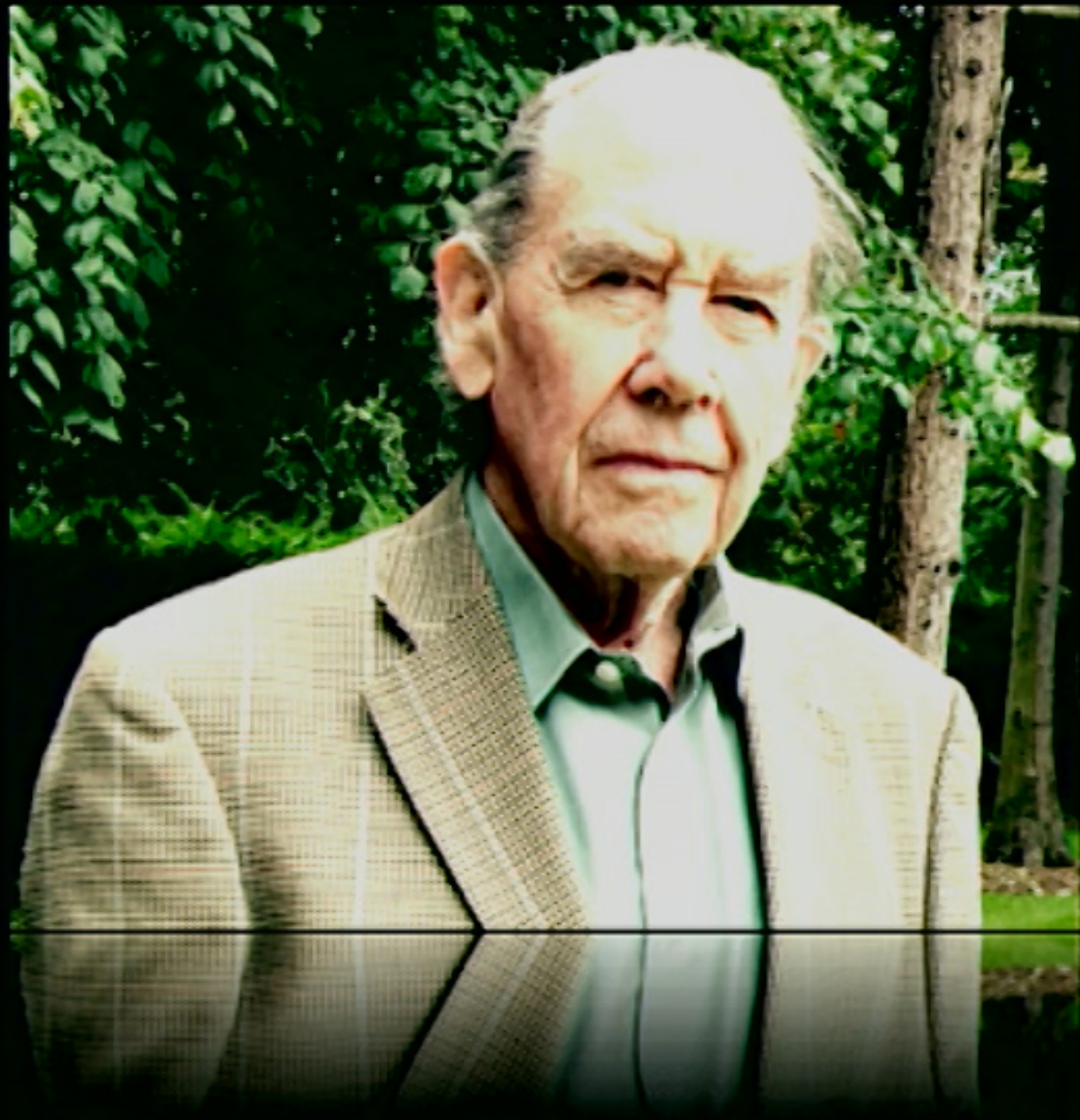


A pair of hands wearing white surgical gloves is shown holding a human heart. The heart is a reddish-pink color with visible coronary vessels. The background is a light blue, crinkled fabric, likely a surgical drape. The text "Half a Century of Heart Transplantation" is overlaid in white, bold, sans-serif font across the center of the heart.

Half a Century of Heart Transplantation

Martin Elliott

37th Gresham Professor of Physic



Sir Terence English



Mr Stephen Large



Mr Martin Barsby

Prepare Your Questions!



GRESHAM COLLEGE



Gian Lorenzo Bernini,
Medusa, 1630

Museo Capitolini Italy

Homer's Chimera

GRESHAM COLLEGE







**Simon Peter
cutting off the ear of Malchus**



Francisco de Zurbarán (1598 - 1664)

Saint Agathe (1660 - 1663)

Musée Fabre, Montpellier



Francisco de Zurbarán (1598 - 1664)

Saint Agathe (1660 - 1663)

Musée Fabre, Montpellier



GRESHAM COLLEGE

250 AD

GRESHAM COLLEGE



Sts. Cosmas and Damian, ca. 1370–75, Master of the Rinuccini Chapel (Matteo di Pacino) (Italian, active 1350–75),
tempera and gold leaf on panel.

North Carolina Museum of Art, Raleigh, gift of the Samuel H. Kress Foundation.



School of Castile and Leon, 'Saints Cosmas and Damian Healing a Christian with the Leg of a Dead Moor', 1460-1480

DEGLI
INNESTI ANIMALI
DI
GIUSEPPE BARONIO



MILANO
DALLA STAMPERIA E FONDERIA DEL GENIO
Circo del Giardino presso il Teatro della Scala.
1804.



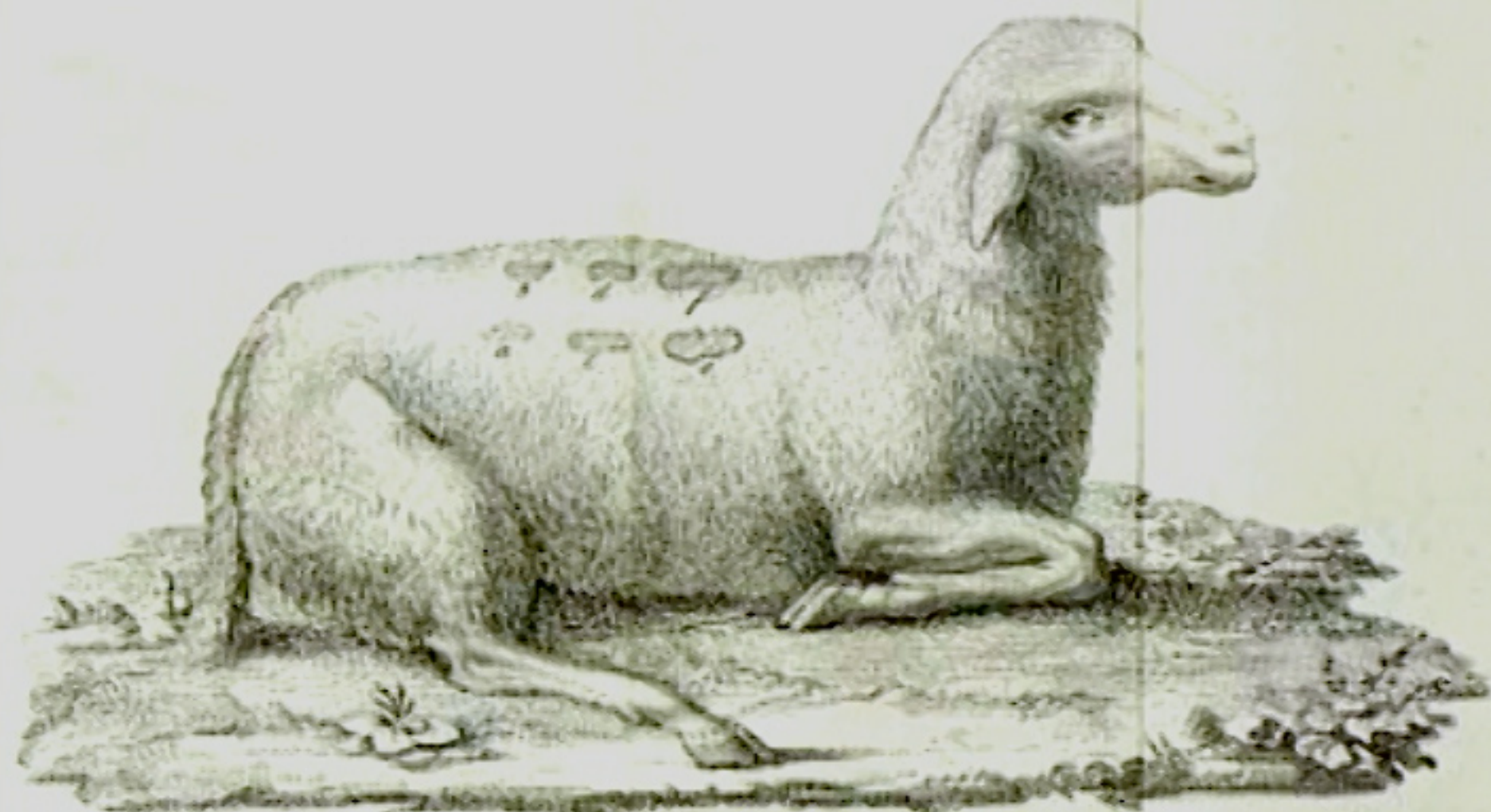
DEGLI
INNESTI ANIMALI

DI
GIUSEPPE BARONIO



MILANO
DALLA STAMPERIA E FONDERIA DEL GENIO
Circo del Giardino presso il Teatro della Scala.

1804.



Tab. II

Passchendaele





James Barratt-Brown 1899 - 1971

repeat allografts do worse

GRESHAM COLLEGE



Peter Medawar

<http://www.starzl.pitt.edu/people/brent.html>

Leslie Brent



Peter Medawar



Rupert Billingham (1921 - 2002)



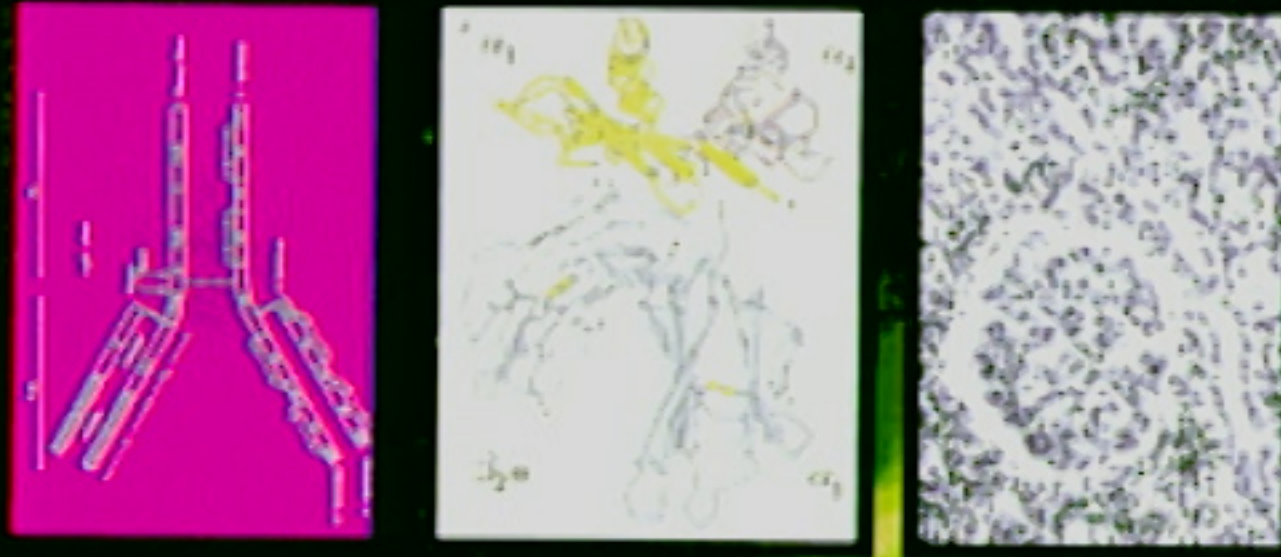
Sir Peter Medawar (1915 - 1987)



Sir Frank Macfarlane Burnet (1899 - 1985)

Nobel Prize 1960

GRESHAM COLLEGE



A HISTORY OF TRANSPLANTATION IMMUNOLOGY



LESLIE BRENT

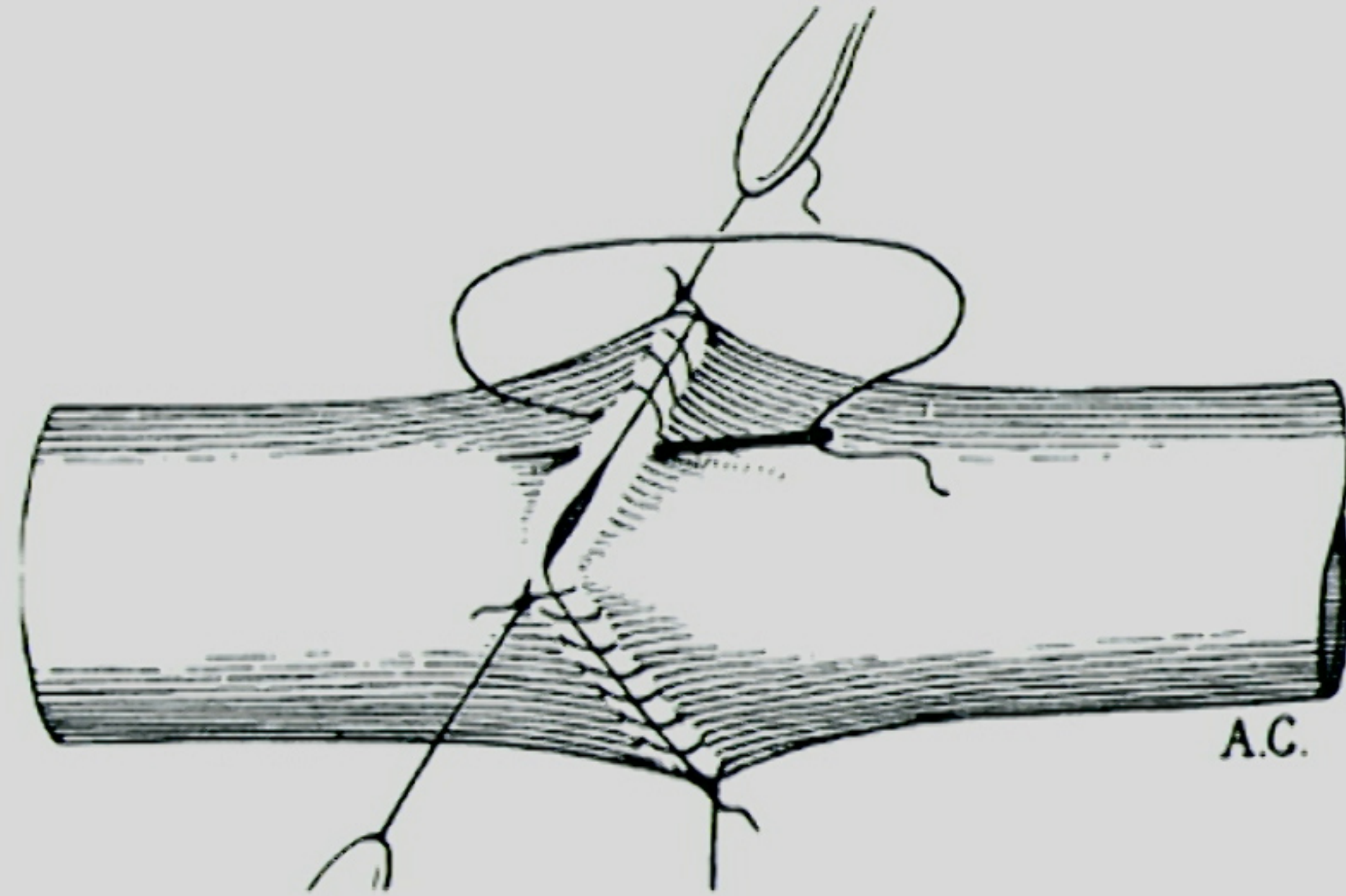


1996, Academic Press
San Diego and London



Alexis Carrell (1873-1944)

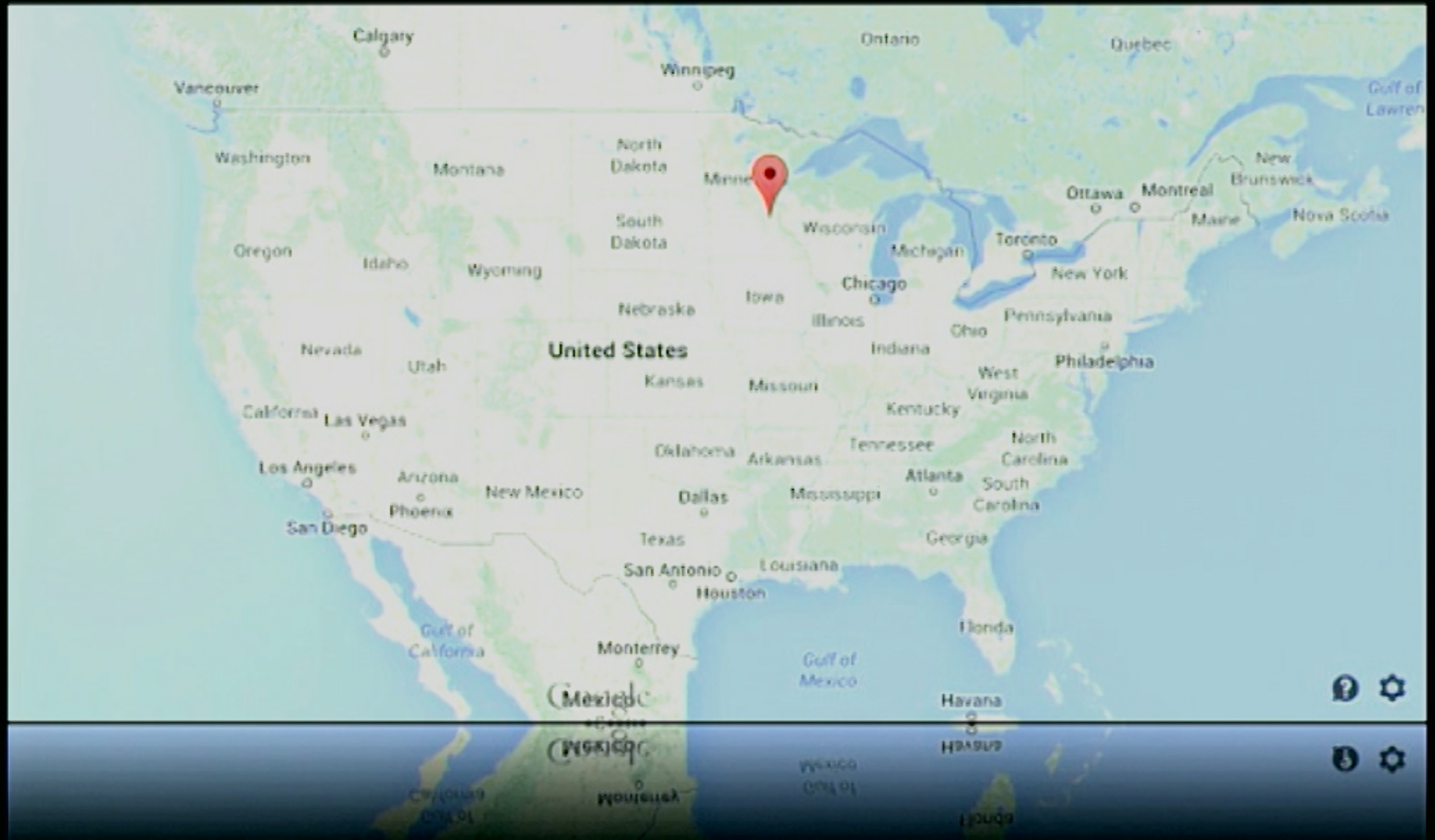
GRESHAM COLLEGE



Nobel Prize in Medicine and Physiology in 1912

- **cardio-pulmonary bypass**
- **myocardial preservation (hypothermia +/-cardioplegia)**
- **technical operative strategies**
- **an understanding of tissue typing, anti-rejection therapy and post-op care**
- **organisational skills and dedicated teams**
- **a logistics infrastructure**
- **ethical, scientific and social acceptance**

**C Walt Lillehei
(Minnesota)**

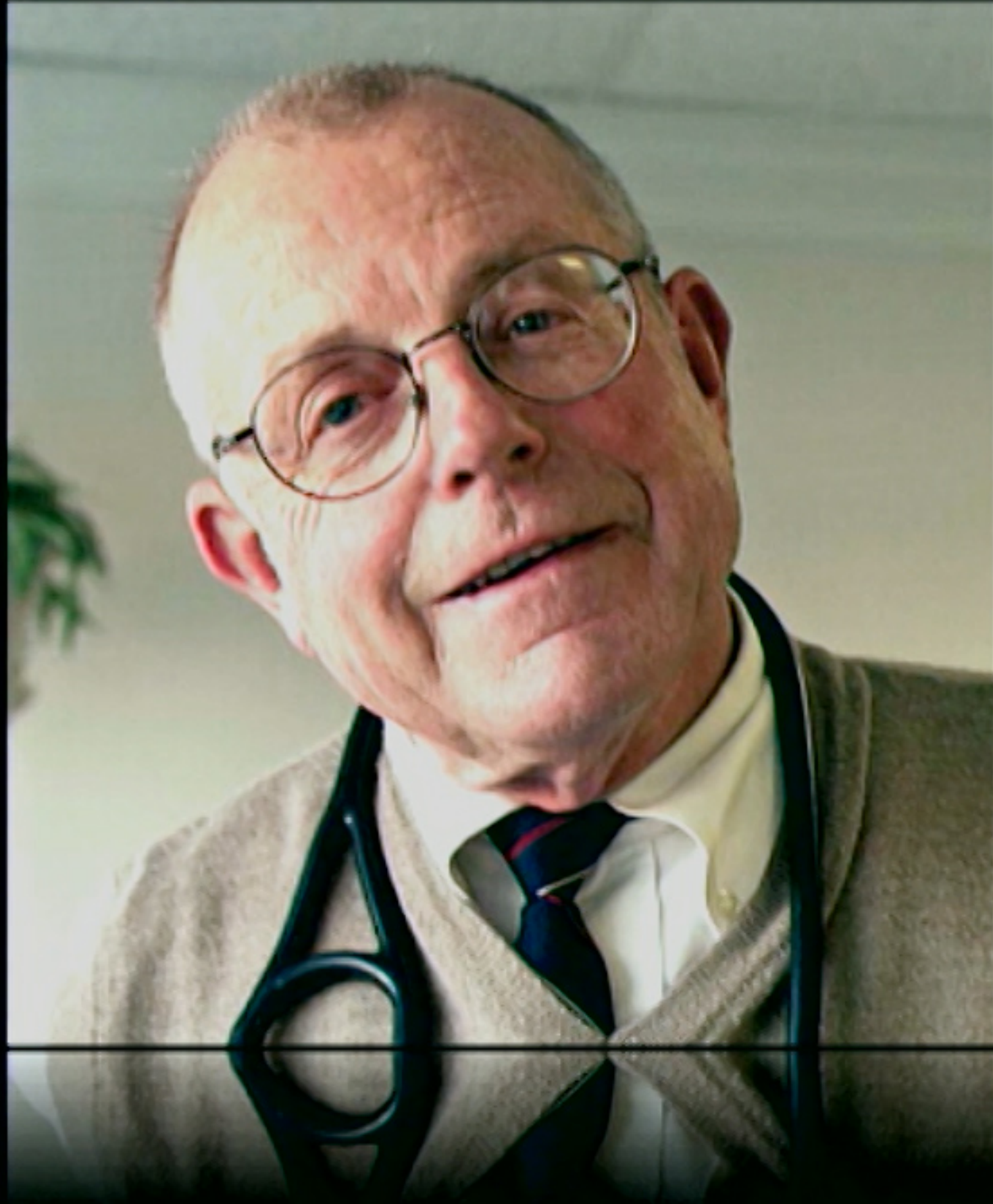




Norman Shumway GRESHAM COLLEGE
(1923-2006)

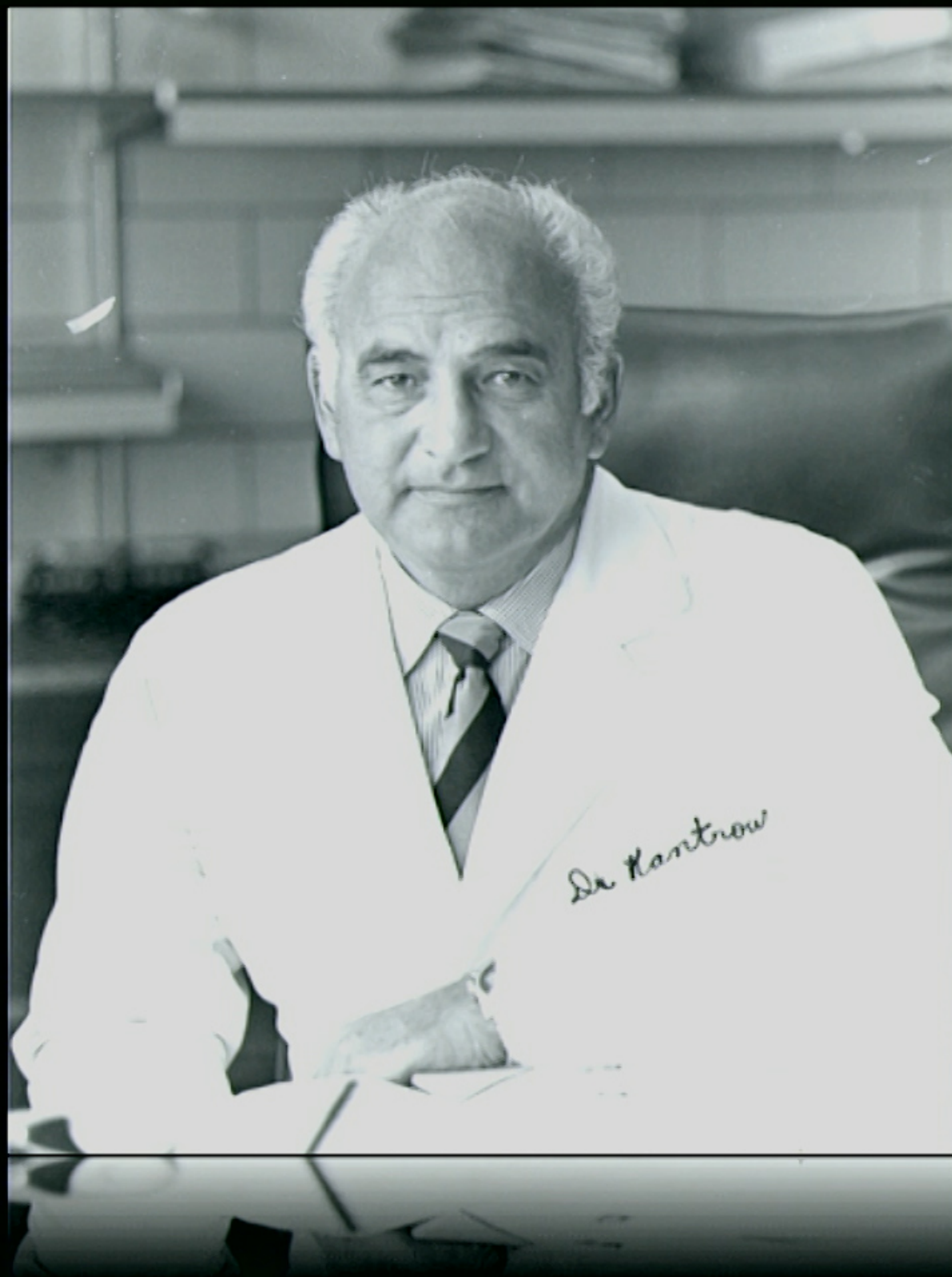
GRESHAM COLLEGE

**Richard Lower
(1929-2008)**

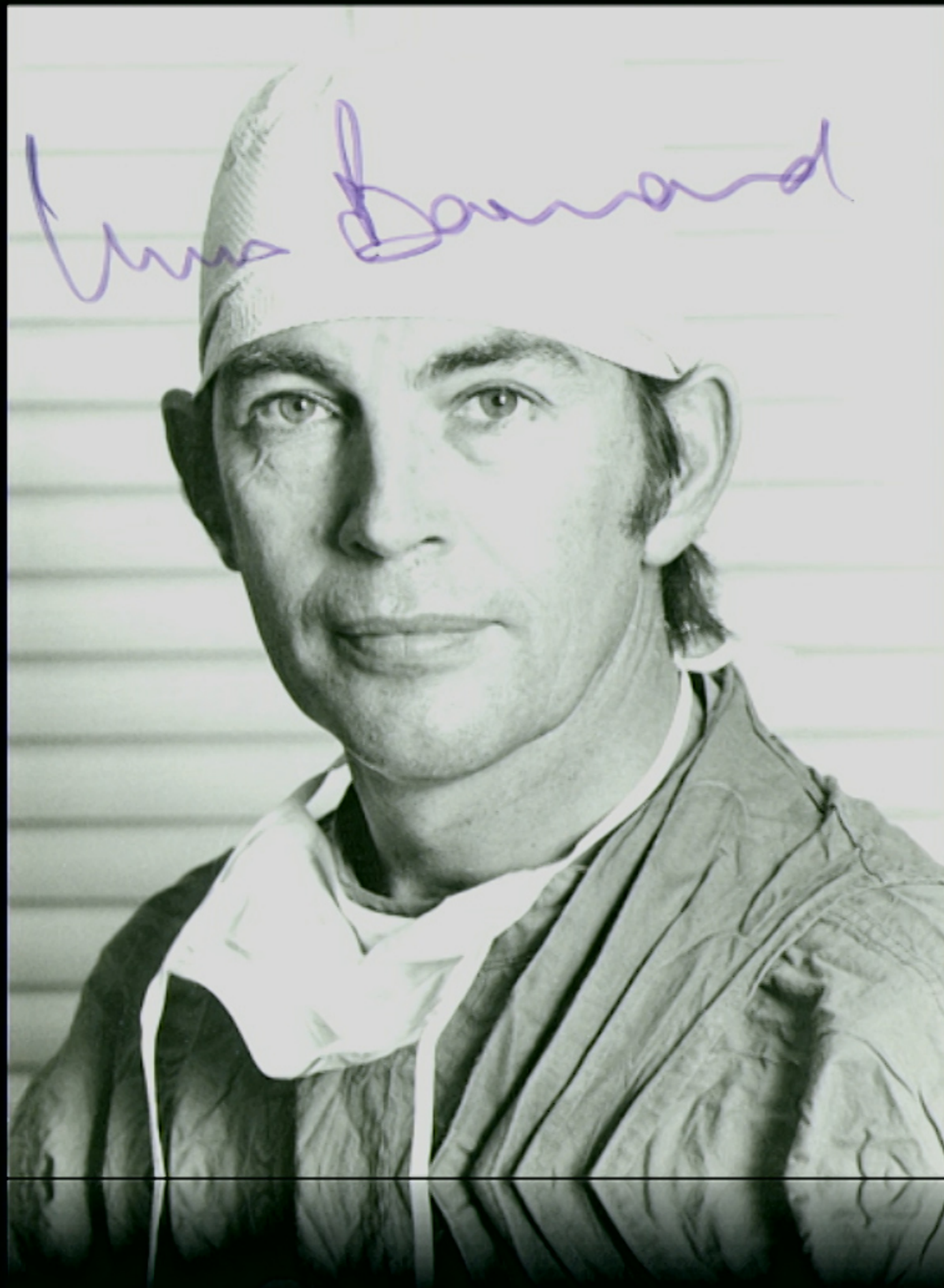


GRESHAM COLLEGE

Adrian Kantrowicz
(1918-2008)



Christiaan Barnard GRESHAM COLLEGE
1922-2001



THE EXTRAORDINARY RACE TO
TRANSPLANT THE FIRST HUMAN HEART

EVERY
SECOND
COUNTS



DONALD McRAE

2006
Simon & Schuster
London

DONALD McRAE





Vladimir Demikhov 1916 - 1998

1946; the first heart transplant (dogs)

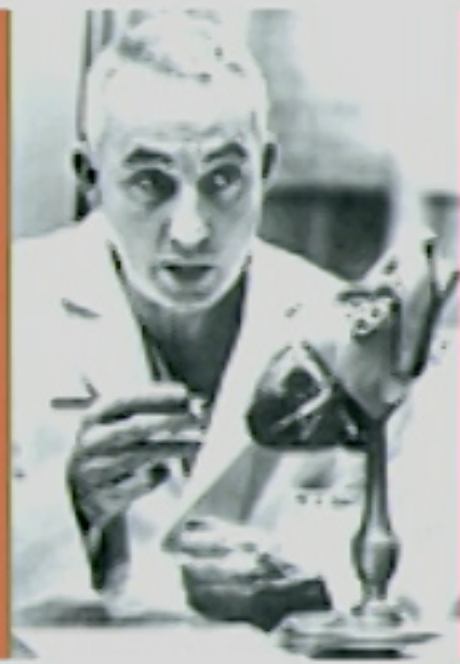
1946; the first heart-lung transplant (dogs)

1948; the first liver transplant (dogs)

1954; head transplant (dogs)

1

**Norman
Shumway**



1949
Minnesota

1956
PhD
CV Science

1958
Stanford
GRESHAM COLLEGE

kidney machine/topical hypothermia

2

**Richard
Lower**



1957
Stanford

topical hypothermia

3

**Adrian
Kantrowitz**



1955
Maimonides
Brooklyn

CPB & Mechanical Assistance

4

**Christiaan
Barnard**



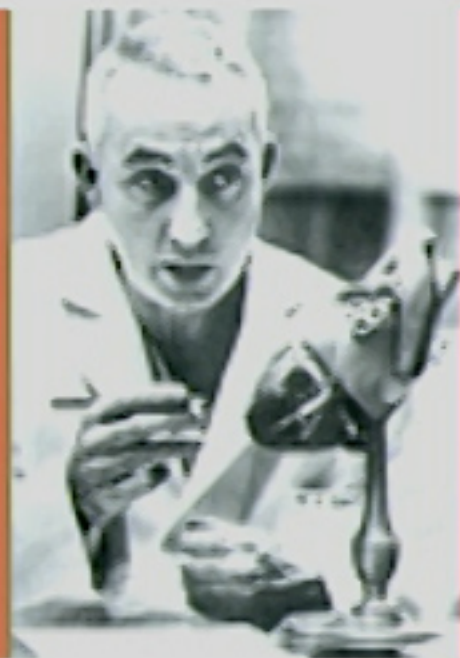
1955
Minnesota

1958
Cape Town

Oesophagus & CPB

1

Norman Shumway



1960

topical hypothermia

transplantation in dogs

GRESHAM COLLEGE

1965

1970

2

Richard Lower



1960

Medical College of Virginia (MCV)

transplantation in dogs

3

Adrian Kantrowitz



1960

transplantation in dogs



4

Christiaan Barnard



Demikhov

MCV

dogs

“After eight years of laboratory experience we are now quite convinced that cardiac transplantation is perfectly feasible from the technical as well as the physiological standpoint..... the time has come for clinical application”

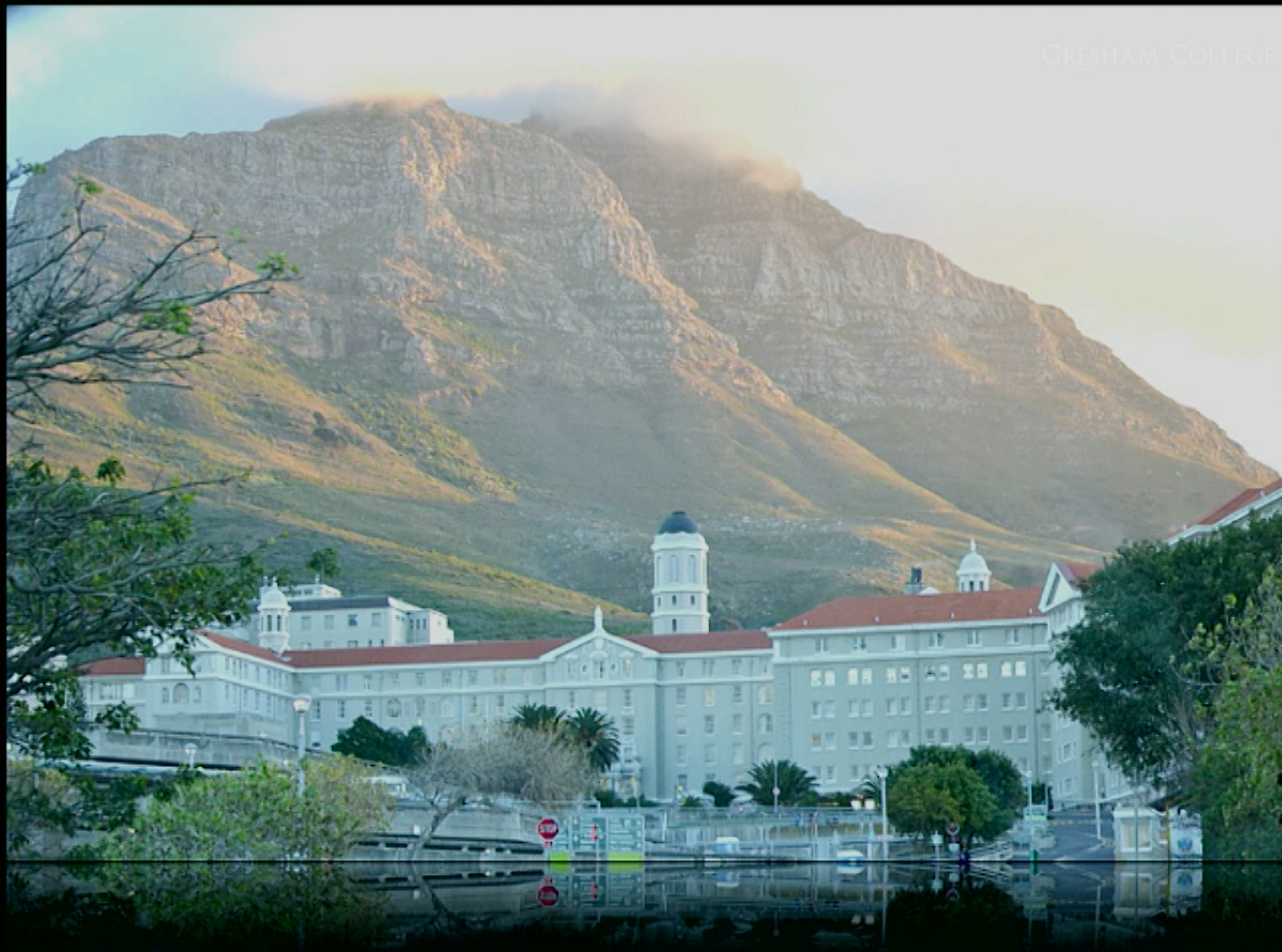
Norman Shumway

October 1967

Address to the American College of Surgeons (Chicago)



Louis Washkanski



Groot Schuur Hospital, Cape Town



Denise Darvell, 25

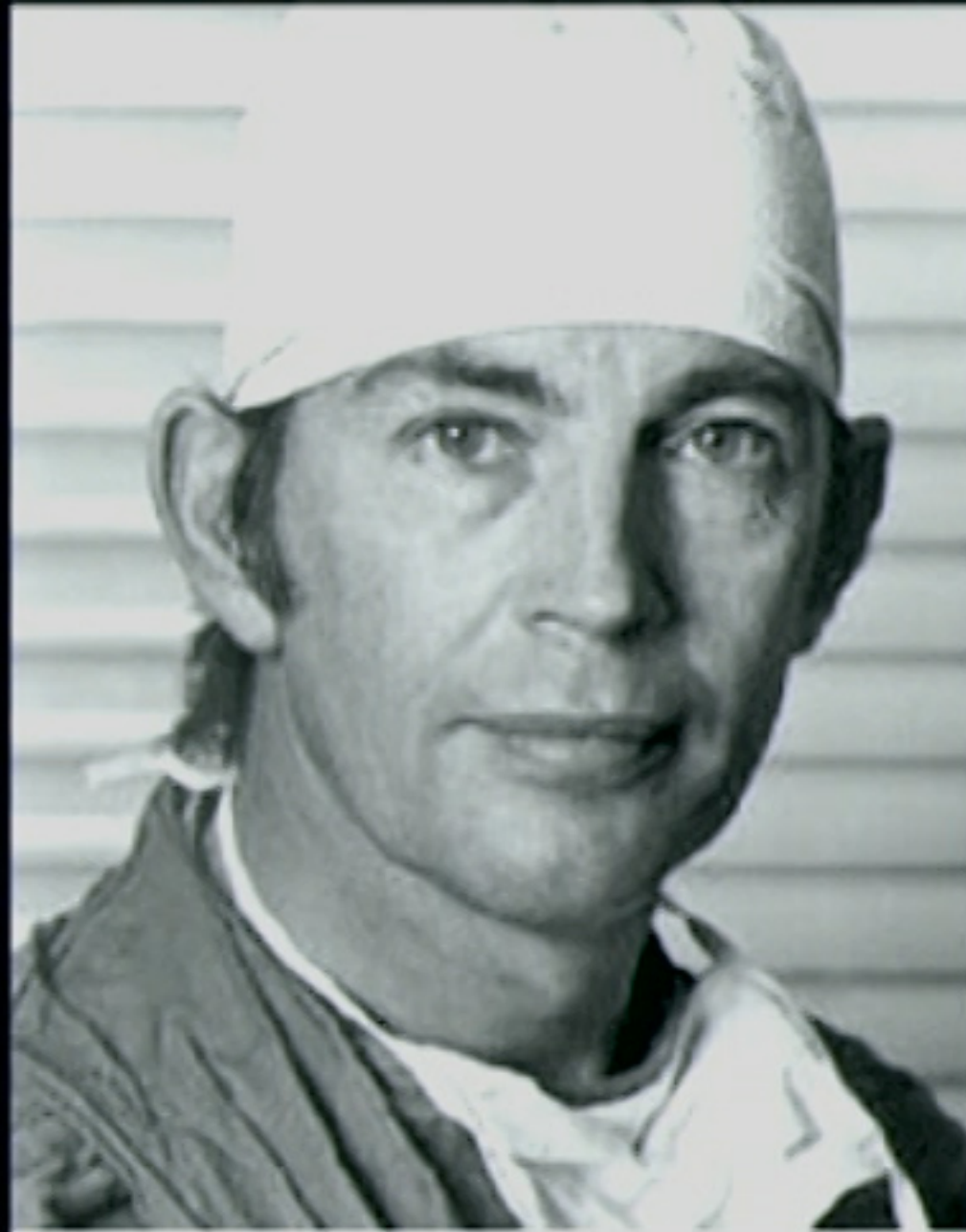


<https://www.youtube.com/watch?v=UY684Rqs6rE>



Louis Washkansky post transplant

First transplanted human heart beats



CAPE TOWN, South Africa (AP) — A South African man continued in satisfactory condition today with the heart of a 25-year-old girl pumping his blood after the medical breakthrough Sunday of a human heart transplant.

Louis Washkansky, 55, a Lithuanian-born businessman, was in the critical postoperative period of what Grootshuur Hospital called the first successful human heart transplant.

He was being fed anticoagulants to prevent blood clotting. Dr. Berger said that without the transplant Washkansky would have been dead within a few days because his heart's muscle was worn down.

The landmark operation was supervised by Dr. Jan. H. Louw, the hospital's chief surgeon, with Prof. Chris Barnard performing the main surgery.

Surgeons removed the heart from Miss Darvall's body first and kept it going by a mechanical

dying patient and donor—whose heart must be taken no later than half an hour after death—occurs at Stanford.

Dr. Shumway predicted that within 10 years doctors will be transplanting hearts with the same frequency they now transplant kidneys. About 600 persons throughout the world were living with transplanted kidneys as of last February.

Dr. Michael DeBakey, who led the development of the heart pump, said in Houston the

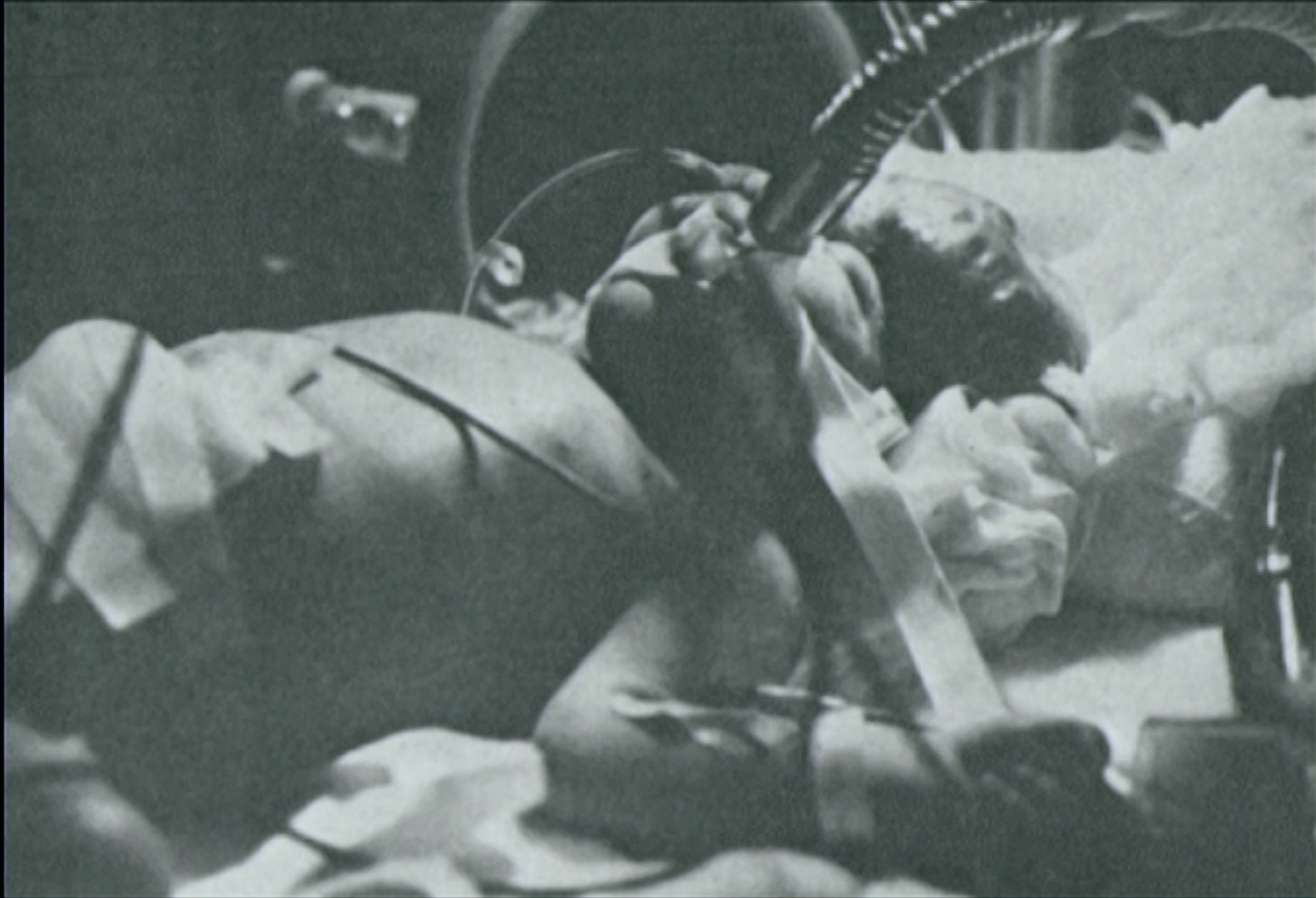


Denise Darvell

GRESHAM COLLEGE

**Louis Washkanski died
of severe pneumonia,
18 days
after his transplant**





Anencephalic donor infant



Donor Heart



Dr Blaiberg taking Eileen and his surgeon, Chris Barnard, for a ride,
May 1968 (*Don Mackenzie*)

Dr. Philip Blaiberg

Looking At
My Heart



1969
London
Heinemann



Mike Kasperak

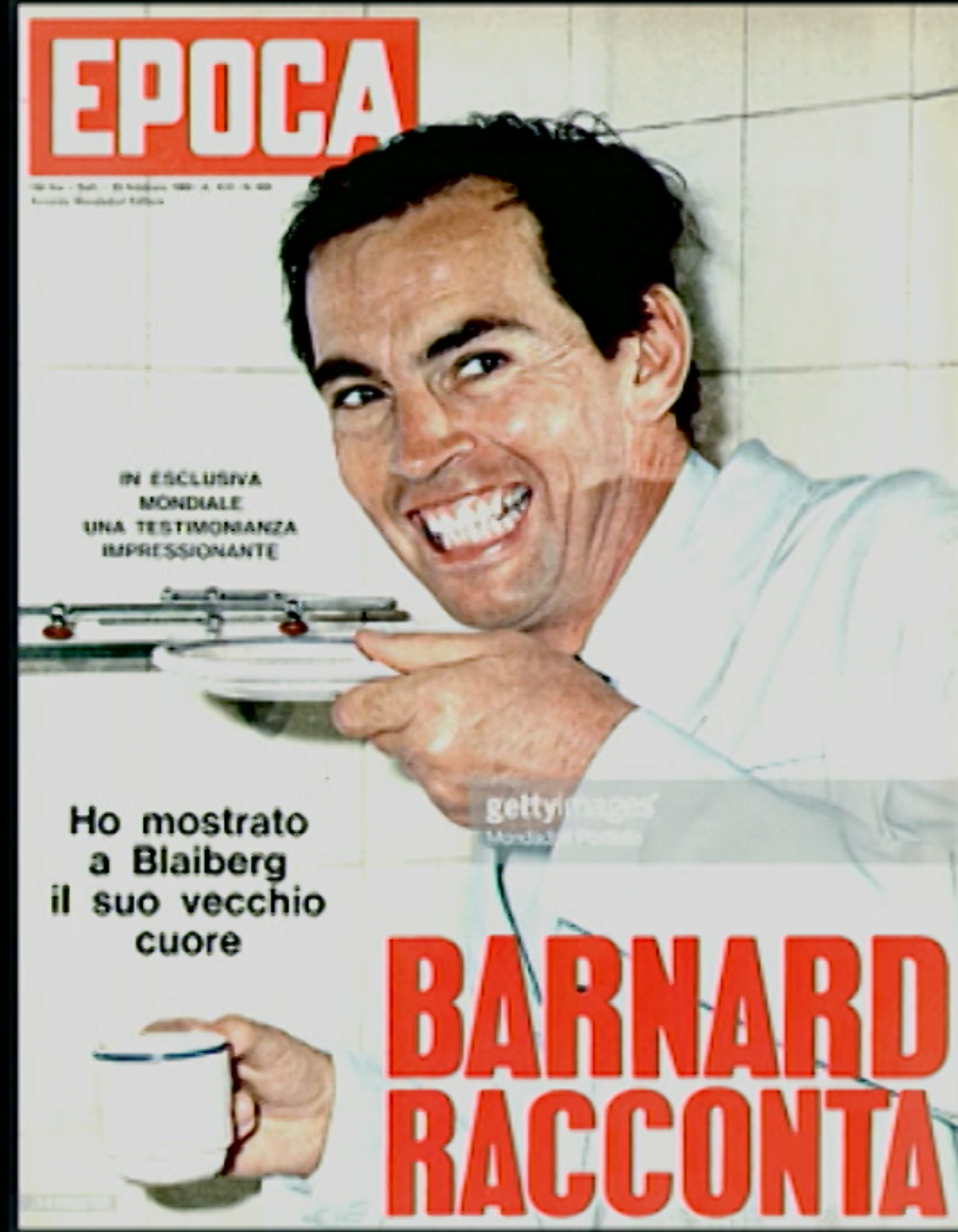
4 operations

**died after
2 weeks**



GRESHAM COLLEGE

210 Units of Blood



“Does anyone know who was
the second person to fly across the ocean?”







No. 171
Friday
5 July '68

PRIVATE EYE

GRESHAM COLLEGE

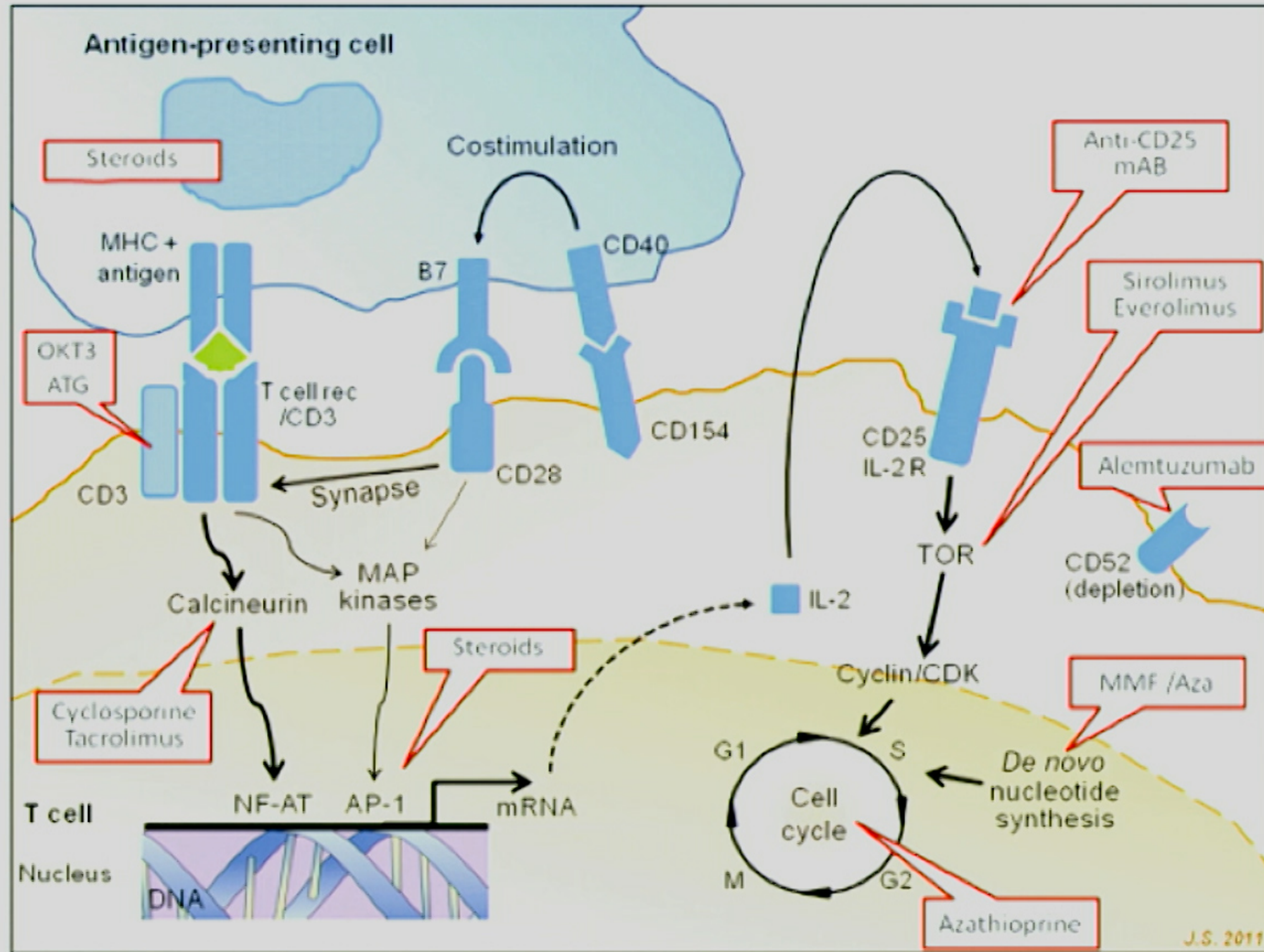


**“O.K., SO WE GOOFED”
say Heart Men**

**moratorium
until
1978**



**January 1979,
first heart transplant at Papworth**



Adult and Pediatric Heart Transplants Kaplan-Meier Survival

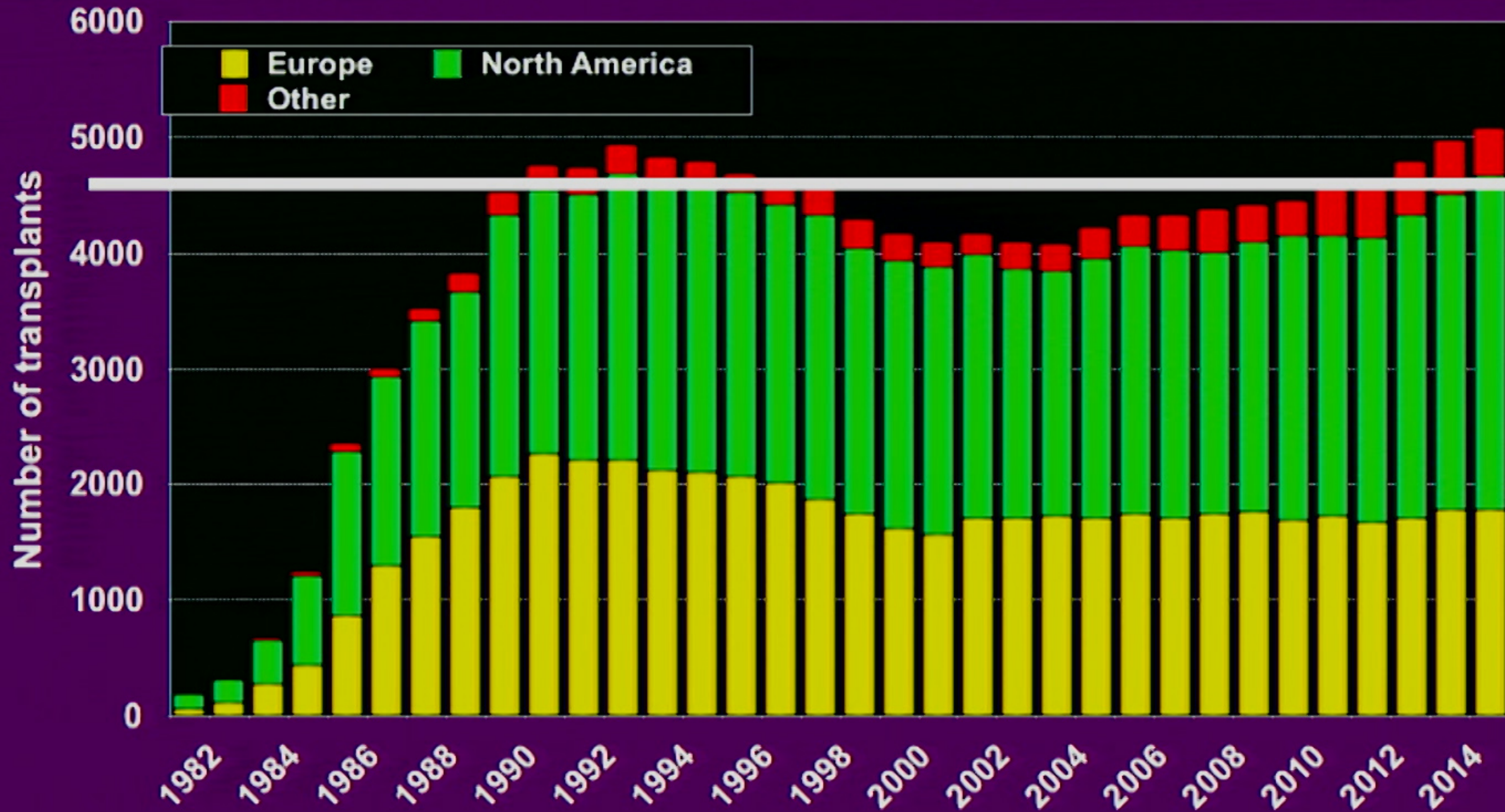
GRESHAM COLLEGE

(Transplants: January 1982 – June 2015)



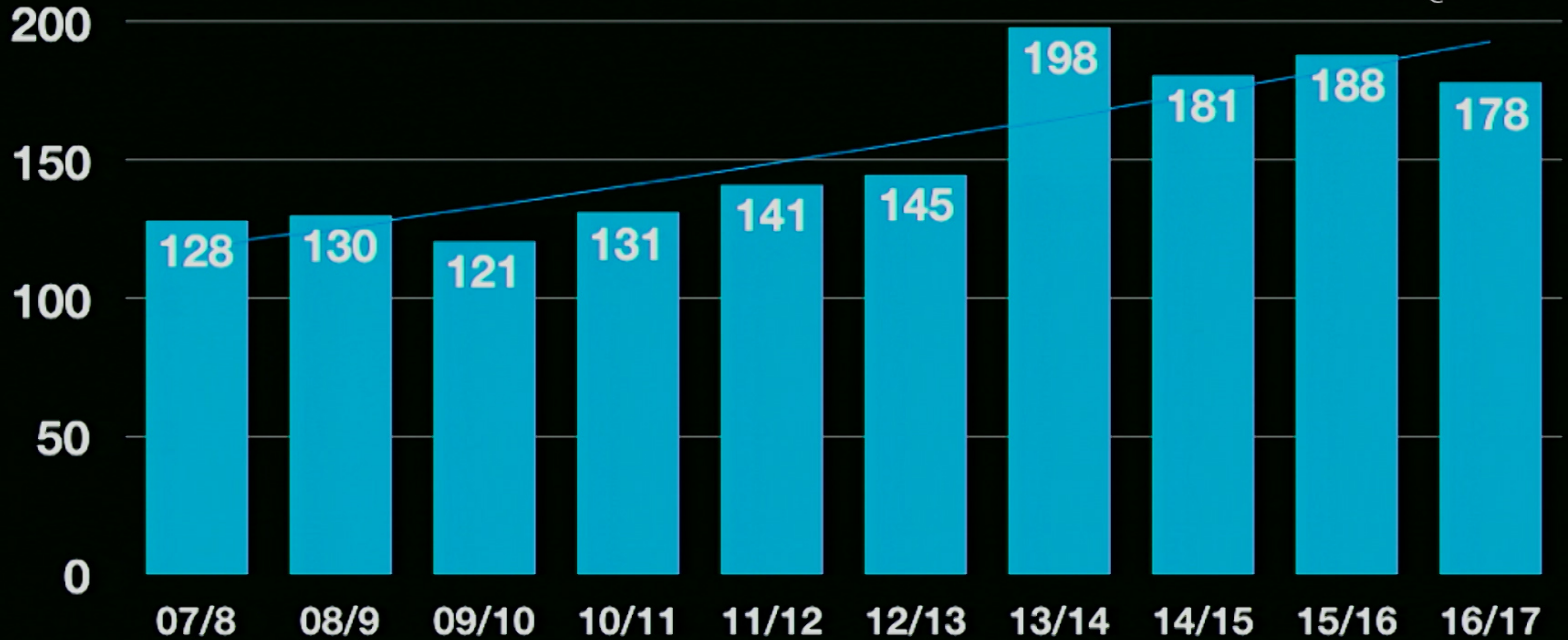
Adult and Pediatric Heart Transplants Number of Transplants by Year and Location

GRESHAM COLLEGE



No of Heart transplants/year in the UK (2007 - 17)

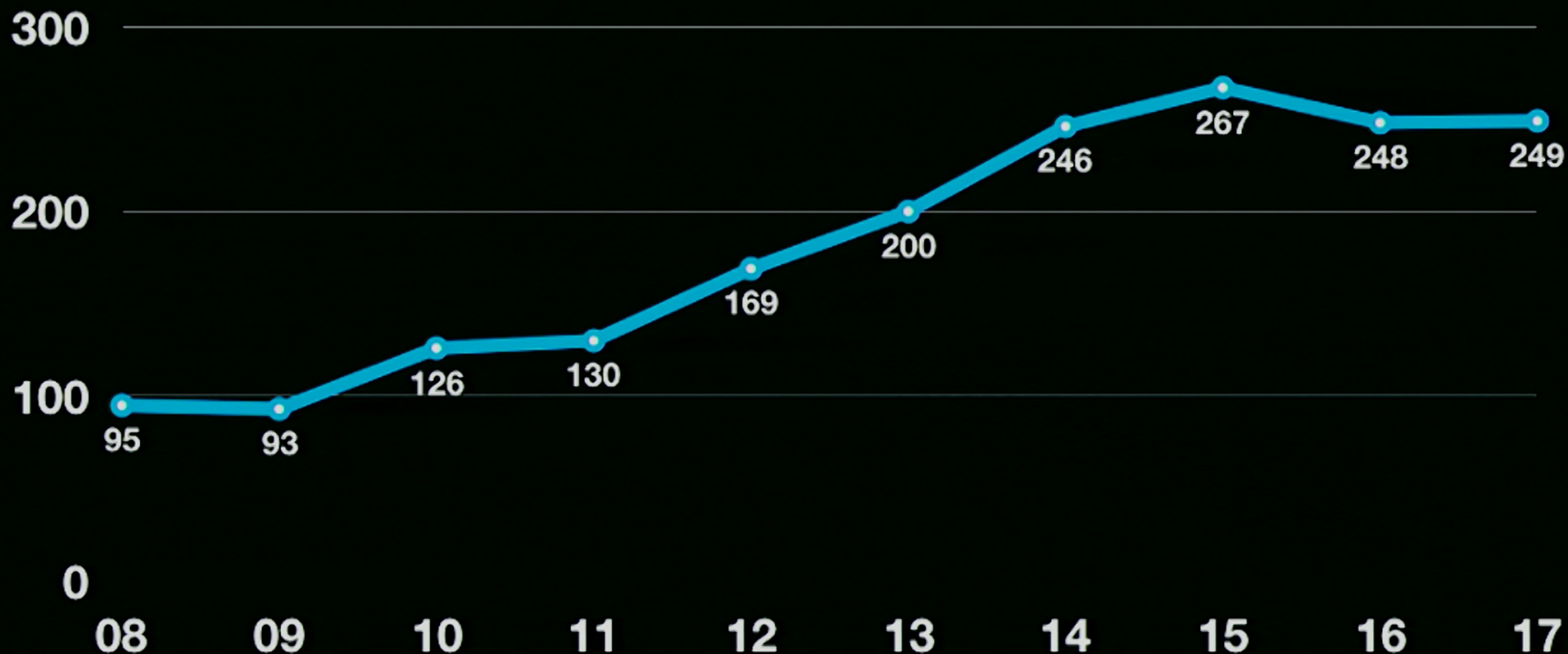
GRESHAM COLLEGE



Source: annual report on Cardiothoracic Organ Transplantation 2016/17, NHS Blood & Transplant

No of Patients on the UK active heart transplant waiting list (2008 - 17)

GRESHAM COLLEGE



Source: annual report on Cardiothoracic Organ Transplantation 2016/17, NHS Blood & Transplant