

Index

a

- Aberrant crypt foci (ACF) 343
- ACE inhibitors 184, 246, 249, 252
- Acetaminophen (Paracetamol)
 - Alzheimer's disease 361f.
 - analgesic action 324ff.
 - analgesic nephropathy 180, 182
 - asthma 197ff., 217ff.
 - hepatotoxicity 188
 - osteoarthritis 334f.
 - renal failure 181f.
- Acetylsalicylic acid (ASA), *see* Aspirin
- Acute coronary syndrome, *see* Coronary vascular disease
- Adenomatous Polyposis Coli (APC) 118f., 343f., 346, 349, 354
- Allodynia 114
- Alzheimer's Disease Anti-inflammatory Prevention Trial (ADAPT) 363
- Alzheimer's disease 18, 359ff.
 - actual situation 363
 - clinical trials 361ff.
 - etiology 359
 - mode of aspirin action 360
 - pathophysiology 359
- American Health Professionals' study 233f.
- Angioedema 205
- Anticoagulants
 - cerebrovascular disease 269ff.
 - coronary vascular disease 247ff.
 - peripheral arterial disease 282
 - venous thrombosis 287f.
- Antiplatelet drugs 91f., 280, 289, 294
- Antiplatelet/antithrombotic Trialists' Collaboration 229
- Antipyretic analgesics 322ff., 329, 340
- Antithrombotics in the Prevention of Reocclusion in Coronary Thrombolysis (APRICOT) 248
- Antitumorigenic effects, *see* Malignancies
- Apoptosis 69, 71, 118, 120ff., 354
- Aprotinin 146f.
- Arthritis and rheumatism 332ff.
 - actual situation 336
 - clinical trials 334f.
 - mode of aspirin action 332ff.
 - osteoarthritis 333ff.
 - rheumatoid arthritis 332ff.
- Aspirin, *see also* Salicylate
 - absorption 34ff., 40
 - actions on organs and tissues 86ff.
 - alcohol 146, 168
 - analgesic/antipyretic actions 14, 86, 105, 111, 113f., 323 ff.
 - antiinflammatory actions 106ff., 232
 - antiplatelet actions 15, 86, 88, 90, 262
 - antitumor effects 120ff.
 - antiulcer drugs 170
 - bioavailability 38f.
 - biotransformations 46ff.
 - bleeding risk 15, 142ff., 152, 159f., 244f.
 - chemical properties 25ff.
 - clinical applications 225ff.
 - coagulation 98
 - COX-independent actions 66ff., 122 ff.
 - COX-inhibition 13f., 54ff., 120ff., 163f.
 - desensitization 201
 - determination 30ff.
 - dosing 41, 88, 92, 226ff., 251, 262f., 352f.
 - Ductus arteriosus 151f.
 - energy metabolism 79ff.
 - esterases 46ff.
 - excretion 49ff.
 - fertility 150
 - fibrinolysis 98f., 242f.
 - formulations 27ff., 40, 326
 - gene transcription 13f., 61ff., 69ff.
 - hemostasis 89ff.
 - hepatotoxicity 187f.

- history 5ff., 19ff.
 - hypersensitivity, *see also* Aspirin-induced asthma 197ff.
 - inhibition of platelet function 90ff.
 - inhibition of prostaglandin formation 12, 53ff.
 - inhibition of kinases 67ff.
 - interactions with NSAIDs 60f. 170, 249f. 308f.
 - miscarriage 151
 - modes of action 53ff.
 - pharmacokinetics 33ff., 46ff.
 - pharmacological properties 225
 - pseudoallergic actions 197ff.
 - renal failure 181ff.
 - “resistance” 303ff.
 - sphingosine-1-phosphate 58
 - thrombin generation 143f.
 - toxicity 131ff.
 - transcription factors 69ff., 123f.
 - Aspirin Esomeprazole Chemoprevention Trial (ASPECT) 312f.
 - Aspirin-induced asthma 197ff., 217f.
 - clinical studies 201f.
 - clinical symptoms 198f.
 - leukotrienes 200f.
 - mode of aspirin action 199f.
 - pathophysiology 197ff.
 - “Aspirin-like drugs” 18, 60
 - Aspirin-Myocardial Infarction Study (AMIS) 17
 - Aspirin-triggered lipoxin (ATL) 59, 108f., 163f.
 - Atherosclerosis Risk in Communities Study (ARIC) 227
 - Audiovestibular system, *see* Ototoxicity
- b**
- Baltimore Longitudinal Study of Ageing 361
 - Barbados Low-dose Aspirin Study in Pregnancy (BLASP) 294, 297
 - Bioavailability 38ff.
 - Biotransformations 46ff.
 - Birmingham Atrial Fibrillation Treatment of the Aged Study (BAFTA) 270
 - Bleeding disorders 142ff.
 - bleeding time 142ff.
 - bleeding risk in surgical interventions 144ff.
 - GI tract 159ff., 169f.
 - hemorrhagic stroke 264
 - pregnancy and labor 152
 - role of platelets 143
 - British medical doctors’ study (BMDS) 232f., 264
- c**
- Cancer, *see* Malignancies
 - Cancer prevention study II (CPS-II) 227, 347f.
 - Cardiovascular diseases, *see also* Coronary vascular diseases
 - ACE-inhibitors 249
 - in patients with renal disease 182ff.
 - statins 249
 - Celecoxib Long-term Arthritis Safety Study (CLASS) 171
 - Ceramide 121, 123
 - Cerebrovascular diseases 260ff.
 - actual situation 270f.
 - anticoagulants 269f.
 - clopidogrel 269
 - dipyridamole 267ff.
 - etiology 260
 - hemorrhagic stroke 264f.
 - mode of aspirin action 261ff.
 - primary prevention 263ff.
 - secondary prevention 265ff.
 - Chinese Acute Stroke Trial (CAST) 266f.
 - Cilostazol 283
 - Clopidogrel
 - cerebrovascular disease 269
 - coronary vascular disease 246f.
 - peripheral arterial disease 282
 - “resistance” 303
 - Clopidogrel for High Atherothrombotic Risk, Ischemic Stabilization, Management and Avoidance (CHARISMA) 247f.
 - Clopidogrel in Unstable Angina to Prevent Recurrent Ischemic Events (CURE) 246, 269
 - Clopidogrel versus Aspirin in Patients at Risk of Ischemic Events (CAPRIE) 229, 240, 246, 269, 282
 - Collaborative low-dose aspirin study in pregnancy (CLASP) 227, 293ff.
 - Colorectal cancer 343ff.
 - actual situation 352ff.
 - clinical trials 346ff.
 - COX-2 expression and aspirin 61f., 120f., 344ff.
 - etiology 344f.
 - mode of aspirin action 345f.
 - NSAIDs 352
 - pathophysiology 344ff.
 - Combination Hemotherapy and Mortality Prevention Study (CHAMP) 248
 - Coronary vascular diseases 411ff.
 - actual situation 250ff.
 - acute coronary syndrome (ACS) 238ff.
 - aspirin historical use 15f.
 - anticoagulants 247ff.
 - Clopidogrel 246f.
 - coronary artery bypass grafting 244ff.
 - coxibs 249f.
 - coronary artery bypass graft surgery (CABG) 244ff.
 - etiology 228f.
 - mode of aspirin action 229ff.
 - NSAIDs 249
 - percutaneous coronary interventions (PCI) 243f.
 - primary prevention 231ff.

- secondary prevention 238ff.
- Cottbus Reinfarction Trial 240f.
- COX
 - atherosclerosis 95f.
 - gastric mucosa 160f.
 - gene expression 14, 61, 359
 - historical aspects 13ff.
 - inhibition by NSAIDs 54ff., 171, 335ff., 363
 - lipoxins 59
 - role in asthma 199f.
 - transcription factors 69ff.
- COX-1
 - acetylation by aspirin 56ff.
 - active site 55f.
 - aspirin-induced asthma 199f.
 - 12-HPETE 62
 - inhibition by aspirin 54ff.
 - interaction with NSAIDs 308
 - platelet function 90ff.
- COX-2
 - acetylation by aspirin 59ff.
 - gene expression 61, 120f., 359
 - inhibition by aspirin 56ff., 163
 - lipoxins 59
 - platelet function 90ff.
 - tumor promotion 120ff., 345, 350
- COX-3 111
- Coxibs
 - cardiovascular risk 335f.
 - interactions with aspirin 108, 170f.
- Critical Leg Ischemia Prevention Study (CLIPS) 279, 281
- Cyclooxygenases, *see* COX

d

- Deep vein thrombosis, *see* Venous thrombosis
- Desmopressin 146
- Diabetes 183
- Dicarboxylic acids 81, 209
- Dipyridamole 267ff., 280, 282f.
- Dipyrrone 308
- Disease-modifying Antirheumatic Drugs (DMARDs) 332, 334
- Ductus arteriosus 151f.
- Dutch TIA Trial 265f.

e

- Endocannabinoids 111
- Endothelium
 - antiplatelet factors 96f.
 - atherosclerosis 95ff.
 - dysfunction 278
 - inflammation 108f.
 - NO-synthase (eNOS) 74f.
 - prostaglandin production 95ff.

- Energy metabolism 79ff.
- European and Australian Stroke Prevention in Reversible Ischaemia Trial (ESPRIT) 268
- European Stroke Prevention Study-2 (ESPS-2) 267f.

f

- Fatty acid metabolism 80ff.
- Ferritin 74
- Fertility 150ff.
- Fetal development 150f.
- Fever 113ff., 323, 326
- Fibrinolysis 98f., 242f., 278

g

- Gastrointestinal tract (GI) 157ff.
 - aspirin and GI injury 161ff., 170 ff.
 - clinical trials 166ff.
 - coxibs 170f.
 - gastric mucosa 358ff.
 - gastrointestinal bleeding 159ff.
 - *Helicobacter pylori* 164ff.
 - mode of aspirin action 161ff.
 - prostaglandins and GI injury 160f.
- Global Registry of Acute Coronary Events (GRACE) 227, 251, 276

h

- Habituation 139
- Headache, *see* Pain
- Health Professionals Follow-up Study (HPFS) 347ff.
- Hearing disturbances, *see* Ototoxicity
- Heart failure 183f.
- Heart Outcomes Prevention Evaluation (HOPE) 310ff.
- Helicobacter pylori* 164ff.
- Heme oxygenase 174f.
- Hemorrhage, *see* Bleeding disorders
- Hemorrhagic stroke, *see* Cerebrovascular diseases
- Hemostasis 89ff.
- Hepathoencephalopathy, *see* Reye's syndrome
- Hypertension 183, 235
- Hypertension in pregnancy, *see* Preeclampsia
- Hypertension Optimal Treatment study (HOT) 234ff., 260, 264f.
- Hyperthermia 137f.
- Hyperventilation 79, 134f.

i

- Ibuprofen 56f., 60, 151, 171, 324
- Indomethacin 56f., 143f., 151, 171
- Inflammation 74, 105ff., 231
- Inflammation marker 232
- International Study on Infarct Survival (ISIS) 17, 99, 170, 227, 239, 242ff.
- International Stroke Trial (IST) 266

Ischemia, *see individual organs*
 Isoprostanes 94, 309

j

Jamaica Low-Dose Aspirin Study Project (JLASP) 294, 297

k

Kawasaki disease 339ff.
 – clinical trials 340
 – mode of aspirin action 339
 – pathophysiology 339
 – Reye's syndrome 217, 340
 Kidney 179ff.
 – analgesic nephropathy 179f.
 – clinical studies 181f.
 – diabetes 183
 – mode of aspirin action 180
 Kinases 66ff.
 Leukotrienes
 – asthma 198ff.
 – inflammation 106, 108
 – ototoxicity 193
 Lipoxins, *see also* Aspirin-triggered Lipoxin 108
 Liver 187ff.
 – aspirin actions 80ff., 187
 – drugs and liver injury 84, 187
 – hepatotoxicity of salicylates 84f., 187, 210f.
 – Reye's syndrome 84f.
 Lyell syndrome 206

m

Malignancies 118ff., 343ff.
 Malondialdehyde 122
 Management of Atherothrombosis with Clopidogrel in High-risk Patients with recent Transient Ischemic Attack or Ischemic Stroke (MATCH) 269
 Maximal Individual Optimized Therapy for Acute Myocardial Infarction (MITRA) 251
 Melbourne Colorectal Cancer Study 346
 Metamizol, *see* Dipyron
 Methylsalicylate 27
 Migraine 326ff.
 Myocardial infarction, *see* Coronary vascular diseases
 Myocardial Infarction Registry (MIR) 251

n

Neuroprotection 72f., 360
 Nitric oxide (NO) 73, 96f., 164
 – endothelial NO-synthase (eNOS) 74, 143
 – inducible NO-synthase (iNOS) 73f., 106
 Nonsteroidal antiinflammatory drugs (NSAIDs)
 – Alzheimer's disease 360ff.
 – antiplatelet effects of aspirin 60, 249f., 308

– asthma 199f.
 – colorectal carcinoma 346ff.
 – COX-1/COX-2-selectivity 55f.
 – Ductus arteriosus 151, 292f.
 – GI-effects 160f., 170f.
 – interactions with aspirin 60f.
 – miscarriage 151
 – mode of action 60, 108
 – osteoarthritis 333, 336
 – renal effects 181f.
 Nuclear factor kB (NFkB) 70ff., 123
 Nuclear factor of activated T-cells (NFAT) 70f.
 Nurses' Health Study (NHS) 181, 227, 348ff.

o

Orbital Atherectomy Study for Treatment of Peripheral Vascular Stenosis (OASIS) 248
 Organ toxicity 157ff.
 Osteoarthritis 171, 333, 336
 – acetaminophen 335
 – clinical trials 334
 Ototoxicity 191ff.
 – clinical trials 193f.
 – hearing disturbances 191f.
 – mode of aspirin action 191f.
 – pathophysiology 191
 – tinnitus 192
 Oxidative phosphorylation 82ff.

p

Pain 110ff., 322ff.
 – acetaminophen 324ff.
 – cannabinoids 111
 – clinical studies 326ff.
 – headache 326ff.
 – mediators of pain 110ff.
 – migraine 326ff.
 – mode of aspirin action 111ff., 323ff.
 – prostaglandins 110f.
 – serotonin 112
 Paracetamol, *see* Acetaminophen
 Perinatal Antiplatelet Review of International Studies (PARIS) 295, 297ff.
 Peripheral Arterial Disease (PAD) 276ff.
 – actual situation 283
 – clinical trials 278ff.
 – etiology 276
 – mode of aspirin action 276ff.
 – other drug treatment 282f.
 – peripheral transluminal angioplasty 281f.
 Phenacetin 180
 Physicians' Health Study, *see* US-Physicians' Health Study
 Platelets 89ff.

- aspirin-insensitive inhibition 309, 315
- bleeding time 143
- cyclooxygenases 56ff., 308f.
- inhibition by aspirin 90ff.
- response variability, *see also* “resistance” 261f., 303ff.
- thrombotic risk 229f., 276f.
- thromboxane formation 91ff., 306f.
- time-dependent inhibition 91
- Preeclampsia 290ff.
 - actual situation 298
 - clinical trials 293ff.
 - etiology 290
 - miscarriage 151, 298
 - mode of aspirin action 290f.
- Pregnancy 150ff.
- Pregnancy-induced hypertension, *see* Preeclampsia
- Prevention Regimen For Effectively avoiding Second Strokes (PROFESS) 268f.
- Primary Prevention Project (PPP) 170, 236f., 264
- Prostacyclin, *see also* Prostaglandins 95ff., 291f.
- Prostaglandins
 - biosynthesis 55ff.
 - general aspects 12f.
 - mode of aspirin action 11ff., 55
 - pain mediators 110f.
 - receptors 122
- Prostaglandin synthases, *see* COX

r

- “Resistance” 303ff.
 - clinical trials 262, 310ff.
 - definition 304
 - measurement 304ff.
 - mechanisms 303ff.
 - role of thromboxane 306f.
- Reye’s syndrome 208ff.
 - actual situation 217f.
 - asthma 217f.
 - clinical studies 212ff.
 - etiology 209
 - laboratory findings 209
 - morphological findings 209
 - pathophysiology 210
 - salicylates 84f., 211ff.
- Rheumatoid arthritis 332f.
 - clinical studies 250, 334ff.
 - mode of aspirin action 332f.
 - myocardial infarction 332, 336
 - pathophysiology 332
- Rotterdam Study 362

s

- Salicin 6, 26, 334f.
- Salicylate

- antiinflammatory actions 107f.
- antipyretic actions 115
- biotransformations 47f.
- bleeding 98, 142f.
- chemical properties 25ff.
- determination 30f.
- energy metabolism 79ff.
- excretion 49f.
- fatty acid metabolism 80ff.
- gastric mucosal injury 162
- history 19ff.
- inhibition of kinases 67ff.
- inhibition of prostaglandin synthesis 56f.
- natural sources 6, 42f.
- pharmacokinetics 38, 48ff.
- preeclampsia 291f.
- protonophoric properties 83ff.
- thrombotic events 277
- toxicity 132ff.
- transcription factors 61f., 69ff.
- uncoupling of oxidative phosphorylation 82ff.
- Salicylic acid, *see* Salicylate
- Serotonin 112
- Stroke, *see* Cerebrovascular diseases
- Study of Left Ventricular Dysfunction (SOLVD) 249
- Swedish Angina Pectoris Aspirin Trial (SAPAT) 237f.
- Swedish Aspirin Low-Dose Trial (SALT) 266
- Sydney Older Persons Study 361

t

- Thrombin 89, 144
- Thrombosis 90
- Thrombosis Primary Prevention Trial (TPT) 170, 236ff., 264
- Thrombotic risk 229f., 244ff., 261f., 276f., 287, 290f.
- Thromboxane (A₂)
 - aspirin “resistance” 306f.
 - biosynthesis 12f.
 - inhibition 91, 97, 229, 261f., 292, 455
 - urinary excretion 277, 306f.
- Tinnitus, *see also* Ototoxicity 192
- Toxicity, *see also individual organs* 131ff.
 - clinical symptoms 131ff.
 - dose-dependency 133ff.
 - intoxication in children 135f.
 - laboratory findings 135
 - treatment 136ff.
- Transcription factors
 - colorectal carcinoma 123f.
 - modulation by salicylates 69ff.

u

- United Kingdom Transient Ischemic Attack Aspirin Trial (UK-TIA) 265

(First) United Kingdom Heart and Renal Protection Study (UK-HARP) 183
US-Physicians' Health Study (US-PHS) 169, 231f., 278, 349f.
US-Public Health Service Study (PHS) 213f.
Urticaria 205

v

Variability in antiplatelet responses, *see* "Resistance"
Venous thrombosis 287ff.
– actual situation 288
– air travelling 288

– clinical trials 287f.
– etiology 287
– mode of aspirin action 287
Veterans Administration Cooperative Trial 238f.
VIOXX GI Clinical Outcomes Research (VIGOR) 250f., 335f.

w

Warfarin, *see* Anticoagulants
Warfarin Antiplatelet Vascular Evaluation (WAVE) 270
Widal's Triad, *see* Aspirin-induced asthma
Women's Health Study (WHS) 227, 234f., 263f.