Anatomy, respect for the body and body donation - a guide for good practice

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SUMMARY

As pointed out by many anatomists worldwide, an international debate on body donation and the use of the dissection of human cadavers in healthcare studies is needed. Numerous countries have no donation programs in place, or difficulties in obtaining bodies for anatomy teaching. Consequently, the International Federation of Associations of Anatomists (IFAA), in their 2014 Beijing Meeting, has proposed the creation of an international body donation network and the provision of international help to countries with difficulties setting up donation programs. In two previous publications by the Trans-European Pedagogic Anatomical Research Group (TEPARG), a number of legal, ethical, cultural and religious aspects of current practice in body donation in European countries were reviewed. Now, we bring here to international attention some other aspects of body donation in Switzerland and Spain. In doing so, we wish to address specific questions, e.g., who can donate, where to enroll in the donation program, best practice in interacting with relatives of the deceased donors, issues raised by commercialization in the use of some human bodies, use of long-term preserved body parts and body parts nearly permanently preserved by means of plastination, ethical use of human bodies for medical research and public display. We also propose some principles of good practice for body donation.

Key words: Body donation – European Community – Legal and ethical aspects

INTRODUCTION

In two previous papers, the Trans-European Pedagogic Anatomical Research Group (TEPARG) summarized the current practice of body donation throughout Europe (McHanwell et al., 2008; Riederer et al., 2012). Other author found independently that there is a need for policies on ethical care on use of cadavers and their tissues (Champney, 2011). In 2010, a doctoral thesis investigated the legal and ethical framework on body donation and dissection of human cadavers in Austria and compared it to the European situation (Mayer, 2010). This prompted in part to the update (Riederer et al., 2012) of the first TEPARG paper above-quoted (McHanwell et al., 2008). Another recent doctoral thesis discussed different aspects on body donation and dissection in The Netherlands (Bolt, 2012). According to the latter thesis, the donor's main reasons to donate are to promote the advance of medical sciences and helping other persons. Economic reasons are less prominent, though there is a wish not to be a burden with funeral costs. It follows from all of the above that in most European countries the body donation and their use is regulated by law and

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strict ethical frameworks. However, many anatomy departments have developed so called standard operational procedures (SOPs), which are additional rules that go further in the regulation and consideration what constitutes good practice in body donation and the use of human bodies in teaching and research.

Nonetheless, it is far from clear how to harmonize procedures on body donation and dissection of human cadavers around the Globe, because of the variety of legal, religious and ethical frameworks that should be considered and integrated. As it has been pointed out recently (Biasutto et al. 2014), there are structural problems in Central and South American countries and there are additional strong cultural influences in Asia and Africa. In several countries it is even impossible to address publicly human body donation and dissection. Consequently, it is felt widely that there is a need for public debate on body donation (Biasutto et al., 2014). Problems related to body donation and ethical considerations, worldwide, were addressed in two Symposia at the 18th Congress of the International Federation of Associations of Anatomists -Body Donations for Anatomy & Medical Humanities and Ethics (IFAA 2014). In such Symposia a twofold requirement came to light, namely the need for public debate on those subjects and the need for raising the awareness on the importance of dissection in medical education. Consequently, at the 18th IFAA Congress (IFAA 2014) it was proposed to create an international network on body donation and to provide international help to countries with difficulties setting up donation programs (Riederer et al., 2014).

Therefore, in the present paper we make some reflections on critical issues and contribute propositions for good practice in body donation, at national and international level. We hope that the many interested readers may profit from one or the other point addressed in this article. For the sake of body donation, we do not simply provide here a list of points we consider of importance, but also look at background issues and reasons for the proposed points.

BODY DONATION TO TEACHING AND RESEARCH

The primary aims of body donation are medical teaching and research; both objectives should be guided by legal and ethical principles. Currently, there are more and more requests to use human cadavers for research. The use of human cadavers in medical education is well accepted in most European countries, while the use of donations for medical research is quite diverse and less specified, and may therefore need of a stricter regulation. In 2004, prompted by the need of regulation for acquisition and retention of pathological specimens, the Human Tissue Act was passed in the

UK. This Act covers all donations of human tissue. It was recently summarized and commented (Riederer et al. 2012). In the European Union and several other European Countries, similar events led to better defined regulations in the use of human tissue. Thus, research projects need as a prerequisite the approval of an ethical committee, with licensing, or eventually need to conform to guidelines of tissue banks in case tissues or fluids are taken (SAMS, 2006, 2008, 2010).

WRITTEN INFORMED CONSENT

For all donations it is essential to have an informed written consent from every potential donor. This is a legal requirement in many countries and serves as legal document to justify any donation. It guarantees that the act of donation conforms to the relevant laws in place in the country concerned. For one, it protects the donor from any institutional misconduct. Yet, it protects too the anatomical institute and allows using bodies for teaching and research. The form should contain a range of information which should include, at least, for what purpose cadavers are used, when and if cremated remains may be returned, if costs such as transport and cremation are covered by the institution and within what time frame the use of the cadaver can be expected. The latter concerns especially long-term preservation. To give transparent information, on the different steps of the procedures after death, on how donated bodies are used i.e. in teaching, medical research, or for longterm preservation for teaching and medical exhibitions, is very important not only for donors but also for families (Riederer, 2014). Often it is helpful to have a staff member that can discuss with potential donors and give some advice and information.

The written informed consent form should be kept as simple as possible as well as transparent as possible. It should be stated, that once a donated body is enrolled in the process, the bequest becomes the responsibility of the receiving institution and is at their discretion to make exceptions (seeing the body, speeding up cremation etc.). Additional information and explanations regarding points such as who can donate, under what conditions a donation is not possible or a donation may be refused (e.g., contagious/infectious diseases, obesity, major traumatism, or else as indicated further below) should be specified as well.

Proxy consent for fetuses and children may partially apply for biomedical research but depends on law in place and authorization by local ethical committee. However, it is not recommended to use dissection of cadavers of children and fetuses for teaching gross anatomy. At Lausanne, for mentally ill persons or those in a coma it is up to the family to decide by proxy consent. In the UK, in the Human Tissue Act this right was removed. In many European countries institutions do not accept donations without a prior written consent made in life. A particular situation is, when a family declares that it was the last Will of a deceased to donate their body. This must be stipulated in writing in the last Will or testament of the deceased, or any written and signed document stating specifically this Will. For obvious reasons, any cadaver that has undergone autopsy or had major surgery is no longer acceptable even when inscribed in the donation program. The acceptance of a bequest is also unlikely when a cancer with metastases has altered the normal human anatomy rendering the body no longer suitable for normal gross anatomy teaching, while some organs and body parts could still be used for specific projects. But this depends on local circumstances such as ongoing research and continued teaching courses on specific topics.

IMPLIED CONSENT

Implied consent is defined as consent, which is not expressly granted by a person, but rather inferred from a person's actions and depends on facts and circumstances of a particular situation. Again, this is not possible in the UK any longer. The term is most commonly encountered in the context of United States of America drunk driving laws (en.wikipedia.org). Regarding organ donation, most countries have legislation allowing for implied consent for organ donation, asking people to opt out of organ donation instead of opt in, but allow family refusals (Bulletin of WHO, 2012). Regarding whole body donation, an implied consent could mean that organs may also be used for other purposes not stipulated in the written consent form, i.e. for organ transplantation.

FINANCIAL ASPECTS

There should be no financial remuneration for the act of donation. No anatomical institution in Switzerland or Spain is taking money from donors for covering expenses; on the contrary, expenses for transportation and cremation are covered by the receiving institution. Funeral expenses may vary between different regions and may also depend on the citizenship of the deceased. As initiated above, what about body donors that are also organ donors? Lifesaving donations of organs are important and priority should be given to the living. Yet, families of body and organ donors should be aware that when organs are donated for transplantation, the transport and funeral expenses (i.e. cremation) are not taken in charge by the organ receiving institution. At the University of Bern (Switzerland) this practice is in place for several years, but so far such has not to be applied. Thus, the procedure seems very rare and not impinging in donation programs.

The Spanish Anatomical Society is currently investigating whether commercial firms may legally

receive bodies of altruistic donors in Spain. It is still possible to import body parts into Switzerland or Spain for commercial use. In Europe or elsewhere, sometimes it can be the only way to get bodies or body parts for anatomy teaching and continued medical education, when donation programs are not enough, not in place, or cultural and religious situation are not favorable. However, such practices need to respect mandatorily the Will of donors, legal guidelines and ethical aspects. As well, any financial profit in ulterior selling of bodies to anatomical departments in need of cadavers for teaching, research, or medical speciality courses should be regulated. Perfectly, any remuneration should cover only costs regarding transport, preparation, cremation or burial of bodies, but not a financial profit. However, how reconcile this with a corporate policy focused on the benefit? This point needs further discussion. Just as it is necessary to discuss the exhibition of preserved human cadavers, dissected or not, in order to obtain a financial benefit, even if such an exhibition is said to be helpful for educational purposes to the general population (see further below).

What to do, when there is no more storage space to accept more body donations? This is a delicate point, since the number of donations may vary over the year and the number of incoming donations cannot be accurately foreseen. act of donation should be honored and cadavers should, whenever possible, not to be refused simply due to a lack of space in the receiving institute. However, this depends on ongoing post-grade training or specific research projects. An alternative is to exchange bodies between anatomy departments that have not sufficient donations. This is already done in many countries. In Switzerland, anatomical institutes have established a network and exchange of information, of whole bodies or of body parts. In Spain, the Spanish Anatomical Society often coordinates the transfer requests between anatomical institutions, if departments have not done this previously on their own. Nevertheless, the institution that is receiving a donation in the first place normally remains responsible for the donated body. This is necessary for the administrative follow-up of the body donation (its location and use) and its cremation or burial. Just a word of caution, a recent intercontinental demographic study showed that many donors show gratitude towards their community and therefore donate their body to them. Therefore, this aspects needs also be considered when planning exchanges between institutions and needs a careful consideration (Cornwall, 2014).

AN EXAMPLE: THE DONATION PROGRAM AT LAUSANNE

A statistical analysis of data from the body donation program in Lausanne provides some helpful indications regarding a defined region in Switzerland. The summary Table 1 shows some trends in donations. The number of inscribed donors was raising several folds since 2001, and the number of actually donated bodies has increased by 1.5 folds.

The average age of donors admitted to the Platform for Morphology of the University of Lausanne is around 85 years and an age range between 46 and 100 years. While the average age of announced donors has a peak in the age range of 70 -79 years (Fig. 1). We can expect a raise in donations within the next ten years. Currently there are more than 1900 registered donors for a population of 740,000 inhabitants of the Canton of Vaud (Switzerland).

LAST MINUTE DONATIONS

Figure 2 provides some information on the delay (in years) between signing in in the donation program and the death of the donor regarding Lausanne. There is a high variability, with those that feel death approaching and die within the next year(s) after having announced their donation and a large clustering of donation of 8 to 36 years between announcement and death of donor. Most donors are in an age range between 70 to 100 years old. There are more women that donate their body. It is important to analyze the profile of donation panels, this may help to predict future supply of body donations and may guide donation policy (Table 1).

A delicate question is the acceptance of suicides. Usually, suicides are dealt with by legal medicine. However, body donation may be receivable in the case of assisted suicide by organizations assisting persons that wishes to die and have signed the donation form. Yet bodies are only receivable

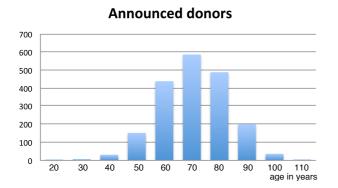


Fig. 1 (left). Distribution of donors in the donation program according to their current age. One should be aware that several donors may have already passed away, given that families were not aware of the wish of a body donation, mainly above 100 years old. when no autopsy is performed.

A retrospective analysis of the donor program in Lausanne provides valuable information (Table 1). Given the increase in enrolled donors with a peak in the age range of 70-79 years, an increase in incoming bequests over the last ten years, a decrease in the average age of incoming donors around 84 years, and considering an average delay of 12-15 years between the announcement of a donation and death, we can expect a considerable increase in the number of incoming donations over the next ten years. In Spain, the number of donations has risen to such extent that some Anatomy departments have temporarily stopped receiving further legacies, though have continued to accept the cadavers of those who had previously expressed a wish to bequest their body. Similarly, some Anatomical institutes in Switzerland have already reached a limit of storage of body donations and depend on other Universities to take up the surplus of body donations, in order not to refuse donations. Given this trend, in several years, anatomical institutes need to be more selective on donations. Another possibility may be to propose more postgraduate and continued training, or to explore an export of human bodies to anatomical departments in other countries. There is an interest from clinics and industry for applied teaching and continuing education courses in surgery, but sometimes with limited availability for some ordans.

OBLIGATIONS FOR DONORS

In Spain and Switzerland, enrolled donors receive a donor card; they should inform their family and family physician of their wish to donate their body. In the donor program at Lausanne more than 40 donors are over the age of 100 years (Fig.

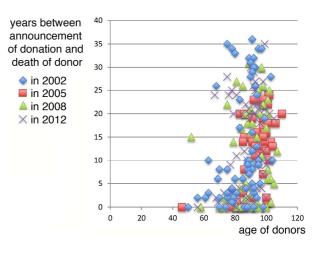


Fig. 2 (right). Distribution of donors regarding donation delay between inscription in the donation program and death of donors for the years 2002, 2005, 2008 and 2012.

Year	announced donations	received donations	% female donations	donations within 1 year	waiting time in years	min	max
2012	144	69	58%	10	12	0	36
2011	132	64	55%	12	15	0	39
2010	160	58	60%	9	11	0	37
2009	177	52	60%	12	13	0	35
2008	107	62	65%	12	13	0	35
2007	99	58	54%	10	13	0	32
2006	120	71	68%	15	13	0	34
2005	96	50	66%	10	12	0	31
2004	90	54	58%	7	13	0	28
2003	92	51	57%	5	13	0	27
2002	65	47	60%	5	12	0	24
2001	45	38	76%	6	14	0	27

Table 1. Body donations at the University of Lausanne

1), but several have not responded to a recent call for update of information, and one can suspect that several donors have already passed away or have not communicated address changes. Therefore it is essential to maintain contact, i.e. to communicate any address changes when admitted to a nursing home. However this is not on top of the list of priorities when changing life style. The donor card should also contain instructions of first steps to take by families after death of the inscribed donor and give a telephone number to call for advice and procedures. It may be the case that families are not aware of the wish of a body donation. Consequently, donations are not made; therefore receiving anatomical departments may not be aware of and keep the donors in the donation program and thus are lost.

OBLIGATIONS FOR RECEIVING INSTITUTIONS

Health and safety: In some institutes every donor is tested for contagious diseases. Handling personnel of cadavers need to be vaccinated at regular intervals. Tests may also be imposed by industry when organizing courses at anatomical departments. Furthermore, treating physicians are consulted for medical records and potential contagious diseases. Funeral agencies need to provide the death certificate prior to an admission of a donor.

Ownership and responsibility: Who can receive donations and what are the responsibilities of receiving institutions, what can they do and what can't they do? This is regulated by law and by several ethical directives in many countries. By Swiss and Spanish laws, the use of human bodies is defined in different ways, but still leaves open some space for reflection and interpretation. Nevertheless, some basic principles apply, in that the human body or body parts are not accepted for profit, though the costs of preservation and treatments of human bodies are excluded from this agreement (but does not apply universally). In general, any commerce with human bodies and body parts is forbidden. Body parts cannot be retained without prior consent of the donor and can only be used as stipulated in the consent form. In addition, the Federal Constitution of Switzerland adds that the human dignity needs to be preserved. The Swiss penal code is also protecting human cadavers to any non-authorized intervention (SAMW, 2008). In addition, anatomical institutes often have extended these directives and have established additional guidelines (SOPs).

STANDARD OPERATIONAL PROCEDURES (SOPS)

It is suggested that anatomical institutes have an internal committee that oversees daily operation and reviews the use of bodies on a yearly/monthly basis (as recommended by AAA, 2009). In the following, a number of points highly commendable to be included in any SOP is enumerated.

- Keep a register of announced donors and update register on a regular basis.
- Keep a register of donations and keep track of bodies and body parts at any time, from reception to disposal. Such a system also helps for a statistical anaylsis.
- Set-up a protocol of reception, provide a place for arriving bodies, procedure of signaling the arrival (who to inform, phone number, signal on door).
- Have an oversight committee that defines the use of bodies, planning according teaching, special courses and research.
- Define protocols of preservation. Adapt storage facility accordingly.
- Define procedure of disposal, transport, cremation and return of the urn to family – when requested.
- A point that needs also special attention is to have facilities secured or even supervised by cameras in hallways.
- Have special signs at entrance points to rooms where bodies are stored to limit con-

frontation of unauthorized personnel with cadavers.

- Have temperature controls and alert system to limit the loss of bodies due to failure of cooling units.
- For transport of bodies between storage and dissection hall, personel should be aware that this may happen at any moment of the year and according to teaching schedule.
- It is certainly good practice to cover cadavers when moved from one place to another.
- A co-ordination between institutions is also advised, to have common rules/ exchange of information on courses, donations and use of bodies. In Switzerland, this happens once or twice a year when all responsible professors meet at Swiss Network of Gross Anatomy (SNGA) meeting. The SNGA is part of the Swiss Society for Anatomy, Embryology and Histology. Such exchange of information helps to coordinate donations, inform other departments on ongoing projects that include cadavers and anatomical teaching at undergraduate and postgraduate levels.
- Images of the material in the dissecting room can only be taken with consent of the donor before death. Note that it is the use to which the images are put that may make their use illegal. Public display of anatomical material is possible with appropriate consent, but in some countries may require special licensing. Furthermore, images should be anonymized, a person should not be identifiable when it comes to publishing anatomical data and there personal data should be protected.
- Before students enroll in the dissection course, they should be asked whether they have relatives that have donated their body, to avoid any surprise or traumatic confrontation in the dissection hall. In all Swiss Universities and many Spanish Universities with an Anatomy department, donors come from the same geographical region as the medical students. The same applies to the medical faculty involved in practical anatomy teaching.

EXCHANGE OF BODIES BETWEEN INSTITUTIONS

Several European and surrounding countries have only few donations but would accept body donations from other countries to introduce practical anatomy teaching in their curricula.

Any Institute that receives human body donations is responsible for the bodies from their reception until cremation, restitution of remains to families or placement of the urns in the cemetery. In Switzerland and Spain, an exchange between anatomical departments is possible, yet the "transfering" party remains responsible for bodies and body parts, therefore it is essential to establish an agreement between giving and receiving institutes, defining number of bodies or parts, specific use, and set a time limit when they have to be restituted to the responsible home institute.

LONGTERM PRESERVATION, COMMERZIALIZATION AND PUBLIC DISPLAY

One point that transpires from several contributions (Riederer et al., 2012) is a lack of control in import/export of human dead bodies and a need for a tighter regulation. A second point is the commercialization of human body parts. In Switzerland, the law prohibits commercialization of human body parts. Yet, it is still possible to exhibit (plastinated) human bodies for an entrance fee, given the popular interest. This is a longstanding debate, i.e. whether this is art, medical divulgation, or else. Our personal feeling is, that such exhibits of dead human bodies have not that much changed since the Middle Ages, with exhibits of abnormatlities in museums and amusement parks. What is the purpose of exhibiting two dead human bodies displayed in a copulating position or other inappropriate positions? Exhibits of dead human bodies should be not to satisfy simple human curiosity but to improve scientific education and communication, and in doing so to justify the purpose of use of body donations (as discussed by Riederer et al., 2012). It follows that there are several points that need special attention, since plastination means long-term preservation for decades or longer and these bodies may not be cremated for a long time. It follows too that body donors must have agreed that their body will be dissected, plastinated and put at display for the public. Furthermore, when these plastinated bodies are displayed in exhibits they may be placed in some awkward positions. It is therefore essential that these donors have signed that they agree to public display and to the position they will be placed in.

Another information that needs to be given to donors when they enroll in the programme is, that it may take at least two years before a final disposal by cremation is possible. As in many Universities, at Lausanne and Leioa, the family can decide whether they want to have back the final urns, or whether they should be placed at the cemetery in the garden of memory. In the case of a family wanting to have back remains, the use of single parts for plastination and storage for a very long time is not possible. It involves also some logistic to trace all remains and at the end have all remains of a donor cremated at once. In our experience, during dissection courses- all remains are kept together up to the last course. Usually, before cremation, families are called just to aks whether they want to have the urn with ashes back or not. This may make a difference in logistic and costs.

What about religions that do not cremate, but

have other burial rituals, can they also donate their body for medical sciences? This needs to be clarified with the institution that receives donations.

How to reduce stress of students when approaching human cadavers? This is addressed in upcoming contribution on practical anatomy teaching (Riederer et al., 2014; Arráez-Aybar et al., 2014). It is essential to prepare mentally students as well as the personnel that is handling or manipulating cadavers.

COMMEMORATION

How can donors be thanked? There are many different ways in which appreciation can be expressed to donors and their families, depending on local traditions, how the donation programs have evolved over the years or on religion and customs to celebrate death. In many European countries such ceremonies have already existed for a long time. The most common sign of appreciation is a thank-you letter to the families. Another possibility is a commemoration ceremony; this may be combined with the presence of medical students. For example, in Basel (Switzerland), medical students have formed a choir and they sing for the families during a ceremony where thanks are expressed for donations. At The University of the Basque Coun-



Fig. 3. "The Forest of Life" (*Vitae Silva*) in the University of the Basque Country (UPV/EHU) campus at Leioa, near Bilbao (Spain). When you arrive to Bilbao by airplane you are able to see this monument in the University campus on top of the hill. During a ceremony, the urns are deposited in the reserved space within the wooden pillars that form the Forest of Life.

try UPV/EHU, (i.e. Universidad del País Vasco / Euskal Herriko Unibertsitatea), a monument called the "Forest of Life" (*Vitae Silva*) has been constructed on the university campus at Leioa, near Bilbao, where urns with remains of all donors are deposited, in the presence of donor families and local authorities in the form of a commemoration celebration (Fig. 3). This is carried out in the spirit of a meaningful death.

CONCLUSION AND GOOD PRACTICE

Also in the future medical sciences will depend on body donations and it is therefore essential to keep the act of donation as transparent as possible and follow guidelines that respect the highest ethical standards. Here some recommendation to consider for good body donation practice. It should be noted that during the revision process of this manuscript recommendations were published in Plexus (Jones, 2014).

- Establish a clear and rigorous legal and ethical framework that defines bequest of human remains for anatomical sciences.
- Provide a leaflet with information regarding body donation.
- Define responsibilities for receiving institutes.
- Assure costs for transport and disposal of remains.
- Define standard operational procedures and place a committee in place to oversee preparation and handling of cadavers.
- Establish a written consent form and keep transparency of procedures relating to the bequests, including also circumstances when a bequest might be declined (contagious diseases, obesity, cancer with metastases, or other).
- Donors should receive a donor card and should inform family and physician about the donation.
- Provide information to relatives on the procedure to follow after the death of the donor.
- Maintain contact with donors and keep their addresses up-to-date.
- Have optimal conservation procedures.
- Respect anonymity of donors.
- Have commemoration services for families (where it is customs).
- Erect memorials to donors, or plaques in their honor, whenever possible.
- Establish international treaties to regulate transport and exchange of human bodies and body parts.
- No commercialization of bodies and body parts should be allowed.
- Give information to the public in ethics and on bequest of human remains.
- Set limits to the extent to which images or other artifacts produced from donations are

placed in the public domain to prevent morbid curiosity.

REFERENCES

- ARRÁEZ-AYBAR L-A, BUENO-LÓPEZ JL, MOXHAM BJ (2014) Anatomists view's on body dissection and donation: an international survey. *Ann Anat*, 196: 376-386. First published online July 3, 2014.
- BIASUTTO SN, SHARMA N, WEIGLEIN, AH, BENIA FM, McBRIDE J, BUENO-LOPEZ JL, KRAMER B, BLYTH P, BARROS MD, ASHIRU O, BALLESTROS LE, MOXHAM BJ, KRISHNAN S (2014) Human bodies to teach anatomy: Importance and procurement – experience with cadaver donation. *Rev Arg de Anat Clin*, 6: 72-86.
- BOLT S (2012) Dissertation: When I die I will go to the University. A study of body donation in the Netherlands. Parthenon Publishing House. ISBN 978 90 79578 450. pp 197.
- BULLETIN OF THE WORLD HEALTH ORGANIZATION (2012) Keeping kidneys. Volume 90 (10): 713-792.
- CHAMPNEY TH (2011) A proposal for a policy on the ethical care and use of cadavers and their tissues. *Anat Sci Edu*, 4: 49-52.
- CORNWALL J (2014) The demographic characteristics of donors: An intercontinental study. *Ann Anat*, 196 S1: 225.
- HUMAN TISSUE ACT (2004) http:// www.legislation.gov.uk/ukpga/2004/30/contents.
- IFAA (2014) Abstracts 18th Congress of the International Federation of Associations of Anatomists. Ed. F. Paulsen. *Ann Anat*, 196 S1: 286.
- JONES GD (2014) Recommendations of good practice for the donation and study of human bodies and tissues for anatomical examination. *Plexus*, August, pp 12-14.
- MAYER E (2010) Der Umgang mit der Leiche. Thesis: Institut für Strafrecht und Kriminalogie Wien. Universität Wien 218.
- M^cHANWELL S, BRENNER E, CHIRCULESCU A, DRUKKER J, VAN MAMEREN H, MAZZOTTI G, PAIS D, PAULSEN F, PLAISANT O, CAILLAUD M,

LAFORET E, RIEDERER BM, SAÑUDO JR, BUENO-LÓPEZ JL, DOÑATE F, SPRUMONT P, TEOFILOVSKI-PARAPID G, MOXHAM BJ (2008) The legal and ethical framework governing Body Donation in Europe - A review of current practice and recommendations for good practice. *Eur J Anat*, 12: 1-24.

- RIEDERER BM, BOLT S, BRENNER E, BUENO-LÓPEZ JL, CHIRCULESCU A, DAVIES DC, DE CARO R, GERRITS PO, M°HANWELL S, PAIS D, PAULSEN F, PLAISANT O, SENDEMIR E, STABILE I, MOXHAM BJ (2012) The legal and ethical framework governing Body Donation in Europe - 1st update on current practice. *Eur J Anat*, 16: 1-21.
- RIEDERER BM (2014) Platination and ist importance in teaching anatomy. Critical points for long-term preservation of human tissue. *J Anat*, 224: 309-315.
- RIEDERER BM, JONES GD, et al. (2014) Summary report on body donation and ethics. *Plexus*, August 2014, pp 10-11.
- SAMS (2006) Swiss Academy of Medical Sciences: Biobanks: Obtainment, preservation and utilisation of human biological material. published May 23, 2006. http://www.samw.ch/en/Ethics/Guidelines/Currentlyvalid-guidelines.html
- SAMS (2008) Swiss Academy of Medical Sciences: Verwendung von Leichen und Leichenteilen in der medizinischen Forschung sowie Aus-, Weiter- und Fortbildung. Published 27 november 2008. http:// www.samw.ch/de/Ethik/Richtlinien/Aktuell-gueltige-Richtlinien.html
- SAMS (2010) Swiss Academy of Medical Sciences: Research with Human Subjects; A manual for general practice. Published 1.4.2010. http://www.samw.ch/en/ News/News.html
- Guidelines suggested by American Associations of Anatomists, November 13, 2009 http:// www.anatomy.org/sites/default/files/pdfs/ body_donation_policy_11-09.pdf