

## News Release

For immediate release

# Hebrew University breaks new ground with launch of Centre for Converging Sciences

Jerusalem, January 23 2007 – A vehicle for cross-disciplinary scientific research on a more comprehensive and cooperative scale than has ever before been attempted anywhere is being launched by the Hebrew University of Jerusalem, in cooperation with Yissum, the technology transfer company of the university.

The university is the first in the world to establish a Centre for Converging Sciences and Technologies that will include cooperative research groups in the exact, biomedical sciences, as well as in humanities, law and the social sciences, said Prof. Dan Gazit of the Hebrew University's Faculty of Dental Medicine, who is the founder and director of the new centre.

Prof. Gazit explained that while the concept of converging sciences was formulated a few years ago by the U.S. National Science Foundation, that vision did not include those fields outside of the exact and biomedical sciences, which the Hebrew University is now incorporating. Thus, the Hebrew University's vision of converging sciences is a broader one than conceived elsewhere and brings together virtually all fields of scholastic endeavour. This, he said, is a new and perhaps even revolutionary approach in scientific cooperation.

The new centre will involve cooperative planning and definition of research projects that will be examined from the outset from a number of perspectives involving elements of scientific, economic, ethical, societal and legal aspects, Gazit explained. In this way the centre will be able to identify and to promote the study of scientific questions and challenges that can be resolved only by combining the expertise of scientists stemming from the fields of biotechnology/biomedicine, nanotechnology/nanoscience, information technology, cognitive science, arts and humanities together.

A further aim of the centre in the future will be to develop teaching programs for students studying for B.Sc., M.Sc. and PhD, degrees in a manner that will enable them to think and work in ways that are conducive to the converging science approach, said Gazit.

As an illustration of the type of projects that can be included within the Centre for Converging Sciences and Technologies, Gazit pointed to a project which he directs for engineering of new tissues and organs. Gazit and his staff have already demonstrated how it is possible to utilize adult stem cells to grow bone, cartilage, ligament and tendon tissues, thus providing a promising alternative to surgery for millions of people suffering from injuries or degenerative diseases and to return them to full functioning. The project incorporates elements of expertise in stem cell biology, nanotechnology, informatics, genetics, and issues related to medical ethics, law and public opinion.

The three new converging sciences projects being funded through the new centre are:

1. Combining nanotechnology, medicine and business to develop and market nanodevices and sensors for detecting pathogens (the causes of diseases),
2. Combining physical chemistry, archaeology, linguistics and computer science to investigate the prehistoric origins of the Hebrew language, using a computerized comparison of various texts taken from archaeological findings.
3. Combining biomedicine, cognitive, social and computer sciences to investigate what is the genetic, hormonal and neurological basis of the altruistic phenomenon in human society.

Commenting on these three projects, which were chosen from among ten candidates, Prof. Gazit said that “they illustrate the initials – BINCA – that we use to identify the scope of our new centre, and which stand for bio, info, nano, cogno, arts and humanities.”

“A remarkable pool of highly skilled professors already exists within the various faculties of the Hebrew University from which experts with diverse talents can be drawn for projects within the Centre for Converging Sciences and Technologies,” said Gazit, but the centre will aim also to extend its reach to attract the best scientific minds from elsewhere as well.

For more information, or for press contact with students, faculty or spokespersons from HU, please speak in the first instance to Jason Caplin, Communications Manager, on +44 (0)20 7691 1471 or email [jason.caplin@bfhu.org](mailto:jason.caplin@bfhu.org).



#### **About the Hebrew University**

With 24,000 full-time students, the Hebrew University of Jerusalem is Israel's pre-eminent institute of higher education. Its faculty members pursue projects that are both essential to Israel's future and the benefit of humanity. It is a centre of international repute, with formal and informal ties extending to and from the worldwide scientific and academic community. Students come from all over Israel and across the Middle East to study in an atmosphere of academic and research excellence.

#### **About the British Friends of the Hebrew University**

Established in 1926, The British Friends of the Hebrew University is the oldest established Jewish charity in support of higher education. The charity works to promote and enhance the reputation of the Hebrew University, ensure that underprivileged students are given the opportunity to complete their studies, and help HU to maintain its standard of excellence and worldwide reputation for research.

BFHU acts as the UK's gateway to Hebrew University research, expertise and faculty, and provides financial and pastoral support for prospective and current students at HU, as well as supporting visiting and sabbatical Hebrew University lecturers during their time in the UK.