**Strategy to Stop a Pandemic**

Prof. Shlomo Havlin of BIU’s Dept. of Physics has coauthored a study presenting a new approach for effective use of scarce vaccine supplies. Computer simulations demonstrate that targeting vaccinations to selected people could block a pandemic from spreading along the network of social interactions while using up to 50 percent fewer doses than existing approaches.

“The strategy is to disintegrate the network,” says Prof. Havlin, who together with his colleagues, presented these findings in the prestigious scientific journal *Physical Review Letters*. “This method could also offer a cost-effective way of blocking the spread of computer viruses on the Internet, or breaking up a terrorist network.”

In one of the most dramatic illustrations of their technique, Prof. Havlin and his fellow researchers simulated the spread of a pandemic using data from a Swedish study of social connections. In this study, more than 310,000 people are represented and connected based on whether they live in the same household or work in the same place. With the new method, the epidemic spread to about 4 percent of the population, compared to nearly 40 percent for more standard strategies.
Talking Plants Tell Scientists Their Water is Contaminated

Prof. Zvy Dubinsky and Dr. Yulia Pinchasov of BIU's Mina and Everard Goodman Faculty of Life Sciences have developed a new method to detect and measure contamination in a body of water by “listening” to the sound that microscopic algae plants release into it.

The new technology radiates a green laser beam on the plant being examined. If the plant is reaching its full photosynthesis (the process of converting sunlight into energy) potential, it will utilize part of the laser light and convert it into energy, while the rest is converted into heat. This heat causes the water to expand and produces a change in pressure, which is actually a sound wave that can be picked up by a hydrophone or special aquatic microphone.

This improved method of detection is crucial, as the country’s dwindling supply of drinking water needs to be constantly monitored to detect contamination and any decline in quality (reported in APS, The Jerusalem Post, Haaretz and a number of scientific journals including the prestigious Hydrobiological Journal).

On another note, Prof. Dubinsky, a prize winning film-maker and world-renowned photographer, is now exhibiting his photographic works at BIU’s The Wohl Centre. The exhibit will run through March 8.

Innovative BIU Technology to Help Celebrities Evade Paparazzi

Prof. Zeev Zalevsky of BIU’s School of Engineering is developing the technology behind a new product that will block or ruin photographs taken by a digital camera. Prof. Zalevsky’s research is being developed by the Israeli start-up company PhotoFree. The company says that the new product is based on wireless technology that can distort digital stills and video in a way that prevents the images from being reconstructed or reused.

The recent incorporation of cameras in cellular phones and the growing sales of digital cameras in the world have affected companies, security services, celebrities, events organizers and targets of surveillance who can’t avoid being photographed and furthermore can’t prevent the photos from being published. The new product aims to offer a viable solution to what has become a serious problem.

Among other benefits, for instance, now celebrities hounded by paparazzi photographers will have a means to prevent them from invading their privacy (haaretz.com).
A Historical Day for the Advancement of Gender Equality in Israel

In a landmark decision, the Israeli Knesset has voted in favor of an amendment to the Spousal Property Relations Law which will now allow for the division of property prior to divorce. BIU’s Ruth and Emanuel Rackman Center for the Advancement of the Status of Women took a leading role in initiating this revolutionary amendment, together with the International Coalition for Agunah Rights (ICAR).

“The Knesset has taken a major step forward in promoting women’s status in Israel today,” said Prof. Ruth Halperin-Kaddari, Director of the University’s Rackman Center. “This is a day of celebration for women in Israel, for the advancement of gender equality and for the advancement of human rights in Israel,” she added.

Prior to this newly passed amendment, a couple married after 1973 (when the Spousal Property Relations Law was enacted) was permitted to divide its assets only after being granted a get (religious divorce). This tempted husbands to refuse to grant their wives a get so that the assets, generally in the husband’s name, wouldn’t be divided between them. The division of assets also gave the husband a means to “blackmail” his wife as a condition for granting the get. The amendment will now allow for the division of property prior to the get, in cases where divorce proceedings last more than 18 months or if it is proven that a marriage is in irretrievable breakdown, or in a case of domestic violence.

The timing of this move is particularly meaningful in that it took place just a few weeks before the passing of BIU’s beloved Chancellor Emeritus Rabbi Prof. Emanuel Rackman for whom the Rackman Center is named.

Children’s Games Are Not Child’s Play

Prof. Pnina Klein, Director of BIU’s Edward I. and Fannie Baker Center for the Study of Development Disorders in Infants and Young Children, was interviewed on an Israeli radio talk-show about the conference she held recently entitled “Children’s Games are Not a Trivial Matter.” The conference was under the auspices of BIU’s The I. B. Harris Program and the Lois Alberto Machado Chair for Research on Cognitive Modifiability and the Development of Intelligence.

During the interview Prof. Klein reiterated how important children’s play is at very young ages, particularly games that improve cognitive skills. She emphasized that how a parent or caretaker plays with a child is critical. “The amount of toys is less important than the type of play, which should invite the child to be active, to use his/her imagination, to initiate and not just respond,” said Prof. Klein (Kol Yisrael).

BIU Psychologist Wins Award

Industrial/Organizational Psychologist Dr. Asher Raz is the Highly Commended award winner of the 2008 Emerald/European Foundation for Management Development (EFMD) Outstanding Doctoral Research Award celebrating excellence in research. Dr. Raz is the only Israeli to have received an honorable mention.

Dr. Raz received the award for his dissertation, entitled The “good” recommender and the “bad” recommender: Regulating for the factors of leniency effect in reference letters, which attempts to identify variables that might serve to increase the validity of reference letters, one of the most popular tools used by organizations to select new personnel. Dr. Raz’s PhD dissertation was supervised by Prof. Meni Koslowsky, of BIU’s Dept. of Psychology, and promises to become an important tool for evaluation of employee effectiveness.
Delegation of Nigerian University Leaders Visits BIU

BIU recently hosted a delegation of presidents representing seven Nigerian universities. The group participated in a mission to Israel in order to learn different methods of instruction and education. To this end, they met with Prof. Zemira Mevarech, Director of Bar-Ilan’s Churgin School of Education, who provided them with an overview of the School and of the educational system in Israel. The group was interested in several ideas presented by Prof. Mevarech and agreed to collaborate with her on future projects. Vice President for Research, Prof. Harold Basch, and Prof. Eli Merzbach, Chairman of the University’s Regional Colleges Administration, also met with the delegation.

Nigerian University Leaders visit Bar-Ilan University

BIU Alumnus Appointed Chairman of Ashdod Port

Cmdr. Yaakov Raz (BA Criminology and Political Science, MA Public Administration) has been appointed the new Ashdod Port Chairman. Raz served for thirty one years in the Israeli police forces during which period he was head of the community police, the civil guard and police traffic division. More recently, he was a director in Ashtrom Group Ltd., one of the country’s leading building corporations (Israel Today).

BIU Student Volunteers for the Needy

In the midst of rising food costs and a weak global economy, students like Yonatan Amir (who studies law and economics at BIU) are volunteering their evenings to gather leftover foods for poor families.

“You have to be a night owl for this kind of work,” says Amir who volunteers for Table to Table, a food-rescue charity that gathers leftovers from thousands of catering halls, restaurants, bakeries and hotels countrywide. Volunteers like Amir use their own cars to collect the food and deliver it directly to non-profit organizations, which in turn distribute it the next day to needy families. Food distribution charities estimate a 25 percent increase in the number of families or individuals requesting assistance this year, undoubtedly due to the economic downturn. Luckily for them Table to Table, and volunteers such as Yonatan Amir, are making sure that as little as possible gets wasted (The Jerusalem Post).