

## Pursuit of Knowledge and the Importance of Education

*A symposium on “Open Knowledge and Freedom of the Spirit” held at the Open University on the occasion of the dedication of the new Chais Auditorium on the Raanana campus brought together an interesting range of topics and illuminating speakers including the fields of law, science, the Bible and political science. Participants in the symposium were the President of the Supreme Court Prof. Aharon Barak, discussing the conflict between human freedoms and other basic rights, Nobel Prize winner in Chemistry Prof. Aaron Ciechanover on freedom to pursue research in the forefront of science, Israel Prize Winner Prof. Sara Yeffet speaking on freedom of expression in the book of Ecclesiastics, and the founder of the Master’s Degree program on Democracy at the Open University Prof. Benyamin Neuberger speaking on the characteristics of stable democracies. The symposium reflected the cornerstone of the Open University, opening the treasures of knowledge to all who seek them, universal access to higher education, promoting open and creative learning and independent study. At the crossroads between freedom of spirit and pursuit of knowledge, Nobel Prize winner Prof. Aaron Ciechanover traces his career in research on DNA against a backdrop of freedom of the spirit and of scientific pursuit and addresses a fundamental issue – the pivotal importance of education. Here are extracts from Prof. Ciechanover’s message:*

### Should Research Be Restricted?

Ever since the genetic revolution, the discovery of the structure of DNA and the mechanism of conveying that information from generation to generation, incessant dispute has ensued. The reason the genetic revolution was not accepted with open arms was the archaic fear that someone would interfere with the act of creation, and scientists would have the power to exploit their knowledge for evil intent beyond all human imagination. Today, every first year student starts with creating genetic changes in bacteria and the fears have dissipated.

Recent mapping of the human genome, the sum of all human genetic information, rekindled the notion that this knowledge could bear great dangers. For example, there is a danger of immediate knowledge of every detail of an individual’s genetic make-up and the future consequences of that knowledge in predisposition for diseases. We could gather information about millions of people – and identify genes that are associated

with diseases, schizophrenia, heart diseases, prostate or breast cancers. It is possible that once these illness-causing genes are located, human disease can be predicted at the level of the embryo with a picture of the child’s future health profile, and the implications of that projection are beyond imagination.

Will mothers say they don’t want a certain the child and abort? Or can she plan in advance and eliminate undesirable characteristics from the sperm or ovum? Perhaps the army would want to enlist only those with certain characteristics, and insurance companies will want to insure only those who are low risk, high health profile clients. And what about couples? Will they want to choose each other based on a pre-determined health identity?

#### Restriction of Research?

There are a number of possibilities. Research can be halted entirely. If this is the approach, humanity could rapidly march back and recede into

the Middle Ages. This knowledge brings immense benefit to humanity. And if we do not investigate, we will not know. The problem is in the use of knowledge and the limitation of its use, not in acquiring it, not in the prevention of generating knowledge. We need to maintain a delicate balance between the absolute necessity of science to continue to pursue knowledge and the ways this knowledge can be used.

Recently, the green movement in Switzerland tried to pass a referendum to halt genetic cloning, which would constitute a death sentence to Switzerland’s advanced science. Another version of this is President Bush’s restriction of the use of stem cells, the greatest hope of medical science in the coming years for curing devastating diseases, such as neurodegeneration (e.g., Alzheimer’s) and diabetes, as stem cells are the only cells that can regenerate on site and replace dead and damaged cells.

American medicine is experiencing difficulty, seeking loopholes to advance science and heal the infirm.