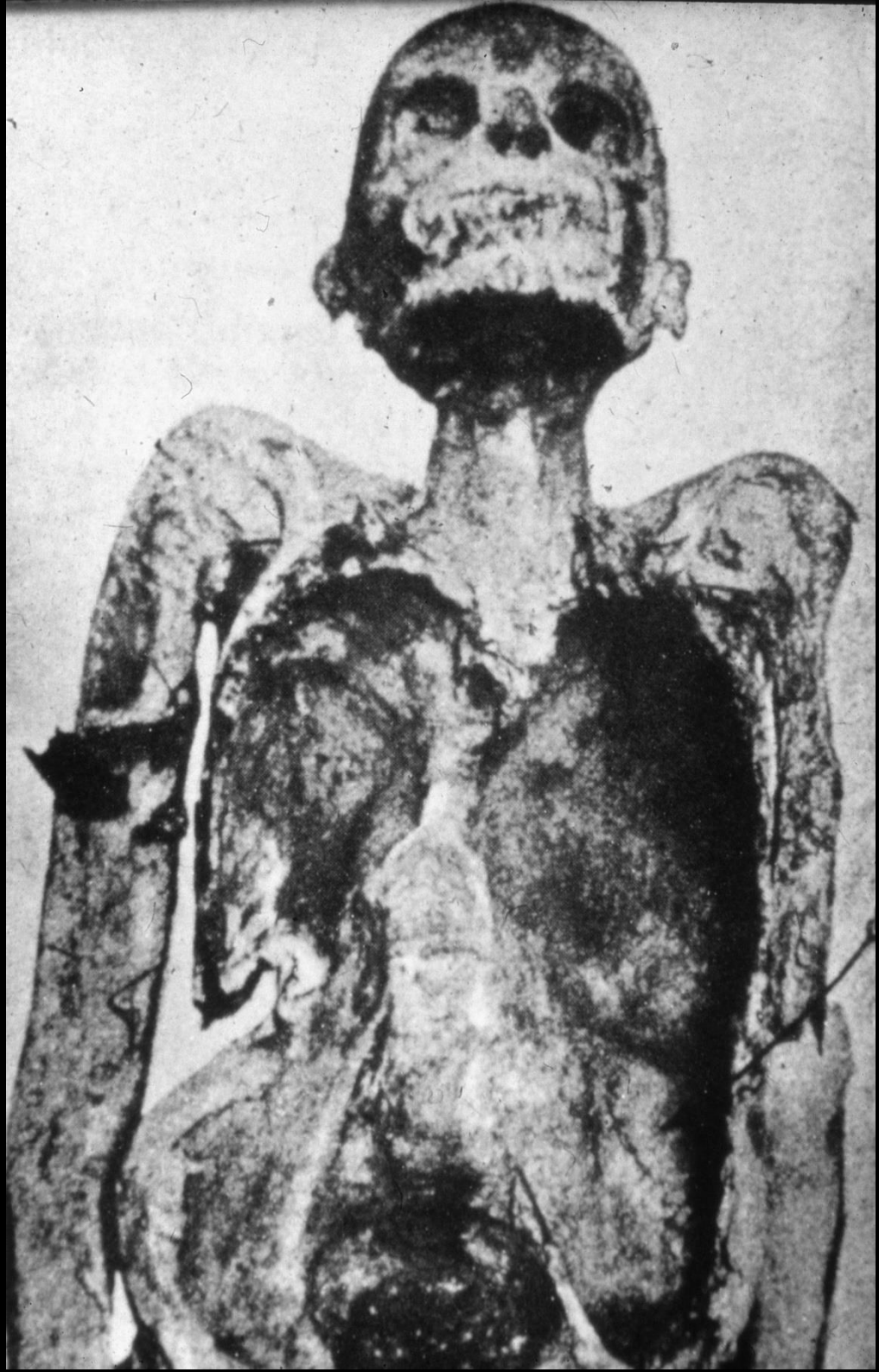


Dus auons dit
plusieurs choses

ne en soy et de la vertu des
feuilles : des cendres et de

Spinal tuberculosis
(and psoas abscess)
in Egyptian mummy
circa 1000 BC



Leprosy in Egyptian mummy

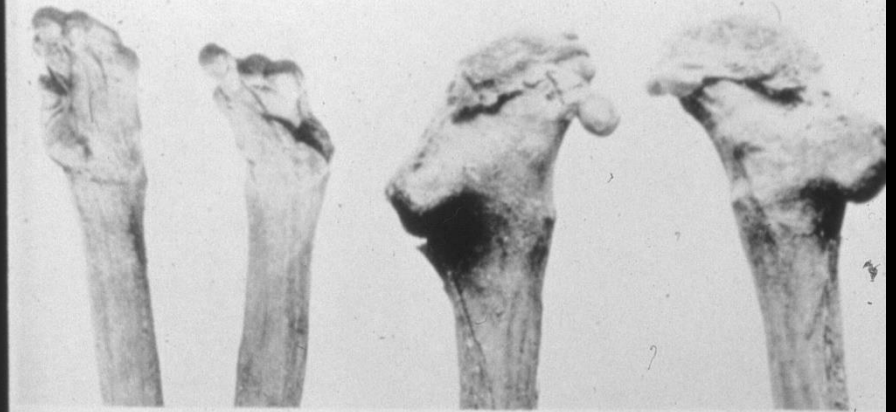


Fig. 13. Hands and feet of a mummy from El-Bigha with evidence of leprosy (p. 14, 79 ff.) (Reproduced with permission from the publishers, George Allen and Unwin, Ltd., London from G. Elliot Smith and W. R. Dawson: Egyptian Mummies, figg. 66 and 67).

ff.). (Reproduced with permission from the National Museum, Copenhagen, photo no. 28843.)



X-ray photo of Left foot of the mummy from El-Bigha (p. 14, 79 ff.). (Reproduced with permission from professor V. Møller-Christensen).

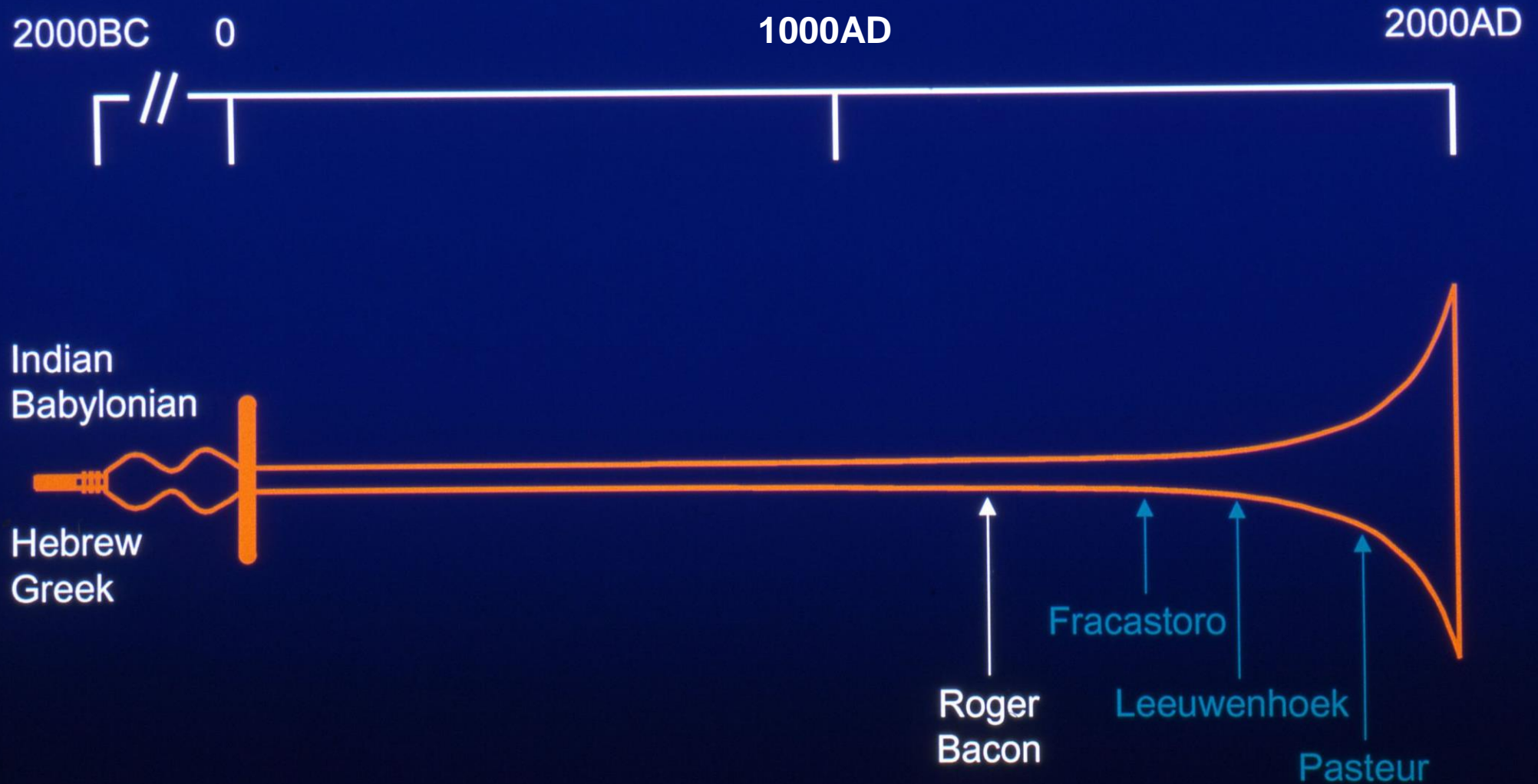


Fig. 15. X-ray photo of the Left hand of the mummy from El-Bigha (p. 14, 79 ff.). (Reproduced with permission from professor V. Møller-Christensen).

Known diseases of antiquity

Palaeopathology [**Tuberculosis**
Leprosy
Smallpox
Schistosomiasis

Contemporary descriptions [**Trachoma** **Ebers Papyrus 1500 BC**
Diphtheria
Tetanus **Hippocrates 400 BC**
Rabies
Anthrax **Virgil 1st century BC**



The understanding of infectious disease over the ages

Plague protective
clothing 1656
(designed by
Charles Delorme of
Marseilles)



Vorstellung des Doct. Chicogneau Lanklers der Universitaet zu Montpel-
lier, welcher A. 1720. vom Könige in Frankreich nach Marseille geschicket worden,
um denen mit der Pest behafften Leuten beizusprechen. Er trug daselbst ein langes Kleid
von Corduan-Leder mit einer Masque, die Augen von Crystall hatte: und deren lange
Nase mit wolriechenden Sachen wieder das Gift angefüllet war. Dabey er einen Stab in der hand
führte, womit er auf die Leiber, der von der Pest angestochten Personen deutete, wenn er sagte, man
sollte zu deren Genesung thun.

2000BC

0

1000AD

2000AD

Indian
Babylonian

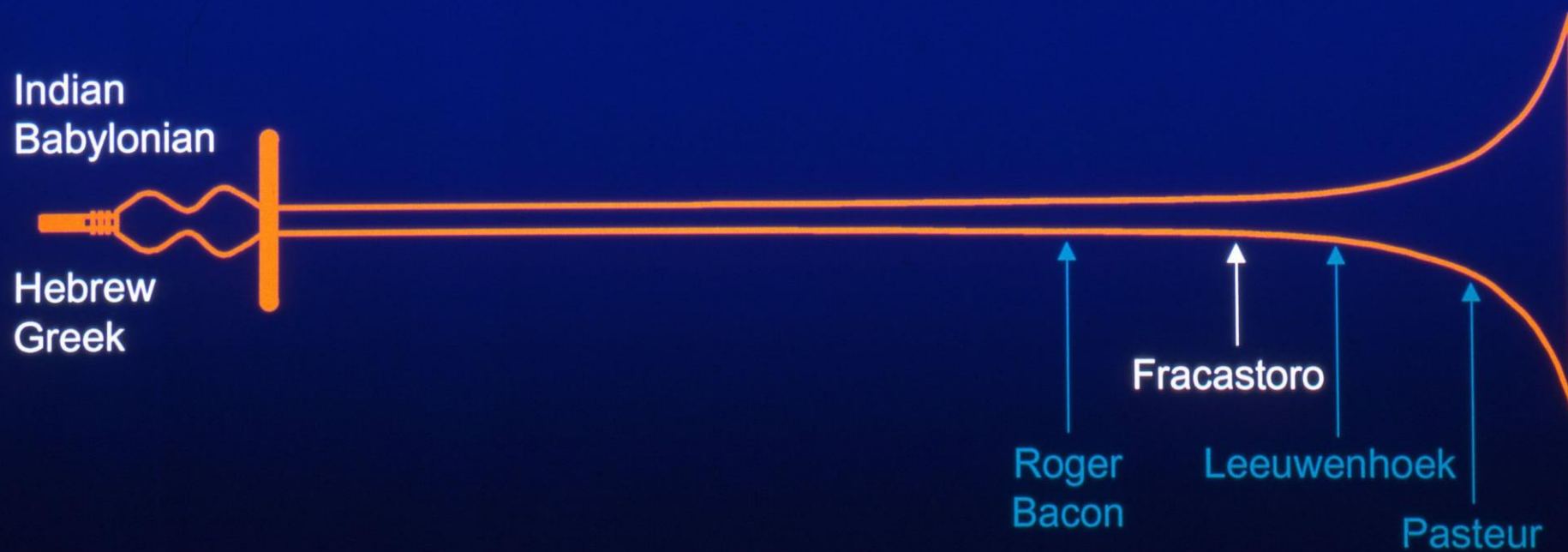
Hebrew
Greek

Fracastoro

Roger
Bacon

Leeuwenhoek

Pasteur



Giralamo
Fracastoro
1478 – 1553



Combing head
lice from a youth

Hortus sanitas 1491



La.cix.

p

Edicul⁹. Xli. Pediculifant ymes
curis a pedib⁹ dci. vñ pediculof

Thomas Moffet
1553 –1604



A page from Thomas Moffet's *Insectorum Theatrum* 1590

genera esse dicta, sed non describitur *Phalangium* (ex gra. nels
Galem libro) in *Aegyptiacum*, *Nigrum*, *Rutilum*, *Rachen*, *Album*,
Cinnam, *Vileum*, *Formicaria*, *Cantharadum*, *Vespartum* et
Orobacem, *Phalangia* dicitur. Sed tam inopie (re quid grauius
dicem) tam ipse *Phalangium* Arabum familia illa describitur, ut
nihil de re tanta tam enormiter videtur confasum. Demum ut
omnes (qua vidimus, legimus ut) *Phalangium* species addam,
placuit etiam Cretense adijcere, cuius hinc imaginem accurate
sculptam habetis. Est autem ex colore fusca cinerascens, corpore
glatro, tribus brachijs, iuxta ex duobus quasi vinctis stimulis
munitum, quibus morder et pungi. Viri Francorum more
ex musis et papilionibus, quibus illaqueandis telas conficiunt.
Qua ponit *Phalangia*, *Phalangia*, *Phalangia*, *Phalangia*, *Phalangia*,
qua sub ventre harent materno, donec aduultera facta ma-
trem occidunt, foramen excauat pro corporis magnitudine
aptum; nam ut non vix tunc coloris, ita nec eiusdem
magnitudinis. Habitant in cauerna duos pedes profunda,
quam extra stramine operiunt, ne puluere repleantur.
Phalangia hi omnes Veneni ex insita Natura Venenum ob-
tinent; non enim illud ex herbis, sugunt (ut *Similicudinum* cor-
rasores nonnulli autumnant) nec ex cibi malignitate. Vescunt
enim potissimum muscu, culicibus, apibus, nihil cacochymia
ex eorum corporibus exiguunt. *Formicarij* morsum grauius
inseguuntur symptomata: nam vulnere tumorem infert in-
gentem, genia labefactae, cordis tremorem exciunt, viri
dejectionem inducit, quandoque et mortem. *Nigricor* agros
adeo profunde dormire auctor est, ut in sempiternum nau-
siger demum incidant; patiuntur et ea quae ab *Aspidem*,
Leoparum pectori adhibuisse referunt historiae, ut sine do-
lore i Pompeij manibus euaderet. *Agrostus* imbellem *phal-*
gem infert.



signa morsus
Phalangiorum

• J-I h

Little Miss Muffet (Moffet)

Little Miss Muffet sat on a tuffet,
Eating some curds and whey;
There came a great spider, and sat down beside her,
And frightened Miss Muffet away.



2000BC

0

1000A

2000AD

Indian
Babylonian

Hebrew
Greek

Roger
Bacon

Fracastoro

Leeuwenhoek

Pasteur

D

Title page of
Robert Hooke's
Micrographia
1665

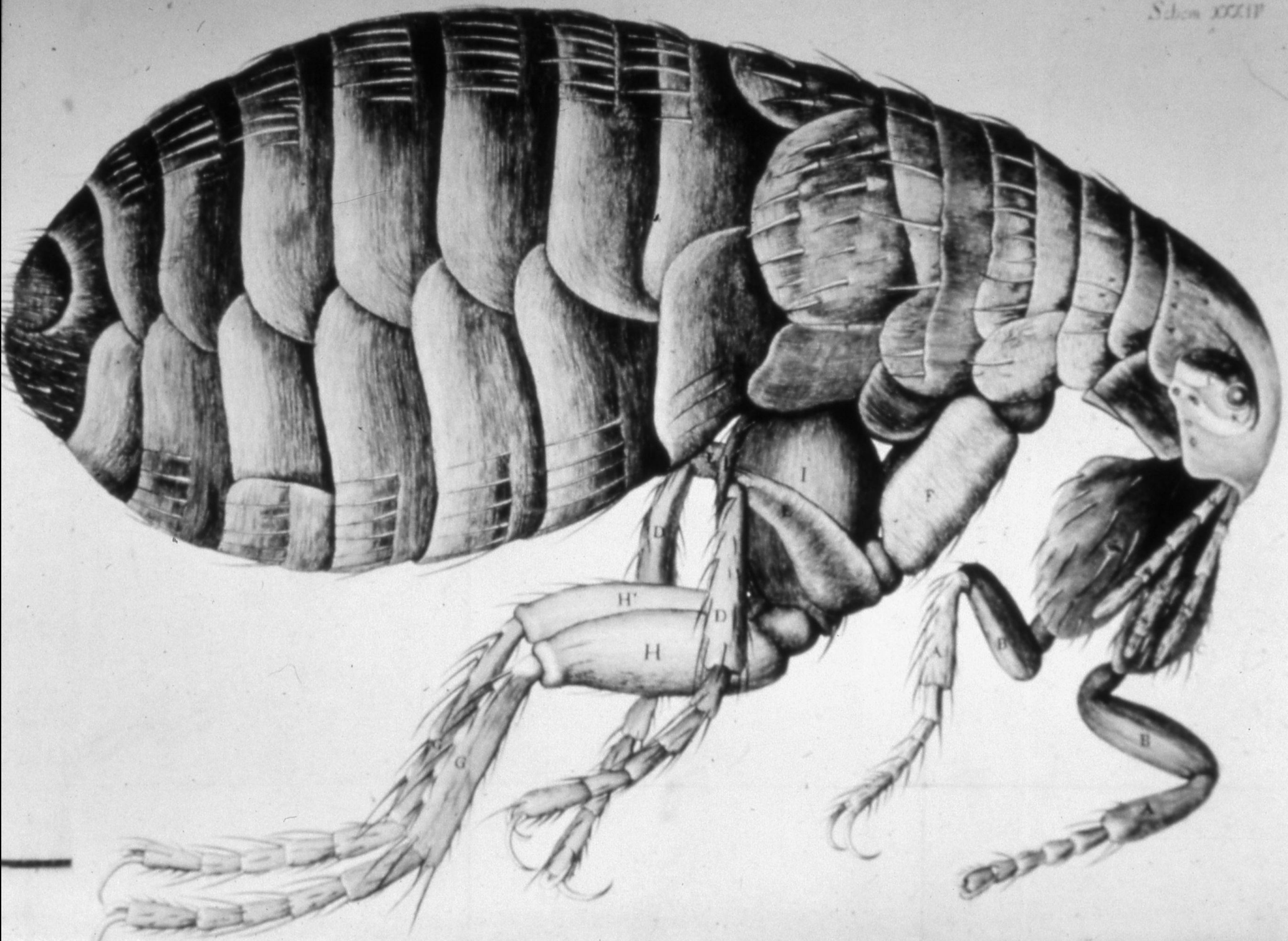
MICROGRAPHIA:
OR SOME
Physiological Descriptions
OF
MINUTE BODIES
MADE BY
MAGNIFYING GLASSES.
WITH
OBSERVATIONS and INQUIRIES thereupon.

By R. HOOKE, Fellow of the ROYAL SOCIETY.

*Non possis oculo quantum contendere Linceus,
Non tamen idcirco contemnas Lippus inungi. Horat. Ep. lib. 1.*

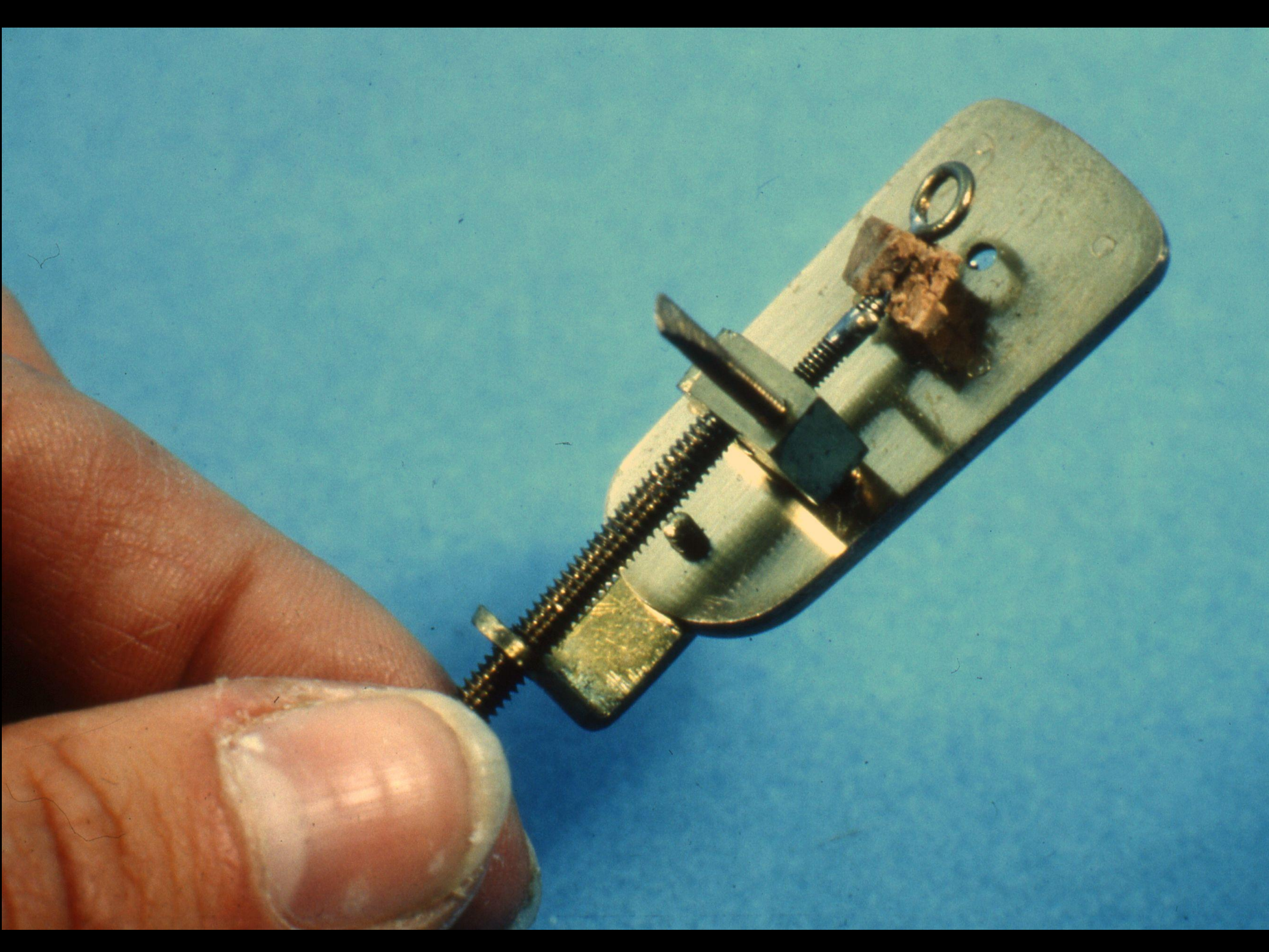


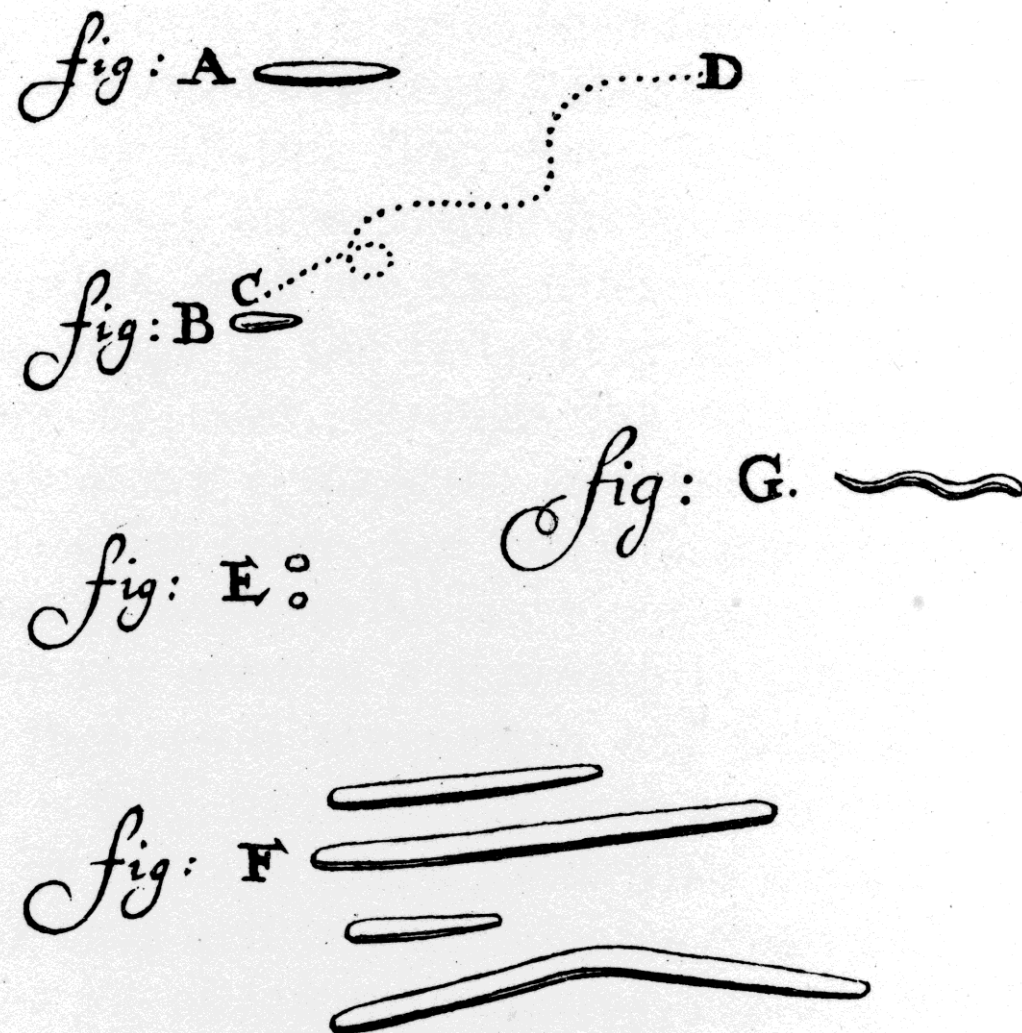
LONDON, Printed by Jo. Martyn, and Ja. Allestry, Printers to the
ROYAL SOCIETY, and are to be sold at their Shop at the Bell in
S. Paul's Church-yard. M DC LX V.



Antonie van
Leeuwenhoek
1632–1723

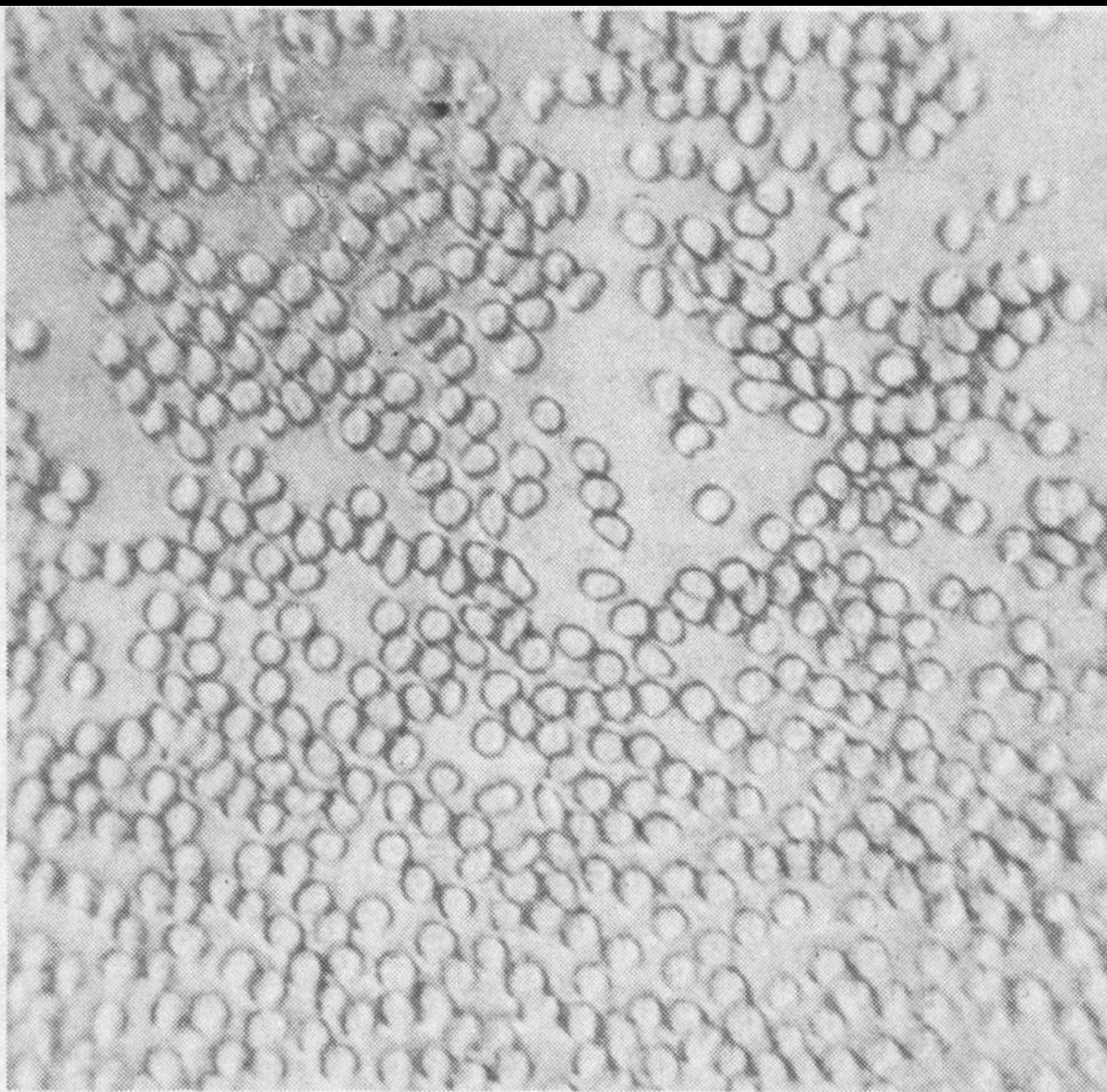






LEEUVENHOEK'S FIGURES OF BACTERIA FROM THE HUMAN MOUTH
(Letter 39, 17 Sept. 1683)

Enlarged ($\times 1\frac{1}{2}$) from the engravings published in *Arc. Nat. Det.*, 1695.



Unstained smear of author's erythrocytes imaged with Leeuwenhoek microscope in fig 1. View compares favourably with a modern microscope of medium power, and bacteria can be satisfactorily resolved by this lens, which dates from around 1700.

Sir John Pringle
1707 – 1782



Lady Mary Wortley Montagu

1689-1762





In Memory of
Peleg, Son of
Thomas & Mary
Conklin.

who died
of the Small pox
by Inoculation
Jan^y 27th 1788
Aged 17 years.

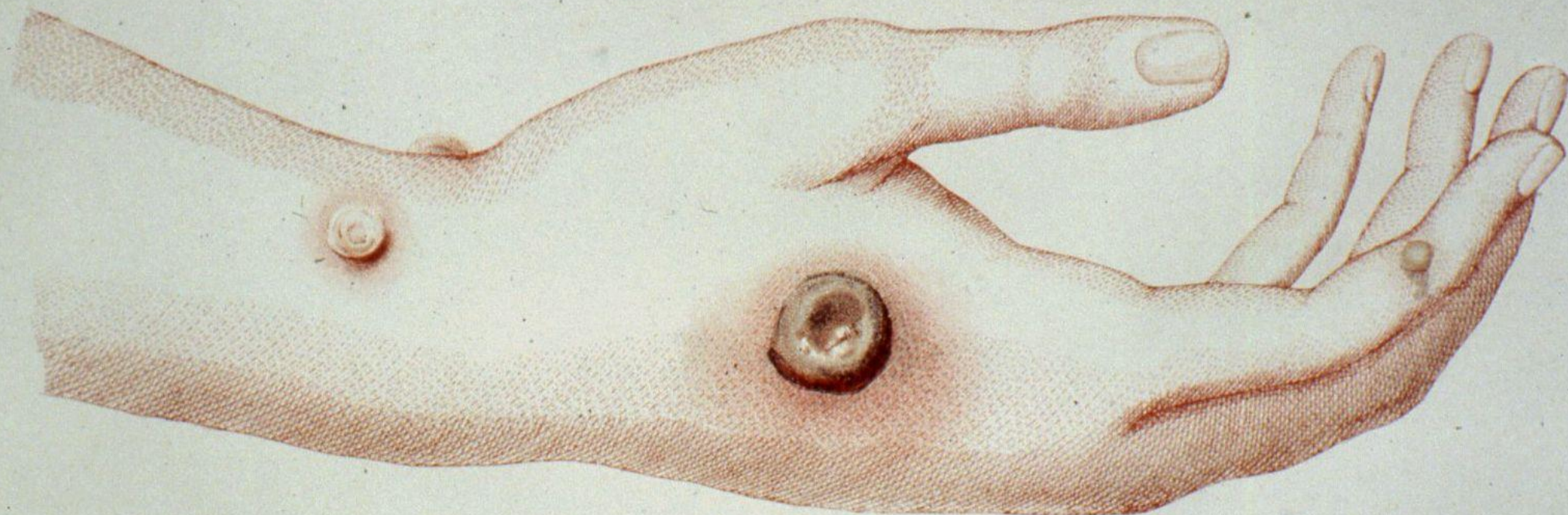
Benjamin Jesty
c.1736-1816



Edward Jenner

1749-1823





CASUAL COW POX (JENNER).
CASE OF SARAH NELMES.

The hand of Sarah Nelmes – cowpox





Artist Gaston Melingue's version of Jenner's vaccination of James Phipps

A



The Cow-Pock — or — the Wonderful Effects of the New Inoculation! — Vide. the Publications of y^e Anti-Vaccine Society.



Vaccination session in Chateau Liancourt c.1820

Street vaccination session in Paris





Military vaccination session in France



The Chantry, Jenner's home in Berkeley, Glos.

Ignaz Semmelweis
1818 –1865





John Snow

1813 –1858

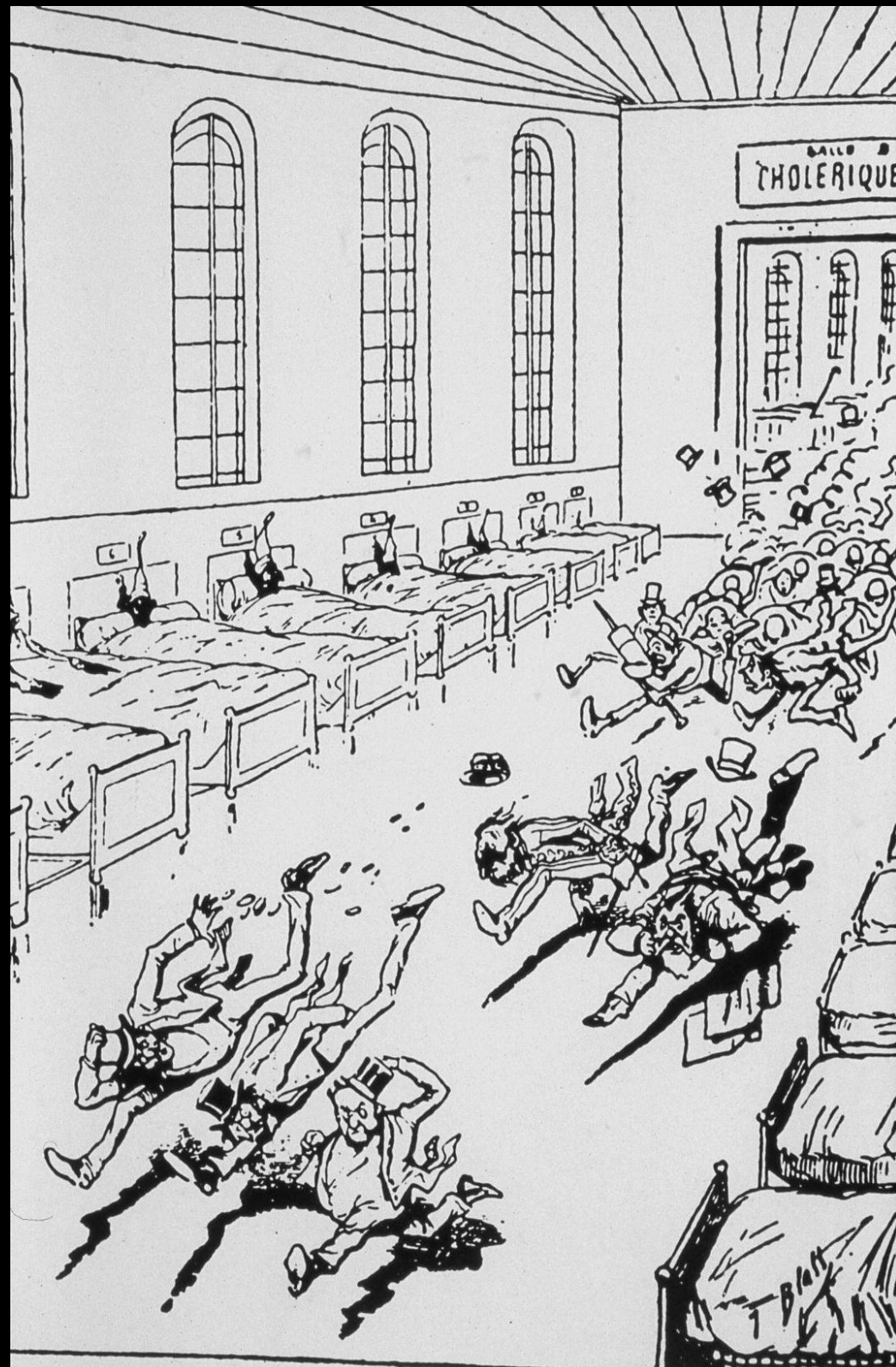


Cholera Präservativ Frau, and dog!

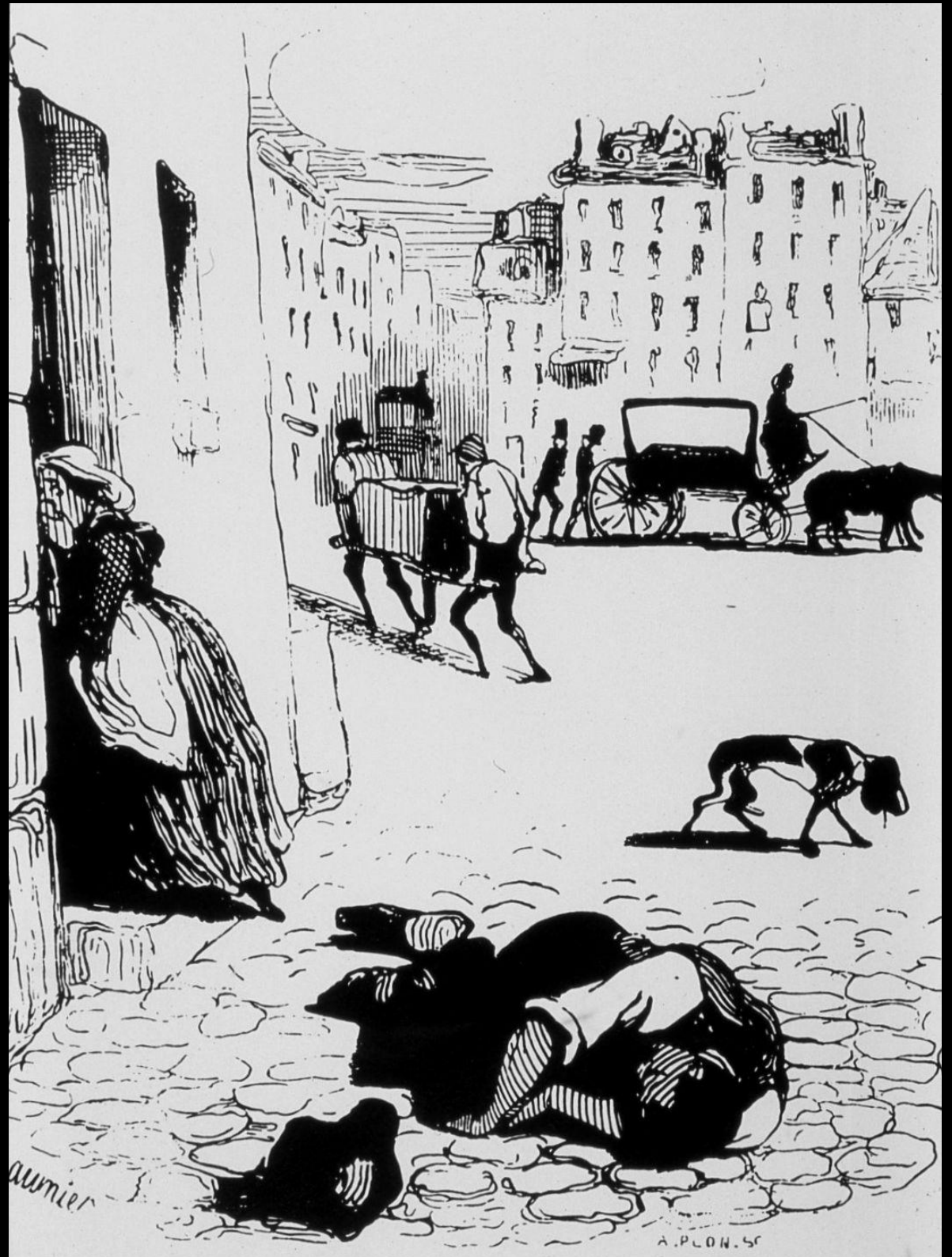


Portrait einer Cholera-Präservativ-Frau
von H. G. Saphir

Portrait of a Cholera-Preventive Woman
German, c. 1832 (no. 18)



Cholera in Paris (Daumier, 1840)



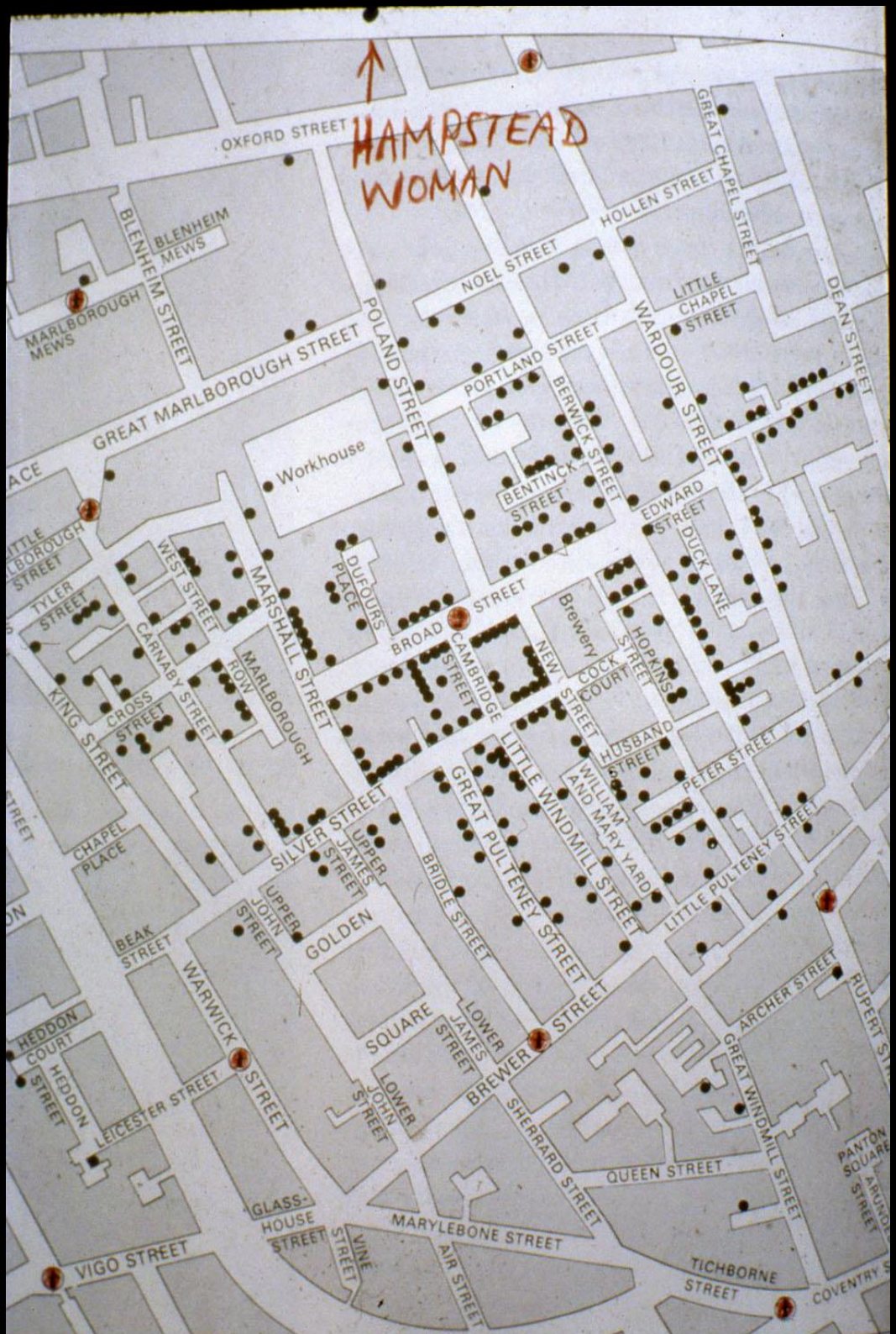
Punch cartoon
1855



FARADAY GIVING HIS CARD TO FATHER THAMES

And we hope the Dirty Fellow will consult the learned Professor.

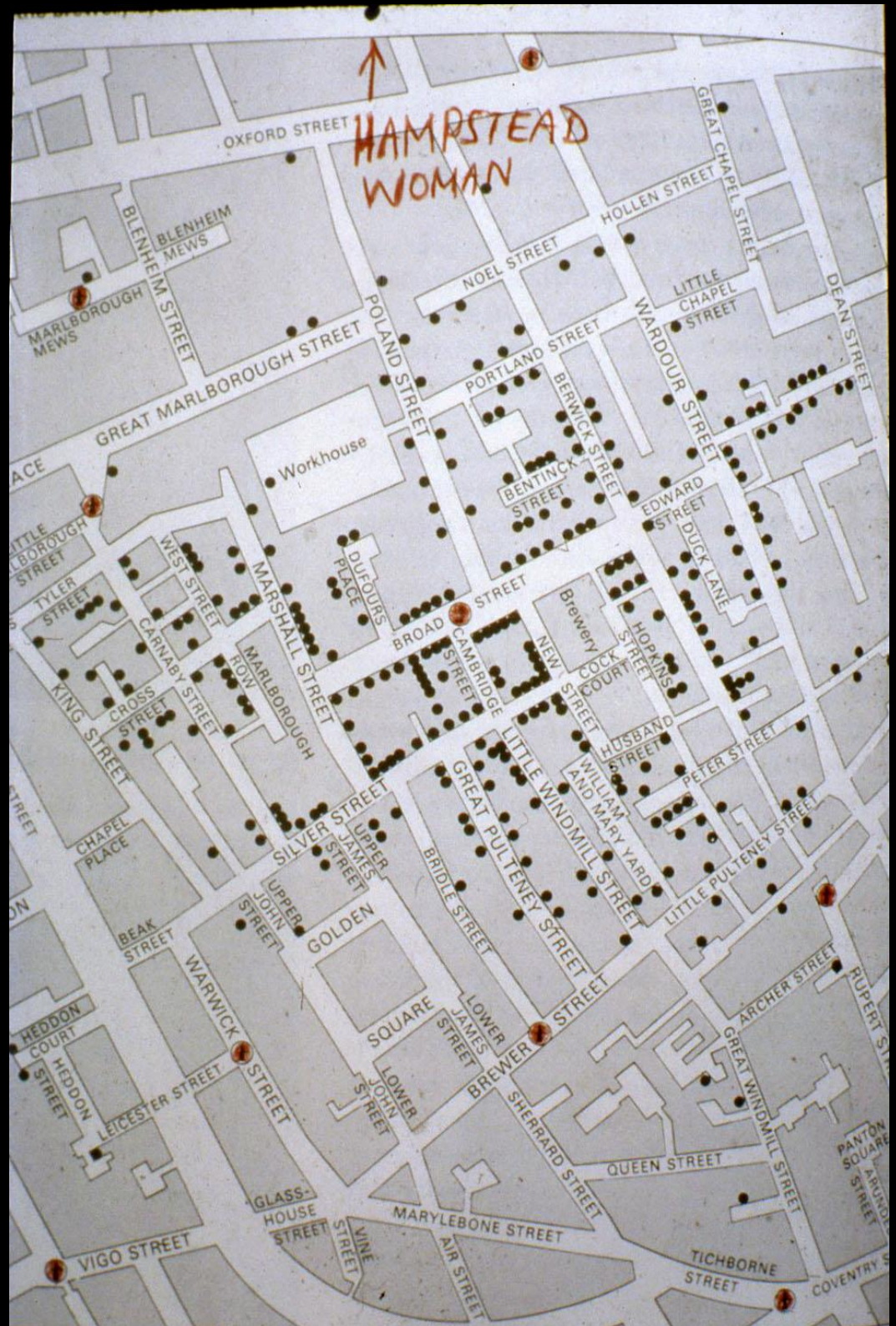
John Snow's map of cholera deaths in Soho



The infamous
Broad Street
pump, 1854



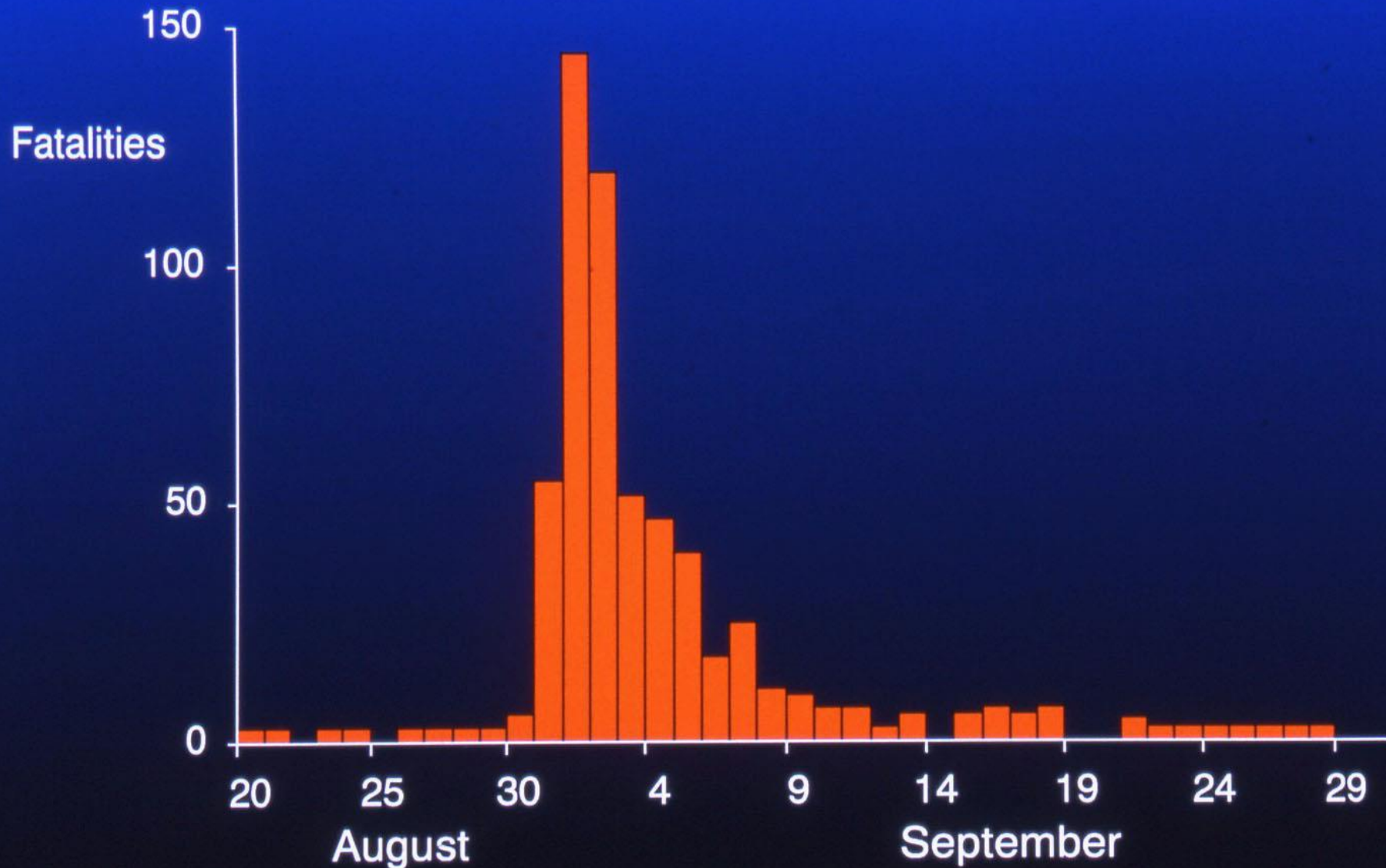
John Snow's map of cholera deaths in Soho



REGISTRATION DISTRICT <u>Hampstead</u>									
1854. DEATH in the Sub-district of <u>Hampstead</u> in the <u>County of Middlesex</u> .									
No.	When and where died.	Name and surname.	Sex.	Age.	Occupation.	Cause of death.	Signature, description, and residence of informant.	When registered.	Signature of registrar.
429	Second September 1854 West End	Susannah Eley	Female	59 years	Widow of William Eley Percussion Cap maker	Diarrhoea 2 hours Cholera Epidemica 16 hours Certified	Eliza Gardner Present at Death West End Hampstead	Sixth September 1854	William Paxon Registrar

Susannah Eley's death certificate

Epidemic Curve of Cholera Outbreak: Golden Square, London, 1854

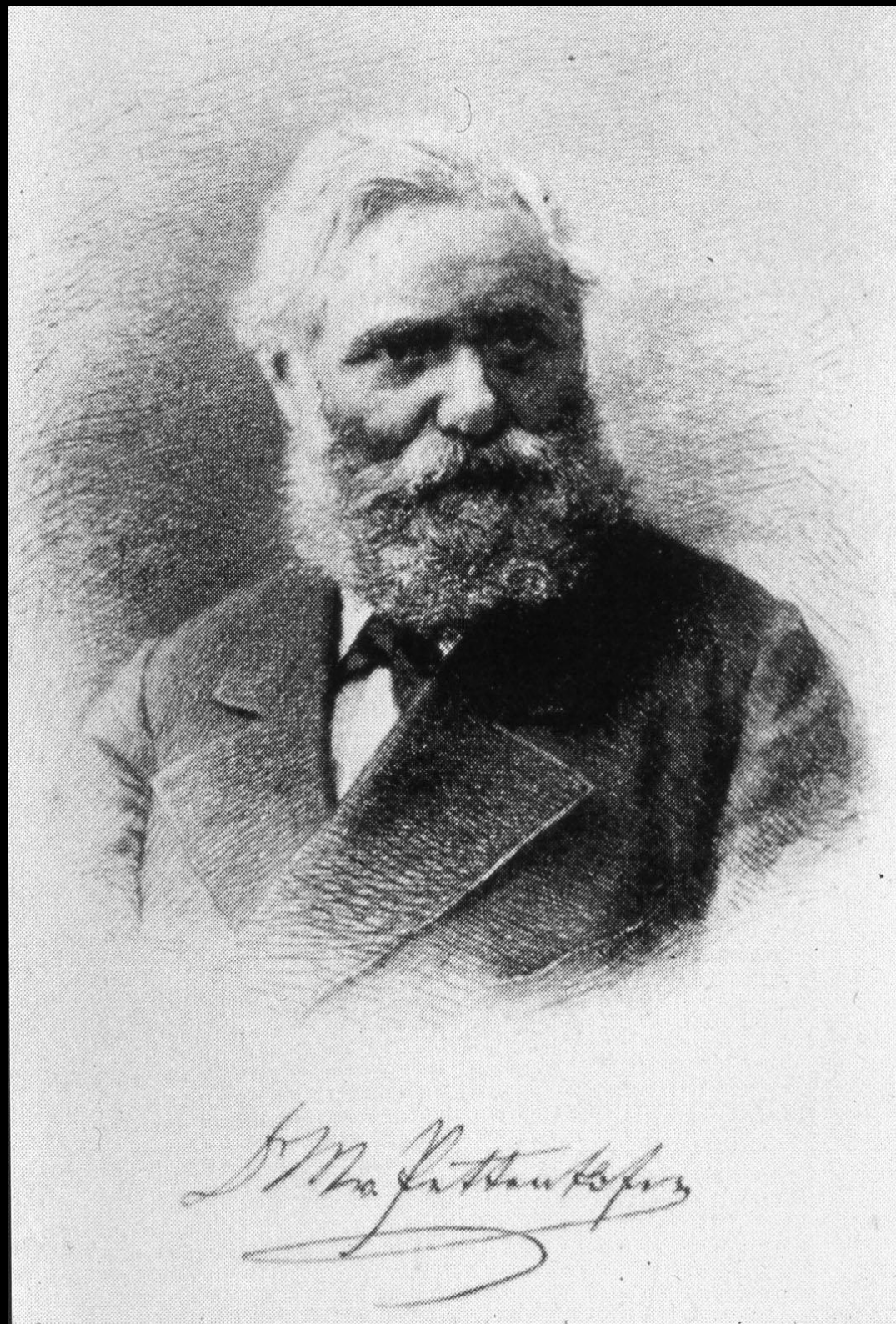


Arthur
Hassall
1817–1894



Max von Pettenkofer
1818 –1901

Professor of Hygiene
Munich



James Paget
1814-1899



Fig. 2.

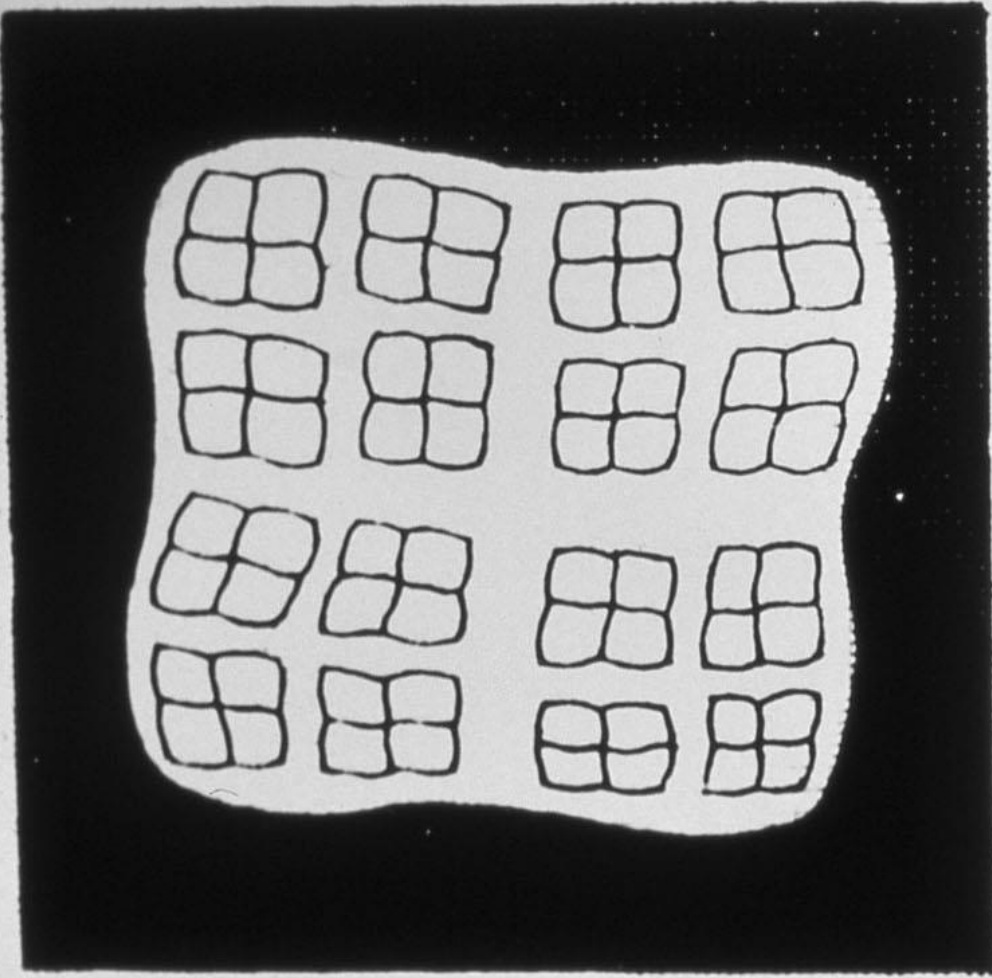
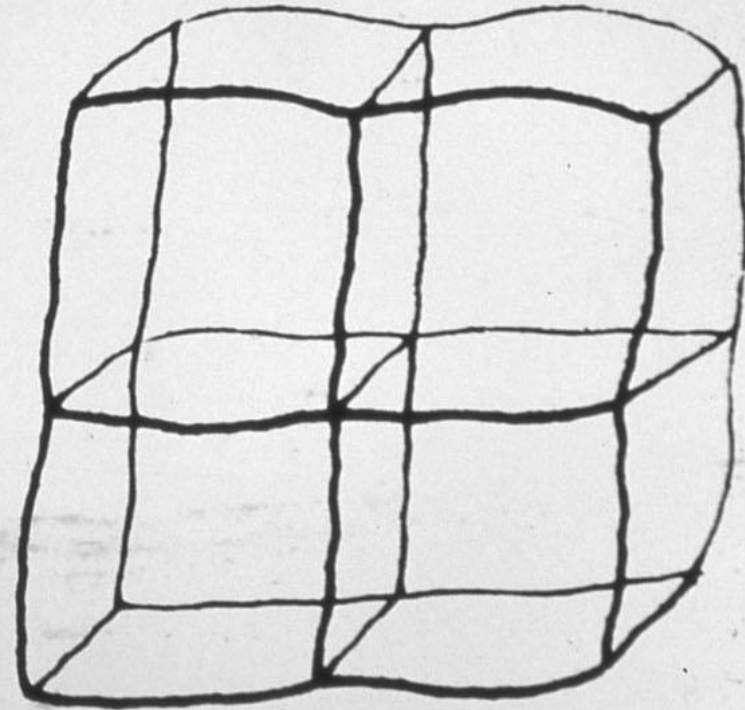


Fig. 3.



John Goodsir's drawing of *Sarcina ventriculi*, 1842

Casimir Davaine 1850

Saw microscopic rods in animals
dead from anthrax

Thought they were living, named
them 'Bacteridium'

Filipo Pacini (Florence),
Active 1850 - 1883

“Miriadi di vibrioni”

Vibrio cholera (sic)

2000BC

0

1000AD

2000AD

Indian
Babylonian

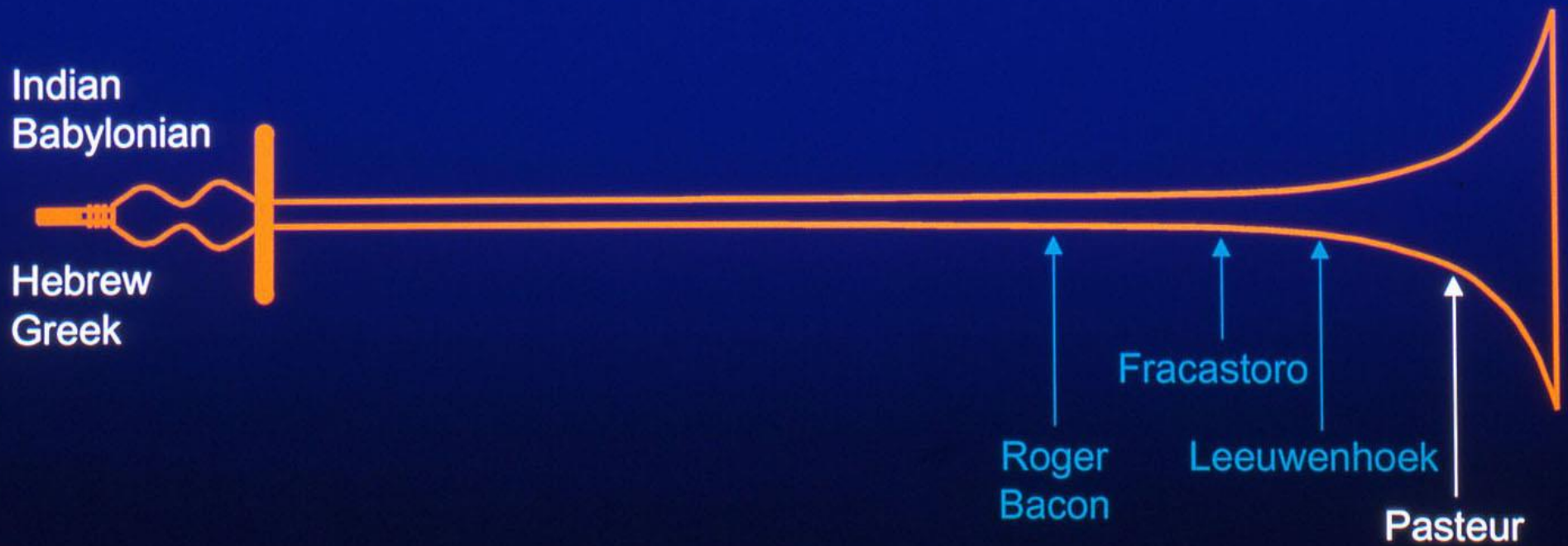
Hebrew
Greek

Roger
Bacon

Fracastoro

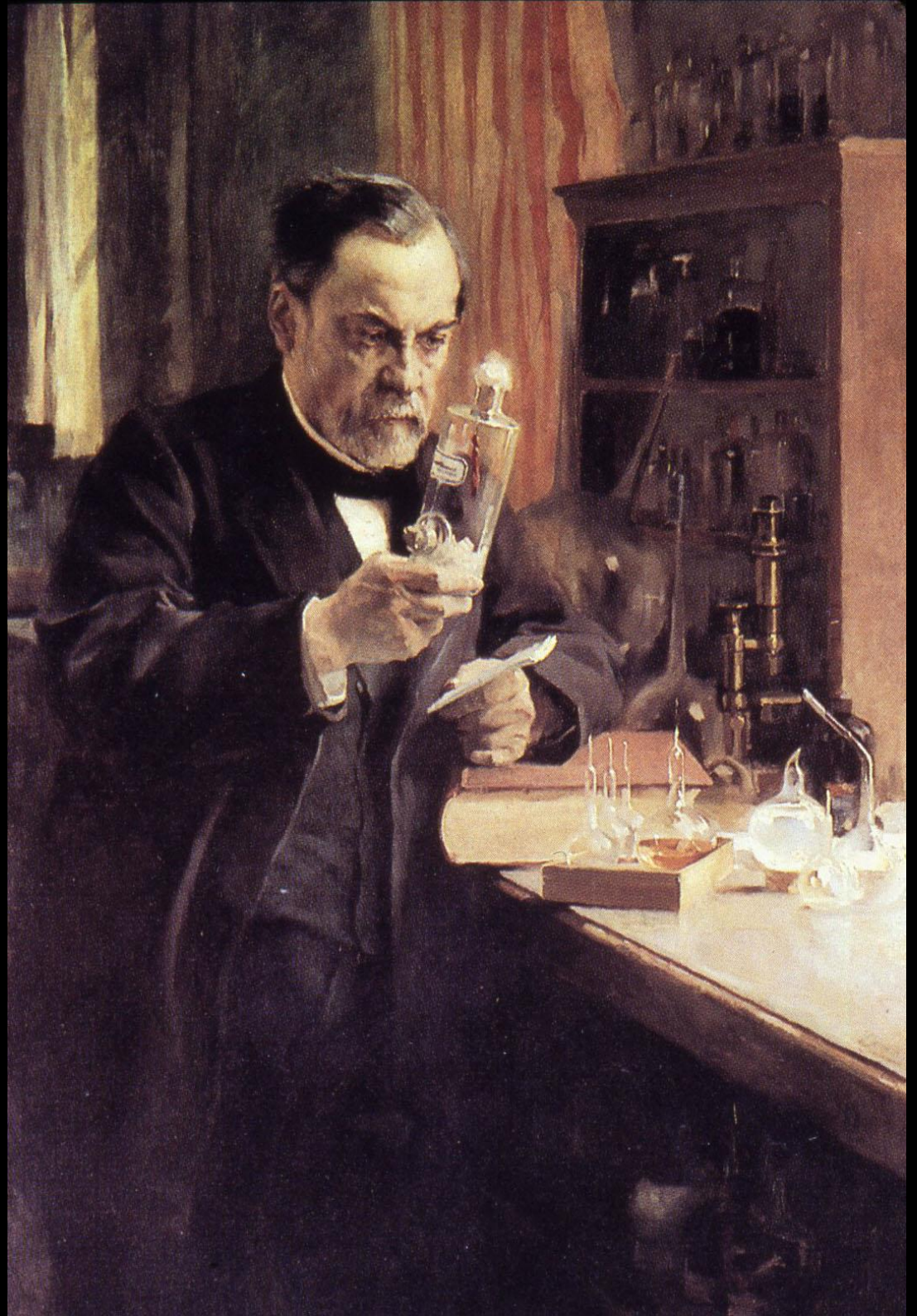
Leeuwenhoek

Pasteur



Louis Pasteur
1822 –1895

(Painting by Albert
Edelfelt)





Inoculating sheep with Pasteur's anthrax vaccine

Joseph Lister
1827 –1912





Lister greets Pasteur at a celebration of Pasteur's 70th birthday in Dec 1892 at the Sorbonne

Robert Koch
1844 -1910







von Behring

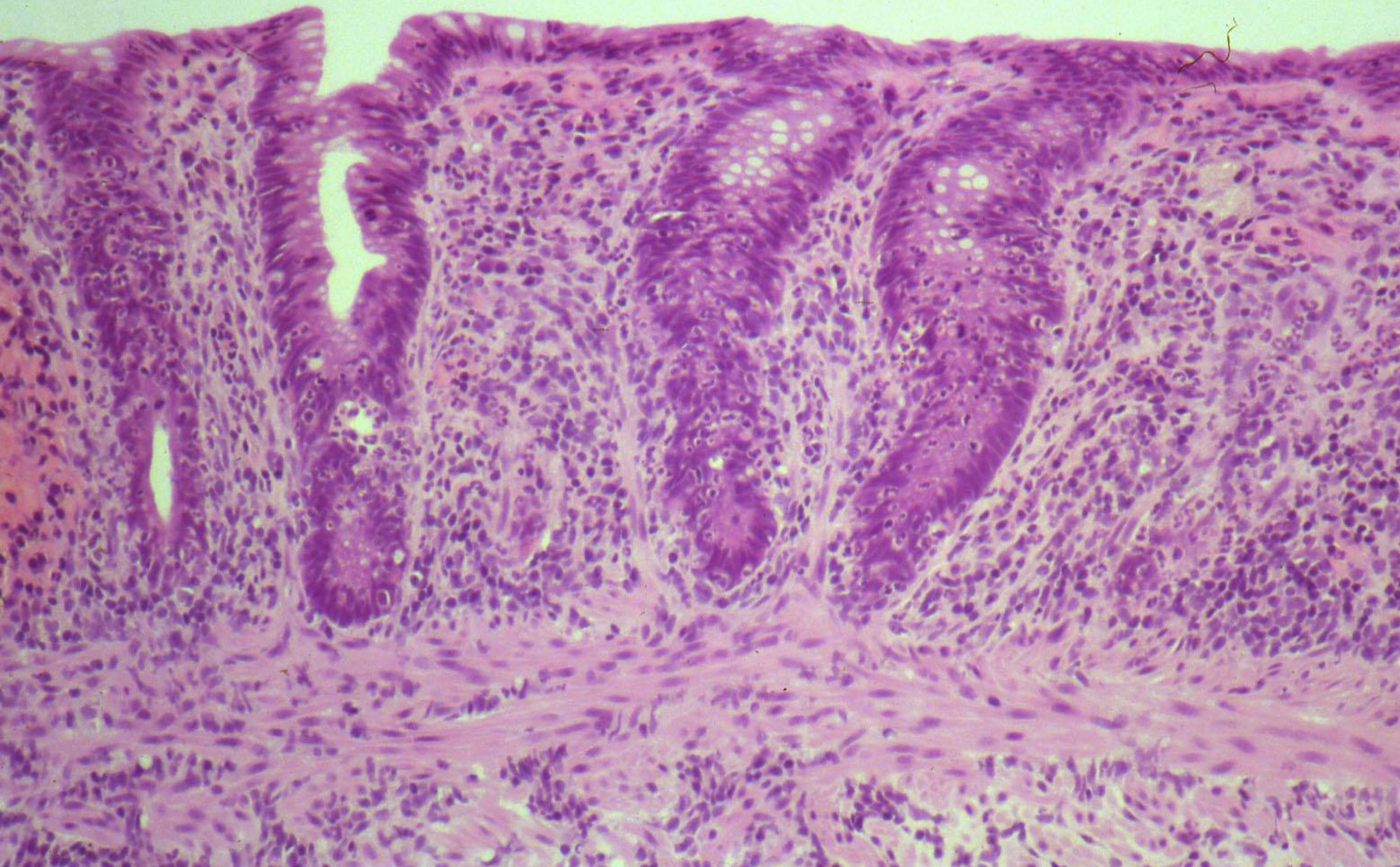


Kitasato





Paul Ehrlich and S. Hata



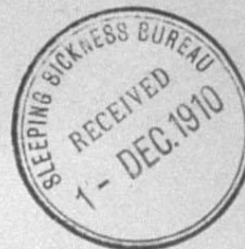
Differential staining of tissue components

Die experimentelle Chemotherapie der Spirillosen

(Syphilis, Rückfallfieber, Hühnerspirochäetose, Frambösie)

Von

Paul Ehrlich und S. Hata



Mit Beiträgen von

H. J. Nichols-New York, J. Iversen-St. Petersburg, Bitter-Kairo
und Dreyer-Kairo

Mit 27 Textfiguren und 5 Tafeln



Berlin

Verlag von Julius Springer

1910

Treatment of framboesia with Salvarsan



Fig. 19
Framboesia
Boy, aged 11, before treatment



Fig. 20
Twelve days after treatment with 0.28 gr.
Salvarsan by Dr. STRONG, Manilla

Treatment of tertiary syphilis with Salvarsan



Fig. 17

Syphilis tertiaria maligna mutilans

Four years history of illness; tracheotomy; during last six months facial lesions increasing in extent



Fig. 18

Nine days after treatment with 0.3 gr. Salvarsan by Prof. BAYET, Brussels



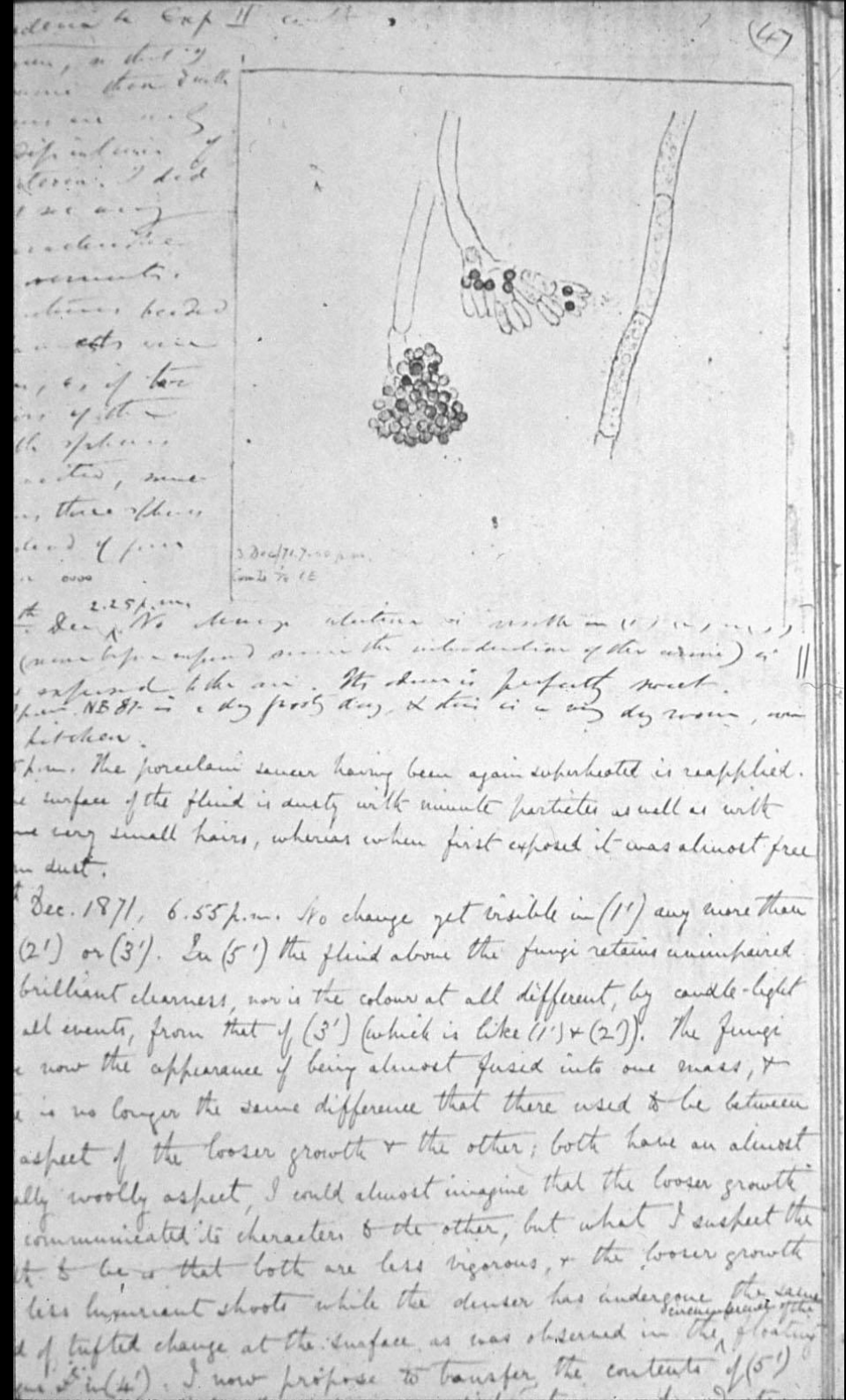
Paul Ehrlich in his study in 1910

Gerhard Domagk
1895 – 1964

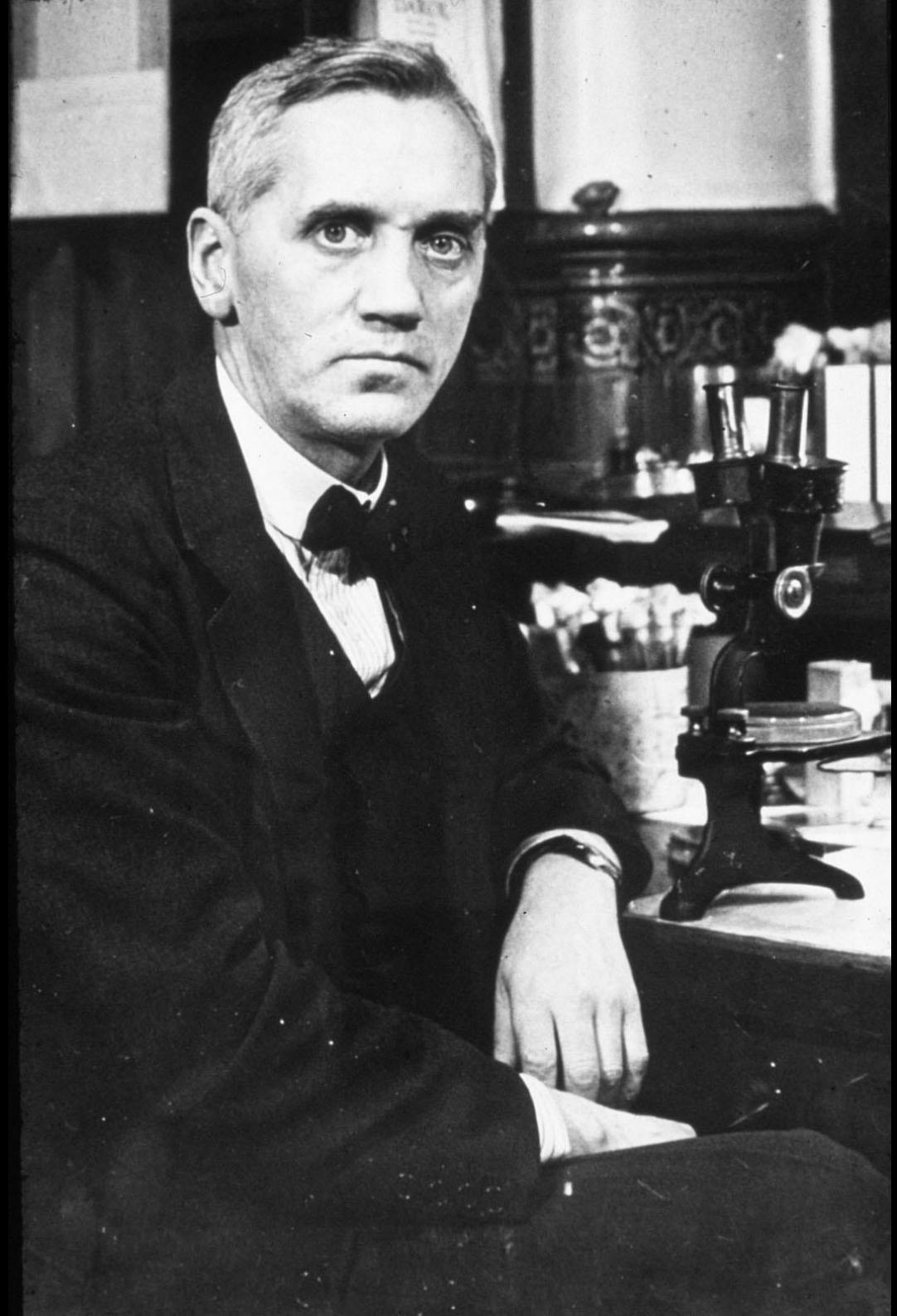


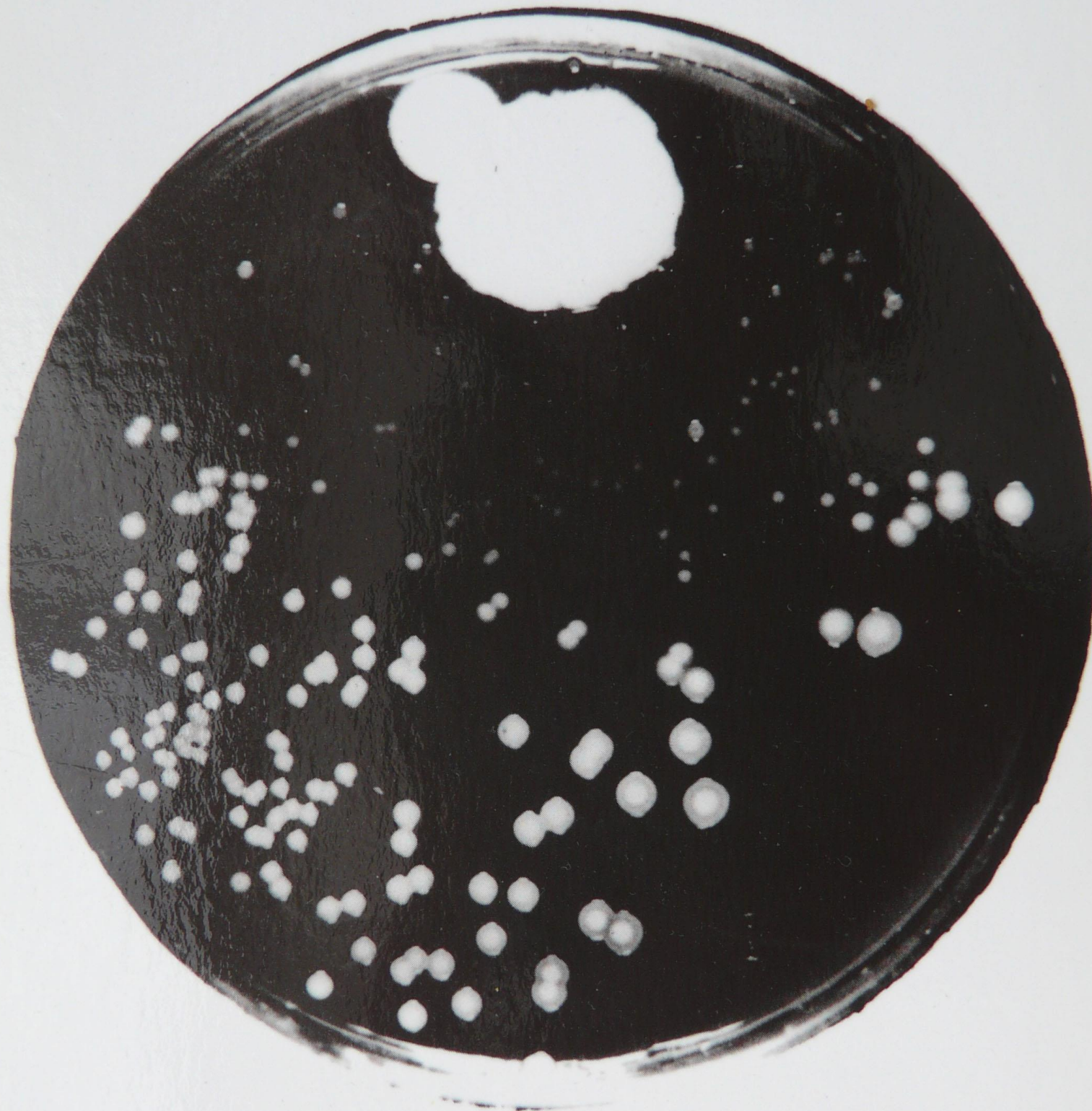


A page from Lister's notebook in the 1870s



Alexander Fleming
1881 – 1955







ON THE ANTIBACTERIAL ACTION OF CULTURES OF A PENICILLIUM, WITH SPECIAL REFERENCE TO THEIR USE IN THE ISOLATION OF *B. INFLUENZÆ*.

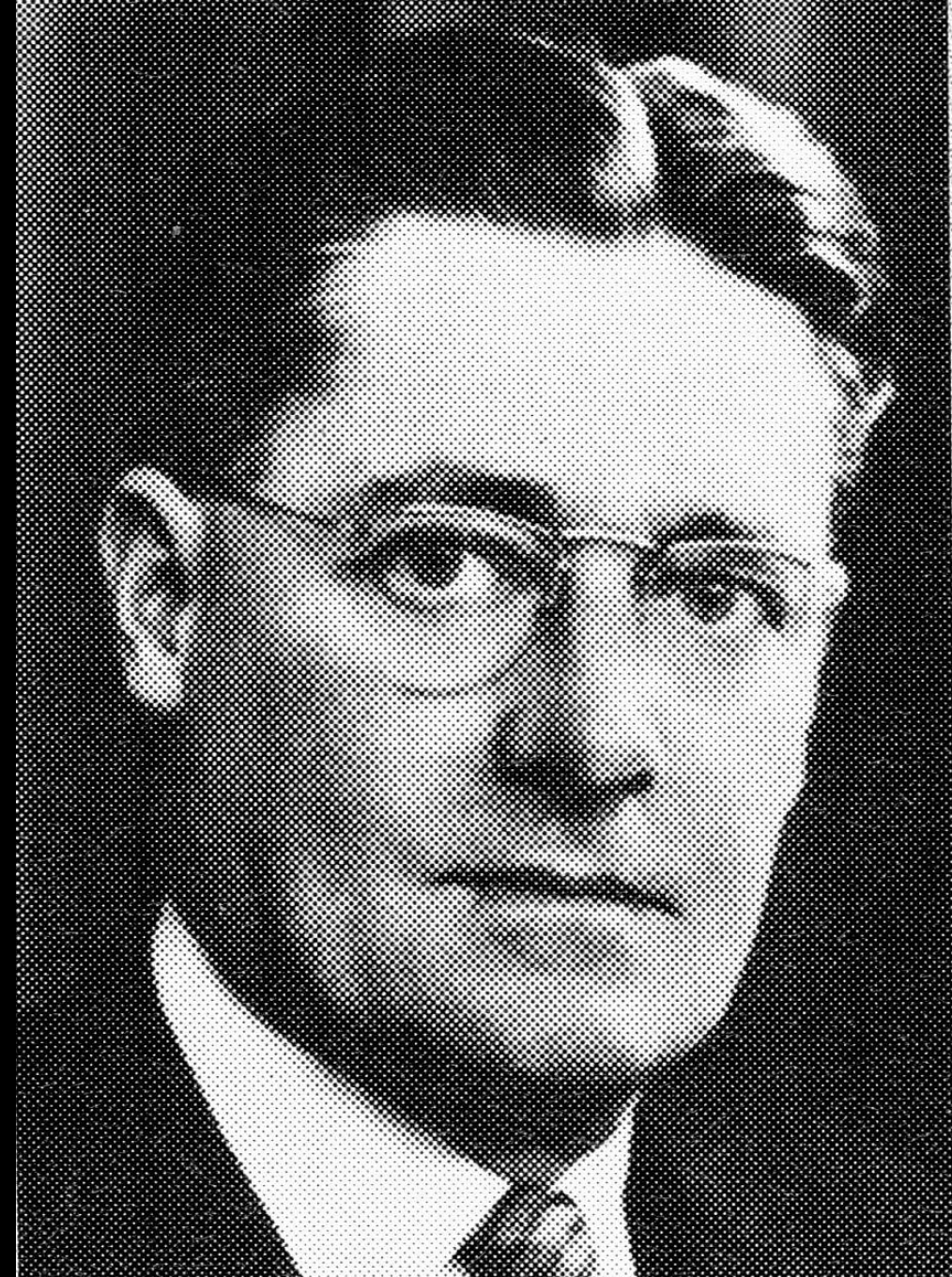
ALEXANDER FLEMING, F.R.C.S.

From the Laboratories of the Inoculation Department, St Mary's Hospital, London.

Received for publication May 10th, 1929.

WHILE working with staphylococcus variants a number of culture-plates were set aside on the laboratory bench and examined from time to time. In the examinations these plates were necessarily exposed to the air and they became contaminated with various micro-organisms. It was noticed that around a large colony of a contaminating mould the staphylococcus colonies became transparent and were obviously undergoing lysis (see Fig. 1).

Subcultures of this mould were made and experiments conducted with a view to ascertaining something of the properties of the bacteriolytic substance which had evidently been formed in the mould culture and which had diffused into the surrounding medium. It was found that broth in which the mould had been grown at room temperature for one or two weeks had acquired marked inhibitory, bactericidal and bacteriolytic properties to many of the more common pathogenic bacteria.



Howard Florey
1898 – 1968



Ernst Chain
1906 – 1979

PENICILLIN AS A CHEMOTHERAPEUTIC AGENT

BY

E. CHAIN, PH.D. CAMB.

H. W. FLOREY,
M.B. ADELAIDE,

A. D. GARDNER,
D.M. OXFD, F.R.C.S.

N. G. HEATLEY, PH.D. CAMB.

M. A. JENNINGS,
B.M. OXFD,

J. ORR-EWING,
B.M. OXFD,

A. G. SANDERS,
M.B. LOND.

(From the Sir William Dunn School of Pathology, Oxford)

IN recent years interest in chemotherapeutic effects has been almost exclusively focused on the sulphonamides and their derivatives. There are, however, other possibilities, notably those connected with naturally occurring substances. It has been known for a long time that a number of bacteria and moulds inhibit the growth of pathogenic micro-organisms. Little, however, has been done to purify or to determine the properties of any of these substances. The antibacterial substances produced by *Pseudomonas pyocyanea* have been investigated in some detail, but without the isolation of any purified product of therapeutic value.

Recently, Dubos and collaborators (1939, 1940) have published interesting studies on the acquired bacterial antagonism of a soil bacterium which have led to the isolation from its culture medium of bactericidal substances active against a number of gram-positive micro-organisms.¹ Pneumococcal infections in mice were successfully treated with one of these substances, which, however, proved to be highly toxic to mice (Hotchkiss and Dubos 1940) and dogs (McLeod et al. 1940).

Following the work on lysozyme in this laboratory it occurred to two of us (E. C. and H. W. F.) that it would be profitable to conduct a systematic investigation of the chemical and biological properties of the antibacterial

1. See *Lancet*, 1940, 1, 1172.

2000BC

0

1000AD

2000AD

Indian
Babylonian

Hebrew
Greek

Roger
Bacon

Fracastoro

Leeuwenhoek

Pasteur



First Attempt at Publication: 1983

Dear Dr. Marshall,

I regret that your research paper was not accepted for presentation...

The number of abstracts we receive continues to increase and **for this meeting 67 were submitted and we could only accept 56.**

Score = bottom 20%

**Barry
Marshall**



**Robin
Warren**

2000BC

0

2000AD

Indian
Babylonian

Hebrew
Greek

Roger
Bacon

Fracastoro

Leeuwenhoek

Pasteur

