

Israel's 'ambassadors' in Africa

Young physicians from the continent come to Jerusalem to study, and later these new friends and admirers take up influential positions in their own countries. Judy Siegel-Itzkovich reports

When she was only four and living in Nigeria, Ose Okoye saw photos of a starving boy before and after being cared for by UNICEF, and decided on the spot that she wanted to be a physician. One of 10 children whose parents encouraged all of them to graduate from college, Okoye received her MD degree from the University of Benin in 1995 – one of about 15 women in a class of 127.

Although she initially thought of pediatrics, she selflessly decided to go into public health, a field in which Nigerian doctors go to the poorest, least educated patients in the field rather than sitting in pleasant offices and having well-off patients come to them. Then, in 2008, she was invited to be a Pears Foundation fellow and study with other Africans at the Hebrew University-Hadassah Braun School of Public Health and Community Medicine. Its special international program leading to a master's degree (in public health, plant sciences or nutritional sciences) and headed by the Braun School's Dr. Yehuda Neumark requires a year of study.

The Braun School's international MPH program, established in 1971, now has more than 700 graduates from 90 countries in developing and transition regions, as well as from developed countries in North America and Western Europe. All Pears scholars study with top experts in the field of public health in the developing world, live on the Jerusalem Ein Kerem campus and tour all over Israel. Okoye went home last September but was invited back last month for a special Pears Foundation symposium at the school of public health, along with other former fellows from countries such as Kenya, Ethiopia, Cameroon and Uganda.

Okoye said that when she saw TV broadcasts about the Israel Defense Forces' field hospital in Haiti's capital after the devastating January earthquake, she was "so proud of Israel. I want to come to here again and again." She added that she feels a real attraction to "spiritual, quiet Jerusalem and its historical and biblical background, rather than to the bustle and noise of Tel Aviv." She marvelled that Israel and Israelis are "very concerned about health; from what I read about Israeli medical advances, I learn that they are very interested in promoting basic medical knowledge and applied research."

Although Nigeria is one of the world's eight largest producers of oil, its national wealth is not fairly distributed among the half-Christian and half-Muslim population, who are not entitled even to national health insurance. Influential businessmen and other powerful people siphon off most of the assets, she said. As a result, the poor – mostly in rural areas – have little access to medical care.

Okoye now works in a faith-based organization in the southern part of the country whose physicians set up tents in such poverty-stricken areas and treat patients who flock to them. Some 300,000 Nigerians have benefited from the program over the past decade. More than 50% of women now give birth in hospital, and vaccination programs have taken off.

The tall, striking-looking physician, who is married to a Nigerian engineer, told *The Jerusalem Post* during the symposium that she learned a great deal at the Braun School. One of the most important things was "how to characterize a community, learn its medical needs and problems



DR. OSE OKOYE of Nigeria spent a year in Jerusalem earning her MPH degree.

(Judy Siegel-Itzkovich)

before you start to offer services. I learned to partner with other organizations and make sure my tools are used. The level of teaching was very high," she said. The one-day symposium – part of a week-long conference for graduates – was a bonus, "enabling all of us Pears Foundation scholars over the years to exchange notes."

The London-based foundation, which announced it is expanding the number of African scholars from six to eight annually, sponsored the symposium because it thought it was important for the faculty and MPH graduates to discuss critical issues impacting health in Africa today, and look at Israel's role in helping out. Nearly all the graduates who return to Africa take senior positions as physicians and specialists; due to their close exposure to Israel's innovations in medicine and its society, they become informal ambassadors. Sixty scholars have taken part in the project since it was established five years ago, and thanks to the foundation, a strong network of alumni has been established.

Foundation executive chairman and British businessman Trevor Pears sent a message stating that the aim of the scholarship program was to build a network of scholars in the developing world who benefit from academic expertise in Israel, and transfer that expertise to development efforts in their home countries. "A subsidiary objective is to help strengthen relationships between Israel and Africa," he declared.

At the symposium, foundation director Charles Keidan said the Braun School scholarships were "a flagship program for us, as we aim to promote the developing world and Israel's integration into the world community in this field."

During the early days of statehood, Israel, through the Foreign Ministry's MASHAV (International Cooperation Department), invested relatively large sums sponsoring health, agriculture, water supplies and other fields in Africa. After the Yom Kippur War, African countries cut off diplomatic relations, thus ending such assistance, even though individual beneficiaries begged that it continue. In recent years, the ministry realized that the technical aid created positive memories of Israelis in Africa, and decided to restore such projects. MASHAV director Haim Divon told participants that his ministry now spends \$20 million annually on direct aid to the continent, excluding salaries, and that Africa is regarded as the "number-one beneficiary" for Israeli knowhow. He added that there is a clear correlation between friendly relations with African countries – including Muslim ones – and technical support Israel has provided. "The prime minister of Senegal, who is head of the African Union, is a Muslim but praises our activity," he said.

Braun School Prof. Jeremy Kark lectured at the symposium on what his parents, Dr. Sidney and Dr. Emily Kark, contributed to public health and social medicine (the practice of medicine concerned with health and disease as a function of group living). Graduates of Witwatersrand University Medical

School in Johannesburg, they spent much time in rural Natal Province during the 1940s and early 1950s. "I was born there," said Jeremy, himself a graduate of the Braun School. "My parents' mission in South Africa was to prevent disease and provide high-quality primary care." He said medical teams carried out health assessments at

various levels and reached conclusions on what treatments as well as preventive medicine and health promotion services were needed. Thus they spent much time supervising pregnancies and developing sanitation, improving water quality, diet and nutrition, health education, epidemiology and other topics that weren't even considered at that time.

The Karks also moved to Durban, where Sidney directed the new Institute of Family and Community Health; the couple returned to Jerusalem in 1959. Jeremy's lecture was accompanied by a large collection of black-and-white photos of his parents and their African patients some six decades ago. Here, the Karks established the department of social medicine in Ein Kerem, and Sidney was one of the founders of the Braun School. He died in 1998 and his wife in 2006.

"They pioneered the holistic approach. They identified serious malnutrition in 80% of the Pholela population, as well as high childhood mortality, stunted growth, inadequate milk consumption by children and consumption of meat, fresh fruit and vegetables. They also taught local residents how to make compost and grow vegetables." As a result, health improved significantly, and their work prepared the country for South Africa's universal health care system, Jeremy recalled. But the rise of apartheid led to the dismantling of the public health team, leading to the emigration of many members.

Prof. Steve Tollman of the University of Witwatersrand lectured on how the serious decline in the global economy has affected Africa. "There has been a dramatic fall in capital inflows, in commodity prices [but not gold] and less demand for good and services. Agricultural costs and food prices are up. Companies cut back or go out of business. There are more public works projects, but a million jobs were lost in sub-Saharan Africa," he said. This holds 12% of world's population but contributed only 1.5% to its economy. The declining economies, as well as the devastating loss of life due to HIV and AIDS, have had a significant impact on health, he said. "About 15% of our life expectancy has been lost since 1990 due to HIV, and the disease has also increased maternal mortality. At the same time, in addition to acute diseases, older teens are increasingly getting overweight, leading to chronic illness.

Dr. Norbert Rakiro, responsible for the East African Zone of the International Red Cross and Red Crescent Federation, was in the first Pears Foundation Program in Jerusalem in 2004/5, and said that then there were only three surgeons in Southern Sudan, and in some areas one doctor for every 500,000 people.

Braun School and Hadassah University Medical Center nutrition expert Prof. Elliot Berry said many people lack basic food security. Some 165 million children under five in developing countries suffer from stunted growth. They lack iron, vitamin A and iodine, Berry said. Many pregnant women are anemic and lack iodine, thus leading to more disease and reduced cognition, and productivity. "There is enough food in the world to feed everybody," he noted, "but it is not well distributed."

Surely as the number of Pears Foundation scholars increase and they take up key positions, they will practice the principles of social medicine and other fields they studied in Jerusalem.

Teach foreign languages in the accent of the listener

NEW WORLDS

• By JUDY SIEGEL-ITZKOVICH

Many schools teaching adults second languages insist on exposing their students to the "original" accents. Yet University of Haifa researchers have found that perception of speech in a foreign language is easier when that language is spoken in the accent of the listener.

Dr. Raphiq Ibrahim and Dr. Mark Leikin of the university's Safra Brain Research Center for the Study of Learning Disabilities, Prof. Zohar Eviatar of the psychology department and Prof. Shimon Sapir of the learning disabilities department published their study in the prestigious *Journal of Psycholinguistic Research*.

The research set out to reveal the level of phonological information that the adult learner needs to identify words in a second language that had been learned at a later age, and whether the level of phonological information that they require varies when the words are pronounced in different accents. The team recorded four Hebrew sentences in which the last word was a noun pronounced in different accents: Hebrew, Arabic, Russian and English. These sentences were electronically encoded on a computer system and applied to the "gating" paradigm, in which participants are exposed to increasing amounts of a speech stimulus (40 milliseconds) and at each "gate" are asked to identify the stimulus. This procedure allows the identification of the point at which a word is recognized.

The sentences were played back to 60 participants aged 18 to 26; 20 were native Hebrew speakers; 20 were adult immigrants to Israel from the former Soviet Union; and an equal number were Israeli Arabic speakers who began learning Hebrew between the age of seven and eight. The findings showed that there is no difference in the amount of phonological information the native Hebrew speakers needed to decipher the words, regardless of accent. With the Russian and Arabic speakers, on the other hand, less phonological information was needed in order to recognize the Hebrew word when it was pronounced in the accent of their native language.

"This research lays emphasis on the importance of continuing investigation into the cognitive perspectives of accent to gain a better understanding of how we learn languages other than our native tongue. In Israel and in other countries where the population is composed of many different language groups, this understanding holds great significance," the researchers concluded.

'BREAKFAST OF CHAMPIONS' FIGHTS INSECT PESTS

Feeding "super-sexed" but sterile insects a "power breakfast" can improve pest control, according to Hebrew University of Jerusalem agricultural scientists who have developed this improved method of raising large number of insects who cannot produce progeny without harming the environment with bug-killing chemicals.

A variety of potentially dangerous chemicals such as DDT have been used since the early 1900s to kill crop pests or carriers of diseases. But this led to the evolution of resistance to pesticides and has a severely negative impact on human health and the environment. As an alternative, Prof. Boaz Yuval at the HU Faculty of Agriculture, Food and Environment is working on upgrading an approach known as the sterile-insect technique. This method is currently used against several dozen species. The principle is to rear millions of individuals of the species one seeks to control, separate the sexes, sterilize the males and release them into the field. The sterile males will mate with wild females, who will then be unable to lay fertile eggs, thus reducing the pest populations.

But Yuval says the process of rearing millions of male insects, sterilizing them and transporting them to the release site can severely affect their sexual competitiveness. So his lab has focused on improving the technique as applied to fruit flies and mosquitoes.

He studied the behavioral and physiological elements that define the factors contributing to male bug sexiness and devised ways to confer these characteristics on sterile males. One of these is nutritional status. Yuval found that feeding males high-protein diets significantly improves their sexual performance. With his team, he also found that bacteria living in fruit flies are important, and that factory-reared flies lacked the bacteria found in wild insects.

With this information, Yuval and colleagues are formulating a high-protein, bacteria enhanced "breakfast of champions" that is fed to males before their release and significantly improves their sexual performance. Their work is described in the current issue of the *ISME* (International Society for Microbial Ecology) *Journal*. The team believe that their approach can be applied successfully to a variety of plant and animal pests, as well as to organisms that transmit human disease.

REMEMBERING ILAN

A new computer lab for Tel Aviv University undergraduates was recently dedicated in the geophysics and planetary sciences department in memory of Col. Ilan Ramon, the Israeli astronaut who died in the *Columbia* space shuttle disaster seven years ago. His widow Rona was present at the ceremony along with university heads and Dr. Dianne Evans, a scientist from the NASA Jet Propulsion Lab, who lectured on the role of satellites in understanding the environment.



DR. SIDNEY and Dr. Emily Kark devoted many years of their lives to pioneering social medicine, instituting health promotion and teaching in South Africa.

SIDS linked to low serotonin levels

HEALTH SCAN

• By JUDY SIEGEL-ITZKOVICH

study involved 136,474 people who did not have Parkinson's disease at the beginning of the research were asked about their use of non-steroid anti-inflammatory drugs (NSAIDs), including aspirin, ibuprofen (Advil) and acetaminophen (Acamol). After six years, 293 participants had developed Parkinson's.

The study found users of ibuprofen were 40% less likely to develop Parkinson's than people who didn't take ibuprofen. Also, people who took higher amounts were less likely to develop Parkinson's than people who took smaller amounts of the drug. The results were the same regardless of age, smoking and caffeine intake.

"Ibuprofen was the only NSAID linked to

a lower risk of Parkinson's," said Dr. Xiang Gao of the Harvard School of Public Health in Boston. "Other NSAIDs and analgesics, including aspirin and acetaminophen, did not appear to have any effect on lowering a person's risk. More research is needed as to how and why ibuprofen appears to reduce the risk of Parkinson's, but one should of course never start a drug therapy without first consulting one's physician.

BETTER TO PREVENT THAN TREAT

A forum of doctors at Hadassah University Medical Centers in Jerusalem has been set up to help reduce risk factors for heart attacks and encourage physical exercise. The forum will also include health fund community physicians and doctors from other hospitals in the area. It was initiated by Hadassah's Prof. Ted Weiss, head of the cardiology unit at the

university hospital on Mount Scopus. Soon the forum will also include doctors from hospital units and departments that deal with geriatrics, cardiology, diabetes, renal insufficiency, obesity surgery, hypertension, blood lipids and psychiatry.

KNOWLEDGE REDUCES ANXIETY

Knowing about something you are about to undergo reduces anxiety. An educational writer named Deborah Rubin Fields has produced a 29-page, English-language electronic book called *Take a Peek Inside: A Child's Guide to Radiology Exams* that is aimed at young children. The \$8 volume, which appears in a PDF format, can be ordered via e-mail from www.take-a-peek-inside.com.

Besides offering the facts, the child-friendly e-book contains jokes, riddles, visual aids, instructive sidebars and an index, and is relevant to those who will undergo an X-ray, ultrasound, a CT or MRI scan. When their parents read it to them or they read the book themselves, young patients will very likely suffer from less stress.

Low levels of the neurotransmitter serotonin is apparently one of the factors involved in sudden infant death syndrome (SIDS, or crib death), according to researchers at Harvard University in a study just published in the *Journal of the American Medical Association* and announced ATID, the Israel Foundation for the Study and Prevention of Sudden Infant Death. Serotonin has an important effect on breathing, blood pressure, body temperature and the waking mechanism.

Every year, between 40 and 60 Israeli children under one die of SIDS, although the cause is reached by ruling out other causes, since autopsies of babies are rare.

The US researchers compared the brain stems of crib-death victims with those of babies who died of known causes and found a 25 percent lower level of serotonin in the SIDS babies. In addition, they discovered 22% less tryptophan hydroxylase, an enzyme involved in the synthesis of serotonin. The team also found that serotonin receptors were less

effective in the brain stems of 29% to 55% of babies who died of SIDS.

Almost every SIDS baby also had one of the risk factors for crib death, including sleeping on their stomachs, being in an environment of cigarette smoke, sleeping on a soft mattress or being in a too-warm room (over 22°C). Eighty-eight percent were exposed to two or more risk factors. The Harvard team are continuing to study the theory that a defect in the baby's brain when in the womb – possibly due to its mother's exposure to tobacco or alcohol – could be an important factor in SIDS.

ADVIL TO CUT PARKINSON'S RISK?

An ibuprofen pill a day could keep Parkinson's disease away, according to new research that will be presented in April to the American Academy of Neurology's 62nd annual meeting in Toronto. The retrospective