



COLLEGE OF MEDICINE

NEWSLETTER

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COLLEGE NEWS



VIRAL NEWS



MEDICAL HEROES



STUDENTS' CORNER



STUDENTS' POLLS



DOCTOR'S ORDERS

DEAN'S MESSAGE OF THE MONTH

It brings me great pride to report that the College of Medicine at the University of Sharjah ranked 251-300 in the Times Higher Education's World University Rankings for Clinical and Health Subjects. I would like to congratulate our faculty and students on all their wonderful achievements. They continuously make me and our college proud. This would have not been possible if not for the continuous efforts and dedication of our faculty and staff. I would also like to thank His Highness Sheikh Dr. Sultan bin Mohammed Al Qassimi, Member of the Supreme Council, Ruler of Sharjah and President of the University of Sharjah and Prof. Hamid Al-Naimiy, Chancellor of the University of Sharjah, for their continuous and tremendous support.



Prof. Hamid recently met with the College Council members where he admired the extraordinary achievements of the College of Medicine including the excellent teaching, outstanding research and productive community works. Since COVID-19, the campus has become digital and paperless. The college is currently in the process of planning to implement a hybrid system. We are in the process of preparing to bring the students back to campus for Clinical Skills, Practical and PBL sessions, provided they present a negative COVID-19 test result. We are also aiming to conduct all the final examinations on campus.

An initiative from our college is underway as the University of Sharjah COVID-19 Testing Center is preparing to administer a faster test to cater to the University of Sharjah community; test results would be ready within two hours. The College of Medicine has also launched a Distance Learning Studio which provides technical support to faculty to enhance their distance-learning skills. It is equipped with state-of-the-art facilities to take distance-learning to the next level. Many research grants have been acquired by our faculty members which is great news for our college on the research front. I would like to highlight the wonderful achievements of all of those who applied and congratulate them for receiving grants on both the national and international level. I look forward to seeing the results of those collaborative efforts. As always, we will be working hard to provide the best education for our students, the best service for our community, and the best standard of research and clinical training.

COLLEGE NEWS

Times University Rankings 2021 - Clinical & Health Subjects

Rank	Name Country/Region	No. of FTE Students	No. of students per staff	International Students	Female:Male Ratio
251-300	Rutgers, the State University of New Jersey United States Enquire	44,264	11.0	17%	52 : 48
251-300	RWTH Aachen University Germany	45,256	58.4	23%	32 : 68
251-300	University of Salerno Italy	25,123	27.5	2%	55 : 45
251-300	University of Sharjah United Arab Emirates	12,688	18.6	58%	67 : 33
251-300	University of South Australia Australia Enquire	20,930	30.6	20%	58 : 42
251-300	University of Southern Denmark Denmark	22,544	12.7	14%	53 : 47



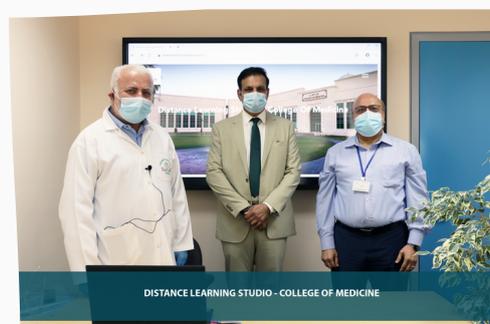
E-learning Studio



Under the direction and guidance of Prof. Qutayba Hamid, The College of Medicine has set up the Distance Learning Studio.

The studio is equipped with facilities for recording and transmitting resource sessions, performing clinical demonstrations in labs, professionally editing lectures, telemonitoring large and small groups of students, and serving as a central office for videoconferencing. A smart screen is also available for technology-enhanced teaching.

The studio is located at room M27-161, and sessions can be booked online through the Quick Links tab of the College of Medicine website.



Telemedicine



Telemedicine consultations is a community service initiative led by Prof. Mohammed Al-Hajjaj. The Specialized Medical Center at UoS will primarily provide general medicine services to UoS staff and students. This will be expanded to several specialties to provide free teleconsultation services to the community.

The initiative will also be offering hands-on training to Year 4 and Year 5 students on the rules, policies, and limitations of teleconsultations. Additionally, there is a collaboration with the Computer Science Department at UHS to develop a mobile application that can be used for teletriaging and video consultations. The community service initiative has been approved by Prof. Qutayba Hamid and the Chancellor, and the team is in the process of applying for a telemedicine license with MOHAP.

Artificial Intelligence and Medicine



Prof. Rifat Hamoudi, in coordination with the office of Vice Chancellor for Research and Graduate Studies, organized on the 6th of October 2020 a joint workshop entitled "Artificial Intelligence and its applications in research" with Skolkovo Institute of Science and Technology (Skoltech). It covered numerous areas of research carried out at the University of Sharjah that use Artificial Intelligence such as diagnostics, drug discovery, cybersecurity, robotics, aerospace and advanced materials. Prof. Hamoudi gave a presentation on the use of AI on biomedical data to help unravel the pathogenesis of various diseases identifying diagnostic and prognostic biomarkers as well as potential therapeutic targets.

Adaptive Learning in the post-COVID Era



Prof. Rifat Hamoudi participated in a collaborative workshop with the Massachusetts Institute of Technology faculty entitled "Activating the Ecosystem to Reimagining Education" on the 9th of October 2020. He presented an innovative project related to online education during the post-COVID era. The project, entitled "Development of Adaptive Software Methodology for Active Learning based on Computational Logic Programming", applied a mixture of computational techniques to implement active learning based on the ICAP framework, and an adaptable software was created to track the students' learning paths and move the student across the various levels depending on the certain triggers.

The software is adaptive and flexible and was used to demonstrate how to teach a Biostatistics course while resolving two major concerns with online learning:

- Implementing one-to-one teaching and learning to large number of students
- Adapting to the students' backgrounds and speeds of learning

It is hoped that such a development will usher in the new wave of online learning and education.

Faculty Achievements

COVID Webinar

Prof. Qutayba Hamid, Vice Chancellor of Medical Affairs and Dean of the College of Medicine, held a live virtual webinar titled "COVID-19 Myths vs Facts" on October 25th 2020.

The webinar was held over the video conferencing platform Zoom and was attended by the faculty, staff, and students of University of Sharjah.



Collaborative Grant

Congratulations to all the collaborators from University of Sharjah and University of Lübeck for securing a combined grant of AED 400,000 for their project on 'Development of Emirati Pharmacogenomics Passport: Towards Practicing Personalized Medicine in UAE'.

Dr. Maha Saber is the principle investigator from the University of Sharjah along with the following co-investigators: Prof. Qutayba Hamid, Prof. Nabil Sulaiman, Prof. Mohamed Al Hajjaj, Prof. Saleh Ibrahim, Prof. Rifat Hamoudi, Prof. Eman Abu Gharbieh, Prof. Hellme Najim, Dr. Mohamed Saif, Dr. Rabah AlMahmoud, Dr. Samrein Ahmad and Dr. Thenmozhi Venkatachalam. We wish all the best to the research team!



Antibiotics and the Public

Prof. Eman Abu-Gharbieh had a recent interview on the Sharjah Radio program "Towards a Healthier Life", where she discussed the appropriate use of antibiotics in healthcare.



NEW



Research Opportunity in Women's Health for Undergraduate Students (Limited Openings)

The Clinical Sciences Department is excited to announce the launch of The Women's Health Clinical Research program (WHCR). It is an extra-curricular initiative that aims to involve undergraduate medical students during their Obstetrics and Gynecology (OBG) clerkship in clinical studies in the field of women's health.

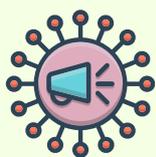
Students in the OBG clerkship can apply for one of the following:

- A) **Case report studies:** Interested students can provide a potential case anytime during their rotation. Once the case is judged suitable as a case report study, the student will be guided by the OBG faculty on how to write the manuscript and proceed with the next steps. Students who have not started the OBG clerkship are not eligible to apply for this pathway. Up to 2 students will be accepted during each rotation.
- B) **Extended research project:** Accepted students are expected to commit to a 6-8 month clinical study, often either a retrospective or a cross-sectional study. Research meetings and direct supervision will be provided by the OBG faculty. Up to 4 students will be accepted throughout the academic year under this initiative.

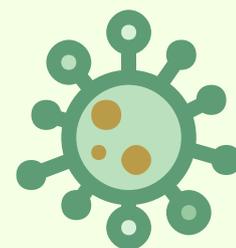
Other components of the program include supportive training sessions that are provided throughout the program to advance the clinical research skills for the participating students. A list of essential but diverse training topics will be available for students to choose from.

Finally, a certificate will be awarded to the participating students and co-authorship in resulting publications could be granted depending on the extent of each student's contribution.

Those who are interested , please email your CV and brief email showing interest to the OBG clerkship coordinator Dr. Ghada Mohammed at gmohammed@sharjah.ac.ae.



VIRAL NEWS



Using Calcium to Burst Tumor Cells

Tumor cells are well known for their notorious ability to resist the effects of chemotherapeutic agents. Studies have shown that this phenomenon, known as Multidrug Resistance (MDR), is the leading cause of cancer treatment failure. However, only minor progress in the prevention of MDR has been done.

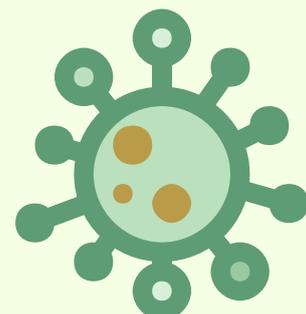
P-glycoprotein (or P-gp), found on the membrane of tumor cells, acts as a pump that quite literally expels cancer drugs out of the cell. Scientists have developed multiple medications to counteract the action of P-gp. Unfortunately, the risks associated with the use of these agents far outweigh their benefits.

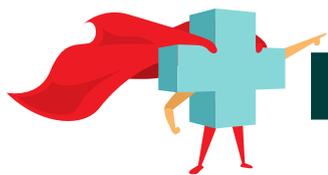
Previous studies have observed that overfilling tumor cells with calcium ions depletes P-gp and its energy supply, hence preventing multidrug resistance. Scientists from Zhengzhou University in China have described a novel approach to blocking the actions of P-gp using a "calcium ion nanogenerator" (denoted TCaNG). TCaNG works by specifically targeting tumor cells and releasing both doxorubicin (a chemotherapeutic agent) and massive amounts of calcium ions intracellularly.

This approach has been proven to be successful in killing previously multidrug resistant tumor cells. TCaNG has also been found to have little adverse effects in animal trials. If future human trials go smoothly, TCaNG shows potential in the treatment of stubborn, drug-resistant tumors.

REFERENCES:

Liu, J., Zhu, C., Xu, L., Wang, D., Liu, W., & Zhang, K. et al. (2020). Nanoenabled Intracellular Calcium Bursting for Safe and Efficient Reversal of Drug Resistance in Tumor Cells. *Nano Letters*. doi: 10.1021/acs.nanolett.0c03042





MEDICAL HEROES

Medicines. Pills. Tablets. Instinctively, these are the words that come to mind when considering healthcare or disease. Drugs and pharmaceuticals form the strongest pillar of medicine. Diseases that seemed incurable at some point have become easy to treat today, thanks to the pioneering efforts of women who saved lives, one molecule at a time.



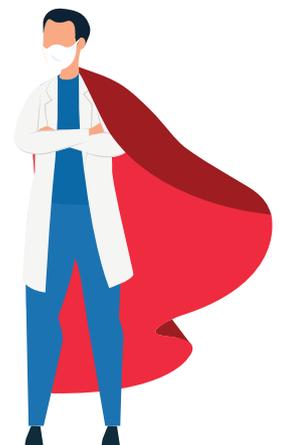
Dr. Gertrude B. Elion

Circa 1970s, drug development was a field of extraordinary discoveries, but mostly by accident. Dr. Gertrude B. Elion, however, knew this string of accidents was not sustainable. With Dr. George Hitchings, she proposed a rational, scientific approach to drug discovery based on knowledge of the biological target, for which they were later awarded the Nobel Prize in Medicine or Physiology. She began work on purines and together, they discovered 6-mercaptopurine, and then further worked on Pyrimethamine, Allopurinol and Trimethoprim. More importantly, she independently spear-headed the 'anti-viral drug' movement. In 1978, she launched Acyclovir with her team - a drug that specifically targeted and inhibited the herpes virus with minimal toxicity. If a drug against COVID-19 is eventually developed, it will be thanks to the brilliance of the scientist who started it all.



Dr. Jane C. Wright

In the early 1900s, when medicine was a professional field entrenched in sexism and racism, Dr. Jane Cooke Wright, hailing from an African American family, challenged their preconceptions. She was amongst the founding members of the field of clinical oncology. In 1951, she led a research project that firmly established the efficacy of methotrexate, a folic acid antagonist, in treating breast cancer. During that era, chemotherapy was still considered a last-resort experiment to treat cancer. Dr. Wright changed that cultured tumor tissue from patients. The primary culture was treated with different chemotherapeutic agents to find the most effective course of therapy. In doing so, she also led the movement in personalized medicine and shared her expertise and legacy with other international oncologists.



STUDENTS' CORNER



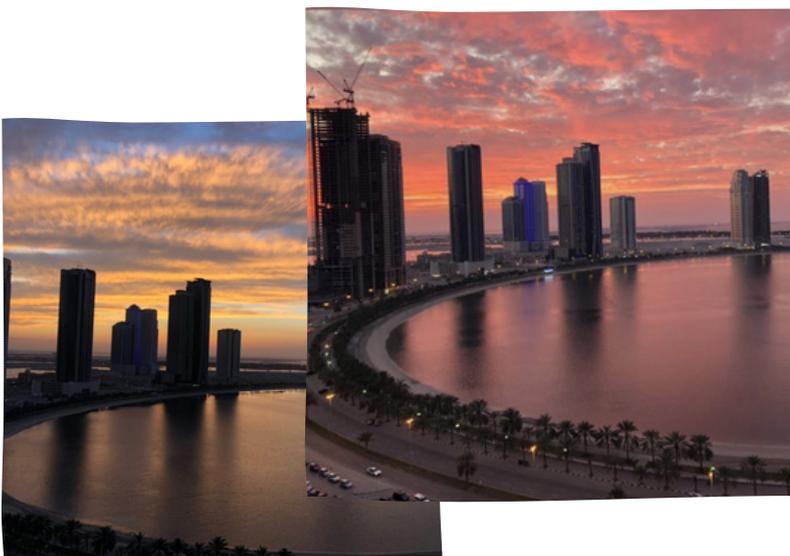
"If you truly love nature, you will find beauty everywhere"
-Vincent van Gogh

MUZNA ALKHAROOSI YEAR 2



"Nordic autumn is that of ethereal beauty"

KHOLOD HUSSAIN YEAR 2



"Same location, different days"

KHALED WALEED YEAR 2





"Far beyond these walls, there's
flaming water and land made of ice"
-Armin Arlert

RASHID ABU HELWA YEAR 2



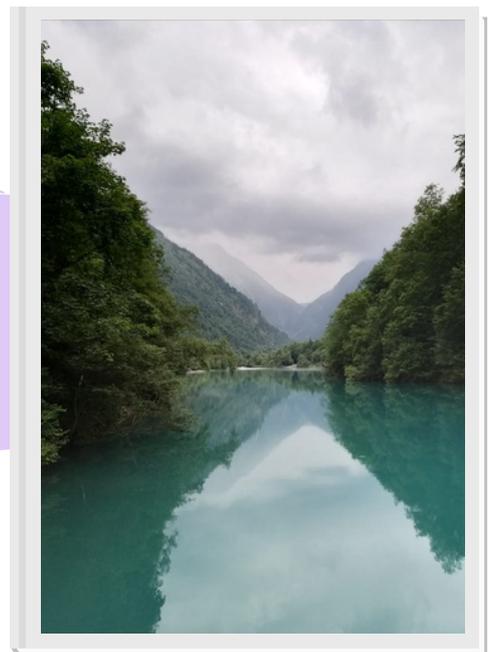
"My favorite part about traveling is
to take pictures that will remain
forever as a memory "

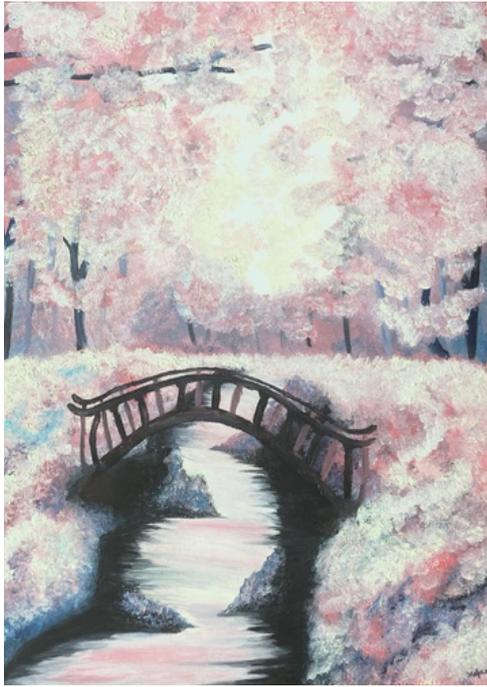
SHAHAD ALAMEERI YEAR 3



" A single act of kindness throws out
roots in all directions, and the roots
spring up and make new trees"

OMAR WARDAN YEAR 2





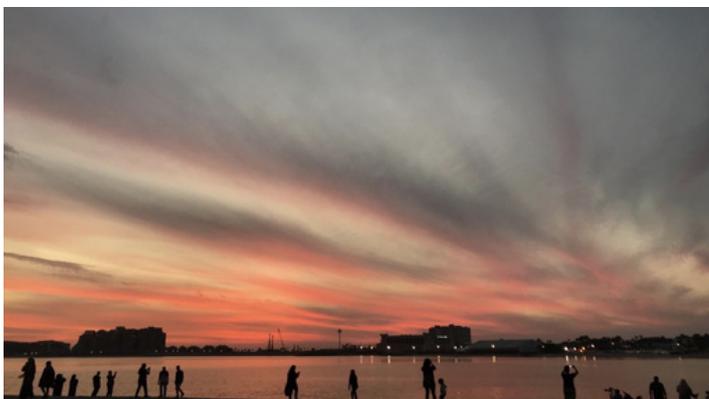
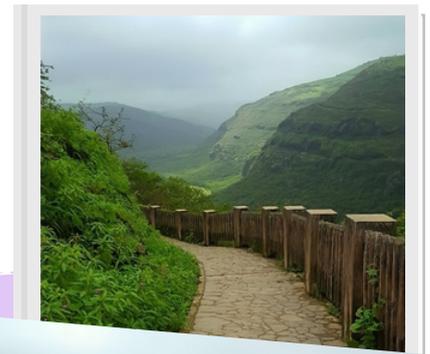
"What better way to express nature than with cherry blossom pink in honor of breast cancer awareness month"

HOURIA QASEMI YEAR 2



"Never miss an opportunity of noticing anything of beauty"

HADEEL ALAMELEH YEAR 1



"She captured a feeling, sky with no ceiling, the sunset inside of a frame."

- La La Land

MARIAM ALMAAZMI YEAR 3



DiagKnowsed

Case of the Month

A pregnant female gave birth to a premature baby boy at 27 weeks gestation. The pregnancy was uncomplicated, except by sudden membrane rupture occurring 2 days before delivery with no response to tocolytic therapy, and the baby was born by vaginal delivery. The neonate weighed 1030g, and Apgar scores were 2, 6, and 9 at 1, 5, and 10 minutes after birth, respectively.

Nasal CPAP was applied to the infant, and immediate transport to the NICU was ordered. In fear of possible infection due to premature membrane rupture, amoxicillin-clavulanic acid (for 7 days) along with gentamicin (for 3 days) were started, with no clues of infection obtained clinically or from lab tests.

On the 19th day of the infant's life, a red lesion of epidermal peeling was observed on the infant's nostril near the nasal CPAP entry. Rapid expansion of the lesions was noted, along with the appearance of new skin peels all over the infant's trunk, and the skin was extremely irritable with any touch. Skin culture tested positive.

Following appropriate treatment measures, complete recovery was seen after 11 days of onset, and the baby was discharged one-month after birth. Unfortunately, on day 48 of life, the exact same symptoms of skin peeling that the baby presented with before had occurred again, which led to immediate isolation of the infant in the NICU.



WHAT COULD BE THE MOST LIKELY CAUSE OF THE NEWBORN'S SYMPTOMS? TELL US AND CHECK IF YOU ARE RIGHT BY FILLING THE FORM [HERE](#) !

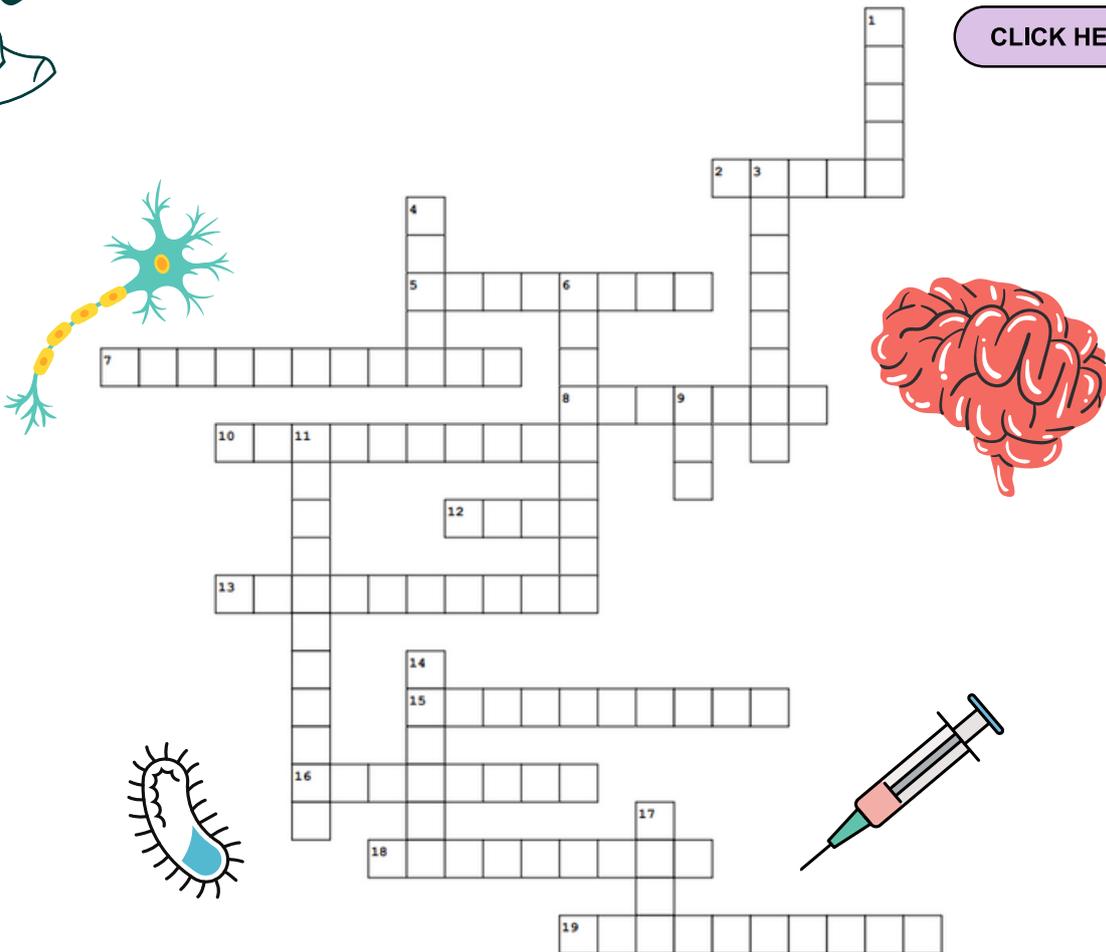


MEDICAL CROSSWORD



For this month's crossword, the theme is the Nervous System. **Click on the icon to the right to access an interactive version of the crossword.** You can type in your answers and it will check if they are correct. Good luck!

[CLICK HERE](#)



Across

- 2. Uncontrollable hand
- 5. Positive sign of UMNL
- 7. Two cerebral _____
- 8. Fainting
- 10. Man in the brain
- 12. Performed in brain surgery
- 13. Paralysis on one side
- 15. Cranial nerve V
- 16. Obsolete way to treat mental disorders
- 18. Dorsal root ganglia are responsible for _____
- 19. Difficulty in articulation

Down

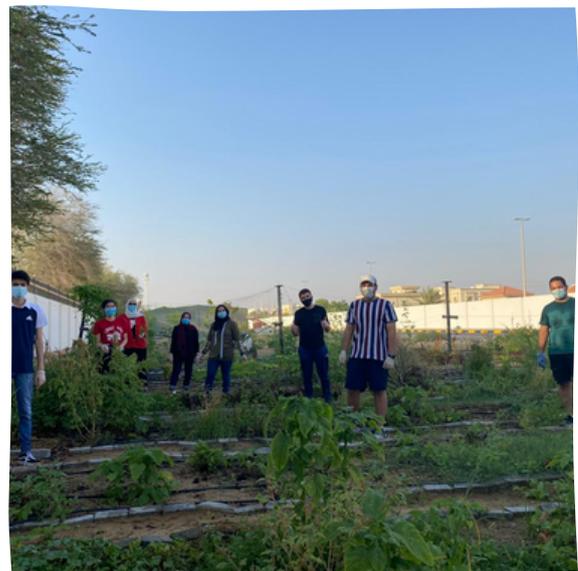
- 1. Egyptians removed this in mummification
- 3. Drug used in Parkinson's disease
- 4. Tuning fork test
- 6. Bacteria causing meningitis
- 9. Sterile body fluid
- 11. Athlete who suffered from Parkinson's
- 14. Commonly misdiagnosed condition
- 17. Latin for "bridge"

Student Community Service



During the COVID-19 lockdown, all of us were trapped in our houses; our lives and daily routines had drastically changed. Fortunately, some of us were able to participate in a new outdoor experience that served as a stressbuster. We visited the sustainable community farming area and greenhouse on the University of Sharjah campus during the weekends. We helped clean weeds and assist Dr. Anu Ranade and Dr. Rizwan Qaisar on the 'Linking Education And Farming' project.

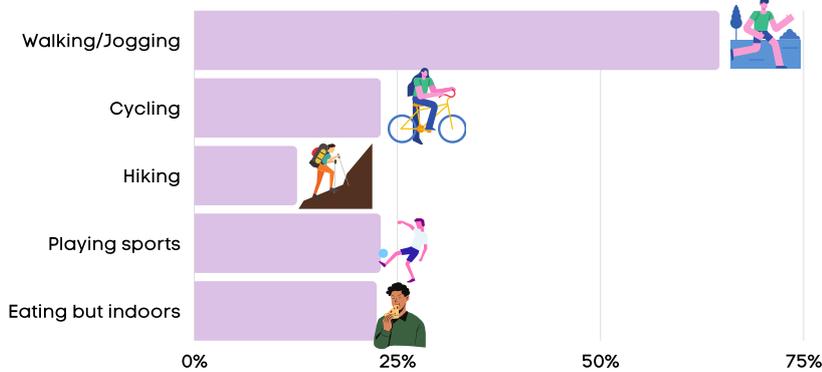
This was also a good opportunity to learn new information on plants and their growth patterns. An interesting tidbit we learnt was that the extract of the papaya tree has essential anti-plasmodial activity which can be used in treatment of malaria. We happily harvested beetroots and spinach, taking some of the produce home. It was a wonder seeing different varieties of vegetables thriving and adapting to the harsh UAE summer. The list ranged from miniature watermelons and paddy to okra and mint. We met some of our colleagues and faculty after nearly three to four months and it truly felt wonderful to be on campus, after so long. We missed it!



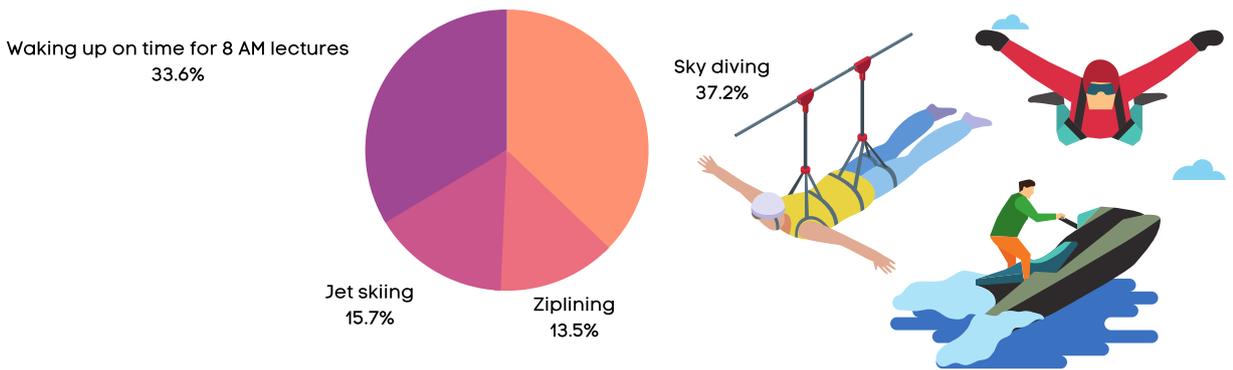


STUDENT-SELECTED

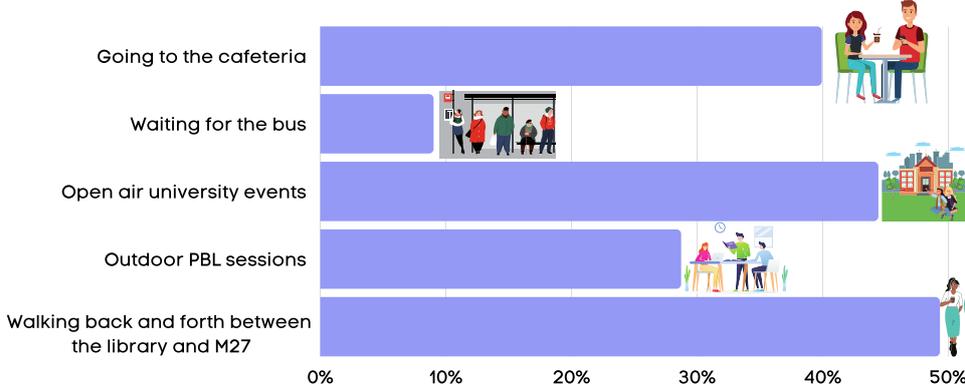
WHAT IS YOUR FAVORITE OUTDOOR ACTIVITY?



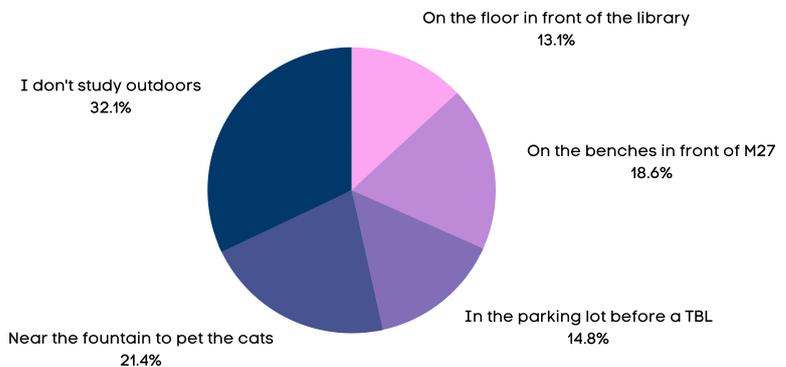
WHAT IS AN EXTREME SPORT YOU'VE ALWAYS WANTED TO TRY?



WHICH OUTDOOR ACTIVITY DO YOU ENJOY MOST WHILE ON CAMPUS?



WHAT IS YOUR FAVORITE ON-CAMPUS OUTDOOR STUDY SPOT?



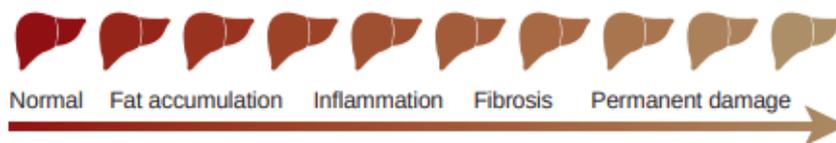
DOCTOR'S ORDERS

DR. SARRA SHORBAGI

FATTY LIVER DISEASE

Facts at-a-Glance

- **Nonalcoholic fatty liver disease (NAFLD)** is the buildup of extra fat in liver cells that is not caused by alcohol consumption. The more severe form of NAFLD is called nonalcoholic steatohepatitis (NASH).
- NASH causes the liver to swell and become damaged.



- About **25 %** of adults and **3-12%** of children have NAFLD.
- NAFLD often has no symptoms until advanced liver damage occurs. The symptoms may include fatigue, weakness, weight loss, loss of appetite, nausea, abdominal pain, yellowing of the skin and eyes, itching, fluid buildup, mental confusion, and swelling of the legs and abdomen.

Risk Factors

- Obesity
- Diabetes mellitus (T2DM)
- Hypertension
- High cholesterol or high triglycerides
- Genetic predisposition
- Other factors: age, gender, and ethnicity



Treatment of NAFLD

There are no medical treatments yet for non-alcoholic fatty liver disease. Having a healthy diet and exercising regularly may reverse it in the early stages.

How Can I Prevent NAFLD?

There are ways to prevent non-alcoholic fatty liver disease, including:

- Maintaining a healthy weight
- Eating a healthy diet lower in fat and fructose
- Exercising regularly
- Controlling blood sugar, blood pressure cholesterol and triglycerides



REFERENCES:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5483623/#:~:text=Depending%20on%20the%20type%20of,are%20considered%20obese%20%5B3%5D.>
<https://liverfoundation.org/for-patients/about-the-liver/diseases-of-the-liver/non-alcoholic-fatty-liver-disease/#information-for-the-newly-diagnosed>
[https://www.gastrojournal.org/article/S0016-5085\(05\)00694-3/fulltext](https://www.gastrojournal.org/article/S0016-5085(05)00694-3/fulltext)



SOLUTIONS

DiagKnownsed

Case of the Month

Following the findings that the attending doctor discovered, a **Vitamin D deficiency** was suspected, and lab results showed low vitamin D levels of 7ng/ml.

A treatment of vitamin D supplementation at 50,000 IU weekly for two months, followed by 1,000 IU maintenance dose, along with continuous sunlight exposure, was sufficient to dramatically relieve the patient's symptoms of fatigue, hypersomnia, anosmia, and back pain.

A 6 months follow-up revealed complete return to normal physical activity. Vitamin D is a fat-soluble vitamin essential in maintaining general health. It has a primary role in the body's physiology when it comes to muscular movement and signal transduction, as well as to the immune system in protecting the body against invading pathogens.

This case reveals the draining effects that vitamin D deficiency may cause, including:

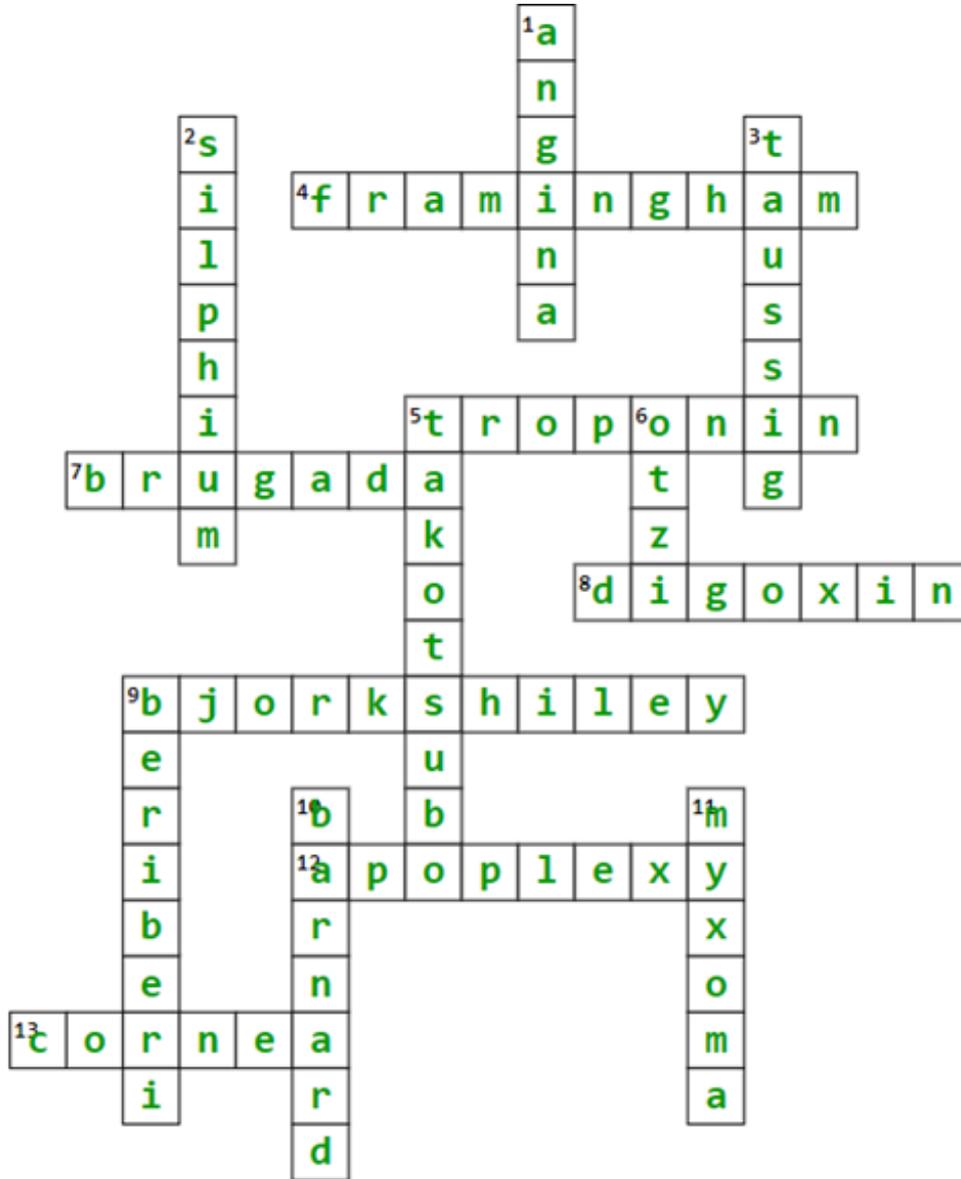
- Unspecified back pain: Vitamin D has a crucial role in maintaining bone health and preventing osteoporosis.
- Fatigue: Multiple studies have identified a correlation between vitamin D deficiency and generalized fatigue, as well as hypersomnia as seen in the case.
- Allergic rhinitis: This patient was experiencing excessive allergic reactions to multiple irritants, which possibly lead to the recurrent nasal polyp growth. Vitamin D deficiency has been previously reported to have a role in allergic rhinitis, along with anosmia.

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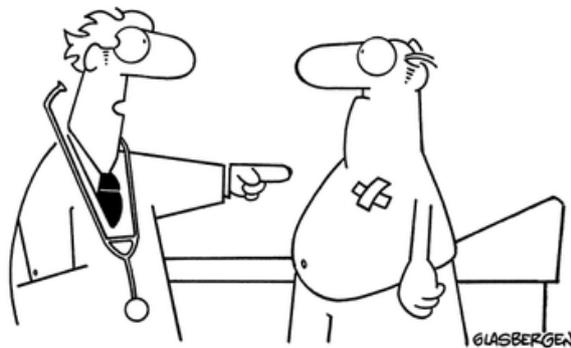
Ibrahim,M.K.M., Elnimeiri, M.K.M. Non-classical presentation of vitamin D deficiency: a case report. J Med Case Reports 14, 126 (2020).
<https://doi.org/10.1186/s13256-020-02454-1>



MEDICAL CROSSWORD



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“Whenever your cholesterol gets too high, a sensor will send out a signal that automatically locks the kitchen door and turns on your treadmill.”

