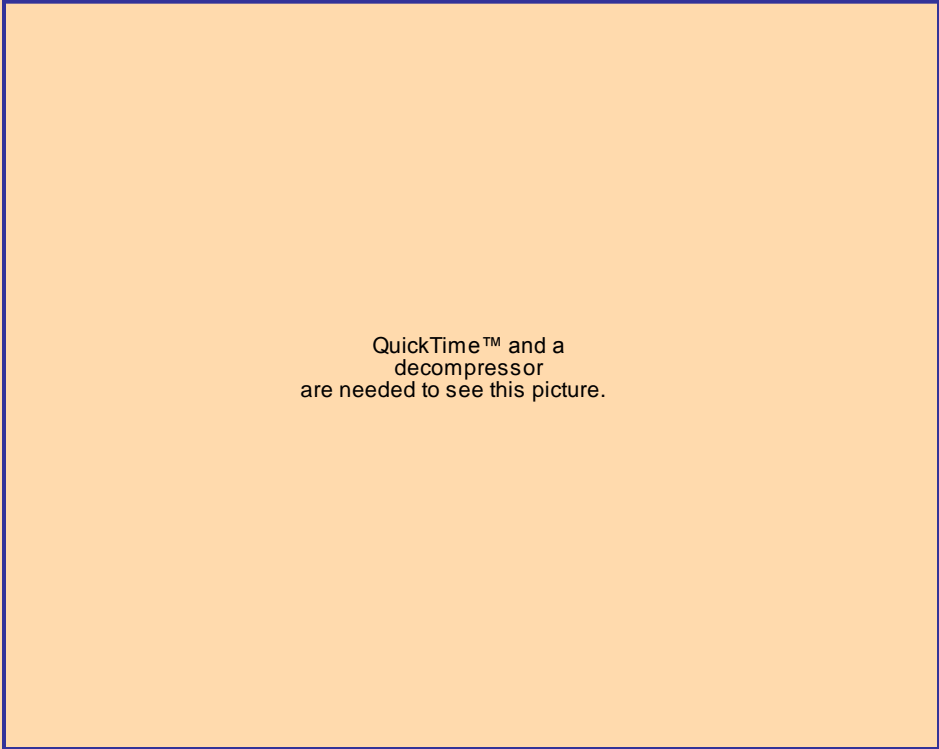




# **Villains and Heroes:** *The story of smallpox*

Gareth Williams

*Professor of Medicine, University of Bristol*

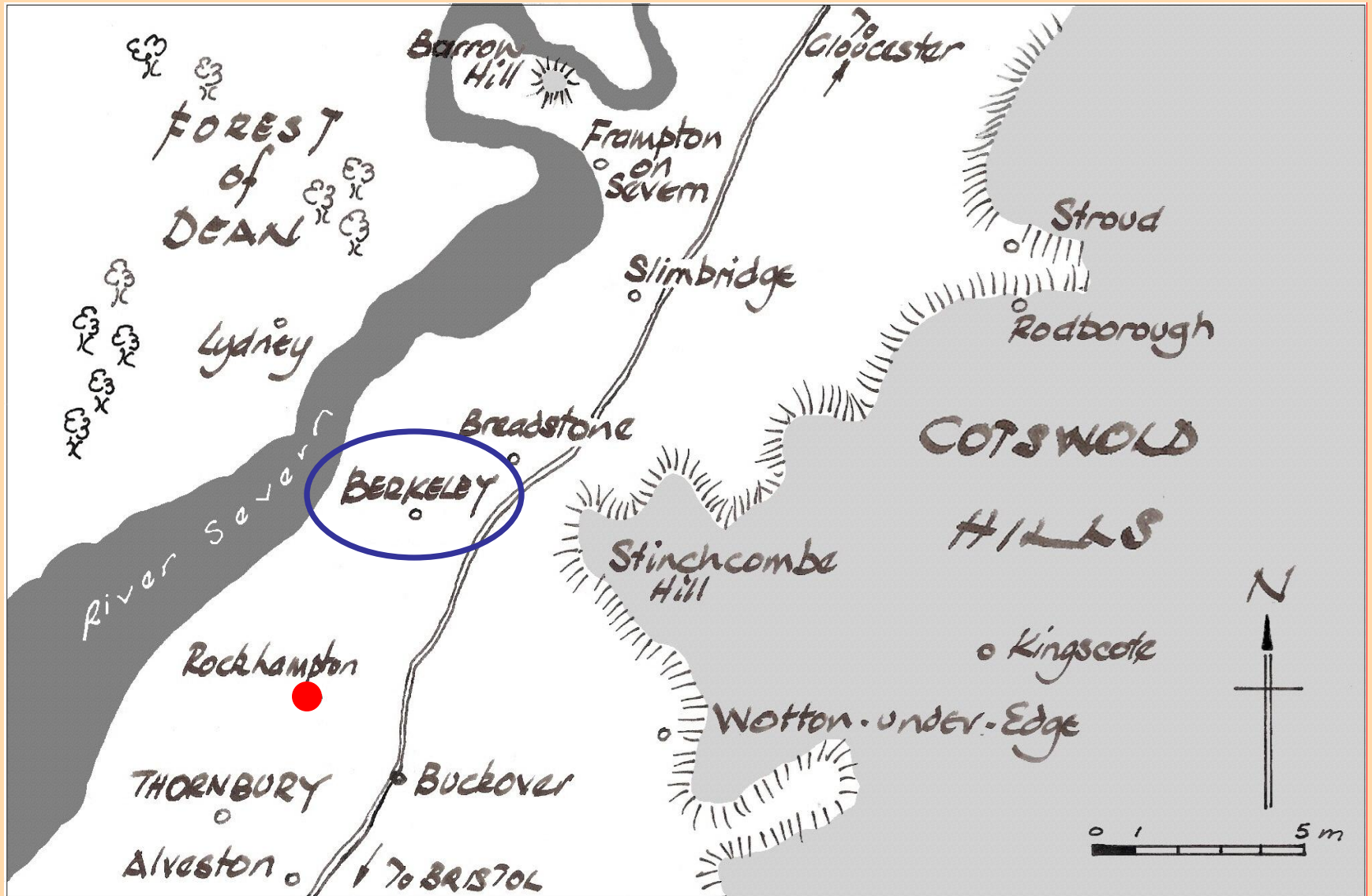


QuickTime™ and a  
decompressor  
are needed to see this picture.

# My research background ...

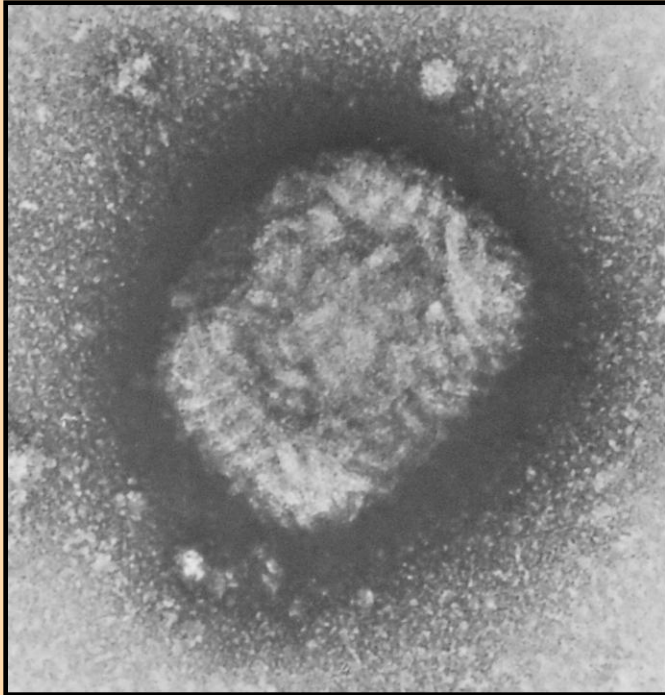


*... The big questions in obesity*



The catchment area of Dr. Edward Jenner

## CV of a Villain



“The fact is we have forgotten what smallpox is like.”

*D. Fraser Harris, 1914\**

*\* Still to go:*

*63 years*

*250 million deaths*

## The Smallpox Lottery

- Hit 1 in 3
- Killed 1 in 12  
(90% aged <5 years)
- Badly scarred 1 in 3 survivors
- Commonest cause of blindness in young adults

## CV of a Villain

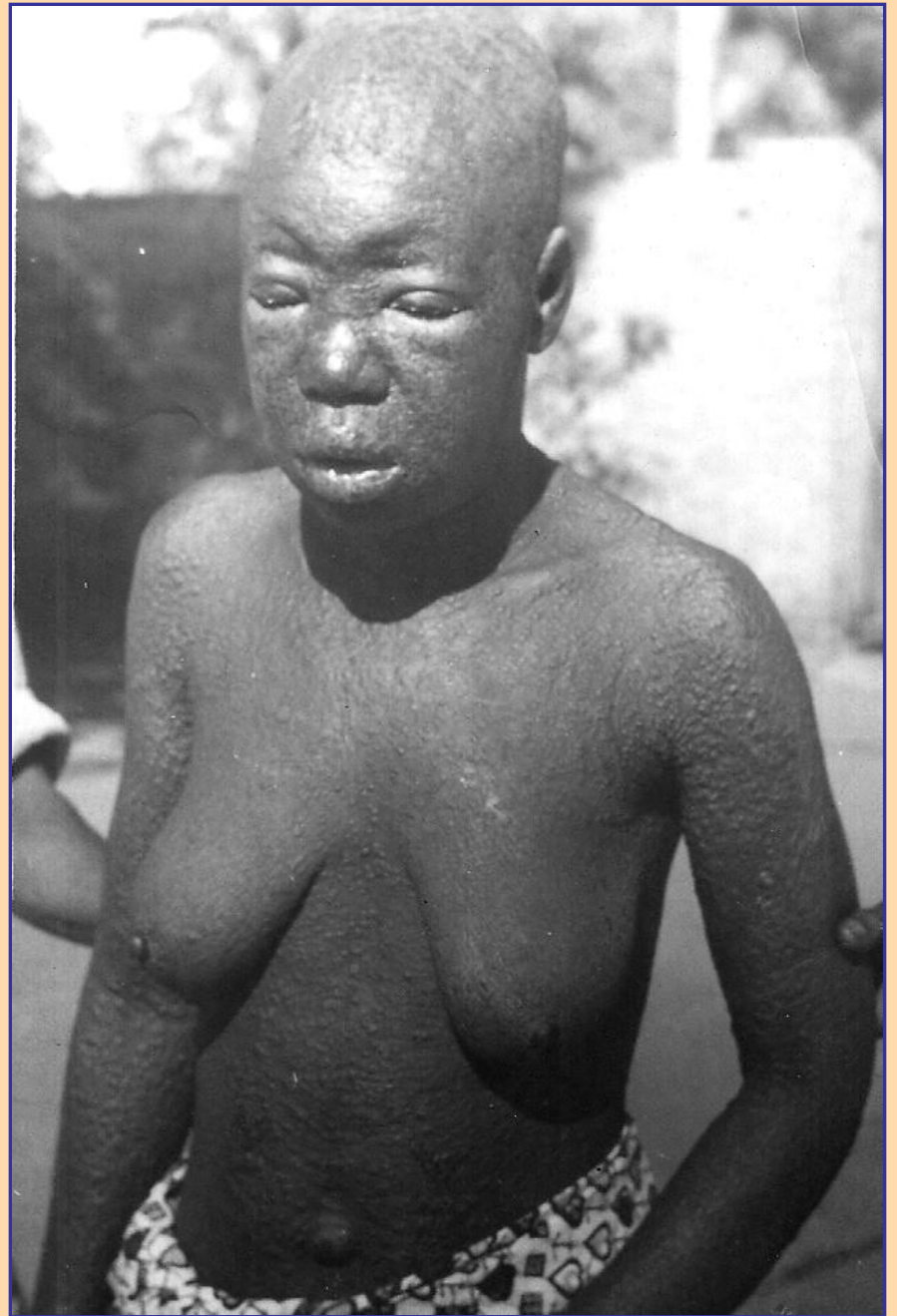
“The fact is we have forgotten what smallpox is like.”

*D. Fraser Harris, 1914\**

*\* Still to go:*

*63 years*

*250 million deaths*



# Treating smallpox: the Therapeutics of Despair

## Medicinal leech



... as prescribed, 1884

1770s:

- *Leeches, etc*
- *Purges, vomits*
- *Red things*
- *Let out the pus*

Mortality: 20-50%

1970s:

- *No mirrors!*
- *Intensive care*
- *Anti-viral drugs*

Mortality: 20-30%



# Prevention is better than cure



**Edward Jenner, FRS  
(1749–1823)**

*Gentleman doctor*

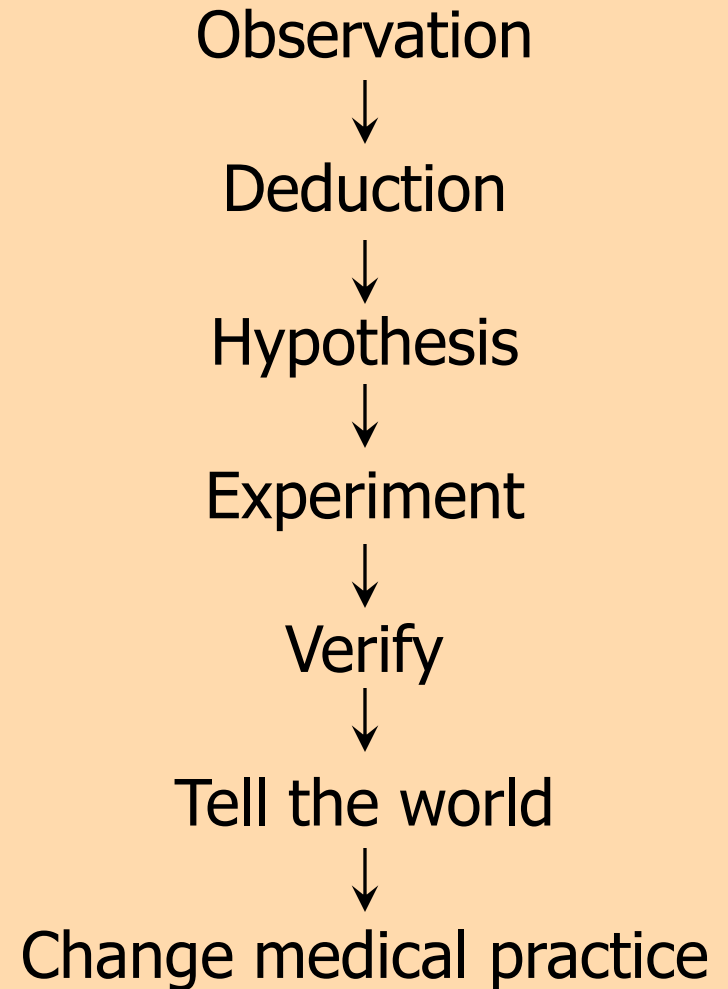
*Polymath and dilettante*

*Bon viveur, musician,  
poet*

*Pupil of John Hunter,  
Surgeon Extraordinary*

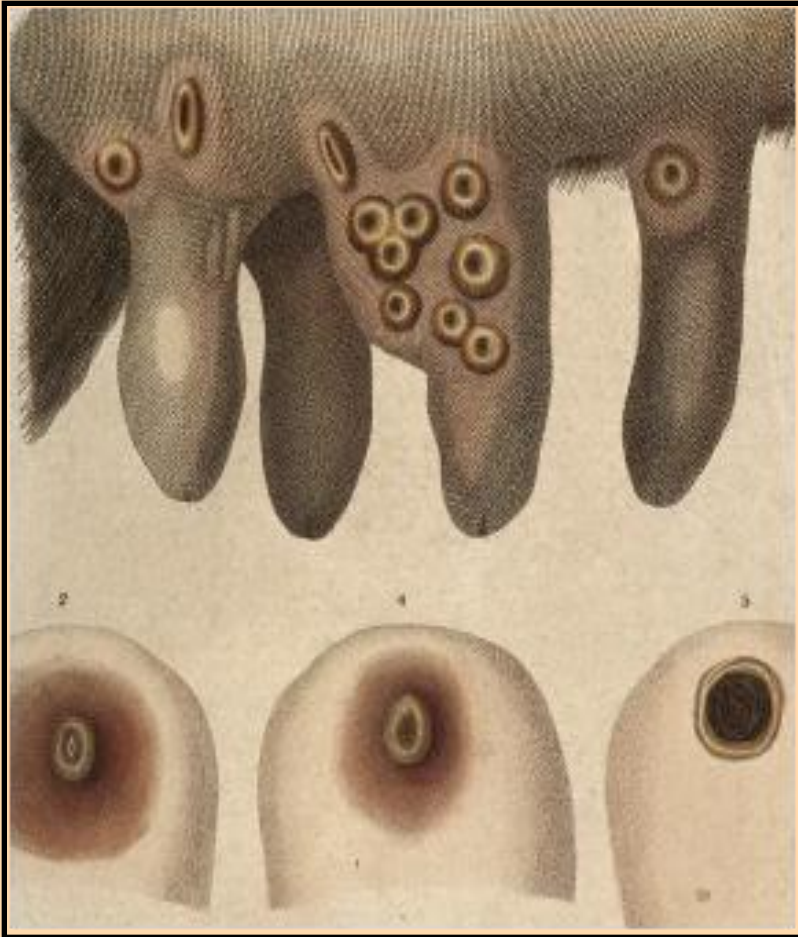
*Victim of variolation*

# Edward Jenner and the scientific process



# Vaccination

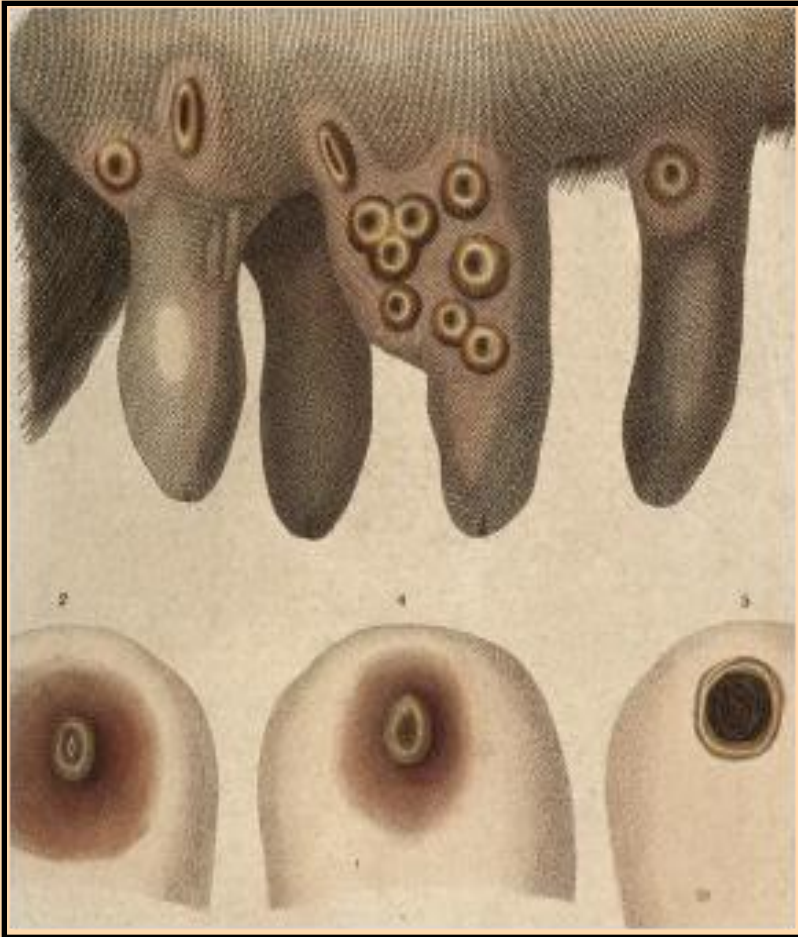
Giving *cowpox* to prevent *smallpox*!



Milkmaids' disease and legend

## Vaccination

Giving **cowpox** to prevent smallpox!



“I cannot take smallpox,  
for I have had cowpox.”

*Anonymous milkmaid  
to Edward Jenner  
Chipping Sodbury,  
ca. 1768*

The start of a 30-year  
experiment ...

Milkmaids' disease and legend

## The Convivio-Medical Society, ca. 1788



*“For the united purposes of conviviality and improvement of medical science” (but not cowpox)*

# And eventually to Blossom, Sarah and James



*(Blossom omitted for clarity)*

*14th May 1796*

Inoculated with cowpox pus  
– small sore, mild fever

*1st July*

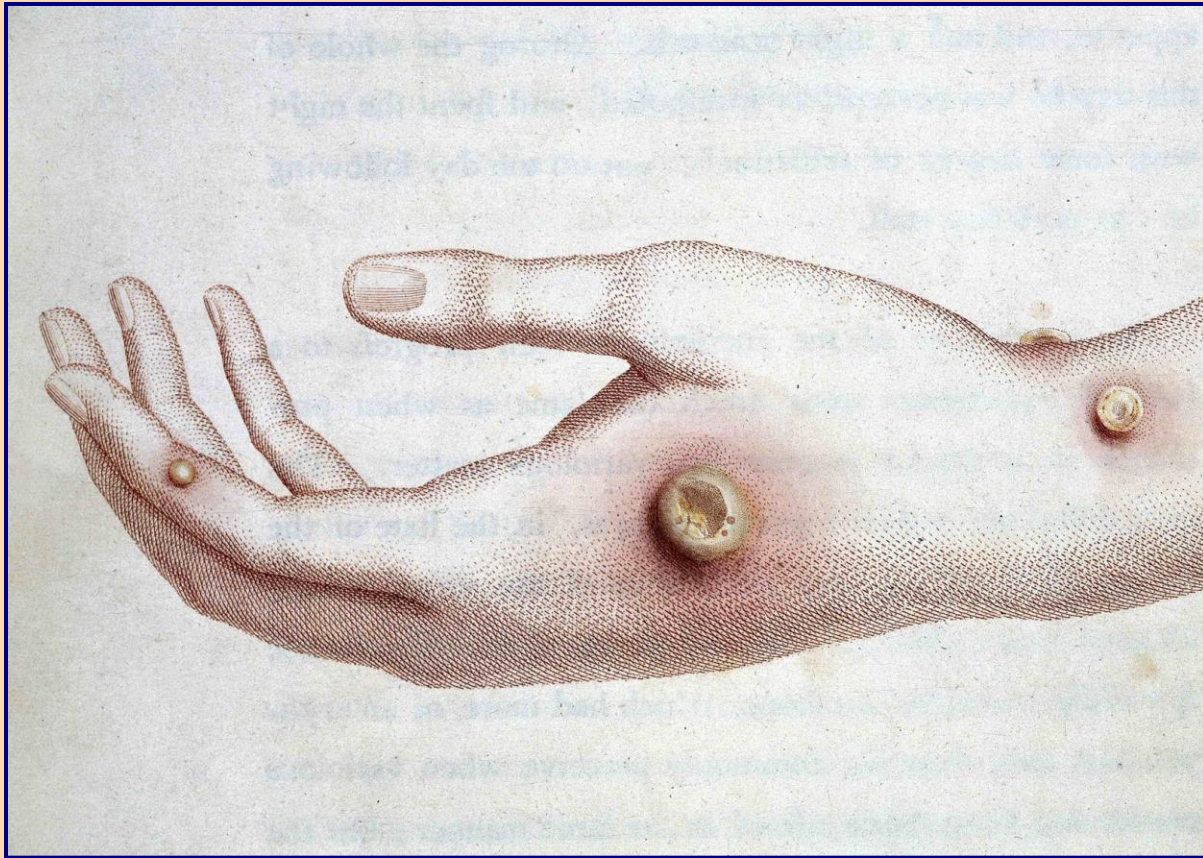
Variolated  
– no reaction

i.e. immune to smallpox

**Eureka!**

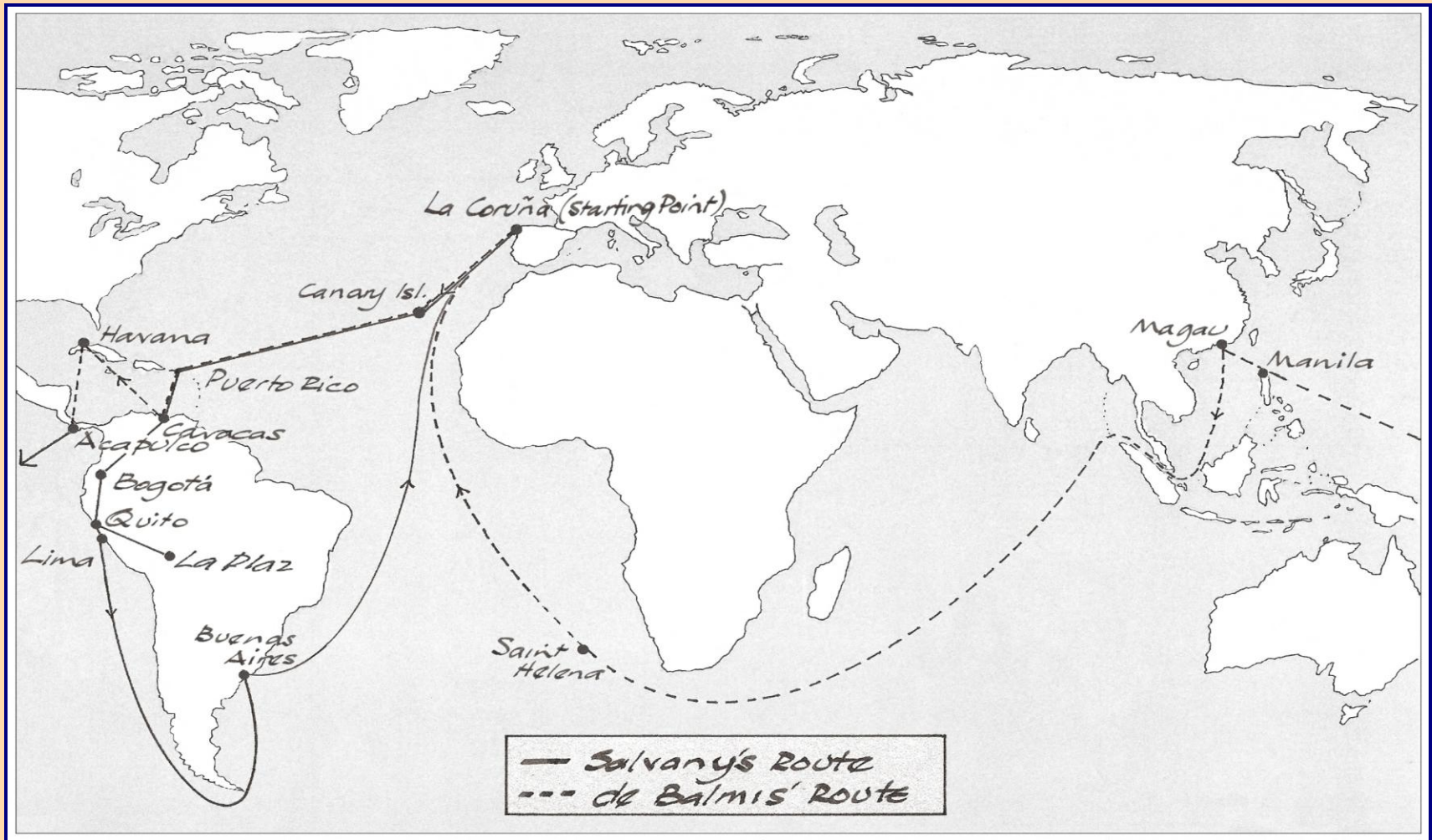
... But the Royal Society  
rejected Jenner's paper

An Inquiry into the causes and effects of the Cow Pox  
*(Self-)published September 1798, by Sampson Low, Soho (7/6d)*



A DIY guide to vaccination ... and an instant sensation

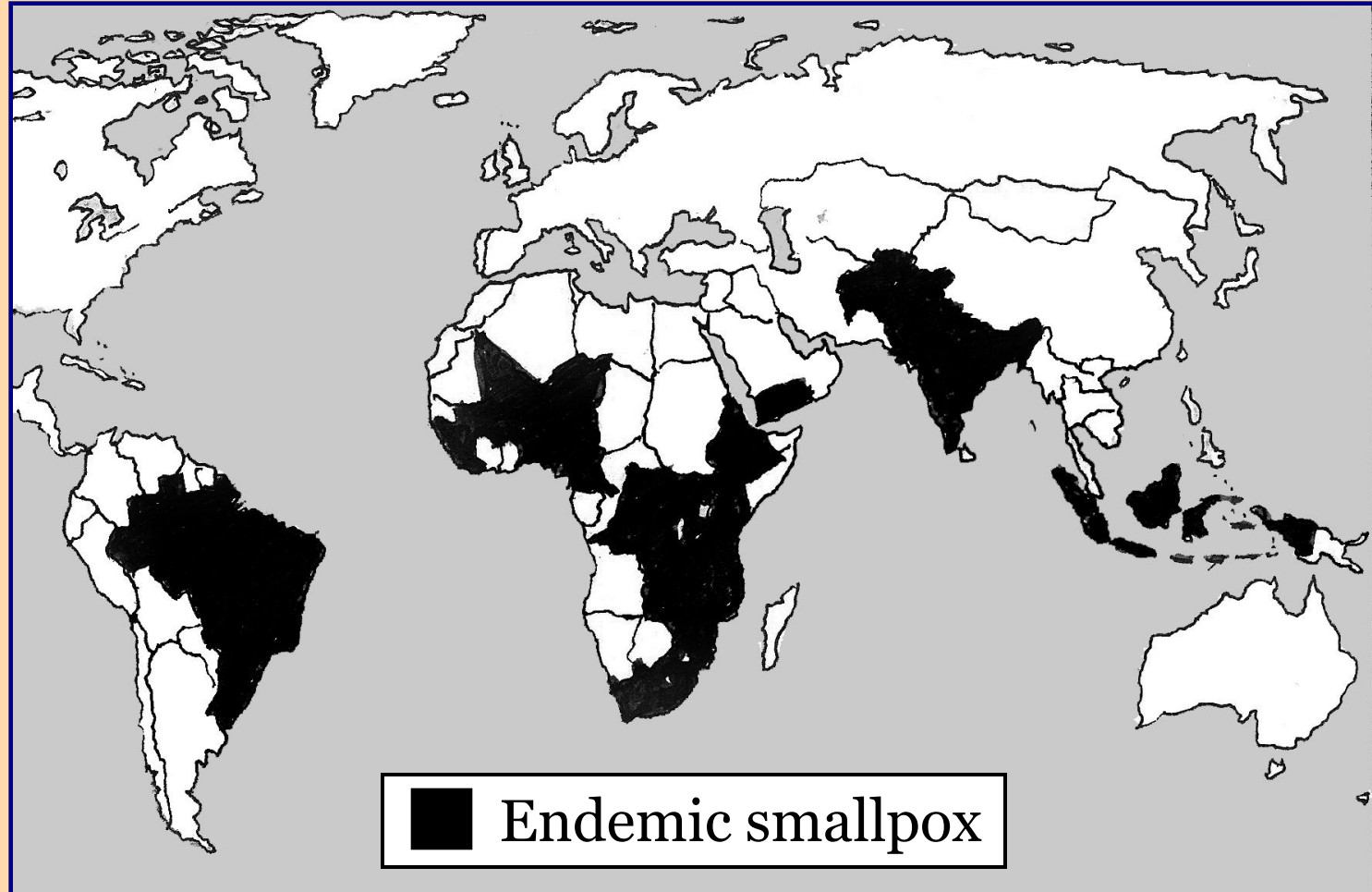
# Vaccination encircles the planet, 1803–6



The Royal Philanthropic Expedition of King Carlos of Spain



# Vaccination conquers the planet ... 1967



*The start of the WHO Smallpox Eradication Programme*



## **D.A. Henderson**

*Public health physician*

*Mastermind of WHO  
eradication programme*

*Visionary, mover and  
shaker*

*Bioterrorism guru*

# Jenner's vision realised



Rahima Bhanu

**October 1975:**

Last victim of *Variola major*  
*Rahima Bhanu, Bangladesh*

**October 1977:**

Last victim of *Variola minor*  
*Ali Maow Maalin, Somalia*

**8th May 1980**  
**WHO Declaration:**  
***Target Zero achieved***

**“A prophet without honour in his own country” (BMJ, 1896)**



*“Mankind can never forget that you have lived ...*

*Future nations will know by history only that the loathsome smallpox has existed.”*

*Thomas Jefferson, 1806  
Letter to Edward Jenner*

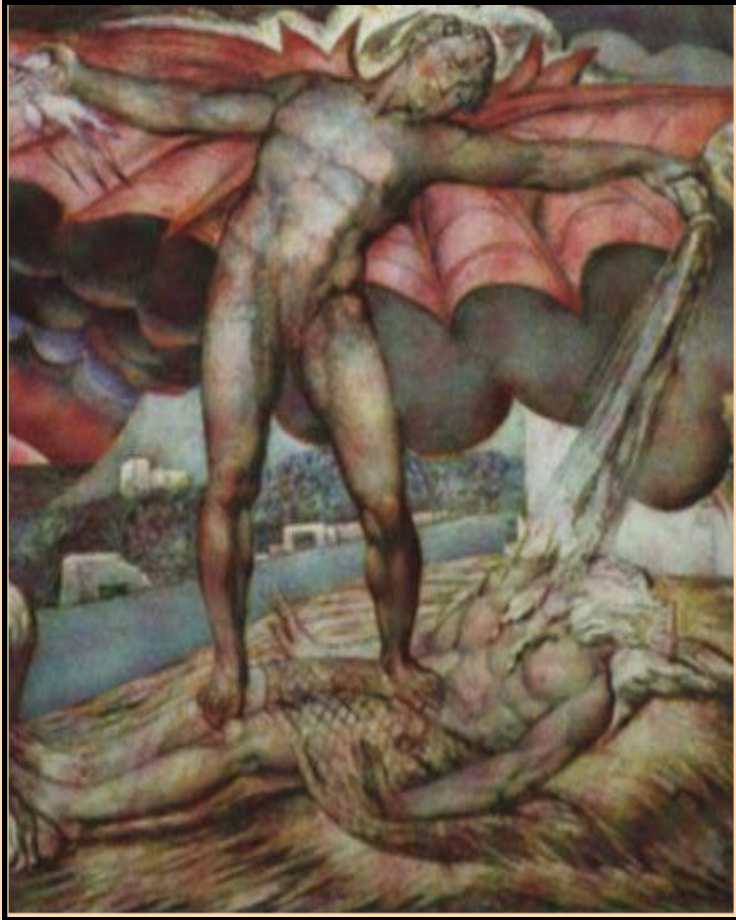
Trafalgar Square, 1858-62

# The great Vaccination Debate, 1800–?

*A war of disinformation*



# Vaccination is evil: God and Doctors



Blasphemy



Dangerous



Lamponing a non-risk of vaccination (Gillray)

# 'Crimes of the Cowpox Ring'



**Lora C. Little**

Natural healer, activist, writer

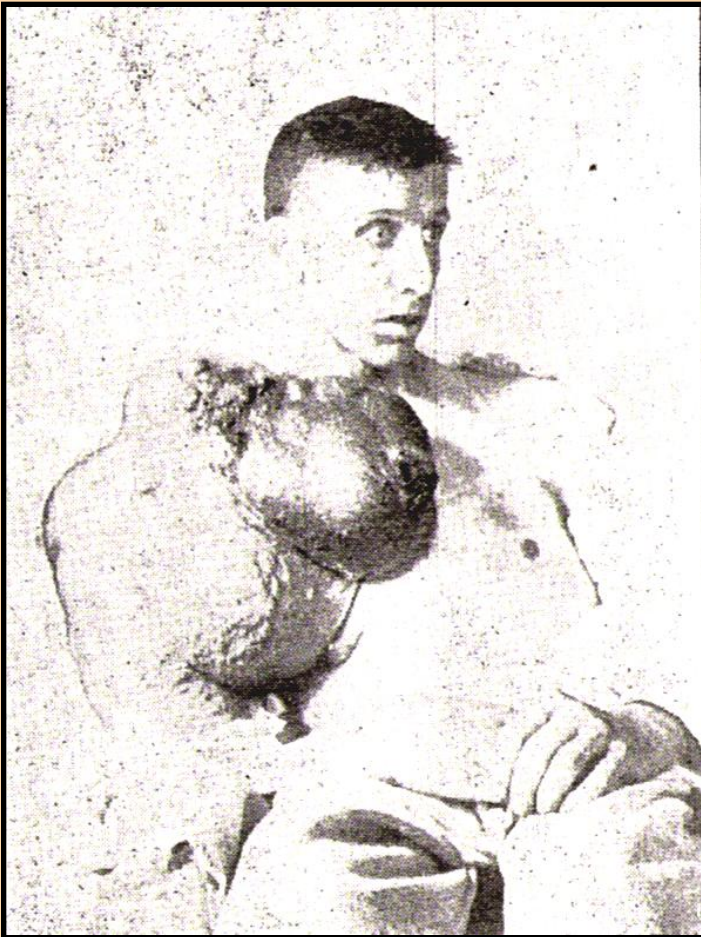


**Case No. 30**

Died aged 7 years,  
after forced vaccination at school



# Medical disasters following vaccination



“Dangerous consequences of  
the absorption of a brutal  
miasma into the human blood”  
*Immanuel Kant (1843)*

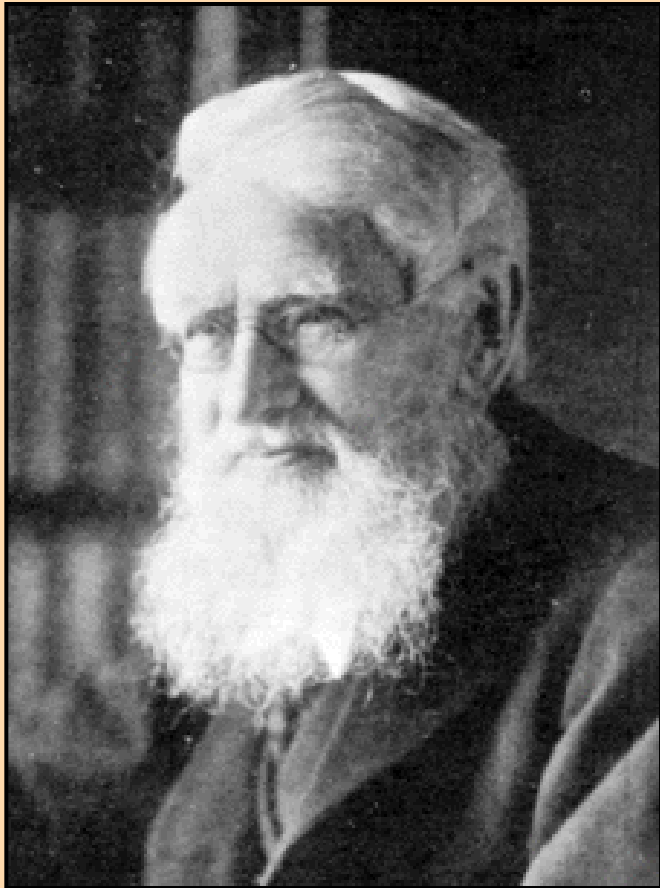
Extracts of cow cause cancer  
*Ernest McCormack (1909)*

**Case No. 275**

Benjamin Olewine

‘Saved from smallpox by vaccination’

# Big Names vs vaccination and the Acts



Alfred Russel Wallace

“A particularly filthy piece of witchcraft”

*George Bernard Shaw*

“Probably the cause of a greater mortality than smallpox itself ...  
But cannot be proved ever to have saved a single life”

*Alfred Russel Wallace*

**Deaths caused: thousands**

## A predictable outcome: Leicester, 1900



*Thanks to Mum, Dad and their MP*

**Kenneth Marion Little**  
*Only child of Lora C. Little*  
*Vaccinated September, 1895*  
*Died from the effects, April 1896*



KENNETH MARION LITTLE.

Only child of Mrs. Lora C. Little. Vaccinated Sept., 1895. Died from the effects, April 10, 1896. Age 7 yrs. 3 mos. (No. 30.)



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**Kenneth Marion Little**  
*Only child of Lora C. Little*  
*Vaccinated September, 1895*  
*Died from the effects, April 1896*

Vaccinated in September



Measles (recovered)



Diphtheria in April (died)

**Mortality rates in USA, 1896:**

- Diphtheria: 40%
- Under tens: 40%

# **'The Science [*sic*] of Chiropractic'**

*D.D. Palmer (1906)*

*“We do not believe that any disease is the result of a specific infection from micro-organisms ...”*

- ‘luxation’ of vertebrae causes diphtheria, smallpox, cancer, epilepsy, tapeworms, etc etc

*“Smallpox and chickenpox are one and the same”*

- treat both by manipulating the neck
- miracle cure!

*“Replacing luxation will cure the patient and give the death-blow to the vaccine poison swindle.”*

# The lens that focused anger over vaccination



Jenner – saint or demon?

# The lens that focused anger over vaccination



“His unscientific, foolish, unsupported assertions show that it was time that he should die ...

Only in oblivion should his name and doings be decently buried.”

*Alexander Wheeler (1879)*

Jenner – saint or demon?



# Jenner: not perfect



## **‘Inquiry’ flawed**

- *How many vaccinated?*
- *How many test-variolated?*
- *Cover-up?*

## **Evidence denied**

- *Immunity **not** lifelong*
- *There **were** risks*

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## Evidence denied

- *Immunity **not** lifelong*
- *There **were** risks*

Lives saved: millions  
Deaths caused: thousands

# The World's Greatest Names in Medicine



“Credit goes to the man who convinces the world,  
not the man to whom the idea first occurs.”

*Francis Galton*



# Anti-vaccinationists today

*Still going strong, e.g.:*

Council of Chiropractic Pediatricians

Association of American Physicians and Surgeons

- *'Battered baby' death due to vaccine reaction*

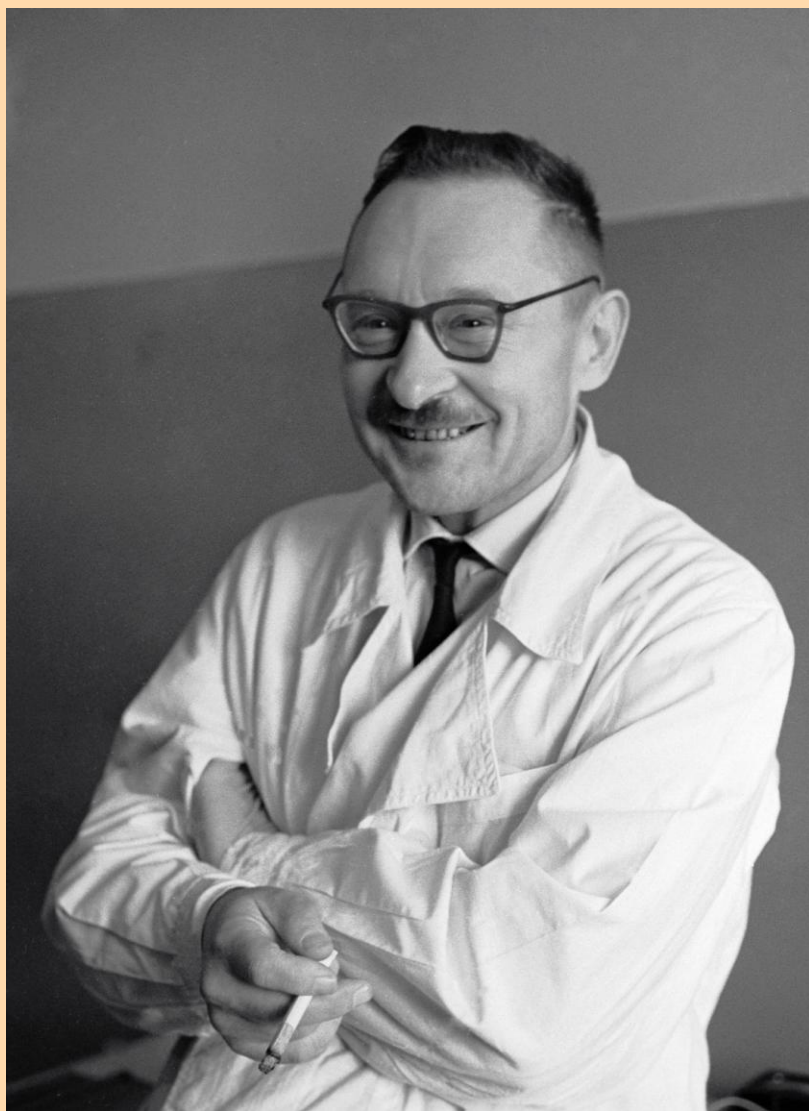
Campaign against Fraud in Medical Research

- *'Gulf War Syndrome' due to vaccine reaction*
- *AIDS and Ebola are man-made*

Dr. Viera Scheibner

Ex-Doctor Wakefield

## Hero turned Villain?



**Viktor Zhdanov (1914-2005)**

*Virologist, USSR Academician*

*Deputy Minister of Health  
and WHO activist*

*Later Chief of VECTOR  
and Biopreparat,  
Koltsovo, Novosibirsk*

**... Why did the SS20 spin?**

**You can go to where it all began**  
*Dr. Jenner's House, Berkeley*



[www.jennermuseum.com](http://www.jennermuseum.com)

# ANGEL OF DEATH

THE STORY OF SMALLPOX

GARETH WILLIAMS



*Why buy this book?*

- Royalties going to Dr. Jenner's House
- Only 28 shopping days to Christmas
- It's not too bad really

*Shortlisted for:*

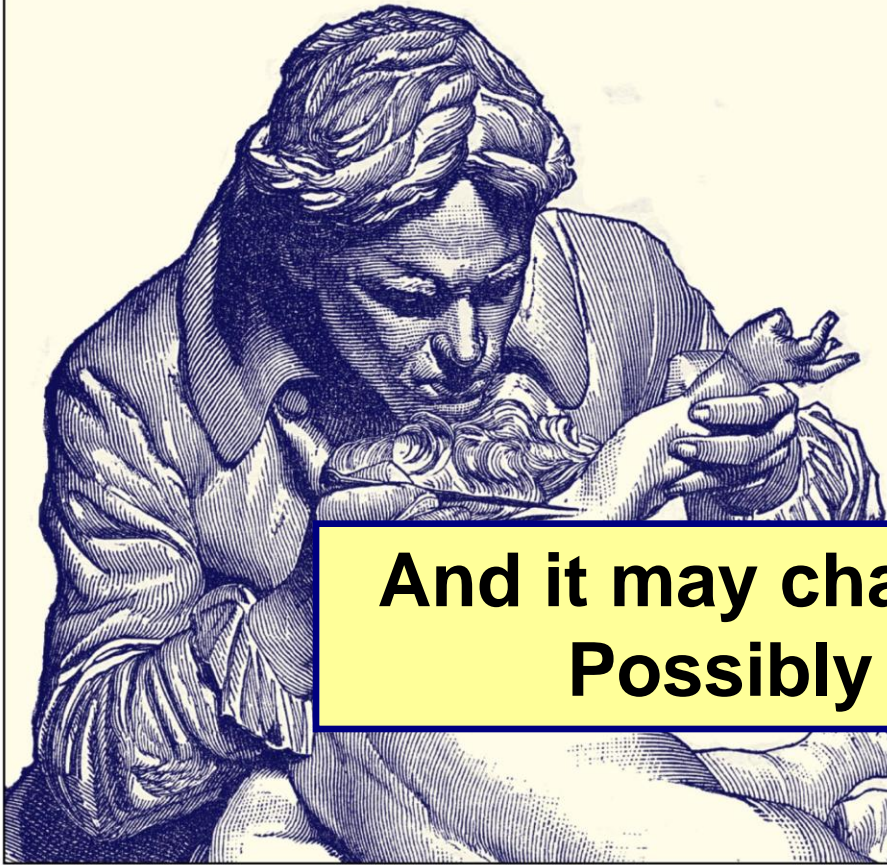
Wellcome Trust Book Prize, 2010  
Medical Journalists' Award, 2011



# ANGEL OF DEATH

THE STORY OF SMALLPOX

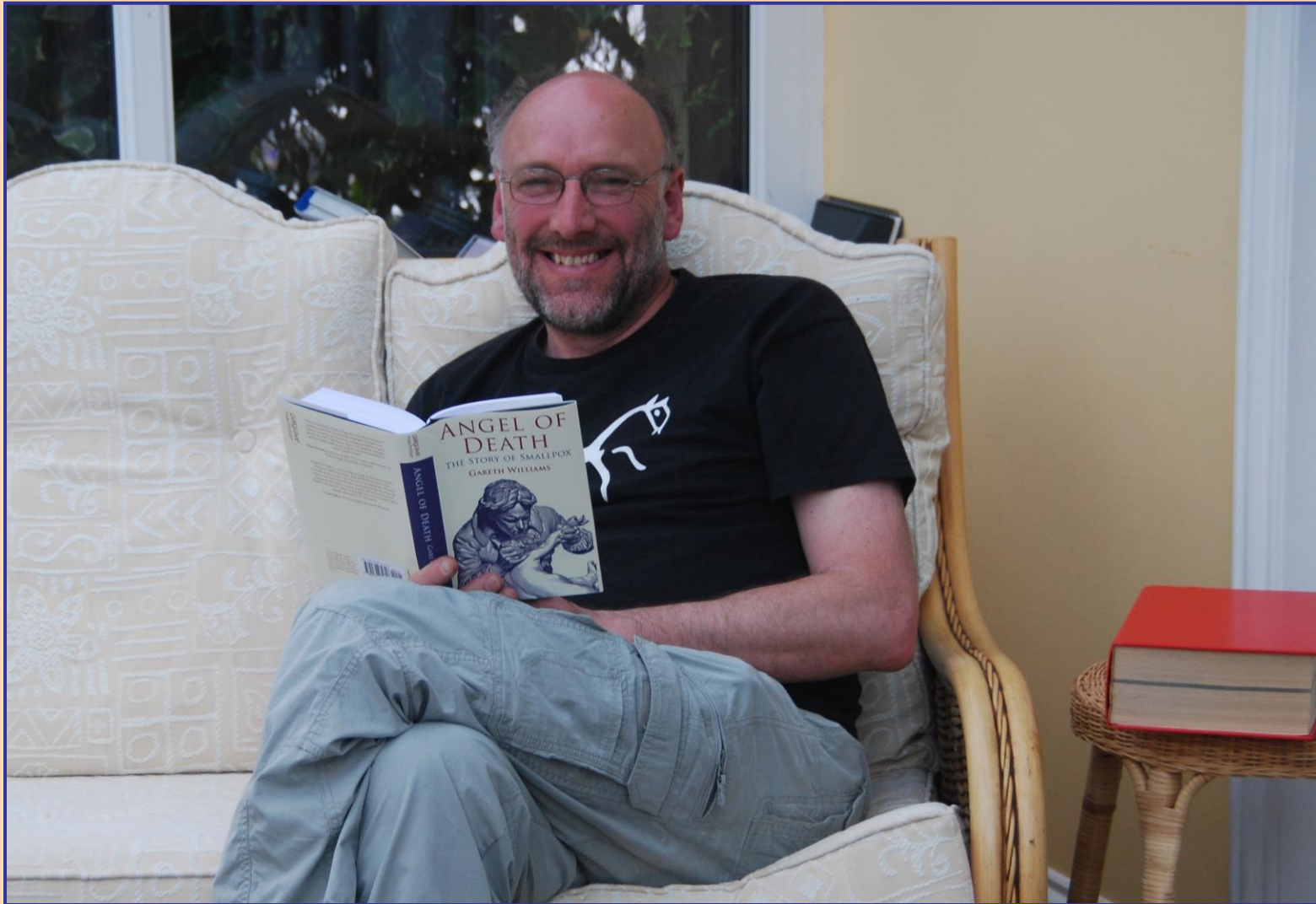
GARETH WILLIAMS



*Why buy this book?*

**And it may change your life.  
Possibly for ever.**

**Before ...**



... and shortly after



