



The Canadian
SHAARE ZEDEK Hospital Foundation
a hospital with a heart

winter 2009 heartbeat

The Role of Genetics in Medical Research



In today's world, there are few families that have gone unaffected by the traumas of breast or ovarian cancers. As the form of cancer that affects women more than any other, breast cancer will be diagnosed in over 1.2 million women worldwide this year. According to the American

Cancer Society, one in every 33 women will die as a result of the disease. Ovarian cancer, while affecting a smaller number of women, is known to be a more deadly form, particularly when it is not diagnosed early. These two cancers have been proven to be of particular danger to Jewish women, and specifically Jewish women of Ashkenazi origin. Combating them therefore has become a leading research objective at Shaare Zedek Medical Center in Jerusalem.

Medical Genetics at Shaare Zedek

Long dedicated towards pursuing research studies that complement the clinical activities at the Hospital, Shaare Zedek is deeply committed towards the expansion of its Department of Medical Genetics. This esteemed Department has proven itself as an internationally-recognized research entity committed to assisting patients and the community at large through the continuously developing science of genetics. In 1997, researchers at Shaare Zedek, under the guidance of Professor Ephrat Levy-Lahad, Director of the Department of Medical Genetics, discovered that a third of the cases of ovarian cancer in Ashkenazi women are due to inherited mutations in the BRCA1 and BRCA2 genes. Since that time, these genes have also been proven to be linked to the occurrence of breast cancer.

Medical Genetics, the Jewish Community and Israel

The Jewish community and Israel have made significant contributions to Medical Genetics and are uniquely poised to be a basis for further research. This is the result of the specific social structure of the Jewish community, which in genetic terms, has remained relatively insulated from other communities. Studies have found that, while many other ethnic groups have undergone a high degree of social assimilation, Jews have traditionally "inmarried" at a higher rate than comparably sized ethnic groups. Thus, genetic diseases tended to remain within the community rather than being more quickly diffused amongst the broader population. Similarly, while other ethnicities were able to introduce other genes from outside their communities,

which would lessen the frequency of disease-carrying genes, the lower rates of assimilation amongst Jews sharply curbed this possibility. Even though Jews have dispersed throughout the globe, certain genetic markers have closely followed the Jewish community, producing far higher than normal frequencies of certain diseases throughout its history. Well-known examples are the childhood genetic diseases Tay Sachs, Bloom Syndrome, Canavan Disease and Gaucher Disease. In recent years, as mentioned above, a high frequency of mutations in the breast/ovarian cancer genes BRCA1 and BRCA2 has also been found in Ashkenazi Jews.

While most Jews share genetic similarities, the largest genetically homogeneous group are Ashkenazi Jews, which comprise about half of Israel's Jewish population. Their genetic similarity greatly facilitates genetic research. This is because much of genetic research is based on discovering which genes are different in an affected person compared to a healthy person, or in a person who developed medication side-effects compared to one who did not. If two people are more similar to begin with, (e.g. if they are both Ashkenazi Jews) the more likely it is that a difference found between an affected and a healthy person is a difference that will be important for the disease.

The combination of Israeli science and the specific characteristics of the Jewish population in Israel, has resulted in major contributions to Medical Genetics. Shaare Zedek has played an active role in these efforts and sees itself as an important player in further promoting research in this quickly-expanding field.

The Genetics Team at Shaare Zedek

Like any world-renowned hospital, Shaare Zedek's successes are a reflection of its dedicated and experienced staff. While many of the Hospital's departments are staffed by some of Israel's finest medical practitioners, the doctors and researchers that work in the field of Medical Genetics have established an internationally-recognized reputation for excellence and innovation.

Prof. Ephrat Levy-Lahad: Director of the Department of Medical Genetics

Dr. Reeval (Peled) Segel: Directs the activities of the Pediatric Clinic within the Department of Genetics

Dr. Paul Renbaum: Director of the Medical Genetics Lab

Dr. Gheona Altarescu: Director of the Pre-implantation Genetic Diagnosis (PGD) Lab

Spotlight:

Parviz Ohebshalom Cancer Pain and Palliative Medicine Clinic

Palliative medicine is medical care that focuses not on a cure, but on reducing the severity of symptoms (physical and psychological) that accompany terminal illness. Palliative care physicians are set apart from their medical colleagues in a distinctive way: in a profession in which success is defined by cures, palliative care doctors offer a strong commitment to reduce their patients' physical and emotional suffering and help assure these patients that their lives still have meaning.



At Shaare Zedek, the Palliative Medicine Unit is under the auspices of the Institute of Cancer Care and Research, but utilized throughout the Hospital wherever appropriate. The

role of this Palliative Medicine Unit is to optimize patients' quality of life, addressing physical, spiritual and emotional issues, while providing expert medical treatment.

Shaare Zedek's Parviz Ohebshalom Cancer Pain and Palliative Care Unit is led by Dr. Nathan Cherny, who was recently appointed as the chair of the Levan Center for Humanistic Medicine. His mastery of combining oncological care and palliative care go to the root of humanistic medicine. Since cancer has now become a chronic disease and is not always terminal, Dr. Cherny has stressed the importance of this field and is really the pioneer in bringing the specialty to Israel.

Specific goals vary according to a patient's prognosis. For some patients, their disease is viewed as curable and the emphasis is placed on treatment and alleviation of pain and discomfort. When a

cure is considered unlikely, the Unit's specialists work with patients and their families to optimize patients' quality of life during the time they have remaining. In every case, a care plan is tailored to the specific needs of the patient and his or her family.

For Dr. Cherny, optimizing life for his patients is of the utmost importance. He believes that although the terminally ill may not define hope in the same terms as healthy people, they still have many hopes for their lives. In some patients, hope for a longer life may fade in favour of much richer hopes. Dr. Cherny tells of one patient who was suffering from terminal lung cancer, whose one hope was to live long enough to attend his daughter's wedding. When the day arrived, the happy father was transported to the wedding in an ambulance. With Dr. Cherny standing nearby, the father stood under the chuppa and saw his daughter wed.

At Shaare Zedek, the doctors are well aware that terminally ill patients cannot focus on hope and meaning if they are in extreme pain. The Hospital believes that although medical resources should be utilized to save lives, these same resources must be channeled into helping critically ill patients make the final transition with minimal pain, fear and despair.



Calendar of Events:

January 13, 2010: Downtown Toronto Speaker Event

- Featuring Paul Godfrey, CEO of the *National Post*
- Hosted by Heenan Blaikie LLP

February 24, 2010: On the Slopes

- The Canadian Shaare Zedek Hospital Foundation and State of Israel Bonds Annual Ski Day at Alpine Ski Club

Spring 2010: Annual Tribute Event

- Details coming soon

June 2010: On the Green

- New Leadership's 20th Annual Golf Tournament

upcoming

To register, sponsor or learn more about our events call 416-781-3584 or visit www.hospitalwithaheart.ca

Annual General Meeting

On November 11, 2009, the Annual General Meeting of the Board of Directors and Members of The Canadian Shaare Zedek Hospital Foundation took place at the home of David and Karen Smith. Longtime Board member, Mr. Kurt Rothschild, began the evening with a poignant reminder of the importance of observing Remembrance Day and Kristallnacht, sharing stories of his own family's experience.

Jonathan Solursh, President of the Foundation, then updated everyone on its current status. He reported that, even in such tough economic



from left to right: Mitch Green, Jonathan Solursh, David Smith, Uri Schwarz, Jeffrey Rosenthal

times, the Foundation has sent \$1.5 million to the Hospital to date this year, already surpassing 2008.

Uri Schwarz, Director of International Operations for the Medical Center in

Jerusalem, presented an informative update on some of the many ongoing and future programs at the Hospital.

He discussed, with appreciation, the support that the Hospital continues to receive worldwide, including donations from solely Christian groups in Holland and Norway. Mr. Schwarz outlined the progress of current development projects such as the Wilf Children's Hospital and the Wohl Surgical Complex. Looking at recent statistics, he demonstrated how the Hospital has grown over the past decade. For example, comparing 2000 to 2009, admissions have increased from 40,000 to 62,000 per year; deliveries have grown from 7,000 to 13,000 per year, which has necessitated the opening of a third maternity ward. As well, the ER Department has grown to become the busiest in Jerusalem today. And as a final point of interest, Mr. Schwarz referred to a new enterprise for the Hospital – that of the medical tourist industry where interest is quite high, especially from the former Soviet Union.

Everybody Loves Jerusalem (and Shaare Zedek)

Everybody Loves Raymond creator and executive producer Phil Rosenthal is teaming up with Dreamworks Studio and Tel Aviv-based TTV Production to produce a six-hour documentary series focusing on Jerusalem through the eyes of Shaare Zedek Hospital.

Scheduled for release in 2011, the as-yet-untitled project is going to highlight contemporary Jerusalem and reveal the various social, political and cultural nuances that characterize the city through the lives of doctors and nurses in the Hospital.

Working along with Rosenthal, who's wife Monica played the role of Robert's wife Amy on the long-lived comedy series starring Ray Romano, will be screenwriter Jeremy Garelick, who recently wrote the hit comedy *The Hangover*, and veteran Israeli producer and head of TTV, Zafir Kochanovsky.

"Jerusalem is a place that demands to be explored through the medium of documentary filmmaking and we believe that medicine is a perfect conduit to do so," Rosenthal said in a press release. "Dreamworks has long sought to create a documentary piece that conveys Jerusalem, but we wanted to avoid limiting it to the more obvious undertones of politics or religion. In discovering Shaare Zedek we believe we have found a perspective that allows us to tell this story in an original and no doubt captivating way."

"We are deeply proud and honored to have been selected by Dreamworks and TTV for this historic project," said Professor Jonathan Halevy, Director General of Shaare Zedek. "Our Hospital has long played a storied role in our city's history and we know this film will enable the world to better understand both what Jerusalem and we are all about."

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HOLD Wednesday February 24, 2010



The Canadian Shaare Zedek Hospital Foundation and State of Israel Bonds Annual Ski Day

Two great organizations...bonding together for one great event

WHERE: Alpine Ski Club, Collingwood

COST: \$150 per person for downhill skiing, snowboarding or snowshoeing
*rentals available for additional charge

BUS DEPARTS: 7:00am

REGISTRATION: 9:00am

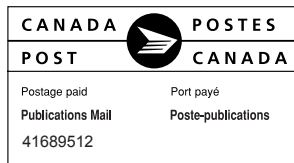
EVENT INCLUDES:

- Breakfast, lunch and snacks (Kashruth observed)
- Transportation to and from Alpine
- Beginner and intermediate ski and snowboard lessons
 - Fun ski races
 - Registration gift
- Silent auction and raffle prizes



The Canadian **SHAARE ZEDEK** Hospital Foundation
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Canadian Shaare Zedek Hospital Foundation
205-3089 Bathurst Street
Toronto, Ontario
M6A 2A4 Canada



To make a donation or see how you can become more involved with The Canadian Shaare Zedek Hospital Foundation, visit us on the web at **www.hospitalwithaheart.ca** or please contact our office at:

205-3089 Bathurst Street
Toronto, ON M6A 2A4
Office: 416.781.3584
Toll-free: 800.387.3595
Fax: 416.781.6439
foundation@hospitalwithaheart.ca

