



# HAPPENINGS

Issue 57  
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## FOR THE TIMES THEY ARE A-CHANGIN

### What's new ?

We have great pleasure in enclosing our 2015-16 Year Book together with "Happenings" for your enjoyment. As you will see, our Year Book is "innovation" focussed, highlighting just a selection of The Hebrew University of Jerusalem's exciting innovations and research successes.

### Put the kettle on.

We all need to take a break sometimes, but at The Hebrew University of Jerusalem the work never stops. So enjoy a well-earned cuppa, while you check out some of the latest news from Israel's top university.

## HUMANITY

### Clinical Legal Education Centres for Human Rights and Social Responsibility

The Clinical Legal Education Centres (CLECs) for Human Rights and Social Responsibility were established by the Faculty of Law in order to provide high quality legal aid free of charge to underprivileged individuals and groups and at the same time to educate the future generation of the Israeli legal elite in social responsibility.

Society gains twice: disadvantaged people get valuable legal aid and are empowered, while the legal community is enriched with knowledge, sensitivity & comprehension of the unique skills necessary to protect and further human rights.

A great advantage of the Clinics is that it avoids all bureaucracy, often a characteristic of organisations which offer help to the underprivileged. The students and lawyers provide their clients with legal assistance throughout the process. Emphasis is placed on providing a high quality service to those of limited means in order to give them equal opportunities in relation to those who can afford the high prices of good legal services.

In addition, the students gain further insights into their work through cooperation with professionals from other disciplines, such as community activists, social workers and physicians. The students are closely supervised by an experienced team of lawyers who operate the various clinics.

## HUNGRY MINDS

### Saving Lives

**New Device Shortens Chest-Tube Insertion From Minutes To Seconds - University students develop life-saving device following a wave of stabbing attacks that leave dozens of Israeli civilians with collapsed lungs**

To address this challenge, **Dr. Ariel Drori** partnered with **Yoav Kan-Tor** and **Bettina Nadorp**, engineering students at The Hebrew University's Alexander Grass Center for Bioengineering, along with **Dr. Liran Levy**, a pulmonologist from Hadassah Medical Center, and **Chen Goldstein**, an MBA student at The Hebrew University. Together they developed ThoraXS.



Students at the Hebrew University's BioDesign program developed ThoraXS, a one-handed thoracic portal opener that shortens the procedure time of chest-tube insertion from minutes to less than 30 seconds.

Video about ThoraXS can be seen at <https://youtu.be/jZ3fhZmgyiY>

### STOP PRESS: German and Israeli Research Leaders Join Forces to Launch Global Cybersecurity Centre

The Hebrew University of Jerusalem, Israel's premier university and leading research institution, and the Fraunhofer Institute for Secure Information Technology SIT, the leading institute for applied cybersecurity research in Germany, have agreed to co-create a Fraunhofer Project Centre for Cybersecurity in Jerusalem. The planned Centre is meant to become the leading institution for applied cybersecurity research in Israel, as well as worldwide.

**The Hebrew University is Israel's leading academic and research institution, producing one-third of all civilian research in Israel.**



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## NEWS IN BRIEF

*Please contact your local Australian Friends office to receive the full article*

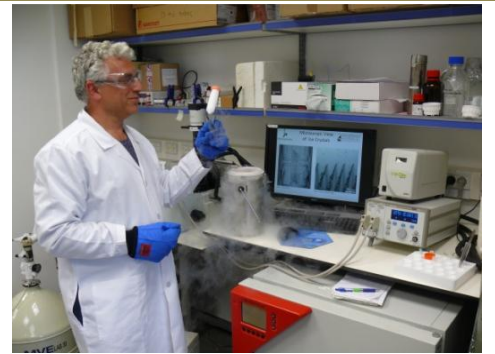
### Scientists “break the ice” on organ banking

After decades of studies, scientists now believe that a breakthrough in preserving body organs for the purpose of saving lives is close at hand.

A heart or lung is kept viable for transportation for only six hours before deterioration begins. Pancreas or liver would go to waste after 12 hours in storage and a kidney could be kept outside the body for less than 30 hours.

One of the main problems standing in the way of storing organs for more than a few hours is ice growth. When organs are frozen, expanding ice crystals damage the cells in a way that they cannot be revived. That is why some organs are kept cooled but not frozen.

*Prof. Ido Braslavsky at his lab, where his team investigates ice binding proteins and new methods in cryopreservation of cells and tissues (Credit: Dr. Amir Bein)*



### Impression of King Hezekiah’s Royal Seal Discovered



0 1cm  
(Photo by Ouria Tadmor)

© Eilat Mazar, Photo: Ouria Tadmor

This is the first seal impression of an Israelite or Judean king ever exposed in situ in a scientific archaeological excavation. The discovery brings to life the Biblical narratives about King Hezekiah and the activity conducted during his lifetime in Jerusalem’s 1<sup>st</sup> Temple Period Royal Quarter.

Hebrew University’s Institute of Archaeology Director Dr. Eilat Mazar said: “Although seal impressions bearing King Hezekiah’s name have already been known from the antiquities market since the middle of the 1990s, some with a winged scarab (dung beetle) symbol and others with a winged sun, this is the first time that a seal impression of an Israelite or Judean king has ever come to light in a scientific archaeological excavation.”

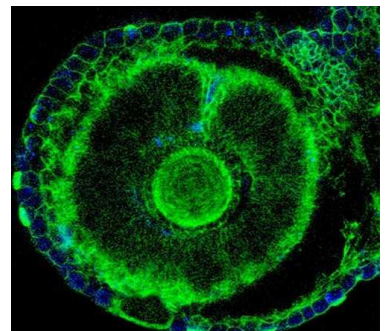
A video about this discovery is available online at <http://www.keytodavidscity.com>.

### Scientists Convert Skin Cells Into Functional Placenta-Generating Cells

Researchers from the Hebrew University of Jerusalem, led by Dr. Yosef Buganim at The Institute for Medical Research Israel-Canada (IMRIC) in the Faculty of Medicine, have succeeded in converting skin cells into stable and fully functional placenta-generating cells (also termed induced trophoblast stem cells (“iTSCs”). Now, the main focus of the Buganim lab is to apply their technology to generate fully functional human placenta-generating cells

The success of this study will grant a real chance for women who suffer from recurrent miscarriage and placental dysfunction diseases to have healthy babies. It is important to note that these cells do not hold any risk since they integrate only into the placenta and not to the embryo itself.

*A trophoblast stem cell*



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