



# ACADEMIA ENGELBERG

## **Media release**

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### **Academia Engelberg Foundation: Successful completion of the 10<sup>th</sup> Dialogue on Science**

## **Chances and risks of personalized medicine**

**In the future, genetic testing will make it possible to simply and quickly analyze potential disease risks of a person. If and when diseases occur will highly depend on the health-related behavior of affected people.**

The prospects are tempting: thanks to genetic testing, one will know the risk of contracting diabetes, Alzheimer or breast cancer. Depending on the probability and disease risks, it will be possible to boost one's health with preventive measures. The disclosure of patients' health-related data allows scientists to do further research and develop better and more specific treatments. The question remains how well a person faces the fact that he or she knows about risks for diseases. On the occasion of the conference held by the Academia Engelberg Foundation in Engelberg, over 150 experts from science, industry, culture, politics and society from all over the world discussed the chances and risks of personalized medicine from a medical, ethical, legal and also economic point of view during the past three days.

## **Drug development at a turning point**

Today, a disease is defined by its symptoms. However, one single pathology can be triggered by different body defects. Thanks to genetic testing, a disease can be divided into subtypes. Such divisions might be helpful for the pharmaceutical industry as 50 percent of new drugs do not pass the third testing stage due to lacking efficiency. Genetic testing would make it possible to filter the patients who benefit from the medication. And those who do not experience any changes could be excluded. However, the risk exists that the pharmaceutical industry is not interested in the development of new drugs as patient groups would be too small. Such developments might lead to far-reaching consequences in the future.

**Paradigm shift in medicine**

During the conference, it became obvious that personalized medicine will revolutionize medical treatments: Simple curing of diseases (reactive therapies) will be increasingly replaced by proactive treatments of disease risks. The four treatment elements “proactive, personalized, preventive and participative” move the patient into the spotlight. Sensitized and committed patients will need less, but more specific treatments due to better health care provisions. But also research itself undergoes a paradigm shift. Today, researchers still look for a rather large number of certain patient types. In the future, patients will provide their genetic data for research purposes. And larger amounts of data make more precise results possible.

**Views of young scientists**

During a preconference, members of the Swiss Study Foundation and YES Youth Encounter on Sustainability prepared various presentations. Several questions were raised; one of which was the following: May an Islamic country such as Pakistan also benefit from personalized medicine? The answer to the question was a resounding no. In a country where 50% of the population are illiterate, 55 million do not have access to safe drinking water and 100 million live without sanitary facilities, diseases such as hepatitis, malaria, diarrhea and respiratory diseases are priorities. Public health and education have to be improved first before thinking of personalized medicine. But in the case of Switzerland, for example, there are good conditions for personalized medicine: High educational levels, high incomes, on-site research and patients with high expectations. However, the scientists also came to the conclusion that there is a lack of information regarding the requirements and benefits of personalized medicine. Therefore, an intensive information exchange between scientists, doctors and the general public is highly necessary to improve acceptance. Thus public opinion is decisive for the breakthrough of personalized medicine in society.

**Conference 2012 – Future cities**

The program committee already started to prepare the 11th Dialogue on Science. Next year's conference will address the worldwide rapid urbanization which is an issue of great complexity and global significance, especially in Asia, Africa and South America. The UN Secretary General Ban Ki Moon pointed out the issue during the World Expo in Shanghai in 2010. The UN's Department of Economic and Social Affairs predicts that between now and 2050, the world's urban population will almost double. The 11th Dialogue on Science of the Academia Engelberg Foundation will focus on these challenges. The interdisciplinary dialogue offers architecture, urbanism and environmental sciences a unique platform to discuss together the issue of



rapid urbanization. The conference will look for potential solutions to questions such as: What form will such future cities take, and how can they be sustainable? How will they be governed, and how will they function?

### **Bridge between science and society**

Fundamental scientific findings are likely to meet strong reservations and encounter mistrust among the general public. The Academia Engelberg Foundation ([www.academia-engelberg.ch](http://www.academia-engelberg.ch)) contributes its share to the creation of a new foundation of trust through interdisciplinary dialogue between the scientific community and the general public. Every autumn, personalities from science, industry, culture, politics and society meet in Engelberg, Switzerland. In addition to this, projects are carried out and follow-up events are organized as results of the conference. All the presentations of the 10<sup>th</sup> Dialogue of Science have been videotaped and can be accessed at [www.academia-engelberg.org](http://www.academia-engelberg.org).

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### **Media Relations**

Photos, texts and videos on the conference are continuously available at [http://www.academia-engelberg.ch/konferenz\\_2011.php5](http://www.academia-engelberg.ch/konferenz_2011.php5)  
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