

Index

A

- age
 - at death, 86, 87, 90
 - susceptibility to tuberculosis, 75, 77, 87, 90
- Americas
 - tuberculosis, 79, 83, 84, 89, 90
- ancient DNA (aDNA), 114–118
- ancient specimens, 179, 182, 185
- anthropology, 23, 29, 33, 34
- Antonine plague, 9–13
- archaeology, 23, 24, 33, 34, 49, 51, 52, 53
- archeothanatology, 27, 28
- Asian flu, 206, 208
- Athens plague
 - history, 161–162
 - hypotheses, 162
- authenticity, 59–60
- Avian virus, 199, 205–208

B

- bacteraemia, 176, 179, 190
- Bartonella clarridgeiae*, 180
- Bartonella henselae*, 180, 181, 189
- Bartonella koehlerae*, 180
- Bartonella quintana*, 181, 183, 189
- Beijing strain, 90
- biotype, 146–147, 153–154
- black death, 182
- body louse (*see Pediculus humanus humanus*)
- bubonic plague, 6, 12, 17
- burial assemblage, 132

C

- cat, 180, 189
- Chile, 84
- China, 79

- clinical diagnosis
 - of ancient plagues, 3, 4, 6, 9, 12, 16, 17
- co-infections, 90
- connection, 52, 53
- contamination, 59, 188
- Coxiella burnetii*, 71, 178, 180
- Cribo orbitaria*, 90
- cross immunity, 109, 118–119
- culture, 178

D

- deletion analysis of *Mycobacterium tuberculosis*, 78, 87
- demography, 25, 26, 29, 31, 38, 43
- dental pulp, 175, 176, 179, 185, 187
 - Salmonella typhi*, 164
 - Athens plague, 164
- detection, 175, 177
- diagnosis, 77
- disease
 - ancient, 79, 80, 83, 88
 - animal, 76, 79, 89
 - human, 75, 76, 77, 79
- DNA
 - ancient, 57, 79, 80, 83, 88
 - authentication, 80, 81, 82
 - extraction, 57–58
 - guanidine and cytosine content, 76, 82
 - Mycobacterium africanum*, 76, 88, 89
 - Mycobacterium bovis*, 77, 78, 87, 89
 - Mycobacterium tuberculosis*, 78, 86, 87, 88, 89
 - retrieving, 81, 84
 - robustness, 82

E

- Egypt
 - tuberculosis, 79, 83, 84, 88, 89

electron microscopy, 70
 elephantiasis, 107
 environmental mycobacteria, 76, 77
Escherichia coli, 178
 Europe, 79, 89
 evidence of tuberculosis
 archaeological, 79, 89
 biomolecular, 82, 83, 87
 historical, 79
 pre-Columbian, 79, 83, 89, 90
 skeletal, 78, 82, 83, 84
 soft tissue, 83, 85, 87
 spine, 78, 83
 evolution
 Yersinia pestis, 147

F

facies leprosa, 101, 103, 110, 117
 feline teeth, 186
 flea, 145
 foci, 147, 151–152
 formalin-fixed tissues, 70

G

gastrointestinal tuberculosis, 76, 77, 85
 genetic reassortment, 206–208
 genomic amplification, 188
 genomics of tuberculosis, 78, 89, 90, 91
 genotype, 147–148
 genotyping, 65
 Giemsa stain, 70
 Gram stain, 70
 Grocott-Gomori methenamine silver stain, 70

H

head louse (*see Pediculus humanus capitis*)
 Hematoxylin & eosin, 69
 Herpes simplex virus (HSV), 181
 histologic special stains, 70
 histology, 176
Homo erectus, 216
Homo neanderthalensis, 216
Homo sapiens, 216
 Hong Kong flu, 208
 host factors and tuberculosis, 75, 76, 84, 87, 90, 91
 host-pathogen co-evolution, 76, 89, 90
 Human immunodeficiency virus (HIV), 181
 human teeth, 187
 Hungary – Vác mummies, 85, 86, 87, 88, 90, 91

I

immune response and tuberculosis, 76, 90
 immunodetection, 178
 immunofluorescence, 71
 immunohistochemistry, 70, 71
 incidence, 126
 incidence rate, 126
 infection
 routes, 76, 77
 sources, 76, 77, 79, 89
 infectious diseases, 175, 177
 influenza A H1N1, 203, 205, 207–209
 influenza A H1N2, 202, 206–208
 influenza A H3N2, 208–209
 influenza A H3N8, 203, 208
 influenza A H5N1, 209–210
 influenza A H7N7, 209
 influenza A H9N2, 210
 influenza di freddo, 201
 influenza virus A1, 206
 influenza virus A2, 206
 influenza virus A3, 208
 inhumation, 28, 33, 35, 37, 49, 50, 53
 IS1081, 77, 78, 89
 IS6110, 77, 78, 83, 87, 89

J

Justinian plague, 13–18

K

Koch bacillus, 87
 Kulubnarti – Nubian mummies, 86, 87, 90

L

Langerhans cell histiocytosis - LCH, 91
 lazar house, 107–109, 111–112
 lepromatous leprosy, 101, 103, 110, 117
 leprosy
 lesions and tuberculosis
 calcified, 76, 85
 distribution, 83, 84
 pulmonary, 84, 85
 rib, 84
 skeletal, 78, 83, 84
 licked candy stick finger, 105
 life tables, 25
 lineages of *M. tuberculosis*, 78, 89
 lipid biomarkers, 76, 82
 louse comb, 217–219
 lung, 76, 83, 87
 Lupus vulgaris, 77

M

- Mass burial
 - Athens plague 162–163
- measles, 7, 12, 17
- metagenomics, 64
- microscopy, 178
- milk, 76
- molecular typing of *Mycobacterium tuberculosis* complex
 - deletion typing, 78, 87
 - single nucleotide polymorphisms (SNPs), 77, 78, 88, 89
 - spoligotyping, 78, 87, 88, 89
- mortality crisis, 23, 25, 26, 29, 30, 33, 35, 37, 43, 49, 51, 52, 53
- MTB - *see Mycobacterium tuberculosis*
- multiple burials, 26, 29, 50
- multiple spacer typing, 154–155
- Mycobacterium avium*, 71
- Mycobacterium intracellulare*, 71
- Mycobacterium leprae*, 116–119
- Mycobacterium*, 61, 65
- Mycobacterium tuberculosis* complex, 76, 77, 80, 82, 83, 84, 86, 87, 88, 89
 - M. africanum*, 76, 88, 89
 - M. bovis*, 76, 77, 78, 87, 88, 89
 - M. canettii*, 76
 - M. caprae*, 76
 - M. leprae*, 116–119
 - M. microti*, 76
 - M. pinnipedii*, 76
 - M. tuberculosis*, 76, 78, 79, 82, 83, 85, 86, 87, 88
- mycolic acids, 82

N

- N Question, 127–128
- Napoleon's army, 184
- Necropolises, 50, 52, 53
- Neolithic
 - Italy, 79
 - Sweden, 79
- Nubia – Kulubnarti mummies, 86, 87, 90
- Nucleic-acid-based detection, 179
- Nutrition and tuberculosis, 87, 90

O

- occupations, 85
- Osteoarchaeology, 110

P

- palaeopathology, 78, 82, 84
- paleoepidemiology, 111, 116
 - generality, 126
 - tuberculosis, 138–141
- PCR, 58–59, 177, 179, 181, 182
 - authentication, 80
 - contamination, 79, 81
 - genetic loci, 77, 78, 83, 87
 - inhibition, 81
 - M. bovis*, 78, 87, 88, 89
 - M. tuberculosis*, 78, 83, 87, 88
 - suicide, 152
- Pediculus humanus capitis*, 215–218
- Pediculus humanus humanus*, 215, 216, 220
- Pediculus mjobergi*, 215
- periodic acid-Schiff (PAS) stain, 70
- Periostitis, 78, 103–104
- Peru, 83
- Pfeiffer - Pfeiffer's bacillus, 202, 204
- Plague geography, 147, 151–152
- Plague of athens, 4–9
- Plague pandemics, 146
- Plague transmission, 145–146
- pleura, 84
- polymerase chain reaction - *see* PCR
- population studies, 84, 85, 86, 87, 90
- pott's disease, 78, 84
- pre-Columbian tuberculosis, 79, 83, 84, 90
- predisposing factors in tuberculosis, 75, 76, 77, 87, 90
- prevalence, 127, 133–134
- primary deposit, 49, 50
- Prion protein, 182
- Pthirus pubis*, 220
- Pubic louse (*see Pthirus pubis*)

Q

- Q fever, 71

R

- receptor binding site, 205
- reproducibility factor R_0 , 207
- rhinomaxillary syndrome, 103, 110, 112, 116
- ribs, 84
- Rickettsia africae*, 71
- Rickettsia conorii*, 71
- Rickettsia rickettsi*, 71
- Russian pseudo-pandemic, 208

S

Salmonella typhi, 166
 sample structure, 136–137
 SARS, 208
 scrofula, 77
 Seasonal flu, 207
 Siberia, 89
 simultaneous death, 49, 50, 51, 52
 single nucleotide polymorphisms (SNPs), 77,
 78, 88, 89
 skeleton, 78, 82, 83, 84
 skin, 77
 smallpox, 7, 12, 17
 Spanish flu, 199, 203, 205–206
 spine, 78, 83
 spoligotyping, 78, 87, 88, 89
 Suicide PCR
 Athens plague, 165
 swine H1N1, 209
 swine virus, 209
 syphilis, 70

T

taphonomic processes, 128, 132–133
 Thailand, 79
 transmission of tuberculosis, 76, 77
 treatment
 absence of, 77, 84
Tropheryma whipplei, 71
 Tuberculoid leprosy, 100, 108, 118
 tuberculosis
 animals, 76, 79
 bovine, 76, 77
 extrapulmonary, 76, 77, 84

gastrointestinal, 76, 77, 85
 latent, 75, 76
 lymph glands, 76
 meningitis, 76
 natural history, 75
 origins, 78, 90
 populations, 84, 85, 86,
 87, 90
 pulmonary, 76, 85, 87
 Thucydides narration 167–170
 typhoid fever, 7, 12, 17, 166
 typhus, 8, 12, 16

V

Vác – Hungarian mummies, 85, 86, 87,
 88, 91
Variola virus, 70

W

Warthin-Starry stain, 70
 Whipple disease, 71
 WHO, 206, 208
 World War I, 204–205

Y

Yersinia pestis, 61–64, 65
 description, 146–147

Z

Ziehl-Neelsen stain, 70
 zoonose, 147