

verteilt werden müssen, oder kann es gelingen, den Faktor Arbeit in Zukunft sogar zu stärken? Welche Arbeitsformen werden mit welchen sozialen Auswirkungen vorherrschend sein? Und was bedeutet dies für die Qualifikationsanforderungen, denen sich die Menschen stellen müssen? Zu untersuchen ist schließlich auch, inwieweit die Politik in diesem Zusammenhang überhaupt noch als gestalterische Kraft eine Rolle spielen können, oder ob sich die Arbeitswelt zusehends von ihr autonomisieren wird.

Alles in allem verfolgt das IZA ein ehrgeiziges Ziel: Forschung und öffentlichen Diskurs gleichermaßen voranzubringen sowie praktikable Lösungsansätze für die Bewältigung des akuten Problems der deutschen wie europäischen Massenarbeitslosigkeit zu erarbeiten. Die Zukunft der Arbeit will bedacht sein. Das IZA möchte einen qualifizierten Beitrag hierzu leisten.

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VIB starts TA research programme on the social aspects of modern biotechnology

VIB, the Flanders Interuniversity Institute for Biotechnology was granted 70 million Belgian francs by the Flanders Government to start up a technology assessment research programme on the social aspects of modern biotechnology. For this programme 7 projects have been selected, each one studying the effects of modern biotechnology on society.

Background

In 1995 the Flemish Government founded the Flanders Interuniversity Institute for Biotech-

nology (VIB). The institute gathers and enforces the human resources, the technology and the know-how of nine university research groups, internationally reputed in molecular biology, a research area in which Flanders has a proven track record. VIB has a competent staff of about 700 researchers, performing basic and applied research. These departments are situated at four different universities. The headquarters of VIB, located in Zwijnaarde, coordinate nine existing research departments and created two new ones: a technology transfer department and a technology assessment department. The technology transfer department aims at obtaining intellectual property rights covering the findings of research done at VIB laboratories, and promotes the industrial development of these. The technology assessment department co-ordinates the institute's approach of risk assessment, regulations, the socio-economic impact of biotechnology, ethical issues and public information.

The VIB Technology Assessment Research Programme

The VIB technology assessment research programme serves to stimulate a broad public dialogue on the social, economic, legal, ecological and ethical facets of modern biotechnology. The programme will develop new information or methods and instruments which can be used in this public dialogue. The research starts from the international state of the art in technology assessment (TA).

The concerns of the Flemish society were taken as a starting point for the theme's of the research programme. These concerns were determined after a broad consultation of Flemish institutions and after advice of the VIB platform committee. The theme's that were finally chosen focus on those problems for which there is no or not sufficient information, and which besides this will grow in importance in the years to come.

On a call for proposals which was launched in spring 1998, 29 project proposals were submitted. The call was only open to Flanders institutions. An international jury of experts has evaluated the project proposals with regard to quality and relevance. Finally, after advice of the VIB platform committee, 7 proj-

ects were selected. The projects started on February 1st, 1999. The length of the projects varies from two to four years.

The 7 selected research projects encompass a broad range of theme's, varying from genetically engineered food to human germline gene therapy. The projects cover different facets from ethical and psychological aspects to economic aspects. A short outline of each of the projects follows.

The TA research projects

Human germline gene therapy

Human germline gene therapy is genetic engineering of human beings in which the genetic alteration is also – or deliberately – effected in reproductive cells, which means that offspring will also carry the alteration. In the beginning of the nineties, with the first clinical trials of gene therapy, it was determined that the genetic engineering of human reproductive cells was ethically not acceptable. Slowly, but surely this position is corroding, influenced by the proposition of gene therapy in the womb, and the development of cultured human embryo stem cells. The mapping of the different ethical points of view on human germline gene therapy is therefor highly appropriate.

Genetic testing

In the coming years a great number of genetic tests will become available for late onset diseases. Such tests are extraordinary, because the person on the moment of the test is healthy, while the test results shed light on possible future disease. This knowledge creates a new psychological identity which is not yet familiar to our society. It is of great importance that the opinions of the general public, but also of practitioners, nurses, researchers and other relevant groups play a role in determining the availability and accessibility of future genetic tests.

Cost-versus-utility in gene therapy

At this moment a growing number of gene therapy products are entering clinical trials. Most of these products are likely to have their biggest impact on the improvement of the quality of life and thus on the 'indirect' costs of an illness. At this moment it is not known what the economic

benefits might be of gene therapeutic products and, so far, no economic protocol exists which guides all parties either in setting up a phase 3 (or 4) economic study.

Xenotransplantation of cells

There is a huge shortage of donor organs. A possible solution of this problem is xenotransplantation. This is the transplant of non-human cells, tissues or organs to human beings. The pig is the most probable donor. In debate and in surveys until now the emphasis has been put on the transplantation of whole organs (heart or kidney). The transplantation of cells could be much more realistic and near, for instance for the treatment of certain types of diabetes. Only little is known about the attitudes of potential patients or of the general public on xenotransplantation of cells. As clinical trials will be reality in a number of years, it is appropriate to do research on this aspect, also in order to be able to provide better advice for patients in the future.

Economic benefits of biotechnology in agriculture

Are there any economic benefits attached to biotechnological (genetically engineered) products in agriculture? If so, how large are these benefits? And for whom are these benefits? Are they for the biotechnological companies? For the farmer? For distributor or retailer? Or are they for the consumer? In the current public debate on biotechnology in agriculture and food, these data are missing completely. An economic analysis with real numbers would be a welcome contribution to the public debate.

Genetically engineered foods and the consumer

In consumersurveys concerning biotechnology the Belgian consumer is mostly described as being not very involved and not very well informed when compared to a number of other north-west European countries. Detailed consumer research which would enable to divide consumers into different groups according to attitude and motivation, and which would more or less enable to predict actual behavior, is not existing in Flanders. Besides this a more thorough insight into peoples motivations could help to organise a better and more effective information campaign.

An interactive Flemish public debate

In Flanders different types of research are being done which fall within the scope of technology assessment. This research is characterised by being rather academic and having a rather low profile. Modern technology assessment however is much more an interaction between relevant actors, including the general public. Some European countries already have quite some experience with the organisation of such interactions, like consensus conferences, hearings or citizen debates. What determines whether these interactions are effective? Would it be possible to organise such processes in Flanders, taking account of the Flanders political and cultural context? Insight into these questions would make it possible to organise and stimulate a public dialogue on biotechnology more effectively.

Coordination

The 7 projects will be running at different institutions in Flanders in dialogue with VIB (with a single exception, all institutions belong to universities). Coordination activities are run from the VIB headquarters. For guidance VIB will make use of its platform committee and of independent panels of experts. In coordinating the project VIB will play an important role in transferring the results of the projects to the public debate and the feedback to relevant target groups. VIB will organise a number of special activities aimed at the media and the general public. Also wherever possible information will be made available for the general public in an easily accessible and understandable format. Only in this way will it be possible to really stimulate and underpin a well-founded public dialogue. Because the issues that are dealt with in the projects are just as important in an international context, VIB will make sure that the information is transferred to all relevant target groups outside the Flanders borders.

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Neues Fraunhofer-Institut für Verkehrs- und Infrastruktursysteme in Dresden

Wegen ihrer strategischen Bedeutung will die Fraunhofer-Gesellschaft der Verkehrstechnik ein höheres Gewicht geben. Ein erster Schritt dazu ist die Errichtung eines Fraunhofer-Instituts für Verkehrs- und Infrastruktursysteme (IVI) in Dresden. Weitere Kapazitäten sind in Dortmund und Berlin geplant.

Die Gestaltung der Verkehrsprozesse wird in den kommenden Jahrzehnten zu einem Schlüssel für die Entwicklung von Wirtschaft und Gesellschaft. Von einer funktionierenden Verkehrsinfrastruktur hängen Regional- und Stadtentwicklung ebenso ab wie die Entwicklung der internationalen Arbeitsteilung. Neue, verkehrsübergreifende Leit-, Steuerungs- und Sicherungssysteme spielen in hochindustrialisierten Ländern in Europa, den USA und Japan die entscheidende Rolle in der Verkehrspolitik. Diese Telematiksysteme können helfen, die heutigen Informationsdefizite bei Verkehrssystem-Betreibern wie -Teilnehmern abzubauen. Gleichzeitig liefern sie die Voraussetzung für eine Integration des Kraftfahrzeugverkehrs in ein multimodales Verkehrssystem.

Um diese Herausforderungen schlagkräftiger angehen zu können, baut die Fraunhofer-Gesellschaft ihre Kapazitäten in der Verkehrstechnik aus. Ein wichtiger Schritt dazu ist die Errichtung eines Fraunhofer-Instituts für Verkehrs- und Infrastruktursysteme IVI in Dresden als Teilinstitut des Fraunhofer-Instituts für Informations- und Datenverarbeitung IITB in Karlsruhe. Das IITB betreibt seit 1992 in Dresden eine Außenstelle für Prozeßsteuerung. Diese wird nun in ein Institut umgewandelt und ausgebaut. Das Stamminstitut in Karlsruhe verlagert damit seine verkehrstechnischen Kompetenzen nach Dresden und fokussiert sich auf nunmehr acht Geschäftsfelder. Das Land Sachsen unterstützt den Aufbau des neuen Geschäftsfeldes "Multimodale Verkehrssysteme" in Dresden in den nächsten fünf Jahren mit erheblichen zusätzlichen Mitteln für Ausstattung und Betrieb.