In vivo investigation of the wound healing ability of a novel bilayered antimicrobial collagen chitosan-based scaffold

Authors: Priya Das 1, Noof Sulaiman 1, Matthew McGrath 2, Hansel Geo Thomas 3, Melvin Varghese Jacob 3, Martin Maresch 4, Fergal O' Brien 2, Michael Keogh 1

1 RCSI Medical University of Bahrain
2 RCSI in Dublin
3 Charis Vets, Budiaya, Kingdom of Bahrain
4 RMS-BDF Bahrain

Introduction: RCSI TERG research group has recently developed a bilayered collagen chitosan scaffold which may be beneficial to prevent post debridement infections of non-union ulcers. This scaffold was first characterised in vitro and showed anti-microbial activity in the upper chitosan layer while retaining the biocompatibility for soft tissue wound healing. To test this novel material these scaffolds were assessed under in vivo settings using a split skin dorsal rat model.

Methods: Four 8-mm full thickness biopsies were created on the dorsal surface of seven Sprague Dawley male rats aged 12 weeks old, (Fig. 1a) in the following quadrants: upper left empty defect control upper right collagen-glycosaminoglycan scaffold; lower left bilayered scaffold and lower right gene activated bilayered scaffold containing pro-angiogenic and rejuvenating plasmids SDF and Klotho respectively (Fig. 1 a). The skin grafts surrounding the wound areas were sampled on day 14 for H&E, van-gieson and immunofluorescence (VEGF, CD31, collagen III, fibronectin and CD163). Wound closure was evaluated based on angiogenesis, ECM accumulation, contraction reepithelization.

Results: After 14 days of healing, the wounds of empty and collagen scaffold were fully healed, while those of chitosan scaffold were still apparent (Fig. 1 a). The H&E staining of the healed wounds on day 14 are shown in Fig. 1 b. Further analysis is ongoing.

Conclusion: We show a variation in wound healing response with greater healing in gene activated scaffolds. Chitosan scaffolds do not integrate with the wound but become fluid filled and may be useful to as a physical antimicrobial barrier.

References:

- 1) McGrath M, Zimkowska K, Genoud KJ, Maughan J, Gutierrez Gonzalez J, Browne S, O'Brien FJ. A Biomimetic, Bilayered Antimicrobial Collagen-Based Scaffold for Enhanced Healing of Complex Wound Conditions. *ACS Applied Materials & Interfaces*. 2023 Mar 31;15(14):17444-58.
- 2) Laiva AL, Raftery RM, Keogh MB, O'Brien FJ. Pro-angiogenic impact of SDF-1 α gene-activated collagen-based scaffolds in stem cell driven angiogenesis. *International journal of pharmaceutics*. 2018 Jun 15;544(2):372-9.
- 3) Suku, M.; Laiva, A. L.; O'Brien, F. J.; Keogh, M. B. Anti-Ageing Protein β -Klotho Rejuvenates Diabetic Stem Cells for Improved Gene-Activated Scaffold Based Wound Healing. *J Pers Med* 2020 Dec 22,11(1),4. doi: 10.3390/jpm11010004.
- 4) Laiva, A. L.; O'Brien, F. J.; Keogh, M. B. SDF-1 α gene-activated collagen scaffold restores pro-angiogenic wound healing features in human diabetic adipose-derived stem cells. *Biomedicines* 2021, 9(2), 160.

Abstract

Humoral and innate immunological profile of paediatric recipients of Pfizer- BioNTech BNT162b2 mRNA vaccine

Dr Sundararaj Stanleyraj Jeremiah

Post Doctoral Researcher, RCSI Medical University of Bahrain

Introduction: The Pfizer-BioNTech vaccine was one of the essential tools in curtailing the COVID-19 pandemic. Unlike conventional vaccines, this newly approved mRNA vaccine acts by causing the host cells to take up the mRNA payload and synthesize the specific viral antigen, mimicking the process of viral replication.

The vaccine was introduced for adults initially and the immunological profile of adult recipients is well characterized. The vaccine was approved for paediatric use much later, after its efficacy and safety had been well characterized in children. However, the complete picture of how the immune system of children reacts to the vaccine is not well documented, especially with regard to the innate immunity.

Methods: Blood and serum samples were collected after obtaining informed consent at Day 0, 21 and 90 of vaccine administration in paediatric recipients ranging between 5 to 17 years of age. We analysed the humoral response, immune cell counts, and

interferon signalling using chemiluminescence assay, flow cytometry and quantitative real time polymerase chain reaction respectively.

Results: Our findings suggest that the paediatric recipients elicit a robust humoral response that sustains for over three months. We also find that the vaccine triggers a transient lymphocytopenia similar to that observed during viral infection. More interestingly, we have disproven other claims of the vaccine dampening the interferon signalling pathway and have revealed that the vaccine may sensitize the interferon signalling pathway, priming the cells to mount a potent response when exposed to interferons during a subsequent infection.

Conclusions: The study offers new insights into the working of the paediatric immune system and innate immunity thereby opening the doors for further research in this field.



Abstract

Chinese herb (Ginseng)-derived compound (Ginsenoside Rg5) protects pancreatic β -cells from macrophage-mediated inflammation

Dr Abu Saleh Md Moin

Research Fellow, RCSI Medical University of Bahrain

Abu Saleh Md Moin¹, Ammar Hasan¹, Hamna Hameetha Begam¹, Sana Waris¹, Juberiya Muhammed Azeez¹, Alexandra Butler¹
Background and context:

Chronic low-grade inflammation in adipose tissues is widely recognized in obesity-induced insulin resistance and its associated metabolic syndromes. The inflammation involves macrophages, which infiltrate the pancreatic islets and produce cytokines and chemokines causing damages to pancreatic β -cells in type 2 diabetes. Ginseng is a traditional Chinese medicine that has many beneficial compounds, including ginsenoside Rg5, which can reduce inflammation. However, it is unknown if ginsenoside Rg5 can stop macrophages from entering the pancreatic islets in obese animals with type 2 diabetes.

Objective: To determine whether Ginsenoside Rg5 treatment prevents the pro-inflammatory macrophage infiltration in pancreatic islets in high fat fed diet-induced obese (DIO) mice.

Study Design: We generated DIO mice using our in-house formulated of high fat diet (HFD) (29% of fat). Ginsenoside Rg5 was injected orally in control and HFD mice. The frequency and distribution

of CD68 positive macrophages was investigated in the pancreas sections of DIO mice orally treated (for 1 week) with Ginsenoside Rg5.

Results: One-week oral administration of Ginsenoside Rg5 did not affect the glucose clearance in HFD mice (determined by oral glucose tolerance test, OGTT). Pancreatic islets were adaptively expanded in response to 1-week HFD. The number of CD68 positive cells (~10 cells / islet) were increased in HFD islets, however, a marked reduction (~50%) of CD68 positive cells (~5 cells / islet) was observed in Ginsenoside Rg5 treated HFD islets, suggesting a potential role of Ginsenoside Rg5 in protecting islet macrophage migration and activation in HFD induced obesity.

Conclusion: Ginsenoside Rg5 treatment may improve obesity-induced alteration of pancreatic β -cell function by limiting macrophage infiltration in pancreatic islets.



Abstract

Cardiac Manifestations in Post COVID-19 Pediatric Patients with MIS-C in Salmaniya Medical Complex, Governmental Hospitals, Bahrain

Dr Salsabeel Abdulkarim Ebrahim
Salmaniya Medical Complex, RCSI Alumni

Background: Children were thought to be immune to the COVID-19 pandemic. However, reports across Europe showed multiple cases of inflammatory shock syndrome. Although rare, this syndrome remains an important source of morbidity and mortality of pediatric COVID-19 patients.

Objective: to identify the percentage of the cardiac manifestations of post COVID-19 multisystem inflammatory syndrome in children (MIS-C) and the characteristic of the patients, specifically in patients presenting to the main governmental hospital in Bahrain.

Methods: A retrospective study design was conducted at Salmaniya Medical Complex (SMC). All children patients who were admitted to the pediatric department at SMC, during the period from April 2020 to September 2021, and were diagnosed with post COVID MIS-C. The data was retrieved by a comprehensive review of the electronic filing system of the hospital (i-Seha) to extract relevant information, including demographic data, clinical presentations, laboratory results and cardiac imaging findings. The data was divided to subgroups, and the analysis was performed using chi square, Fisher exact, and Mann-Whitney U tests as appropriate.

Results: The study analyzed data from 38 children who had been diagnosed with post COVID-19 MIS-C. Among these cases, cardiac manifestations were found to be prevalent, specifically relating to valvulopathies. About 26.3% of the children required intensive care unit (ICU) admission, and it was particularly significant among patients older than 6 years (40%). These older children had also a higher prevalence of cardiomegaly, abnormal q wave, and elevated levels of ferritin and troponin. Among females, mitral valve insufficiency and cardiomegaly were observed. In male cases, pericardial effusion, tricuspid valve insufficiency, and abnormal Q wave were more prevalent.

Conclusion: The study emphasizes the frequent occurrence of cardiac manifestations in MIS-C and underscores the importance of assessing and monitoring them during both the initial presentation, throughout the clinical course, and during the following up post recovery.

Abstract



Verification of 2021 IDF-DAR risk assessment tool for fasting Ramadan in patients with diabetes attending primary health care in the Kingdom of Bahrain: The DAR-BAH study

Dr Najla Mahmood Shamsi

Clinical Educator, RCSI Medical University of Bahrain

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Co-Authors:

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2. Dr. Hanan Humaidan.
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5. Dr. Fadheela Abbas.
6. Dr. Sumaya Al-Doseri.
7. Dr. Najat Shabeeb.
8. Dr. Ebtihaj Al-Shaikh.
9. Dr. AbdulRasool Al-Dairi.
10. Dr. Khawla Al-Saad.

Background: There is a high prevalence of diabetes mellitus among Muslim adult patients. Those Muslims are required to fast the holy month of Ramadan. However, the Islam religion exempted some people with medical issues. It was not clear if all the patients with diabetes were considered medically unfit to fast Ramadan. Therefore, IDF-DAR group created a new risk calculator to categorize the patients with diabetes to advise with or against fasting accordingly.

Objective: This study is validating the IDF-DAR tool in assessing the accuracy of IDF-DAR risk calculator tool on adult patients with diabetes visiting primary health care in the Kingdom of Bahrain. The study will facilitate the health care professionals' decision to exempt the patients from fasting.

Methods: It is a prospective, randomized study for Ramadan 1444/2023 to assess the new IDF-DAR risk score tool that predicts the complications and the negative outcome of fasting during Ramadan.

It included pre- and post-Ramadan questionnaires. 757 patients were selected randomly from the patients list of the central diabetes clinics in primary health care for pre-Ramadan risk assessment scoring. Post-Ramadan a phone questionnaire was done to evaluate the ability of fasting and the occurrence of adverse events.

Results: Out of the 757 participants, 611 were included in the study. The mean age of the studied population was 59.8 years and 52.8% of them were female. 630 (95.3%) had type 2 diabetes. According to the new IDF-DAR risk calculator, 184 (27.8%) were categorized as low risk (≤ 3 score), 252 (38.1%) as moderate risk (3-6 score), and 225 (34%) as high risk (> 6 score). 92.4%, 89.3%, 74.7% patients fasted the full 30 days in the low, moderate, and high risk respectively ($P < 0.001$). Therefore, the study showed significant increase in the risk of complications during fasting Ramadan among patients in the moderate and high-risk groups when compared to those in the low-risk group. The main reason of breaking the fast was hypoglycemic attacks. The leading factors that play a significant role in increasing the risk of adverse events during fasting Ramadan were type 1 diabetes mellitus, the presence of previous hypoglycemia attacks, the presence of renal impairment, and negative previous Ramadan experience.

Conclusion: The new IDF-DAR risk calculator is a good tool to predict both the ability to fast Ramadan and the probability of experiencing adverse events (mainly hypoglycemia) in people with diabetes mellitus in Kingdom of Bahrain.

Abstract

The Imprint of Shift Work on Nurses

Ms Jumana Tawash

Government Hospitals, RCSI Alumni

Background: Most of the healthcare sector relies on shift workers. In Nursing, shift work enables the nurses to provide services around the clock to ensure the continuous care of patients. This approach prioritizes and promotes the well-being of patients. However, working in irregular shifts that require high physical effort, intellectual functioning, and altered sleep-wake schedule, which is misaligned with natural physiology, appeared to have many negative impacts on nurses. Including a high risk of developing obesity, gastrointestinal disturbance, physical discomfort, and psychological stress. Furthermore, shift workers were found to have sleep disturbance and insomnia and reported using sleeping pills to help them fall asleep.

Objective: This review aims to highlight the negative influence of shift work on nurses' health and well-being.

Methods: The literature search included studies published within the past five years on Pubmed database. Cross-sectional articles were selected for this study.

Results: From a total of 273 potential articles, we found eight articles that met the inclusion criteria. All articles agreed that shift work results in sleep disturbance and has a potentially hazardous effect on the health status of nurses. Four studies reported nurses having higher rates of depression and stress as a result. Two of them found 'burnout' as an inevitable consequence.

Conclusion: The review concluded by acknowledging that shift work negatively impacts nurses' health and well-being. Interventions to reduce the impact of shift work should be implemented, like balancing the ratio of day-night shifts, having a two-hour nap during night shifts, and adjusting long rotational night shifts could help diminish sleep issues for nurses. Further research is required to assess whether these findings can be generalized across the globe, predominantly in understudied regions like the Arabian Gulf region. Moreover, additional qualitative research is needed to explain the impact of shift work from nurses' point of view.



Abstract

Alteration of BNIP3 expression in humans with Type 2 Diabetes

Ms Sara Anjum Niinuma

Med Yr 3 Student, RCSI Medical University of Bahrain

Context: Bcl-2 interacting protein 3 (BNIP3) is known to induce mitochondrial autophagy as an adaptive response to cellular stress. The role of BNIP3 in pancreatic β -cell apoptosis has been previously explored in human islets. However, the extent of BNIP3 expression in the pancreatic β -cells in humans with type 2 diabetes (T2D) has not been explored yet.

Objective: To compare the expression levels of BNIP3 in the pancreas tissues of non-diabetic subjects and patients with T2D to study the role of BNIP3 in the pathogenesis of T2D.

Design, setting, and participants: Using immunofluorescent (IF) staining, we investigated the frequency and intensity of BNIP3 expression in the pancreas of 5 individuals clinically diagnosed with T2D and 5 non-diabetic subjects. BNIP3 expression was observed under a fluorescence microscope, and cellular fluorescence was measured using ImageJ.

Results: BNIP3 expression was confined in pancreatic β -cells both in non-diabetic and T2D subjects. The expression of BNIP3 was significantly decreased in T2D human islets and the mean Correlated Total Cell Fluorescence (CTCF) was measured as 592105 ± 93014 for control sections compared with 82850 ± 39941 for T2D sections ($P < 0.05$).

Conclusion: The diminished levels of BNIP3 observed in patients with T2D indicate the potential scenario wherein, at the point of diagnosis, BNIP3 expressions may have already executed a substantial portion of apoptosis and autophagy within the β -cells of individuals with diabetes. Additionally, the data suggests that the diminished expression of BNIP3 contributes to impaired insulin secretion and is integral to the pathogenesis of T2D.



Abstract



Spinach-Mediated Synthesis of Silver Nanoparticles/ Nanoclusters and Fabrication of Reuseable Polymer Beads and Membranes for Antimicrobial and Photocatalytic Applications

Ms Al Khulood Al Zakwani

Med Yr 3 Student, RCSI Medical University of Bahrain

In recent years, phytosynthesis of metallic nanoparticles using extracts of plants and plant products has gained considerable importance in biomedical applications due to the environmentally friendly approach.

In this study, we have developed stable silver nanoparticles and silver nanoclusters using the extract of green spinach as chemical reducing and stabilizing agent. Upon addition of the extract to silver nitrate solution, silver nanoparticles formed immediately as evidenced by a color change of the solution. A characteristic surface plasmon resonance peak at around 400 nm confirmed the formation of silver nanoparticles.

The silver nanoparticles was encapsulated in alginate beads by a single step method by ionotropic crosslinking using calcium chloride (5 wt%). The resulting beads were compact and black in color. The beads were porous and contained plate-like silver nanoclusters as revealed by Scanning Electron Microscopy studies.

The photocatalytic characteristics of the beads were evaluated using two important organic molecules/ pollutants such as 2-nitrophenol and methyl orange.

The beads exhibited excellent photocatalytic properties by degrading the pollutants to non-toxic substances in less than 30 minutes. The enhanced degradation performance was attributed to the synergistic effects of silver nanoclusters and alginate. The nanoclusters acted as catalytic sites for the degradation process, while alginate provided a stable matrix for the immobilization of the nanoclusters and facilitated mass transfer of the pollutants to the catalytic sites.

The study highlights the effectiveness of silver nanoclusters-loaded alginate beads as a promising and eco-friendly material for the treatment of medical waste in the future.

Reuseable polymer films of alginate, and polyvinyl alcohol containing silver nanoparticles was also developed using a spray method. The films were robust and exhibited excellent antibacterial properties against various strains of bacteria. This research project paves the way for the development of sustainable and effective nanomaterial-based solutions for biomedical and environmental remediation.

Abstract



Self-management interventions for common long-term conditions in Low- and Middle-Income Countries: A Synthesis of Current Evidence.

Ms Margherita Gabra

Med Yr 2 Student, RCSI Medical University of Bahrain

Background: Resource-poor health systems in low- and middle-income countries (LMICs) are buckling under an increasing prevalence, morbidity, and mortality attributable to chronic non-communicable diseases- “NCDs crisis”. Supported self-management (SM) is a safe, affordable, and recommended approach for improving patient outcomes. There is yet no robust evidence on the effectiveness of SM interventions for long-term conditions (LTCs) in LMICs.

Methods: Underpinned by comprehensive search of seven databases (including MEDLINE, EMBASE) without date/language restrictions till June-2022 for relevant studies, a systematic review and evidence synthesis was conducted. Paired reviewers completed study selection (using predefined eligibility criteria), methodological appraisal (using Mixed Method Appraisal Tool-MMAT) and data extraction.

Data analysis was by a narrative synthesis of evidence considering disease-specific (e.g., HBA1c, pain/function), quality-of-life (QoL) and economic outcomes.

Results: Of 49222 citations, 26 studies (1 systematic review, 14 trials, 5 cross-sectional and 6 qualitative) fulfilled eligibility criteria and were included. LTCs for which SM interventions were specified included: diabetes (14 studies, N=2388), hypertension (6 studies, N=1779), and arthritis (2 studies, N=180).

Three studies (N=237) were on co-morbid diabetes and hypertension. Interventions (varying content, and mode of delivery) were broadly classified as: SM education, mHealth guided SM, and community-based support for SM. Education on SM showed the most promising improvement in clinical outcomes (e.g. pain scores [3.97 to 2.77], HBA1c [8.58 to 8.08%; 9.45 to 8.98%], mmHG [129.7/83.7 to 117.9/75.3]) and health related QoL among patients living with diabetes, hypertension and arthritis compared to usual care. Effectiveness of interventions were dependent on literacy levels, SM education delivery aids, and disease-specific care activities as patients generally expressed preference for direct in person (interactive) education sessions over virtual assistance alone.

Conclusion: There is a need for regulatory bodies to develop clinical guidelines and promote implementation of SM education as a management strategy tailored for LTCs care in LMICs, since it shows promise for improving outcomes for people with common LTCs. mHealth guided SM and community-based support are best used as complementary approach to optimising care.



Abstract

The Effect of Intra-operative Ciprofloxacin vs. Ciprofloxacin-Hydrocortisone Otic Drops on Tympanoplasty Healing and Hearing Outcomes.

Mr Taim Akhal

Med Yr 3 Student, RCSI Medical University of Bahrain

Background: Quinolones alone, dexamethasone-quinolone and neomycin-polymyxin-hydrocortisone postoperative otic drops are common preparations used in tympanoplasty practice. There is paucity in recommendations on intra-operative tympanoplasty drops. This study aimed to compare the effect of intra-operative ciprofloxacin (CF) vs. ciprofloxacin-hydrocortisone (CFH) drops on healing (residual perforation) and hearing (air-bone gap (ABG)) outcomes in tympanoplasty patients.

Methods: Tympanoplasty cases were retrospectively identified from electronic medical records. The patient characteristics and procedure details were extracted from each patient's record. Intraoperative CFH drops were administered in surgeries between May 2021 and the end of March 2022, and CF drops were used from March 2022 and onwards. Residual perforation was assessed via otoscopy by a qualified otologist. The latest available post-operative ABG was used to calculate the change in ABG ($\Delta\text{ABG} = \text{pre-operative ABG} - \text{post-operative ABG}$).

Results: A total of 127 tympanoplasty procedures were analyzed; CFH drops were used in 86 procedures and CF drops were used in 41. A residual perforation was present in 16.5% of the CFH cases

and in 10.3% of the CF cases (odds ratio=0.580 [0.178 , 1.891]) ($p=0.362$). A binary regression model that adjusted for other study variables—gender, age, perforation location and size, preoperative ABG, laterality, the presence of an assisting resident, eustachian tube dilation, other operative findings/procedures (e.g. cholesteatoma, canaloplasty), surgery duration, revision surgery, ossicular chain reconstruction, type of prosthesis, graft, cartilage use and surgical view—yielded an odds ratio of 0.926 ($p=0.926$). The mean improvement in ABG in the CF group (10.52 dB) was lower than the CFH group (11.07 dB) (mean difference=-0.557 [-5.440 , 4.325]) ($p=0.821$). An automatic linear model analysis nominated the preoperative ABG, residual perforation and graft variables as the top predictors of ABG improvement; T-tests adjusted for these variables still yielded insignificant mean differences between the two groups.

Conclusion: The use of CFH vs. CF has little effect on healing and hearing outcomes of tympanoplasty surgery.

Abstract



An Exploration of the Perceived Needs of Nurses When in a Preceptor Role for Newly Graduated Nurses, in a Specialist Center in Bahrain. A Qualitative Descriptive Study.

Ms Malak Dinar

MSc Nursing Student, RCSI Medical University of Bahrain

Background: The role of nurse preceptors is often underappreciated despite their essential role in supporting newly graduated nurses. Preceptorship is crucial for the successful transition of graduates into professional practice. It enhances patient care and safety and improves recruitment and retention rates. However, preceptors' needs are infrequently addressed; therefore, the researcher sought to ascertain their perceived needs throughout preceptorship and explore the potential facilitators and barriers encountered.

Problem Statement and Aim: Affirmed by the researchers' anecdotal evidence and supported by prior literature, nurse preceptors frequently lack recognition, training, and support, especially compared to similar roles like mentorship. This impacts patient care, job satisfaction, and retention of preceptors and preceptees. This study aimed to answer the research question, 'What do nurses perceive they need before and during their role as preceptors of newly graduated nurses?'

Methodology: A qualitative exploratory descriptive research design was adopted for this study, conducted in a specialist centre in the Kingdom of Bahrain. A purposeful sampling technique was used to recruit, via a gatekeeper n=8 participants. Participants were experienced in-patient nurses who had fulfilled the preceptor role for over two years in the study-setting. Data saturation concluded the face-to-face individual semi-structured interviews guided by a five-question framework created by the researcher's experience, addressing literature gaps and the study's objectives. Transcripts were verbatim and analysed using Braun and Clarke's thematic analysis.

Findings: Findings revealed that participants' preceptor experience ranged from 2-30 years. The thematic analysis resulted in five themes and fourteen sub-themes. Feelings of being Unprepared, Scope

of the Preceptor Role, Dual-Role Complexity, Perceived Support and Diversity, and Benefits of Taking on the Preceptor Role were the developed themes.

Implications of Findings: Increased attention to preceptorship, robust role preparation and training, clear guidelines on the roles and responsibilities, advanced notice with role selection, organisational support, dedicated time for the role, role flexibility, and recognition and rewards were among the needs identified in the context of clinical practice. While the analysis revealed preceptors faced more challenges than facilitators, all insights corresponded to identifying their needs. The findings can be used to improve the guidance, preparation, and support given to preceptors so they can, in turn, better support preceptees. This may also improve the recruitment and retention of experienced, well-skilled, and trained nurses within the workforce, contributing to safer and higher-quality patient care.

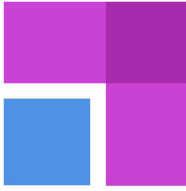
Conclusion and Recommendations: The study findings contribute to the existing literature, identifying areas for improvement in current preceptorship programmes. This informs the development of educational initiatives, such as preceptor training, and the formulation of policies and guidelines on preceptors' roles and responsibilities. These initiatives, among others, are expected to enhance the preceptorship experience, sustain preceptor commitment, and ultimately increase satisfaction among both preceptor and preceptee.

Further studies with increased participants and using focus groups are recommended to explore a range of viewpoints and identify areas of agreement and disagreement. Limitations of the study included time constraints as the researcher worked full-time while pursuing their part-time degree.

Abstract

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An Exploration of the Perceived Needs of Nurses When in a Preceptor Role for Newly Graduated Nurses, in a Specialist Center in Bahrain. A Qualitative Descriptive Study.

MALAK DINAR "Prof Rebecca Jester - RCSI MSC Supervisor , Dr Fariba Al Darazi - RCSI MSC Supervisor "

Student Choice Topic: Green Nanotechnology & Medical Applications

Sara Abdulhadi Hasan - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Maryam Alqayem - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Ali Zayer - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Awrad Alkhalidi - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Renad AlAnsari - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Lulwa Alqallaf - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Mareena Jijo - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Abeer Abdulla - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Ghadeer Almarzooq - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Zainab Ali - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Hawra Alkhadaad - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Radwan Darwish - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Awni Bata - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Ismail SakfAlHait - School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, Sami Beidas - School



of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain, G. Roshan Deen - Materials for Medicine Research Group, School of Medicine, Royal College of Surgeons in Ireland (RCSI), Medical University of Bahrain, Kingdom of Bahrain

Risk and timing of isotretinoin-related laboratory disturbances- A population-based study

Mariam Abdelghaffar "Khalaf Kridin - L_beck Institute of Experimental Dermatology, University of Lübeck, Lübeck, Germany"

Unearthing Nature's Remedy: An Exploration into Lycopodium's Medicinal and Therapeutic Potential

Aiman Khudair "Sara Anjum Niinuma - RCSI - Bahrain, Aiman D. Khudair - RCSI - Bahrain, Haniya Habib - RCSI - Bahrain, Ahmed D. Khudair - RCSI - Bahrain, Stephen L. Atkin - RCSI - Bahrain, Alexandra E. Butler - RCSI - Bahrain"

Alteration of BNIP3 expression in humans with Type 2 Diabetes

Sara Anjum Niinuma - School of Medicine, Royal College of Surgeons in Ireland Bahrain, Busaiteen 15503, Bahrain, William Junior Khalil - School of Medicine, Royal College of Surgeons in Ireland Bahrain, Busaiteen 15503, Bahrain, Alexandra E. Butler - Research Department, Royal College of Surgeons in Ireland Bahrain, Busaiteen 15503, Bahrain, Abu Saleh Md Moin - Research Department, Royal College of Surgeons in Ireland Bahrain, Busaiteen 15503, Bahrain"

The Incidence, Diagnosis, and Management of Primary Hyperaldosteronism in the Kingdom of Bahrain – a multicenter approach"

Dr. Dana Arekat - RCSI, Prof. John Flood - RCSI, KHUH, Prof. Denis Quill - RCSI, Dr. Suha Hejres - KHUH, Dr. Rehab Helmy - KHUH"

Treatment of An Unusual Case of Meckels Diverticulum with a new Robotic Platform

Abdulrahman Muwafaq Mustafa Alomar "Mouhammad Halabi - RCSI, Abdulrahman Alomar - RCSI, Muhammed Samanoglu - RCSI, Kayan Khouri - RCSI, Khadija Hayyan - RCSI, Abdulrahman Alrujaib - RCSI, Dr. Hatem Moussa - American Hospital in Dubai "

Nurses' Perceptions of their Role in Educating Caregivers of Children with Cystic Fibrosis: A Qualitative Study"

Fatema Ali Abdul Hasan Mahmood Ahmed

A Review of Robotic Assisted Surgeries in Gynaecology and its future directions

Mouhammad Halabi - RCSI Bahrain, Mohannad Ghanem - RCSI Bahrain, Mohamed Keshta - RCSI Bahrain, Muhammed Samanoglu - RCSI Bahrain, Mohammed Yaser - RCSI Bahrain, Hatem Moussa - American Hospital Dubai"

Core-Shell Nanoparticles for Biomedical and Environmental Applications

Jainisha Thadhani - Medical Student, RCSI Bahrain-School of Medicine, Kawther Ali - Medical Student, RCSI-Bahrain-School of Medicine, Fryad Henari - Emeritus Professor, RCSI-Bahrain-School of Medicine, G. Roshan Deen - Lecturer in Chemistry, RCSI-Bahrain-School of Medicine "

Synthesis of Gold Nanoparticles Using Glucose for Biomedical Applications

Moath Mahmoud Daoud - RCSI, Osama Ahmed Zeidan - RCSI, Shaheen Alainati - RCSI, Fouz Yousif Alkhan - RCSI, Dr. Roshan Deen - RCSI, Prof. Fryad Henari - RCSI"

Evaluating bike desks in a university library setting

Thurayya Hilal Said Al-Rawahi - Royal College of Surgeons in Ireland - Bahrain, Ahmed Mohsen Abbas Elhagras - Royal College of Surgeons in Ireland - Bahrain, Rachel Anna Marshall - Royal College of Surgeons in Ireland - Bahrain, Sally Doherty - Royal College of Surgeons in Ireland - Bahrain, Nitya Kumar - Royal College of Surgeons in Ireland - Bahrain, Declan Gaynor - Royal College of Surgeons in Ireland - Bahrain"

Unfolding the Empathic Insights and Tendencies Among Medical Students of Two Gulf Institutions Using Interpersonal Reactivity Index

Haniya Habib - Royal College of Surgeons in Ireland – Medical University of Bahrain, Sara Anjum Niinuma - Royal College of Surgeons in Ireland – Medical University of Bahrain, Khadeja Alrefaie - Royal College of Surgeons in Ireland – Medical University of Bahrain, Heba Awad Al Khalaf - Medical Intern, Al Qassimi Hospital, Mohammad Jasem Hani - Medical Intern, Sheikh Khalifa Medical City, Zeinab Yaareb Mosleh Al-Rawi - Medical Intern, DAHC-MBRU, Zarish Hussain - Royal College of Surgeons in Ireland – Medical University of Bahrain, Prianna Menezes - Royal College of Surgeons in Ireland – Medical University of Bahrain, Somali Rani Roy - University Hospitals of North Midlands NHS Trust, Bincy Mathew - Royal College of Surgeons in Ireland – Medical University of Bahrain, Salman Guraya - College of

Medicine University of Sharjah UAE, Alfred Nicholson - Royal College of Surgeons in Ireland – Medical University of Bahrain, Shaista Salman Guraya - Royal College of Surgeons in Ireland – Medical University of Bahrain”

Primary Healthcare Physicians’ Knowledge, Practice and Attitude Towards Influenza Vaccination of Pregnant Women in Bahrain”

Noora Khalifa bindayna

Clinical Audit of Episiotomy Use and Standard of Care in Bahrain

Jules Coles “jcoles@rcsi.com - jcoles@rcsi.com, hauwaisadutse@gmail.com - hauwaisadutse@gmail.com, Asmahan Mohamed - 20202107@rcsi-Bahrain.com, Ebrahim Luthfi Abousher - 18218288@rcsi-Bahrain.com”

Mechanistic Association of Hepatoblastoma with Cerebral Palsy

Noor Saeed Shaikh Isa Ali Hasan - RCSI, Prof. Warren Thomas - RCSI”

Fc_γRIIIa - dependent platelet activation identified in COVID-19 vaccine-induced immune thrombotic thrombocytopenia-, heparin-induced thrombocytopenia, streptokinase- and anisoylated plasminogen-streptokinase activator complex-induced platelet activation”

Dana Yateem “Dr. Mustapha Abdelouahed - Department of Medical Sciences and Education, Boston University School of Medicine, Boston, MA, United States, Dr. Salim Fredericks - School of Medicine, The Royal College of Surgeons in Ireland, Medical University of Bahrain, Al Sayh, Muharraq Governorate, Bahrain”

Development of Reuseable and Efficient Antimicrobial and Catalytic Polymer Beads containing Selenium, Gold, and Silver Nanoparticles synthesized using Mango Leaves

Amna Kadhem Alkhenazi - RCSI, Fatema Naser Shakeeb - RCSI, Fatima Al Hannan - RCSI, G Roshan Deen - RCSI

Simplified approach to the management of chronic megacolon: A case report

Abdulrahman Muwafaq Mustafa Alomar “Mouhammad Halabi - RCSI, Kayan Khouri - RCSI, Abdulrahman Alomar - RCSI, Obai Hassan - RCSI, Khadija Hayyan - RCSI, Dr. Hatem Moussa - American Hospital in Dubai “

Writing Centres in Bahrain: Negotiating the technologies of the self

Dr Nisreen (Sireen) Al Aradi Prof. Sajjadllah Alhawsawi - Doctorate Colleague

An Assessment of the Influence and Relationship Between Cholesterol Control Follow up Visits and the incidences of Myocardial Infarction: Observations from a Cross-Sectional Study

Yahya Waly - School of Medicine - Royal College of Surgeons in Ireland: Medical University of Bahrain, Ahmed Khudair - School of Medicine - Royal College of Surgeons in Ireland: Medical University of Bahrain, Aiman Khudair - School of Medicine - Royal College of Surgeons in Ireland: Medical University of Bahrain, Muhammed Janan Qassim - School of Medicine - Royal College of Surgeons in Ireland: Medical University of Bahrain, Ali Al-Sabti - School of Medicine - University College Dublin”

The Potential Utility of Tirzepatide for the Management of Polycystic Ovary Syndrome

Nida Naaz “Alekyia Devi Anala - School of Medicine, Royal College of Surgeons in Ireland Bahrain, Adliya 15503, Bahrain, Insiya Sajjad Hussain Saifudeen - School of Medicine, Royal College of Surgeons in Ireland Bahrain, Adliya 15503, Bahrain, Maryam Ibrahim - School of Medicine, Royal College of Surgeons in Ireland Bahrain, Adliya 15503, Bahrain, Moksha Nanda - School of Medicine, Royal College of Surgeons in Ireland Bahrain, Adliya 15503, Bahrain, Nida Naaz - School of Medicine, Royal College of Surgeons in Ireland Bahrain, Adliya 15503, Bahrain”

Using vegetable waste in the phytosynthesis of well-defined silver nanoparticles for biomedical applications

Noor Jaragb - RCSI, Maryam Alqayem - RCSI, Dr. Roshan Deen - RCSI “

The Impact of Knowledge and Attitude Towards Myocardial Infarction Symptoms on Delayed Medical Attention in the General Population

Abeer Alnoaimi Abeer Moosa Alnoaimi - Mohammed Bin Khalifa Bin Salman Al Khalifa Specialist Cardiac Centre

Couriers in Transit: A Comprehensive Study of Motor Bike Accidents and Trauma at King Hamad University Hospital, Bahrain”

Mohammed Abdulmalik Mohammed Ali - King Hamad University Hospital, Muhammad Adeel Sajid - King Hamad University Hospital”



Sigma-1 receptor antagonists enhance the anti-motility activity of paclitaxel in a metastatic triple-negative breast cancer cell line

Jainisha Thadhani "Alia Abdulla Abdullatif Abdulla - Medical Student,RCSI-Bahrain, Jainisha Thadhani - Medical Student,RCSI-Bahrain,Sara Abdulhadi Hasan - Medical Student,RCSI-Bahrain, Preeti Borde - Postdoctoral Researcher,RCSI-Bahrain,Stephen T Safrany - Associate Professor of Pharmacology & Year 2 Director,RCSI-Bahrain"

The Role of Dietary Fiber in the Prevention and Management of Alzheimer's Disease

Reem Mohammed Abdulmoety Elnady Elbeltagi

Unlocking The Potential of Alginate: A Guide to Biomedical Applications

Maryam Adnan Khawaja - RCSI,Jannat Akram Tanweer Mohammad Akram Ahmed Din - RCSI,Neha Irfan - RCSI,Dr Praveen Manyam - RCSI,Dr. G. Roshan Deen - RCSI,Dr Andrea Diaz Gaxiola - RCSI,Dr Shahryar Khattak - RCSI"

The Prolactin-Kynurenine Axis Model of Postpartum Psychosis

Nida Naaz - School of Medicine, Royal College of Surgeons in Ireland Bahrain, Adliya 15503, Bahrain,Sama Faris Thiab - School of Medicine, Royal College of Surgeons in Ireland Bahrain, Adliya 15503, Bahrain,Maryam Ibrahim - School of Medicine, Royal College of Surgeons in Ireland Bahrain, Adliya 15503, Bahrain"

Effect of Different Proteins on the Synthesis, Properties and Applications of Indium Oxide

Ali Hussain Ali Zayer Mohamed "Ali Zayer - RCSI, Jude AlHaddad - RCSI"

Heart Failure with Reduced Ejection Fraction in Bahrain: Medical Therapy and Outcomes

Mahmood B. Dhaif - School of Medicine, Royal College of Surgeons in Ireland - Bahrain, Busaiteen, Kingdom of Bahrain,Amna AlBanna - Department of Internal Medicine, Salmaniya Medical Complex - Government Hospitals, Manama, Kingdom of Bahrain,Ameena Mahdi - Department of Internal Medicine, Salmaniya Medical Complex - Government Hospitals, Manama, Kingdom of Bahrain,Aaya Talaq - School of Medicine, Royal College of Surgeons in Ireland - Bahrain, Busaiteen, Kingdom of Bahrain, Aysha Husain - Department of Cardiology, Salmaniya Medical Complex - Government Hospitals, Manama, Kingdom of Bahrain"

Does simulation improve medical students' knowledge in the management of post-partum haemorrhage?

Sharon Nicklin - RCSI

Comparison of Vision-Related Quality of Life in AQP4+ NMOSD and MOGAD

Adnan Gassan - Adnan Gassan - RCSI Bahrain

Clinical Outcome in Patients with Thyroid Nodules Classified as Bethesda Category III and IV: Retrospective Study

Batool Ebrahim - Dr. Eman AlJufairi - KHUH

Ataxia Telangiectasia in a Bahraini Child treated with Intensive Physiotherapy

Fatima Razzaqi "Aysha Albastaki - King Hamad University Hospital ,Israa Sinan - Canadore Research Centre, Canada"

The unique risk factor profile of triple negative breast cancer. A systematic review and meta-analysis

Nitya Kumar - RCSI Bahrain,Sarah Ehsan - University of Pennsylvania, Perelman School of Medicine, Shahana Banerjee - University of Pennsylvania, Claudia Fernandez Perez - University of Pennsylvania,Isabelle Lhuilier - University of Pennsylvania,Jillian Neuner - University of Pennsylvania,Tara Friebe Klingner - Johns Hopkins University, Bloomberg School of Public Health,Oluwadamilola Fayanju - University of Pennsylvania, Perelman School of Medicine, Bindhu Nair - RCSI Bahrain,Sara Anjum Niinuma - RCSI Bahrain,Shivangi Nampoothiri - Christ University,Anne Marie McCarthy - University of Pennsylvania, Perelman School of Medicine

3D bioprinting for mimicking brain tissues

Yaqeen Alqartubi - medical student

Meta-Analysis of Outcomes in Abdominal Surgery Using the CMR Versus Robot

Abdulrahman Muwafaq Mustafa Alomar "Mouhammad Halabi - RCSI,Abdulrahman Alomar - RCSI,Kayan Khoury - RCSI,Tala Alul - RCSI,Omar Dajani - RCSI,Dr. Hatem Moussa - American Hospital in Dubai "

The efficacy of convalescent plasma in the management of severe COVID 19 Pneumonia: A 6 months retrospective study

Marwa Ebrahim Abdulla Zayed - Bahrain Defence Force Hospital Royal Medical Services ,Abdulrahman Almadani - Bahrain Defence Force Hospital Royal Medical Services ,Khalifa Abdulrahman Yusuf -

Bahrain Defence Force Hospital Royal Medical Services ,Noora Hamad Alaazmi - Bahrain Defence Force Hospital Royal Medical Services ,
Abdulrahman Alraee - Mohamed Bin Khalifa Cardiac Centre Bahrain

A histological and immunological review of vulvar squamous cell carcinoma precursor lesions

Preeti Borde - Royal College of Surgeons in Ireland - Medical University of Bahrain, Kingdom of Bahrain, Uwe Torsten - Royal College of Surgeons in Ireland - Medical University of Bahrain, Kingdom of Bahrain

Breaking the Hypoxia Neuroinflammation Cycle with Prolyl Hydroxylase (PHD) Inhibition

Mohamed Abdulla - School of Medicine, RCSI Bahrain, Busaiteen, Kingdom of Bahrain, John Bennett - Institute for Science and Technology in Medicine, School of Pharmacy, Keele University, Newcastle under Lyme, Staffordshire, United Kingdom, Dr. Ruoli Chen - Institute for Science and Technology in Medicine, School of Pharmacy, Keele University, Newcastle under Lyme, Staffordshire, United Kingdom*

The Effect of Intra-operative Ciprofloxacin vs. Ciprofloxacin-Hydrocortisone Otic Drops on Tympanoplasty Healing and Hearing Outcomes.

Taim Akhal - Royal College of Surgeons in Ireland: Medical University of Bahrain, Maryam Aljineibi - Cleveland Clinic Abu Dhabi, Dani Youness - Cleveland Clinic Abu Dhabi, Mark Bassim - Cleveland Clinic Abu Dhabi*

Biomaterial Based Pancreatic Islet Encapsulation for Diabetes Therapy

Praveen Kumar Manyam - RCSI, Dr. Roshan Deen - RCSI, Dr. Alexandra Butler - RCSI*

Reusable and Efficient Catalytic Alginate Beads Encapsulated with Silver Nanoclusters synthesized using Mangosteen Peel

Maryam Jaafar Alqayem "Hawra Alkhadad - Rcsi, Zainab Hasan - Rcsi, Noor Jaragh - Rcsi, G. Roshan Deen - Rcsi, Maryam Alqayem - Rcsi"

Green Synthesis of Silver Nanoparticles Utilizing Olive Leaf, Cinnamon, Turmeric, and Hibiscus to Treat Recurrent Bacterial Vaginosis

Salam Wael Elakkawi "Prof. Uwe Torsten - RCSI, Dr. G. Roshan Deen - RCSI, Prof. Fryad Henari - RCSI"

Upper Gastrointestinal Bleeding in Bahrain: Clinical Epidemiology, Etiology, and Outcomes

Mahmood B. Dhaif - School of Medicine, Royal College of Surgeons in Ireland - Bahrain, Busaiteen, Kingdom of Bahrain, Yousif F. Yousif - South Tees Hospitals NHS Foundation Trust - National Health Service England, Middlesbrough, United Kingdom, Ali A. Alaysreen - Department of Family Medicine, Primary Healthcare Centers, Manama, Kingdom of Bahrain, Saad I. Mallah - Barking, Havering, & Redbridge University Hospitals NHS Trust - National Health Service England, London, United Kingdom, Husain Ali Alrahma - Department of Gastroenterology, Salmaniya Medical Complex - Government Hospitals, Manama, Kingdom of Bahrain, Tahera H. Qaroor - Department of Psychiatry, Salmaniya Medical Complex - Government Hospitals, Manama, Kingdom of Bahrain, Ahmed Alekri - Department of Internal Medicine, Salmaniya Medical Complex - Government Hospitals, Manama, Kingdom of Bahrain, Ahmed Alsaegh - Department of Gastroenterology, Salmaniya Medical Complex - Government Hospitals, Manama, Kingdom of Bahrain

Characteristics and Outcomes of Patients Transported by Ambulance Services to the Emergency Department of Salmaniya Medical Complex

Taima AlBahrainarak "Sana Alkhawaja - Salmaniya Medical Complex, Taima AlBahrainarak - RCSI Bahrain, Ali Altaahoo - National Health Regulatory Association, Bahrain, AlZain Albaloooshi - RCSI Bahrain, Qusai Othman - RCSI, Bahrain

Spontaneous Coronary Artery Dissection and Fibromuscular Dysplasia: Insights into Recent Developments

Ayah Eltabbakh "Ahmed Khudair - Royal College of Surgeons in Ireland - Bahrain, Aiman Khudair - Royal College of Surgeons in Ireland - Bahrain, Salim Fredricks - Royal College of Surgeons in Ireland - Bahrain"

The role of pyruvate and taurine on male reproduction

Mouhammad Halabi - RCSI , Kayan Khoury - RCSI, Dr. Stefan Du Plessis - Mohammed Bin Rashid university "



RISK FACTORS IN NON-VARICEAL AND NON-MALIGNANCY UPPER GASTROINTESTINAL BLEEDING IN THE PATIENTS UNDERGOING SURGERY

Ahmed Taymour Algahiny - Royal College of Surgeons Ireland - Bahrain, Ishan Antony - Lahey Hospital and Medical Center, Burlington, MA, Fareeha Akram - House Officer, Ayub Teaching Hospital, Abbottabad - Pakistan, Abdullah Ahmed Almesri - Royal College of Surgeons in Ireland, Iqra Zulfiqar - Demonstrator Pharmacology, Mohi-ud-din Islamic Medical College, Mirpur - AJK, Abdulhamid Diab - Royal College of Surgeons Ireland - Bahrain

Synthesis of Fluorescent Gold Nanoclusters Capped with Bovine Serum Albumin Protein for Potential Applications in Sensing of Vitamins and Fluorescent Imaging

Ghadeer Almarzooq - School of medicine (RSS), Zain Jameel - School of medicine (RSS), Zainab Ali - School of medicine (RSS)"

Unusual Distribution of Cerebral Venous Thrombosis in a Patient With Sickle Cell Disease: A Case Study

Mohamed Fuad Ebrahim Alchalban
"Ahmed Ali Alekri - Salmaniya medical complex, Mohamed Fuad Alchanlban - Bahrain Defence Force hospital"

Scoping Review of Autologous Fat Transfer and its Emerging Efficacy in Various Clinical Contexts: Scars, Craniomaxillofacial Reconstruction, and Hand Deformities

Mouhammad Halabi - RCSI Bahrain, Kayanne Khoury - RCSI Bahrain, Abdulrahman Alomar - RCSI Bahrain, Khadija Hayyan - RCSI Bahrain, Hatem Moussa - American Hospital Dubai











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