Speech of the Minister of Justice of Rheinland-Pfalz (Germany) *Peter Caeser* at the occasion of the opening of the 14th Congress of the International Society of Forensic Haemogenetics

Dear Congress President,
Ladies and Gentlemen,

I am pleased to welcome you here in the Electoral Palace of Mainz to the opening of the 14th congress of the International Society for Forensic Haemogenetics. As a member of the Government of Rheinland-Pfalz I am very glad that you have chosen our beautiful state capital as the meeting place for your convention. It is a city in which the past - the traces of antique and medieval history and the present - art, science, media and economy - form a harmonic entity.

Mainz represents also for you and your society the past and the present. You return this year to the starting point of your scientific society. Back in the year 1968 a group of forensic experts from Rheinland-Pfalz and Saarland have met in the University Clinic of Mainz. In the beginning these scientists have founded the German Society for Forensic Haemogenetics. Today you have returned to your birthplace as an international society renowned throughout the world with members from more than thirty countries.

This year's congress will deal with a number of important questions and current problems in the field of forensic haemogenetics. I am sure that all participants will spend three interesting and profitable days.

Almost thirty years ago the late swiss author Friedrich Dürrenmatt wrote the comedy "The Physicists". In a brilliant way he deals with the responsibility of the scientist for the results of his research. Is a scientist responsible for what other people do with the results of his research? Dürrenmatt convincingly rejects moral and ethical nihilism: It is the very own responsibility of the scientist himself whether other people create a desaster based on the results of his research. Therefore the scientist is urged to take care of practical and human consequences of his research.

I am not sure if Dürrenmatt would put physicists in the centre of such a comedy today. In my opinion the question of responsibility has a particular relevance to the results of genetic research especially today.

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Gene technology will be one of the topics of your congress. This subject concerns not only the physicians and biologists. Responsibility is a normative size. Legislation and jurisdiction are urged together with biologists, physicians, philosophers and theologists to reach a consens in dealing responsibly with the results of gene technology.

The work of the International Society for Forensic Haemogenetics as well as this scientific congress and the entire forensic medicine as I presume are strongly influenced by the specific possibilities of the genome analysis and especially the DNA fingerprinting technique. This is an important topic also for the jurisdiction. For me as the Minister of Justice of this state are not only the specific questions of the application of this technique in jurisdiction a major question. The problems which are posed by DNA fingerprinting and genome analysis in general have to be seen in the framework of problems related to gene technology as a whole.

Since the beginning of the eighthies in the Federal Republic of Germany, prospects and risks of gene technology are positive signals

- for challenges and new questions in the whole field of natural sciences,
- for experiments and new developments in applied sciences,
- for innovation processes, calculations and decisions for major investments in economy and industry,
- and for the expectations and hopes of patients and those who take care of them.

Prospects and risks of gene technology are as well negative signals

- for worries, fears and worst expectations of numerous scientists and especially of a significant part of the population.

The expression "prospects and risks of gene technology" represents one of the most important and dynamic topics of our time. No one doubts that gene technology has opened up major opportunities. On the other hand many are well aware of its horrendous risks.

The rapid development and the dynamics of research in gene technology, the speculative description of possible results and developments, have created fear of the future, the so called "Zukunftsangst". Sometimes the risks have been exaggerated. It has been said that abuse by unscrupolous scientists and business people, and even environment catastrophes will become possible.

This wrong picture has emerged, although the relationship between prospects and risks of gene technology have been studied and presented with great responsibility throughout the world. It may be possible, however, that the experts in science and industry have restricted their knowledge on the risk potential of gene technology to their own circles for too long. This had to provoke speculations.

Meanwhile, there has been decisive change concerning this point. The scientific results of gene technology, their possible implications and the judgements by the different disciplines in science are widely presented and discussed in the general public. For example, in Germany a report has been published on "In-Vitro-Fertilisation", genome analysis and gene therapy. This report has been presented in 1985 by a joint working group of the Federal Ministries of Research and Technology and of Justice. It has made a major contribution to form an objective basis for this discussion. This report has pointed out the topics that are relevant for all ethical and legal implications and judgements of these new techniques. In addition, seperate recommendations were also made to the legislature. It is interesting for the application in forensic medicine, that it has been declared legal to study human cells, for example for the identification of a suspect. The suspect has to allow the physical examination as well as the taking of a blood sample according to the rules of the German code of criminal procedures.

The results of the Enquête Commission of the German parliament by the name "Prospects and Risks of Gene Technology" had an even greater impact. Members of all fractions of the German parliament, as well as representatives of science research, theology, legal sciences, molecular genetics and biochemistry, and personalities of the industry of the German trade unions and from the association of German physicians were included in this Enquéte Commission.

The commission was founded on August 14th, 1984. It had the task to present prospects and risks of research in gene technology and biotechnology, in the context of its application in the areas of health, nutrition, production of energy and raw materials as well as environment protection. In addition, criteria had to be worked out for the limitation of the application of cell biological and gene technological methods on human cells and the human individium as a whole.

In the beginning of 1987 the results of the Enquête Commission were presented containing more than 170 proposals. The question of genome analysis in the context of legal procedures is discussed in detail. The commission has expressed the expectation that the recommendations will be accepted and implemented by the responsible experts as soon as possible. A framework shall be created for this new

technology before all possible applications are put to work. The chances of gene technology shall be used responsibly and in a socially acceptable manner, and care shall be taken against possible risks, and dangers should be excluded, as far as possible.

The report of the Enquête Commission has initiated a broad discussion about the social and legal implications of the new technologies. The relevant authorities have studied the recommendations and have put forward political consequences. In some areas legislation has already been adopted. An example is the embryo protection law, which prohibits experiments on human embryos.

The State Government of Rheinland-Pfalz has accepted to contribute to the solution of questions and tasks posed by gene technology very early. On the background of the report of the Enquête Commission, the State Government has ordered the State Commission on Bioethics, to work out ethically and legally responsible guidelines for political decisions regarding the application of gene technology in man.

Members of this bioethics commission, of which I am the chairman, are as well scientists of numerous disciplines, representatives of the churches, the industry, the trade unions as well as politicians and members of the respective state ministries. Our starting point is a close linkage between the ethical and political evaluation of modern human genetics with its prospects and risks. The analysis of the human genome is not simply basic research without any moral implication. But even in this context, this research would not be ethically neutral, because of all possible applications that have to be taken into account.

The intervention into the right of the individial has to be considered in the context of the constitution. An example is the right of man not to know anything about his own genes or his genetic predispositions. This is true in the Federal Republic of Germany, in particular regarding the important right of informational self determination. It has to be considered that there is a danger that a man will be classified or even discriminated on basis of certain standards. We have also seen the potential danger that as a result of gene technological methods the acceptance of disease or disabled people in our society will be reduced. We have also discussed the danger that the disclosure of a given genetic predisposition may lead to the loss of job of certain working people. We have studied if genome analysis in the area of insurance may lead to increased risk premiums or even to the exclusion of people expected to be at a certain risk. Concern was expressed that man will only be seen in a biologistic context, so that he is reduced to his genetic composition. The relevance of these

concerns is emphasized by recent studies on genetic discrimination of individials by insurances and companies in the United States.

The commission has also covered the problem of genome analysis in the context of legal procedures. Since this topic is of particular interest for you, I will explain it in more detail.

The major results have been published in 1989 in the second report of the Bioethics Commission of Rheinland-Pfalz with the title "Human Genetics, Theses for Genome analysis and Gene Therapy". This report is the basis for decisions of the State Government. The report has also been used by the federal working group on genome analysis. As the result, detailed recommendations regarding the genome analysis in legal procedures have been made last year.

A number of different and often controversial opinions are found in this often spectacular area of application of genome analysis. A number of people are doubting the reliability of these methods and of the results of DNA fingerprinting procedures.

It has been stated that the genome analysis gives a most exact proof of identity compared to conventional procedures. One of the foremost criminalistic experts of the Federal Republic of Germany, Dr. Steinke, head of the departement of forensic technology at the Federal Criminalistic Office (BKA), had recently spoken of a "revolution" in the field of forensic bloodgroup serology and stain analysis, and that a new dimension in forensic medicine has been entered. Spectacular successes have been reported. Recently, a case was published on a fifteen year old girl that had been killed ten years ago. Her body was found only 8 years after the crime. Now the identity of the victim has been revealed using DNA analysis. The work has been carried out by the English scientist Alec Jeffreys, who ist participating in this conference.

I do not intend to discuss the probative valve of DNA analysis at this point. No one will doubt after the recent decisions by state and federal Courts, that DNA analysis has introduced a considerable progress for the identification of a suspect. In addition it is important for the field of forensic medicine that the German federal high court, the so called "Bundesgerichtshof", has accepted the application of DNA analysis and its use as evidence for civil and for crime cases on the basis of the already existing laws.

This opinion is explicitly shared by the Commitee of Interior Affairs of the German parliament by including recommendations of the Enquête Commission. In my opinion

the majority of the German state administrations of Justice also share this view. In this context, however, it is important to emphasize that this is only true for the noncoding part of the human genome. The utilization of DNA evidence is based on the assumption that coding sequences and information exceeding the purpose of identification or segregation analysis will not be obtained. In other words - DNA analysis has to be neutral for the personality of the person being investigated.

The Bioethics Commission of Rheinland-Pfalz has studied this problem in great detail. The president of this congress, Professor Rittner, has informed us extensively on the scientific background and the state of knowledge at that time.

The commission did not see a scientific basis for the assumption, that individual traits of character and personality could be obtained from genetic information.

Nevertheless, the commission has made a clear statement on the potential risk that genome analysis could contribute to establishing the ability of being guilty, or the credibility, or for a final evaluation of the offenders personality. The commission has emphasized that this type of genetic investigation would be in violation of privacy rights and man's dignity. Therefore, the commission has put up the guideline that without consent of the affected person, genome analysis may only be used in civil cases and cases only for the purpose of identification or segregation analysis. The use of any information which exceedes this purpose for the case or including the information in the case proceedings, should not be allowed.

In addition the commission has emphasized that for the admissible application of DNA analysis, it is necessary to obtain court orders and to take strict measures for data protection. I fully support these guidelines. Therefore it is my opinion, and this opinion is supported by court practice, that the DNA finterprinting method is already admissible on the basis of the existing law.

Based on the fast development in the field of molecular genetics, concerns have been raised that a limitation of DNA analysis to the areas neutral to the personality can not be guaranteed. I can not disregard these fears. Would it one day be possible, that the worldwide efforts decoding the human genome and the mapping of all human genes will go beyond the obtaining identification from DNA analysis, which should have served only the simple purpose of identification? That even the noncoding part of DNA will become readable and its information being used? That genetic data bases could be established in the near future?

It ist a well known fact that any progress in this area will open up new possibilities of

obtaining information and if this information is available, then maybe in practice, it will be used as well. This has to be taken into account! The transparent man or, if you prefer, the genetic inquisition should not become possible in a democratic country. We are operating the switchboard of this development. Once the facts are created and the pratices are established, it will be difficult to reverse this development.

Therefore we need legal regulations for the application of gene technology in man. Misuse has to be stopped and irresponsible developments in research and sciences have to be avoided. The protection of privacy rights and man's dignity have to be guaranteed. To make it clear: It is not my point to stop progress. However, we have to point to an ethically responsible way. Appropriate solutions need an open dialogue between the public, politicians, and scientists.

At the end I want to give an example on the difficulties of the legislation in the area of gene technology. The German code of criminal procedures allows the taking of a bloodsample by a physician even without the consent of the suspect for the purpose of establishing facts which maybe of significance for the trial, already on the basis of existing law.

Last year the Federal Ministry of Justice has presented a first draft for a legal framework of DNA fingerprinting within the criminal procedures. Principally a detailed and specific basis has to be welcomed in the interest of legal safety.

A complete regulation has not yet been achieved by this draft: Results of DNA fingerprinting could be a start of a data base and could be used for a systematic search of suspects. No recommendations are proposed on a regulation in this field. These problems are yet not regulated in German law: It is allowed to use identification procedures on suspects. However, according to the examples given in the law we can see that the legislature means in particular photographs, classical fingerprints and measurements of body weight and size.

In my opinion this does not include the possibility to store results of DNA analysis in a data base. These differ significantly in quality from the storage of a photograph or a fingerprint.

In the light of the basic decision of Dezember 15th 1983 of the Federal Constitutional Court, the general privacy law includes the protection of the individial against an unlimited collection and procession of his personal data. This basic law guarantees the right of the individium to decide himself on the use of his personal data. This is called the right of informational selfdetermination of man.

Based on this decision the processing of DNA fingerprinting data in a data base represents an additional interference with positions protected by the constitution. This could only become possible with a specific authorization not yet existing.

This is particularly true if the results of the analysis should be stored beyond the end of the court case. On the other hand, it is true that the storage of DNA typing results by the police could be quite helpful in solving future crime cases.

A legal authorisation for data storage would be obviously in the interest of the prosecution authorities. I think it is very important that this authorisation would make it clear to the citizen in which way the state is handling personal data. We need this open approach especially, since we want to reduce concerns and fears related to gene technology.

On the other hand, a genetic "pattern" search would be an offence against man's dignity. The individial would be degraded to an object of actions taken by the state. This would be the first step towards the transparent man.

I think that with your congress you will be able to explain these problems to the public. You will make a significant contribution to the acceptance of responsible gene technology. Thus I wish that your convention will take a successful course

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