Index
Accreditation, 77-79
Admissibility
  DNA tests, 14, 16-17, 98-101, 103-105, 107, 157-172
  DNA tests, limited or barred, 16, 103, 105, 108, 157
  scientific evidence, 14, 15, 91, 93, 95-%
  State statutes for DNA testing, 107
Advisory Committee on Automated Personal Data Systems, Federal Code of Fair Information Practices, 127
Advisory Policy Board (APB)-NCIC, 20, 125-127
Alabama
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 158
Alaska
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 158
American Academy of Forensic Sciences (AAFS)
American Association of Blood Banks (AABB)
  proficiency testing program, 79
  quality assurance standards for paternity testing of, 72
American Association of Criminalists, 76
American Civil Liberties Union
American Osteopathic Association, clinical laboratory regulation, 13, 78
American Society for Microbiology, survey of membership in *Hopkins case*, 142
American Society of Crime Laboratory Directors (ASCLD)
  accreditation program, 12, 77-78, 146
  proficiency testing program, advisory capacity of, 72, 146
  support for national databank based on FBI RFLP protocol, 124
  survey of members, 142
American Society of Histocompatibility and Immunogenetics (ASHI), quality assurance guidelines of, 72
American Society of Human Genetics (ASHG)
  preservation of DNA samples, points to consider by, 133
  quality assurance guidelines, points to consider by, 72
American Type Culture Collection, 121
Antitrust Division (U.S. Department of Justice), 78
Argentina, 51
Arizona
  law establishing DNA databank in, 16, 20, 122, 123
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 158
Arkansas

number of DNA cases in, 15
reported uses of DNA typing in, 16, 158
Army (U.S.)
  reported use of DNA typing in, 172
see also Military
Ashton, Jeffrey, 99
Attorney General (U.S.)
  oversight and setting of standards, 29-30
  role in crime-related information exchange, 125
Australia, 24, 145
Automated Fingerprint Identification Systems (AFIS), 114

Band shift, 10-11, 63, 65
Beirne, D., 119
Biotechnology Science Coordinating Committee, monitoring DNA technologies, 81
Brandeis, Justice, 111
Bureau of Justice Statistics (BJS), study of rates of recidivism, 22, 129

California
  law establishing DNA databank in, 16, 20, 122-123
  *Martinez case*, 157, 159
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 157, 158-159
California Association of Crime Laboratory Directors (CACLD), 72
  proficiency test administered by, 79-80, 105
  survey of interest in DNA typing conducted by, 142
California Association of Criminalists (CAC), 72, 76
California Department of Justice, 72
Canada
  Gander, Newfoundland incident, 130
  Royal Canadian Mounted Police, 24, 145
Casselman, Murrel, 89
Castro, Jose, 103
Cellmark Diagnostics (Maryland), 148
  costs of services, 25, 149
  crime laboratories contracting with, 149
  criminal cases and investigations examined by, 157-172
  testimony as expert witnesses by, 98
Certification, 76-77
Cetus Corp. (California)
  Forensic Science Associates’ licensing agreement with, 148
  patent for PCR, 148-149
  test kit marketed by, 149
Civil liberties, 21-23
  policy options for, 35-38
see also Privacy
Clinical laboratories
Federal regulation of, 12-13,29,71,78
proficiency testing in, 80
State regulation of, 75-76
see also Clinical Laboratory Improvement Amendments of 1988
Clinical Laboratory Improvement Amendments of 1988 (CLIA), 12-13,78
Cobey, Kenneth, 108
Collaborative Testing Services (CTS), proficiency testing program, 79
College of American Pathologists, clinical laboratory regulation, 13,77,78
Colorado
law establishing DNA databank in, 16,20,123
number of DNA cases in, 15
reported uses of DNA typing in, 16,159-160
Computers
analyzing DNA tests using, 18-21,113,114-120
cost-effectiveness in court, 118-120
cross-jurisdictional networks of, 19-20,125-128
FBI model system, 119
interpretation of PCR test results, 117-118
interpretation of RFLP analysis, 114-117,118
interpretation of RFLP analysis, potential problems, 18,119
storing DNA results in, 19-21,120-128
verification and reliability of, 18,119
see also Databanks
Congress, U. S., policy issues and options for, 26-38
Connecticut
Hinton case, 157,160
number of DNA cases in, 15
proposed law establishing DNA databank in, 16,20,124
reported uses of DNA typing in, 16,160
Consensus Development Program (NIH), 28,73-74
Constitution, U. S., 75,80,81,82
considerations in obtaining biological evidence, 97-98
Fifth Amendment, 17,97-98
Fourteenth Amendment, 17,98
Fourth Amendment, 17,98,108
Right to privacy, 128
Sixth Amendment, 17,98
see also Privacy
Controls
for PCR, 69-71
for single-locus probe analysis, 62-64
costs
FBI equipment and computer, 118-120
FBI estimates of DNA typing, 25,143-144
forensic services by private laboratories, 25,149
of DNA typing, impact on defense, 17-18,26,101
onsite DNA testing, 23-25
paternity services by private laboratories, 149
quality assurance, 14,79
savings to courts in, 17,100
to States of implementing DNA databank networks, 127
Council on Forensic Science Educators, 72
courts
DNA in, 14,16-17,98-100,157-172
pretrial hearings of DNA evidence in, 101,103-105
role in quality assurance, 82
scientific evidence in, 14,16,91,93,96
trial strategy when using DNA in, 107
Crime laboratories
budgets of, 144-145
budget requests for DNA testing of, 150
contracting by, 148-150
involvement in DNA testing of State and local, 147-152
not currently using DNA testing, 147-148
onsite DNA testing by, 150-151
OTA survey of, 23-26,129,141,144-153
plans for DNA testing by, 23-25,147,148
Databanks
access to information in, 133-134
accessibility to State criminal history files in, 22-23,128,134
creation and use of, 19,120-128
crime laboratories’ interest in, 19,146-147,152
de facto national, 21,113
ethnic and racial data collected in, 20-21,68,120-121,122
existing storehouses of genetic information, 121
fair information practices, 127-128
FBI plans for types of, 19,120-124,151
information exchange via, 20,125-128
information proposed for storage in, 131-132
investigatory uses of, 19-21,120,121-124,134-135
maintenance and management of, 20,125-128
policy options for advisability of, 32-34
policy options for standardization for, 34-35
population statistics in, 19,120-121
privacy of DNA information in, 21-23,128-135,136
proposed use to locate missing children, 130-131
recidivism as a justification for, 22,129
role of NCIC, 20,125-127
security and accountability, 127
standardization, 14,21,46,83,124,136
State laws for establishing DNA, 16,20,122-124
technical considerations in establishing, 124-125
see also Computers; Privacy
Davis, Aubrey J., 101
Davis v. Mississippi, 134
Delaware
number of DNA cases in, 15
Pennell case, 157,160
reported uses of DNA typing in, 16,160
Denmark 24,145
Department of Commerce (U.S.), 28,75
Department of Health and Human Services (U.S.)
clinical laboratory regulation, 13, 78
Consensus Development Program (NIH), 73
quality assurance and performance under Medicare, 81
Department of Justice (U.S.). See Federal Bureau of Investigation; Attorney General (U.S.)
District of Columbia
number of DNA cases in, 15
reported uses of DNA typing in, 16, 160
DNA
composition and structure of, 3-4, 6, 41-43
sources of, 4, 15, 42, 104
variability and uniqueness of, 3, 41-43, 59, 83
DNA analysis. See DNA testing, terminology
DNA databanks. See Databanks
DNA fingerprinting. See DNA testing, terminology
DNA identification. See DNA testing, terminology
DNA markers
population genetics and variation of, 7, 43-44, 122
variable number of tandem repeats, 44
see also DNA; Population genetics; Restriction fragment length polymorphism; Statistics
DNA patterns
in murder casework 11, 50, 65
in paternity casework 9, 61
in rape casework 7, 50, 60, 117
revealed by multilocus probes, 47
revealed by single-locus probes, 4, 47
using PCR/HLA DQx-I, 50
DNA prints. See DNA testing, terminology
DNA profiling. See DNA testing, terminology
DNA sequencing, 50
DNA testing
advantages of, 17, 50, 100
considerations for declaring a match in, 63-64
controversies over setting standards for, 10-11, 82, 85
courtroom use of, 14-17, 98-100, 157-172
crime laboratories’ interest in, OTA survey, 23-26, 141, 144-153
criminal investigations using, 14, 157-172
criticisms and limitations of, 17-18, 101
defense-initiated use of, 99-100
equipment needs for, 143
exclusion through, 157
impact on murder cases of, 51-52
impact on rape cases of, 51-52
international uses of, 24, 145
medically informative, 19, 37-38, 130-132
newborn infants, 130-131
novel applications of, 7, 51
paternity disputes, 14, 52
quality assurance considerations for, 11-14, 71-82
reliability of, 7-8, 60, 83
State laws addressing admissibility of, 14, 107
surveys to assess interest in (non-OTA), 142
terminology of OTA report, 3, 41
uses of, present and future, 6-7, 8, 50-52, 53
validity of, 7-8, 10, 59-60, 83, 103
DNA typing. See DNA testing
Dotson, Gary, 119, 162
Drug testing laboratories, Federal regulation of, 12, 29, 71
Due process, 17, 98, 128

Economics. See Costs; Funding
Einstein, Albert, 57
Electrophoresis Society, 73, 124
Everhart, Jeffrey L., 101
Evidence
biological, 96-98
DNA as, 96-109
DNA as exculpatory, percent by FBI laboratory, 157
rules and standards concerning the law of, 91
standards for admitting scientific, 91, 93, 95-96
statistical, 104-105, 107
Expert testimony
costs of, 25, 149
provided by FBI and commercial laboratories, 14, 98
requirements under the Frye test, 93, 95
requirements under the relevancy test, 96
use of, 91, 93

Fair Information Practices, 127-128
Federal Bureau of Investigation (FBI)
cases and samples handled by, 23
computer networks and databanks, advisory role of, 122, 125-129, 151
criminal cases and investigations examined by, 157-172
DNA Analysis Unit, 23-24, 143, 152
DNA databank types proposed by, 19, 120-122
percent suspects excluded in cases by, 157
proficiency testing, role of, 144
responsibilities for data files, 20, 22, 127
roles suggested by crime laboratories for, 26, 146-147
survey of interest in DNA typing conducted by, 142
testimony as expert witnesses, 23, 98
see also Forensic Science Research and Training Center; National Crime Information Center; Technical Working Group on DNA Analysis Methods
Federal Rules of Evidence. See Relevancy test
Federal Trade Commission (U.S.), 78
Fifth Amendment to U.S. Constitution, 17, 97-98, 135
Finland, 24, 145
Florida
law establishing DNA databank in, 16, 20, 123
number of DNA cases in, 15
private access to criminal history files in, 22, 128, 134
reported uses of DNA typing in, 16, 160-162
Forensic science
education and training in, 76-77
policy options for funding in, 30-32
professional societies in, 72
Forensic Science Associates (FSA)-California, 148-149
costs of services, 25, 149
crime laboratories contracting with, 149
criminal cases and investigations examined by, 157-172
licensing agreement with Cetus Corp., 148
testimony as expert witnesses by, 98
Forensic Science Foundation (FSF), proficiency testing program, 79
Forensic Science Research and Training Center (FSRTC)
mission of, 141
research by, 141, 143
training by, 23, 143
validation studies of DNA testing by, 23, 143
Visiting Scientist Program of, 23, 143
see also Federal Bureau of Investigation
Fourteenth Amendment to U.S. Constitution, 17,98, 128
Fourth Amendment to U.S. Constitution, 17,98,108,135
Frye case, 93
Frye, James Alfonso, 93
Frye test, 93-95
advantages and drawbacks of, 95
comparison to relevancy test, 16, 96
Funding
mechanisms by crime laboratories for DNA testing, 150
policy options for, 30-32
Gander, Newfoundland, 130
GenBank, 121
General Accounting Office (U.S. Congress), quality assurance in drug testing laboratories, 12,71
GeneScreen (Texas), 148
Genetic markers, traditional, 6,41,50,83
Genetics Society of America, 73
Gennan Corp. (Ohio), 148
Georgia
number of DNA cases in, 15
reported uses of DNA typing in, 16, 162
Guidelines
TWGDAM, 74
voluntary professional, 72-73
Hardy-Weinberg equilibrium, 67
Hawaii
number of DNA cases in, 15
reported uses of DNA typing in, 16, 162
Health Care Finance Administration (HCFA), clinical laboratory regulation, 13,78
Holmes, Justice, 57
Houston, Cpl. Carl, 130
Human Gene Mapping Library (HGML), 121
Human Genetic Mutant Cell Repository, 121
Human Genome Mapping Project
computer spin-off technologies from, 113, 117
identification of loci for DNA sequencing from, 50
Human leukocyte antigen (HLA)--HLA DQx-J
casework using, 50
discrimination power of, 48
PCR examination at, 48-49
Idaho
number of DNA cases in, 15
reported uses of DNA typing in, 16, 162
Illinois
Dotson case, 119, 162
law establishing DNA databank in, 16,20, 123
number of DNA cases in, 15
reported uses of DNA typing in, 16, 162
Imperial Chemical Industries PLC (United Kingdom), 148
India, 24, 145
Indiana
Hopkins case, 142, 162
number of DNA cases in, 15
proposed law establishing DNA databank in, 16, 20, 124
reported uses of DNA typing in, 16, 162-163
International Association of Chiefs of Police, 125-126
International Electrophoresis Society, 124
International Society for Forensic Haemogenetics (ISFH), quality assurance guidelines of, 72
Interstate Identification Index (Triple 1)-NCIC, 22, 125
Iowa
law establishing DNA databank in, 16,20, 123
number of DNA cases in, 15
reported uses of DNA typing in, 16, 163
Ireland, 24, 145
Israel, 24, 145
Italy, 24, 145
Jack, Melanie, 100
Japan, 24, 145
Jeffreys, Alec, 148
Joint Commission on Accreditation of Healthcare Organizations, clinical laboratory regulation, 13,77,78
“Junk” DNA, 19,38, 131-132
Kansas
Mosley case, 100
number of DNA cases in, 15
reported uses of DNA typing in, 16, 163
Kentucky, number of DNA cases in, 15
Korea, Republic of, 24, 145
Law Enforcement Assistance Administration, 144
Law Enforcement Standards Laboratory (National Institute of Justice), 75
Legislation
State admissibility of DNA tests, 14, 107
State DNA databanking, 16, 19,20, 122-124
Leicester case, 8, 134-135, 148
Licensing
  of personnel, 74-76
  of facilities, 77
Lifebank Inc. (New York), 131
Lifecodes, Corp. (New York), 149
costs of services, 25, 149
crime laboratories contracting with, 149
criminal cases and investigations examined by, 157-172
testimony as expert witnesses by, 98
Louisiana
  law addressing the admissibility of DNA in, 14, 107
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 163
Maine
  McLeod case, 157, 163
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 163
Marine Corps (U. S.)
  reported use of DNA typing in, 172
see also Military
Maryland
  clinical laboratory licensing in molecular biology, 75-76
  Cobey case, 108, 163
  law addressing the admissibility of DNA in, 14, 107
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 163-164
Massachusetts
  number of DNA cases in, 15
  private access to criminal history files in, 22, 128, 134
  proposed law establishing DNA databank in, 16, 20, 124
  reported uses of DNA typing in, 16, 164
Match (DNA patterns), considerations for declaring and reporting, 63-66
Mays, Kimberly, 131
Mays, Robert, 131
Mendel, Gregor, 41
Michigan
  number of DNA cases in, 15
  proposed law establishing DNA databank in, 16, 20, 124
  reported uses of DNA typing in, 16, 164
Military (U.S.)
  number of DNA cases in, 15
  potential use of DNA typing and DNA databanks by, 130
  reported uses of DNA typing in, 157, 172
Minnesota
  law addressing the admissibility of DNA in, 14, 107
  law establishing DNA databank in, 16, 20, 123
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 164-165
  Schwartz case, 105, 108, 157, 165
  statistical evidence in, 105, 107
Mississippi
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 165
Missouri
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 165
Mitochondrial DNA (mtDNA), 51
Moennens, Andre A., 89
Montana
  number of DNA cases in, 15
  reported uses of DNA typing in, 16, 165
Mosley, Johnny D., 100
Multilocus probes, 68-69
  patterns revealed by, 47
  population genetics of, 69
Murder
  DNA patterns from actual cases of, 11, 50, 65
  impact of DNA on, 17, 51
  incidents reported (1988), 17, 51
  recidivism statistics for, 22, 129
National Academy of Sciences, 28, 73
National Association of Criminal Defense Lawyers, 73
National College of District Attorneys, 73
National Conference of Commissioners on Uniform State Laws, role in quality assurance of, 27
National Crime Information Center (NCIC)
  DNA information, policy of, 126-127
  DNA profiles indexed in, 20, 125
  records held by, 125
  role in exchanging criminal history information, 125-127
  safeguards for databanks of, 22, 134
National District Attorneys’ Association, 126
National Institute of Justice (NIJ), 31-32, 73, 75
National Institute of Standards and Technology (NIST), role in quality assurance of, 28-29, 75
National Institutes of Health (NIH)
  Consensus Development program, 28, 73-74
  FBI joint project with, 141
  Recombinant DNA Advisory Committee, monitoring DNA technologies, 13, 81
National Law Enforcement Telecommunications System (NLETS), 20, 125
National Probation and Parole Association, 126
National Sheriffs’ Association, 126
Nebraska, number of DNA cases in, 15
Negligence litigation, 76
Netherlands, the, 24, 145
Nevada
  law addressing the admissibility of DNA in, 14, 107
  law establishing DNA databank in, 16, 20, 123-124
  number of DNA cases in, 15
New Hampshire
number of DNA cases in, 15
reported uses of DNA typing in, 16, 165
New Jersey
number of DNA cases in, 15
reported uses of DNA typing in, 16, 165
New Mexico
number of DNA cases in, 15
reported uses of DNA typing in, 16, 166
New York
Castro case, 103, 157, 166
Forensic DNA Analysis Panel, 152
number of DNA cases in, 15
reported uses of DNA typing in, 16, 166-167
New Zealand, 24, 145
North Carolina
number of DNA cases in, 15
reported uses of DNA typing in, 16, 167
North Dakota, number of DNA cases in, 15
Norway, 24, 145
Office of Technology Assessment (OTA)
findings on validity and reliability of DNA tests by, 7-8,59-60
instrument for survey by, 173-178
reports on human genetics and biotechnology by, 41
results of survey of crime laboratories, 23-26,129,141, 144-153
Ohio
number of DNA cases in, 15
proposed law establishing DNA databank in, 16, 20, 124
reported uses of DNA typing in, 16, 167-168
Oklahoma
number of DNA cases in, 15
reported uses of DNA typing in, 16, 168
Olmstead v. United States, 111
On-Line Mendelian Inheritance in Man (OMIM), 121
Oregon
number of DNA cases in, 15
reported uses of DNA typing in, 16, 168
Paternity cases, 99
child support enforcement, 52
cost savings to court in, 52
DNA patterns from, 9,61
number of facilities handling, 52
Pennsylvania
number of DNA cases in, 15
reported uses of DNA typing in, 16, 168-169
Pitchfork case, 8, 134-135
Poland, 24, 145
Policy, issues and options for Congress, 26-38
Polymerase chain reaction (PCR)
amplification of DNA using, 4,47-50,69-71
computer technologies used with, 117-118
contamination as a problem of, 69-70
controls for, 69-71
HLA DQx+1 amplification using, 48-50,70-71, 119
misincorporation with, 70
mitochondrial DNA amplification using, 51
novel applications using, 48,50,51
population genetics considerations for, 70-71
possible technical standards for, 10,69-70
schematic of DNA using, 6,48
use in actual casework, 50, 119
validity and reliability, 59-60
Ponce, Vilma, 103
Popper, Sir Karl R., 57
Population frequencies. See Population genetics; Statistics
Population genetics
disagreement about, 10,66
ethnic and racial considerations in databanks, 20-21, 37,68, 120-122
interpreting DNA test results using, 8-10, 62, 66-71
role in forensic investigations, 6,134-135
validity of underlying principles applied to forensic casework, 66
see also Statistics
Privacy, 21-23, 128-136
debates about storing DNA v. storing DNA test results, 21, 132-133
medically informative DNA tests, 21-22, 37-38, 130-132
personal information and, 128
policy options to address issues in, 35-38
regulations by NCIC to ensure, 22, 134
Privacy Act of 1974
Code of Fair Information Practices as a model for, 127
exemptions for criminal justice agencies, 22, 128, 134
protection of information in Federal databases, 22,128
Probes. See Multilocus probes; Single-locus probes
Proficiency testing
AABB program, 79
controversy over availability and use of results of, 80
controversy over CTS-FSF program, 79
FBI plans for, 80
United Kingdom program, 79
Protein Data Bank (PDB), 121
Protein Identification Resource (PIR), 121
Quality assurance, 83-85
clinical laboratories, 12-13,29,71, 75-76,78, 80
costs of, 14, 79
drug testing laboratories, 12,29,71
Federal role in, 14-16,73-75, 80-82
flexibility in programs for, 14,79
mechanisms for, 11-14, 71-82
policy options for, 27-30
professional societies’ role in, 12,72-73
State role in, 12,75-77
see also Regulation; Standards
Quality control, 62, 71

Rape
DNA patterns from actual cases of, 7, 50, 60, 117
impact of DNA on, 17, 52, 99
incidents reported (1988), 17, 52
recidivism statistics for, 22, 129
Recidivism, 22, 129

Regulation
accreditation, 77-79
certification, 76-77
clinical laboratories as a model for, 12-13, 29, 71, 75-76, 77, 78, 80
drug laboratories as a model for, 12, 29, 71
Federal role in, 80-82
licensing, 75-76, 77
policy options for, 27-30
proficiency testing, 79-80
State role in, 75-77
see also Quality assurance; Standards, setting of

Relevancy test, 14, 16-17, 96
comparison to Frye test, 16, 96
expert testimony under, 96

Reliability
increasing challenges to, 8
of DNA test results, 60
of DNA tests per se, 7-8, 60

Research, funding for forensic, 31-32
Restriction enzymes, used by FBI and commercial laboratories, 46
Restriction fragment length polymorphism (RFLP)
analysis and interpretation, 4, 4347, 60-68
basis for, 43-44
population genetics, 66-68
see also Multilocus probes; Single-locus probes; Southern blotting; Variable number of tandem repeats
Rhode Island
number of DNA cases in, 15
reported uses of DNA typing in, 16, 169

Right to counsel, 17, 98

Schmerber v. California, 97-98
Schwartz, Thomas, 105
Scientific evidence
expert testimony, 91, 93
Frye test, 93, 95
relevancy test, 96
standards for admitting, 91, 93
see also Evidence; Statistics

Search and seizure, 17, 98, 135
Cobey case, 108
Secret Service (U.S.), 125
Self-incrimination, 17, 97-98, 135
Senate Committee on Labor and Human Resources (U.S.), 3
Sessions, William S., 1, 111

Sexual assault. See Rape
Sheindlin, Judge Gerald, 103

Single-locus probes
analysis and interpretation using, 44-47, 60-68
computer analysis of DNA tests using, 114-117, 118
considerations for choosing, 62
contROLS for test using, 61-62, 64
evidence size limitation for analysis with, 47
patterns revealed by, 4, 47
population genetics of, 66-68
possible technical standards for, 60-66
reporting that patterns match using, 63-66
schematic using, 5, 45

Sixth Amendment to U.S. Constitution, 17, 98
Social security number (SSN), use as a national identifier, 21, 113, 115
Society of Heredity and Evolution, 73
South Africa, 24, 145
South Carolina
Ford case, 89, 169
number of DNA cases in, 15
reported uses of DNA typing in, 16, 169
South Dakota
law establishing DNA databank in, 16, 20, 123-124
number of DNA cases in, 15
reported uses of DNA typing in, 16, 169
Southern Association of Forensic Scientists, 77
Southern blotting, 44, 46, 47, 60-61
Spencer, Timothy W., 101, 108

Standardization
as distinct from standards, 83
importance to crime laboratories of, 145-146
importance to DNA databanking of, 14, 21, 46, 83, 124, 136
international cooperation on, 24, 145
policy options for, 34-35
role in quality assurance of, 83

Standards
controversies over setting, 10-11, 82, 85
crime laboratories’ view of FBI role in, 25, 147
for legal admissibility of scientific evidence, 14, 16-17, 91, 93, 95-96
for PCR, possible technical, 10, 69-70
for RFLP analysis, possible technical, 10-11, 60-66
operational, 10, 82
policy options for setting, 27-30
technical, 10, 82
see also Guidelines; Quality assurance

Statistics
as evidence in court, 101, 104-105, 107
calculating for RFLP analysis, 67
database considerations of population, 120-122
see also Population Genetics

Supreme Court, U.S.
privacy of criminal history records, 134
refusal to hear appeal in Spencer case, 101
ruling on congressional authority to impose conditions on funds, 81
Sweden, 24, 145
Switzerland, 24, 145

_TJ. Hooper, The_, 57
Teale, Edwin Way, 39
Technical Working Group on DNA Analysis Methods (TWGDAM)-FBI
computer database model of, 13, 122, 127, 144
members of, 144
quality assurance program of, 13-14, 74-75, 77, 144
statistics, 13
Tennessee
number of DNA cases in, 15
reported uses of DNA typing in, 16, 169
Texas
number of DNA cases in, 15
reported uses of DNA typing in, 16, 169-170
_Trimboli case_, 100, 170
Thompson, Governor James (Illinois), 162
Thorton, John I., 139
Training
policy options for funding, 31
education and requirements for, 76-77
Trimboli, Ronald Stephen, 100, 170
Triple I. See Interstate Identification Index
Twigg, Arlena, 130-131
Twigg case, 130-131
Uhrig, Hal, 39, 99
United Kingdom
DNA typing in, 24, 145
DNA’s criminal debut, Leicester case, 8, 135
immigration case, first use in forensic context, 68
multilocus probe analysis in, 47, 68
proficiency testing in, 79
_United States v. Williams_, 89
University of New Haven (Connecticut), survey of interest in DNA typing conducted by, 142

_Utah_
number of DNA cases in, 15
reported uses of DNA typing in, 16, 170-171

Validity
DNA tests per se, 7-8, 59-60
principles of population genetics, 10, 66
Variable number of tandem repeats (VNTR), 44
Vermont
number of DNA cases in, 15
reported uses of DNA typing in, 16, 171
Virginia
child support enforcement and DNA testing in, 52
law establishing DNA databank in, 16, 20, 123-124
number of DNA cases in, 15
onsite DNA testing in, 150-151
reported uses of DNA typing in, 16, 171
_Spencer case_, 101, 108, 171

Washington
law establishing DNA databank in, 16, 20, 123-124
number of DNA cases in, 15
reported uses of DNA typing in, 16, 171-172
Webb, Cathleen Cromwell, 119
West Germany, 24, 145
West Virginia
number of DNA cases in, 15
reported uses of DNA typing in, 16, 172
_Woodall case_, 108, 157, 172
Williams, John, 39
Wisconsin
number of DNA cases in, 15
reported uses of DNA typing in, 16, 172
Wyoming, number of DNA cases in, 15

Yugoslavia, 24, 145