Weill Cornell Medicine-Qatar

Foundation Program
Achieving the Dream

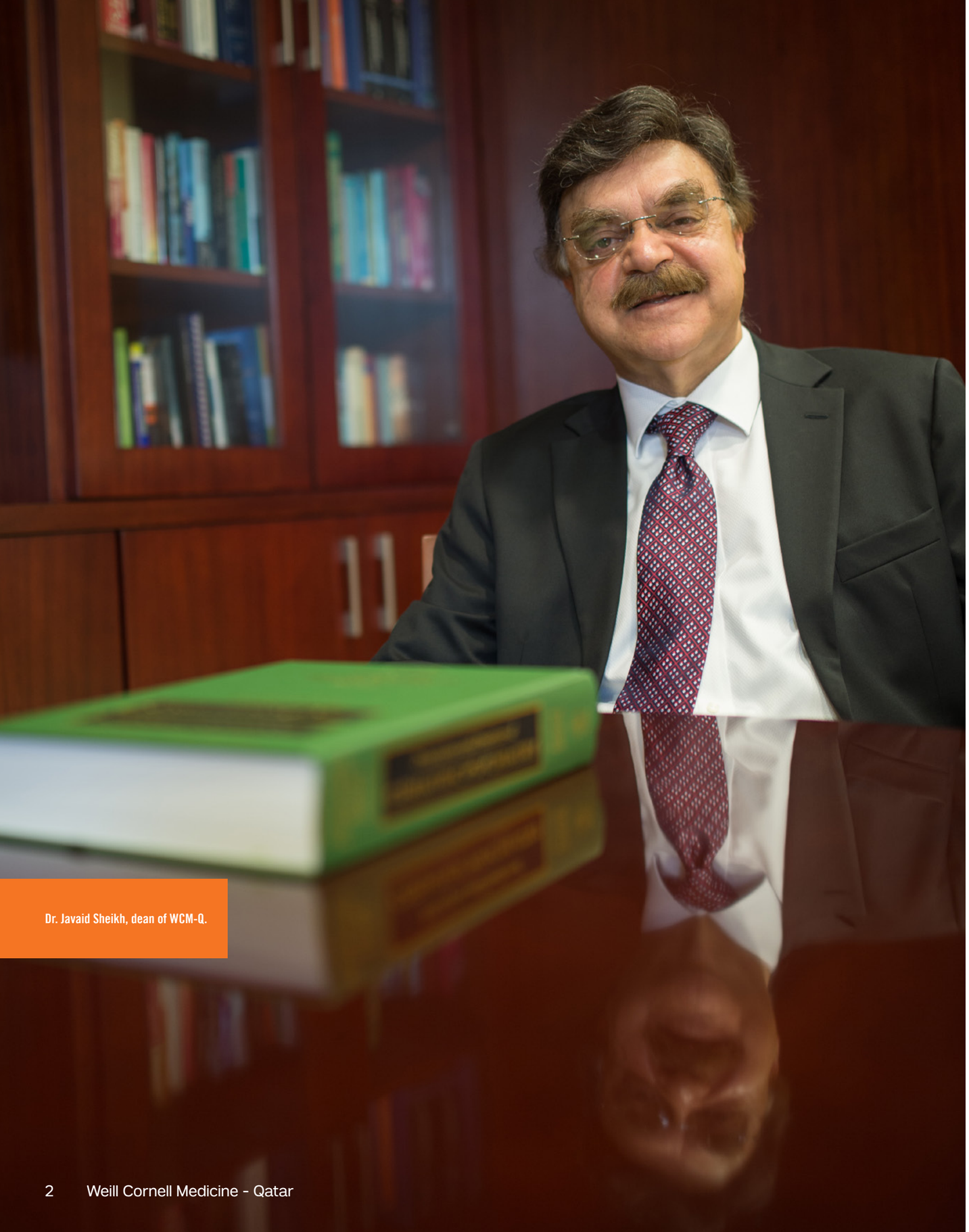
البرنامج التأسيسي
ويتحقق الحلم

Teach.

Discover.

Care.

10th anniversary



Dr. Javaid Sheikh, dean of WCM-Q.

Celebrating a Decade of SUCCESS

At Weill Cornell Medicine-Qatar we feel fortunate to be able to provide hardworking and committed Qatari students with the opportunity to learn how to give that greatest of gifts – good health – to other members of our community. We feel truly blessed to be able to do so.

For this reason, back in 2007 WCM-Q launched the Foundation Program, a dedicated course of study designed to provide a pathway for talented local students to facilitate their journey from high school to our Six-Year Medical Program, and from there onwards to successful and rewarding careers in medicine.

The majority of Foundation Program students come to us from high schools with traditional curricula where much of the instruction is in Arabic. It is therefore necessary to give these students a space in which they can adjust to the different learning environment that exists here at WCM-Q, a western-style institution, and time to develop the advanced English-language skills needed to master the difficult material on the six-year program. This is achieved through a combination of a finely-tuned curriculum and careful guidance provided by our dedicated faculty and administrative teams who are fully committed to the ethos of Cornell University to provide instruction to 'any person, in any study'. The Foundation Program, therefore, constitutes an important and highly effective means by which we are able to extend access to the world-class medical education offered by WCM-Q to students of different academic backgrounds.

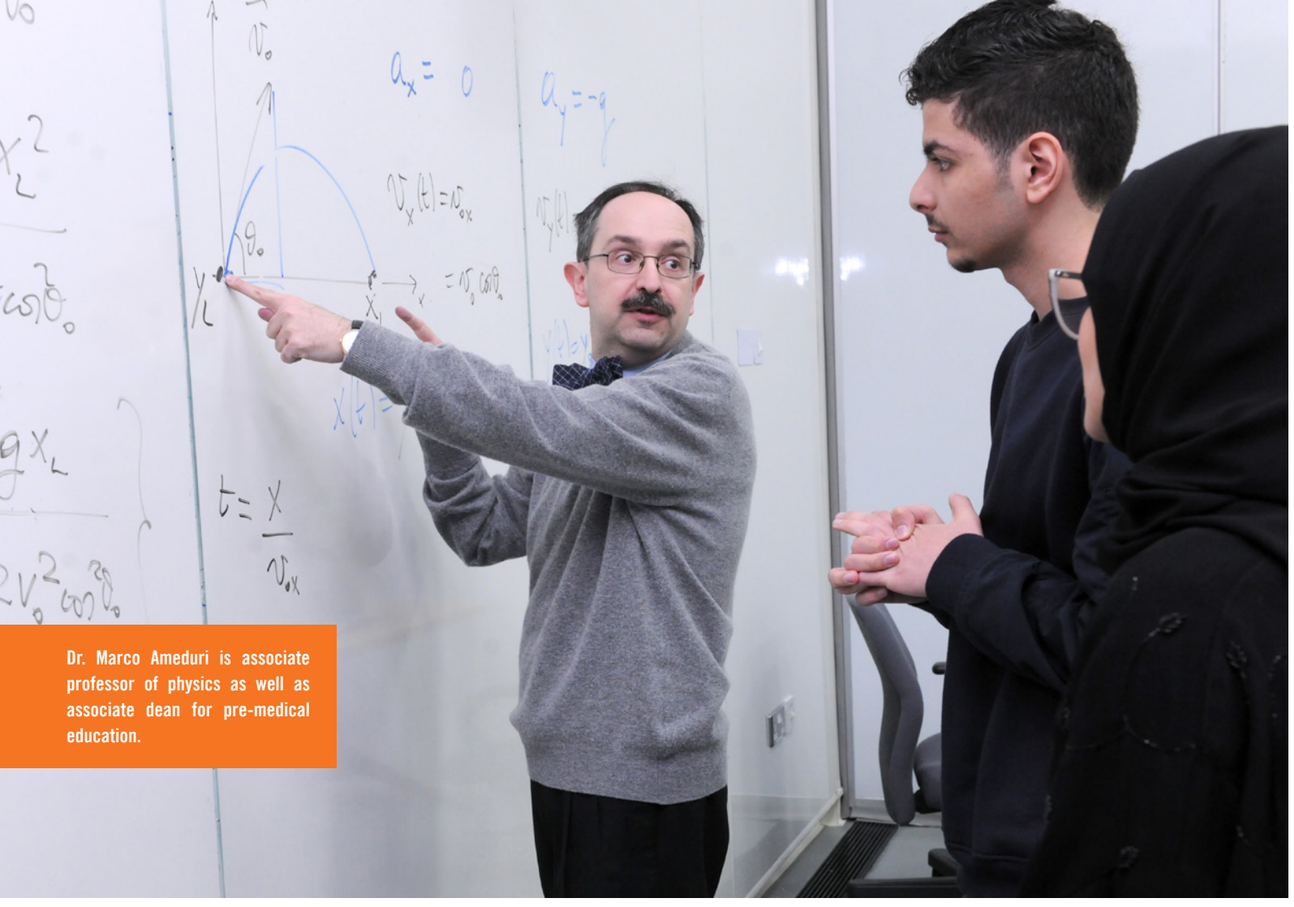
Given the scale of ambition of the Foundation Program, it is immensely pleasing to all of us in the WCM-Q community that we are now celebrating a full decade of successful operations, and it is fitting that we take a moment to reflect upon the many challenges we have overcome, the triumphs we have enjoyed and the inspiring moments we have shared together.

I hope you will enjoy reading about the course that the Foundation Program has charted these past ten years, and hearing the thoughts and impressions of the faculty, staff and students whose hard work has made the program such a source of pride and pleasure for us all.

In addition to saluting the efforts of faculty, staff and students, I also want to take this opportunity to thank Her Highness Sheikha Moza Bint Nasser, Chairperson of Qatar Foundation, whose visionary leadership and unstinting support is so vital to everything we do at WCM-Q.

Thank you all for your continued dedication.

Javaid I. Sheikh M.D.
Dean



Dr. Marco Ameduri is associate professor of physics as well as associate dean for pre-medical education.

A Philosophy for Success

Dr. Marco Ameduri, associate dean for pre-medical education, and Dr. Rachid Bendriss, assistant dean for student recruitment, outreach and foundation programs, are key figures in the design and delivery of the Foundation Program. Here they discuss the underlying principles of the program, its aims, the reasons for its success and plans for its future development.

Dr. Ameduri has been an almost ever-present member of the faculty at WCM-Q, having arrived in Doha to teach physics in November 2002, just three months after the college's inaugural class began studying the pre-medical curriculum in August of that year. With his keen understanding of the college, its students, the curriculum and the wider system of education in Qatar, Dr. Ameduri was ideally placed to play a central role in the design and implementation of the Foundation Program, which started in August 2007.

Dr. Rachid Bendriss, assistant dean for student recruitment, outreach and foundation programs, joined WCM-Q in August 2010, when he was recruited to bring his in-depth knowledge of English use in academic settings and English as a second language to the college. A native speaker of Arabic, Dr. Bendriss' skillset is ideally suited to assist the Foundation Program students as they navigate a challenging curriculum while simultaneously developing the advanced English language skills needed to thrive on the Six-Year Medical Program.

Explaining the motivation behind the creation of the program, Dr. Ameduri said: "The idea for the Foundation Program began when we realized that students coming from traditional educational backgrounds, who had not been taught in English, had to make considerable adjustments to meet the pace required by the pre-medical curriculum and to be ready to start on the medical curriculum while they were still accustoming themselves to the style of education.

"These students were still learning the necessary terminology in the English language, and were transitioning to an unfamiliar system in which there were greater requirements for independent learning.

"This was unfortunate because these students were bright and had great potential but were simply not oriented to succeed in an education system with which they were not immediately familiar. The Foundation Program was devised to offer these students a transition between high school and our program, and designed specifically for students who wanted to study medicine at WCM-Q."

Dr. Ameduri explained that acceptance to the Foundation Program is competitive and based upon high standards.

"The aim of the Foundation Program is to take students whom we have identified as being academically gifted, but who need to refine their skills so that they can realize their true potential and thrive on the Medical Program."

Dr. Bendriss said: "When we see from someone's application that they have real potential but are not quite ready for the Medical Program we invite them to consider joining the Foundation Program. This method has helped us to find some exceptionally gifted students over the years, who would otherwise have simply gone away with a feeling of rejection and perhaps would have given up on the idea of studying medicine. Instead, we managed to recognize their ambition and talent and to put them on the path to realizing their dream of becoming a doctor, serving their community. This is one of the greatest strengths of the Foundation Program and one of the most satisfying things about our work."

"The aim of the Foundation Program is to take students whom we have identified as being academically gifted, but who need to refine their skills so that they can realize their true potential."

The aim of the Foundation Program is not just to provide knowledge of the sciences, math and English; it is just as much about equipping students with the skills and mindset to become successful independent learners, said Dr. Bendriss.

"We don't want to just teach them about chemistry - we want them to be successful learners of chemistry; we don't want to just teach them about physics, math, English – we want them to become effective lifelong learners of those subjects," he explained.

"As such, we have designed the Foundation Program to develop each student's natural curiosity, to make them resilient, to help them develop their work ethic, and to encourage creativity and deep, critical thought so that they can advance to higher levels of intellectual achievement. When these qualities are instilled, not only do students become extremely effective at gaining knowledge but they also gain the ability to apply that knowledge to novel situations, which is essential for their future success, both as students on the Medical Program and as doctors in their future careers."

Dr. Rachid Bendriss said the Foundation Program excels at developing students' potential.

Mastery of English is a key element of the Foundation Program. True to the name of the program, a sophisticated understanding of the English language provides a strong foundation upon which knowledge and skills can be built.

Describing the teaching philosophy behind English instruction on the Foundation Program, Dr. Bendriss said: "In second-language teaching one of the most effective methods – and this is the method we use – is content-based instruction. This means that students on the Foundation Program don't only learn English through dedicated English classes. Instead, all of the content of their classes is delivered in English. So, when they are in chemistry, biology, physics and math classes the students are also learning English. This is a really effective tool for giving students functional literacy because using a language to complete tasks and communicate complex information entails a deeper understanding and development of language."

Dr. Ameduri said that the content of the Foundation Program is constantly reviewed and updated.

He added: "We have had great success to date with the Foundation Program but we are not complacent. As science and medicine advance and at the same time new, more effective teaching methods emerge we are committed to refining and adapting our program to ensure our students receive the very best education possible."

A Curriculum for Achievement

Students on the Foundation Program learn to take responsibility for their own learning.

Designed to help students achieve success on the Six-Year Medical Program, the Foundation Program has a focus on reinforcing students' existing knowledge and providing them with the academic background to allow them to take on the challenges they will face when studying medicine.

Alongside teaching information, though, the Foundation Program hones and teaches the skills that are needed for success as a student doctor, and these are easily as important if not more so, than facts. Study skills, critical thinking, research, behavioral habits, and knowledge application take students beyond the pages of the text book and classroom, allowing them to take responsibility for their own learning and appreciate what it takes to be a physician. A career as a doctor requires a lifetime of learning as new drugs, treatments and therapies are introduced, and new research is conducted. For students to make a success of a career in medicine, they have to embrace and appreciate this approach to life.

That is not to say that facts are not vital, of course, and the Foundation Program ensures that students are at the correct academic level in the sciences and with their English language skills.

In small classes, and with access to Cornell laboratories and resources, the foundation students take lessons in biology and human biology, chemistry, and reading and writing for academic purposes.

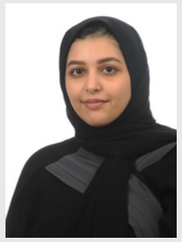
Combined with co-curricular and leadership activities such as field trips, faculty mentorship, theater productions, and distinguished guest lectures the students complete the Foundation Program with the skill-set required for WCM-Q's Medical Program.

The Foundation Program is designed for students who specifically want to study medicine.

The View from the Classroom

There are currently 22 students enrolled on the Foundation Program, busily gaining the skills and knowledge they need to succeed on the Six-Year Medical Program.

Here, four Foundation Program students share their impressions of the program so far.



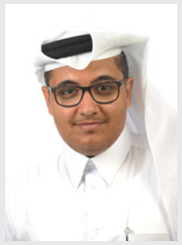
Moza Salah Al-Hail

"In the first semester we learned a lot about biology, chemistry and physics, which was really helpful because it went into more depth than we did in high school. I feel like I'm really improving as a student.

"Now that we have reached the second semester we are taking human biology classes and we have also had the chance to do a dissection project, so it feels like we are really starting to learn things that are directly related to actually becoming doctors. That is really exciting for us.

"I also had the chance to go on an observership experience shadowing Qatar Red Crescent, which brought me into contact with patients and which was so rewarding. After that experience, I have considered going into the emergency medicine field so it is helping me to think about the type of doctor that I want to be.

"One thing I really like is that because the Foundation class is quite small we get a lot of time with faculty and also we have become like a little family. We are all going through this experience together and overcoming challenges together, which means we are forming great friendships."

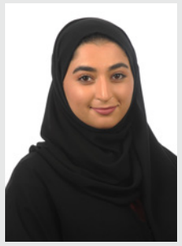


Jassim Taimour

"I love that the Foundation Program is so varied. We are doing practical things in the lab, having lectures, doing a dissection, and having many discussions. The experience of being exposed to the world of medicine has been great and very inspiring. For me, it's the most interesting and rewarding field to work in. Perhaps being a businessman or an engineer is also interesting, but I see medicine as the only career in which I can help people without asking for something in return, which is important to me.

"I also feel that with the Foundation Program we are getting to study some things that usually you can only study if you are on a pre-med or medical program. It's like we are getting an advance look at what it is like to truly study medicine, and that is very rewarding and interesting.

"Perhaps what I like most is that the program is very challenging. I love a challenge and therefore I feel that this suits me very well."



Razan Al-Mousawi

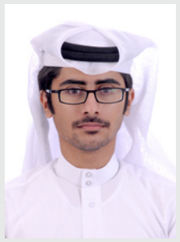
"I have been interested in medicine since I was a child and in recent years I really started to think about it seriously. The Foundation Program is helpful because it has provided me with a clear pathway to go from just thinking about becoming a doctor to actually doing it.

"The program is putting everything in perspective for me. Before you leave high school you have all these ideas of what college will be like, but you don't know really. The Foundation Program helps us to understand what would be expected of us on the Medical Program and the standards you need to maintain as a student of Cornell. I am learning just how much work there is to do and how intense it can be, and one of the most useful things is that I am learning how to manage my time to fit in everything that I need to do. Previously we would have more time to finish a paper, more time to prepare for an exam, and deadlines were a bit more flexible. Now there is a continuous flow of work. If you start an essay this week then it needs to be finished and submitted the next week, with no delay. You have to be really switched on and if you get behind you will find it hard to keep up, so the time-management skills we are learning are really helpful and I feel like I've improved a lot in this aspect.

"At high school we studied biology and there was a lot about the structure of plants, the eco-system and so on – it was very general. But now we are concentrating more on human biology and it is everything I have been looking forward to for years, everything that I am really interested in. It is so fascinating! Recently we have been studying the structure and development of bones and it is so amazing the way that they develop from the earliest stage in the embryo all the way up to the complexity of the fully developed skeleton.

"It was a bit strange at first to come to WCM-Q because for 15 years at school I have been surrounded by the same people, so the new environment felt very different. But it has been great to meet new people and I feel like it has helped my communication skills to get a lot better."

"The Foundation Program is really a healthy environment for students and provides many opportunities to grow and explore medicine."



Abdullah AlMarri

"I became interested in medicine because of an experience I had when I visited the diabetic foot clinic of Hamad Medical Corporation. I admired the doctor who worked there and the way that he dealt with patients. That drew me to medicine, though not necessarily in the same field – really it was just that I realized from that experience that I wanted to be able to help people.

"Since I started on the Foundation Program I have been really intrigued and interested by my studies. There is more work than at school and lots of new processes to adapt to but also the material is more interesting. I am finding that what I'm learning is making my curiosity grow and at the same time satisfying my need for new knowledge, which I think is making me grow as a student. I also feel that the increased pressure of the Foundation Program has made me much more organized and the fact that we have to research a lot of information ourselves has made me much more independent.

"I enjoy all of my subjects but if I'm going to pick a favorite one I would go with human biology, of course, because it is closest to medicine and the application of medicine. Learning how the human body is structured and how that relates to function is really fascinating.

"The Foundation Program is really a healthy environment for students and provides many opportunities to grow and explore medicine. I am really enjoying the Medical Career Seminar Series where doctors come and talk to us about their experiences. It is a helpful way for the students to think about their own career path. I think the Foundation Program doesn't just help you grow as a student but also helps you to search for answers about what their path as a medical student and as a doctor could look like in the future."

From High School to Foundation to Medicine

The basic premise of the Foundation Program is to bridge the gap between high school and the Six-Year Medical Program, and to ensure that foundation students have the necessary skills to achieve success on the pre-medical and medical curriculums.

To ensure it happens, Foundation Program faculty also teach the pre-medical syllabus and the foundation curriculum itself is integrated to ensure a seamless transition between the years.

Dr. Clare McVeigh, senior lecturer in biology, has taught at WCM-Q for four years. She explained how the modules of her subject prepare students for the rigors of the pre-medical and medical curricula.

Dr. McVeigh said: "What we're doing is bridging the gap between high school and pre-med.

"When the students – and I mean all of our students – come to Weill Cornell, they often find it stressful and a big jump in learning, not necessarily because they have a lack of knowledge but maybe because of a lack of confidence or because of the changes required in the way they study compared to high school.

"For biology in particular, some think they can just memorize facts. Certainly, when they join us they seem to know lots of information but they often don't know the background to those facts; they don't know 'why'. They might know what a cell is and how it works, but not how all the different processes act together within an organism."

Dr. McVeigh said the first semester for the foundation students is all about consolidation of what they already know, except that the foundation faculty teach them to think about their knowledge differently. The aim is to show them the broader view, allowing them to see, for example, the human body as the holistic system that it is rather than a discrete collection of organs.

"With the foundation students we have the luxury of this extra year to fill in those gaps in their knowledge," she added.

"It means they are more aware and the subject matter is more interesting for them as they appreciate it at a higher level. When they head off to pre-med they have a head start as they understand the bigger picture.

Above: Dr. Clare McVeigh discusses human anatomy with her students; Below: Dr. Sheila Qureshi, senior lecturer in chemistry, teaches laboratory skills to the students.

"By the time they enter the spring term of the Foundation Program, they realize that things are more complex than they previously thought and we have rid them of many misconceptions."

But it is in the spring term – the second semester – of the Foundation Program that the biology curriculum really demonstrates the unique approach that makes the transition for students onto the pre-medical syllabus so much easier.

"The second semester is basically an inquiry course. I start off with embryology which none of them have done before," said Dr. McVeigh, "Then we go through the biological systems of the body. They have lectures and tutorials, but also laboratory classes where they dissect the relevant system that we have been learning about." Students use ethically sourced mammalian samples for this. The specimens become a valuable learning tool, allowing foundation students at WCM-Q to examine muscular, digestive, cardiovascular, reproductive and renal systems that are similar to those of humans. This provides them with a holistic picture of how the systems fit and work together. This also gives them a very good idea of how the human body works, so provides an insight into the medical curriculum to come.

"It changes them from high school students who have had to absorb a lot of information over a very short time period to true students of learning."

"They also look at pathology," said Dr. McVeigh, "the idea being to recreate the life of their specimen, and undertake individual research to form a case study.

"It is a really successful part of the program as it helps their manual dexterity and it gets them over their squeamishness. Most importantly though, it makes them more independent in their learning as they have to research their different specimens.

"It's not so much about the biological content but about enjoying the topic and the actual process of learning. They come to realize that they are not just here to memorize facts."

That is how the Foundation Program really prepares its students for the Medical Program – it changes them from high school students who have had to absorb a lot of information over a very short time period to true students of learning, able to make their own decisions about the best research methodology; rather than just asking "what?" they also ask "why?".

STORIES OF SUCCESS

Dr. Mohamed Al-Hajjaji, Class of 2016

Resident on Hamad Medical Corporation's pediatric residency program, sponsored by Sidra Medicine

Dr. Mohamd Al-Hajjaji joined the Foundation Program in 2008 and went on to graduate from the Medical Program in 2016. Dr. Al-Hajjaji took time out from his busy schedule as a second-year pediatric residency at Hamad Medical Corporation to discuss how the Foundation Program set him up for success.

He said: "I attended a government school and while the education standard was very good, my English was not that perfect. Being able to spend a year on the Foundation Program being taught in English was a huge help to me. I also found it was a really good way to smooth the transition from high school to college.

"One thing I think is very good about the Foundation Program is that it is specifically designed to prepare students for studying medicine. Given that medicine is one of the most challenging subjects and has a very heavy workload, I am certain that a general foundation program would not be quite so effective. I think the college experience on a medical program is quite different from that of other subjects, so being able to actually attend the college and absorb the culture, ethos and environment was very important for me. It was also good to become adjusted to independent, self-directed learning, which we later found out was so important on the pre-med and medical curricula.

"Of course, the very solid grounding that we received in biology, math and the other sciences was also very important for us."

Dr. Al-Hajjaji said that he is finding his residency program extremely rewarding.

"During my rotations, I always found treating pediatric patients more natural and more rewarding than adults," he explained. "I think it's because younger patients are the most vulnerable and in need of help, so I feel a special obligation to them. It may also be that during my training my wife and I had our first child so I was perhaps especially concerned with the health and welfare of kids."

He continued: "My residency program is going very well – sometimes it's hard and it's stressful but my training at WCM-Q allows me to manage that. One of the best things is that here in Doha we encounter people from all over the world so we are constantly exposed to interesting cultural experiences, which is enlightening. Another great thing is that we also go to many different hospitals -we spend time at Hamad General, Sidra, Al Wakra and so on - which is good because it gives us lots of variety and makes you more adaptable.

"I'm really pleased that I found the Foundation Program. It really opened the door to my career in medicine."

Dr. Shaikha Al-Shokri, Class of 2015

Resident on Hamad Medical Corporation's internal medicine program

Dr. Shaikha Al-Shokri, of the Class of 2015, is now in the third year of the internal medicine residency program at Hamad Medical Corporation. She believes the Foundation Program served as a vital bridge that allowed her to make a smooth transition from high school to medical school.

Dr. Al-Shokri said: "When I graduated high school my English was not great, as all of our classes were in Arabic apart from one. I completed the Academic Bridge Program at Qatar Foundation and that was extremely helpful because it gave me a solid grounding in English. I then joined the Foundation Program at WCM-Q which helped me to improve my English skills further and also to improve my knowledge of the core sciences of biology, chemistry and physics. I think that taking this route made the transition to medical school very smooth and the step up to the first two years of the pre-medical curriculum felt very natural and manageable. Without the Foundation Program, I think it would have been much more difficult for me so I'm very pleased I took this path.

"As well as improving academically, I also improved my communication skills and I think this was perhaps the most important skill that I developed on the Foundation Program because it is something that helps me every single day in my work now. I was involved in the debating society so I learned how to think critically, to work out which information is most relevant and to then put forward logical arguments in an effective way. It also dramatically improved my understanding of English.

"Later, I became a member of the admissions committee for the Foundation Program looking for Qatari students with potential and I was able to see them take the same path that I took. It is great for Qatar that this program exists because it reaches out to good students who just have a few gaps in their skillset and their education, and helps them to fill those gaps and go on to achieve great things."

Dr. Al-Shokri is now enjoying the challenges of the internal medicine residency program at Hamad Medical Corporation. She said: "I chose internal medicine because it is a very broad specialty with many sub-specialties, and you encounter patients of many different age groups, so you are required to be flexible and adaptable, which is challenging and rewarding. I think the IM residency is one of the best ones at HMC and it is exciting to be part of the process of growth and modernization that is taking place in the healthcare sector in Qatar. There are new facilities opening all the time and it is great to see the citizens and residents of Qatar being able to access very advanced healthcare at hospitals that have the latest technology. I am very happy that our country is investing in the health of the people and I'm very happy to be a part of it. I feel that the Foundation Program is making a valuable contribution by helping to produce Qatari doctors who can work in these new facilities."

The aim of the Foundation Program is to bridge the gap between high school and the Six-Year Medical Program.

The Future

The Foundation Program's Class of 2018.

What does the future hold for the Foundation Program? In one word: innovation.

The program has thrived on innovation since it was founded, indeed the very premise of the program was new, showing an originality of thinking that has ensured the Foundation Program has thrived and evolved.

Most recently this has manifested itself in students earning credits for the modules they take as part of the program. Then, if they choose not to pursue a career in medicine and decide to join a different program at a different university, the work they have done and the knowledge they have gained, can be taken into consideration.

Dr. Rachid Bendriss, assistant dean for student recruitment, outreach and foundation programs, said it would be a more rewarding system.

He said: "It's going to attract even more students and their motivation will increase. The change will be fairer as students invest 12 months of their lives. If they feel they may not be a good academic fit for medicine, or just decide that medicine is not the career for them, a system of credits will mean that they have something to show for their year with us, and that the knowledge and skills they have gained can be put to use at other institutions. Prior to this, it was a risk for students, but we feel this is a good balance."

There have been a variety of changes over the last decade of the program as initiatives are implemented to increase academic attainment, and these changes have had a positive impact on recruitment – 22 students joined the program in the fall of 2018 making it the largest class so far.

Dr. Marco Ameduri, associate dean for pre-medical education, said the reputation of the program was an important factor in this.

"We already have a high profile in schools through our outreach programs," he said, "but an important driver for recruitment to the Foundation Program is word of mouth; students hear about the course from their former peers and it is recommended to them. In fact, we have many requests to actually join the Foundation Program directly rather than immediately entering the Six-Year Medical Program, as students feel it will increase their chance of success when they begin the medical curriculum proper."

This popularity and reputation for success is undoubtedly due to past innovations. The curriculum is very student-centered and the faculty are highly focused on providing one-on-one support where necessary. The introduction of teaching specialists

The program's curriculum is very student-centered.

An important driver of recruitment to the Foundation Program is word of mouth.

was also an inspired initiative, providing faculty with day-to-day classroom support but most importantly introducing an additional layer of help for students.

The Foundation Program has also embraced flexible learning.

Dr. Bendriss said there are cases where a student may have performed excellently in all subjects except one.

"If that is the case, we may be able to offer a targeted curriculum to bring that student up to the required academic level," he said.

This flexibility is inherent in the program and embedded in the reasoning of the faculty. It means that whatever the future holds, the Foundation Program will adapt to meet the challenges.

"Our shared philosophy is to seize new teaching methodology or new curricular ideas as the medical world evolves, said Dr. Ameduri.

"Medicine and indeed teaching are fluid disciplines; techniques, methodology and even some accepted 'facts' have changed over the last decade, and we will continue to make the necessary changes to the Foundation Program as the next decade unfolds."