Into the Future:
Class of 2008 plan the next moves
On the cover: Dedicated to her country: Jehan Al Rayahi, one of four Qatari doctors-in-training in the Class of 2008, has set her sights on a career in radiology and teaching.

At right: Chiaroscuro – candle and lamp cast pools of light at the Welcome Event, September 9 (see also page 24).
Highlights of this issue

6
The right moves: With graduation ahead of them in May, the Class of 2008 have taken to their final year sub internships and electives in the U.S. and Qatar with enthusiasm.

10
Qatar has one of the most extensive newborn screening programs in the world. Dr. Ahmad Teebi, WCMC-Q professor of pediatrics and of genetics, explains its significance.

12
With WCMC-Q students moving onto the international stage, and expanding opportunities in Qatar, we take a look at the bright future for biomedical research in Qatar.

20
Creating a buzz: How pre-medical faculty are using new tools to keep the students on their toes.

22
Faculty and staff joined Qatar Foundation’s campaign to take the message about Education City around the region this fall.
Spreading the word overseas

With 4,000 people attending the event, WCMC-Q’s delegation to the Annual Meeting of the Association of American Medical Colleges (AAMC), November 2-7, seized the opportunity to spread the word about the Medical College among colleagues in North America.

And a massive 50-foot (15 meter) long display gave visitors further food for thought as they learned more about WCMC-Q’s role as part of the global educational reach of Weill Cornell Medical College in New York and its affiliate, NewYork-Presbyterian Hospital.

The WCMC-Q team was led by the Dean, Dr. Daniel R. Alonso and comprised Associate Dean for Admissions and Student Affairs, Dr. Maya Hammoud; assistant professor of pathology, Dr. Gerardo Guiter; Director of Admissions, Lee Askin; Director of Student Affairs, Eric Fry; Director of the Distributed eLibrary, Thomas Williams; Associate Director for Assessment, Dr. Mary Ann Baker; and Student Academic Counselor, Donney Moroney.

Dr. Hammoud gave two presentations at the Washington, D.C. meeting. In one, she presented research into the admissions process at WCMC-Q, using data on 148 students of more than 20 nationalities for the period 2002-2006.

The findings show that meeting pre-medical admission criteria and maintaining a good GPA are the best indicators for predicting success in gaining admission to WCMC-Q’s Medical Program. Dr. Hammoud concluded it is feasible for the Medical College to move towards a one-step admission process, bringing it closer to the practice of the 34 medical schools in the U.S. that offer combined BS/MD programs.

In a second presentation, on the use of portfolios in clinical medical education, Dr. Hammoud made the case for more extensive use of this student-centered approach to learning, in which students maintain a record of, and reflect on, their experiences. It could be extended to postgraduate medical education and even become part of the process of physicians’ lifelong learning, she said.

Dr. Hammoud’s talk was based on her experience as a member of a panel of the Alliance for Clinical Education, a multidisciplinary group that works to enhance clinical instruction of medical students.

New post for Dr. Maya Hammoud

Congratulations to Dr. Maya Hammoud, who was appointed to the post of Senior Associate Dean for Education, December 1. An academic obstetrician-gynecologist, she was a distinguished medical educator and student affairs administrator in the U.S. before joining WCMC-Q in 2006 as associate professor of obstetrics and gynecology, and Associate Dean for Admissions and Student Affairs.

Dr. Hammoud will be in charge of the entire education portfolio of WCMC-Q and will be responsible for furthering the educational mission of the Medical College, providing administrative leadership in the implementation, coordination and evaluation of the Pre-medical and Medical Programs.

With bachelors and M.D. degrees from the University of Michigan, Dr. Hammoud was appointed Obstetrics and Gynecology Clerkship Director at the University’s Medical School upon completion of her residency training. She introduced a number of innovations in the third-year courses, contributed to curriculum development and went on to become Interim Associate Dean for Student Programs at the Medical School.

Dr. Hammoud was recognized for her work by being appointed Chair of the Undergraduate Medical Education Committee of the Association of Professors of Gynecology and Obstetrics, a post that she continues to hold.
Qatar Institute for Biomedical Research (QIBR) is one of three new organizations set up to implement and coordinate research in Qatar. The announcement was made on the final day of the First Conference for Arab Expatriate Scientists, QFIRST 2007, December 10-12.

Its initial focus will be on establishing two programs, one in neuroscience and neurodegenerative diseases, and one in cancer.

Organized by Qatar Foundation, the three-day meeting brought together scientists born in the Middle East but now based in countries such as the U.S. and Canada, and colleagues and stakeholders in Qatar. It followed a preparatory meeting held in spring 2006, where three working groups were formed in the fields of biomedical science, environmental science, and computing and information systems.

Senior leaders and faculty from WCMC-Q attended the meeting, including Vice Dean for Research, Dr. Javaid Sheikh, who participated in the biomedical group.

Qatar has allocated 2.8 percent of its GDP – $1.5 billion annually – to research, in a bid to move towards a knowledge-based economy in which innovation and translational research are keys to sustainable development. Discussions during the meeting focussed on a number of issues central to achieving this goal, including establishing graduate education programs, building capacity and encouraging multi-disciplinary research.

Areas for early investigation by the new Qatar Institute for Integrating Environmental Research are water resources and high-rise buildings, while Al-Khwarizmi Institute for Computer and Information Science and Engineering will focus initially on developing technologies for Arabic language resources and research into the knowledge-based society.

Qatar “as good as it gets” for a biologist

With very low rainfall, high temperatures and a marine environment of exceptional salinity, Qatar’s ecology is unique – yet its biodiversity is both rich and still to be fully investigated by scientists.

These were among the points raised by Dr. Renee Richer, lecturer in biology, during a panel discussion on Environmental Degradation and Conservation: Challenges and Prospects organized by the Center for International and Regional Studies of Georgetown University School of Foreign Service in Qatar, November 12.

“For a biologist interested in how organisms deal with the environment, this is as good as it gets, because the environment is so challenging. It’s fantastic to look at how the different creatures and plants deal with the conditions,” Dr. Richer said in an interview afterwards.

Over 200 people from across Education City gathered at VCU-Q to hear the views of experts from the five universities on campus*, and to join in the following discussion.

Dr. Richer identified a number of factors, notably industrialization and population growth, that are increasing pressure on the environment. Among the consequences are overgrazing leading to desertification, and heavy exploitation of water resources and fisheries.

While fieldwork is being carried out, for example by industry and government, the findings are not available in the international scientific literature, and the status of a number of species thought to be present in the country or its marine environment remains uncertain.

However, the National Biodiversity Strategy and Action Plan now being implemented under the guidance of Qatar’s Supreme Council for Environment and Natural Reserves (SCENR) points the way forward, Dr. Richer said.

“Education is one of the main strategies in the action plan. I think the SCENR recognizes it as being very important.”

Meanwhile, Dr. Richer welcomed the recycling initiative by Qatar Academy. “Education City-wide, there’s a lot we can do, and the more people are aware of the school’s efforts, the more successful it will be,” she noted.

*Speakers were: Dr. Timothy Beach, Georgetown University; Dr. Patrick Linke, Texas A&M University at Qatar; Dr. Deborah Lange, Carnegie Mellon University; Peter Martin, Virginia Commonwealth School of the Arts in Qatar (VCU-Q); and Dr. Richer, WCMC-Q.
Minimally invasive techniques are revolutionizing surgery for doctors and patients alike, offering less pain, minimal scarring and infection, and earlier discharge from hospital - thereby reducing health care costs.

One area where this approach is applicable is in the emerging field of metabolic surgery, bringing the promise of new, curative treatments for diseases such as type 2 diabetes, an epidemic on a global scale.

This was the message from Dr. Francesco Rubino, recently appointed associate professor of surgery at Weill Cornell Medical College, in lectures given at WCMC-Q and Hamad Medical Corporation (HMC) in December.

“We are at the beginning of a new chapter in medicine – it’s a very exciting time,” he commented, directing his message particularly at the many medical students in the audience.

Dr. Rubino predicted that the field is wide open to important discoveries, heralding a new era of work that will be more interdisciplinary and closer to a disease-based model, with significant opportunities for research.

Focussing on surgery for diabetes, Dr. Rubino, who is also Director of a new service in gastrointestinal metabolic surgery at NewYork-Presbyterian/Weill Cornell Medical Center, said the approach originated with the observation that morbidly obese patients who underwent weight loss surgery frequently found their blood glucose levels returned to normal post-operatively.

Along with a study in human subjects from Brazil, the research showed that blood sugar can be controlled by surgery whether or not patients are obese.

Noting that the small bowel is “the most important endocrine organ in the body,” Dr. Rubino hypothesized that overproduction of anti-incretin in this organ could upset the “perfect balance” of insulin within it, leading to diabetes.

The formation this year of an International Diabetes Surgery Task Force, of which Dr. Rubino is a founding member, promises more research in the field. While some 40 percent of the group are surgeons, the majority are specialists in areas such as endocrinology, gastroenterology and nutrition.

As with type 2 diabetes, obesity* is at epidemic levels globally: An estimated 60 percent of the population in the U.S. is overweight, said Dr. Alfons Pomp, introducing Grand Rounds on weight loss surgery at HMC.

Dr. Pomp, professor of surgery, Frank Glenn Faculty Scholar and Director of the Section of Laparoscopic and Bariatric Surgery at NewYork-Presbyterian/Weill Cornell, noted the considerable costs, both personal and societal, of the epidemic.

Whereas dieting and medical treatments do not work as long-term solutions, Dr. Pomp argued that surgery is shown to work in patients who are carefully selected, highly motivated, and followed up for compliance and nutritional status post-operatively.

Surgical options include restrictive procedures – adjustable gastric banding and sleeve gastrectomy; combined restrictive and malabsorptive procedures like the gastric bypass; and primarily malabsorptive surgery - the biliopancreatic diversion. All these operations can be done using minimally invasive techniques.

Laparoscopic techniques mean that a hospital stay of 36 hours is now regarded as the “gold standard” for gastric bypass, Dr. Pomp reported, with most patients maintaining the weight loss after five years, and a good risk/benefit ratio.

For the super-obese**, he outlined a two-stage approach, using a laparoscopic sleeve gastrectomy to achieve initial weight loss, followed by further surgery to effect long-term weight reduction.

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* Obesity: a body mass index (BMI) over 35
** Having a BMI over 50
Writing centers go regional

A utumn Watts, the coordinator of WCMC-Q’s Writing Center, has joined the inaugural board of a regional branch of the International Writing Centers Association (IWCA).

This was one outcome of the first Middle East-North Africa Writing Centers Symposium, held in Doha, October 26-27. Sponsored by Qatar Writing Centers Network*, the meeting gathered representatives of academic institutions from across the region, including all six members of the Gulf Cooperation Council, Iran and Lebanon.

With the focus on developing students’ all-round communication skills, topics on the table included setting up a writing center, working with students as peer tutors and conducting research.

Keynote speaker and workshop leader was Dr. Michele Eodice, director of the Writing Center at the University of Oklahoma and president elect of the IWCA.

Watts said: “Writing centers are gaining increasing attention for their innovative possibilities within education, and the new Middle East and North Africa network will facilitate dialogue and collaboration among universities in this region. The Symposium is just the beginning.”

Also attending were WCMC-Q faculty in the First Year Writing Seminars: Peter Fortunato, senior lecturer, and Drs. Rodney Sharkey and Alan Weber, assistant professors.

*In addition to WCMC-Q, the network includes writing center directors from Carnegie Mellon University in Qatar, Georgetown University School of Foreign Service in Qatar, Texas A&M University at Qatar, Virginia Commonwealth University in Qatar and the College of the North Atlantic-Qatar.

Pen pal program ‘bridges the gap’

F rom ice cream to sleep patterns and from career plans to the U.S. presidential election, WCMC-Q pre-meds and students at Cornell’s Ithaca campus discussed the topics that interest them during the fall semester.

The scheme to communicate across the oceans and bring students on the two campuses closer via email was the brainchild of Dr. James B. Maas, Weiss Presidential Fellow and professor of psychology at Cornell University.

“One of the things that Cornell is trying to do is to make the world smaller, to increase understanding,” he explained during a visit to Doha in October. “The Middle East is so different from the Americas in culture, religion and customs. There’s very little understanding on a person-to-person basis.”

Enter the 101 Ithaca-Doha pen pal program. Using Dr. Maas’ Psychology 101 course as a platform, it invited students taking the course on both campuses to sign up for the email exchange.

Signing up: WCMC-Q pre-meds were keen to join in the pen pal program set up by Dr. James B. Maas and administered by Rebecca Robbins ’10 (pictured).

One point on the final grade for those who wrote a minimum four emails provided an additional incentive to join in.

Administering the program and monitoring the exchanges was Rebecca Robbins, a junior in the School of Hotel Administration, who was also taking the course and working as Dr. Maas’ research assistant.

By the semester’s end, students on the Doha side gave it an enthusiastic thumbs-up.

“My pen pal and I exchanged more than the required number of emails because we ended up having so much in common,” said Maria Ahmad. “We talked a lot about the work we have, and the stress, and we gave each other advice. Additionally, we both clicked over food: We just started talking about the types of cookies we like, ice cream flavors, cakes, chocolate.”

Petro Kostandy summarized: “The program was quite a success for myself and for many others. In terms of ‘bridging the gap’ it allowed us to easily share and discuss our thoughts with students in Ithaca. I’m glad I participated: The opportunity for such an exchange of ideas is just priceless.”

Winter 2007 5
Taking it in their stride
Class of 2008 move towards ‘The Match’

Moving on to the final phase of medical school, the Class of 2008 last summer stepped confidently out of the third year clerkships and into their fourth year electives.

For six of the young doctors-in-training, the step was more of a leap, as they began the year with sub internships in internal medicine at NewYork-Presbyterian Hospital (NYPH).

Their verdict? Ibrahim Sultan, all set on a career in surgery, was wholly positive: “It’s been great. I had a sub internship and two surgery electives in the U.S. and all of them have been fabulous.”

The experience also confirmed him in his career plans. Asked how sure he was, he responded unhesitatingly: “250 percent! At the end of the day, when I go back home, I need to be satisfied with what I am doing. I think surgery is the career I found to be suitable for me.”

Doing the groundwork

Preparations for the fourth year were underway well before the doctors-in-training set foot on a plane to travel to the U.S. The Associate Dean for Clinical Curriculum, Dr. Nounou Taleghani, and the Associate Dean for Admissions and Student Affairs, Dr. Maya Hammoud, worked closely with colleagues in the U.S. to do the groundwork, assisted by staff on both campuses.

Considerable support was provided in New York by Dr. Mark S. Pecker, professor of clinical medicine, Vice Chairman of Educational Affairs, and Director of the Residency Program at NewYork-Presbyterian/Weill Cornell Medical Center.

“The class were very well prepared, both clinically and administratively,” said Dr. Taleghani. “We did a lot of preparatory work, counseling and advising. We brought people from New York to explain how things work, and we used our own experience as U.S.-trained physicians to explain to them what it was going to be like.”

This built on the excellent clerkship experience at Hamad Medical Corporation, Sultan noted.

“As far as knowledge, professionalism and dealing with patients go – everything you need to be a successful fourth year medical student – we were more than adequately prepared from our experiences in Hamad Hospital.”

“Scary…but fun”

Nevertheless, starting the fourth year with month-long sub internships meant the students had to take a lot in their stride once they reached New York.

More rigorous rotations than electives, sub internships require medical students to work more like interns (first year postgraduates).
“They carry as many patients as an intern and do the same load of work,” explained Dr. Taleghani. “It was tough for the students to do it as the first rotation, because they had to get used to a new hospital system and be integrated into a North American, hierarchical residency training program.”

Class members felt they were ready. “It was fun,” said Subhi Al Aref, “because you get responsibilities, and you feel you’ve been working hard for five years to reach this stage: To be responsible for your own patients, to present your patients to the doctors, and to help in the team’s decisions. It’s scary at the beginning, but once it starts, it’s fun.”

Sultan agreed: “Most of us were quick to learn the ropes — we knew who to ask questions of. People were very nice in New York; they understood the fact that we did not do prior rotations in the hospital. Overall, it turned out to be an excellent experience.

“The whole point of a sub internship is to make sure that you have the experience of carrying the responsibility of an intern. You are the primary care-taker of the patient. Of course, you are supervised appropriately, but you have to think about every aspect of patient care. I think that’s an experience that every medical student needs before he or she graduates.”

It was a gratifying four weeks, Al Aref noted. “I proved to myself that I can function as an intern, and this made me very happy. It’s satisfying to know one can be a fully functional intern in one of America’s best hospitals.”

Keeping on track…

While all the medical students chose to do internal medicine sub internships, the choice of electives was made in light of the residencies they planned to apply for. Here, the bigger picture was their intended career.

“We gave the students a lot of advice about which electives are better to take for the specialty they want to enter,” said Dr. Hammoud. “Each student gets up to three months’ electives at Weill Cornell affiliated hospitals and we assisted them with arranging their rotations in New York.”

Determined to pursue a career in anesthesia, Mashael Al Khulaifi did an elective in the field, rotating in both NYPH and the Hospital for Special Surgery, a center for orthopedic cases.

“A typical day would start at 7:00 a.m. and end around 5:00 p.m., although this varied depending on when the operations and procedures were done for the day. I was paired with a resident, and everything was supervised by an attending,” Al Khulaifi said.

“I learned important facets of patient care. I saw new airway devices like the airtrach, glidescope and fiberoptic technique and witnessed emergency situations that heightened my understanding of anesthesia to a whole new level. I worked with many excellent residents and reputable attendings: All-in-all, I was exposed to state-of-the-art anesthesia practice.”

Following electives in endocrine surgery, and in gastrointestinal and bariatric surgery, chosen primarily to keep on track with his planned career, Sultan earned high praise from Dr. Fabrizio Michelassi, The Lewis Atterbury Stimson Professor and Chairman of Surgery at NewYork-Presbyterian/Weill Cornell.

“Sultan was extremely well prepared academically, and he had a broad knowledge of the hospital system in the United States. He demonstrated an outstanding ability to reason and utilize basic science knowledge...He was a vital part of his team while he was on service.”

… and planning the next moves

Over the coming weeks, Sultan intends to do an elective in at least one field he is unlikely to rotate on once he starts residency training.

“I want to be well-versed in surgical aspects of patient care, which I need to know before I start an internship, because I think I would definitely make a better resident that way.

“But I also want to do things that I will not see extensively during the rest of my career, such as cardiology or nephrology. These are important as a surgical resident because you do take care of patients with multiple medical co-morbidities, but you do not get a chance to rotate on such services once you start a surgical residency,” he explained.

(Continued on page 23)
Young Qatari dedicated to serving her country

By Mohamed Amasha

The year 2008 promises to be a watershed in the life of medical students at WCMC-Q, opening a new phase in their career. Ahead lie more challenges and duties towards serving humanity at large as the Inaugural Class receive their MD degrees from Cornell University in the summer.

Among them is Jehan Al Rayahi, one of four Qataris in the Class of 2008. Her purpose is clear: “I want to be a doctor so that I can contribute to the development of my country,” she said.

Following graduation next May, Al Rayahi plans to travel to the U.S. to do residency training, before coming back to work in Qatar.

Al Rayahi reflected on her memories and why she chose medicine. “When I was at high school, I did not know much about the medical profession, but I always wanted to help patients. So I wanted to travel abroad to major in medicine.”

When Cornell University established WCMC-Q in 2001, she seized the opportunity. “I decided to stay in my country and study at the Medical College,” Al Rayahi said.

Looking back to August 2002, when she joined the Pre-medical Program and went through the orientation, Al Rayahi commented: “I became very aware of the opportunities I would have after graduation from the Medical College. I decided to do my utmost to achieve this noble goal.”

She recalled the day before her first-ever class. “I was so worried because I did not know what I would do the next day. But when I was in the class, I mingled very quickly with the professor and my colleagues,” Al Rayahi said, noting that the range of nationalities in the class eased the way for her to exchange experiences, both academic and personal.

Al Rayahi is among 37 Qatari students who are enrolled in Pre-medical and Medical Programs at WCMC-Q among a total of over 200 students from more than 30 countries. Her class has 16 students from countries as diverse as Qatar, Nigeria, India, Syria and Bosnia.

Since 2002, she has traveled three times to the U.S. to conduct medical research in genetics, pharmacology and medicine. During her final year, she is again traveling to the U.S. to take some electives, besides choosing others at HMC.

In addition, she is committed to serving the community in Qatar: “I want to work as a radiologist and also to deliver lectures in the Medical College. I want to contribute with everything I learned in this country.”

Al Rayahi is very optimistic about the future. “I am glad I am among the Inaugural Class: We succeeded through all the past years, because we were taught by professional faculty. I will do my utmost to contribute to the development of my country.”
Aiming to pursue a career in general surgery is Osama Alsaied. Starting late May, he chose electives in radiology, emergency medicine and cardiothoracic surgery at Hamad Medical Corporation, before working with WCMC-Q’s first year medical students as an academic assistant in the Molecules, Genes and Cells course.

“For a career in general surgery, I believe that radiology and emergency medicine are essential,” he said. “You need to know how to read films, how to assess and manage emergency cases.

“In radiology, I usually worked one on one with an attending. I learned that radiologists have a lot of clinical rationale. They put a lot of thinking into disease processes, which was very interesting, and there’s a lot of applied pathophysiology in interpreting the films – I was impressed by that.

“The emergency elective was entirely hands-on. I carried out everyday procedures from blood extraction to enemas to intravenous catheter insertion. I also worked semi-independently caring for medical cases and surgical emergencies, and taking part in minor operation theater procedure.”

Exposure to major operations came with the cardiothoracic surgery elective, where Alsaied was assigned to the team of senior consultant, Dr. Amer Chaikhouni.

“Accommodation of fourth year medical students in cardiothoracic surgery is a pleasure,” Dr. Chaikhouni commented. “It is fairly easy to include them in our daily practice. Cardiac surgery patients offer superb clinical experience to learn basic hemodynamics and invasive monitoring, which are useful for any physician.”

Alsaied explained: “My hands-on experience was to put chest tubes, remove them, remove pacing wires, close wounds and remove sutures. I scrubbed in and actively assisted on every surgery my attending was in, and observed a lot of others.”

Coronary artery bypass operations formed an important part of the workload, and Alsaied took part in procedures as he gained in experience.

“Towards the end, I had the opportunity to harvest the veins from the leg, to be grafted,” he noted.

“All in all, I had a gratifying experience. I absolutely feel the difference from the third year, in the amount of knowledge and the capacity for clinical reasoning I have now. Each day, I’m getting closer to the ‘big picture’ – I’m not there yet, but I can see the pieces coming together.”

“I absolutely feel the difference from the third year” said Osama Alsaied, seen here with HMC consultant pediatric surgeon, and assistant professor of clinical surgery, Dr. Adel Ismail, during his pediatric surgery elective.
Experts from across the world gathered in Doha, November 2-5, to exchange knowledge and experience of screening newborns for genetic conditions from hearing and visual impairment to metabolic disorders and sickle cell disease.

The keynote speaker at the First Qatar International Conference on Newborn Screening was Dr. Ahmad Teebi, professor of pediatrics and of genetics at WCMC-Q. A member of the scientific committee for the meeting, Dr. Teebi is an authority on genetic disorders among Arab populations.

The conference was organized by Hamad Medical Corporation (HMC), under the direction of chief of medical staff of the Women’s Hospital and Director of the Qatar Newborn Screening Program, Dr. Hilal Al Rifai.

Those taking part were from Heidelberg University, Germany; the Hospital for Sick Children, Toronto, Canada; the University of Texas, San Antonio, U.S.A.; and HMC, among other institutions.

Welcoming delegates, HE Dr. Sheikha Ghalia Bint Mohamed Al-Thani, Chairperson of the National Health Authority, said Qatar’s screening program has been built up since 2003, to the point where the Gulf state is now one of only three countries in the world to offer a service covering more than 30 conditions.

Assistance is offered to neighboring countries, in areas including training of personnel, analysis of samples and advice on the management of babies, noted Chairperson of HMC, Dr. Latifa Al Houty.

Dr. Teebi’s paper, Genetic Disorders in the Arab World, provided an historical survey of patterns of migration to and from the region, and traced the origins of a number of disorders and syndromes in the population.

Interviewed afterwards, he explained the purpose
of gathering such information: “I have been working in the field for the past 25 years, so I have developed expertise in genetic disorders in most Arab countries, originating mainly from my studies in Kuwait, Saudi Arabia and Qatar. “We are using the information to study and build up what is needed in Qatar…The purpose is to help people in the country, especially to prevent genetic disorders and handicap in the community.”

The Qatar Screening Program has already revealed a high incidence of several metabolic diseases, such as homocystinuria, an autosomal recessive disease, which can lead to vascular thromboses and intellectual handicap.

Like many other metabolic disorders, homocystinuria is treatable provided that it is picked up at an early stage. Previously, individuals with the disease would not have been identified until symptoms appeared, giving a bleak outlook.

Even where there is currently no treatment available, as with sickle cell disease, identification of a condition can lead to better management of patients and the avoidance of complications during medical or surgical procedures, said Dr. Teebi.

Preventive approaches discussed at the conference included pre-marital or pre-pregnancy counseling of individuals who are known carriers of a condition; pre-natal diagnosis; and pre-implantation genetic diagnosis.*

Dr. Teebi described pre-implantation genetic diagnosis as the way ahead in Qatar. “It’s a good way to avoid having a baby affected by certain genetic conditions,” he explained.

Getting the message across to the general public about newborn screening and related services is essential, he added. “The public should know these services are accessible here: They are available at HMC.”

Prior to the conference, Dr. Teebi took part in teaching a two-day course on metabolic disorders in newborns at HMC’s Education Center. Organized by HMC and Orphan Europe, the course attracted region-wide participation by neonatologists, pediatricians, family physicians, nurses and dieticians.

“This was the first such course in the region, so those practicing in the field know more about what is going on in other parts of the world, and can transfer the knowledge to benefit patients in Qatar and elsewhere,” he said.

Looking ahead, WCMC-Q is now working on the reinstatement of the Arab Genetic Database, developed by Dr. Teebi while at Toronto University. “This would be a huge service to people in Qatar, the Arab world and beyond,” he said. “From our work, the world can learn a lot about human genes and human diseases. This will benefit other populations with similar genes.”

Dr. Teebi was part of an international team that reported in the August edition of *Nature Genetics* that mutations in LRP2 cause Donnai-Barrow syndrome (DBS) and facio-oculo-acoustico-renal (FOAR) syndrome.

DBS is associated with a spectrum of congenital malformations, including facial dysmorphology (abnormal development of tissue), an area in which he is an expert.

The group’s study of a number of families, including two in the Gulf region, resulted in mapping of the disorder to chromosome 2q23.3-31.1, identifying LRP2 mutations in six families with DBS, and one family with FOAR.

LRP2 encodes megalin, a multigland uptake receptor whose role is to regulate the levels of a number of circulating compounds. The presence of megalin is essential for normal embryonic development.

“If you know the gene and you know the function of the gene, such as producing an abnormal protein, then – if you can find anything to suppress or deactivate the protein, or in the future you can use a ‘knockout’ gene – you might prevent some of the bad aspects of the condition,” Dr. Teebi said.

Future pharmacological therapies could be developed to target the megalin pathway, bringing hope for families that carry the mutation.


http://www.nature.com/ng/journal/v39/n8/abs/ng2063.html; jsessionid=80D2FDF5A23D30D5E5C1DEFC316D6E9FE

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*Pre-implantation genetic diagnosis: removal of a cell from a multicell embryo generated by in vitro fertilization to verify there is no disease-causing mutation, before implantation in the uterus.*
Throughout 2007, research activities by WCMC-Q students and faculty gathered momentum. For the first time, a poster was presented by a medical student at an international meeting; another medical student won a prize for his research achievements; and there was significant growth in projects conducted in Doha, with support from Qatar National Research Fund’s (QNRF) Undergraduate Research Experience Program.

Now, students in every class, from first year pre-meds to fourth year meds, are involved in scientific investigations. Several are collaborative projects across centers, and some are international in scope.

This year also saw an increase in the number of summer research fellowships from 12 to 16. The fellowships are awarded by competition and fund students for up to eight weeks in the labs of top researchers at Cornell University and Weill Cornell Medical College in the U.S.

At the Annual Medical Student Research Forum, held October 23, ten medical students gave oral presentations on topics as diverse as asthma and birdsong, while 11 presented posters covering themes from Alzheimer’s disease to protein crystallization. All were the fruits of their research experience over the summer.

The fourth such event organized by the Medical College, and a highlight of the fall semester, the Research Forum demonstrated the truly world class standard of students’ research activities, said Vice Dean for Research, Dr. Javaid Sheikh.

Training the next generation

Opportunities to work with leading investigators are vital to the development of the next generation of biomedical scientists said Dr. Ronald G. Crystal, professor and Chairman of the Department of Genetic Medicine at Weill Cornell in New York.

“Part of our responsibility in academic medicine – and our legacy – is to be mentors, to train people. It’s really the young people that are creative, develop ideas and have enthusiasm. The students are our future, and it’s our obligation to put efforts into training them.”

Like other faculty at Weill Cornell and Cornell University’s main campus in Ithaca, Dr. Crystal has welcomed WCMC-Q students to his lab for a number of years. He considers them a great success.

“I think they are as good as any I have worked with over a 37-year career. I’m very pleased to have them in our laboratory: They do a terrific job, they are enthusiastic, they work hard and they are productive.”

He praised the work of Nigel Pereira ’10 and Mohamed...
Elshazly ’10, whose projects in the lab last summer focussed on understanding the genetic basis of diabetes and developing personalized therapies that could lead to better management of patients in the future. The students won joint first prize for their oral presentations in the Research Forum.

First step onto the international stage

Zeinab Ammous ’09, who worked in his lab in 2006 on an investigation into the interaction of the environment with our genes, went on to present a poster, as first author, at the American Thoracic Society’s (ATS) International Meeting in San Francisco last May.

“Zeinab came to our lab, she worked very hard, she quickly grasped the concepts, and she contributed significantly to the intellectual aspects of the study, guided by our team. This combination of things meant she was deserving of being first author,” said Dr. Crystal.

For Ammous, the poster presentation was the chance of a lifetime: “It was an amazing experience to go to an international conference, in a place I had never visited…I enjoyed every second of it!”

Fielding questions from visitors from all over the world, she found they were as interested in WCMC-Q as in her research, and she took the opportunity to spread the word about the Medical College in Qatar to her audience.

Connecting with the ‘real world’

Apart from interacting with the scientific community, the young doctors-in-training also need to know how to communicate their research to society at large. While Dr. Crystal’s team prepared Ammous for her presentation in the U.S., participants in this year’s Research Forum at WCMC-Q were given training by Dr. Sheikh.

“While we want them to value and develop a passion for basic research, we encourage them to always be thinking of the ‘real world’ benefits of such research to their patients. By training them to communicate their ideas clearly, we are trying to ensure that the general public also understands and begins to share their passion and enthusiasm for this most important endeavor,” Dr. Sheikh said.

The evidence is that the presentations are improving year on year, in terms of quality of slides and self-possession of the speakers, for example when taking questions from the audience. This was picked up by Dr. Imad Khadduri, Undergraduate Research Experience Program, QNRF:

“I was very impressed. The students were excellent and their capability in giving presentations, never mind the science, was very impressive. With such potential, there’s a good future here for research activities.”

Bright future for biomedical research in Qatar

Increasingly, the collaborative and international nature of scientific research is emerging as a feature of the students’ experience. Since 2006, Dr. Crystal’s team has...
Dr. Javaid I. Sheikh is Vice Dean for Research

Javaid I. Sheikh, MD, MBA, has been appointed Vice Dean for Research at WCMC-Q. He comes to us from Stanford University School of Medicine where he was a Professor of Psychiatry and Behavioral Sciences, and Chairman of the Board, Palo Alto Institute for Research and Education. Dr. Sheikh was also Director, Cooperative Studies Program, Clinical Director for the Mental Illness Research, Education and Clinical Center, and Research Director for the National Center for Post-Traumatic Stress Disorder at the Stanford affiliate VA Palo Alto Health Care System, where he also served as the Chief of Medical Staff from 2001-2006.

Dr. Sheikh is an internationally renowned researcher in the area of anxiety disorders, chronic stress related conditions and geriatric psychiatry. He has published more than 125 scientific articles and more than 70 abstracts from proceedings of scientific meetings. Over the years, Dr. Sheikh has received consistent research funding from multiple federal and private institutions in the U.S., including National Institutes of Health (NIH) and Veterans Administration. His most recent investigations have focused on the interface of central fear circuits and sleep architecture in patients with chronic anxiety disorders. Funded by the NIH, he and his colleagues have recently completed pioneering studies of sleep architecture in patients with anxiety disorders using low burden methodologies (e.g. life-shirt, sleep mattress) in naturalistic settings. This work will contribute substantially toward better understanding of the pathophysiology of these complex and chronic disorders. Dr. Sheikh was listed in the “Best Doctors in America” from 1997-2001.

worked closely with colleagues at WCMC-Q and at Hamad Medical Corporation (HMC) on two proof of concept projects, and a physician from the Corporation was the first author of another poster at last May’s ATS meeting.

“We have been very pleased to work with our colleagues in Doha,” Dr. Crystal said. “It’s really expanding into a significant project, and we are very interested in working with Dr. Alonso and Dr. Sheikh to expand the research program in Doha.

“Our goal is to help develop research there, by training people and developing capacity at the medical school and Hamad Hospital, to establish a first-rate biomedical research program that’s admired throughout the world.”

Generating scientific knowledge of international standard that is in tune with the needs of Qatar and the region is a top priority for the Medical College, Dr. Sheikh said.

“Three of the projects we heard about (in the Research Forum) are mostly, or in part, being done here in Qatar: one on asthma, and two on diabetes and drug therapies respectively. This is just the beginning and within the next year or two we should be able to conduct most of such research in Qatar.

“With time, students will be provided equally with opportunities to do research here in the Gulf.”

There was praise from Dr. Khadduri for the initiative taken by the Medical College in promoting student research of relevance to the country: “It’s required, because Qatar is very interested in research, not only for the sake of the research – in itself a noble cause – but also as it relates to the country.

“Once the students get a taste for research, and they need encouragement to continue, we are willing to offer grant incentives. It is a complementary step to what they have started.”

For Ammous, there was no doubt that her early experience of work at the bench would influence her choice of career.

“I’m thinking of combining clinical work and research. That’s why, as I choose my specialty, I’m looking for something that is interesting in research, and that I would look forward to working in.”

There is much to look forward to, here in Qatar.
Appointments to the faculty

Bakr Nour, MD, PhD, FACS, is professor and Vice Chairman of the Department of Surgery and Director of the Surgery Clerkship. A graduate of the University of Alexandria, Egypt, Dr. Nour went on to earn both master’s and doctoral degrees in surgery. He joined the University of Pittsburgh Medical Center in 1982, where he obtained a pediatric surgery fellowship, followed by an abdominal organ transplant fellowship working with Dr. Thomas Starzl.

Following a period as assistant professor of transplant surgery at the University of Pittsburgh, Dr. Nour became clinical assistant professor at Oklahoma University, Tulsa, and adjunct clinical professor at the University of Texas at Arlington School of Nursing.

From 1994, he was Chief of Pediatric Liver Transplantation and an adult liver transplant surgeon with INTEGRIS Health. Dr. Nour performed more than 260 liver transplants, of which 16 percent were in children; he also performed Oklahoma’s first isolated intestinal transplant and multi-visceral transplant.

During more than five years as Director and Chairman of the Institute, Dr. Nour oversaw significant expansion of its activities. He has published over 150 scientific articles and book chapters, and authored the Fellows Manual for Pediatric Transplantation at the University of Pittsburgh. He is a member of several professional associations and a founder-member of the Small Bowel and Multi-visceral Transplant Team in Pittsburgh.

Christopher Triggle, PhD, recently joined WCMC-Q as professor of pharmacology from Royal Melbourne Institute of Technology (RMIT) University, Melbourne, Australia, where he was innovation professor, Director of Biotechnology and Chair of the Microvascular Research Group.

A graduate of the University of East Anglia, UK, Dr. Triggle earned his PhD from the University of Alberta, Canada. He was Associate Dean for Basic Medical Sciences in the faculty of medicine at Memorial University, Newfoundland, from 1973 to 1990.

Dr. Triggle then joined the University of Calgary, where he held a number of posts including Associate Dean for Research (Medicine), head of the Department of Pharmacology and Therapeutics, and the Alberta Heart and Stroke Foundation Endowed Chair in Cardiovascular Research.

With a special interest in vascular disease, Dr. Triggle has published over 160 papers, and has actively participated in international meetings in the field. His industry appointments have included Preclinical Research Director/Consultant for Ciba and Novartis Canada. Dr. Triggle was president of the Pharmacological Society of Canada from 1989 to 1991, and of the Western Pharmacological Society, 1996-7. He has served as Chair and member of numerous peer-review grant panels in Canada and for the National Institutes of Health.

Rachel Koshi, MBBS, MS, PhD, is professor of anatomy in surgery. She was formerly head of the Department of Anatomy at the Christian Medical College (CMC), Vellore, India, where she had previously earned her MBBS, MS and PhD degrees.

Dr. Koshi has extensive experience of teaching and mentoring medical students. Her department aimed to provide them with a complete knowledge of gross, microscopic and developmental anatomy relevant to clinical studies and the anatomical basis of common clinical conditions. Promoting development of the skills and attitudes needed by physicians to meet the health care needs of India was an important part of her duties.

Her special research interest has been in developing animal models for the study of diarrhoeal diseases and in characterizing ultrastructural changes in the enteric microvasculature. She has also published papers in other aspects of anatomy and in medical education.
Khaled Machaca, MS, PhD, is associate professor of physiology and biophysics. A graduate of the American University of Beirut, he earned his MS degree from the University of Georgia and went on to conduct doctoral research on spermatogenesis in the model genetic system C. elegans at Emory University. This was followed by a postdoctoral fellowship studying the mechanisms by which Ca²⁺ signals regulate channel activity.

Dr. Machaca started his laboratory at the University of Arkansas for Medical Sciences in 2000, with a primary focus on oocyte maturation, the cellular differentiation pathways involved in preparing the egg for fertilization. Dr. Machaca’s research has been continuously funded by the National Institute of General Medical Sciences in addition to other funding agencies such as the American Heart Association.

Dr. Machaca is a reviewer for several funding agencies such as the National Institutes of Health and the National Science Foundation. He reviews for top tier publications including the Journal of Biological Chemistry, Developmental Biology and the American Journal of Physiology, and serves as Associate Editor for the Journal of Cellular Physiology. Dr. Machaca has extensive experience teaching undergraduates, graduate and medical students, and he has mentored several students and postdoctoral fellows.

Mohamud Verjee, BSc (Hons), MBChB, DRCOG, CCFP, is assistant professor of family medicine, and Director of Primary Care and of the Clinical Skills Center.

After earning both bachelors and medical degrees from the University of Dundee, UK, Dr. Verjee completed postgraduate studies in family medicine at Oxford University and went on to practice for 16 years in Oxfordshire. From 1990 to 1994, he was a clinical tutor in the Department of Community Medicine and General Practice at Oxford University.

Dr. Verjee moved to Canada in 1994, practicing first in Newfoundland and then joining the Department of Family Medicine at the University of Calgary, where he rose to the rank of clinical associate professor and Clerkship Director in Family Medicine.

During his time in Calgary, Dr. Verjee taught medical students, residents and international medical graduates. He was a chief examiner for the Medical Council of Canada Licentiate examination, and a consultant with both the Alberta International Medical Graduate Program and the Medical Communication Assessment Program of the university.

Dr. Verjee’s areas of research interest are in thyroid disorders, diabetes, cardiology and glaucoma.

Hong Ding, MD, PhD, has joined WCMC-Q as instructor in pharmacology. She earned her MD degree from Zhejiang Medical University, Zhejiang Province, China, in 1989 and was a staff physician from 1989 to 1993 in the Department of Internal Medicine, Hangzhou Hospital.

Dr. Ding went on to earn her PhD from the Graduate Department of Cardiovascular and Respiratory Sciences, University of Calgary in 2001, supported by scholarships from the Canadian Hypertension Society and the Heart & Stroke Foundation of Canada. She pursued postdoctoral studies at Ottawa University and Yale University, before taking up the post of senior research scientist in the School of Medical Sciences at Royal Melbourne Institute of Technology (RMIT) University in Melbourne, Australia, where she conducted research in the Microvascular Research Group, and taught honors and undergraduate students.

Dr. Ding has a career total of 20 peer-reviewed publications and has held collaborative grant support from Diabetes Australia Research Trust. She has used her expertise in a wide range of physiological, pharmacological and molecular techniques for her studies of endothelial-vascular smooth muscle communication in physiological and pathophysiological states.
Foundation Program faculty

Members of faculty appointed in the Foundation Program, which opened in the fall after a successful pilot last spring, are (from left to right):

Marina Dodigovic, PhD, visiting assistant professor teaching English as a second language. She has a PhD in computer-assisted language learning from the University of Bremen, Germany, in addition to an MA in English and a BA in language education. Her teaching career at tertiary level spans almost two decades and includes English as a second language, writing, linguistics and English teacher training.

A winner of several international young scholars awards and research grants, Dr. Dodigovic has a keen interest in second language acquisition. Her most recent book is dedicated to the role of artificial intelligence in second language learning.

Krystyna Golkowska, PhD, senior lecturer in English. With a PhD in English literature from the Jagiellonian University, Poland, Dr. Golkowska has taught at both Ithaca College and Cornell University.

At Cornell she worked for many years in the Intensive English Program in the Department of Modern Languages; she also taught undergraduate and graduate courses in the School of Continuing Education and Summer Sessions, and the International TA Development Program. Other responsibilities included assessment, curriculum development and TA supervision. Her research interests range from English literature to language acquisition, sociolinguistics and cultural studies.

Imad Makki, PhD, senior lecturer in physics and mathematics, and Director of the program, who joined WCMC-Q from the Ford Motor Company in the U.S., where he was a technical expert and researcher in the Research and Innovation Center.

Dr. Makki received his PhD in electrical engineering in 1995 from Wayne State University in Detroit, Michigan. The emphasis of his graduate experience was directed toward robust control system technologies and applied mathematics with applications to automotive systems. His graduate research concentrated on creating stability and robustness conditions for nonlinear systems using an $H^\infty$ framework.

While with Ford, Dr. Makki initiated, funded and managed multiple research collaboration programs with several universities in the U.S., leading to a number of patents and conference publications. He has received innovation and research awards including the Henry Ford Technology Award.

Dr. Makki has over eight years of academic and teaching experience at Wayne State University, Purdue University, and the University of Detroit. He has served on graduate students advisors committees at both MS and PhD levels.

Renee Richer, PhD, lecturer in biology. She received her BA in biology from the University of Chicago and her PhD, also in biology, from Harvard University in 2004. Her dissertation work focused on increasing atmospheric CO$_2$ and carbon cycling in savanna ecosystems of southern Africa. Before joining WCMC-Q, Dr. Richer was assistant professor and Director of the Environmental Conservation and Research Center of the American University of Armenia.

Dr. Richer’s work with bird life in Armenia has recently been recognized by the Whitley Award, the UK’s largest conservation award.

Sheila Qureshi, PhD, senior lecturer in chemistry. After obtaining her BSc in chemistry and biology from Goldsmiths College, University of London, she went on to earn her PhD in synthetic organic chemistry from the University of Wales Institute of Science and Technology (now University of Cardiff), UK.

Dr. Qureshi’s postdoctoral research at the University of Zurich, Switzerland, investigated glycoisidation reactions with neuraminic acid; her later work in the chemical industry involved pharmaceutical production, support, and development. Also qualified in education, Dr. Qureshi had several years’ experience in foundation programs for Hertfordshire University before joining WCMC-Q to work on the development of the pilot Foundation Program, supporting both students and faculty. Her teaching continually strives to actively involve students as independent learners.
Adjusting to a new way of life, meeting high academic expectations, learning to look after yourself: the freshman experience is quite a learning curve. We met seven students, who shared their experiences of navigating the new waters of life at WCMC-Q.

1 – Pre-med students

Yes, it’s a sea change, said Mohammed Al Hajri. “It’s totally different from high school. The amount of work is much more intensive.”

For many, the change is attractive, indeed sought-after. “It’s quite hectic: They give you more responsibilities, ask you to use your own initiative. I really feel I have responsibility for myself,” commented Rim Mesraoua.

Her family is in Doha, but Mesraoua has elected to live on-campus. “I want to have the ‘College experience’ and I think it can’t be fulfilled unless you really enter into the community. It’s also part of having more responsibility,” she said.

Wealth of experiences

With 61 students admitted to the Pre-medical Program in fall 2007, the first year class is filled to capacity. Academically strong, culturally diverse, gifted in everything from the arts to sport and with an impressive record of community service, the class is broadly typical of the WCMC-Q student body as a whole.

Some enrolled knowing what to expect, after taking the pilot Foundation Program in the spring semester. “They taught us how to prepare in advance and that really helped,” Iqbal El Assaad noted. “This way, you get used to WCMC-Q. It’s not like coming from high school.”

What is new for El Assaad and Al Hajri is the hands-on work in the laboratory, an integral part of the program.

Asked if he is enjoying it, Al Hajri said unhesitatingly: “Yes! I especially like the experiments. It’s interesting work.”

The chemistry lab is “really fun” El Assaad said, adding: “The most important thing is to go prepared. It’s not difficult if you read the manual before you go and solve the lab questions.”

For Mesraoua, the diversity of the students is a major strength. “I love the fact that people come from so many different places. During the English seminar classes, I have found it inspiring because I learn so much about other people, and myself, from the discussions we hold.”

She felt this is excellent preparation for a career in medicine. “When you practice as a physician, you will meet patients from different backgrounds, and you might not understand their traditions. Having contact with so many different people so early might help us for the future.”
Managing the challenges

If it is not all plain sailing, then there are strategies for success. Time management is key, said El Assaad, who, at fourteen years old, is the youngest student ever admitted to the Pre-medical Program.

“You always have work to do but, if you know how to handle it, you’ll be fine... For example, you should do the (biology) reading assignment before each lecture. If you don’t, you get lost in the lecture.”

Keeping up with the reading has the added benefit of opening new avenues to explore, she noted: “Especially with biology, when I read an assignment, I find I want to know more!”

When they need advice and assistance, the students turn to upperclassmen, and to faculty. As El Assaad put it: “The professors are here to help you. There’s no question you ask and there’s no answer for it.”

Teaching assistants (TAs) also offer valuable support. “They are very helpful,” said Al Hajri. “We disturb them with many questions and they don’t complain. Whenever I go, I find one of them to help me, any time.”

While the academic side of life tends to be uppermost in their minds, life outside the classroom is also important. As Mesraoua observed: “Of course, you have to have a social life. But Qatar Foundation takes care of us. There are so many activities organized - for instance, during Ramadan there were iftars (to break the fast) and the Ramadan Bazaar. It’s really nice, and it gives us the opportunity to bond with other students.”

2 – Foundation students

New this year, the Foundation Program is designed to assist students coming from non-English language schools as they adjust to studying at WCMC-Q.

The program opened in August with 18 potential pre-meds pursuing courses of study designed to help them prepare for the challenges ahead. As the first semester progressed, their enthusiasm was ignited.

“We are learning the skills that a student needs to take the pre-med more easily,” said Zahra Makki. “I think we’ll be more adapted to the environment, we’ll know the professors, staff and students – so we’ll be more comfortable.”

Senior lecturer in physics and Director of the Foundation Program, Dr. Imad Makki explained that the year-long program follows a successful pilot project run in the spring semester 2007 (see Qatar Chronicle issue 5).

(Continued on page 23)
The lecture hall is almost full, there’s quite a buzz. As they watch the screen, pre-med students see a multi-choice question come up – then pick up a small transmitter (‘clicker’) and point it at the screen, clicking away.

A flurry of colored boxes appears, each carrying a six-digit number, rapidly filling a portion of the screen. After a brief time – 45 seconds, to be precise – up comes a bar chart of the class response, with the percentage of the class who answered each question and a symbol indicating the correct answer.

The student reaction? It might be a quiet murmur, or comment and laughter among groups; but it’s just as likely to be cheering and clapping, particularly when a large majority of the class gets it right.

Perhaps surprisingly, this is a biology seminar and the topic is hormone replacement therapy (HRT). We are in the middle of a pre-seminar quiz (above); it’s informal and ungraded, but there’s no doubting the students’ interest and participation.

Teaching the seminars is professor of physiology and Associate Dean for Pre-medical Education, Dr. David Robertshaw. His goal here is to assess how well the class members have grasped the pre-class reading assignment.

Dr. Robertshaw regards the personal response system (PRS) as a great teaching tool. It’s much more efficient than a paper-based quiz, effective in grabbing and keeping students’ attention and, with its in-built capability to track individual responses, it allows faculty to check how well the students are following the classes.

He introduced the PRS to pre-medical teaching at WCMC-Q after seeing ‘clickers’ in action at Cornell University in Ithaca, where they are widely used, particularly in teaching the sciences.

“I was impressed with the system right from the beginning,” Dr. Robertshaw explains. “The times I saw it used, in biology, I thought it was highly effective. I talked to students afterwards and they liked it – they wished it were used more extensively.”

WCMC-Q students are similarly positive. “The technology gives you the chance to know how the whole class thinks without actually talking. It saves time and makes the process faster,” says Maen Abou Ziki.

“The questions focus your attention towards the main points. They help you to think critically, because they check your understanding of the material - teaching you to ask questions when you are studying the reading assignment.”

In fact, this flexible system has many applications in the classroom, from reviewing pre-lecture reading and post-lecture understanding, to regular refreshers during a lecture, to pre-demo surveys to find out what students predict is going to happen.
TA Johnhenri Richardson used a PRS in physics classes during his junior year at Cornell, usually at the end of lectures.

"It definitely did elicit a response from the class as a whole," he comments. "I think it was a very effective way of quickly judging everyone, of gauging whether we had been paying attention and understood what the professor talked about five minutes before."

Depending on the response, there could be further discussion of the material among the class, he adds. "If there was a split between two different answers, then he would usually give us more time to discuss the question and see if he could get a change in the answer."

Weiss Presidential Fellow and professor of psychology at Cornell, Dr. James B. Maas recently introduced the PRS into his Introductory Psychology course, which WCMC-Q’s second year pre-meds take via videostreaming.

He explains: "It enables the students, especially in the setting of larger classrooms, to feel they are actively participating in the educational experience.

"Typically, I ask eight or nine questions per session, parsed throughout the lecture, depending on the topic we are dealing with. We rarely have more than two or three questions at a time."

So the students are kept constantly on their toes. For Dr. Robertshaw, this is one of the main beauties of the system, given that students’ attention spans in a passive teaching situation are up to 45 minutes, and they need to re-group regularly.

“One of the most effective uses of the PRS is to find out: ‘Are the students with you?’ It keeps the students alert...The professor can also make some adjustments and elaborate on a point if it was not clear to the majority of the students.”

Such adjustments require flexibility of approach, observes professor of physics, Dr. Roger Hinrichs. He has used the system for several years, and likes it.

“I look to everybody, not just the ’A’ students, and everybody has to contribute...The system tells me right there how people are doing.

“It’s not always easy, but you can repeat something (if necessary), try a different way. It means your teaching goals for the day may be altered and your schedule changed, and you have to be willing to do that.”

Dr. Maas often uses the PRS to conduct class surveys, designed to gather information about students’ habits or attitudes. These, in turn, support the subject matter of his lecture.

Teaching a class during a visit to Doha, he begins with a quick poll of the students’ sleeping habits, allowing them just enough time to give totally honest replies, rather than the “socially acceptable response.”

The students engage with enthusiasm, providing Dr. Maas, and the whole class, with a snapshot of the group – while also preserving their anonymity.

“The ‘clickers’ and class polls often make the discussion much more relevant and interesting,” says second year pre-med Petro Kostandy. “And yes, sometimes it does surprise me to find out the results.

“It’s easy to make assumptions about what others think and what they do. Polling brings about immediate results that are usually different from what we may have assumed.”

His colleague, Maria Ahmad finds the graphs a simple but effective visual tool for communicating information about the student population. And since each number is known only to the individual user, the system’s anonymity is a real plus.

“Some of the questions may be somewhat personal, and it is great that we feel we can answer openly without being hindered by the judgment of others,” Ahmad says.

A strong proponent of active learning, Dr. Hinrichs has also brought the PRS into normally passive situations such as demos. He believes this really makes the students think the science through.

“I ask the students to tell me what they think the result of the experiment will be - it might be an optics question, or one with a pendulum - and to choose a,b,c,d or e. That way, they think about what’s going to happen and they vote.

"Then I do the experiment. They can see if they were right or wrong, and we can talk about why.”

The time period for answering is from 30 seconds to a minute in most teaching situations. This is ample, he notes: The important point is the active participation achieved.

“In the long run, this may be the best way for students to learn the subject matter. Several of us think the students will keep their knowledge longer as they engage more in the topic.”

But what happens if a student clicks on the wrong button, or has a flash of inspiration and realizes too late it should be c – not a? Well, that might be difficult – as far as we could tell, the vote may be quick, but it’s also final!
Crowds flock to discover Education City

Keen to tap the potential of the region’s burgeoning population of young people, Qatar Foundation’s Discover Education City campaign took off early October on a series of flying visits to multiple centers, from Bahrain to the United Arab Emirates (UAE).

On the schedule were fairs, school visits and meetings with school counselors in Bahrain, Kuwait, Oman and a number of emirates in the UAE.

Meanwhile, the campaign to reach out to people in Qatar intensified, with recruitment in schools in and around the northern town of Al Khor included in the campaign for the first time.

This year’s WCMC-Q effort began in Egypt, October 4 and 5, where professor of surgery and acclaimed transplant surgeon, Dr. Bakr Nour; director of admissions, Lee Askin; and public affairs specialist, Noha Saleh, represented the Medical College in the AMIDEAST College Fairs in Alexandria and Cairo.

Alexandrian-born Dr. Nour spared no effort to convey the philosophy behind the establishment of a medical school in Qatar by Cornell University and the opportunities it offers, while Askin explained aspects of the American educational pathway and its admissions criteria to high school and university students who flocked to the events.

Some 600 students were estimated to have attended the fair in Alexandria; in Cairo, the visitors topped 800.

Presentations were also made in some of the country’s most prestigious schools, along with iftars (Ramadan meals) for school counselors.

Interest in WCMC-Q was high, Askin reported, and the counselors were well prepared to advise their students. “Awareness of the unique opportunity that Cornell’s medical campus in Qatar represents seems to be developing more and more in Egypt,” he said.

The event in Bahrain was also crowded; and there was a new thrust by Qatar Foundation to reach out to students in government schools, in addition to the private schools normally on the schedule.

Maysoon Dalees, admissions specialist, said the audience was both interested and well informed: “I was really impressed. The level of awareness of Education City, and the level of knowledge of the academic requirements (of WCMC-Q) was really high.”

Outreach in northern Qatar

Efforts to reach a wider audience, and to explain the breadth of Qatar Foundation’s activities, were given impetus this fall in Qatar, with a mini-fair in Al Khor, November 15 following the Discover Education City event in Doha, October 28 (above).

A healthy turnout of WCMC-Q faculty, students and staff was on-hand in Doha to field questions from potential students and their families keen to find out more about the reality of studying at the Medical College.

Maysoon Dalees said the fairs offer opportunities to ask about the detail, with questions often focussing on fees and Qatar Foundation’s financial aid program.

“We can give much more information in the exhibition. When people come to the booths, they really start to discuss things on an individual basis – it’s more personalized,” she explained.

In Al Khor, students from some 15 schools in the town and surrounding area were invited to attend the mini-fair, hosted by Qatar Leadership Academy.

The response from visitors to the events was positive. “I have a lot of dreams to achieve. Today, I had the chance to talk to a number of American universities here, and now I know what I want: I want to be a doctor,” said Jordanian high school student Ali Al Saadi.

And one parent was reassured by the presence of top-quality higher education institutions in Education City: “It is wonderful that my daughter will be beside me and learning here in Qatar. She will also get an American degree, and I am sure she will have many opportunities in the future.”

With additional reporting by Noha Saleh and Mohamed Amasha.
During his stay in New York, Sultan received significant guidance on planning the right career moves from faculty clinicians.

“Career counseling was provided by Dr. Thomas Fahey III, who is Director of our Surgical Education Program. Dr. Fahey reviewed at length Sultan’s list of programs to which he is applying, and reviewed and counseled him on his personal statement,” Dr. Michelassi said.

“In addition to meeting with Dr. Fahey, Sultan sat down on multiple occasions with our administrative chief resident, Dr. Carrie Lubitz, to review his residency application materials and career plans.”

Al Aref also took advice from many in order to narrow his choice of career and electives. “We had much support from Dr. Hammoud and Dr. Taleghani, and each of us had an advisor in New York,” he said. “We spoke to the residents and interns in NYPH – each of us had so much input, and we had to make our choices according to what’s important to us and how we see our future.”

**Facing up to ‘The Match’**

Since Al Aref, Al Khulaifi and Sultan aim to do their residency training in the U.S., they now have ‘The Match’ ahead of them. This is the process by which fourth year med students apply for residency training in hospitals in the U.S., go through interviews and wait to hear – on ‘Match Day’ every March – onto which program they have been accepted.

“It’s nerve wracking to wait for it,” Al Khulaifi said. “We have started sending out our applications to different programs, and what lies ahead is unknown for now.”

Al Aref outlined his goal: “I’d love to be at Weill Cornell. I’m interested in an academic institution because I’d like to be a clinician and a researcher at the same time. So Weill Cornell is my top choice.”

**Navigating new waters**

The curriculum addresses the students’ needs in the basic sciences, math and English, and builds the skills central to success in their future studies.

A multimedia course in English for academic purposes, introduced in the fall, focuses on college level reading and writing assignments, understanding academic lectures, and participating in academic discussions. It also includes work in the language lab, giving presentations and taking part in videotaped interviews.

Projects planned for the spring semester include a newsletter and yearbook, Dr. Makki said. “All this is possible because the students are enthusiastic and eager to learn.”

It’s a far cry from high school, the students agreed. Days in class are longer, the homework load is greater; there is less memorization and an emphasis on critical thinking.

“They use more real-life applications and teach us to analyze them,” said Zahra Makki. “In high school, we used to have some problems and use critical thinking, but not to this extent. Here we have to see the problems from all sides.”

For Ahmed Al Saei, the approach is stimulating: “The kind of questions we get, not only in class but in our homework assignments, require analysis and thought.”

There is huge interest in the weekly career seminars given by WCMC-Q’s medical faculty. They provide an insight into the breadth of opportunities in the profession, how physician-scientists organize their workload, and how they combine career with family commitments: “It’s really incredible!” said one student.

There are no second thoughts about being foundation students. “I would encourage others to join, because it’s a great program,” said Sara Al Suwaidi. “You will love medicine more, because the people around you are studying it. The people around you want you to achieve this long-term goal, so you are even more motivated.”

Extending their pre-med studies by a year is not a concern, Amna Al Khuzai said: “We are not counting the number of years: medicine does not have an end.”
For the first time, WCMC-Q’s Annual Welcome Event at the Four Seasons Hotel, September 9, included the presentation of awards to long-serving (five years or more) members of faculty and staff – in line with the practice of the “mother ship” in New York.

_Pictured here are:_

Professor of biochemistry, Dr. Suresh Tate (1), and Director of finance, Bruce Montgomery (3), who leave the Medical College this year, receiving plaques from Dean Alonso in appreciation of their service.

2 (Left to right) Syed Ahmed Hasnain, Alexander Tejada and Barbara Polkowski, senior lab technicians for physics, chemistry and biology respectively, with Dr. David Robertshaw, after receiving their awards.

4, 5 Welcome to the medical profession: At the White Coat Ceremony, September 10, the Class of 2011 gathered with Dean Alonso and Dr. Maya Hammoud. Among the faculty members presenting stethoscopes to the young doctors-in-training was Dr. Bakr Nour, seen with Karl Migally.

6 HRH Crown Prince Philippe of Belgium and HRH Crown Princess Mathilde d’Udekem d’Acoz, accompanied by Dr. Abdullah Al-Thani, Qatar Foundation’s Vice President for Education, were welcomed to the Medical College, November 7, by Vice Dean for Administration, Ms. Havva Idriss.
The President of Bulgaria, HE Georgi Parvanov and Mrs. Zorka Parvanova were escorted by Dr. Saif Ali Al-Hajari, Vice Chair of Qatar Foundation, as they arrived at the Medical College, November 8.

Pictured with Vice Dean Idriss during a visit to WCMC-Q are (left to right) Stephen M. Cohen, Executive Vice Dean for Administration and Finance, and Associate Provost, Weill Cornell Medical College in New York, and officials from NewYork-Presbyterian Hospital: Hussein Tahan, Executive Director, International Health Services; Jose Nunez, Vice President, International and Corporate Healthcare Services; Dr. Herbert Pardes, President and Chief Executive Officer; and Emme Deland, Senior Vice President, Strategy.

Dr. Mohamud Verjee (center) presented Michael Koth, General Manager of the InterContinental Hotel, with a certificate of appreciation, December 4. WCMC-Q faculty and medical students were granted behind-the-scenes access to the hotel for the public health module of the Medicine, Patients and Society II course. Also in the picture: public affairs specialist Noha Saleh (second from left) and members of the hotel’s management.

As students gathered to break their fast at sunset, colorful traditional costumes brought a party atmosphere to a Ramadan iftar organized by the Medical Student Executive Council-Qatar in October.

Rounding off the semester with some intensive exercise, WCMC-Q students participated with enthusiasm in a relay race as part of the Wellbeing Week organized by the American Medical Student Association-Weill Cornell chapter, early December.
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