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MedEdu Tabuk

Weekly Newsletter

Faculty of Medicine, University of Tabuk

Dedicated Website

Message From the Editor- Dr. Tanveer Raza

The newsletter will soon have its own website, InshAllah. Our gratitude to **H.E. Prof. Abdullah M. Althiabi**, Rector of the University of Tabuk, **Dr. Marai M Alamri**, Dean of Medicine, University of Tabuk and **Dr. Saad Almutairi**, Dean of IT deanship, University of Tabuk. Having a website will enable us to reach more readers and archive our past issues. I would like to thank all our esteemed colleagues and students in helping us achieve this milestone.



With **Dr. Saad Almutairi**, Dean of Information Technology and **Dr. Khalid Al Hazmi** Vice Dean Academic Affairs



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Wednesday Academic Activity: Think Research in Everyday Clinical Practice: Fostering Research Culture in Health Care Settings

Prof Mohamed Ali Seyed

Faculty of Medicine
University of Tabuk

The pursuit for knowledge has helped humankind progress over the years, from discovery of ignition of fire, everyday appliances, prescribed drugs, natural products, stem cells through Dolly the sheep clone to advanced missile, nuclear program and space missions, leaving behind a record of discoveries and inventions in science and technology for the benefit of humanity, cutting across culture and boundaries.



Medical sciences have made many advances in basic and clinical research that explore health risk factors and the burden of various diseases. Research in literal meaning is gathering knowledge or investigating thoroughly. However, the term scientific research defined as an organized and systematic way of finding answers to questions. The pattern of medical education and research has evolved over the years, from textual knowledge and application to more of evidence-based learning. Medicine is well defined as the science and art of healing. Researchers were engaged in discoveries and clinicians managed clinical practice, each confined to their own fields. **Evidence-based Medicine (EBM)** has revolutionized medical science, to bring about an amalgamation of professional scientists and clinical practitioners, with respect to knowledge and skills. **Whereas, Translational Medicine (TM)** is the process, which leads from evidence, based medicine to sustainable solutions for public health problems.

More than ever before, perceived now a medical practitioner in the 21st century is a career of lifelong learning. The combination of continued, rapid growth in knowledge and advancing technology bringing that information to their fingertips, have brought both a richness to the practice of medicine as well as a challenge. There is a growing appreciation that researchers make better clinicians. Research exposure increases understanding of clinical medicine; facilitates critical thinking and critical appraisal; improves prospects of successful application for graduate and post graduate training, research grants, and high impact publications in the reputed peer reviewed journals; develops teamwork skills; and increases exposure to the best clinical minds. In recent years, most governments around

the world is lifting its investment in health and medical researchers like never before. By providing continued substantial investment in research training and scholarships for current students and 2030 vision signals the Government's commitment to developing clinician researchers for the future.

Currently research culture is lacking in majority of health care settings, mainly in less developed countries in comparison to a research-led teaching environment in developed countries. Physicians, nurses, researchers and academic faculty should be encouraged to undertake the everyday evidence-based clinical practice as clinical research. Research outputs from these collective efforts will depend on how well research methods and knowledge integrated into clinical practice. These desired health outcomes, in the long run, can influence policy and potentially transform healthcare for future generations. In addition, development of collaborative links with academic partners need to be encouraged and research projects complementing regional clinical practice issues have to be strengthened efficiently with available resources and infrastructure.

*"No development without research;
No research without development"*

Yvo Nuyens

Research outputs from these collective efforts will depend on how well research methods and knowledge integrated into clinical practice. These desired health outcomes, in the long run, can influence policy and potentially transform healthcare for future generations. In addition, development of collaborative links with academic partners need to be encouraged and research projects complementing regional clinical practice issues have to be strengthened efficiently with available resources and infrastructure.

As a trained biomedical Scientist cum passionate advocate of health and medical research wherever I have given an opportunity, I always support the research and encourage the inclusion of research in medical programs. Research training and experience are not just 'nice to have' but a 'must' for our clinicians of the future.

SURVEY ON MEDEDU TABUK

Dr. Tanveer Raza

Editor-in-Chief, MedEdu Tabuk

A Survey is being conducted to analyze the reader behavior of **MedEdu Tabuk** so that the main objective of the newsletter can be achieved. We plan to understand better what our readers expect and discover ways to improve **MedEdu Tabuk**. As the newsletter will soon go online this is a necessary step. I would like to invite all of my colleagues at the Faculty of Medicine to take part in this survey. To improve transparency, **Dr. Khalid Funjan** has kindly agreed to conduct the survey.

The screenshot shows a survey form titled "MedEdu". It contains three questions:

1. Do you read the MedEdu Tabuk newsletter? *
☐ a) yes
☐ b) No
2. If the previous answer is NO, explain why.
3. What is your principal purpose of reading MedEdu Tabuk? (You can select more than one) *
☐ a) Staying informed
☐ b) Update of Knowledge
☐ c) Keeping in touch with activities, events
☐ d) Entertainment

Reader's Corner: Nanoparticles: The very tiny particles that could change the future of medicine

Dr. Ghareb Soliman

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Faculty of Pharmacy,
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The term nanoparticles refers to particles having diameter in the range of 1-1000 nanometers. Due to this very small size, nanoparticles can be visualized only by powerful electron microscopes. What is very interesting about these very tiny particles is that their properties are significantly different from their larger counterparts. Thus, nanomaterials have different properties such as melting point, fluorescence, electrical conductivity, magnetic permeability, and chemical reactivity. These different properties lay the groundwork for very exciting applications in all aspects of our modern life. One of these interesting applications is the so-called "nanomedicine".

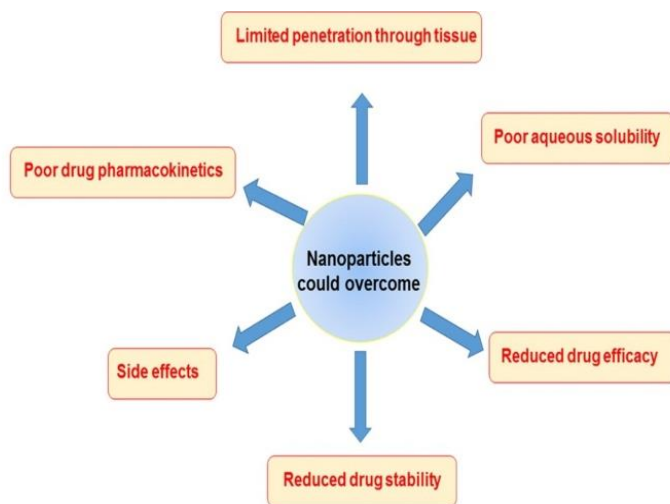


Figure: Advantages of nanoparticles to achieve drug efficacy with minimum side effects

Specific drug delivery to tumor tissues greatly limits the cytotoxic drugs side effects, which result from drug delivery to healthy tissue. Currently there are 50 approved drug

formulations based on nanoparticles and many other formulations are under development. It is expected that the near future will witness significant contribution of nanotechnology in the diagnosis and therapy of several diseases.

References

Soliman GM. (2017). Nanoparticles as safe and effective delivery systems of antifungal agents: Achievements and challenges. *Int J Pharm* 523: 15-32.

Ventola CL. (2017). Progress in Nanomedicine: Approved and Investigational Nanodrugs. *Pharmacy and Therapeutics* 42: 742-755.

Novel mutations in filamin C (*FLNC*) identified in pediatric restrictive cardiomyopathy

Muhammad Tariq
Faculty of Applied Medical Science
University of Tabuk



Restrictive cardiomyopathy (RCM) is a rare and distinct form of cardiomyopathy characterized by normal ventricular chamber dimensions, normal myocardial wall thickness, and preserved systolic function. The abnormal myocardium, however, demonstrates impaired relaxation. To date, dominant variants causing RCM have been reported in a small number of sarcomeric or cytoskeletal genes, but the genetic causes in a majority of cases remain unexplained especially in early childhood. Here, a research group led by Dr Stephanie Ware (Indiana University, USA) described two RCM families with childhood onset: one in a large family with a history of autosomal dominant RCM and the other a family with affected monozygotic, dichorionic/diamniotic twins. Whole Exome sequencing identified a pathogenic filamin C (*FLNC*) variant in each: p.Pro2298Leu which segregates with disease in the large autosomal dominant RCM family, and p.Tyr2563Cys in both affected twins. *In vitro* expression of both mutant proteins yielded aggregates of FLNC containing actin in C2C12 myoblast cells. Recently, a number of variants in *FLNC* have been described that cause hypertrophic, dilated, and restrictive cardiomyopathies. This data presented provide further evidence for the role of *FLNC* in pediatric RCM, and suggest the need to include *FLNC* in genetic testing of cardiomyopathy patients including those with early ages of onset.

Research Team: Jeffrey Schubert, Muhammad Tariq, Gabrielle Geddes, Steven Kindel, Erin M. Miller, Stephanie M. Ware

ACADEMIC affairs arrangement for FACULTY OF MEDICINE

Prof Magdy M. ElShamy
Faculty of Medicine



In the Next Week:

For Female Section:

- **Forensic Medicine Module:** : 4th Year, Announcing the **Final Results** of the module
- **Medical Genetics Module:** 4th Year, Announcing the **Final Results** of the module
- **Basing Imaging Module:** 4th Year, Announcing the **Final Results** of the module
- **Professionalism & Medical Ethics :** 4th Year, Announcing the **Final Results** of the module
- **Cardiovascular System (CVS) Module:** 3rd Year, **Final MCQs Exam** on Sunday 28/10/2018
- **Cardiovascular System (CVS) Module:** 3rd Year, **OSPE** on Monday 29/10/2018
- **Normal Human Morphology I (NHM I) Module:** 2nd Year, **Second Mid-Module Exam** on Tuesday, 30/10/2018

For Male Section:

- **Forensic Medicine Module:** : 4th Year, Announcing the **Final Results** of the module
- **Medical Genetics Module:** 4th Year, Announcing the **Final Results** of the module
- **Basing Imaging Module:** 4th Year, Announcing the **Final Results** of the module
- **Professionalism & Medical Ethics :** 4th Year, Announcing the **Final Results** of the module
- **Cardiovascular System (CVS) Module:** 3rd Year, **Final MCQs Exam** on Sunday 28/10/2018
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- **Normal Human Morphology I (NHM I) Module:** 2nd Year, **Second Mid-Module Exam** on Tuesday, 30/10/2018

Hands on training for Molecular Biology techniques

Dr. Eltayib Hassan Ahmed

Faculty of Applied Medical Science

University of Tabuk



20/25/Sept/2018 at Prince Fahd Bin Sultan Research chair



The two day hands on training for Molecular Biology techniques was conducted at Prince Fahd Bin Sultan Research chair for MBBS students under the supervision of **Dr. Rashid Mir**, Assistant professor, Supervisor-Division of Cancer Molecular Genetics, Prince Fahd Bin Sultan Research

chair. The students were trained in **Basic molecular Biology techniques** involved in Molecular Based diagnostic of leukemia, Breast cancer and Sickle cell disease. We are also thankful to Dr Ashraful Islam who was the main initiator of this training .We are also thankful to Vice Rector -Academic affairs and Dean -Faculty of Medicine for their kind cooperation .

- The student learnt following basic molecular Biology techniques.
- v DNA extraction from human peripheral Blood,
- v Quality analysis of DNA on by Nanodrop ,
- v Gel electrophoresis ,
- v PCR amplification of a specific gene ,Gel
- v Handling of molecular Biology instruments Thermocycler -PCR ,
- v Gel documentation system and Nanodrop



STUDENT SECTION: Humane Duty

Abdullah M. Zahi

6th year

Faculty of Medicine

University of Tabuk



More than 500 people left their homes for 10 days, interrupted their holidays and came to one place for one purpose to provide high quality health care to pilgrims.

First days at "Hajj Health Volunteer Program" were full of excitement, making new friendships with your roommates and other participants, everything was perfect and it's as my expectations became reality. new people means new experiences, You will meet a hardworking people from different specialties and many hours of medical education and workshops provided by

specialized doctors , all of them want to give all their experience to you , it was like they born to be volunteers and it's their fate .



In the field it was 3 days and 6 hours/day working under the sun and walking for long distances , our mission mainly focus on managing Heat exhaustion, burns and diabetic feet and providing initial assessment and first aid for any case and even sometimes we work as guiders and all those hours passed like seconds, upon all of that you don't feel exhausted or tired , and in between there was a lot of activities. its perfect opportunity to promote teamwork,

adapting a new situations and take the responsibility as team leader in the field, making critical decisions.

Being in Mecca during hajj is another great experience, walking in the streets meeting a lot of people from different countries like the whole world centred in one city.



Last day was difficult to us, when you were leaving friends like you knew them for years ago and the thing you loved to do has ended at that time you will be proud of what you achieved.

Many people are looking for and seeking satisfaction in their lives. I just found it there.

EXAM INVIGILATION, FACULTY OF MEDICINE

Dr. Zubair M. Hayat, Dr. Mohd. Ahmed Mesaik

Date	Module	Invigilators	Exam Supervisors	Time	Venue
28/10/2018	Cardiovascular Module (Written)	Dr. Ayman Faisal Mr. Mahmood Alfifi Mr. Nahed Alawneh Mr. Muneef Alfageer	Dr. Mahmoud Odemi (Module coordinator)	9-12	1st Floor PBL rooms
29/10/2018	Cardiovascular Module (OSPE)	All faculty members involved in the teaching of the cardiovascular module are requested to attend the OSPE exam	Dr. Mahmoud Odemi (Module coordinator)		Contact Module Coordinator

CONFERENCE SCHEDULE

Dr. Abdullah Miah, Family Physician, Abu Shajera Primary Health Center, Umluj

Dr. Zubair M. Hayat, Faculty of Medicine, University of Tabuk

Name of the conference, Place	CME	Conference website	Date
The Best Resident Course, Jeddah	✓	www.ssim.kau.edu.sa	27 th Oct 2018
Institute for Medical Simulation & Simulation Instructor Training, Riyadh	---	Email: Saudi.sim.ims@gmail.com	28 th - 31 st Oct 2018
ECHO for Pediatric Intensivist, Riyadh	✓	www.ksau-hs.edu.sa	30 th Oct 2018
Changing Health Behavior: An evidence based practical approach, Riyadh	--	www.ngcebm.org	31 st Oct 2018
3 rd Pediatric Hematology Oncology Update 2018, Jeddah	✓	www.jcme-kfshrc.com/events	1 st -3 rd Nov 2018
12th International Conference of Jordan Society of Family Medicine, Amman	--	www.jsfm.jo	7-10 November 2018
Best of Emergency Medicine,		www.BestofEM.com	10 th Nov 2018
Surgical Knot Tying and Suturing Workshop, Jeddah		Email: maalsalim@pnu.edu.sa	24 th Nov 2018
Research Day (the 3 rd), Jeddah	✓	http://goo.gl/5onKLL	24 th Nov 2018
Saudi International Pharma Expo, Riyadh	--	www.saudipharmaexpo.net	19 th -20 th Nov 2018
International Saudi Conference on Gynecology, Obstetrics and Reproductive Medicine, Riyadh	✓	Email: info@topconferences.com	30 th Nov 2018

For submissions

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