



Please understand that not all authors could provide their slides. For smaller file size, the image quality is low.

# **Symposium: Challenges of implementing body donation programs: a multi-cultural perspective**

Chairs:

Brandi Schmitt, University of California, USA

Andreas Winkelmann, Medical School Brandenburg, Germany

**Summary of the symposium held on 10 August 2019 at  
the IFAA conference in London**

8:30 Introduction

8:45 **Andreas Winkelmann, Germany:** *History of body donation in Berlin*

9:00 **Diogo Pais, Portugal:** *Building up a body donation program: the Portuguese experience*

9:15 **Ameed Raoof, Qatar:** *The concept of establishing a sustainable anatomical donations program in the Middle East: assessing the needs*

9:30 **Pasuk Mahakknaukrauh, Thailand:** *The challenge of organizing body donation in Northern Thailand*

9:45 **Samuel A. Asala, Nigeria:** *Body donation to departments of anatomy in Nigeria: challenges and prospects*

10:00 **Guo-Fang Tseng, Taiwan:** *Body donation campaigning in a conventionally reluctant society in Asia*

10:15 **Brandi Schmitt, USA:** *Challenges that persist in a well-established body donation program*

10:30 **Andrea Oxley da Rocha, Brazil:** *Understanding the donor profile: a fundamental tool for body donor recruitment campaigns*

10:45 **Hope Gangata, United Kingdom:** *The need for developing conceptual theoretical frameworks for implementing body donations across the world*



Symposium:

**Challenges of implementing body donation programs:  
a multi-cultural perspective**

Introduction

## Synopsis

Academic institutions with anatomical education programs and clinical health missions need bodies of the deceased to support teaching and research. There is a broad consensus that, from an ethical point of view, body donation is the preferable way to acquire bodies for these purposes. However, many anatomists around the world still depend on the use of unclaimed bodies. Others may seek alternative sources, including import from abroad, to support their teaching needs. In many countries where traditional dissection is the preferred teaching method and where clinical education and research requires modern human specimens, efforts to implement body donation programs are under way. These efforts meet diverse challenges depending on the social, cultural and religious context and on local laws, regulations and traditions.

In this symposium we propose to bring together perspectives from several contexts to identify the challenges of implementing body donation and possible ways to face them. Symposium speakers represent five continents and will present on the challenges they encounter in establishing body donation programs, methods they use to address relevant challenges as well as barriers that persist. We do not expect to offer a standard way of how to implement a donation program. However, for anatomists who may work in very different contexts, a kind of cross-cultural comparison will help to better understand the issues at hand and may lead to the development of strategies to overcome them.

We will begin with an introduction, including a first interaction with the audience, followed by nine presentations, and end with a panel session. We will use this session to discuss options for supporting one another around the globe in implementing and improving body donation programs. Discussions will include the possible application of suggested conceptual frameworks to diverse contexts, those presented by the speakers but also those contributed by anatomists in the audience.

# FICEM

= Federative International Committee on  
Ethics and Medical Humanities of IFAA

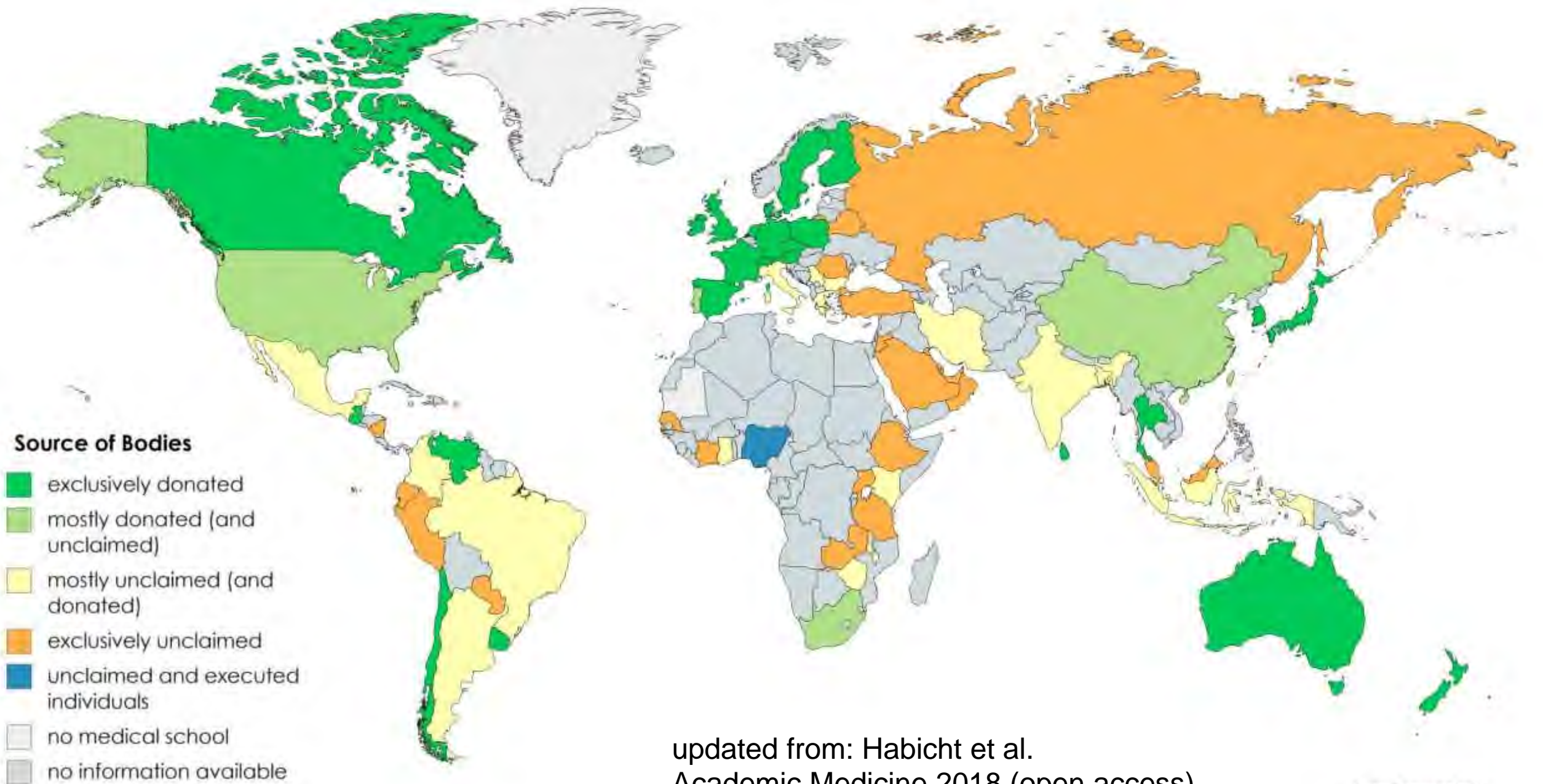
- Visit the website at [ifaa.net](http://ifaa.net) for what we do and have done

- IFAA recommendations (2012, Gareth Jones)

"Recommendations of good practice for the donation and study of  
human bodies and tissues for anatomical examination"

"Informed consent from donors must be obtained in writing  
before any bequest can be accepted."

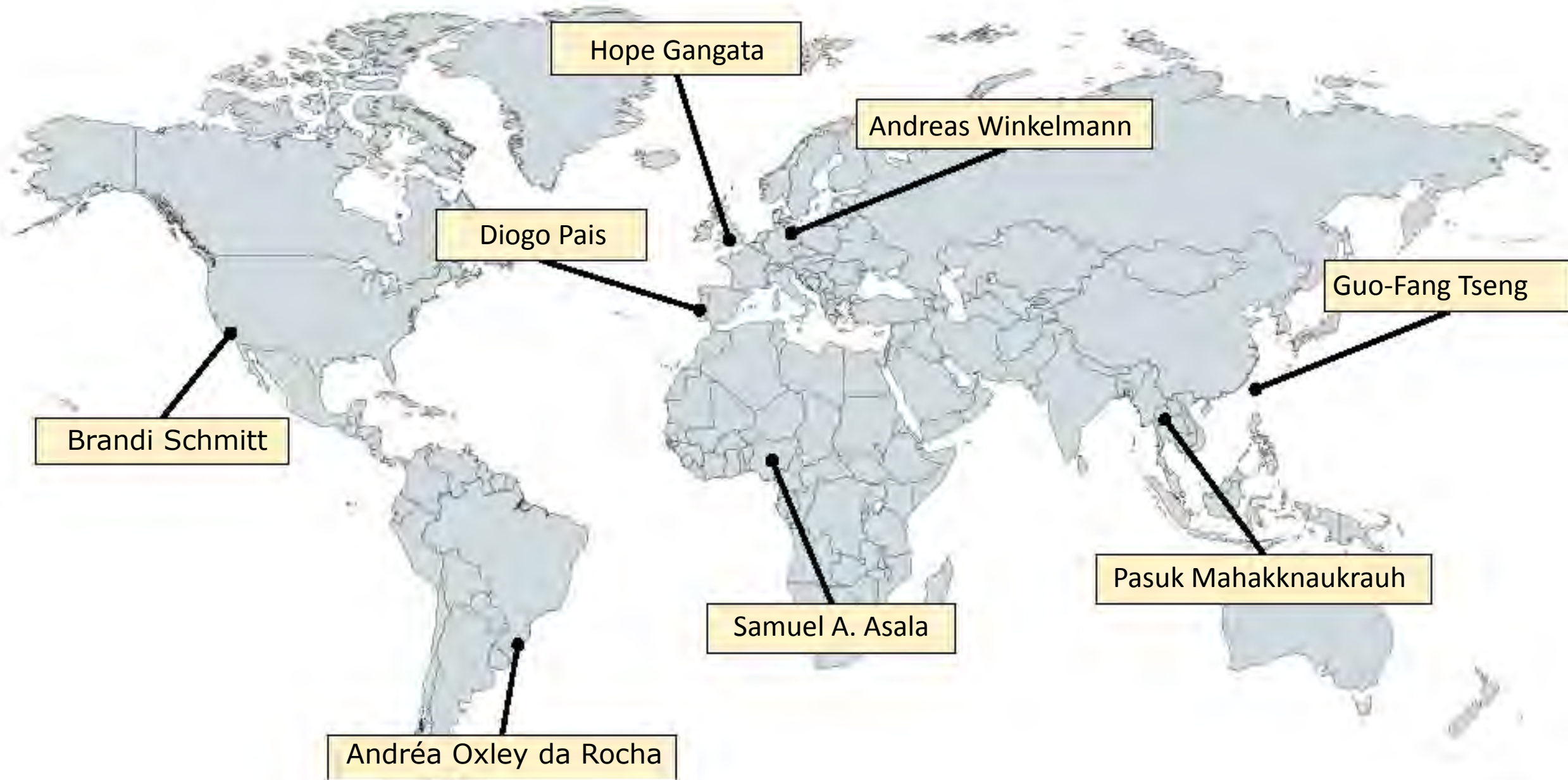
# Sources of bodies for anatomy education



updated from: Habicht et al.  
Academic Medicine 2018 (open access)



## Speakers of the symposium





Symposium:

**Challenges of implementing body donation programs:  
a multi-cultural perspective**

**Andreas Winkelmann,  
Germany:**

History of body donation in  
Berlin



**Andreas Winkelmann, Kathrin Roller**  
***History of body donation in Berlin***

In Germany, regional law of the 16 federal states ("Länder") regulates funeral practice and postmortem examination, and also anatomical dissection. Berlin therefore has its own "dissection act". This act makes body donation the only legal source of bodies for anatomists. It requires written consent during a donor's lifetime, prohibits financial remuneration, and confines any dissection to anatomy department premises. In Berlin with its history of over 300 years of anatomical dissection, these regulations are a comparably recent development. From the first appointment of a Berlin professor of anatomy in 1713 until after World War I, anatomists occasionally and legally used the bodies of execution victims, but most bodies delivered to the dissecting rooms derived from the Berlin poor, those whose relatives could not afford burial costs. Bodies were mostly delivered by institutions like prisons or hospitals. The times of the "Third Reich" 1933-1945 saw an unprecedented rise in execution numbers, with the bodies legally directed to the anatomy department by an immoral justice system. While we thus know a lot about regulations and body sources until the end of World War II, the history of the post-war introduction of body donation remains to be written. When executions ceased in 1945, a lack of bodies for anatomical purposes ensued during the post-war decades. In West Berlin of the 1960s, donated bodies still only accounted for one third of the bodies available for anatomical dissection. The remainder were unclaimed bodies, a source increasingly opposed by the welfare administration. More successful measures to implement body donation seem to have been introduced in the 1970s, more efficiently in West than in East Berlin. An unequivocal regulation only came in 1996, i.e. after German reunification. More historical research is needed to elucidate how body donation was successfully implemented during this period.



# History of body donation in Berlin

Andreas Winkelmann & Kathrin Roller  
Medical School Brandenburg  
Neuruppin, Germany



## Situation in Berlin today

Berlin

*Berlin = 1 of 16 federal German states*

### **Dissection Act** (*Sektionsgesetz*)

- natural death
- written consent during a donor's lifetime
- no financial remuneration
- dissection in anatomy department premises only
- supervised by anatomist

... since when?

1996!



# History of donation in Berlin

Berlin

Method: Historical research

Sources: Archives of

- Anatomical Institute Berlin
- Free University Berlin
- Humboldt University Berlin

## Programme of my talk:

- Very short history of anatomy in Berlin
- First donations
- Post-war procedures in East and West Berlin
- Conclusions



# History of anatomy in Berlin

1713

Anatomical Theatre



1803

Royal Anatomical Museum



1865/1883



Anatomical Institute

1948

Anatomical Institute  
Humboldt University

Institute of Anatomy  
Free University

2003



Center for Anatomy



today

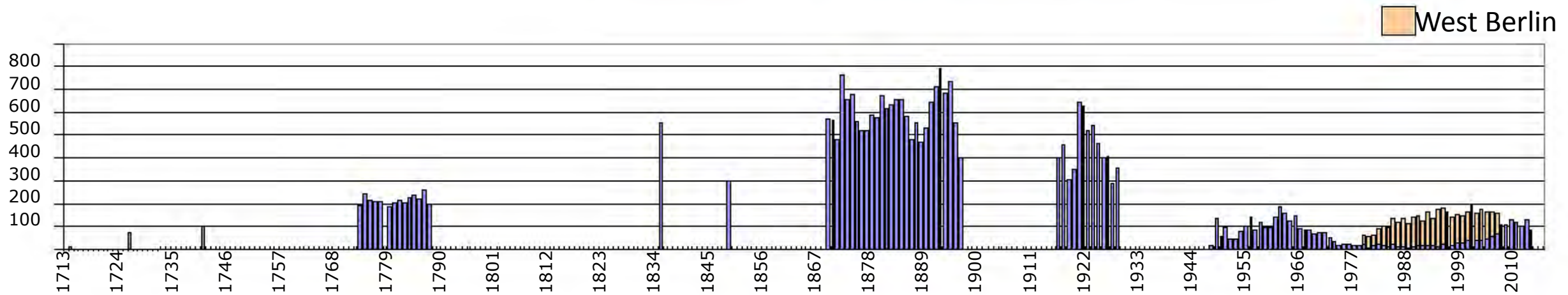
3 Institutes

East/West



# History of anatomy in Berlin

Number of bodies per year



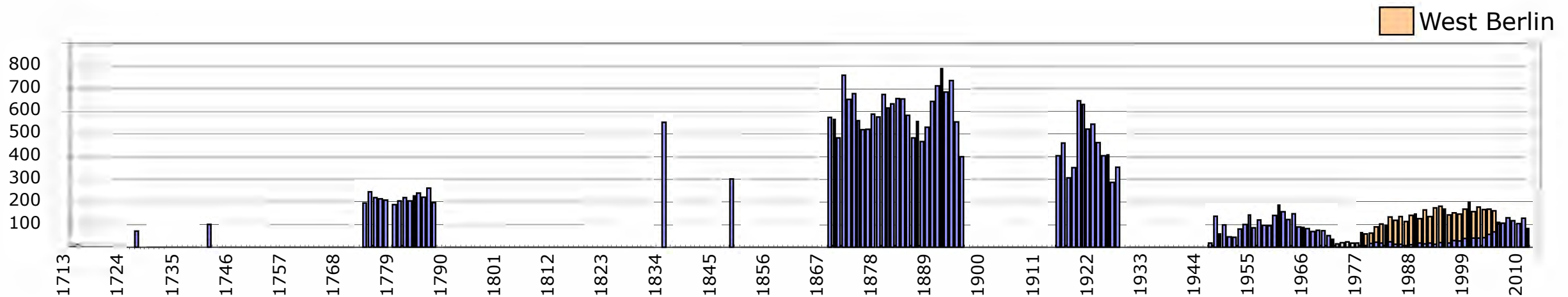
# Where did the bodies come from?

Paupers (those who could not afford burial)  
Deaths in institutions  
Unclaimed bodies

Executed prisoners

"Third Reich"

Donations ?



# When did body donation start?



*Dr. Waldeyer.*

Wilhelm Waldeyer  
1836 - 1921  
(Director 1883-1917)

... donated his skull, brain, and hands!



## Die Hände von Wilhelm von Waldeyer-Hartz.

Von  
Hans Virchow, Berlin.  
Mit 18 Textabbildungen und 5 Tafeln.  
(Eingegangen am 12. Dezember 1922.)

		1. Str.	2. Str.	3. Str.	4. Str.	5. Str.
Metakarp.	r.	4,4	6,55	6,4	5,3	5,5
	l.	4,3	6,6	6,45	5,3	4,95
1. Phal.	r.	2,9	4,05	4,5	4,0	3,0
	l.	2,9	4,0	4,4	4,0	— <sup>1)</sup>
2. Phal.	r.	2,35	2,0	2,5	2,5	2,0
	l.	2,4 <sup>2)</sup>	2,2	2,7	2,5	— <sup>1)</sup>
3. Phal.	r.	—	1,75	2,05	2,0	1,75
	l.	—	1,8	1,9	1,85	1,8 <sup>3)</sup>

## When did body donation start?

First documented written consent:  
1922

Last Will

My body belongs to the Anatomy  
Department for scientific studies.

Berlin W.62 ...

[name]

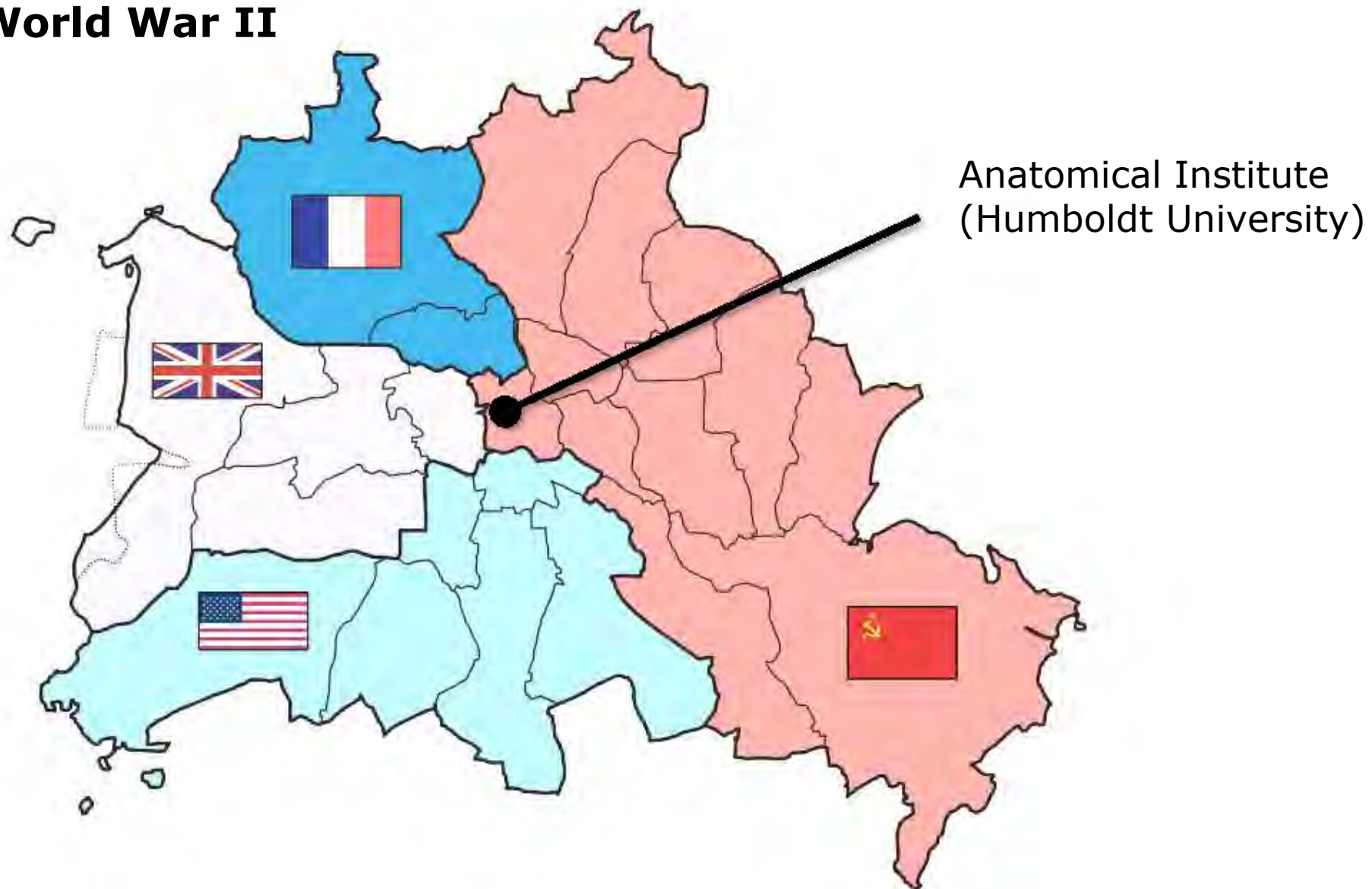
bookseller

9 November 1922

document, Charité Center of Anatomy

But donations were not relevant until after World War II!

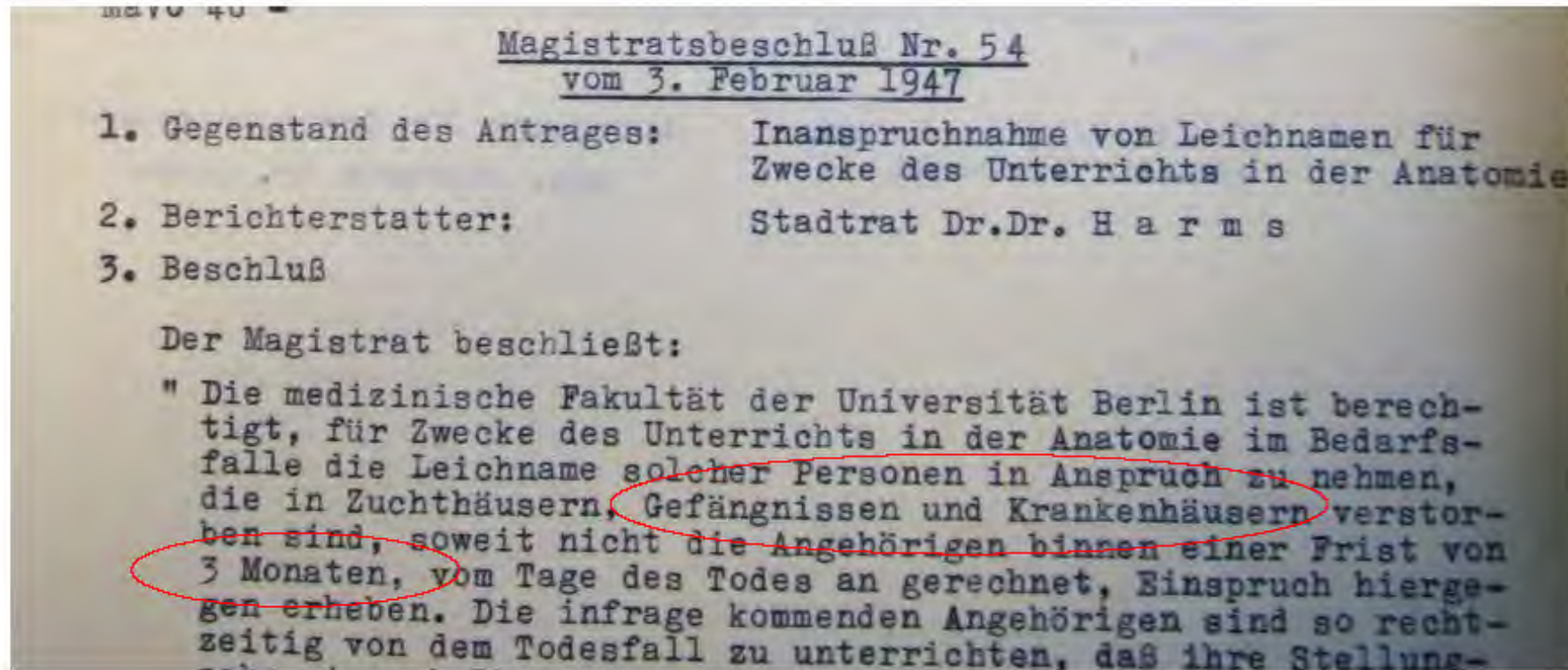
**1945 – after World War II**





## 1947 - Administration of Greater Berlin

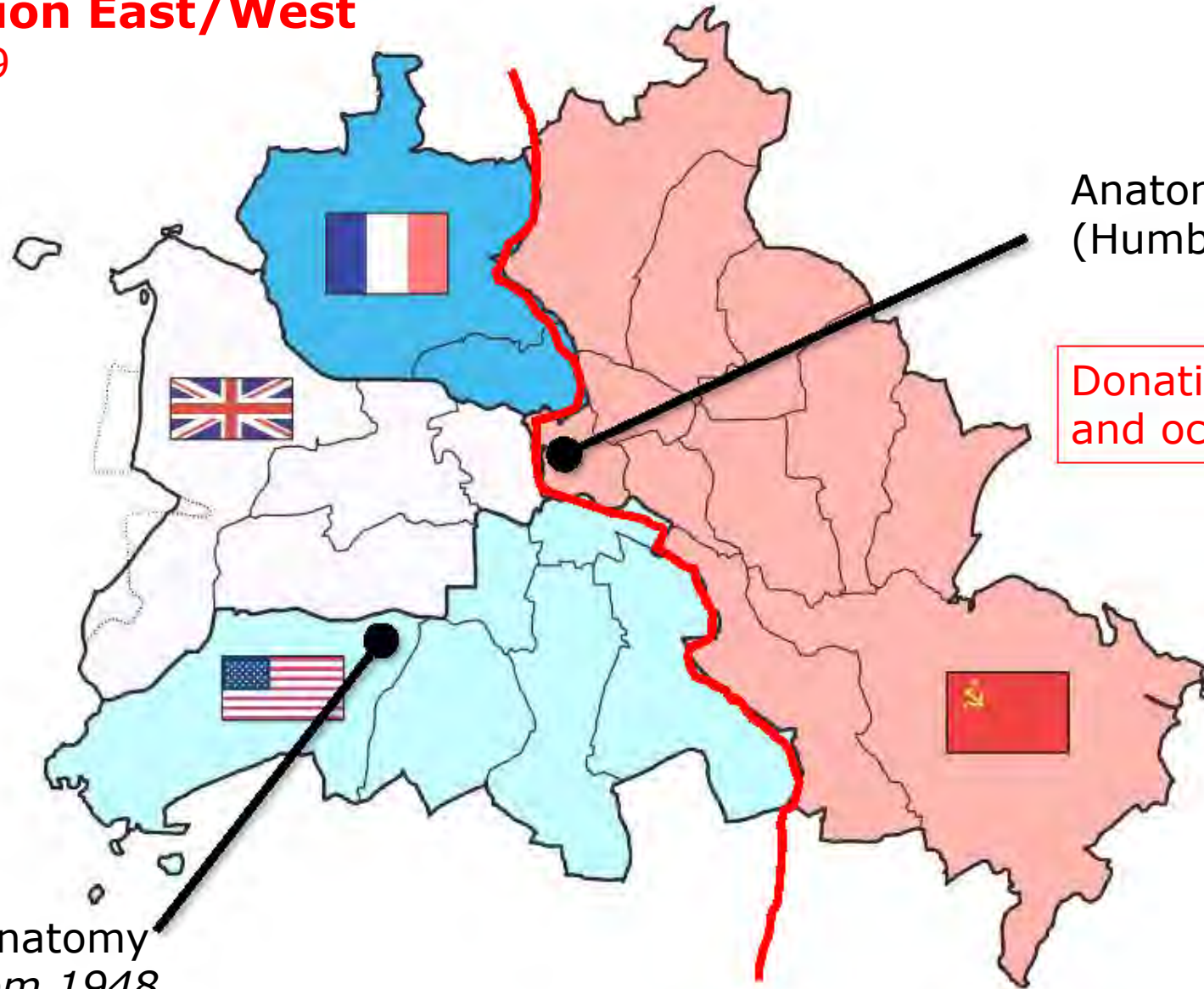
Bodies of those dying in hospitals and prisons can be used if no relatives show up within 3 months.



FU archive, letter v. Herrath 13 Oct 1958

## 1949 - Division East/West

Wall 1961-1989



Anatomical Institute  
(Humboldt University)

Donation remained optional  
and occasional until 1989

"New" Institute of Anatomy  
(Free University) *from 1948*

## **West Berlin after 1949**

- no executions
- rare donations
- lack of bodies

1958: only 7 bodies for 700-800 students

## **West Berlin - 1960s**

Sources of bodies 1963

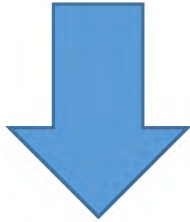
- 10-15% unclaimed bodies
- 30-40% donations
- 45-60% paupers

## West Berlin - 1960s

February 1963

**Administration of Social Welfare**

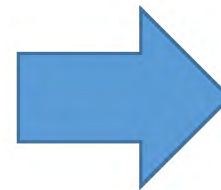
**withdraws regulations that allowed to acquire bodies without consent**



After 1967? / 1970s?

**Body donations only** (without legal regulation)

Advertising in local newspapers



Only after 1989:

**Dissection Act 1996**

## **Summary**

- first donations: 1920s
- West Berlin around 1963: welfare restricts access to bodies without consent
- Anatomists start advertising for body donation: late 1960s / 1970s (?)
- Legislation follows not before 1996

## **Conclusions**

- In this case, the local administration took the first step (not the anatomists)
- Legislation does not always have to come first





Symposium:

**Challenges of implementing body donation programs:  
a multi-cultural perspective**

**Diogo Pais, Portugal:**  
*Building up a body donation  
program: the Portuguese  
experience*

**Building up a Body Donation Program – the Portuguese experience**

When developing the first Body Donation Programs, three main challenges presented to the Portuguese anatomical community: religious, legal, and financial.

In Portugal the majority of citizens is Catholic. There is also a substantial difference between the mentality of people living in the metropolitan areas when compared to those living in the province. One of the reasons for this is the very traditional mentality of the people. Changing this mentality is hard. It takes a lot of effort with campaigns, leaflets and most importantly the testimonials of common people that have donated their body. The important thing is that lay people understand of how useful for the society, for future doctors and for science it is to donate their bodies.

For many years, there was no regulatory legal framework for Body Bequests in Portugal. Until 1999, the only reference that could be found in the law concerning the use of cadavers by medical schools was the Ordinance 40 of 1913. This Ordinance allowed medical schools to obtain the bodies of those dying in hospitals, asylums and public assistance houses provided they had not otherwise been claimed within a 12hr period. Only in 1999 did legislators approve the decree-law of 274/1999 that regulates the use of cadavers in teaching and research. This Decree-Law was based on the ‘transplantation law’ 12/1993, sharing important resources created by this law, namely the ‘RENDA’ (‘NON-Donors National Registry’), transposing the ‘opt-out regulation’ to body donation for teaching and research process.

One other challenge has to deal with the financial burden of a Donation Program. We have solved it with the implementation of a large amount of post-graduation courses and training sessions for surgeons which was the way to convince the Institutional authorities that hosting such a donation program was so important for the Medical School.



Symposium:

**Challenges of implementing body donation programs:  
a multi-cultural perspective**

**Ameed Raoof, Qatar:**

*The concept of establishing a  
sustainable anatomical donations  
program in the Middle East:  
assessing the needs*

**The Concept of Establishing A Sustainable Anatomical Donations Program  
in The Middle East: Assessing the Needs**

The last three decades witnessed a remarkable increase in the number of medical colleges in the middle east region. There are about 160 medical colleges in the region applying a wide range of medical curricula. There is no sufficient, nor up-to-date information about the use of cadaver dissection in teaching anatomy in those institutions. Nevertheless, a large proportion rely on the availability of human cadavers. Traditionally, unclaimed cadavers made a constant resource. Reliance on unclaimed cadavers is attributed largely to deep cultural considerations and perceptions about death and dissection in general. Unclaimed cadaver supply to medical colleges, especially in the Middle East has always been unsustainable and unpredictable resulting in inadequate availability of specimens for teaching. This fact led anatomy programs in the region to rely on prosected specimens and on alternate resources.

The emergence of a new resource in body supply during the past few years helped regional medical colleges to a certain extent in acquiring cadavers when needed. These are donated cadavers supplied from international locations such as Europe, Asia and America. Obviously, the expense for attaining such specimens is usually high. Medical colleges in well-off middle eastern countries could afford these specimens, unfortunately, for the majority, especially the public medical colleges such an option may not exist at all.

The idea of having a body donation program is not new to the region. Such a program, when established and successful, will certainly ensure an adequate supply of appropriate specimens for teaching anatomy. A central advantage of having local donation programs is the positive impact they may have on students' professionalism and the local community.

It is becoming increasingly essential to seriously consider the implementation of valid and sustainable body donation programs to ensure a more effective anatomy education.

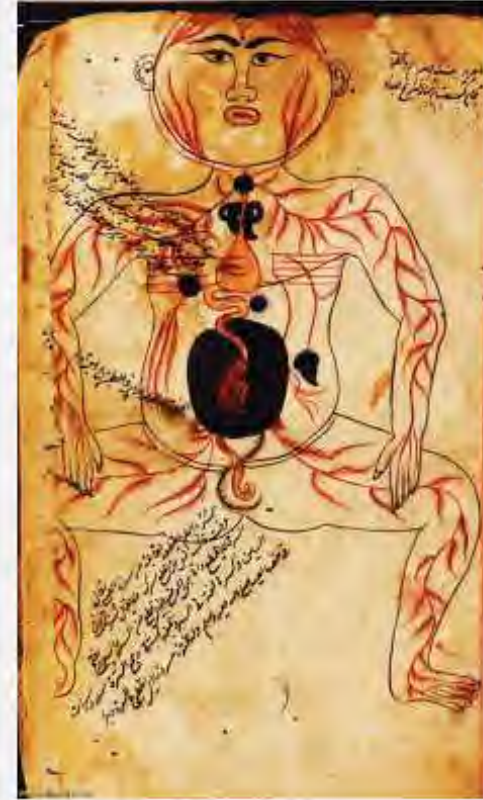
# The Concept of Establishing A Sustainable Anatomical Donations Program in The Middle East: Assessing the Needs

Ameed Raoof, MB ChB, Ph.D.  
Associate Professor of Anatomy in Radiology  
Weill Cornell Medicine – Qatar

[amr2032@qatar-med.cornell.edu](mailto:amr2032@qatar-med.cornell.edu)

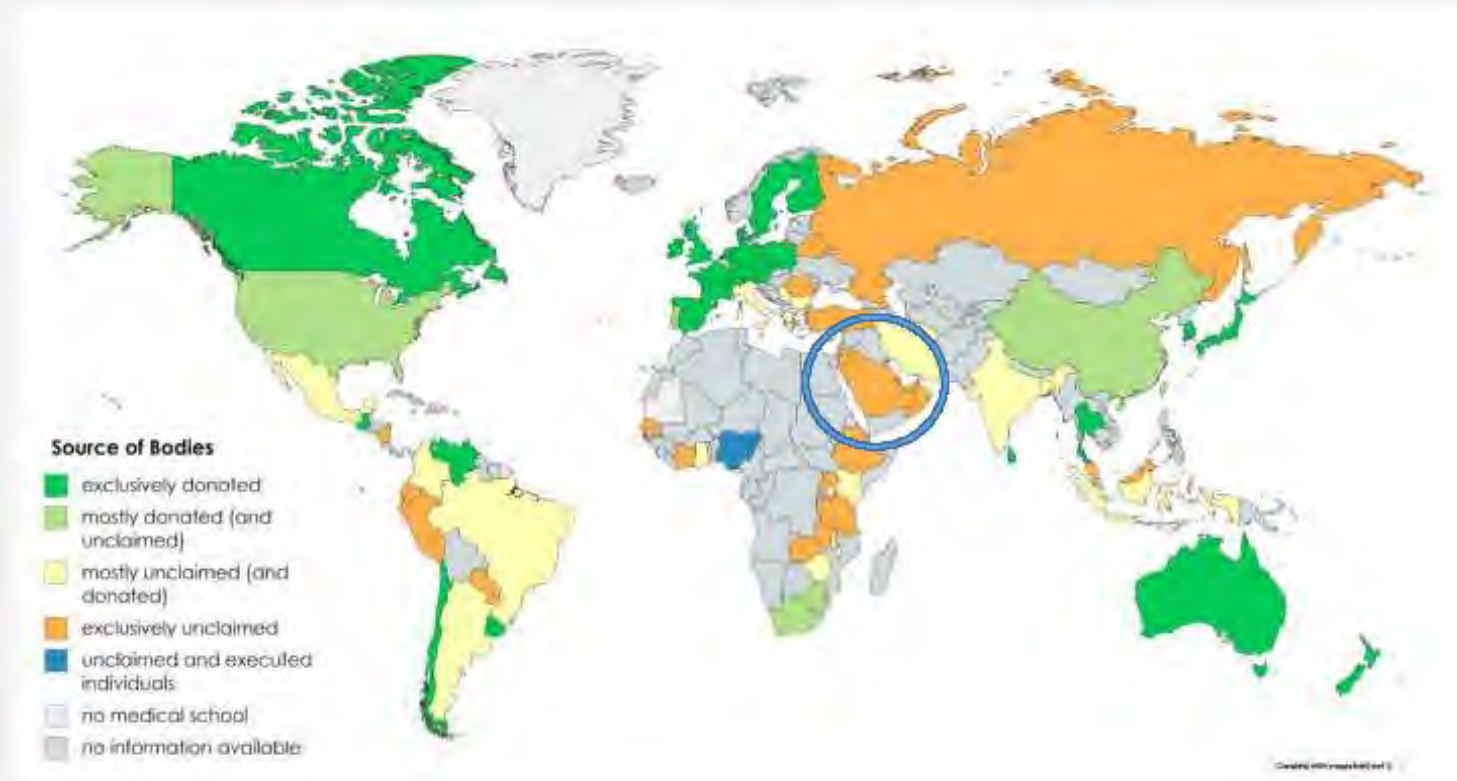
IFAA 2019 Symposium: Challenges of implementing body donation programs: a multi-cultural perspective





Arteries and viscera according to Ibn Sina, (1632) From the Qanon of Medicine, Al-qanon Fi-T-Tib (Ibn Sina) Folio 126, rector, Arabic MS 155  
 Courtesy: Wellcome Library, London

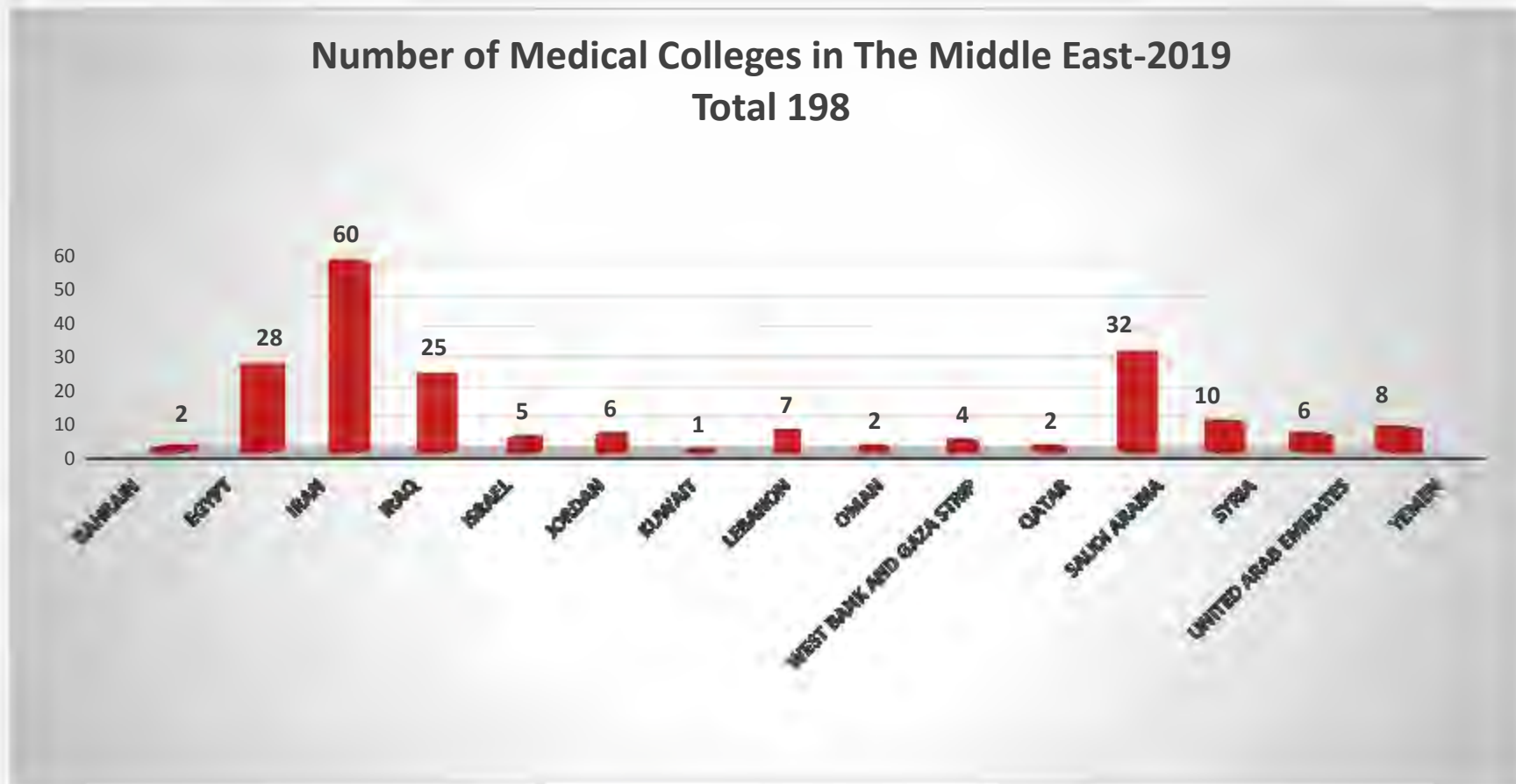
## Sources of Cadavers Used For Anatomy Teaching In Undergraduate Medical Curricula In 68 Countries



Habicht, Juri L.; Kiessling, Claudia; Winkelmann, Andreas: **Academic Medicine**. 93(9):1293-1300, September 2018

**FICEM**

Federative International Committee on Ethics and Medical Humanities of IFAA



World Directory of Medical Schools: World Federation for Medical Education ([WFME](#)) and the Foundation for Advancement of International Medical Education and Research ([FAIMER](#))- June 2016

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Obviously, the expense for attaining such specimens is usually high.

A central advantage of having local donation programs is the positive impact they may have on students' professionalism and the local community.



# Getting There.....

Education Education Education

- Community awareness and education
- Two-way process between medical colleges and the community – trust or social contract

“There has to be adaptation to local, cultural and religious customs. In order to increase public awareness of the crucial role of body donation in the medical education of future physicians, it is essential to speak to the public by all methods possible.” [Riederer, B. Clinical Anatomy 29:11–18 \(2016\)](#)

It is becoming increasingly essential to seriously consider the implementation of valid and sustainable body donation programs to ensure a more effective anatomy education.

Thank You



Symposium:

**Challenges of implementing body donation programs:  
a multi-cultural perspective**

**Pasuk Mahakknaukrauh, Thailand:**  
*The challenge of organizing body  
donation in Northern Thailand*

**Pasuk Mahakkanukrauh****The challenge of organizing body donation in Northern Thailand**

The best way to study human anatomy is by cadaveric dissection. We obtain cadavers from body donations. Reasons for donation include: .1 For the benefit of medical education; .2 Being revered as the *Ajarn Yai*, or “Great Teacher”; .3 Being the greatest last donation of a lifetime. Recently, we have approved the development of a new cadaveric surgical training center which serves 3 important activities: basic surgical training for undergraduates, post-graduate surgical workshops, and cadaveric research. Between 1980-2018, there were 91,948 registered as donors from all backgrounds, ranging from 15-100 years, with a greater female to male ratio )1.2:1(. There were, however, 6942 body donations made. So far, the number of cadavers have been sufficient for training purposes. However, with an increasing demand from the government to train more doctors and healthcare workers, there may be a shortage of donors in the future. We approach this challenge by creating a *royal cremation ceremony*, to show that each and every cadaver is invaluable and deserves the highest respect from us all. Even with this ceremony, the number of donors do not meet the requirements for donation. As a result, we are now developing a new modern charnel house for all accepted donors to show our highest respect and to encourage the trend for body donation. In order to maintain the trend, it is imperative that we take some enhancing measures. These may include: (1) increasing the radius of operation in the transportation service of the faculty, (2) strengthening the honoring process to the relatives of the donors by having a faculty member present at each reception ceremony, (3) performing the royal cremation ceremony for all the "Great Teachers", and )4( developing a new modern charnel house for all cadavers, to show our highest respect.



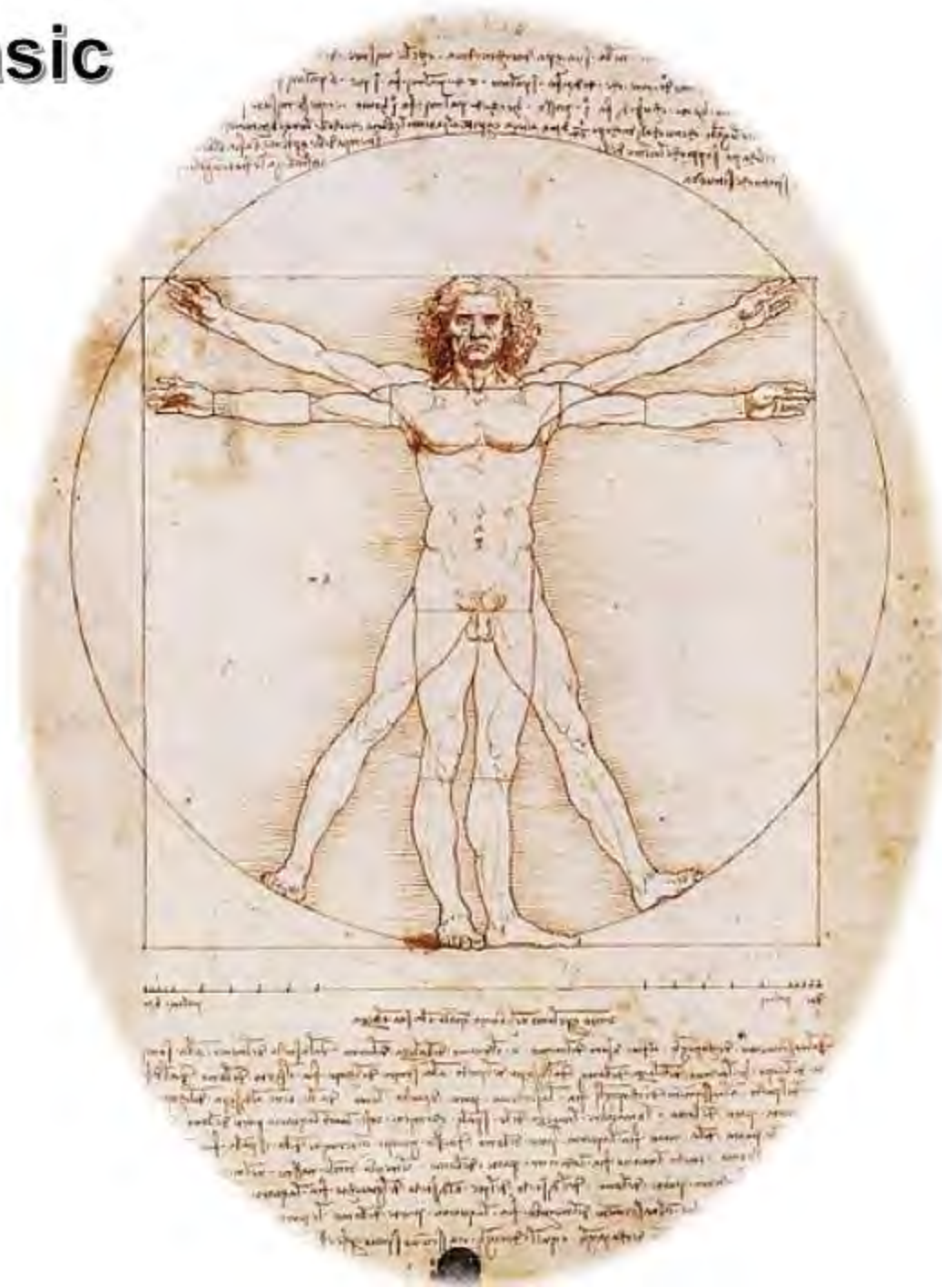
# The Challenge of Organizing Body Donation in Northern Thailand



Professor Pasuk Mahakkanukrauh, MD



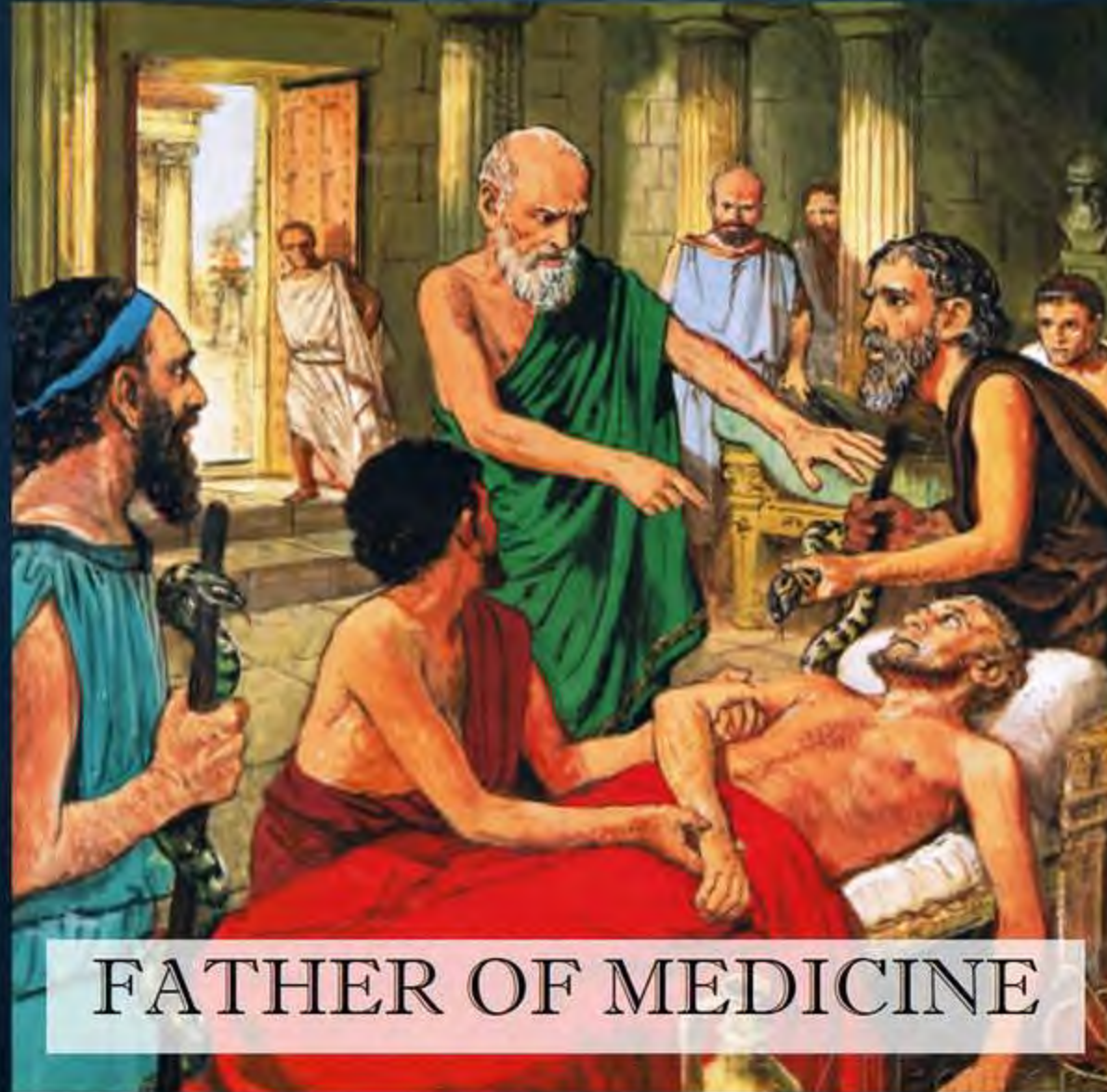
# Anatomy is the Oldest Basic Medical Science.



*"the nature of the body is the beginning of medical science"*



Hippocrates

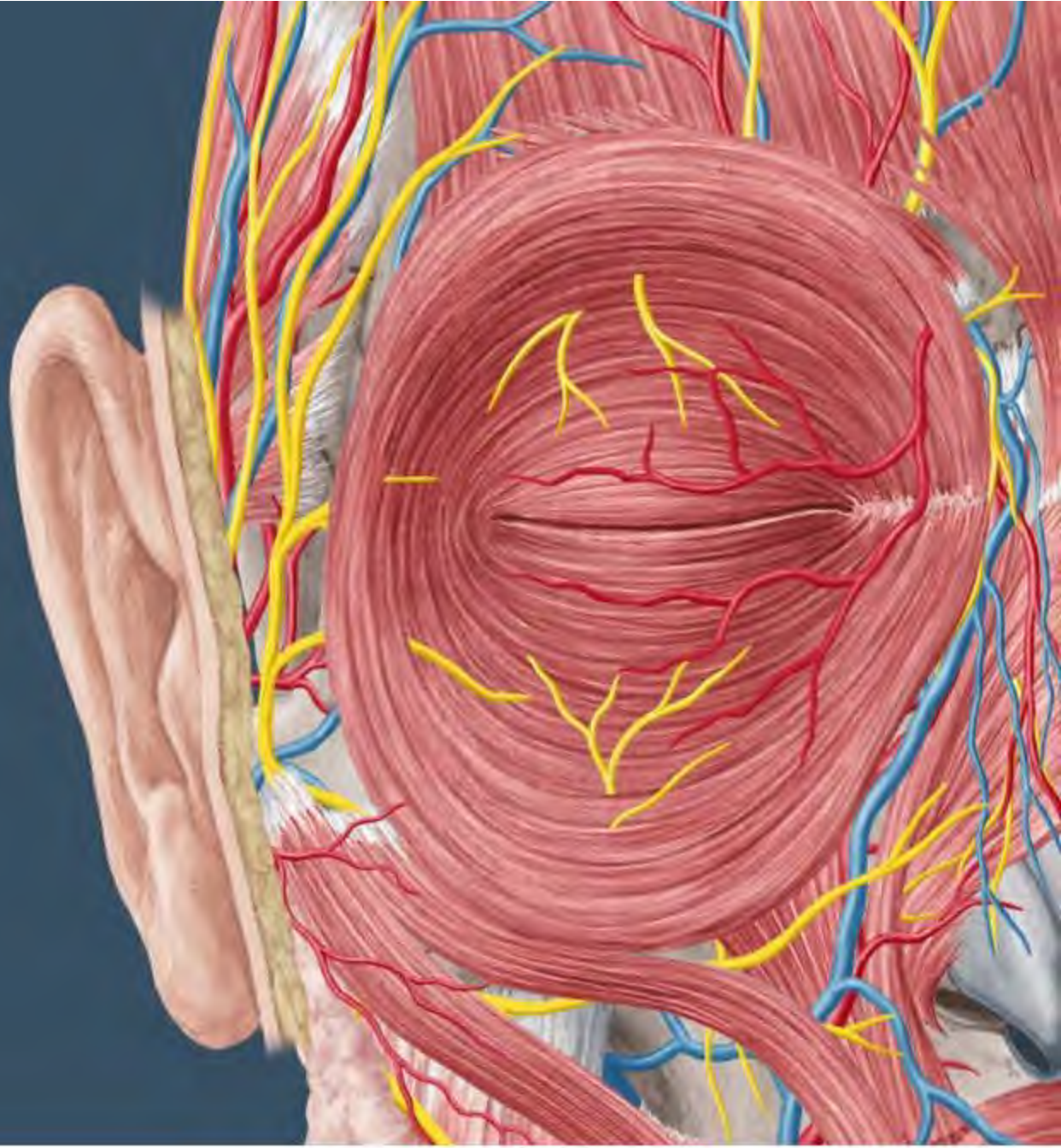


FATHER OF MEDICINE





Best way to  
learn Anatomy



**Where does our cadaver come from?**







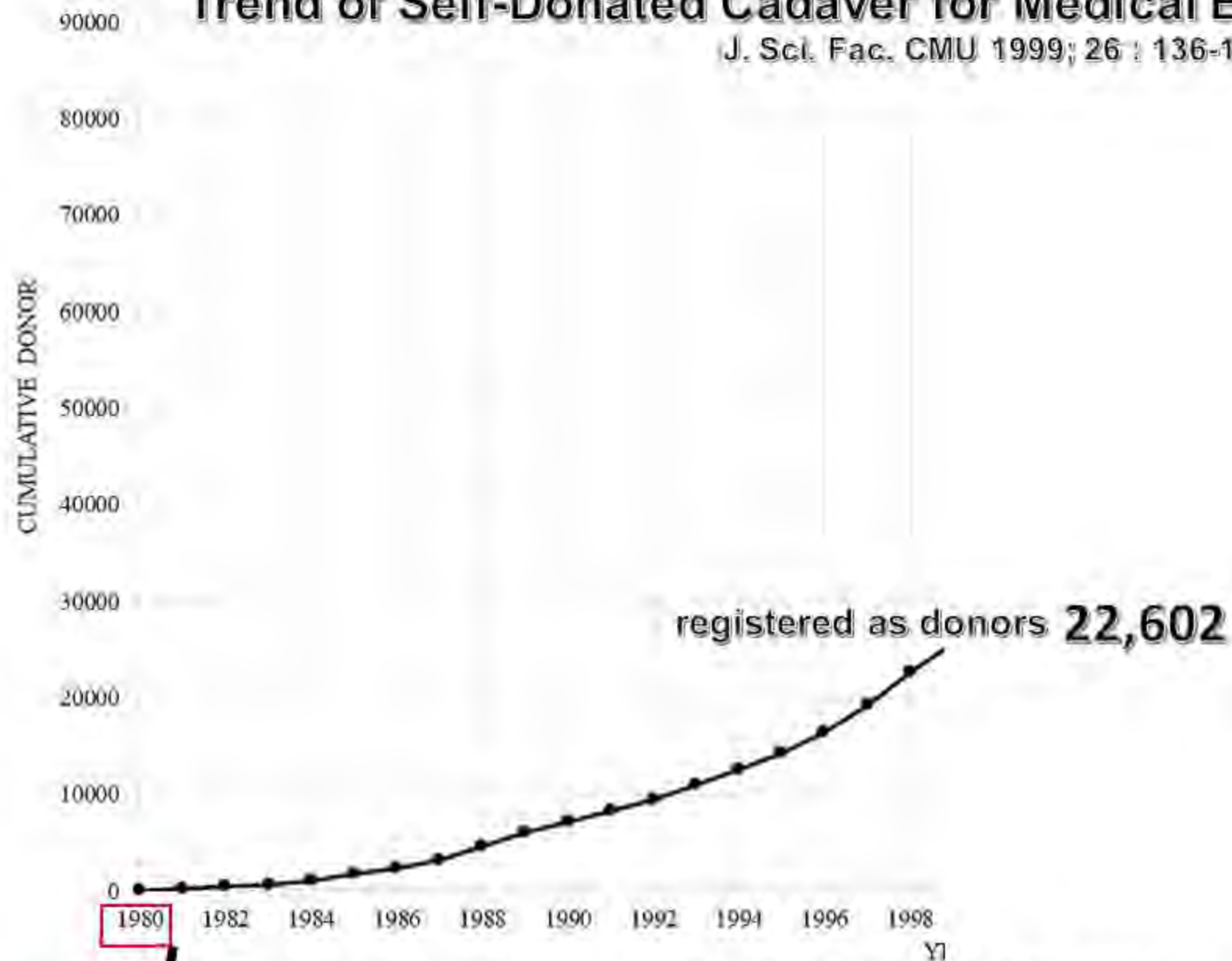
**“Ajarn Yai”**

Greatest last donation  
of a lifetime



# Trend of Self-Donated Cadaver for Medical Education In 1980-1998

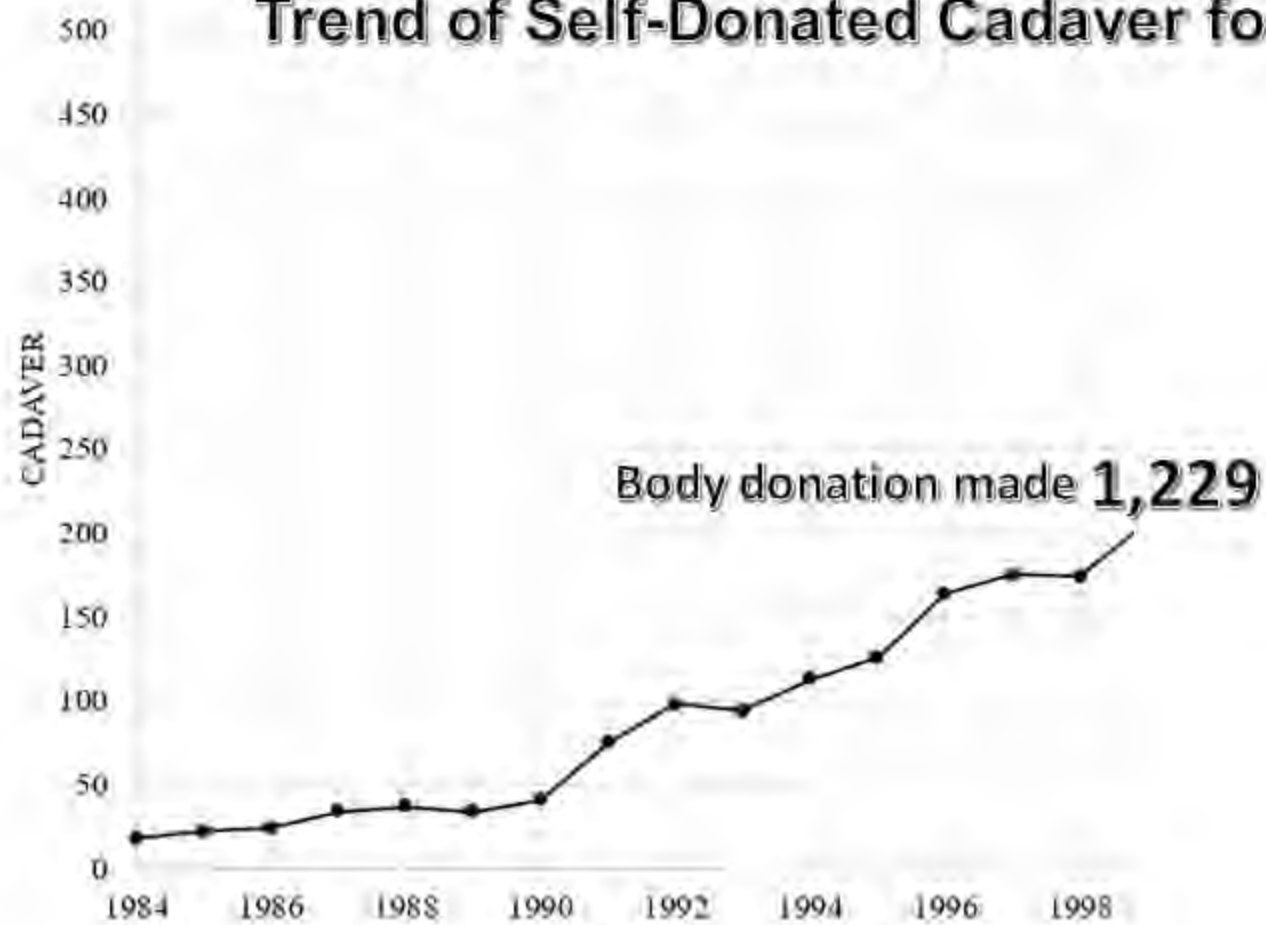
J. Sci. Fac. CMU 1999; 26 : 136-143



♀ / ♂ 1 / 1 Age range : 2-96, 80% 21-60, All background



## Trend of Self-Donated Cadaver for Medical Education In 1980-1998



♀/♂ 1/3, 73% >60, All background





Cadaver Prosection  
**15**



Ratio 1 : 4---200  
**50**

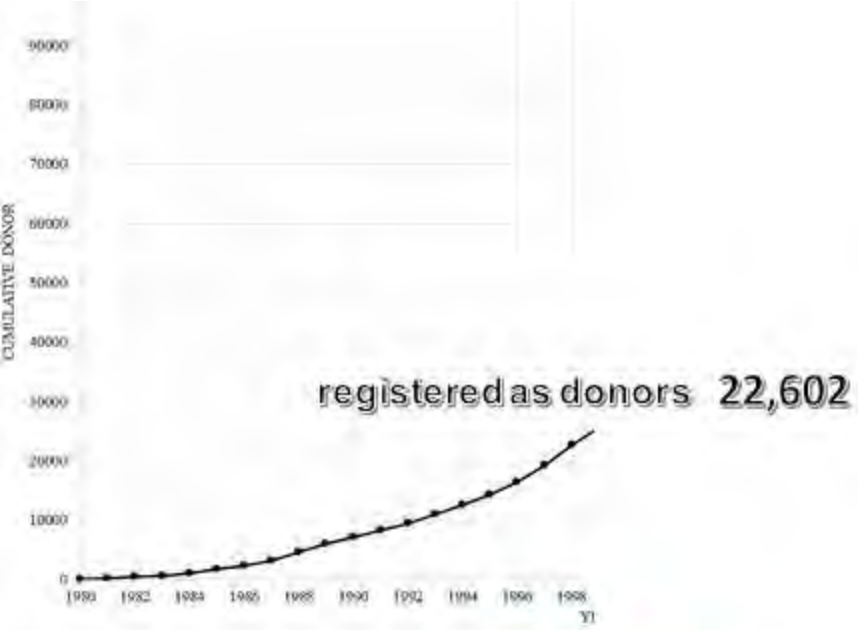


Ratio 1 : 6---60  
**10**



Ratio 1 : 6---80  
**15**







# Normal Cremation Ceremony After Dissection





**Normal process**



**Royal Cremation Ceremony**







พิธีทำบุญอุทิศส่วนกุศลแด่พระราชทานเพลิงศพของจเรย์ไทน์

ปีการศึกษ ๒๕๖๐

ภคตวิฆาณภิกขุวิภคตสังสตร์ มหาวชิรญาณวชิรสังสตร์ มหาวชิรญาณวชิรสังสตร์

Royal Cremation Ceremony





Royal Cremation Ceremony





Royal Cremation Ceremony





Royal Cremation Ceremony





Royal Cremation Ceremony





Royal Cremation Ceremony





Royal Cremation Ceremony





Royal Cremation Ceremony



## Royal Cremation Ceremony



พระราชทานเพลิงศพ  
อาจารย์ใหญ่



## Royal Cremation Ceremony





## Royal Cremation Ceremony





## Royal Cremation Ceremony





## Royal Cremation Ceremony







Royal Cremation Ceremony





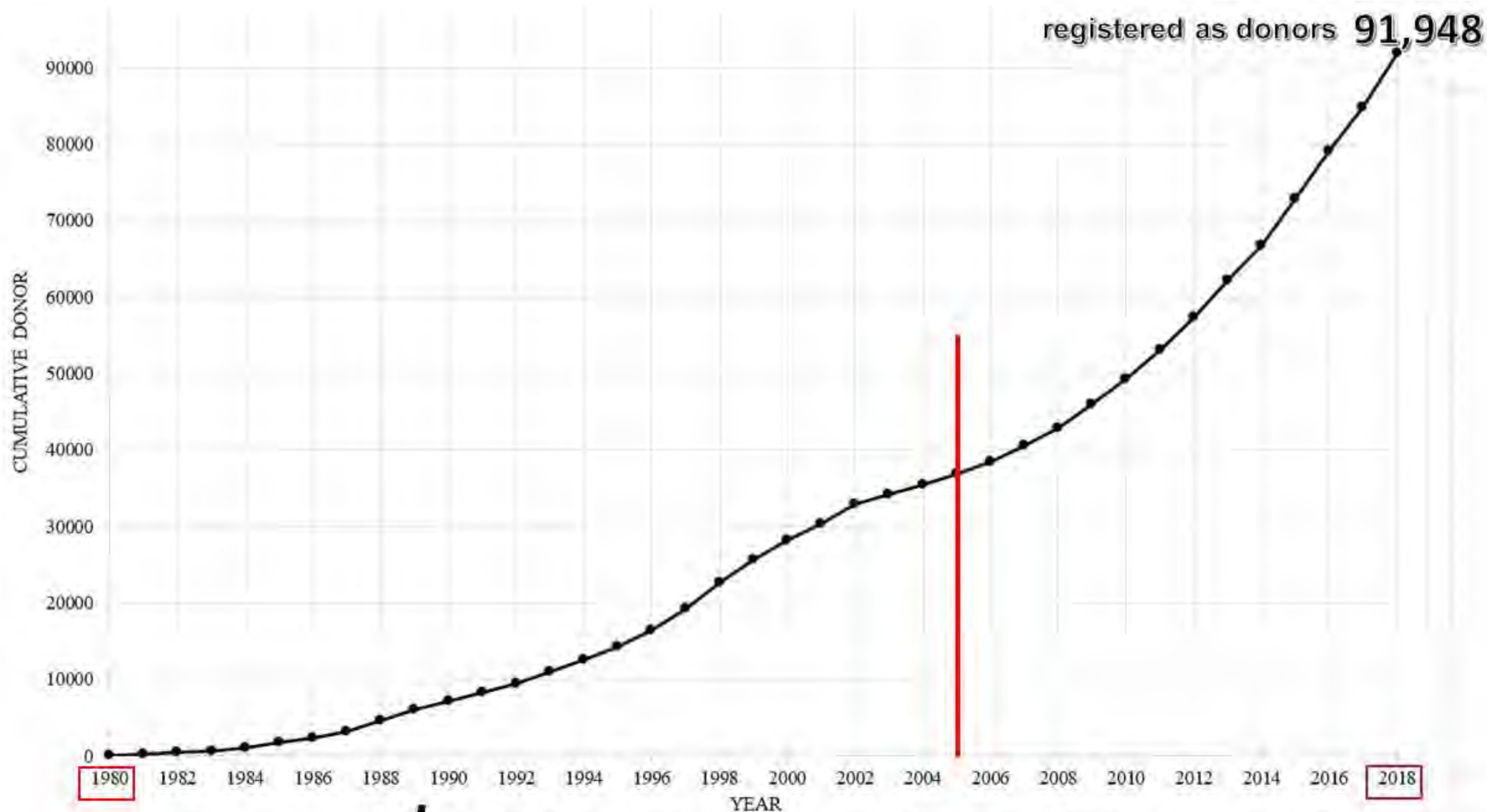
Royal Cremation Ceremony





Royal Cremation Ceremony

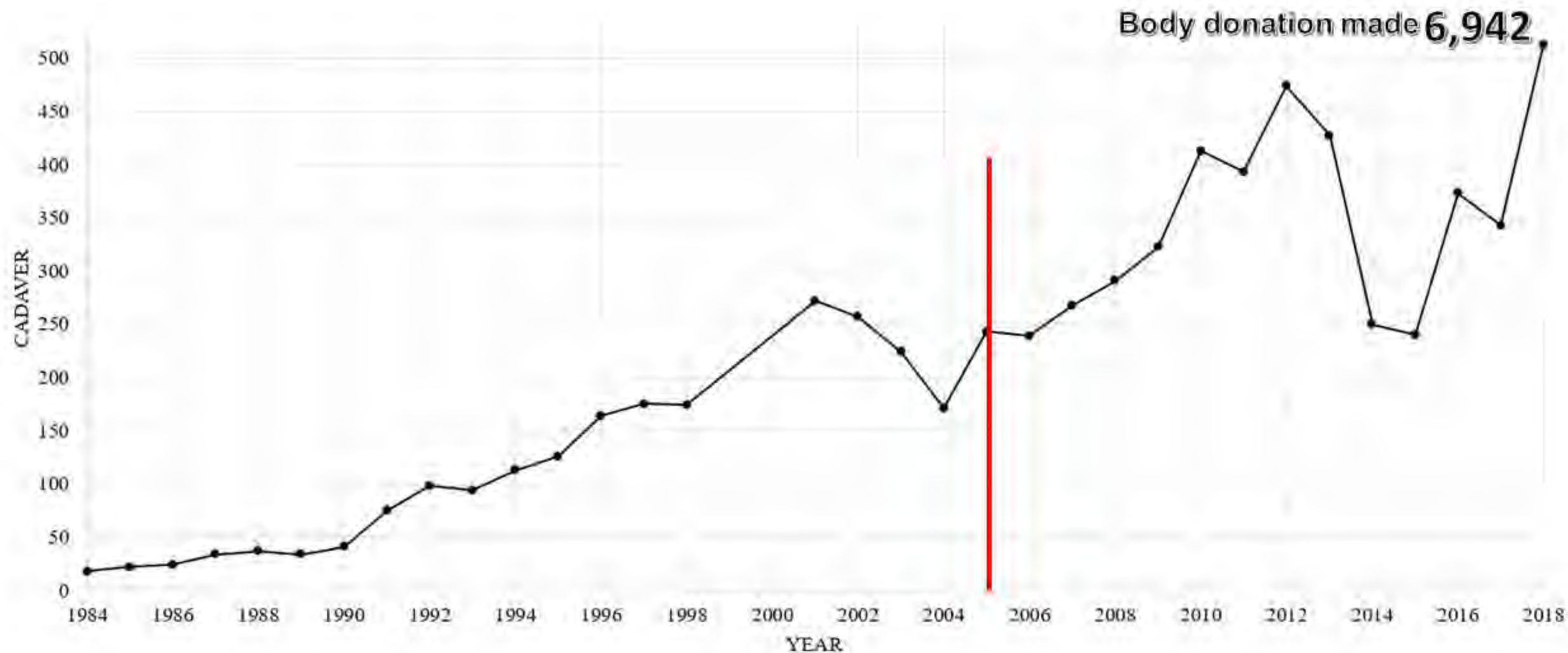




♀/♂

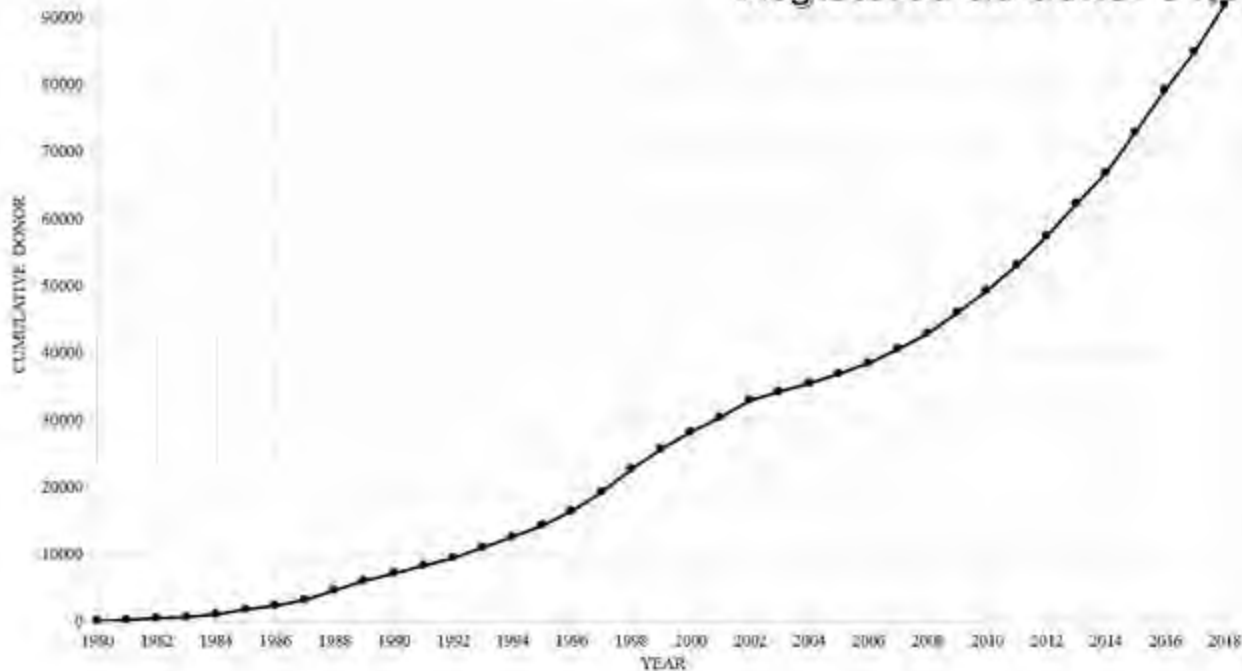
1.2 / 1

Age range : 15-100, All background

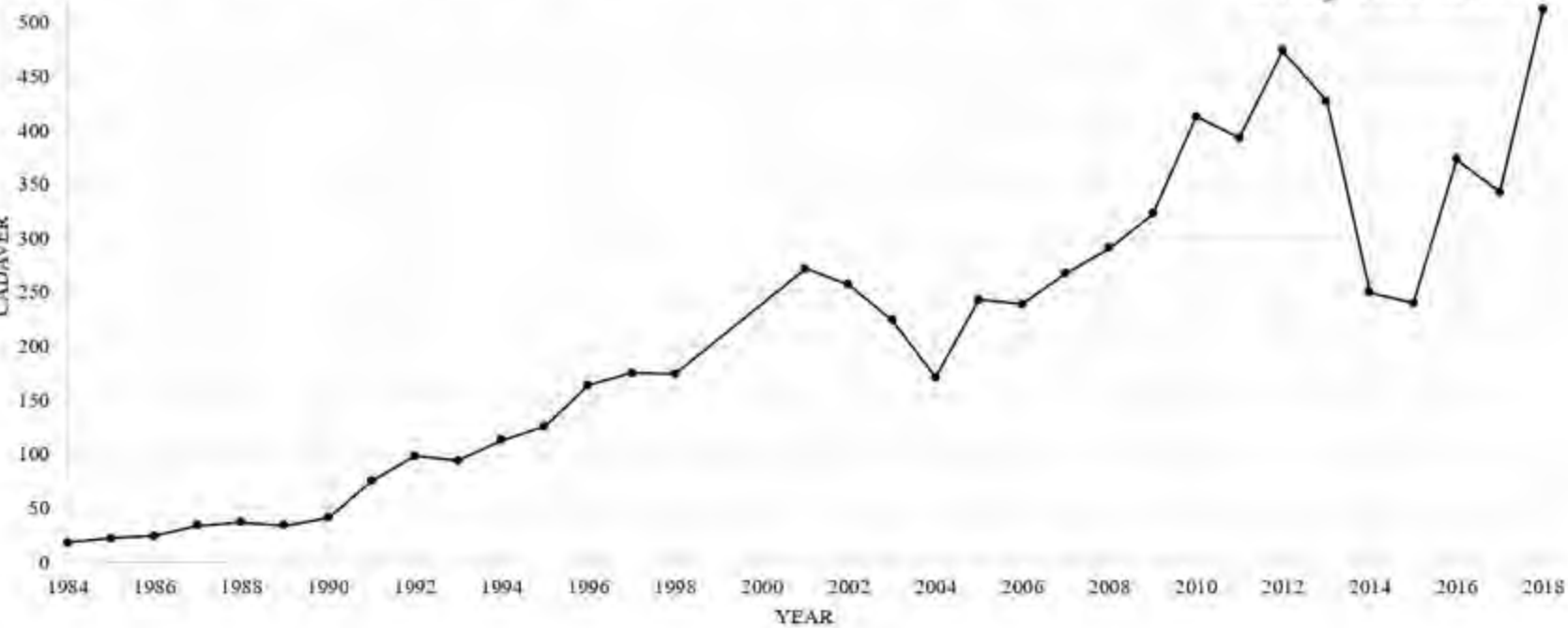


♀/♂ 2 / 1      80% >60, All background

Registered as donor 91,948



Body donation made 6,942





Cadaver Prosection  
20



Ratio 1 : 6---260  
45



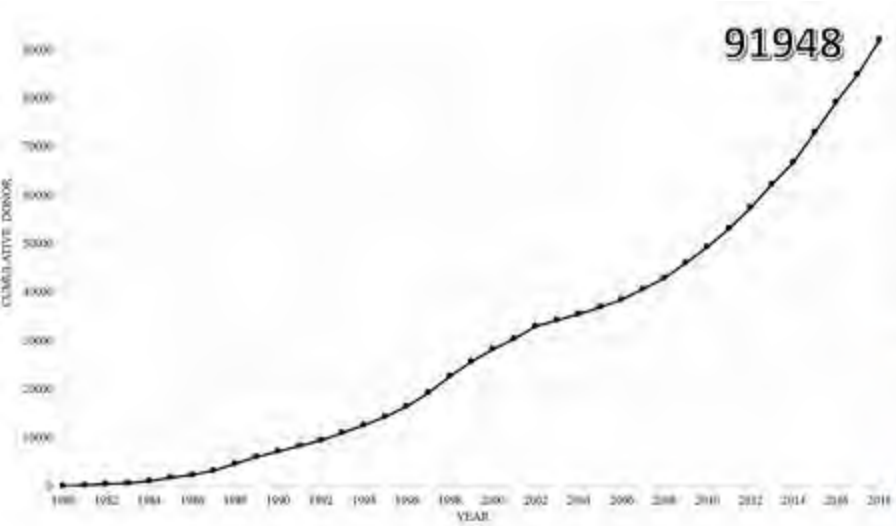
Ratio 1 : 6---80  
15



Ratio 1 : 6---120  
20

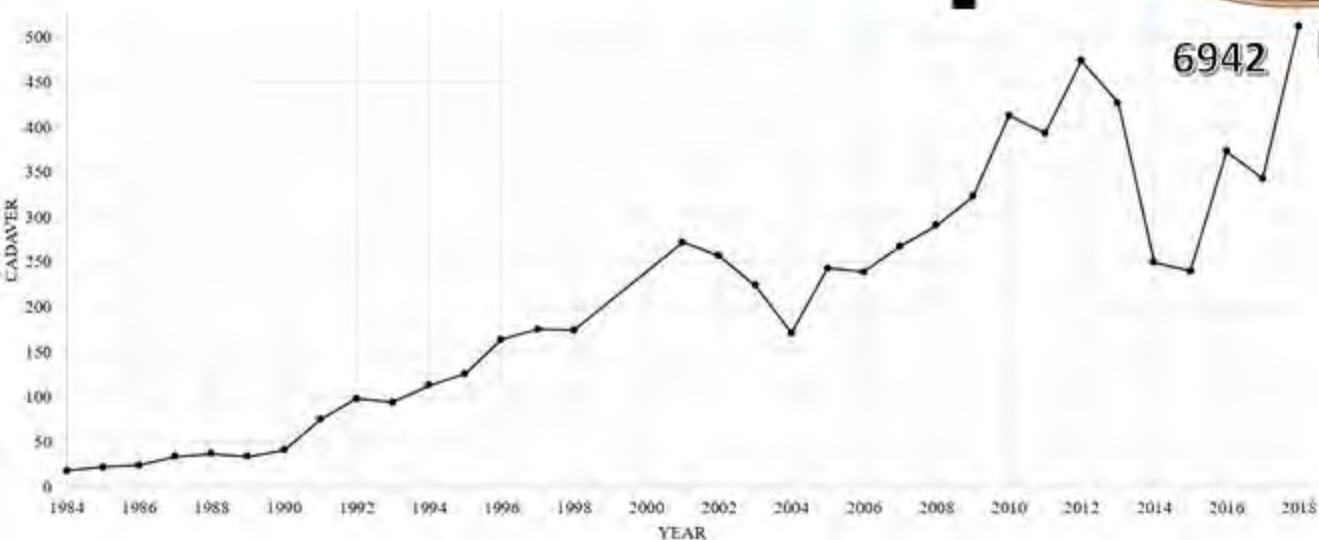
100





registered as donors

100



Body donation made



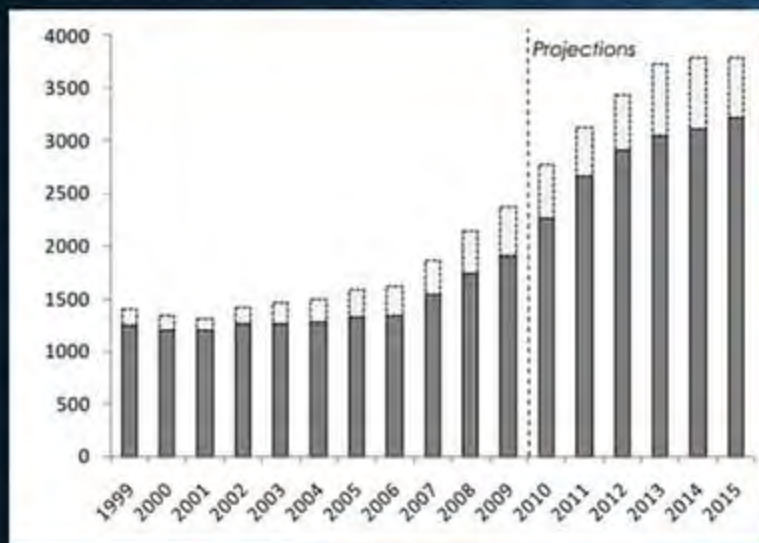


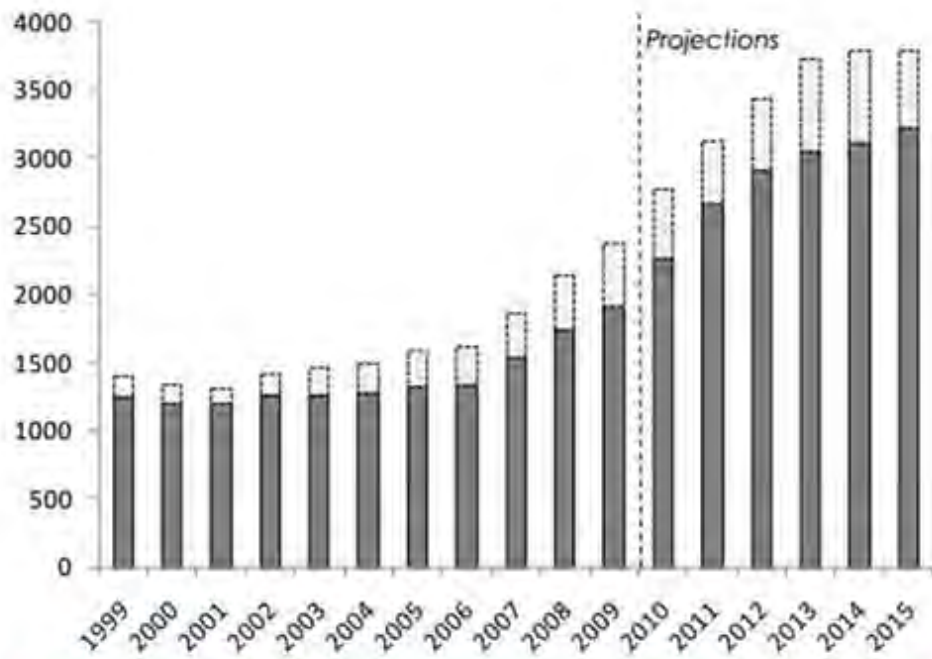
**A : Basic surgical training  
for undergraduates**

**B : Post-graduate  
surgical workshops**

**C : Cadaveric research**

# A : Basic surgical training for undergraduates





## A : Basic surgical training for undergraduates

Nowadays, the number of medical students increases each and every year



To fulfil the hands on procedures as required by the Medical Council of Thailand is almost impossible.





# CADAVERIC WORKSHOP FOR 5TH MEDICAL STUDENT



Photo by Narain







## **B : Post-graduate surgical workshops**





## C : Cadaveric Research





Basic surgical training  
for undergraduates  
**30**



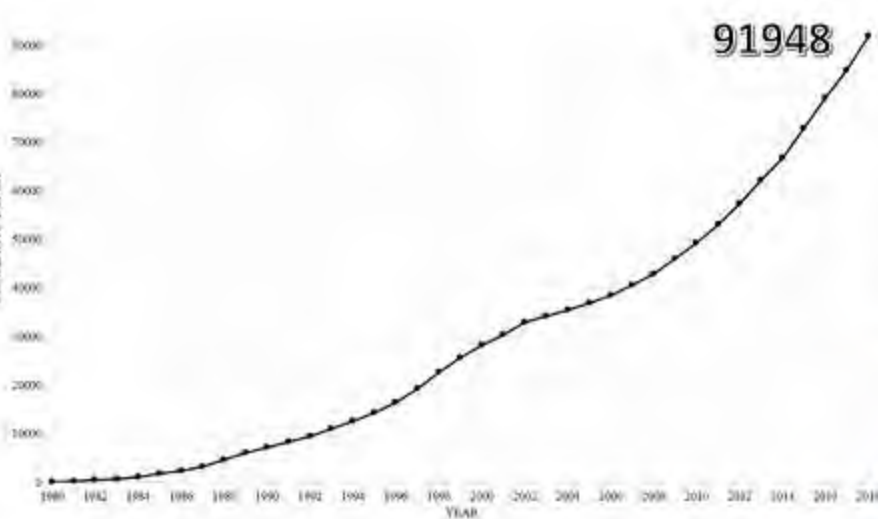
Post-graduate  
surgical workshops  
**150**



Cadaveric Research  
**70**

**250**

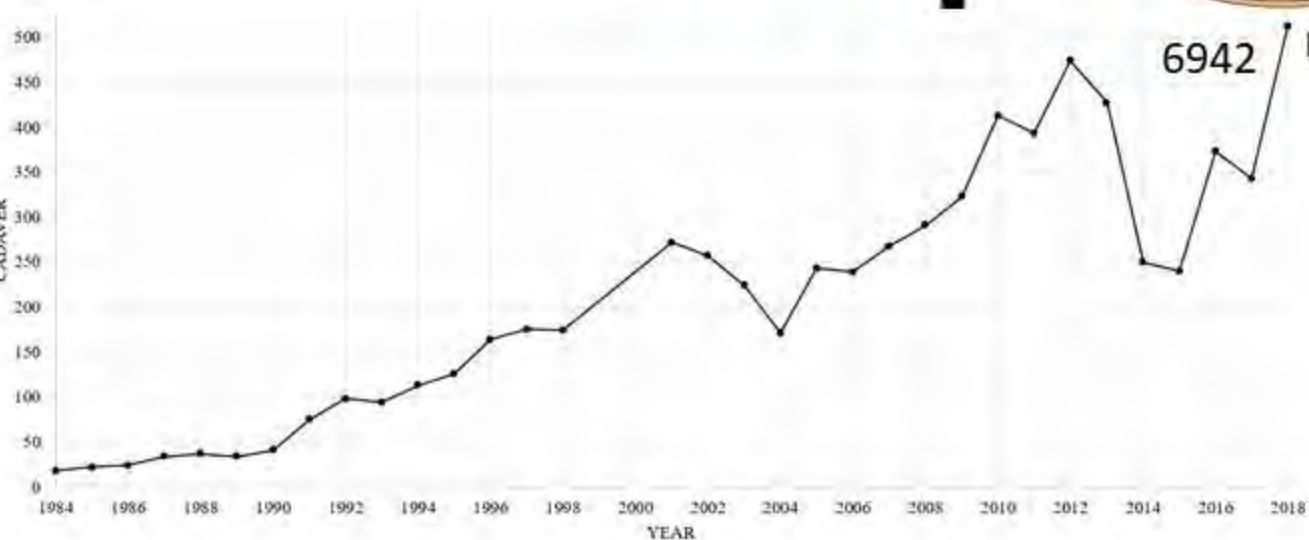




100



250



\*350



# Body Donation

Medical education



Embalm cadaver

**100/yr**

Cadaveric surgical training center



Fresh cadaver

**250/yr**



**200-250/yr**

**Total : 500-600/yr**





## Method of Organization











**Increasing the radius of operation of the transportation service with special car**



**Strengthening the honoring of the relatives of the donators by a faculty process**



The staff member will give an eulogy at the body donation ceremony





Special van transport the donation body to anatomy department  
Free body donation transportation within 300 km from the department





Step3

# Body Donation Preservation



# New Charnel Project



ภาควิชากายวิภาคศาสตร์  
คณะแพทยศาสตร์ มหาวิทยาลัยเชียงใหม่

ขอเชิญร่วมสมทบทุนบริจาค



ธารน้ำใจ  
เพื่อบ้านหลังใหม่  
แด่อาจารย์ใหญ่  
ผู้มีพระคุณ



ติดต่อสอบถามรายละเอียดเพิ่มเติม 061-2676111 หรือบริจาคผ่านมือถือ  
โดยกด \*948\*1001\*100# แล้วโทรออก บริจาคครั้งละ 100 บาท (ทุกเครีย่อย)



QR code  
บน clip  
โครงการ

ร่วมสมทบทุน “มูลนิธิโรงพยาบาลสวนดอก”

ธนาคารไทยพาณิชย์ สาขาคณะแพทยศาสตร์ มหาวิทยาลัยเชียงใหม่ เลขบัญชี 566-4-048440

และส่งหลักฐานการโอนเงินทาง LINE ID 061-2670111 หลักฐานการบริจาค สามารถใช้ลดหย่อนภาษีได้



QR code  
สำหรับ  
มรบริจาค



Step3

# Body Donation Preservation



Embalming Room



Skeleton Room



Step4

## Merit Ceremony Before Dissection

### Merit Ceremony Before Dissection





Step5

## Royal Cremation Ceremony After Dissection







Renovate body donation room  
One stop service



Increase radius transportation  
Pre-speech before transport to Fac.



New channel project

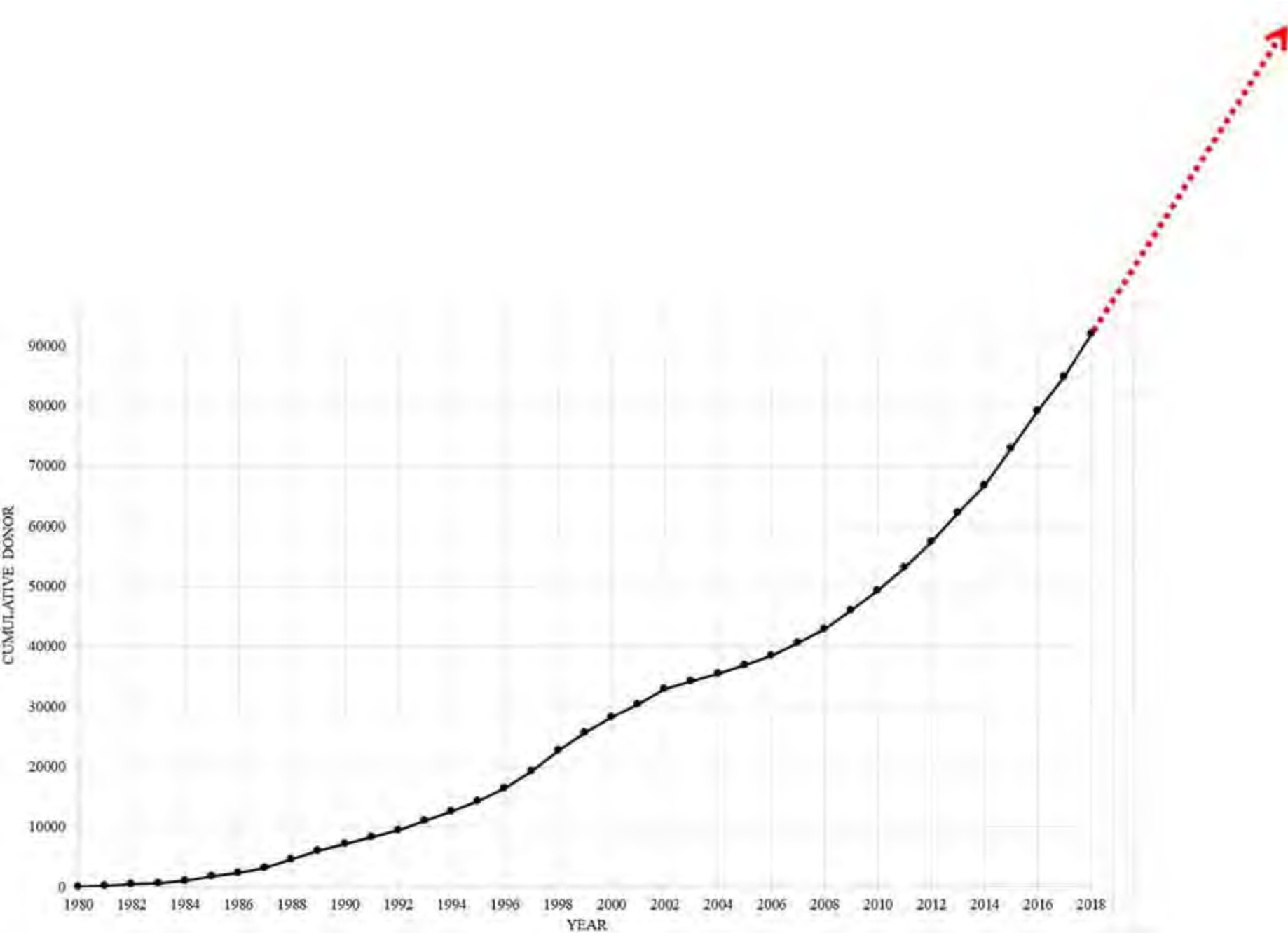


Pre-ceremony before study  
Respectation during dissection



Royal cremation ceremony











Symposium:

**Challenges of implementing body donation programs:  
a multi-cultural perspective**

**Samuel A. Asala, Nigeria:**

*Body donation to departments of anatomy  
in Nigeria: challenges and prospects*

## **Body donation to Departments of Anatomy in Nigeria: Challenges and Prospects**

Cadaver dissection has continued to be a major component of anatomy teaching to medical students in Nigeria. Unclaimed bodies that are released by a designated legal authority are the only source of cadavers. In an effort to assess the level of awareness about body donation, this author administered a questionnaire to willing participants from the university community. None of the participants were medical doctors. All respondents were hearing about body donation for the first time. The idea that a human being could sign over his body for teaching purposes was unthinkable. In Nigeria, challenges to establishing body donation programs are centred on cultural and religious beliefs and practices. Nigerians value the dead as much as they do the living and a deceased person is believed to be on a journey to a new life where the intact body is needed to function. Donating and mutilating the body through dissection may be interpreted as criminal and a termination of the next level of life for the deceased person. For this reason, the deceased is buried close to his residence or that of his ancestors. This ensures that the memory of that person is kept alive. If a person dies and reference cannot be made to where the body is lying, the relatives have mental and emotional difficulty accepting that the individual is dead resulting in a prolonged period of mourning. A person who donates their own body to teaching and research after death, or that of a relative, may be seen as showing disrespect for family relationships. The prospects for implementing body donation programs for anatomy instruction in Nigeria is bleak and medical teachers think that the current dependence on unclaimed bodies seems to be the only way to go.





Symposium:

**Challenges of implementing body donation programs:  
a multi-cultural perspective**

**Guo-Fang Tseng, Taiwan:**

*Body donation campaigning in a  
conventionally reluctant society in Asia*

**Guo-Fang Tseng**

## **Body donation campaigning in conventionally reluctant Asian societies**

In many Asian countries, Confucianism and filial piety discourage body donation. The body is regarded as a gift from the parents that should not be damaged. Moreover, the young are expected to respect the integrity of elder people's bodies after death. Certain groups therefore practice earth burial. The fear of the surviving families that they may have to take the blame for anything ill-fated happening after donation and the difficulties that the survivors are facing on how to get back to normal life also discourage body donation. These social factors are difficult to overcome by reasoning. In addition, the lack of transparency in handling the bodies and the deprivation of surviving families' participation in ceremonies after donation further alienate the public from donating bodies.

In the last two decades, there has been a trend for medical schools in Asia to set up interaction platforms to gain public trust for body donation. Surviving families were arranged to interact with students and jointly participate in ceremonies before and at the end of dissection. These transparency measures turn the conventional one-way pleading for willed bodies to trust-building two-way communication. Participation and interaction encourage students to better appreciate the donation and comfort surviving families. Trust helps the general public to understand the significance of body donation and to better support the surviving families – for whether the survivors agree plays a decisive role in fulfilling the will of the donor in this part of the world.





Symposium:

**Challenges of implementing body donation programs:  
a multi-cultural perspective**

**Brandi Schmitt, USA:**

*Challenges that persist in a well-  
established body donation program*

**Brandi Schmitt**

### **Challenges that persist in a well-established body donation program**

In the United States, the first law to govern the legal donation of bodies for anatomical use, the Uniform Anatomical Gift Act (UAGA) was enacted in 1968. The University of California operates an Anatomical Donation Program (ADP) that has been accepting donations in support of its education, research and public service mission since the early 1950's, prior to any formal law, when the first location was established at UCLA. Today, the UC ADP has five locations that register and accept donors from the state of California, and from neighboring states in certain circumstances. The program supports the UC system which has 5 academic medical centers and 18 health professions schools including 6 schools of medicine. Other educational institutions and industry companies may also become beneficiaries of anatomical donations to UC when they have been approved through a standardized review process. Throughout the years, the program has seen fluctuations in registration and donation rates that may correspond to population demographics, to reputational impacts and to outreach efforts or public awareness. Non-academically housed anatomical donation organizations have been established and become more prevalent in recent years and despite several revisions to the UAGA during the past 50 years, anatomical gifts for education and research remains a largely unregulated industry in the United States. There are persistent challenges to addressing the lack of regulation and ongoing efforts to maintaining or increasing registration rates to meet the needs of the university now and in the future. Engaging in public awareness and outreach activities that provide information about anatomical donation as a choice of disposition; that regard donations as honored and respected gifts; and, that focus on the mission of the university, can be effective strategies to address these challenges.



# Divider Slide

Challenges that persist in a  
well established body  
donation program

Brandi Schmitt, MS, CCEP, CTBS, LFD, LE



UNIVERSITY  
OF  
CALIFORNIA

# US laws

## Uniform Anatomical Gift Act (UAGA)

- Enacted in 1968; rev. 1987 & 2006
- Applicable to all types of anatomical gifts
  - Transplant & clinical therapy
  - Education & research



Governs who can and how to, make, receive,  
amend and revoke a gift.

<https://www.uniformlaws.org/>



# UC Anatomical Donation Program History

UCLA

UCSF

UC San Diego

UC Irvine

UC Davis



# UC Anatomical Donation Program Today

60,000 living registrants recorded in the UC Digital Donor Library

## 2018 stats

- 3398 registrations
- 1327 donations
- 539 approved requests
  - 2855 allocated specimens



“whole-body program administrators... might have developed classification understandings and assumptions about the ideal donor type... however, [there is] a need to go beyond that ideal type, and consider the variation that exists within and beyond that category of donors.”

Asad, et al, 2014

# Who donates....

- Varies amongst communities
- Need to assess the donor profile

At UC, registrants and donors are predominately female

- 60% of nearly 60,000 registrants are female
- Females have represented more than 50% of all donations since 2009
- Two variant profiles have been ID'd for female registrants
  - Younger, educated, married, US born
  - Older, separated, foreign born



# .... And, why?

“The overwhelming majority of all registrants cited a desire to aid medical science as the main reason for wishing to donate their body (78–82%)”

Cornwall, et al, 2012

Other reasons included:

- a dislike of funerals or concern about their cost
- gratitude to the medical profession
- because a relative had donated
- wanting their body to be put to good use

# Reputation

**Memorial honors those who donate bodies to medical science**

**Bodies Donated to Science Offer Invaluable Hands-on Lessons in Anatomy Lab**

**More Californians are becoming body donors for medical research**

## **The Remains of Dismay**

**Cadaver scandals undermine confidence in medical-school programs that ask donors to make a gift of themselves**



# Awareness

- Orientations, syllabi & coursework (e.g. professionalism)
- Training
  - In-service
  - Grand rounds
  - Brown bags
- Advance Directive



The image shows a document titled "Advance Healthcare Directive" from UCLA Health. The document is partially filled out with handwritten text. The visible sections include:

- Organ and Tissue Donation:** A section with checkboxes for donating organs and tissues. The first checkbox is marked with a checkmark.
- Body Donation:** A section with checkboxes for donating the body to medical education and research. The first checkbox is marked with a checkmark.
- Other:** A section with checkboxes for other options, including donating to a research program or other purposes.

The document is titled "Advance Healthcare Directive" and includes a section for "Organ and Tissue Donation". It also includes a section for "Body Donation". The document is partially filled out with handwritten text.

# Outreach

- Printed material, media
- Internet, websites
- Translations in native languages
- Speaking opportunities
  - Invited, donor population



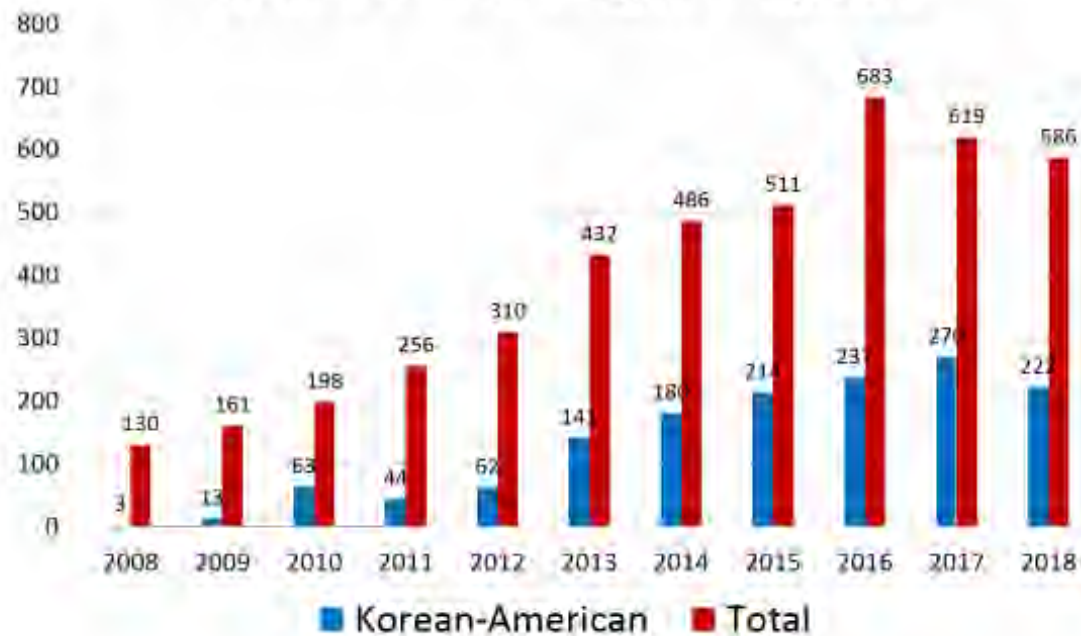
“Donors tend not to be actively recruited... information about body donation was most often acquired passively from a third party or from printed literature and/or the media.”

Cornwall, et al, 2012



# Specific outreach efforts can be impactful.

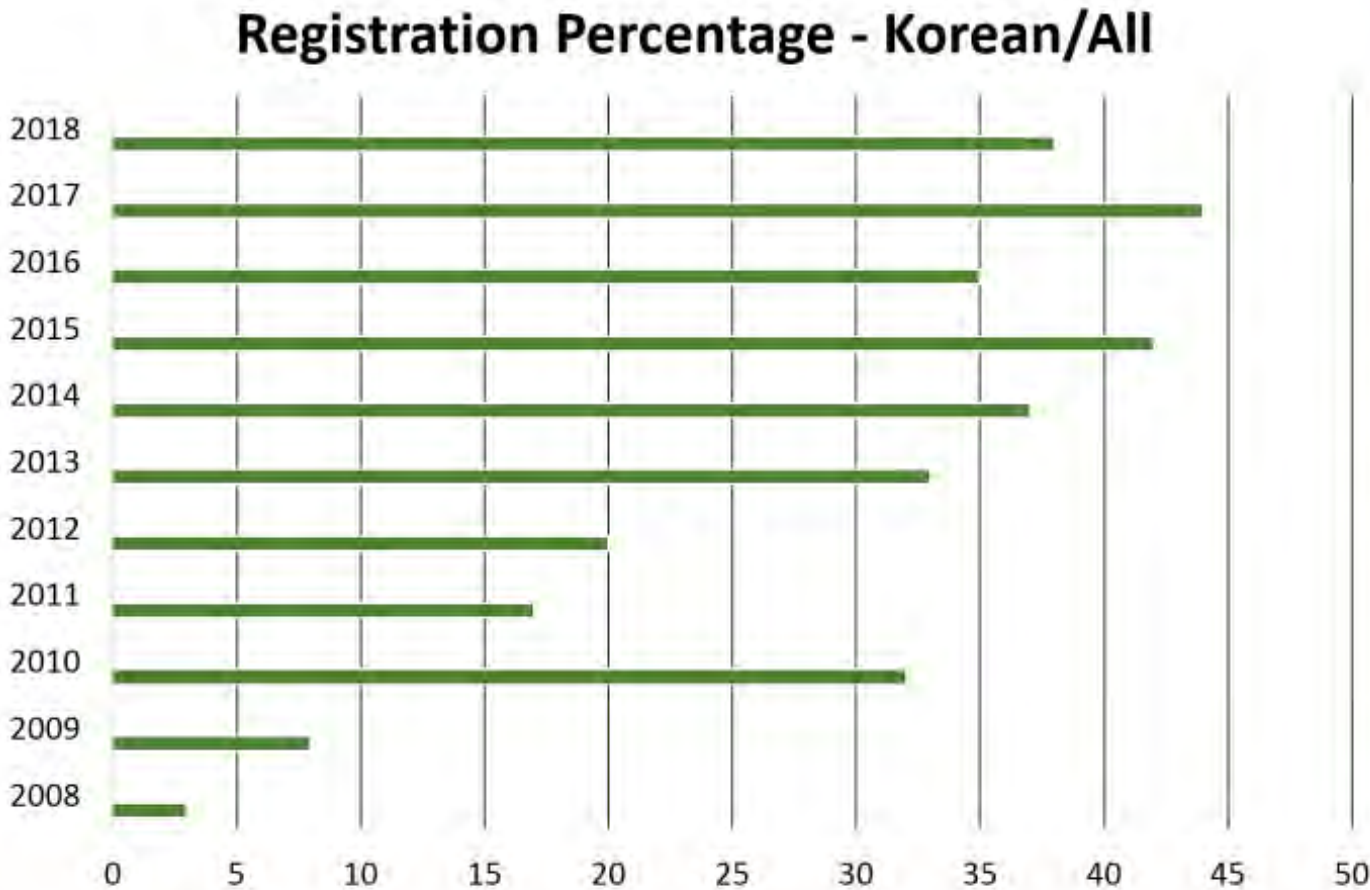
**Korean-American Registrants/Total**



**Korean-American Deceased Donor Cases/Total**



# Registrations increased by 36%



# Honoring the gift





# Registration rates

Number of Registrations per Month



Number of Registrations per Month



# Services of Gratitude



# Veterans Memorial Service



UC Davis





Thank you  
[brandi.schmitt@ucop.edu](mailto:brandi.schmitt@ucop.edu)



Symposium:

**Challenges of implementing body donation programs:  
a multi-cultural perspective**

**Andrea Oxley da Rocha, Brazil:**  
*Understanding the donor profile: a  
fundamental tool for body donor  
recruitment campaigns*

## **"Understanding the Donor Profile: A Fundamental Tool For Body Donor Recruitment in Brazil"**

Due to the growing need for bodies for teaching purposes, several Universities have created voluntary donation-based body acquisition programs. However, these programs may have a role that goes beyond just acquiring bodies. The body donation programs (BDP) might be a potential tool to apply in medical education. Undergraduate students can get involved in campaigns to spread amongst the population the living voluntary body donation program. Besides that, the increasing number of acquired bodies provided the possibility to create different linked activities as the Dissection Workshop, the Museum of Anatomy and the Ceremony to Honor the Body Donors. At the Dissection Workshop students are offered the opportunity to improve their technical and scientific abilities. Simultaneously they increase their awareness of issues related to the need and the importance of living donating bodies, in order to continue such activities. In additional way the students in the first year of the medical course can get involved with the Ceremony. This fact encourages reflection on ethical issues, in order to modify paradigms by raising awareness, and increasing responsibility and dedication to learning. The Museum of Anatomy has an important role in offering opportunity to students share their knowledge with the community in the form of education and art. The PDC might promote the involvement of the undergraduate students, both as scholarship holders or volunteers, working to improve the organization and implementation of the program as well as being participants in the activities and courses. These activities can provide a range of opportunities for students to reflect on ethical and humanistic aspects during their academic training.





# **Understanding The Donor Profile: A Fundamental Tool For Body Donor Recruitment**

Andréa Oxley da Rocha, MD, PhD

[oxley@ufcspa.edu.br](mailto:oxley@ufcspa.edu.br)

Federal University of Health Sciences of Porto Alegre (UFCSPA), Porto Alegre, Brazil.



South America

Brazil

Rio Grande do Sul

→ Rio Grande do Sul ....11.3 million



# Porto Alegre



→ Porto Alegre ..... 1.5 million inhabitants



# FEDERAL UNIVERSITY OF HEALTH SCIENCES OF PORTO ALEGRE (1961)



# ANATOMY LAB



- Around 5000 students  
(undergraduate/ **post-graduate/ distance learning**)
- 16 health courses
- 650 new students/year





# CHALLENGES ON BODY DONATION IN BRAZIL...



→ Brazil is a big country

→ Population is unaware about the possibility to donate one's body

→ Most universities use unclaimed bodies

→ 208.5 million inhabitants

→ 26 states



✓ 336 Medical Schools

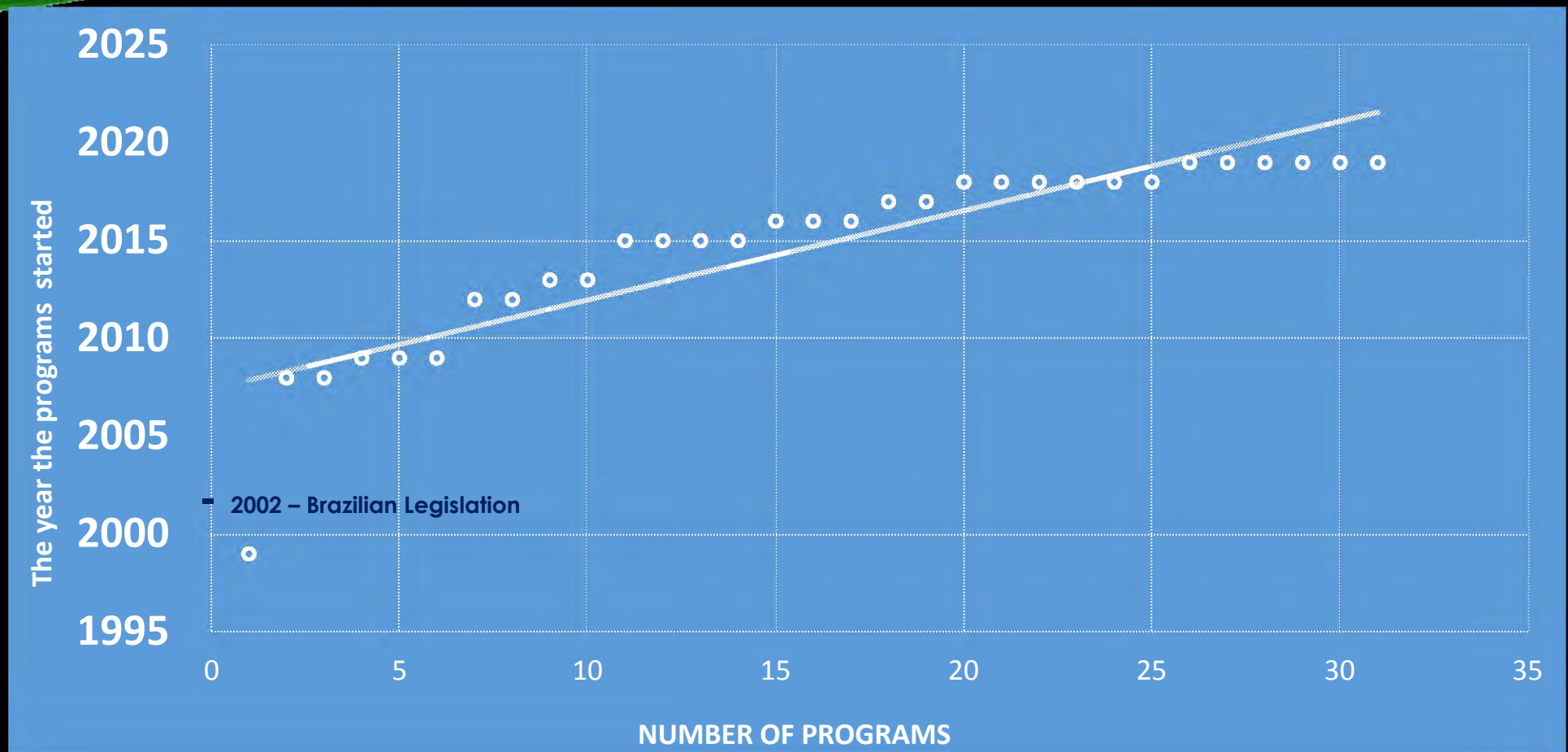


## → Body Donation Programs

- 25 at universities
- 02 being established
- 03 state programs (40)



# The growth of Body Donation Programs in Brazil (graph) (n=31)



\*\* 2019- 03 being established

## BODY DONATION PROGRAM



2002 → Brazilian legislation regulating  
voluntary body donation



2007 → UNCLAIMED BODIES

2008 → STARTED THE “BODY DONATION PROGRAM  
FOR TEACHING AND RESEARCH IN ANATOMY”





# What does the Body Donation Program consist of?

A key element is the campaign to inform the population about the possibility of donating one's body.

Have you ever thought about donating your body to science?


- Newspaper
- Radio
- TV

\* *Informative leaflet and Donor's card*

# Donor form



# Donor profile

  
**UFCSPA**  
UNIVERSIDADE FEDERAL DE CIÊNCIAS DA SAÚDE DE PORTO ALEGRE  
**DEPARTAMENTO DE CIÊNCIAS BÁSICAS DA SAÚDE**  
**DISCIPLINA DE ANATOMIA HUMANA**  
**FORMULÁRIO DE REGISTRO DO DOADOR**

Data: \_\_\_\_/\_\_\_\_/\_\_\_\_

---

**1. DADOS PESSOAIS**

Nome Completo: \_\_\_\_\_

Sexo: ( ) Masculino ( ) Feminino

Cor: ( ) Branca ( ) Parda ( ) Preta ( ) Amarela

Data de Nascimento: \_\_\_\_/\_\_\_\_/\_\_\_\_ Idade: \_\_\_\_

Nacionalidade: \_\_\_\_\_

RG: \_\_\_\_\_ CPF: \_\_\_\_\_

Endereço: \_\_\_\_\_

Complemento: \_\_\_\_\_ Bairro: \_\_\_\_\_

Cidade: \_\_\_\_\_ CEP: \_\_\_\_\_

Telefone Res.: (\_\_\_\_) \_\_\_\_\_ Telefone Cel.: (\_\_\_\_) \_\_\_\_\_

E-mail: \_\_\_\_\_

---

**2. DADOS DO PARENTE PRÓXIMO**

Nome Completo: \_\_\_\_\_

Grav de Parentesco: \_\_\_\_\_

Endereço: \_\_\_\_\_

Complemento: \_\_\_\_\_ Bairro: \_\_\_\_\_

Cidade: \_\_\_\_\_ CEP: \_\_\_\_\_

Telefone Res.: (\_\_\_\_) \_\_\_\_\_ Telefone Cel.: (\_\_\_\_) \_\_\_\_\_

E-mail: \_\_\_\_\_

---

3. Algum familiar seu é doador de corpo para este ou outro programa de doação?

( ) Não ( ) Sim ( ) Pai ( ) Mãe ( ) irmão Quantos? \_\_\_\_\_ ( ) outro \_\_\_\_\_

**QUESTIONÁRIO INFORMATIVO**

<p><b>1. Como ficou sabendo do programa de doação de corpos?</b></p> <p>( ) Folder ( ) Site ( ) Cartaz ( ) Imprensa</p> <p>( ) Médico ( ) Outro doador ( ) Outro meio. Qual? _____</p>	<p><b>2. Qual seu PESO?</b></p> <p>_____ Kg</p>
--	---

---

**3. Religião:**

( ) Nenhuma ( ) Católica ( ) Espirita ( ) Evangélica ( ) Judaica

( ) Budista ( ) Aléu ( ) Amnésico ( ) Outra. Qual? \_\_\_\_\_

---

**4. Grau de Instrução:** ( ) Nenhum ( ) Ensino Fundamental completo ( ) Ensino Fundamental incompleto

( ) Ensino Médio completo ( ) Ensino Médio incompleto ( ) Formação Técnica

( ) Ensino Superior completo ( ) Ensino Superior incompleto ( ) Pós-Graduação

---

**5. Situação Atual:**

( ) Ativo (trabalha) ( ) Desempregado ( ) Aposentado ( ) Em benefício

( ) Outro. Qual? \_\_\_\_\_

---

**6. Faixa de Renda Mensal:**

( ) Até 3 salários mínimos ( ) De 3 a 10 salários mínimos ( ) De 10 a 20 salário mínimo

( ) De 20 a 30 salários mínimo ( ) Mais de 30 salários mínimos ( ) Sem renda fixa (média de salários mínimos)

---

<p><b>7. Profissão em que atua ou atuou:</b> _____</p>	<p><b>8. Alcoolismo?</b></p> <p>( ) Não ( ) Sim Quantos anos? _____</p>
--	---

---

**9. Tem alguma doença?**

( ) Pressão Alta ( ) Diabetes ( ) Doença renal crônica (rins)

( ) Doença do Coração ( ) Hepatite Crônica ( ) Círcos

( ) Enfisema pulmonar ( ) Bronquite crônica ( ) Pancreatite crônica

( ) Lúpus ( ) Síndrome da Imunodeficiência Adquirida (AIDS)

( ) Tumor maligno em tratamento agora. Qual? \_\_\_\_\_

( ) Tumor maligno no passado Qual? \_\_\_\_\_ ( ) Outra(s). Qual(is)? \_\_\_\_\_

---

<p><b>10. Já realizou alguma cirurgia?</b></p> <p>( ) Não ( ) Sim</p> <p>Qual(is)? _____</p>	<p><b>11. Já realizou algum transplante?</b></p> <p>( ) Não ( ) Sim</p> <p>De que? _____</p>	<p><b>12. Fumante?</b></p> <p>( ) Não ( ) Sim</p> <p>Quantos anos? _____</p>
--	--	--

---

<p><b>13. Faz doação para entidades assistenciais?</b></p> <p>( ) Não ( ) Sim</p>	<p><b>14. É doador de órgãos?</b></p> <p>( ) Não ( ) Sim</p>	<p><b>15. É doador de sangue?</b></p> <p>( ) Não ( ) Sim</p>
---	--	--

---

**16. Qual o principal motivo da doação?**

( ) Vontade de ajudar a sociedade e a ciência ( ) Não gostar da ideia de ser enterrado ou cremado

( ) Não causar custo para a família ( ) Não possuir familiares

( ) Gratidão ao atendimento recebido por médicos e outros profissionais da área

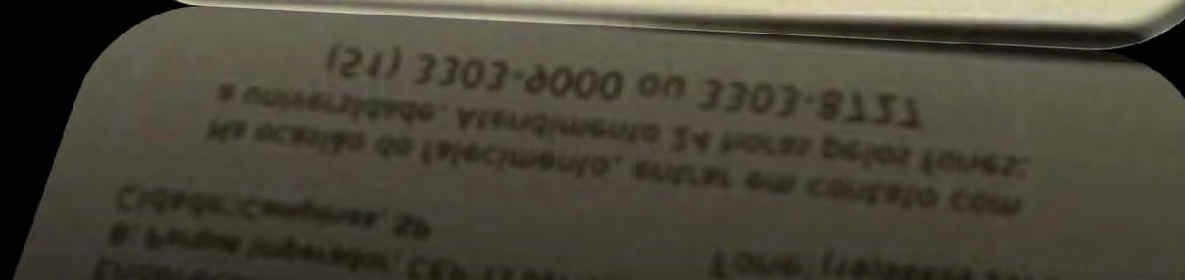
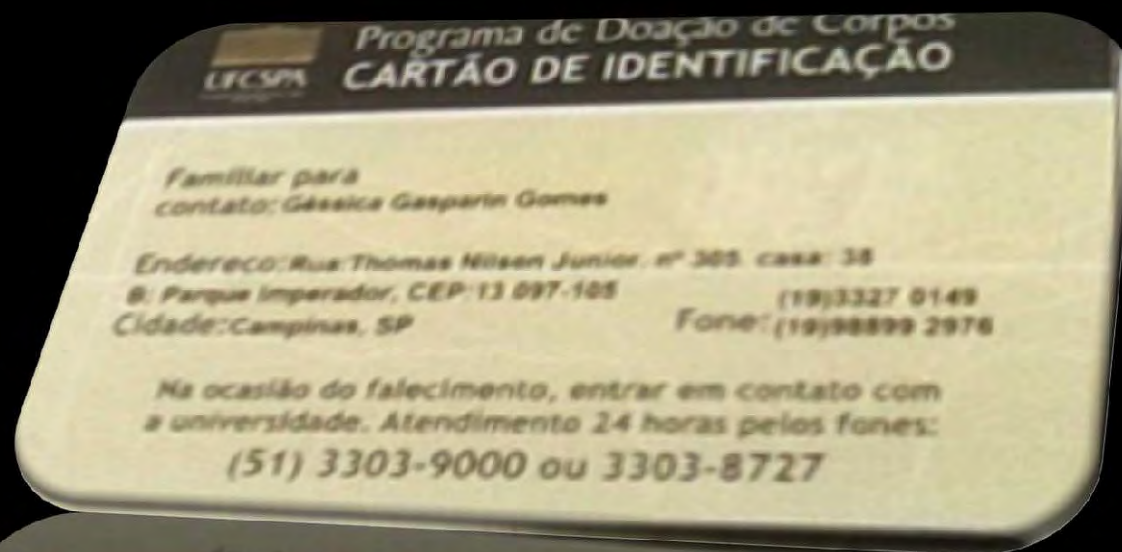
( ) Outro. Qual? \_\_\_\_\_

**\*\* Data stored using in-house software**

- Demographic data
- Civil status
- Schooling
- Social-economic status
- Religion
- Health status
- Active neoplastic malignancy
- Reasons to donate
- Awareness of the Body Donation Program
- Occupational History

# WHO DONATES THEIR BODY?

## THE DONOR PROFILE





# DONOR PROFILE

RESEARCH REPORT

ASE

## Using Body Donor Demographics to Assist the Implementation of Donation Programs in Brazil

**Andrea Oxley da Rocha,<sup>1\*</sup> Deivis de Campos,<sup>1</sup> Marco Aurélio Farina,<sup>1</sup> Gabriel Sartori Pacini,<sup>1</sup> Marina Cornelli Giroto,<sup>1</sup> Arlete Hilbig<sup>2</sup>**

<sup>1</sup>*Department of Basic Health Sciences, Federal University of Health Sciences of Porto Alegre, Porto Alegre, Brazil*

<sup>2</sup>*Department of Medical Clinic, Federal University of Health Sciences of Porto Alegre, Porto Alegre, Brazil*

The use of human material in anatomy education depends upon the generosity of body donors. However, little is known regarding the demographics of body donors in Brazil, where voluntary body donation is a relatively rare phenomenon. Hence, the aim of the present study was to elucidate the demographic profile of applicants to the Body Donation Program (BDP) at the Federal University of Health Sciences of Porto Alegre in

*Anatomical sciences education 10(5): 475-486. (2017)*

**400 REGISTRANTS (2017) ----- 700 (2019)**

# Donor Profile

(n=414)



These data DO NOT reflect the characteristics of the regional population

**SPECIFIC DEMOGRAPHIC PROFILE**

Variable	Category	BDP Data (%)	Data from 2010 Census of RS (%)	P-value
Color/ethnicity (n = 260)	White	51.9		0.007
	Black	3.1	5.5	
	Yellow	0.4	0.3	
	Brown	4.6	70.8	
Sex (n = 414)	Female	89.3	51.3	< 0.001
	Male	30.7	48.5	
Civil status (n = 408)	Married	29.3	36.1	< 0.001
	Divorced	22.3	6.9	
	Single	33.5	51.4	
	Widowed	14.9	8.1	
Age range* (n = 380)	0 - 39	8.8	36.4	< 0.001
	40 - 49	8.8	22.8	
	50 - 59	21.3	19.0	
	60 - 69	35.8	12.0	
	70 - 79	18.4	6.6	
	80 - 97	9.1	2.9	
Religion (n = 326)	Agnostic	1.8	0.08	< 0.001
	Atheist	3.2	0.4	
	Catholic	52.6	68.4	
	Spiritualist	30.7	3.2	
	Evangelical	8.8	18.2	
	Other	1.3	3.6	
	No religion	7.1	5.8	
Schooling (n = 344)	No schooling/primary education incomplete	2.0	48.1	< 0.001
	Primary education complete	16.9	18.9	
	Secondary/technical education	39.2	23.7	
	Bachelor/graduate/Post-graduate degree	41.9	8.6	
Monthly income (in minimum wages*) (n = 333)	No income	13.8	65.2	< 0.001
	Up to 3	47.5	59.3	
	from 3 to 10	30.6	12.78	
	10 to 20	5.0	1.82	
	20 to 30	1.5	0.43	
	More than 30	0.9	0.37	

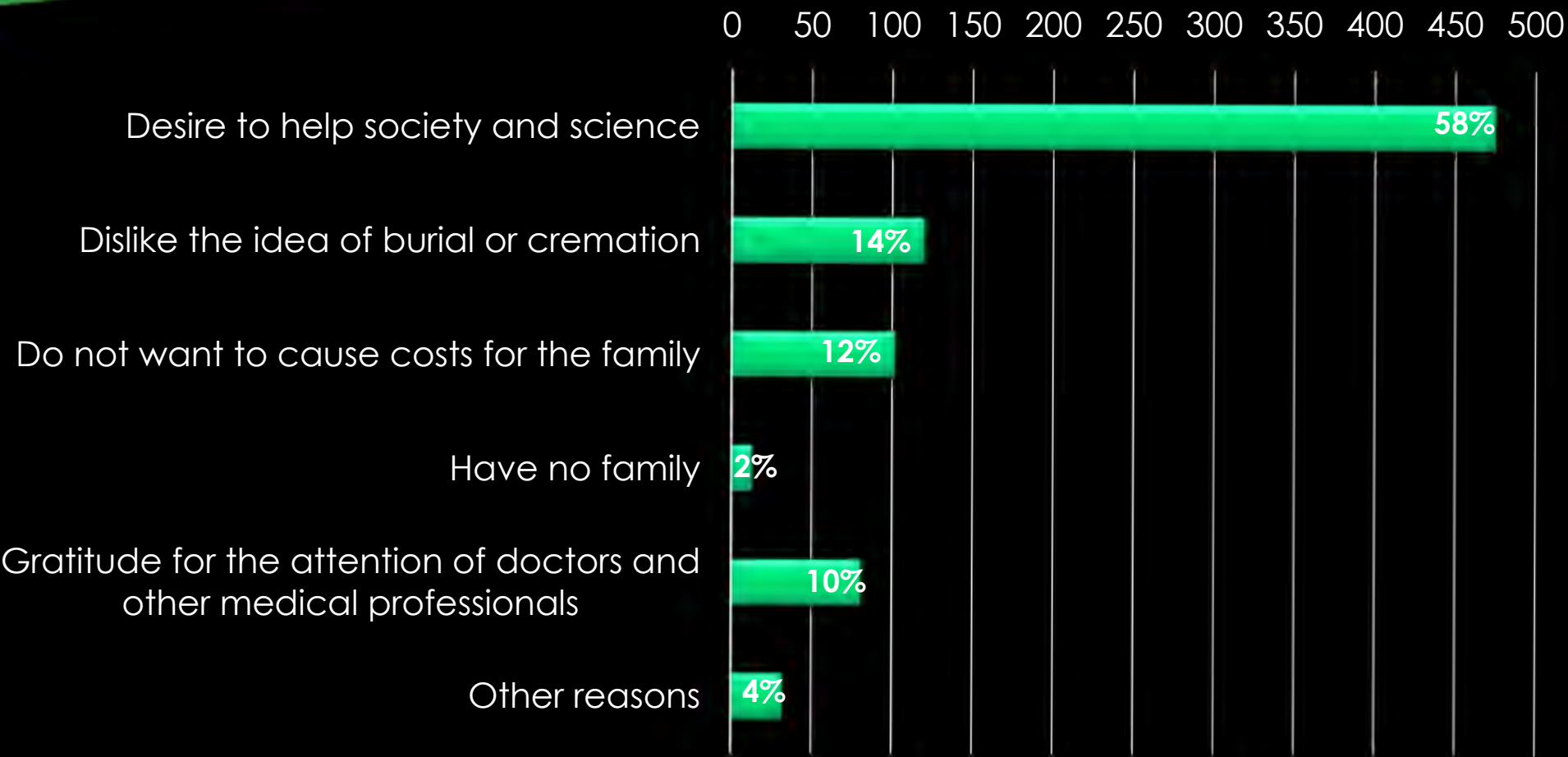
# DONOR PROFILE

- ✓ FEMALE
- ✓ OVER 60
- ✓ UNMARRIED (never married/ divorced/widowed)
- ✓ HOLD A RELIGIOUS BELIEF
- ✓ ABOVE AVERAGE EDUCATION
- ✓ ABOVE AVERAGE INCOME
- ✓ NO TERMINAL DISEASE (8%)





# WHY PEOPLE DONATE...

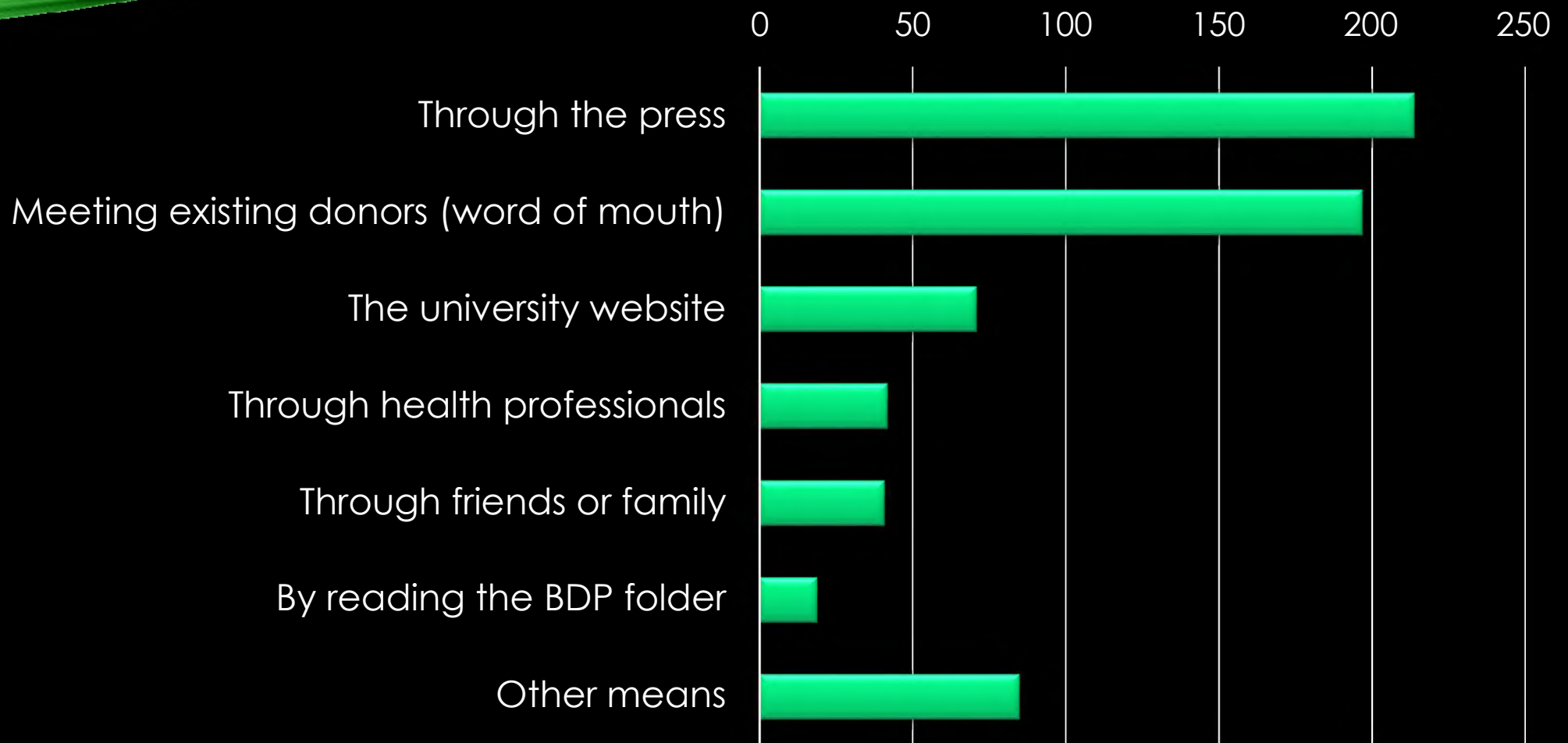


# ALTRUISTIC GESTURE

“The donor is someone who believes that by donating their body they are helping prepare better qualified professionals.”

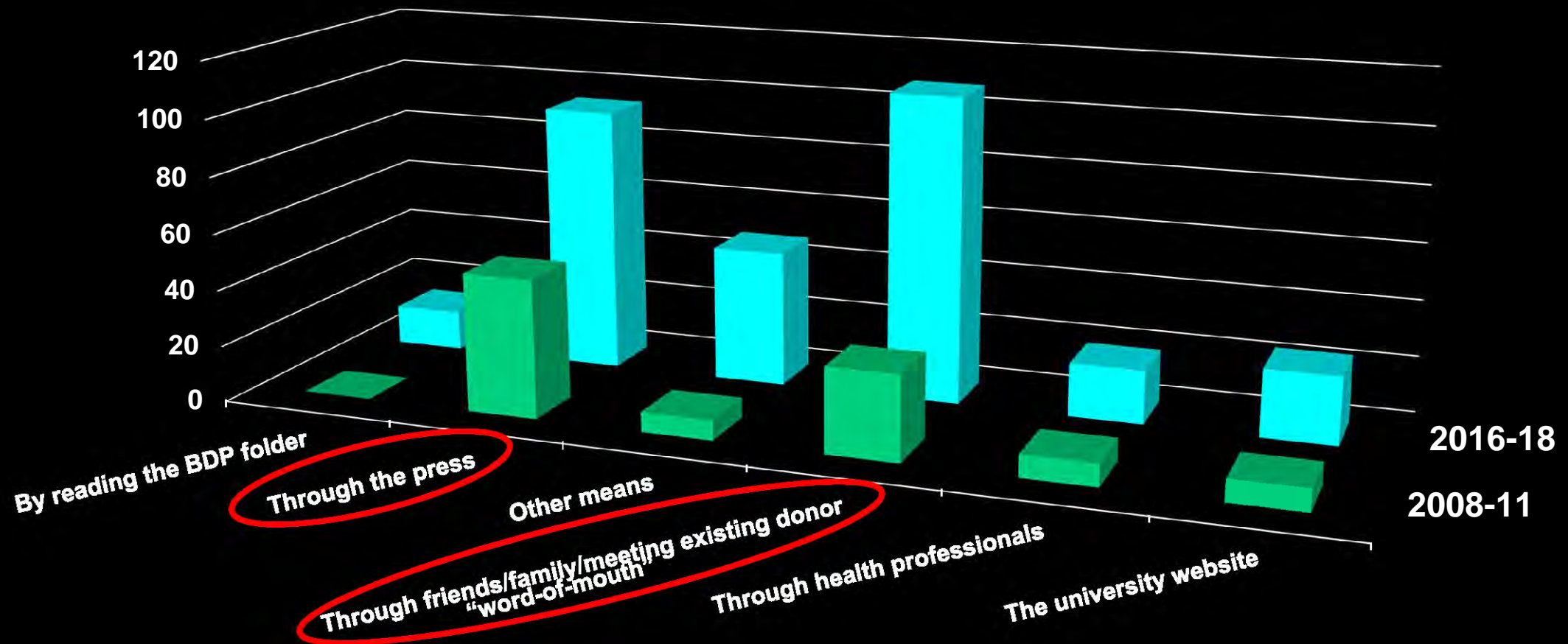
**Without receiving anything in exchange**

# HOW DO POTENTIAL DONORS FIND OUT ABOUT THE BODY DONATION PROGRAM....



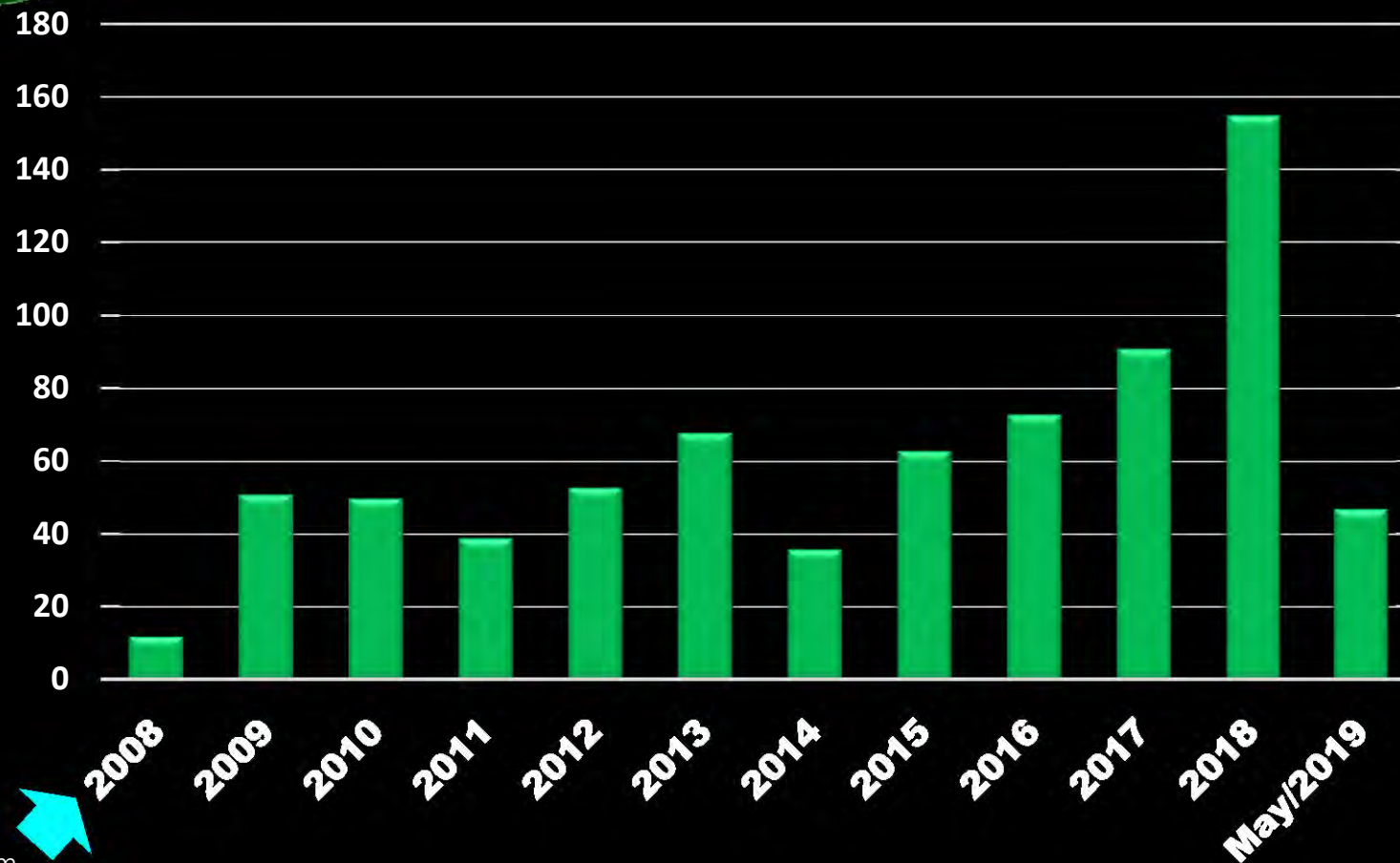


# HOW DO POTENTIAL DONORS FIND OUT ABOUT THE BODY DONATION PROGRAM....



*\*\*The differences are statistically significant*

# NUMBER OF REGISTERED DONORS PER YEAR (726)



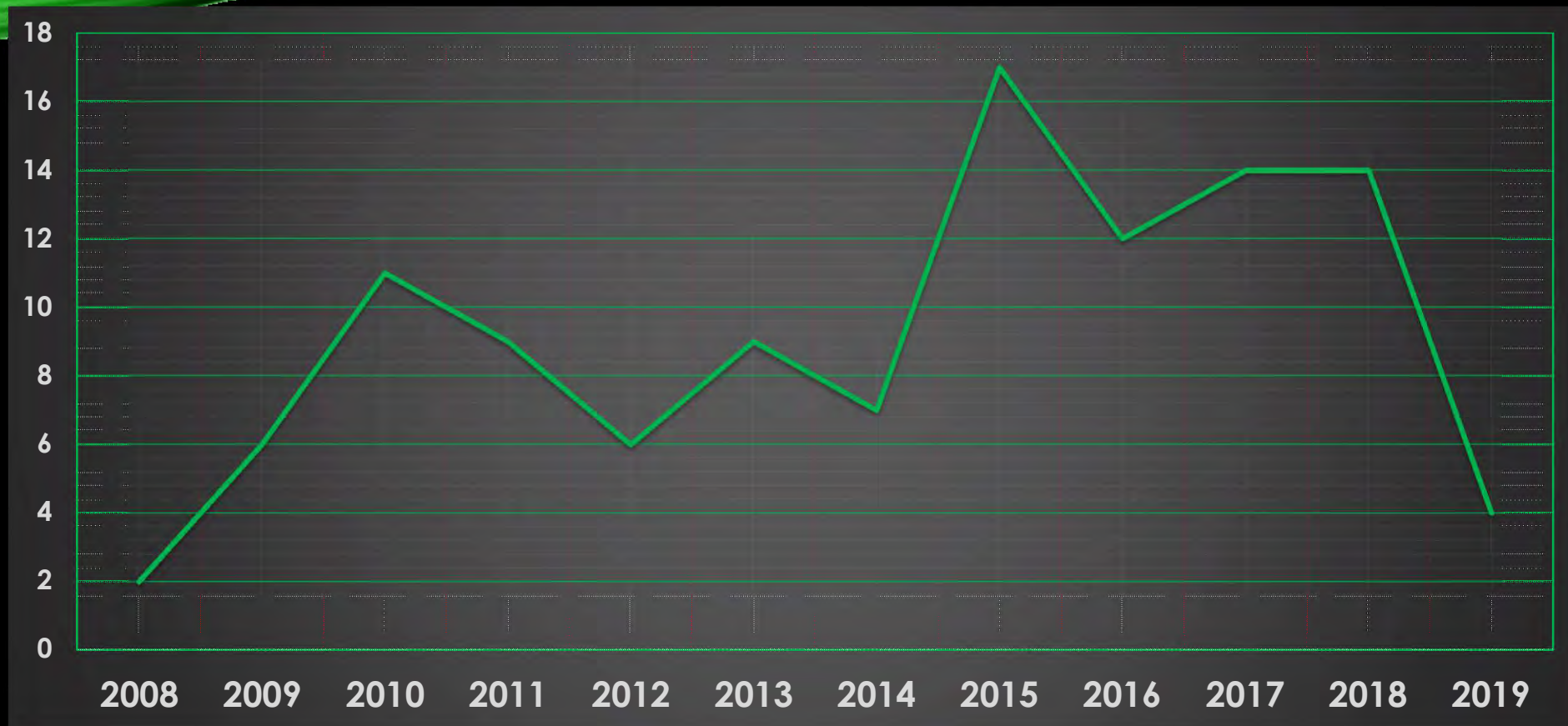
Start of program

\*\* average: 61.5 new registrations/year

The number of registrations is directly related to the media campaigns

# NUMBER OF BODIES DONATED PER YEAR

## N=113



- ✓ The number of bodies received increases with the expansion of the donor register.
- ✓ The number of bodies received is enough for all teaching activities.



# WHO IS THE TARGET POPULATION?

→ HEALTH CARE PROFESSIONALS ...

→ ORGAN DONORS...

→ YOUNG PEOPLE....

→ CAMPAIGNS SHOULD BE BASED  
ON THE DONOR PROFILE



# Thank you

Andréa Oxley da Rocha

[oxley@ufcspa.edu.br](mailto:oxley@ufcspa.edu.br)

CEREMONY IN HONOR OF THE BODY DONORS, 2018



Programa de Doação  
de Corpos UFCSPA



Symposium:

**Challenges of implementing body donation programs:  
a multi-cultural perspective**

**Hope Gangata, United Kingdom:**  
*The need for developing conceptual  
theoretical frameworks for implementing  
body donations across the world*



**The need for developing conceptual theoretical frameworks for implementing body donations across the world**

The use of donated cadavers for anatomical research and teaching has in recent years grown rapidly in popularity and has developed a palpable traction over other means of sourcing cadavers, such as the historical use of bodies of condemned prisoners, body snatching and unclaimed bodies. There is a wide variation across history and different world populations on how cadavers are sourced. Unfortunately, most literature describing the motivations and occurrences of body donation programmes across the world has been pitched at practical levels. The aim of the literature review was to reveal the extent of explicit and implicit theoretical work explaining or governing the use of donated cadavers for anatomical research and teaching.

A literature review was conducted in major literature databases discussing donated bodies used for anatomical research and teaching. The literature was combed through to expose explicit and implicit theoretical work explaining or governing the use of donated cadavers for anatomical pursuits. The literature spectrum covered a temporal period up to 2019 and a worldwide geographic spread.

There was relatively little theoretical work found and was grouped into ethical, psychological, philosophical, geographical, logistical and 'other' categories. The findings of explicit and implicit theories designed for elucidating body donation programmes could help to galvanise debates on body donations by developing common terminology on body donations and raising awareness of key factors on body donations. The theories will be critically analysed to reveal adjustable elements, stages that warrant more research attention and stages that have predictive values. Promising methodologies that may be fruitful in generating new theories will be highlighted. The theoretical work on donated cadavers would encourage the next wave of research on body donation programmes to have a better grasp of conceptual gears and cogs governing the use of donated cadavers. No ethical approval was required.



Dr Hope Gangata

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Human Anatomy, BSc Hons Physiotherapy, Master of Medicine in Anatomy, Master of Arts in Higher Education Practice & Doctor of (Anatomical)  
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# Introduction

- Cadavers - important for teaching gross anatomy
- Cadavers
  - Provide fidelity for living human anatomy
  - Develops awareness of 3D spatial sizes & relationships
- Sourcing cadavers has been challenging at times





# Introduction

- Historical Sources of Cadavers
  - Illegal grave digging
  - Bodies of condemned criminals
  - Unclaimed hospital/prison cadavers
  - Donated cadavers
- Sources of Cadavers in 2019
  - Unclaimed cadavers
  - Willed Donated cadavers
  - Unwilled body donations
    - Post-death family donations
    - Body 'donations' by institutions
  - 'Purchased' cadavers
    - Donated or unclaimed
    - Cadavers/cadaveric specimens bought from commercial catalogues
  - Bodies of suspected criminal extra judicially killed
- In 2012, the IFAA published recommended 'willed body donations' (IFAA, 2014)



A **mortsafe** is a cast iron cage to keep the dead safe from Grave Diggers (Scotland - 1700s)

# Introduction

- From my experiences, it is not common to find:
  - Explicit and implicit conceptual theoretical frameworks
- Conceptual theoretical frameworks
  - = Principles or Theories that transcend beyond local practical work
- Explicit and implicit theories have the potential to
  1. Galvanise debates on body donations by developing common terminology on body donations
  2. Raise awareness of key parameters affecting body donations
  3. Reveal adjustable elements/stages that warrant more research attention
  4. Provide predictive functions in other contexts
  5. Better grasp of conceptual gears and cogs governing the use of donated cadavers

# Introduction

- Aim of the presentation:
  1. Demonstrate the extent of Conceptual theoretical frameworks within literature on Body Donation Research
  2. Show potential research avenues for developing Conceptual theoretical frameworks



# Methods

- Conducted a literature review using
- Google Scholar (20 pages) and PubMed (1618 entries) search engines
- Search terms: 'body donation' & 'cadaver donation'
- Covered a temporal period up to 2019 and a worldwide geographic spread
- XXXX Full articles and XXXX abstracts were retrieved and reviewed

# Results: Dominance by Quantitative Surveys

- Largely focus on practical reporting of implementing body donation programmes
- Dominated by Quantitative Surveys:
  - Typically focus on background/demographic data vs patterns of attitudes on donating bodies
  - Such as sex, age at death, education level, profession etc. (Fennell and Jones, 1992; Dluzen et al., 1996; Lagwinski et al., 1998; Labuschagne and Mathey, 2000; McClea and Stringer, 2010; Asad et al., 2014; Bajor et al., 2015)
  - Surveys targeted potential (Richardson and Hurwitz, 1995) and registered donors (Fennell and Jones, 1992; McClea and Stringer, 2010; Bolt et al., 2010, 2011; Cornwall et al., 2012)
  - Assumes that people have well-known and fully articulated reasons to donate (Olejaz & Hoeyer, 2015)

# Results: Inadequate Qualitative Research

- Surveys not appropriate for capturing complex emotive issues surrounding body donations (Mohr, 2014)
- Such as death, post-death issues, burial cultures, impact of death on relatives & students, & fate of bodies etc.
- Donors have a higher proportions of suicidal causes of death
- Donated cadavers at a medical school were more likely to have a **“Suicide”** Cause of Death than the rest of the population (Flanagan & Murphy, 1973)
- So further in-depth qualitative research work is required



# Results: Inadequate Qualitative Research

## Qualitative Research: Body Donation lagging behind Organ Donations

- Thomas, S.L., Milnes, S. and Komesaroff, P.A., 2009. **Understanding organ donation in the collaborative era: a qualitative study of staff and family experiences.** *Internal Medicine Journal*, 39(9), pp.588-594.
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- Molzahn, A.E., Starzomski, R., McDonald, M. and O'Loughlin, C., 2005. **Chinese Canadian beliefs toward organ donation.** *Qualitative Health Research*, 15(1), pp.82-98.
- Ralph, A., Chapman, J.R., Gillis, J., Craig, J.C., Butow, P., Howard, K., Irving, M., Sutanto, B. and Tong, A., 2014. **Family perspectives on deceased organ donation: Thematic synthesis of qualitative studies.** *American Journal of Transplantation*, 14(4), pp.923-935.
- Parsa, P., Taheri, M., Rezapur-Shahkolai, F. and Shirahmadi, S., 2019. **Attitudes of Iranian students about organ donation: A qualitative study.** *BMC Medical Ethics*, 20(1), p.36.
- Tatterton, M.J., Summers, R. and Brennan, C.Y., 2019. **A qualitative descriptive analysis of nurses' perceptions of hospice care for deceased children following organ donation in hospice cool rooms.** *International journal of palliative nursing*, 25(4), pp.166-175.
- Sarti, A.J., Sutherland, S., Healey, A., Dhanani, S., Landriault, A., Fothergill-Bourbonnais, F., Hartwick, M., Beitel, J., Oczkowski, S. and Cardinal, P., 2018. **A multicenter qualitative investigation of the experiences and perspectives of substitute decision makers who underwent organ donation decisions.** *Progress in Transplantation*, 28(4), pp.343-348.
- Etheredge, H.R., Penn, C. and Watermeyer, J., 2018. **A Qualitative Analysis of South African Health Professionals' Discussion on Distrust and Unwillingness to Refer Organ Donors.** *Progress in Transplantation*, 28(2), pp.163-169.

# Results: Inadequate Qualitative Research

## Few papers on Qualitative Research on Body Donation

1. Olejaz, M. and Hoeyer, K., 2016. **Meet the donors: a qualitative analysis of what donation means to Danish whole body donors.** *European Journal of Anatomy*, 20(1), pp.19-29.
2. Chiu, H.Y., Ng, K.S., Ma, S.K., Chan, C.H., Ng, S.W., Tipoe, G.L. and Chan, L.K., 2012. **Voices of donors: Case reports of body donation in Hong Kong.** *Anatomical Sciences Education*, 5(5), pp.295-300.
3. Papagaroufali, E., 2006. **Playing with One's Own Death While Being Alive: The Case of Registered Body–Organ Donors in Greece.** *Anthropology and Humanism*, 31(2), pp.111-123.

- Qualitative research:
  - Supplements existing quantitative work
  - Provides deeper reflection on body donation issues
  - Our poor grasp of qualitative issues has limited our ability to create Conceptual Theoretical Frameworks

# Results: Inadequate Qualitative Research

- Most literature is dominated quantitative methodologies
- Collectively as researchers on Body Donations, we favour Quantitative Methods research tools



Quantitative Methods



Qualitative Methods



## Results: Inadequate Qualitative Research

- Perhaps we can take a leaf from 'Toy Story 4'
- Where 'Forky' played a significant role

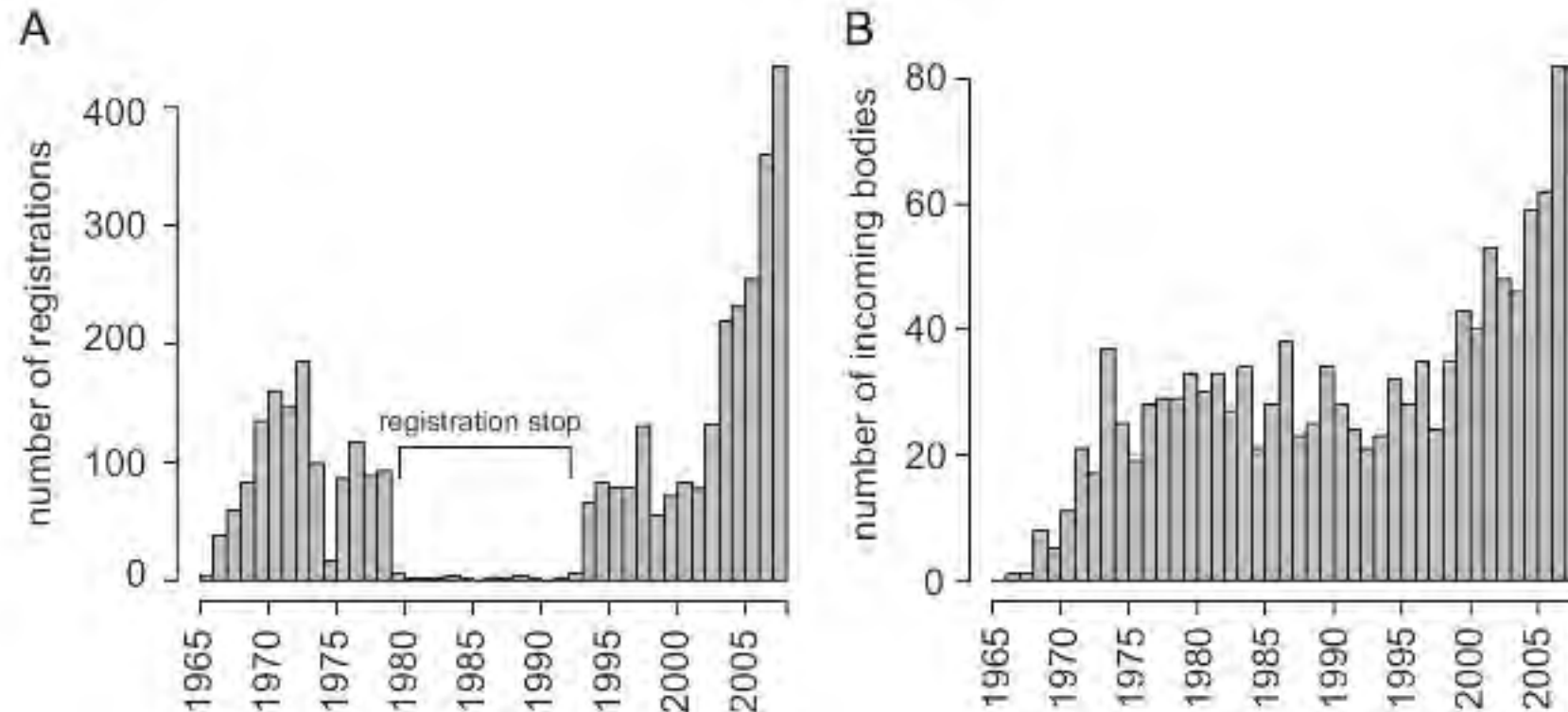


'Forky' =  
Qualitative  
Methods

# Results: An actuarial predictive model for Body Donations (Wijbenga et al, 2010)

- University Medical Center Groningen in the Netherlands were repeatedly receiving more donated cadavers than needed
- Records of Registered potential body donors + Records of deceased body donors
- Problem:
  - Time between donor registration vs point of death ???
  - Turning down donated bodies after death because of over capacity is not desirable

# Results: An actuarial predictive model for Body Donations (Wijbenga et al, 2010)



- “82 predicted deceased (by the model) in 2008 were confirmed by the 81 deceased that actually came in”
- The model can be used to predict shortages and excesses



# Results: Ethical principles with Consensus

- Ethical issues are perhaps the most mature and developed theoretical principles among body donations

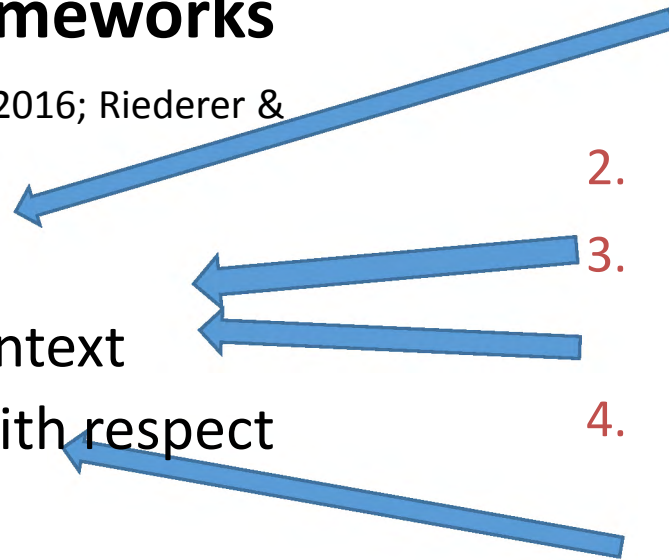
- **Major principles/frameworks with consensus** (Jones, 2016; Riederer &

Bueno-López, 2014):

1. Informed consent
2. Non-commercial context
3. Treating cadavers with respect

- **Still have unresolved issues:**

1. Informed consent: Cadavers of fetuses, children & mentally ill persons or patients who were in a coma
2. Cross border movement of cadavers
3. Digital cadaveric imagery and the internet
4. Length of keeping cadaveric specimens: Is burying a 'hand specimen' 400 years later after the rest of the body okay?



# Results: Worldwide Sources of cadavers (Habicht et al 2018)

- Habicht et al. 2018 arranged countries worldwide according to cadaver sources used
- To assess worldwide progress towards 'willed body donations'
- Used the following categories:
  - A. Exclusively body donation;
  - B. Mostly body donation (and, less often, unclaimed bodies);
  - C. Mostly unclaimed bodies (and, less often, body donation);
  - D. Exclusively unclaimed bodies; and
  - E. Other sources (e.g., import of cadavers from abroad), either exclusively or in addition to another category.

# Results: Worldwide Sources of cadavers (Habicht et al 2018)





# Results: Worldwide Classification of Cadaver Sources (Gangata, 2015)

Grade	Description	Countries
0	<b>No Cadavers:</b> Countries that have failed to acquire any cadavers/have no proof	Countries without medical schools
1	<b>'Purchased cadavers':</b> Unable to use unclaimed cadavers and donated cadavers. Use purchased cadavers as a last resort	Caribbean countries, Muslim dominated countries in Northern Africa & Middle East
2	<b>Unclaimed Cadavers:</b> Exclusively use unclaimed cadavers	Most sub-Saharan African Countries, Romania & Turkey
3	<b>Unclaimed &amp; Donated Cadavers:</b> Virtually all cadavers are unclaimed cadavers with unpromising campaigns towards donated cadavers	Serbia & Singapore
4	<b>Unclaimed &amp; Donated Cadavers:</b> Virtually all cadavers are unclaimed cadavers, with promising campaigns towards donated cadavers	Brazil, China & Italy
5	<b>Unclaimed &amp; Donated Cadavers:</b> Largely use unclaimed cadavers and some donated cadavers	Ghana, Malawi, South Africa, Zimbabwe, Bangladesh, Hong Kong, India, Russia & Chile
6	<b>Unclaimed &amp; Donated Cadavers:</b> Largely use donated cadavers and some unclaimed cadavers	Germany, Portugal, Spain, USA & Thailand
7	<b>Donated Cadavers:</b> Exclusive use of donated cadavers with limited success	Australia, Austria, France, UK, Israel, Japan & New Zealand
8	<b>Donated Cadavers:</b> Exclusive use of donated cadavers and with excellent success	Netherlands & South Korea

## Results: Worldwide Classification of Cadaver Sources (Gangata, 2015)

- Could assist countries in setting the next realistic more ethical source of cadavers
- Future work
  - What are the in-depth parameters governing the each different grade?
  - Why is it hard to move from Grade 3 to Grade 4 for some countries?
    - Grade 3: Unclaimed & Donated Cadavers: Virtually all cadavers are unclaimed cadavers with unpromising campaigns towards donated cadavers
    - Serbia & Singapore
  - Need future theoretical work that can predict the national classifications in 5 or 10 years time

# Conclusion

1. Need to use Qualitative research 'toys' more:
  - a. Better understand complex issues on Body Donations
  - b. That will allow more robust theoretical frameworks to follow
2. There are actuarial models that can predict cadaver numbers
3. Ethical principles need more work
4. Parameters governing the Worldwide Classification of Cadaver Sources requires further work







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