

Index

a

- academic sector 40, 131ff.
 - Access and Benefit Sharing (ABS) 157f.
 - Administrative Authority for Patent Affairs (AAPA) 84f., 87
 - African Agricultural Technology Foundation (AATF) 202
 - Agreement on Subsidies and Countervailing Measures 201
 - agricultural biotechnology 128f., 133f., 138f., 202ff.
 - budget 138f.
 - chemicals 123
 - communication 128f., 133
 - coordination 128f., 131f.
 - diversification 137
 - downstream switching costs 133f.
 - -driven deregulation process 130
 - leaders 132f., 135, 137
 - self-control 130
 - self-regulation 130
 - specialization 137
 - value chain 128f., 133f.
 - Alma Ata Declaration 173
 - ancillary rights 25
 - Argentina
 - biotechnology 109ff.
 - INTA 118
 - RELMÓ 118
 - technology transfer, *see* Latin-America
 - Association of University Technology Managers (AUTM) 40, 48, 52, 163, 166
 - Australia 54
 - Austria 50
 - authorization holder 145
- ### b
- basic research activities 52
 - Bayh–Dole Act
 - Federal Technology Transfer Act 48
 - Japan's 51, 72
 - system 47
 - type rights 53, 57
 - US 11, 36ff.
 - Belgium 50
 - benchmarks 136, 188
 - bench-top experiments 39
 - biodiversity 146f., 157f.
 - bio-economy 127, 133, 137ff.
 - bio-fuels 123, 126, 129
 - biological diversity, *see* biodiversity
 - biologics, *see* therapeutic biotechnology
 - products
 - bio-piracy 158
 - biosafety 203
 - biotechnology
 - agricultural 123ff.
 - financing 188ff.
 - in-house 15
 - international framework 195ff.
 - Latin-America 106ff.
 - sector 17, 39
 - Biotechnology Trust of Africa 202f.
 - BMBF (Bundesministerium für Bildung und Forschung) 105
 - bottom-line monetary improvements 149
 - bottom-up policies 50
 - Brazil 54, 57, 101ff.
 - BIOTA/FAPESP 108
 - biotechnology 107ff.
 - CNPq 107f.
 - EMBRPA 115
 - FINEP 108
 - FIOCRUZ 109, 115f.
 - PASNI 116
 - patent numbers 114
 - technology transfer, *see* Latin-America
 - Brazilian Agricultural Research Corporation 202

- breeding 124f.
 - advanced breeding techniques 125
 - conventional 125f.
 - marker-assisted 124f., 203
 - plant-breeding process 124
- Burrill Biotech Select Index 188

c

- Canada 51f., 54, 118
- CAP (Common Agricultural Policies) 139
- Centre National de le Recherche Scientifique (CNRS) 23
- Chile
 - biotechnology 111f.
 - CORFO 111
 - technology transfer, *see* Latin-America
- China 54, 79ff.
 - Anti-Unfair Competition Law 88f.
 - biotechnology 81f.
 - cross-board technology transfer 79ff.
 - government policy 82f.
 - Import and Export Regulations 90ff.
 - industry dissemination 80f.
 - MOFCOM (Ministry of Commerce) 80, 92
 - MOFTEC (Ministry of Foreign Trade and Economic Cooperation) 80, 92
 - patent applications 84f.
 - patent law 86
 - patent protection 84ff.
 - Supreme Court Interpretations 90, 95, 98f.
 - taxation 98
 - technology contract 95ff.
 - technology export 82, 90ff.
 - technology import 80f., 90ff.
 - technology transfer 90ff.
 - trade secret protection 88ff.
- claims
 - DNA-based 6f.
 - reach-through 44, 147, 151, 153, 155
- clauses 18
 - antistacking 32f.
 - financial 29f.
 - flexibility 34
 - non-use 19
- clinical
 - preclinical trials 29
 - trials 145
- company
 - major 16f., 29
 - private 16f., 49
 - start-up 15f., 124, 128, 131ff.
- competition, *see* law
- confidential endorsement 18
- confidentiality
 - agreement 18, 148
 - clauses 34
 - contract 19
 - obligation 18f.
- conflict of interest 168f.
- Congressional Joint Economic Committee 41
- contract
 - assignment 25
 - circulation 32
 - duration 34
 - founder 22ff.
 - license 25, 31
 - main license 24
 - public bodies 22
 - R&D 25, 30
 - sublicense 24
 - Technology Transfer Agreement (TTA) 24ff.
 - transfer 20
- contractual
 - negotiations 15, 17ff.
 - networks 16
 - pre- 17ff.
 - protection 88ff.
 - technologies 16
- Convention on Biological Diversity 146, 157
- Cooperative Research and Technology Agreements (CRADAs) 37f., 42
- Cooperative Research and Technology Enhancement Act (CREATE ACT) 8
- Court of Appeal 23, 37
- Court of Cassation 23
- Creative Commons 11
- crop
 - commercial GMO 126, 134, 138
 - first generation 124
 - green 139
 - health-promoting products 139
 - HIT-carrying 126, 131f., 138
 - innovative 124ff.
 - global crop protection market 126
 - new functionalities 127, 137, 139
 - new top 138
 - renewable products 139
- cross-board technology transfer 79ff.

d

- database law 16
- Denmark 50, 143, 204
- Department of Defense 41
- deregulation processes 130

developing countries 46, 113, 197ff.
 diligence 38, 43
 – due 38, 148
 disclosure 54f.
 dissemination 54, 80f., 197
 domains 26f.
 Drugs for Neglected Diseases Initiative 174

e

emerging-market countries 46
 entrepreneurial
 – ferment 165f.
 – sector 39
 entrepreneurship 164ff.
 ethical concerns 9, 156
 European Block Exemption for Technology Licenses 143
 European Commission Regulation 27, 31, 49, 144
 European Directive on Biotechnological Invention 204f.
 European Free Trade Association 118
 European Patent Convention 67
 European Patent Office 54
 evergreening 55
 evolutionary technological advance 55
 exclusivity 20, 22, 37f., 56f., 145, 148
 – co-exclusive basis 26f.
 – market 145
 – period 145
 exemption regulation 31, 145
 EXIST 50
 expressed sequence tags (EST), *see* patenting

f

Federal technology Transfer Act 104
 Finland 50
 first-to-file 53f.
 first-to-invent 53
 Food and Agriculture Organization (FAO) 202
 Food and Drug Administration (FDA) 4, 29, 40, 145, 178f., 187
 for-profit 40, 153
 – not- 153
 – research 44
 founder contracts, *see* contracts
 Framework Program for Research and Technological Development 144
 – FP6 144, 156f.
 – FP7 157
 France 50, 54, 57, 114
 freedom-to-operate 142

g

Gates Foundation's Grand Challenges in Global Health Program 176
 Gene
 – mapping 124
 – -related innovations 46
 – -splicing technology 39
 genetic inventions 9f.
 genetically modified organism (GMO) 125f.
 – crop 126
 – non-GMO solutions 125
 – technology in Europe 127
 General Agreement on Tariffs and Trade (GATT) 47, 145, 179
 German Employed Inventor's Act 50
 Germany 50, 54, 143
 germplasm 125, 135
 Ghana 57
 Global Health Networks 173ff.
 global transformation 185ff.
 Government Accounting Office 41
 Government
 – agencies 40
 – control process 130
 – -funded patents 42
 – -funded research 38f., 52, 144
 – -funded technology 36
 – funding 41, 144
 – inspection process 130
 – investigators 37
 – laboratories 36f., 39
 – sanctioning process 130
 grace period 54f.
 grant 36ff.
 – -back 143, 149, 157

h

Hatch–Waxman Act 145
 health-care system 11, 187f.
 herbicide
 – resistant 204
 – tolerance 123f., 126
 HIT (high impact traits) 125f., 128ff.
 – costs 133f.
 – drop out rates 133
 Human Genome Project 11, 186

i

improvements 30f., 34
 incentive 38f., 44, 56f., 198
 – capital investment 56
 incremental innovation 55
 India 56, 159
 Initial Public Offering (IPO) market 191ff.

- injunction 43
- innovation
 - capacity 200
 - capture 141
 - commercialization 200
 - expenses 142
 - leading-edge 200
 - open innovation platforms 123, 128, 131f., 137f.
 - research-based 155
- input traits, *see* traits
- insect
 - control 123f.
 - resistance 126
- Institutional Patent Agreements (IPAs) 36
- Intellectual Property Rights (IPR) 1ff.
 - dangers 147f.
 - frameworks 9
 - information 8
 - Japan 59ff.
 - lawsuit 148
 - ownership 11, 51, 168
 - protection 4, 9, 197
 - system 9
 - warehousing 11
- interference 53
- International Center for Genetic Engineering and Biotechnology (ICGEB) 205ff.
- International Code of Conduct on Transfer of Technology 196
- inventor remuneration 144
- ISI Deluxe 107
- Italy 51

j

- Japan 51, 54, 56
 - Biotechnology Strategy Council 64f.
 - IP management 59ff.
 - IP policies 61ff.
 - IP promotion 61ff.
 - IP-related projects 59, 63ff.
 - IP Strategy Council 60
 - medical patentability 65ff.
 - METI (Ministry of Economy, Trade and Industry) 71
 - MEXT (Ministry of Education, Culture, Sports, Science and Technology) 71f., 74, 76, 78
 - Outline of IP Strategy 68
 - patent application control 76
 - Patent Office 64
 - patent protection 68f.

- policies 70ff.
- technology import 80
- Technology Licensing Organization (TLO) 63, 71,
- university-industry relationships 59ff.

k

- know-how 22, 26ff.
 - proprietary 144
 - protection 16
- knowledge
 - -based bio-economy 127
 - economy 162
 - sequestration 175

l

- large molecules, *see* therapeutic biotechnology products
- Latin-America 101ff.
 - academia-industry cooperation 101ff.
 - incentives 103
 - investments in biotechnology 106ff.
 - policies for marketing biotechnological knowledge 112ff.
- law
 - anti-trust 142
 - competition 142f., 154
- Least Developed Countries (LDCs) 56, 196ff.
- legal frameworks 142
- legislation 38, 162, 198
- Letter of Intent 20
- license
 - automatic 152
 - call-back 152
 - compulsory 57, 146, 198
 - exclusive 22, 31, 38, 44, 151f., 162f., 180
 - negotiations 11, 168
 - non-exclusive 22, 151, 156, 162, 180
 - number 38
 - option for 152
- licensee 24, 28, 31, 33, 37f., 41, 43, 149
- licensing
 - agreement 198
 - competition 141f.
 - exclusive 37f., 40
 - fees 131
 - finality licensing agreement 11
 - genetic research tools 155
 - in- 141f., 145, 149ff.
 - income 167f.
 - offices 143
 - open-source 11
 - out- 143, 148ff.

- payment 143
- practices 9f., 148ff.
- transactions 148, 155f.
- licensors 28
 - control 11
 - second-rank 24
- life sciences sector 15f., 25, 32, 34
- litigation proceedings 33, 144, 150, 205
- living material 21, 26

m

- march-in 37, 42f., 57
- Material Transfer Agreements (MTA) 21, 142, 150f.
- Max Planck Society's (MPS) technology transfer division 50
- medical practice-related technology 68
- Memorandum of Understanding (MOU) 20f., 25, 40f.
- mergers 190
- Metabolic pathways 126
- Mexico 54, 118
- milestones 28f.
 - payment 28, 150
 - performance 38, 43
- Millennium Development Goals (MDGs) 173f.
- monopoly 155
 - patent 55
 - virtual 10f.

n

- NASDAQ 188, 190
- National Institute of Health (NIH) 21, 35ff.
 - extramural program 35f., 44
 - -funded research 41f., 153
 - global efforts 45f.
 - intramural program 35f., 44, 49
 - licensed technologies 38, 40
 - Research Tools Guidelines 40, 46
- National Science Foundation (NSF) 102, 177
- Netherlands 203f.
- New Molecular Entities (NME) 145
- Non-Disclosure Agreements (NDA) 11, 17ff.
- Non-Governmental Organizations (NGOs) 46
- non-profit
 - foundations 102
 - institutions 37, 40, 45, 162
 - researchers 41, 44

- Norway 50
- novelty standard 54
- nutraceuticals 123, 126

o

- obligations 168
- Office of General Council 39
- Office of Technology Management (OTM) 71
- Office of Technology Transfer (OTT) 39, 71
- Organization for Economic Cooperation and Development (OECD) 9, 46, 142
 - Effects of Patents in Blocking Research and Commercial Developments 155
 - Guidelines for the Licensing of Genetic Inventions 142, 147, 153, 155
 - report 9f.
- ownership 21f.
 - international 51
 - joint 22, 25
 - of the rights 25
 - patent 23, 50
 - transfer 21
- Oxford Genetics Knowledge Park (OGKP) 8

p

- Paris Convention 112, 198
- partnering transactions 190f.
- Patent and Trademark Office (PTO) 5f., 9, 36, 114f., 118
- patent
 - allowance 5
 - application 11, 43, 52ff.
 - assignee 42
 - blockbuster 163
 - blocking 155
 - breadth 4, 6
 - claims 4ff.
 - eligibility 56
 - examination 67, 70
 - exemption regulation 31, 145
 - filing 11, 15, 23, 53ff.
 - freedom licences 150
 - gene-related 11
 - granting 10
 - harmonization 55
 - holder 3, 5, 10, 156, 180, 205
 - infringement 43f., 84, 86ff.
- patent law 3, 144
 - Chinese 86
 - European 54
 - US 54, 67

- patent
 - litigation costs 33, 144, 150
 - non-infringing 148
 - off- 159
 - offices 9f., 54
 - policy 37, 42, 44
 - pools 16, 156
 - privatization 9
 - proprietor 24f.
 - protection 3, 26, 39f., 53, 55f., 68, 145, 149, 152f., 175, 204
 - re-examination 5f.
 - rejection 5
 - specificity 4, 6f., 198
 - strategic 11
 - system 10, 37, 53
 - trolls 16
 - validity 31, 144
 - patentability
 - antibodies 2f.
 - benchmarks 10
 - Expressed Sequence Tags (EST) 4
 - gene sequences 2f., 6f.
 - guidelines 10
 - medical activity 65ff.
 - research tools 2, 4, 9
 - stem cells 5f., 11
 - payment 28
 - advance 30
 - down-payment on signature 29f.
 - PCT (Patent Cooperation Treaty) 114f., 118
 - peer-reviewed 54
 - pharmaceuticals 41, 56, 69
 - plant-based
 - innovations 128
 - production 137
 - speciality products 123, 127f., 137
 - plant-made pharmaceuticals 123, 126
 - plant sciences 123, 125
 - plant variety
 - protection 204
 - rights 16
 - Poland 143
 - portfolio 38, 141
 - pre-market preparation 129, 134
 - Private Investment in Public Equities (PIPEs) 189, 193
 - privately funded research 11
 - professor's privilege' system 50
 - proof-of-concept 135
 - proprietary 144, 148, 154, 156
 - provision 29f.
 - PTM (Patent and Technology Management) 71
 - public
 - bodies 16, 19, 22, 29f., 178
 - engagement 10
 - funding recipient 50
 - health 42, 45, 57
 - safety 42
 - publications 21f., 34, 54, 101
 - public-private partnerships (PPPs) 8, 11, 48, 123, 130, 175
 - public research bodies 29f., 178
 - public research organizations (PROs) 39f., 42f., 47ff.
 - European 49
 - US 49, 52
 - publicity funded research Organizations 46ff.
 - publish or perish 176
 - punitive damage 43
- r**
- rampant bio-piracy, *see* bio-piracy
 - raw materials
 - HIT-derived 128
 - industrial 123, 128
 - reach-through rights 44, 147, 151, 153, 155
 - reimbursement 40f.
 - research
 - exemptions 9f.
 - networks 180f.
 - new models 175ff.
 - Research and Development (R&D)
 - collaborations 142f., 152f.
 - investments 158ff.
 - Research Tools Guidelines, *see* National Institute of Health (NIH)
 - rights of first refusal 32
 - royalties 11, 16, 26f., 29, 147, 150f., 197
 - anti-royalty stacking clause 150
 - bearing licenses 39, 147, 150
 - downstream 153
 - free basis 37, 40, 149, 162, 202
 - global payment 197
 - income 38
 - rate 29
 - reach-through 151, 153, 155
 - revenue 163
 - stacking 32f., 150
 - Russia 50
- s**
- Science Citation Index (SCI) 103
 - scientific publications, *see* publications
 - secrecy agreement 17, 19
 - seed 125f.

- selfreproduction 26
 - small business 37, 53, 162
 - Small Business Innovation Research Program 162
 - South Africa 54
 - South Korea 80, 105, 118
 - Spain 50, 105, 204
 - spin-offs 16, 22
 - of innovations 188
 - private sector companies 49
 - spin-out company 52
 - stakeholder 10, 40, 128
 - start-up
 - biotechnology 124, 128, 131ff.
 - cash-craving 136
 - company 15f.
 - 124, 128f., 164f.
 - university 164f.
 - statutory conditions 42f.
 - Stevenson–Wydler Technology Innovation Act 36, 38f., 104, 177
 - sublicense 20, 22, 24
 - Supreme Court 39, 145, 154f.
 - Sweden 50
 - Swiss 143, 145
- t**
- Taiwan 54, 105
 - take it or leave it 143
 - taxpayer 41
 - technical protection 200
 - technology
 - import 79ff.
 - licensed 11
 - platform 2f., 12
 - pre-existing 152
 - Roundup Ready 204
 - Technology Transfer Agreement (TTA) 21f., 24ff.
 - Technology Transfer Commercialization Act 104
 - technology transfer 1, 7ff.
 - cross-board 79ff.
 - growth in laboratories 39ff.
 - in China 90ff.
 - international 46ff.
 - international framework 196ff.
 - Latin-America 101ff.
 - legislation 36
 - life sciences sector 15, 24
 - office 168
 - policy 9ff.
 - technology utilization 27f.
 - territory 27
 - therapeutic biotechnology products 141f.
 - top-down policies 50
 - trade-off 168
 - trade secret protection 88ff.
 - traits 123, 125ff.
 - GMO 127
 - high impact (HITs) 125f., 128ff.
 - input 123
 - licensing 135
 - stacking 136
 - Treaty of Rome 31
 - Triple Helix 177f.
 - TRIPS (Trade-Related Aspects of Intellectual Property Agreement) 47, 56f., 84, 105, 120, 145f., 196ff.
 - compliance cascade 56
 - conference in Doha 57, 146, 196, 199
 - two-tier 180
- u**
- United Kingdom 50f., 54, 105, 158, 178
 - United Nations Population Division 141
 - Universal Biological Materials Transfer Agreement 40
 - university-industry relationships 48, 50
 - Japan 59ff.
 - Latin-America 114, 118
 - policies 70ff.
 - university-licensed technologies 38, 163
 - up-fronts 155
 - Uruguay, *see* Latin-America
 - Utility Examination Guideline 5
 - utilization phases 28
- v**
- Venezuela 54
 - venture
 - capital 192f., 200
 - financing 193
 - Veterans Administration 41
- w**
- win/win situation 129f.
 - World Intellectual Property Organization 199
 - World Trade Organization (WTO) 47, 57, 84, 101, 146, 158f., 196f.
 - Trade-Related Aspects of Intellectual Property Agreement, *see* TRIPS

