TMF Project

Legal basis of an EU-wide biobanking cooperation

(BMB-EUCoop, V010-02)

Zusammenfassungen der Gutachten - **Englisch**

Summaries of advisory opinions - **English**

Version 1.0

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Background

The present document summarises the results of a total of 12 advisory opinions in respect of the "legal basis of an EU-wide biomaterial bank co-operation". The advisory opinions were written within the scope of the TMF (Telematics Platform for Medical Research Networks) project of the same name, submitted in September 2006 by the *Congenital Heart Defect* and *Dementia Competence Networks*.

This was the result of the participation in research projects of international scope, in which biomaterial samples are exchanged internationally. The Competence Network for Congenital Heart Defects is, for example, partner in an EU-FP6 project (Heart Repair) since January 2006, in the framework of which patients with certain congenital heart defects are recruited and pseudonymised clinical data and the DNA of these patients are collected and made available to co-operation partners in the Netherlands and England for research purposes. The participating donors and scientists expect that the co-operation can rely on the support of the respective declarations of consent of the donors and the co-operation agreement between the participating partners. It remained to be clarified, to what extent such expectations are justified and can be realised and to what extent it can be ensured that the use of sample material is in keeping with the standards of German law.

On 14 December, 2006 an Expert Workshop organised by the Competence Network for Congenital Heart Defects and supported by the TMF took place in Berlin. Here, the situation was explained and discussed. In January 2007, a project group headed by Professor Goebel was formed, which formulated a project proposal with the following objectives:

(1) Expert investigation and clarification of such legal questions which, from the point of view of a German BMB, are seen as particularly problematic in respect of co-operative relationships with foreign institutions. The expert report shall focus on the relevant questions in relation to BMBs in Great Britain, the Netherlands, Switzerland and Austria.

(2) Description of the legal and ethical risks for the co-operating German BMB and its probands.

(3) In consideration of the results of (1) and (2), generation of specimen texts for agreements, in-house regulations, etc. or working out of other proposed solutions for international biomaterial bank co-operation.

Following approval of the project and a kickoff meting on 14 June, 2007, by May 2008 there were a total of

- 12 legal advisory opinions with proposed solutions for the subjects of data protection law, property/personal/utilisation rights, medical law, criminal law, supra-national and international law, commercialisation, benefit sharing, industrial property rights, and mechanisms for the resolution of disputes, as well as
- six specimen texts, with the help of which the conditions for international co-operation can be contractually defined (see second document).

Precisely with a view to possible applications submitted within the scope of the Seventh Framework Programme of the EU (FP7), the results represent a special added value for all research groups wishing to make use of biomaterial banks in international co-operations.

The management

Competence Network for Congenital Heart Defects

1. General personal rights (Dr. Christian Lenk, Professor Jürgen W. Goebel)

Starting point of the study

From the ethical and legal point of view, general personal rights play a significant role in the regulation of biobanks, especially in connection with genetic data. This concerns the data of the participating patients or donors as well as the knowledge on genetic dispositions of the patients' or donors' relatives. The anonymisation in contrast to a pseudonomised use of samples, is widely seen as a method of avoiding problems with general personal rights. However, the complete anonymisation of samples seems unrealistic in the case of publicly accessible data, when persons can be re-identified without great effort on the basis of comparative samples from outside. The objective of this advisory opinion is to give recommendations for the practical use in biobanking, to protect personality rights in conjunction with concrete research goals and the activities of biobanks, and to show which principles of medical ethics and law must be taken into consideration.

Possible solutions / suggestions:

(1) for German biomaterial banks

For the co-operation of different biomaterial banks or research projects which exchange biomaterial, binding guidelines or a set of contractual regulations for the regulation of the most important points in respect of the protection of personal rights can be recommended from the very beginning. In order to prevent misuse and the re-identification of the donors of human samples, the biobank storing the samples should keep the code system with which the samples are coded. A decoding may then be performed only in accordance with the requirements of the research project under clearly defined conditions. Questions of donors' consent and the definition of the research purpose should be clarified right at the start of the project. Provisions for the protection of personal rights can then be included in the common guidelines or the common set of contractual regulations, as well as in the patient information sheet and the declaration of consent. In connection with the acquisition of samples from donors and patients, different options for the use of samples should be documented by the biobank for each sample. For the consignment of material to foreign institutions, the data relating to the intended purpose must be sent along with the samples.

(2) for German donors

It seems realistic that, with appropriate planning and adherence to data privacy requirements, a re-identification of probands and patients by external project partners can be largely ruled out if the coding system for the pseudonymised samples remains with the biobank which has taken the samples from the respective donor. The investigated documents uniformly ensure the right of probands or patients to withdraw from research projects at any time and to demand the destruction or anonymisation of the samples donated and the resulting data. It is the responsibility of the project management to ensure the implementation of this right, even for Europe-wide biomaterial bank co-operations. In view of the fact that there is a wide-ranging homogeneity of regulations here, however, this should not present any serious problems. Furthermore, it must also be ensured that the research for other parts of the project remains within the limits described in the declaration of consent and the information relating to the intended purpose. In the relationship between the donor/patient and the biobank, it should moreover be clarified, who safeguards the rights of the donor. As a confidence-building measure, it would certainly be advisable for the German biobank to assume this role for the proband. This aspect would then have to be considered in the formulation of the contractual conditions and set of regulations.

Results and recommendations for Project Part B (specimen texts)

For Project Part B, the following tasks result from the above arguments:

- Formulation of the essential contents of a declaration of consent for EU-wide biomaterial bank co-operations under consideration of the differences to informed consent for pharmaceutical testing
- Formulation of a graded declaration of consent with different scopes for which research activities samples are to serve, with the express naming of relevance to the intended purpose
- Formulating the description of foreign co-operation in a declaration of consent
- Making specimen texts available for the description of different types of biobank projects (such as those oriented to research into a certain disease, population-genetic biobank projects, virtual biobanks, etc.).

2. Ownership and utilisation rights (Professor Jürgen W. Goebel, Jürgen Scheller)

Questions posed, starting position

This legaladvisory opinion of the entire EUCoop project deals with the "ownership law" level of biomaterial, in accordance with the so-called three-level model.[1] For the handling of biomaterial, this model differentiates between the ownership level, in which questions of ownership, possession and other rights of utilisation are dealt with, and the informational right of self determination (data protectionprivacy) level and general personal rights level. The last two levels referred to are the subjects of separate partial advisory opinions, for which the proposed solutions and results, however, are in agreement with the present legaladvisory opinion. The starting point for the legal examination is, here as well, always the interest of the German biobank in a co-operation agreement subject to German law and the safeguarding of its own legal interests, as well as those of its probands, in respect of the handling of the materials which it oversees.

Results

If a biobank becomes the owner of the human biomaterials which it keepsoversees, it can fundamentally dispose of these materials as it sees fit. The ownership model is problematic in so far as the ownership on the part of the biobank can be assumed only with the existence of an express written declaration of the patient/proband indicating willingness to have the ownership of (his) samples consigned to the biobank. This leads to the result that ownership by the biobank cannot be assumed in the absence of such an express declaration. For the majority of biomaterials existing at the present time, the latter could well be the case. The practical relevance for defining the following manifoldmultifarious possibilities for co-operation with partners, which derive fundamentally from the ownership, would therefore appear to be limited.

Furthermore, even when it is legally determined that the biobank is the owner of the materials, the ownership of these materials is not free of limitations. Indeed, restrictive binding legal requirements, such as in conjunction with the transport of such materials, as well as prohibitions governing the importing and utilisation of certain types of materials (for example: stem cells) apply here. In addition, the restrictions arising from the informational right of selfright of self-determination over personal data and general personal rights of the patient/proband, which also limit the freedom of the biobank to act, must be considered here as well. Sets of regulations oriented to ethical principles also contribute purely factually to the limitation of ownership by a biobank, even if these are not understood as legally binding in a stricter sense.

This situation, already ascertainable as applicable for German law, can be found in an altogether similar form in the reference countries under consideration here, i.e. Great Britain, the Netherlands, Switzerland and Austria. There as well, the completely "unencumbered" ownership of human biomaterial can, in any case, not be assumed. The personal rights of the patient/proband greatly influence the admissibility of handling these materials (in part in terms of legal principles, in part in terms of the guidelines of medical associations, classified as "soft law") there as well. Co-operation partners in these countries are therefore de facto bound to observe these "extra-legal" provisions when it is a matter of the legal definition of co-operations and co-operation agreements with German biobanks.

Notwithstanding whether a German biobank concludes co-operation agreements with foreign partners on the basis of its ownership rights or derives its legal positions solely from certain

[1] Developed by Simon/Paslack/Robienski/Goebel/Krawczak, Biomaterial Banks - Legal Outline Conditions, Berlin 2006

rights of utilisation granted on the basis of a purely contractual nature, detailed contractual understandings are indispensable for the regulation of the relationships characterising a co-operation. In spite of all similarities in the result, there are still entirely different legal traditions amongst the member nations of the EU, which in part can only be harmonised to reflect the interests of the partners by explicit contractual understandings regulating the relationships of the partners to each other. The wide-ranging contractual freedom which applies here for all countries under consideration leaves the potential partners the necessary scope for action.

Proposed solutions

For the contractual definition of the co-operation relationship between a German and a foreign biobank, the following aspects must consequently be taken into consideration:

(1) There are two basic contract models upon which the co-operation can be based: a model based on the ownership position of the biobank and the materials which it keepsoversees and a model according to which the German biobank is solely the holder of in personam utilisation rights.

(2) In any case, personal right obligations which the proband has appended to his samples must be "passed on" to and observed by the partner.

(3) Regardless of which model is actually used, the co-operation relationship must be defined as detailed and conclusively as possible. Recourse to legal contract types of one of the relevant legal systems should be avoided.

(4) If the biobank is solely the holder of contractually defined utilisation rights for samples, it is necessary to consider that the co-operating institution cannot grant more rights than it itself has.

(5) On the one hand, for the definition of remuneration for the supply of biomaterial, it is necessary to observe national commercialisation prohibitions. On the other hand, there must be appropriate compensation for the material delivery to satisfy the English consideration provision.

(6) In any case, it is recommended that the applicability of German law be agreed in addition and, if possible, a venue with a German court be defined.[2]

(7) Further recommendations for the definition of contractual agreements with foreign biobanks or research institutions arise in connection with the focal issues constituting the objects which they themselves appraise within the scope of this project.

[2] Unless, as a result of a conciliation or arbitration agreement, an extra-judicial settlement is already sought.

3. Physicians' professional law (Dr. Maren Bedau)

Summary

Specific regulations governing activities of biobanks in the different countries

Specific regulations governing the activities of biobanks could be identified in none of the countries of interest. In Austria and Switzerland, relevant legislation is not yet provided for. However, in Switzerland, the human research act ["*Human Research Act*"] is planned to take effect in the autumn of 2008. In Great Britain, the *"Human Tissue Act"* and the *"Human Tissue Act Scotland"* regulate some issues concerning informed consent and the approval requirements for research with biomaterials. In the Netherlands, regulations concerning bio-medical research can be found in a special human research act, as well as at a more general level in the Civil Code of the Netherlands. In particular in Switzerland, Great Britain and the Netherlands, the guidelines of professional associations or independent committees play an important role.

Doctor-patient confidentiality

All legal systems of the countries under consideration include the principle of doctor-patient confidentiality, the violation of which can lead to disciplinary and criminal law sanctions. Doctor-patient confidentiality also applies without exception to auxiliary medical personnel. Moreover, doctor-patient confidentiality also covers the area of research. Doctors are therefore prohibited from providing personal information deriving from research using pseudonymised samples.

Doctors' qualification requirement ("Arztvorbehalt") for the handling of samples

Although there are some differences among the different countries with respect to the legal regulations for activities that can only be rendered by a formally qualified doctor ("Arztvorbehalt"), the countries are essentially in agreement that the doctors' qualification requirement is not applicable to research activities and is certainly not applicable to research on anonymised and pseudonymised samples. The transfer of biomaterial from Germany to the co-operating countries therefore does not require the involvement of the doctors.

Obligation to consult an Ethics Committee

In the four countries examined, there are no legal obligations requiring that co-operation projects need to be approved by an Ethics Committee. However, some legally non-binding guidelines recommend that research projects on biomaterial should be reviewed by an Ethics Committee. As far as these guidelines are issued by relevant national bodies, these recommendations should be followed. According to these recommendations, in principle not only should the co-operating bank for the research project submit the research project to the locally responsible Ethics Committee but pursuant to the recommendations issued by the German Nationaler Ethikrat ("*German National Ethics Council*"), the German biobank must also consult with the competent Ethics Committee before transferring the samples.

Safekeeping and documentation obligations

The legal situation with respect to safekeeping and documentation obligations for research with biomaterial differs between the countries under consideration. In Austria, no such regulations exist, while in Switzerland there are at least generally formulated specifications for safekeeping, documentation and the usage of biomaterials. In Great Britain, the relevant

guidelines and recommendations contain general regulations for the handling of research materials and the documentation of research results, as well as, in the case of consigning biomaterials, regulations creating the specific obligation to retain the documentation for a period of five years. In the Netherlands, safekeeping obligations are also provided for with regard to research activities. In so far as the German biobank is subject to legal documentation and safekeeping obligations or is bound by relevant contractual provisions in relation to the donor, it is necessary to include these obligations in the co-operation agreement.

Obligation to report information and results

There are considerable differences between the countries examined in respect of a general or specific obligation to report information and results in the case that health related results are found in the course of the research project that might be of vital interest to the donor. Thus, for example, under Austrian law there is no obligation for the biomaterial bank to report such information. In Switzerland and Great Britain there are no legal provisions, however the relevant guidelines provide regulations for notification and ensuring the required information flow. Particularly differentiated specifications are found in the guidelines of the Netherlands. The right of the donor “not to know”, however, is recognized in all legal systems. In all target countries, patients must not be notified against their expressly stated wills . For the German biobank, there is a legal risk only if the bank is contractually obliged to notify the donor of any important result arising from the research with his/her sample. In this case, the respective cooperating bank should be obligated in the co-operation agreement to report the relevant information to the German biobank, in order that the biobank can re-identify the sample and determine whether or not there is a contractual obligation to inform the donor. Furthermore, it should be clarified in the co-operation agreement that the German biobank is not obliged to furnish the data needed for re-identification to the co-operating biobank or to the research staff.

4. Commercialisation prohibitions (Dr. Michael Fuchs)

Summary

Commercialisation is generally understood to mean the subordination of non-economic values to economic interests. In the area of dealing with the human body, its parts and body substances, commerce, gainful intent or profit can be seen as such a form of commercialisation, which can be problematised based on anthropological considerations or moral convictions. The national differences in the weighting of a commercialisation prohibition, as well as the resulting emphasis on prohibition and the demand for benefit sharing, in part from the same participants in this discussion, indicate a complex situation of ethical arguments and fundamental anthropological assumptions for which a suitable analysis is lacking. Such unclarified divergencies can have a negative influence on the legal certainty of researchers and probands. From the ethical perspective as well, a clarification of the derivation of the commercialisation prohibition and its scope, as well as its relevance to the protection of altruistic intentions for the provision of one's own human tissues and body-related data for research purposes, is urgently required. The present examination deals with the philosophically based historical sources for commercialisation restrictions and, on the basis of important normative texts, the ethical discussion in selected target countries. Similar to the analysis of the legal situation, this indicates that an all-embracing disqualification of commercial dealings for the handling of human biological materials cannot be ascertained. Besides the restrictions of explicit prohibitions for certain materials, the fact that the ethics councils of the target countries, in the systematics of the ethics argumentation, subordinate references to the commercialisation issue to the principle of informed consent. Overall, then, the area of human biological samples differs from the strict prohibition of the reimbursement of expenses in connection with the donation of organs or the purposes of transplantation. The ethical discussion is nevertheless, even though there is considerable trans-national agreement, far from being concluded. This is also due to the fact that the underlying questions relating to the personal closeness of different parts of the body and body substances are difficult and are still under discussion.

Concluding remarks and results

In the light of the case Moore vs. the Regents of the University of California, Immanuel Kant's example for the counting of ten thousands of Reichsthaler for a single finger can be seen as visionary. Kant, however, with his exaggeration only wished to emphasise the consequences and unrestricted validity of the principle according to which not only the body as a whole, but also its parts, should not be made available for sale. Only with the beginning of the third millennium are questions concerning the ownership of human body substances increasingly arising. Decisive for a greater, now also economic, interest in parts of the human body is above all the increasing genetic knowledge.

Recommendations

The result indicates that the continuous observation of this discussion in public and in the relevant councils is desirable. As elaborated in greater detail in the advisory opinions on supra-national and international law (ethics part), the constitution of a consultation group is therefore recommended.

5. Supra-national and international law (Dr. Michael Fuchs)

Summary

In the area of bio-medicine and bio-technology, both the updating and the national implementation of European law and the formulation of agreements in accordance with international law and their ratification at the national level are regularly accompanied by intensive public debates and ethical discourses. These discourses are partly structured and institutionalised (e.g. by national ethics councils or the European Group on Ethics in Science and New Technologies) and directly or indirectly characterise the legal situation at different levels. The sub-project supplements the examination of the relevant supra-national and international legal stipulations. This takes place by way of an analysis of the relationship of the ethics discourses within the framework of the institutions of the EU and the European Council and at the international level. While the normative results of the discourse within the framework of UNESCO and the European Council have in the meantime found their way into legal texts and are elaborated in the legal part of the advisory opinion on supra-national and international law, in this connection the discussion concentrates on the positions of the ethics groups of the European Commission, the effects of which are more difficult to assess in detail. Here, it is also a matter of the further development of the respective position. At the present time, no ethical directives above and beyond the legal provisions are emerging, for example in respect of a general prohibition of commercialisation. Nevertheless, this discourse must be observed further, in particular as concerns the development of the charter of the European Union.

Results

The national and international debates surrounding the genesis of the Oviedo convention of the European Council has intensified public discussion about the ethical questions of bio-medical research and, notwithstanding the initial polemics, led to a serious and proper discussion. As a legal text, however, to date the convention has brought about direct results only in a few countries. For a number of years, the European Union has endeavoured to find place for ethical considerations within the scope of its politics. The historical origin of the EU and the focal point of its competence and strategic alignment in the meantime give rise to the wish that ethics should be in harmony with market-oriented research. The subject of ethics is assuming an increasingly positive role within the EU in terms of content with the constitutional process. The European Council and the EU are equally committed to encouraging communication between the national ethics councils in Europe. Already in the past, this communication has led to joint consultation concerning the subject of biobanks. Concerted opinion forming processes are also to be expected for the future. As elaborated in the legal part of the advisory opinion on supra-national and international law, in the area of international and supra-national law there exists a very pronounced degree of poorly defined transitions between normative ethical positions, drafts and documents of international "soft law", as well as in the "hard law" deriving from these. This has influence in court practice, in the updating of legislation, and in the actions of public administrative authorities. The further development of the position of the European Group on Ethics in Science and New Technologies of the European Commission (EGE), as well as bilateral and multilateral positions of national ethics committees must therefore be taken into account for biobanks in practice in future as well. As a result of the increasingly weakening definition of the commercialisation prohibition over the course of development, its subordination to the principle of consent and dissent in the EGE as regards outreaching stipulations, at the present time no positions of the ethics councils going beyond the relevant legal documents have resulted.

Recommendations

For the further observation of the ethics discussion and its analysis, the formation of a consulting group, in which the BMB co-operation partners exchange their views with the responsible persons for ethics and other disciplines with both (national and international) committees and representatives of authorities, is recommended. Annual or semi-annual meetings would appear to be sufficient here. The example of the discussion concerning the commercialisation of parts of the human body makes clear that there are questions relating to the work of the BMB, for the discussion of which there is no clear consensus in respect of ethical requirements at the present time going beyond existing legal requirements, which nevertheless could lead to such requirements. The depiction of the different levels of discussion and the course of discussion in the EGE allows the conclusion that, in future as well, the discussion could take on new directions. These could become effective by way of legislation, by way of public opinion, or by way of commissions, such as regional and university research ethics committees. The recommended consultation group should, for its part, not constitute a normative instance, but only confine itself to presenting the current state of the normative discussion.

6. Benefit sharing (Dr. Christian Lenk)

Starting point

In the strict sense, benefit sharing is understood in the context of research ethics as a sharing of resulting prophylactic, diagnostic or therapeutic results with the patients who participate in a medical study, which can also include the right to receive an innovative treatment. In a broader sense, benefit sharing means also to enable the patients to share the results or profits of a research project in a specific group or population in a defined geographical region. In general, three particular elements of benefit sharing can be distinguished:

(1) a particular support for the persons or groups of persons taking part as patients or probands in the study, going beyond the normal level of medical care;

(2) privileged access to prophylactic, diagnostic or therapeutic procedures identified within the scope of the study as effective or access to medical or technical knowledge gained from the study;

(3) no "improper incentives" should be offered, which would influence the freedom of the patient to decide whether to take part in the study. The advantages resulting from taking part in a study should be not of monetary nature (except for the reimbursement of expenses incurred).

The subject of benefit sharing plays a role in the discussion of medical ethics in terms of balancing the burdens and gains of the researchers and the patients taking part in a joint research project. Of course, a possible benefit for the proband or patient also has some weight, if certain groups of persons are, as a result, motivated to participate in research activities or make tissue available to a particular material bank. The attractiveness of medical studies is measured by potential participants, for example, by the possibility to profit from therapeutic knowledge arising from the study. That they also have a moral right to this is a principle of research ethics anchored in the Helsinki Declaration. The advantages gained by the patients from taking part in the study should, however, not be in the form of inappropriate individual incentives for taking part. From the standpoint of the research staff, there are also reservations due to technical difficulties, as well as the possible complication of the study design. For this part of the advisory opinion, the objective is to define practicable possibilities of benefit sharing and make them available to research consortia like the Competence Networks.

Proposed solutions and suggestions

The assessment of a particular research project in respect of whether a form of benefit sharing is possible and feasible should, in the opinion of the expert writer, focus on the probands and patients and investigate, based on their situation, whether such recompense should be made. Here, particularly the following points of view play a role:

(1) Which groups of persons should be included in the research? Are the participating persons fully capable of giving their consent or are they recruited from the normal population?

(2) Which diseases are to be dealt with? Are therapies available or not, and can a therapeutic or diagnostic benefit for the patients taking part possibly emerge from the research project?

(3) Is this a matter of vulnerable groups, e.g. persons not capable of giving their consent? What measures can be taken in this case in the interest of their protection or of additional benefit for this group of persons?

(4) Is this a matter of socially marginalised persons, not having access to adequate medical care?

According to the composition of the group of persons taking part, thought should be given to possible recompense mechanisms as forms of benefit sharing. The question of whether a research project embodies a purely academic and public character or commercial points of view of private institutions also play a role is relevant for the form of benefit sharing. When economic profits are in fact generated by a biobank project, sharing these with the patient groups taking part should be considered. Here, the recommendations of the German Nationale Ethikrat (German National Ethics Council) concerning this subject offer orientation.

A particularly important area from the standpoint of medical ethics is that of clinically and therapeutically relevant information which can be obtained in the course of genetic analyses. Such information, which can benefit individual probands or patients in connection with the prevention or curing of serious diseases, can be of even greater meaning than other forms of benefit sharing. Accordingly, already during the planning phase of a research project it should be considered whether such information could be found in the course of research. If a research project definitively cannot yield information of therapeutic or diagnostic meaning, then this must be made clear to the patient. For the further project planning, this form of benefit sharing then no longer needs to be considered. If, on the other hand, such information could in fact come to light in the course of the research project, it must then be clarified whether this information is, with sufficient certainty, of clinical relevance. Ambiguous diagnostic findings with little certainty do not represent an additional benefit for the patient. Only with sufficient certainty that the diagnostic findings actually indicate an existing or impending disease, the feedback of such information seems to be reasonable. Accordingly, a procedure oriented to the standards of genetic consultation should then be developed for communicating the results to the patient. Additionally, precautions should also be taken for the case that patients do not want to be informed about therapeutically or clinically relevant findings ("right not to know"). Accordingly, the declaration of consent forms should already include the possibility for the patient to indicate whether he or she wishes information about such health-relevant findings.

In respect of EU-wide biomaterial bank co-operations, the problem of a lack of uniformity in the standards for reporting of information to the donor arises. Theoretically, this gives the possibility to apply the lower or the higher standard to a joint project. However, from the standpoint of medical ethics the higher standard is to be preferred, so that the patients taking part should be properly informed about definitive therapeutically or diagnostically significant findings. This view is also consistent with the documents from Germany, Austria and Switzerland examined in connection with the present advisory opinion. For joint projects with partners from the United Kingdom, it should be accordingly checked whether a joint standard can be realised without entailing the loss of information to German donors which they would otherwise receive if the sample material were investigated in Germany.

Results and recommendations for Project part B (specimen texts)

The results of the advisory opinion must be taken into consideration under the following points of view in Project Part B:

- the development of standard recommendations for non-commercial projects, where the possibilities for the patients of benefit sharing which could arise during the course of the project should be examined;

- as a special case, recommendations for commercially-oriented projects, which intend e.g. to register patents as intellectual property in conjunction with commercial purposes (in coordination with the "commercialisation" project part);
- special recommendations for the inclusion of socially disadvantaged patient and proband groups;
- recommendations for reporting information; here, the recommendations of national commissions and also the existing regulations of, for example, the Euro biobank should be taken into consideration

7. Criminal law (Inga Paster)

Within the scope of the advisory opinion concerning the establishment and operation of biomaterial banks, questions in respect of criminal law and administrative offence law arise as well.

The objective of the advisory opinion is, in addition to the evaluation of the German legal situation, to analyse criminal issues arising from the co-operation of German BMBs with foreign BMBs in Austria, the United Kingdom, the Netherlands and Switzerland. Here, the exportation of biomaterial samples collected in Germany to the four above-mentioned countries is examined. With this co-operation, the German BMB is responsible for the pseudonymisation of the entire patient samples before these are sent to the partner banks in the respective foreign country.

On the basis of these facts, questions dealing with both material criminal law and criminal procedure law arise. As, in accordance with the project description, the German BMB is responsible for both the collection of the samples and their coding and also furnishing them to the respective foreign country, the German legal situation in respect of criminal law will firstly be examined.

The international legal assistance process in criminal matters between the German and the foreign investigating authorities of the four target countries will be illuminated.

Finally, a comparison of the legal systems will be given to make clear to what extent there are also criminal procedure regulations for official searches, confiscation of materials and DNA analysis the in the four target countries.[3]

Summary and recommendations for the specimen texts

The present advisory opinion leads essentially to the following results - also in respect of the specimen texts to be formulated (Project part B):

(1) Criminal liability due to both the omission of assistance and bodily injury caused by negligence or involuntary manslaughter is excluded for researchers and the responsible employees of the BMB, if the sample donor waives all claims to being informed of the results of the investigations in his or her declaration of consent.

If the sample donor is assured of such feedback in the declarations of consent - even if this is limited to vitally important information only - it must then be ensured in the organisational structure of the BMB that attention is given to reporting such information to the donor. Otherwise, the researchers and the responsible employees of the BMB are subject to the risk of criminal liability in connection with the above offences.

It is therefore recommended for the granting of the possibility of feedback to the donor that, for consignment of the samples to another co-operating BMB - whether domestic or in a foreign country - that this is regulated only in the form of a written contractual agreement that feedback concerning clearly defined results of the investigations is reported without delay to the BMB which has made the samples available to the co-operation partner. In the absence of such a regulation, the researchers and the responsible employees of the BMB which has made the samples available to the co-operation partner could possibly be charged with negligence in accordance with criminal law. A possible criminal liability of foreign researchers and staff, e.g. as a

[3] The depiction of the legal situation in the four target countries is based - in respect of being up-to-date as well - on the relevant German language literature available up to now and otherwise reflects the wording of the foreign legal texts.

result of omission of assistance, does not relieve the researchers and staff of a German BMB of their responsibility (in accordance with criminal law) to ensure that the possibilities within the system for reporting back to the donor are utilised. The realisation of these obligations can be duly ensured only by corresponding contractual regulations with the co-operating foreign BMB. The German BMB may not claim to have taken for granted that the foreign partner would report findings deriving from the investigations, because it would then make itself liable to prosecution.

In the case of reporting limited solely to vitally important information, it would also be advisable to include the medical results of the investigations in the contractual agreement which fall under this definition. Within the scope of giving consent, the sample donor must also be given the possibility to inform himself or herself about the term "vitally important information".

(2) Criminal liability due to the violation of private secrets, in accordance with Section 203 of the Criminal Code, is not relevant for the staff of the BMB and non-medical bio-scientists. In the literature, the nature of such secrets, which are also revealed to a doctor active in the pursuit of research strictly for research purposes, is controversial. In order to exclude risks in accordance with criminal law for the doctors engaged in this research, it is recommended that, even with probands not undergoing any form of medical treatment, written consent in respect of the utilisation and, in particular, the consignment of samples to other BMBs for research purposes is obtained. As such a declaration of consent is always required for treating doctors, who would otherwise make themselves liable to prosecution in accordance with Section 203 of the Criminal Code, there should be no serious problem in connection with the use of the declarations of consent to be developed for the doctors responsible for treatment for the doctors engaged solely in research as well.

A possible criminal liability of the data protection officer for a BMB due to the violation of private secrets, in accordance with Section 203, Paragraph 2a of the Criminal Code, cannot be excluded when practicing doctors or even doctors engaged solely in research are employed at the BMB.

(3) Moreover, it must be stipulated that the possibility of the confiscation of samples from a German BMB by criminal prosecution authorities cannot be excluded. As the employees of a BMB and bio-scientists engaged in research do not belong to the persons described in Section 53 of the Criminal Code, such as doctors, solicitors or notary publics, no exemption from confiscation exists for the human material samples under investigation by the BMB. The same applies for doctors engaged in research at a BMB or who work with samples from a BMB in respect of the medical right to refuse to give evidence, in accordance with Section 53, Paragraph 1, Sentence 3 of the Code of Criminal Procedure. This refers namely only to the consultation and treatment relationship resulting from the doctor-patient relationship and not to the research activity.

Staff and researchers do not constitute professional assistants of the doctor treating the sample donor in the sense of Section 53a of the Code of Criminal Procedure, for which - in accordance with Section 94, Paragraph 4 - an exemption from confiscation also exists.

The exemption from confiscation regulated in accordance with Section 97 of the Code of Criminal Procedure for certain objects has, in fact, been extended to include the data of the data processing service providers. However, the BMB does not fall under the protective purpose of this recently formulated legal provision.

(4) Apart from this, in the German legal system there is no fundamentally exempt area. In accordance with Section 97, Paragraph 2, Sentence 3 of the Code of Criminal Procedure, the exemption of written records, communications and other objects from confiscation does not apply when persons entitled to refuse to give evidence are themselves suspected of having committed a criminal offence.

(5) In accordance with the regulations of the Code of Criminal Procedure, the confiscation of tissue samples from an accused person at a BMB can, in a German criminal procedure concerned with DNA analysis, not be excluded.

The global confiscation of a large number of samples from a BMB for the performance of a so-called serial genetic test in accordance with Section 81h of the Code of Criminal Procedure is, in accordance with the present legal situation in Germany, not admissible.

(6) All four target countries have, under certain conditions, a claim to German legal assistance in connection with official searches, confiscation and the surrender of objects on the basis of existing international agreements. It is therefore possible that German BMBs can be searched at the request of the target countries in order e.g. to confiscate a coding system kept there as evidence, after a tissue/blood sample at the foreign BMB has been found to be identical with DNA trace material

Within the scope of legal assistance, the German authorities do not, as a rule, examine whether the evidence collected to date in the foreign process conforms to the rules of procedure of the respective country or even the German Code of Criminal Procedure.

(7) The coercive measures of confiscation and an official search are standardised in all "Codes of Criminal Procedure" of the four target countries - in part, also comparable with the German legal situation. Corresponding requests for legal assistance from these four target countries are therefore also possible.

(8) Finally, DNA analysis is also legally regulated in the four target countries. According to their wording, however, these regulations are not as differentiated and restrictive as in Germany. Thus, for example, the consent of the person concerned and his or her written declaration for taking part in a DNA mass investigation is, contrary to the German regulation, not provided for in Austria and Switzerland. In respect of the extent of sample confiscation, the legal situation is more unpredictable for the BMB there.

8. Industrial property rights (Priv. Doz. Dr. Dr. Tade M. Spranger)

Summary

The financial support of BMB projects by sponsors is regularly attributable to the search for products with commercial potential. In so far, however, the problem arises that valid national and international (bio)medical law, according to a widespread assessment, derives from a prohibition of commercialisation (in the sense of a trade restriction) for the utilisation of even the tiniest parts of the human body. This legal principle is reflected, on the one hand, in a positive legal sense e.g. in the national transplantation and transfusion laws or in the bio-medical agreements of the European Council. On the other hand, the derivation of the prohibition in accordance with human rights leads, above all from the basic rights of human dignity and general personal rights, to its consideration in those areas of application without specific legal formulations as well.

The present examination deals initially with the relevant points of international and European law for restrictions of commercialisation and then investigates the legal situation in selected target countries. This reveals that a comprehensive and universal prohibition of commercial dealings entailing the handling of human biological material can, in fact, not be ascertained. Already the statutes of widely different exceptions (such as for the "service sector"), as well as the - not only - semantic lack of uniformity of international standards, which are furthermore in part (still) not legally binding, speak for this result.

In particular, however, it can be ascertained that the national legal systems of all target countries expressly refrain from the definition of a general prohibition of commercialisation. Sector-oriented prohibitions are instead expressed, solely for certain body materials or specific actions, which must be observed. Such prohibitions are found in transplantation and transfusion law, as well as in the respective stipulations for the handling of embryos, embryonic stem cells and comparable materials. International BMB co-operations must therefore observe the regulations applicable in the respective countries. In the interest of uniform, and therefore effective, handling the possibility of deciding in favour of the strictest legal formulation fundamentally exists as well.

The utilisation of the instruments and mechanisms of industrial property rights does not represent commercialisation in the strict sense and, in accordance with general conviction, is exclusively subject to the specific requirements of, in particular, patent and copyright law. Patent and copyright protection are therefore exclusively subject to the restrictions arising from the respective patent and copyright laws.

Proposed solutions and suggestions

The legal situation indicated in the target countries following the implementation of the European bio-patent directive, as well as the corresponding adaptation of the European patent agreement, grants the operators of BMBs comprehensive patenting of their inventions at the national and international level (national patent offices and the European Patent Office). Exceptional spheres concern inventions offering development potential for cells and other parts of the human body.

The utilisation of the instruments of patent law can be in the form of either different procedures before the respective national patent offices or of a so-called batch patent (granted by the European Patent Office). The batch patent has the advantage of a uniform registration procedure, recognised in different countries. As the batch patent, however, following its issuing - with a view to justiciability as well - "decays" again into national patents, besides the procedural simplification the instrument contains no "element of evasion", with a view to national restrictions. The basic principle recently decided upon by

the Ministers of Justice of the EU member nations for the creation of a community patent has not yet taken effect.

In the individual case, however, the aspect of assigning claims in accordance with patent law arising from the joint generation of inventions in the environment of international BMB co-operations requires further clarification. The ruling regularly found in national legal systems that several inventors, in the absence of a specific arrangement for qualifying the sharing of the co-inventors, does not sufficiently reflect the often complex participation relationships in the context of a scientific finding process which ultimately results in an invention. Furthermore, it must be considered here that sponsoring parties (by way of the relevant guidelines for sponsoring) can have just as much influence on the managing of patent applications as the employer in the formulation of the respective employment relationships.

The utilisation of so-called patent pools represents one option for the avoidance of disputes in accordance with patent law. This is concerned with special forms of licensing agreements: an overall licensing agreement enables the pool members to utilise the respective patented inventions and to make use of these in new technologies. The economic alignment of the construct, however, leads to the situation that the decision regarding acceptance in the patent pool results, in particular, from the consideration of the economic equivalents that the company will contribute to the pool.

With a view to BMBs, this circumstance means that the instrument of the patent pool represents a possibility to enhance or supplement the patent portfolio of the BMB operator. Likewise, patent violation processes with competitors can be intercepted.

In so far as the "internal" relationship of the operators of an international BMB is concerned, the pool can contribute to the smoothest possible course for the generation of inventions. However, the choice of a pool is not necessarily required here; alternative mechanisms - such as a cross-licensing agreement - can also be considered.

The protection for the procedures and materials in accordance with patent law is supplemented by protection for the database systems as such. Parallel to the patent law side, attention must also be given here to the problems which can arise from the relative positions of the different co-inventors. Although the national legal systems formulate different basic principles here for the implementation of European law, use should be made of the possibility of individually specified contractual conditions especially well suited to dealing in an individual case with the special features of the respective constellation.

The spectrum of protective mechanisms - ultimately, available to all (European) BMB operators - leads to the situation that a consignment of samples should take place only under the proviso that a mutually agreed regulation exists for the legal proprietorship. Otherwise, the risk exists that samples supplied to a foreign co-operation partner, who, in the case of a subsequent invention, insists on sole application for a patent - for example, due to national sponsoring guidelines. Comparable conflicts exist with a view to the documentation of supplied samples in a database system. The question of which co-operation partner is entitled to obtain which possible rights of utilisation to what extent, must therefore be clarified before the delivery of the relevant samples.

The currently extremely controversially discussed question of the rights that the proband or material donor has in the case of subsequent commercial exploitation, leads to the point that the information sheets and the declarations of consent should be supplemented to include a corresponding passage waiving all such rights, from which the waiving of all rights in this area clearly emerges. The question of whether and, if yes, in which forms benefit sharing takes place (not required by positive law) should be assessed, independently of this. The regulations existing in the area of industrial property rights are in so far lex specialis.

Results and recommendations for Project Part B

As in the area of industrial property rights, different protective mechanisms are established at the legal level which enables the comprehensive securing of intellectual property rights, the formulation of possible co-operation agreements requires - as indicated above - a fine regulation, by means of which the entitlements of the co-operation partners can be concretely described in relation to each other. Specifically, this concerns the question of which partners are entitled to obtain which rights ensuing from the copyright or inventor situation and to what extent. These aspects should be clarified at the earliest possible stage, that is before delivery of the samples and before a co-operation agreement is concluded with another BMB. This should address, in particular, the following aspects:

- the applicable legal regime (both patent law and copyright law)
- allotted share of patent and copyright claims for joint inventions
- clarification, modification and exclusion of possible claims by third parties (sponsors; [public] third-party donors; supplier companies; co-operation partners in other projects)
- agreement on the non-utilisation of certain substances and materials in order to prevent patent exclusions.

An adaptation to the information sheets and the related declarations of consent in respect of the proband's rights is likewise required. A corresponding waiver clause should ensure here that a proband or material donor, in the case of subsequent commercialisation, has no claims on the basis of patent law or comparable claims.

9. Commercialisation prohibitions (Priv. Doz. Dr. Dr. Tade M. Spranger)

Proposed solutions and suggestions

The previously existing commercialisation prohibitions at the national and international level show, according to the special character of the regulated material, a different degree of concretisation; express sales and commercial prohibitions therefore exist only in connection with individual biological substances or parts of the body. A comprehensive prohibition of commercialisation for all utilised forms of parts of the human body, on the other hand, does not exist in positive law. The utilisation of materials for inventions and their exploitation by the mechanisms of industrial property rights are subject to their own laws, constituting the object of a special examination. Various forms of "services" resulting from the handling of body substances are permissible in addition. When the exceptional spheres are taken into consideration, from the point of view of positive law there are therefore no fundamental reservations concerning commercial orientation or against the corresponding activities of a BMB.

Nevertheless, problems in connection with commercialisation intentions can result indirectly from other requirements placed on the operation of the BMB within the framework of "good practice". This applies, for example, for the area of data privacy law when, for the transfer of data to partners in third countries, it cannot be guaranteed that standards comparable with those in Germany are in use. For the working out of general regulations concerning the consignment of samples to third parties, the possibility of commercial co-operations demanding other rules than purely scientifically motivated projects can likewise be considered.

Results and recommendations for Project Part B

For the working out of specimen texts devoted to the organisation of a BMB in accordance with data privacy law and the securing of quality standards, the possibility of a (subsequent) commercially oriented co-operation should be included from the beginning in the considerations and be made the object of special regulations. Practicable mechanisms enabling the effective control of compliance with the agreed standards for the case of a co-operation with third parties should also be developed.

With a view to the sector-oriented commercialisation obstacles referred to above, for all those taking part in an international BMB co-operation it should be considered whether either compliance with the strictest regulations should be required or a list of those materials which, upon viewing the entire range of relevant regulations (possibly) appear to be discredited, should be made. The latter procedure would have the advantage that all legal systems concerned would be taken into account in the concrete instructions for handling, so that the impression of a "dominant" single legal system could be avoided. Furthermore, the sector-oriented approach of the different countries entails difficulties for the qualification of restrictions applicable to individual substances as "serious" or "slight"; this is a matter of an aliud.

The preferred overall picture would therefore lead to the following demarcation:

A commercialisation in the sense of an immediate "sale" of the relevant biological substance or biological material *as such* must be avoided. This basic principle is found in the legal systems examined, in particular with reference to the following parts of the body:

- Tissue
- Organs and parts of organs

- Genes and genetic sequences
- Blood and blood components
- Foetuses and embryos, as well as foetal tissue
- Embryonic products
- Gametes / germ cells
- Embryonal stem cells
- Totipotent cells.

In the overall picture, it can be seen that - with a view to the great number of regulated materials and in view of the existing demarcation difficulties - ultimately the "sale" of such biological material *as such* is not recommended.

Most of the legal systems examined, however, assume that other forms of utilisation are entirely possible and permissible. This is true, namely, with a view to the reimbursement of expenses incurred, remuneration for services provided, and other payments not made for the substance *as such*. Accordingly, for example, the knowledge deriving from the operation of a BMB and also data records (in compliance with the basic conditions imposed by data privacy law) can be made the object of a commercialisation.

10. Supra-national and international law (Priv. Doz. Dr. Dr. Tade M. Spranger)

Summary

EU-wide biomaterial bank co-operations must not only harmonise the relevant national legal systems, but also fulfil the stipulations of supra-national and international law, which in different ways re-shape, suppress or characterise national law. While, for example, the law of the European Council must be observed only in those member countries which have not only signed, but also ratified, the relevant agreements, European Union law applies in part directly in the member countries (e.g. with regulations), however partly only following implementation in national law (e.g. with directives). The member countries thus have considerable leeway in terms of interpretation. At the level of international law, specific regulations of the World Trade organisation must furthermore be observed, as well as elements of "soft law" found, for example, in the Universal Declaration on the Human Genome and Human Rights and the International Declaration on Human Genetic Data of the UNESCO, as well as in various international documents.

The examination identifies and analyses the numerous supra-national and international legal regulations relevant for biomaterial bank co-operations. This is particularly true for regulations which are not already the object of special sub-projects and therefore already considered for further discussion. In addition, special attention is given to the "soft law", which is of considerable relevance not only for public discussion, but also for the political discussion of the legal aspects, and therefore clearly has an influence on (national) legislation.

The development process described in the examination (ethical principles - political discussion of the legal aspects - "soft law" - positive [binding] law) underscores the necessity of actively observing current intentions for normative definitions at the earliest possible point in time. From the point of view of the BMB operators, this means already taking account of text drafts and proposed regulations which are not yet part of a legislative process "in the strict sense". This is particularly true for developments at the international level, which - particularly in the area of bio-medical standardisation - is increasingly restricting the, originally, commercially-oriented leeway of the national lawmakers.

Against this background, in addition to the reaction to international regulatory scenarios at an early stage, in particular the "pro-active" participation in the process of forming and expressing opinions in the relevant national, and above all international committees is recommended.

Proposed solutions and suggestions

The examined object of international and supra-national law particularly emphasises the poorly defined transitions between ethical principles and views in respect of international "soft law", as well as the legally binding "hard law" emerging from these. In legal practice, these boundaries are often not clearly made, so that ethical statements and soft law documents for the processes of opinion forming the basis of the legislative intent are regularly of considerable relevance.

The increasing activities, in particular of the Ministers' Committee of the European Council, but also of the EGE at the interface between ethics and law in areas relevant for the operation of a BMB, indicate that the current situation - in the more or less generally formulated instruments applied to the special situation of the BMBs - will be subjected to change in the foreseeable future. In so far, the trend is towards the working out of specific regulations for the BMB regulatory area. Relevant parties here are, above all, the European Council (in particular, with a view to the protection of human rights), as well as the

committees of the European Union (with a view to harmonisation efforts and the economic side of a BMB).

As a result, from the point of view of the BMB operators this makes it necessary to actively accompany the ongoing developments in order to enable the working out of balanced and practice-oriented solutions. Besides expert consultation of the relevant committees, relevant publications and different discussion forums can be considered as a means of "pro-active" communication.

Results and recommendations for Project Part B

With a view to Project Part B, from the findings above, in particular, this results in the necessity of uniformly communicating the positions of the BMBs in the public debate and in the political discourse concerning the legal aspects. Against this background, the establishing of a consultation group should be considered, in which BMB co-operation partners meet, on the one hand, with experts from different disciplines and, on the other hand, with representatives of (national and international) committees and public authorities to exchange opinions. This should take place on a regular basis annually or semi-annually).

In the interest of clarity, it must be pointed out that such a committee should be assigned only an accompanying-advisory function and, in particular, no "approval character" be attached to its discussions. In this respect, the already existing network (of national) public approval authorities and evaluating institutions already ensures sufficiently thorough controls. By contrast with these institutions, the consultation group would then be exclusively understood as a discussion forum, devoted to "pro-active" international developments in order to examine their (possible) effects in the national context.

The "pro-active" course proposed here can already affect the working out of the contractual agreements between the BMB partners, in so far as understandings even in respect of such questions are achieved which, as elements of "soft law", do not yet claim to be legally binding. Against this background, in particular the following aspects should be made the object of corresponding agreements between the BMB partners:

- Compliance with internationally accepted minimum standards for obtaining informed consent
- Specimen response for the case that consent is revoked
- Specimen response for a change of purpose of the research project
- Establishing common quality and safety standards (codes of good practice)
- Uniform standards in respect of anonymisation and pseudonymisation
- Uniform standards for access to stored samples
- Uniform standards for access to information (for the material donor)
- Uniform principles for confidentiality in the handling of samples and data
- Scope and detailed form of the documentation
- Evaluation of the project by an expert committee (if possible, an ethics commission)

11. Data protection law (Dr. Ulrich Stockter)

Summary

Questions concerning data protection law play a decisive role in the co-operation between biomaterial banks in the European framework. This sub-project analyses the legal regulations for the exportation of human tissue samples and develops solution approaches indicating possible responses to recognised problem situations by legal formulations or other means. For the case of a legal situation which is not clearly defined, the limits for the reliability of the statements are indicated and strategies for the legal implementation (e.g. in the form of agreements) developed. In accordance with the regulations, the situation in Germany, Austria, Switzerland, the UK and the Netherlands will be examined in greater detail. To the extent required, regulations concerning supra-national data protection law will also be examined.

As will be shown, from the point of view of the BMBs there are no risks entailed for the exportation of tissue samples which do not already exist in connection with sample exchange at the domestic level. However, in the interest of the probands, within the framework of the co-operation agreements with the BMB located in the respective reference country, one should strive for the standard of protection familiar to the probands from the German legal situation. This not only enhances trust on the part of potential probands, and therefore the participation of the public, but also anticipates legal developments already emerging, in particular at the European level.

Proposed solutions:

(1) for German biomaterial banks

In order to anticipate the foreseeable harmonisation tendencies in international and, above all, European legal development, for the future establishing of biomaterial banks it is in any case recommended that one strive to achieve the highest possible data protection law level. Changes in the legal assessment (in particular, for example in respect of the question of the anonymisation of tissue samples) can then no longer lead to the lack of admissibility of BMB utilisation. This ensures the sustained operational capability of the BMB and the trust of the sample donor in compliance with his or her wishes. This applies particularly in connection with the rights of the persons affected, such as the consideration of strict reservations concerning declaration of consent, the possibility of revoking consent at any time, and the destruction of the relevant tissue samples, and - as a prerequisite for claims made in connection with the rights of the persons affected - the traceability of the samples investigated (see also the legal position in accordance with the Human Tissue Act). Particularly for newly established BMBs, later cost-intensive and technically complicated adaptive measures in existing process structures can then already be avoided. The comprehensive guarantee of the probands' data protection rights is in the interest of transparency and could enhance the readiness of the public to take part in BMB projects.

(2) for German probands

The privacy interests of probands can be taken into account by modifying the legal position to reflect the interests of the probands in the contractual agreements between the BMB furnishing the samples and the receiving BMB. It must be considered that the probands probably tend to prefer the formulation of their legal positions of the country in which they have donated the sample and therefore avoid the uncertainties resulting from the differences in data protection law from one receiving country to another. However, due to the more specific regulations of Article 3 of the Data Protection Directive and the regulations for its implementation at the national level, the application of German data protection law within

the scope of international privacy law in the form of a clause governing the choice of legal system is not possible.[4]

In order to simplify the matter of ensuring the rights of the probands, an additional clause could be included in the agreements for sample consignment, in accordance with which the BMB operator receiving the samples is obligated to fulfil the rights of the person affected when this is requested by the BMB furnishing the samples at the initiative of the proband. Such a legal construct has the advantage that the sample donor can then turn to the familiar BMB in Germany in order to exercise his or her rights should this BMB have lost the responsibility in accordance with data protection law with the consignment of samples to the BMB located in the foreign country. Furthermore, the domestic BMB is in fact in a stronger position in relation to the foreign BMB than the proband and in this way can ensure that the rights of several affected persons are simultaneously fulfilled. In this case, the rights of the persons affected could be secured by the agreement of contract penalties in the case of failure to fulfil the rights of the persons affected. Moreover, possibly existing legal uncertainties in respect of the applicable law and the venue in accordance with international law are not at the expense of the sample donors with this construct. This variant can be considered particularly for the case that the BMB in Germany which furnishes the samples has already entered into a long-term agreement with the receiving institution.

The regulations of the data protection law complex for the reference countries, which authorise the data collection for research purposes even without the consent of the probands, should be contractually excluded. These research privileges are dispositive, because they only give the respective data research and processing institutions the *authority* to pursue research without the consent of the probands, but do not obligate these to do so. This evidently agrees with the view of many foreign BMBs, such as the UK Biobank. Waiving the claim to certain authorities in connection with research, which exist independently of the probands, is, in particular, founded upon the argument that research on tissue samples without the consent of the probands would damage trust in the seriousness of the BMB over the long term and, in this way, the readiness of the public to take part in biobank projects would decline. In terms of the legal situation, the safeguarding of this right as concerns tissue samples received in Germany does not have to contractually anchored.

Results and recommendations for Project Part B (specimen texts)

The following points of view represent the most important results of the study:

(1) The taking of tissue samples for research purposes is not uniformly viewed as data collection in the reference countries. The stipulations of data protection lawtherefore apply in some of the reference countries only to the results obtained from the investigations of the samples (for example in the Netherlands).

(2) Tissue samples can, in accordance with the German Data Protection Law, no longer be treated as (in fact) anonymised. The assumption of anonymisation would, to be sure, constitute a legal risk. In order to avoid this risk, the legal formulation for obtaining and utilising tissue samples would have to assume the non- anonymisation of the samples. In the reference countries, legal uncertainties arise due to special regulations or a definition of personal data differing from that of German law.

(3) Blanket consents, in accordance with the German legal position, are permissible, provided that sufficient explanation, regular information about the further utilisation of the tissue samples, and the guarantee of the right to revoke consent are satisfied.

[4] Concerning the suppression of the generally applicable international privacy law in accordance with the regulations of the Introductory Law of the German Civil Code by Section 1, Paragraph 5 of the German Federal Data Protection Act: Dammann, in: Simitis, German Federal Data Protection Act, Section 1, marginal note no. 216.

(4) Sample consignment can be performed within the framework of a data processing agreement or as data processing on one's own responsibility by the institution receiving the samples. In case that the receiving institution utilises the samples on its own responsibility, in respect of further sample utilisation no further obligations exist for the institution furnishing the samples. In the case of contracted data processing, the institution furnishing the samples must ensure that the receiving institution observes the regulations in accordance with data protection law.

(5) Sample consignments *within the scope of an agreed data processing relationship* in member countries of the EU or the European Economic Area are with respect to data protection issues viewed as an internal procedure and are therefore not subject to special requirements. All other sample consignments (in particular, sample consignments within the scope of an agreed data processing relationship with Switzerland) are to be assessed in accordance with Section 3, Paragraph 6 of the German Federal Data Protection Act and, in particular, fundamentally require of the proband's consent in order to be permissible. Sample consignments to foreign countries are subject to the special requirements of Section 4b of the German Federal Data Protection Act.

(6) Proband's requests concerning the results of research are, in accordance with German law, specificially regulated in medical law, which can precede the data protection law. This possibility is also provided for in the Data Protection Directive (see Recital no. 42 of the Data Protection Directive). In the reference states, a similar legal situation is conceivable and is partly the result of specially legislated regulations.

(7) Data controllers' obligations to furnish personal data of the data subject are regulated in all reference countries. However, in most of these there are exemptions from these obligations if the research is performed with pseudonymised data. Whether these exemptions also apply for tissue samples would, in view of their particular quality, appear to be questionable.

(8) Data protection-claims for the destruction of samples exist in German, British, Austrian and Swiss data protection law, but not in the data protection law in the Netherlands.

For the legal formulation of international sample consignment, the following aspects should be furthermore considered:

(1) Within the scope of the contractual agreement between the BMB furnishing the samples and the BMB receiving the samples, a waiving of the exercising of legally-founded research privileges for research without consent should be agreed. In order to ensure compliance with this waiver, contract penalties can be agreed between the German BMB furnishing the samples and the foreign BMB receiving the samples for the case of infringement.

(2) The institution receiving the tissue samples should generally be obligated to respect the intended purposes defined by the proband in his or her consent. Violations of the intended purposes could, in the interests of the proband, be subjected to legal sanctions by the agreeing of contract penalties. The possibility of revoking consent at any time and the destruction of the samples donated should, as well as possible, be granted, even when this is no longer required in accordance with the legal situation of data protection law (for example, as a result of possibly existing research privileges).

(3) The pseudonymisation of samples by means of a coding system for which the proband is given a personal code, enabling the identification of his or her tissue sample, improves the technical prerequisite for the implementation of data protection rights. In contractual terms, one should strive to ensure the traceability of the samples, by suitable organisational and technical measures in order to secure these rights, in particular, the exercising of the right of revocation and sample destruction.

(4) In order to ensure the data protection standard with which the probands are familiar from German law, for international sample consignment the rights of the sample donors should be ensured by way of a contractual agreement, in which immediate claims against the receiving BMB in the foreign country are granted (contract to the benefit of a third party). In order to secure an effective reinforcing of the probands' rights, the respective German BMB should reserve the right to assert the rights of its probands at their initiative, and, if necessary, simultaneously in relation to the receiving BMB. For the unauthorised non-fulfilment of the probands rights, contract penalties could once again be agreed.

(5) The reporting of sample consignment should be the responsibility of the BMB furnishing the samples. Also, in so far as such reporting obligations for the handling of pseudonymised samples in the research area do not exist in the respective data protection regulations of the reference countries, reporting would also appear to be in the BMB's own interest in offering the proband a transparency which fosters trust.

(6) Stability clause against insolvency of the contractually granted rights in accordance with data protection law: In case of insolvency of the German BMB furnishing the samples, these rights must be guaranteed in spite of insolvency. It should therefore be ensured that these claims remain even for the case that the German BMB loses its legal existence.

(7) The possibility of the chain-type consignment of tissue samples should be contractually excluded, as the assertion of the rights of the persons affected for several sequential further consignments of tissue samples could, as a rule, be made considerably more difficult.[5] Instead, the authority to further consign the samples should be limited to the BMB at which the samples originate and which is, viewed legally, directly bound to observe the agreements with the proband. Accordingly, only "star-formed consignments" would be permissible. In this way, the proband can enquire at any time through the BMB at which the sample material was taken about the whereabouts of his or her samples. This allows an increased level of transparency and also simplifies the assertion of the proband's rights, which in turn should enhance the readiness to take part in BMB research projects.

(8) Clearly defined information and reporting obligations can enhance the trust in a reliable transparency and therefore the readiness on the part of the public to take part. It must be clearly defined, to what extent proband information is reported, particularly in respect of international sample consign- ment, but also which circumstances are not regarded as requiring reporting. Only in this way can the proband assess the risk entailed with the donation of a sample.

(9) Regularly informing the probands about the results of research (Biobank Journal, Internet information)[6], on the one hand, and the introduction of new legal authorities for consignment at the national level, on the other hand, creates a greater degree of transparency and trust for the probands. Furthermore, it fulfils possible (ethically appropriate) legal obligations to furnish information. The information about planned (in particular, ethically controversial) research projects enables the proband to take part in the biomaterial bank research consistent with his or her ethical views (e.g. blocking his or her sample material from utilisation for military research purposes).

[5] Comparable problems are known from civil law in connection with the extended retention of title.

[6] UK Biobank, Ethics and governance framework, under I.B. 4: Schneider, Position on the draft of the GenDG, Drs. 16/3233, page 8.

(10) The matter of the legal access rights of third parties in the receiving countries should be described in appropriate detail. These references should also be given for sample consignments within the EU, as access rights or utilisation rights which are unexpected from the point of view of the German legal situation come into play.

(11) Working towards an obligation for biobanks to be registered: In order to enable an effective quality assurance and minimise the danger of organisational mistakes which could damage the reputation of the entire biobank industry, an obligation for biobanks to be registered should be introduced. This obligation can be introduced[7] either in accordance with the laws governing legally established organisations or by legislation.[8]

For already existing BMBs, the previous legal situation applies. As far as possible,however, modifications should be made in order to take into account expected future developments in the interest of ensuring the permissibility for the unrestricted utilisation of biomaterial banks. In order to simplify sample consignment, one should work for the implementation of uniform international "governance" structures for the operation of biobanks. [9]

[7] With a corresponding claim: European Council, recommendation (2006) 4 on research with biological material of human origin, in particular Article 17 ff.

[8] An example for a legal registration obligation can be found in Section 12a of the Hamburg Hospital Act.

[9] See also: Kaye, European Journal of Human Genetics 2006, page 245 ff.

12. Alternative dispute resolution mechanisms (Priv. Doz. Dr. Dr. Tade M. Spranger, Professor Jürgen W. Goebel)

Summary

The founding and operation of a BMB touches upon not only scientific, but also economic, legal and ideal interests of the researchers, sponsors, patients and probands concerned. Consequently, particularly for international co-operations, the often conflicting motivations, rights and specialised materials require the activation of alternative, and thus extra-judicial conciliation mechanisms which can at least partially lessen the impact of the problems arising from different legal systems and venues and, furthermore, as experience shows, bring about a greater degree of satisfaction than decisions from contested (court) processes. Moreover, extra-judicial conciliation also results in greater cost efficiency, shorter process duration, and a greater degree of autonomy for the parties concerned.

As fundamental forms of alternative dispute resolution, here we can mention conciliation/mediation with or without recommendation, conciliation/mediation with a binding ruling for one party, and arbitral jurisdiction, whereby the way of conciliation without recommendation to arbitral jurisdiction processes is characterised by increasing institutionalisation and juridification of the respective process.

The national legal systems refer, in particular in the area of arbitral jurisdiction, in part to the most detailed regulations which can be activated for BMB projects, in so far as the respective procedure can be applied for the field of law concerned; this applies, above all, for questions of civil law. On the other hand, mediation (at the supra-national level as well) is only now beginning to find use in positive law. The general development, however, leads to the conclusion that juridification is making rapid strides here.

The creation of national instruments can of course lead to reservations on the part of individual co-operation partners. It is therefore necessary, not only for this case, to point out that numerous international organisations offer institutionalised mechanisms of alternative dispute resolution which have proven themselves over many years and which could be called upon for the constellation of a BMB operation. Of the models described in the advisory opinion, the International Chamber of Commerce (ICC) Rules of Arbitration, which can be either directly applied or taken as the basis for a BMB-specific agreement, certainly deserve special mention. The conciliation process of the German Association of Law and Informatics (DGRI) could also be suitable without serious problems for application to IT disputes concerning the area of international BMB co-operations.

Proposed solutions and suggestions

In all target countries examined for this advisory opinion there exist legally founded regulations for instruments of alternative dispute resolution. This applies particularly for the material of civil law, which is decisive here. When, and in so far as, we are concerned with disputes in the area of civil law, it is therefore possible to fall back upon already established mechanisms - which, however, in terms of their practical formulation, show considerable variations. Besides this, widely different methods of alternative dispute resolution have become established within the framework of international law and incorporated these in the relevant texts of agreements. Against this background, one can consider, for example, submitting to the relevant regulations of the ICC Rules of Arbitration. At least in respect of the judicial panel entrusted with pronouncing the judgment for such an alternative dispute resolution team, however, it is recommended that one take account of the inter-disciplinary character of potential BMB disputes and ensure that these areas are represented by experts in the respective disciplines.

Results and recommendations for Project Part B

The specimen BMB co-operation agreement should deal with different aspects of the possibilities resulting from alternative dispute resolution: Initially, it must be clarified whether and when the co-operation partners agree on the methods of alternative dispute resolution and for which types of potential disputes. Thereupon, the required methods of alternative dispute resolution and the underlying rules of procedure must be specified. Should the already established procedures not offer a sufficient basis, one should then consider the possibility of an area-specific agreement. The conciliation procedure in the specimen texts of Part B represents an example of this.

Brief profiles of the experts

Maren Bedau

Maren Bedau (born 1974) studied law at the University of Potsdam. Following her first state examination in law (1998) she worked as an assistant at the Humboldt University in Berlin. Her doctorate in legal history was supported by the Studienstiftung des deutschen Volkes (German National Academic Foundation). Since 2004, she has worked as a solicitor for the international Sozietät Hogan & Hartson Raue L.L.P. She is a consultant for hospitals and joint practices in all areas of hospital and national health system physician law, as well as pharmaceutical and medical product manufacturers for the conduct of clinical studies.

Michael Fuchs

Dr. Michael Fuchs is Chairman of the Institute for Science and Ethics and assistant lecturer of the Institute for Philosophy at the University of Bonn. His research emphasises general ethics, bio-ethics and research ethics, anthropology and ontology, as well as the philosophy of the Latin middle ages. At the national and international level, he has collaborated in numerous research projects on the ethical aspects of the sciences. For the European Commission, he has prepared a comparative study on the work of medical research ethics commissions in the European area (2003) and a status investigation of national ethics councils world-wide for the German Nationale Ethikrat (German National Ethics Council) (2005). At the request of the German Federal Parliament, he has also worked on the handling of moral dissent in bio-ethical advisory committees (2002) and on the subject of genetic doping (2007). Since 2000, Michael Fuchs has been a member of the Board of Directors of different Centres of Medical Ethics.

Relevant publications: National ethics councils. Their backgrounds, functions and modes of operation compared, Berlin, 2005; Widerstreit und Kompromiß. Wege des Umgangs mit moralischem Dissens in bioethischen Beratungsgremien und Foren der Urteilsbildung (Conflict and Compromise. Ways of Handling Moral Dissent in Bio-ethical Committees and Forums for the Formation of Opinions), Bonn, 2006; Ethische Aspekte der multiparametrischen Gendiagnostik (Aspects of Multi-parameter Genetic Diagnostics), in: Journal of Laboratory Medicine 27 (2003) 3-4, 137-143; Gene Therapy - an ethical profile of a new medical territory, in: Journal of Gene Medicine 8 (2006), 1358-1362; together with Honnefelder, L.; Risikobewertung und ethische Urteilsbildung in der Biomedizin und Biotechnologie (Risk Assessment and Ethical Opinion Formation in Bio-medicine and Bio-technology), in: Vieweg, K. (editor): Risiko-Recht-Verantwortung (Risk Law Responsibility) = Recht-Technik-Wirtschaft (Law-Technology-Industry), Volume 100, Cologne, 2006, 21-46.

Jürgen W. Goebel

Professor Jürgen W. Goebel, born in 1950, studied law at the University of Heidelberg and received his doctorate in 1981, based on a topic from the area of information law. During his legal studies and his later activities, Professor Goebel gathered practical experience in data processing, as well as the setting up and operation of databases. From 1979 to 1987, Professor Goebel devoted his activities to the systematic examination of legal questions related to information processing, carried out numerous projects and investigations, and published a number of fundamental contributions on subjects dealing with information law.

Since 1988, Professor Goebel has been engaged in practical activities, initially with a database provider, and since 1989 as an independent solicitor. The focus of his activities is in the area of IT law. For more than 10 years, Professor Goebel has intensively specialised in the specific legal questions of medical research associations. Recently, he contributed in particular to the clarification of fundamental legal problems for the setting up and operation of biomaterial banks and has published a number of papers on this subject.

In addition, he is also an assistant lecturer for information law and computer law at various universities, and also Honorary Professor at the University of Darmstadt - Media Faculty. Professor Goebel is Head of the Arbitration Board of the German Association for Law and Data Processing (DGR). Professor Jürgen W. Goebel is a partner of the Lawyers' Office Goebel & Scheller, in Bad Homburg.

Christian Lenk

Dr. phil. Christian Lenk studied philosophy, political science and ethnology at the University of Hamburg. From 2000 to 2002, he worked on two projects of the German Research Association (DFG) in the area of medical ethics at the Universities of Marburg and Münster and received his doctorate in 2002 based on a study on the need for improved interventions with humans. From 2002, he was a research assistant and, since 2004, a research associate in the Department of Ethics and History of the Medical Faculty at the Georg August University in Göttingen. He is the Head of the *Tiss.EU* Research Network (together with Claudia Wiesemann and Nils Hoppe), which examines the ethical and legal aspects of research on human tissue in Europe and is a member of the Ethics Commission of the University Medical Faculty in Göttingen. For 2008, he received a visiting fellowship of the British Leverhulme Trust for the creation of a research co-operation between the University of Swansea (Wales) and the University of Göttingen.

Inga Paster

Personal background: From 1995 to 2000 law studies at the Christian Albrecht University in Kiel; 2000 First state examination in Kiel; From 2000 to 2003 legal clerkship in Schleswig-Holstein: Studies at the German University for Administrative Sciences in Speyer; 2003 Second state examination and beginning of professional activities at the Law Firm Ignor/Bärlein & Partners; 2004 Solicitor in Berlin; Since May 2008 professional activities at the Law Firm Ignor/Bärlein & Partners.

Focal areas: Criminal law and regulatory offences law, in particular medical criminal law and industrial law.

Jürgen Scheller

Jürgen Scheller, born in 1952, studied law at the University of Frankfurt/Main. From 1981 to 1987, he was engaged as a research assistant in developing the infrastructure for information technology with special emphasis on the content of the database and on legal questions relating to international data traffic. From 1987 to 1989, he gained practical experience with a database supplier, where he also served as data protection officer.

Since 1989, Jürgen Scheller is an independent solicitor and a partner of the Sozietät Goebel & Scheller, initially in Frankfurt/Main, and later in Bad Homburg. For many years, he has been active as a consultant for various medical associations. His professional activities focus on the area of industrial property rights, copyright law, IT contract law, and data processing law.

In recent years, he has published frequent contributions to the subject of IT and law, for example in Loewenheim/Koch, Praxis des Online-Rechts (Online Law in Practice), Munich, 2001. He is co-author of the work "Checkliste und Leitfaden zur Patienteneinwilligung" (Checklist and Guide for Patient Consent), TMF series, Volume 3, Berlin, 2006, and also collaborated in the production of Volume 5 of the TMF series, "Biomaterialbanken - Checklisten zur Qualitätssicherung" (Biomaterial Banks - Checklists for Quality Assurance).

Tade M. Spranger

Pri. Doz. Dr. Dr. Tade M. Spranger studied law in Bonn. Following the first and second state examinations in law, he was initially a research fellow within the scope of a project

supported by the Fritz Thyssen Foundation on international bio-medicine and genetic technology law, and then as an assistant professor at the University of Bonn. He received his doctorate in law in 1997 (Bonn) and, in 2002, a doctorate in political science (Munich). In addition to a guest lectureship on bio-diversity law at the Instituto des Estudos Avançados and at the Faculdade de Direito (Institute for Advances Studies and Faculty of Law) of the University of São Paulo in 2002, in 2004/2005 he carried out a research project concerning the international regulation of bio-medicine and genetic technology with the support of a Feodor Lynen fellowship of the Alexander von Humboldt Foundation as a visiting professor at the University of Technology in Sydney. Since August 2006, he is in charge of the young professionals' group "Normierung in den Modernen Lebenswissenschaften" (Norm-Setting in the Modern Life Sciences) at the Institute for Science and Ethics (IWE). Since 2009, he is also Associate Professor at the Faculty of Law.

He regularly accepts lecturing assignments relating to international law for bio-technology and bio-medical law, is one of the founding editors of the Journal of International Biotechnology Law, and a member of different committees for advice on practice and political aspects, including the UNESCO Group of Experts on the subject "A database of legislation, guidelines and regulations in connection to ethics". He has published widely regarding various questions of bio-medical and genetic technology law.

Ulrich Stockter

Dr. Ulrich Stockter is a lawyer and worked as an assistant researcher at the University of Cologne, at the German Ethics Committee (Deutscher Ethikrat) and in the bureau of a member of the German Bundestag. In 2007 he joined the Independent Centre for Privacy Protection (ULD) as judicial assistant responsible for data protection in health care and social security. Since 2008 he works for the German Federal Ministry of Family Affairs, Senior Citizens, Women and Youth.

Dissertation about genetic discrimination and concepts of legal prohibitions of genetic discrimination (2008). Studies concerning patient information in the field of predictive medicine, especially early detection of cancer (2008). Co-author for data-protection regulations in a legal commentary of the German Transplantation Law (to be published winter 2009) and Genetic Diagnosis Law (to be published in spring 2010). Publications and presentations on data protection, typing in law and society, transplantation and medical assisted suicide. Member of the reference group for the EU-funded PrimeLife-Project in the field of Privacy and Identity Management.