

## American Healthcare Professionals and Friends for Medicine in Israel

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**D**r. Roy Kessous is aiming a trident at some rather grim statistics.

After initial treatment, about 75 percent of ovarian cancer patients will face the disease again. Most, after retreatment, will die.

"We just don't have good treatment for this disease, which starts with the fact that it's almost always diagnosed in the later stages," says Kessous, a 2015-2016 APF Research Fellow at Lady Davis Institute for Medical Research, part of Jewish General Hospital at McGill University in Montreal. "In fact, we now believe it's not one disease, it's many – with different molecular structures."

The 40-year-old gynecologic oncology specialist is working on a three-pronged approach to the problem. He and other researchers analyze tumors from a large tumor bank in order to better understand the molecular biology behind this type of cancer.

"Having a better understanding of these tumors, as we are trying to do with this project, will hopefully help us as physicians in three main areas," says the Jerusalem native. "1) to identify who is at higher risk for ovarian cancer 2) to gain better understanding of the course of the disease -- in terms of overall survival, progression-free survival and response to treatment 3) Eventually, the ultimate goal is to find targets for treatment that will be specific for each patient's individual cancer.

"We want, someday, to be able to take a biopsy, do a DNA analysis, and tell a woman, 'According to what we know this is the presumed course of the disease for you and this is the best treatment for this specific tumor.'

"This is still something that we cannot do. But a lot of effort is being invested in this concept and we hope to see improvement in the near future."

One of the things Kessous is hoping to do when he returns home is to establish and maintain a tumor bank with the standards set at McGill.

Kessous, an attending physician in the gynecologic oncology unit of the division of obstetrics and gynecology (ob/gyn) at Soroka University Medical Center in Beersheba, also will work on several "side" research projects, including those focusing on endometrial cancer and on other aspects of ovarian cancer.

He will remain at McGill for two years after his research fellowship, doing a clinical fellowship.

When he returns to Israel he will do not just clinical work, but also continue research and teaching. He is a lecturer at Ben Gurion University of the Negev and teaches nurses, medical students and midwives and works with the school's program for medical students from New York's Columbia University. "Teaching and research is not an addition, it's part of what I do, it's all integrated."

Kessous has published more than 30 scientific papers and presented research abroad several times. He hopes to produce some very significant journal articles from the ovarian cancer gene project.

Leaving Israel was necessary for him to be able to quickly and efficiently advance his knowledge and skills, he says. "I needed this detachment – where it is just gynecologic oncology all day, every day."

"I'm still in the beginning of the fellowship and I can already see how this period of research and clinical work is going to build my skills for the future. I want to take this knowledge with me back to Israel in order to raise the level of care I can provide to patients there."

Choosing McGill was not a coincidence; a year before the start of the fellowship program Kessous had a two-week observation period at the Quebec university hospitals. During this period he was exposed to a greater volume and diversity of patients than in Israel, world-famous scientists and clinicians and state-of-the-art facilities. "The innovative thinking in research here also is unique," he says. "People think forward, about what's going to be the next thing, not just chase what's already been written about. We look for things that have not been studied and have the potential for being useful to our patients. This is very good for me and very important."

Internationally-known Dr. Walter H. Gotlieb, head of McGill's Gynecologic Oncology and Colposcopy unit and the university's Hereditary Ovarian Cancer unit, as well as chief of the lab in which Kessous works, was his first contact at McGill and a major reason he chose this fellowship site. Gotlieb remains his mentor.

In terms of a clinical fellowship, McGill also has a lot to offer, Kessous says. "They pioneered robotics in Canada and have vast experience in this field. In addition, McGill is part of many clinical studies that evaluate new chemotherapy protocols that may become the standard of care in the future." And he says the fact that he will have a chance to work with and learn from famous gynecologic oncologists, Drs. Susie Lau, Lucy Gilbert and Kris Jardon, also figured in his McGill choice.

Kessous describes how time away at a fellowship can be so meaningful. "This opens your mind and changes your perspective. In both research and clinical fellowships you step back from being an attending to being more of a resident, a student – someone who is being taught. It teaches you humility, it takes you back a bit. And it takes me out of the comfort zone of my status in Israel."

The Kessous family came to Montreal from the small community of Meitar outside of Beersheba. They will stay there for three years total. He and his wife Hila, a special education teacher who hopes to work in this field while in Canada, have recently had a baby, Daniel, 3 months old. They also have three other children: son Ori, 11 ½; daughter Yali, 9 and daughter Noa, 7 ½ . He says he couldn't have come this far in medicine without his wife, whom he admires greatly, and his children. The children chose to attend public school, rather than Jewish day school, because they wanted the benefit of greater cultural immersion, says Dad. "Now they have friends from school coming over to the house and it's great.

"I'm trying to keep my priorities in order - all through medical school, internship and residency, my wife and my kids have been my highest priority. But it's been easier in this research year. My family feels it as well, I know." They enjoy ice skating and skiing and try to travel as much as they can around Canada and the US.

Kessous did not always know that he wanted to become a doctor. There were no mentors, family members or incidents of great influence in his life directing him to the field. After six years in the IDF infantry special forces, he had time to improve his grades and evaluate options. "One of the options was medicine and it seemed to fit with my personal ambitions. I thought, 'This is interesting, it's an option.'

"Once I was accepted and started walking through the path of medicine – school, internship and residency – it started growing on me and still grows on me.

"It's an endless field in which you're always growing and learning. Just when you think you know... you need more. "You have to acquire technical skills and 'people' skills (which are always challenging). There is just no equivalent occupation that does that to a person and does that for so long."

Kessous funded medical school at Hebrew University Hadassah Medical School in Jerusalem by working in the security unit for the Israeli president's house. He did his internship at Kaplan Medical Center in Rehovot (about 12 miles south of Tel Aviv). During his internship he first decided on surgery vs internal medicine. "Surgeons sometimes are the type who like action and want results fast. I realized I wanted to be 'the surgeon type.' "He also chose two ob/gyn rotations, found them the most interesting part of his internship and elected that specialty for his career. "This field has obstetrics which is usually happy and very nice. Then there is an aspect of internal medicine in high-risk pregnancies and reproductive technology. And there is surgery in gynecology, often very challenging since the pelvis can be a difficult area in which to work. "So everything was in one basket, so to speak. For me it was ideal."

Kessous completed a six-year-residency in ob/gyn at Soroka. "It was the most meaningful period in my medical career at the time." During residency Kessous was also introduced to the world of medical research. "I had a great mentor, Prof. Eyal Sheiner, an ob/gyn, who guided me and still does even now."

Why did he choose gynecologic oncology? It's certainly a departure from the mostly-happy field of

obstetrics. And there are those grim statistics of which to be fearful.

Kessous agreed and said it took him a while to make the decision. At first, he was asked to fill a vacancy in the gynecologic oncology unit. "Initially, it was sort of a forced thing. And I was fearful. "But then I learned more about the patients, the people who worked there and the surgeries and procedures. And while my fears didn't entirely go away, I got a new perspective on things.

"There's a lot more than just grim statistics. There is the ability to help improve patients' quality of life and to be there for them at the most vulnerable and important moments of their lives. Sometimes, even if the statistics are grim, this time is still very meaningful for patients. In the end I found it to be less grim than challenging for me."

The patient/physician relationship is, by far, one of Kessous' most fulfilling parts of his profession. "I am always aiming to improve myself as a person and to gain tools to better interact with patients. It helps me treat them more successfully.

"Especially with oncology, most patients are with you for years. And you have to be capable of being there for them. "Sometimes I find myself talking with a patient for 30 minutes, not even about medicine, about life; that's as important as giving medication and doing surgery."