

Navigating the Genetic Information Nondiscrimination Act of 2008

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The Genetic Information Nondiscrimination Act of 2008 (GINA) was passed by a nearly unanimous Congress in May 2008 and was signed into law by President George W. Bush on May 21, 2008.¹ Public Law 110-233, 122 Stat. 881, codified at 42 U.S.C. 2000ff et seq. Title II of GINA, which prohibits employment discrimination based on “genetic information,” took effect on Nov. 21, 2009. The Equal Opportunity Employment Commission issued its final GINA regulations, found at 29 CFR § 1635, on Nov. 10, 2010.

GINA includes three titles: Title I, which prohibits genetic information discrimination by health insurers; Title II, which prohibits genetic information discrimination in employment; and Title III, which contains miscellaneous provisions, including provisions on severability and child labor.

Even though this discusses all three titles, the primary focus is Title II. We will outline the central provisions of Title II, examine the background to its passage, review the arguments raised in opposition to the proposed statute, discuss what employers need to know, and determine what GINA may mean in the future for labor and employment attorneys.

Introduction to GINA

Title I: Health Insurance

In order to understand the full scope of GINA and how it affects employers, a brief introduction to Title I is warranted. Title I applies to employer-sponsored group health plans, health insurance issuers in the group and individual markets, Medigap insurance, and state and local nonfederal governmental plans. Title I prohibits a health insurance issuer offering health coverage in connection with a group health plan from adjusting premium or contribution amounts for a covered group on the basis of genetic information concerning an individual in the group or a family member of the individual. In addition, “[g]roup health plans, health insurance issuers in the group and individual market, and issuers of Medicare supplemental policies covered under this title are prohibited from requesting or requiring an individual to take a genetic test.” The Senate report, which was based on the 2007 version of the bill, stated that one purpose of the legislation was to clarify that genetic information includes “information about a request

for or a receipt of genetic services by an individual or family member of such individual.” The Senate report also stated that, “by building these protections into existing statutes (e.g., ERISA, PHSA, and the Social Security Act), this title generally uses the same mechanisms to enforce the protections established under this legislation as apply to other violations of these underlying statutes.” In addition, “with regard to the privacy provisions established by this legislation, the same enforcement structure and penalties created by the Social Security Act for the HHS privacy standards apply with regard to the privacy protections established for genetic information by this legislation.”²

Out of fear that individuals could sue under both Title I and Title II if their employers provided their own health insurance, a “firewall” was put into the bill. This “firewall” ensures that individuals cannot sue under both provisions in such circumstances.³

Title II: Employment Provisions

Like other federal antidiscrimination statutes, such as Title VII of the Civil Rights Act of 1964 (Title VII), the Age Discrimination in Employment Act (ADEA), and Title I of the Americans with Disabilities Act (ADA), the aim of Title II of GINA is to prohibit discrimination in employment practices.⁴ The underlying purpose of Title II is to prevent discrimination in employment based on one’s genetic information. In furtherance of this purpose, Title II also prohibits employers from requiring genetic testing as a condition of employment. Title II also requires employers who already have access to genetic information to ensure that the information is not disseminated to others.

Title II makes it an unlawful employment practice for a covered employer to discriminate on the basis of genetic information when it comes to any aspect of employment, including hiring, firing, pay, job assignments, promotions, layoffs, training, fringe benefits, or any other term or condition of employment.

In addition to prohibiting explicit discrimination based on genetic information, Title II also prohibits harassment and retaliation because of a person’s genetic information. In addition, it is illegal to retaliate against an applicant or employee for filing a charge of discrimination under GINA. Retaliation encompasses firing, demoting, and harassing an employee for participating in a discrimination proceeding or otherwise opposing genetic discrimination.

Furthermore, Title II makes it unlawful for a covered employer to request, require, or purchase genetic information about an applicant or employee. This prohibition is broader than it may appear. An advisory on Title II issued by the Equal Employment Opportunity Commission (EEOC) warns: "Accessing an individual's medical records directly is no different from asking an individual for information about current health status, which the Commission considers a request for genetic information where it is likely to result in the acquisition of such information, particularly family medical history." Thus, at least in the eyes of the EEOC, a mere medical inquiry—already unlawful under the Americans with Disabilities Act—may also trigger liability under Title II of GINA.

There are six exceptions to this general prohibition against inquiries about genetic information. An employer is not liable for an alleged violation of this provision if—

- the employer obtained the information inadvertently;
- the information was obtained, on a voluntary basis, as part of a health or genetic service;
- the information was obtained in the form of medical history provided for purposes of complying with the federal Family and Medical Leave Act (FMLA), state or local leave laws, or certain leave policies;
- the information is already public;
- the information is required by law to be provided or is provided on a voluntary basis; and
- the information is obtained by employers who conduct DNA testing for law enforcement purposes or for the identification of human remains.

Title II also prohibits a covered employer from disseminating any genetic information that may have been obtained about its applicants, employees, or members. If an employer has access to this information, it must be kept in a separate file to prevent dissemination. This latter requirement mirrors the requirement under the ADA that employees' medical information must be stored in files separate from regular personnel files.

Title II borrows from existing federal employment laws. It defines "employee" and "employer" according to Title VII, "state employee" and "state employer" according to the Government Employee Rights Act, and "covered employee" and "employing office" according to the Congressional Accountability Act. Title II defines covered employers as private and public employers with 15 or more employees; employment agencies; labor unions; and joint labor-management training programs, among other entities. GINA does not create individual liability or permit causes of action against individuals, because the definition of "employer" under Title VII does not permit such individual liability. Commentary to 29 CFR § 1635.2 states, "as the statute makes clear, GINA's definition of 'employer' includes employers as defined by Title VII at 42 U.S.C. § 2000(e)b. Numerous courts have held that this definition was not intended to permit individual liability." See *Lane v. Lucent Tech. Inc.*, 388 F. Supp. 2d 590 (M.D.N.C. 2005). And, as with Title VII, claimants under Title II of GINA

must file a charge with the EEOC and exhaust their administrative remedies before bringing suit in court. It should be noted that currently Title II claimants under GINA may allege only "disparate treatment" discrimination claims and are expressly barred from bringing claims under a "disparate impact" theory. However, Congress is required to revisit this issue in 2013 and may amend Title II at that time to allow for "disparate impact" claims if Congress deems such an amendment to be appropriate.⁵

Title II of GINA incorporates the remedies provided for successful plaintiffs under Title VII of the Civil Rights Act. Claimants may seek reinstatement, hiring, promotion, back pay, injunctive relief, pecuniary and nonpecuniary damages (including compensatory and punitive damages) and attorneys' fees and costs. Title VII's cap on combined compensatory and punitive damages also applies to actions under Title II of GINA. The cap on combined compensatory and punitive damages ranges from \$50,000 for employers with 15–100 employees, to \$300,000 for employers with more than 500 employees.⁶

Genetic Information and Genetic Tests

With respect to individuals, genetic information is defined as information about (1) the individual's genetic tests, (2) the genetic tests of family members of the individual, and (3) the manifestation of a disease or disorder in family members of the individual. See 29 U.S.C. § 1191b(d)(6)(A). EEOC regulations, found at 29 CFR § 1635.2, define the term "family members" as follows:

GINA includes as family members persons related from the first to the fourth degree of an individual. The degree of relationship reflects the average proportion of genes in common between two individuals. The GINA provisions thus include the individual's children, siblings, and parents (first degree), grandparents, grandchildren, uncles, aunts, nephews, nieces, and half-siblings (second degree), great-grandparents, great grandchildren, great uncles, great aunts, and first cousins (third degree), and great-great grandparents and first cousins once removed (the children of a first cousin) (fourth degree).

Title II excludes from this definition any "medical information that is not genetic information about a manifested disease, disorder, or pathological condition of an employee or [labor union] member," including such a condition that has or may have a genetic basis.⁷ Thus, such medical information about the *employees themselves* does not constitute protected "genetic information." However, such information pertaining to the employees' *family members* is protected.

Title II defines a "genetic test" as "an analysis of human DNA, RNA, chromosomes, proteins, or metabolites that detects genotypes, mutations, or chromosomal changes." The term "genetic test" does not mean an analysis of proteins or metabolites that does not detect genotypes, mutations, or chromosomal changes, or an analysis of proteins or metabolites that is directly related to a manifested

disease, disorder, or pathological condition that could reasonably be detected by a health care professional with appropriate training and expertise in the field of medicine involved.⁸

The EEOC regulations identify additional forms of “genetic information”: an individual’s request for or receipt of genetic services; the individual’s participation in clinical research that includes genetic services by the individual or family member; genetic information of a fetus being carried by an individual or family member; and genetic information of an embryo held legally by an individual or family member using assisted reproduction techniques. 29 CFR § 1635.3 (c).

Why was Legislation Needed?

Genetic discrimination in the workplace had become a concern many years before GINA was enacted, especially given the rapid pace of advancement in genetic science and medicine which, in turn, led to an increasing number of persons obtaining genetic testing. The EEOC explains in its regulations, found at 29 CFR § 1635, why Congress believed it necessary to take legislative action on this subject:

Many genetic tests now exist that can inform individuals whether they may be at risk for developing a specific disease or disorder. But just as the number of genetic tests increases, so do the concerns of the general public about whether they may be at risk of losing access to health coverage or employment if insurers or employers have their genetic information. Congress enacted GINA to address these concerns, by prohibiting discrimination based on genetic information and restricting acquisition and disclosure of such information, so that the general public would not fear adverse employment- or health coverage-related consequences for having a genetic test or participating in research studies that examine genetic information. Scientific advances require significant cooperation and participation from members of the general public. In the absence of such participation, geneticists and other scientists would be hampered in their research, and efforts to develop new medicines and treatments for genetic diseases and disorders would be slowed or stymied.

Proponents of protection of genetic information believed that a safeguard had to be in place to prevent employers from seeking this information unnecessarily and to protect the information when it was necessary for employers to obtain it.

Prior to the enactment of GINA, 34 states and the District of Columbia had promulgated their own genetic discrimination laws.⁹ Even though all these laws prohibited discrimination based on the results of genetic testing, not all of them protected against discrimination from inherited characteristics and family histories or restricted all employer access to genetic information. Many of the laws were inconsistent and were considered noncomprehensive. In

the 2007 Senate Report, S. Rep. No. 110-48, at 10–15, Sen. Edward M. Kennedy (D-Mass.) wrote that the existing laws did not adequately address the topic of potential genetic discrimination. Moreover, no matter how comprehensive the state laws were, they would be ineffective with respect to health insurance programs, as the pre-emption provision of the federal Employee Retirement Income Security Act, 29 U.S.C. § 1144 (2006), pre-empts state regulation of self-funded, employer-provided private health insurance plans.

Proponents of GINA also believed that there was no adequate federal law addressing the concern over genetic discrimination and asserted that the ADA did not adequately protect genetic information. Supporters of GINA feared that the Supreme Court’s limited interpretation of what constituted a “disability” under the ADA at the time would not adequately protect genetic information. In the seminal case at the time, *Sutton v. United Air Lines*, the U.S. Supreme Court held that being “regarded as” having a disability would apply only to two specific circumstances: (1) a mistaken belief that a person has a limiting impairment or (2) a mistaken belief that a nonlimiting impairment substantially limits major life activities.¹⁰ Similarly, although Title VII may also extend protection against discrimination based on genetic information, it would do so only when that information can be linked to a category protected under Title IV, such as sickle-cell anemia in African-Americans.¹¹

In light of the perceived limitations of existing laws and testimony before various committees of the House and Senate, the Senate Committee on Health Education, Labor, and Pensions concluded in its report that new federal legislation was needed to protect individuals from potential genetic discrimination in health insurance and employment. The 2007 Senate Report on GINA, S. Rep. No. 110-48, at 10–15 stated the following:

[E]mployers may come to rely on genetic testing to “weed out” those employees who carry genes associated with diseases. Similarly, genetic traits may come to be used by health insurance companies to deny coverage to those who are seen as “bad genetic risks.” Enabling employers, health insurers and others to base decisions about individuals on the characteristics that are assumed to be their genetic destiny would be an undesirable outcome of our national investment in genetic research, and may significantly diminish the benefits that this research offers.

The Senate approved GINA unanimously, and the House of Representatives passed it by a vote of 414 to 1, with only Rep. Ron Paul (R-Texas) voting against.¹² The stated goal of the statute was to protect individuals against disparate treatment in health insurance coverage and employment on the basis of genetic information. Congress stated, “Establishing these protections will allay concerns about the potential for discrimination and encourage individuals to participate in genetic research and to take advantage of genetic testing, new technologies, and new therapies.”

Congress sought to provide protection to those individuals who may suffer from actual genetic discrimination now and in the future. “Because of this legislation, Americans will be free to undergo genetic testing for diseases such as cancer, heart disease, diabetes, and Alzheimer’s without fearing for their job or health insurance,” said Speaker of the House Nancy Pelosi (D-Calif.) in a statement.¹³

As these statements make clear, one of the critical concerns that motivated Congress was to encourage Americans to participate in the emerging field of genetic research. Congress was aware of the promise such research offers in the war against illness. For example, the Human Genome Project, a 13-year project coordinated by the U.S. Department of Energy and the National Institutes of Health, had the following goals: “to identify all the approximately 20,000–25,000 genes in human DNA, determine the sequences of the 3 billion chemical base pairs that make up human DNA, store this information in databases, improve tools for data analysis, transfer related technologies to the private sector, and address the ethical, legal, and social issues (ELSI) that may arise from the project.”¹⁴

The Human Genome Project was completed in 2003, and genome research is still being conducted. Scientists believe that by studying the human genome, medical science can cure or eradicate many illnesses, such as diabetes, heart disease, bipolar disorder, and Parkinson’s disease.¹⁵ Congress viewed GINA as playing a critical role in allowing Americans to benefit from the fruits of this research. GINA should be interpreted and applied with this underlying policy goal in mind.

Cases Applying Title II of GINA

Since genetic information is not apparent, and genetic testing is not yet widespread, GINA has seen relatively little action since it was enacted in 2008. Litigation has been rare, and the cases that do exist were brought by pro se plaintiffs.

In a recent case in the Western District of North Carolina, *Bullock v. Spherion*, 2011 WL 1869933, *5–6 (W.D.N.C. May 16, 2011), a pro se plaintiff filed claims under Title II of GINA, Title VII of the Civil Rights Act, the Americans with Disabilities Act, and the Age Discrimination in Employment Act against a temporary agency and one of the businesses it served. The plaintiff’s claim related to his rejection from employment because of his failure to pass initial screening tests. Beyond listing the Genetic Information Nondiscrimination Act as one of his claims, the plaintiff did not allege any facts in support of a GINA claim. Accordingly, his claim was dismissed.

Also, in 2011, in the Southern District of Florida, in *Citron v. Niche Media/Ocean Drive Magazine* 2011 WL 381939, *1 (S.D. Fla. Feb. 2, 2011), a pro se plaintiff filed a complaint alleging that the defendant had discriminated against him due to his gender, in violation of Title VII of the Civil Rights Act, and due to his genetic information, in violation of Title II of GINA. The plaintiff alleged that he was not employed by “Respondent due to my gender/male and my genetic information.” The plaintiff’s complaint was

dismissed without prejudice because it failed to allege that the defendant required him to take a genetic test, that the defendant had otherwise obtained the plaintiff’s genetic information, or that the defendant had discovered specific genetic information that caused it to deny employment to the plaintiff. There was also an issue as to the timing of the alleged discrimination. Any alleged violations taking place prior to Nov. 21, 2009 predate the effective date of Title II and therefore are not actionable.

As employment attorneys become more familiar with Title II of GINA—particularly its broad definition of “genetic information”—the number of GINA-based lawsuits can be expected to increase in coming years, probably in conjunction with claims under the ADA and FMLA.

Criticism of GINA

Most commentators agree that GINA is actually a preventive law; it anticipates a form of discrimination that is not currently a widespread reality in the American workplace. GINA has been called the first law designed to address harm pre-emptively, rather than retrospectively. GINA’s opponents cited this lack of existing genetic information discrimination as evidence that the law was premature or unnecessary. They argued that Congress was unable to predict whether such discrimination would occur at all, and, if it did, what form it would take. Critics also argued that developments in genetic science and changing social norms could render GINA obsolete from the outset. They expressed concern over possible unintended consequences arising from Congress’ inability to predict accurately what future results will flow from GINA’s adoption at this early stage in the development of genetic science.¹⁶

Another criticism was the belief that the statute was the product of an unjustified fear that employers would misuse their employees’ genetic information. Some argued that such an unjustified fear is not a legitimate basis for legislation. For example, in his article, “Genetic Discrimination,” Philip R. Reilly, M.D., J.D., a geneticist, writes: “Little evidence supports the widespread fear that people who undergo genetic tests to determine whether they are at increased risk for developing a serious disorder face a significant risk of genetic discrimination.” In addition, Gaia Bernstein, a professor at Seton Hall University School of Law, argues, “Genetic discrimination is rare and apparently on the decline. Potential abusers, such as employers and insurers, do not use genetic information.”¹⁷

A major concern for both employers and insurers is GINA’s definition of “genetic test.” Employers and the health insurance industry considered the law to be overly broad and vague and have expressed concern that it would do little to reconcile the inconsistencies in the various existing state laws. The health insurance industry recommended that the definition of “genetic test” be limited to predictive testing performed on asymptomatic or undiagnosed individuals for the purposes of assessing the risk of future disease, because the industry was concerned that the definition contained in the law would force employers to offer health plan coverage for all treatments for

genetically related conditions. However, Congress did not adopt the industry's recommendation.¹⁸

One of the asserted purposes of GINA was to reconcile the various state laws that had been adopted on the issue of genetic discrimination and to create a "national and uniform basic standard for the prevention of genetic discrimination." If that truly was Congress' intent, one would expect Congress to have pre-empted the field of legislation in this area, as was done with the regulation of employee health, benefits, and retirement plans under ERISA. Instead, Title II expressly states that its provisions cannot be construed to "limit the rights or protections of individuals under any other Federal or State statute that provides equal or greater protection."¹⁹ Whatever the general merit of such a provision may be, it hardly seems consistent with the stated intention of creating a uniform national standard. Employers and employees are still left to struggle with a patchwork of varying state laws on this subject.

Child Labor Amendments

Section 302 of GINA amends the provisions of the Fair Labor Standards Act of 1938 that fix penalties for violations of the federal child labor laws. Under GINA, civil penalties are increased to \$11,000 per any violation, or \$50,000 per violation that causes death or serious injury to any employee under the age of 18. The penalties may be doubled in cases of willful or repeated violations. An administrative determination by the Secretary of Labor on the amount of penalty shall be final unless the person charged files exceptions by certified mail within 15 days of receipt of notice of the penalty. Once exceptions are filed, the matter will be set down for an administrative hearing in accordance with the Administrative Procedures Act. 29 U.S.C.A. § 216(e); P.L. 110-233, § 302, 29 U.S.C.A. § 216(e).

Unlike Title II, GINA's child labor provisions took effect immediately upon enactment of the legislation.

What Employers Must Know to Comply with the Law

Because Title II prohibits the dissemination of anything that can be construed as genetic information, a term that includes family medical history, an employer must be vigilant in reviewing an employee's personnel files so as to ascertain what information must be eliminated or separated. Family histories and medical information can be construed as "genetic information," and employers must take action to prevent the dissemination of such information. The protected information contained in a personnel file runs the gamut: anything from requests for FMLA leave to care for an ill parent, to a request for accommodations due to illness, to a death certificate provided for bereavement leave purposes may contain protected "genetic information" under GINA's broad definition of the term.

FMLA certifications are a particular area of concern. If an employee seeks leave to care for a seriously ill family member, the employer is entitled to request a medical certification that contains a "statement or description of the appropriate medical facts regarding the patient's health condition," which may include information such as "symp-

toms, diagnosis, hospitalization, doctor's visits, whether medication has been prescribed, any referrals for evaluation or treatment ... or any other regimen of continuing treatment." 29 C.F.R. § 825.306(a)(3). Many employers request these certifications as a matter of course to verify the need for leave. However, these "medical facts" are considered "genetic information" under GINA, and the employer's receipt and possession of such "medical facts" will now trigger potential liability under Title II. Although Title II permits employees to *request* such information, employers face potential liability if the information is disclosed—even inadvertently.

On May 31, 2011, the EEOC published an opinion letter addressing two issues: (1) whether an employer or its agent should have access to an employee's personal health information without the employee's consent; and (2) the manner in which employers must safeguard employees' medical information.

On the first issue, the EEOC distinguished between personal and occupational health information: "Although both the ADA's and GINA's confidentiality provisions provide limited exceptions under which information may be disclosed, none of these exceptions specifically authorize an employer to allow access to medical information related to employment by individuals providing health services unrelated to employment." According to the EEOC, keeping both personal and occupational health information in a single medical record or file may violate both the ADA and GINA. Accordingly, attorneys should counsel their clients that they now need to incur the expense of creating a new filing system—be it in paper or electronic form—in which personal medical information is stored separately from any medical information that may be needed for job-related purposes allowed under the ADA.

On the second issue, the EEOC asserted that, even though encryption programs and other security measures for electronic records are not necessary, GINA's confidentiality provisions do apply to electronic records. Employers are liable under Title II if they do not impose measures that are sufficient to protect electronic records for inadvertent or unauthorized disclosure.

Employers must be counseled to avoid any inquiries, information requests, or other conduct that could be construed as a request or demand for "genetic information." Any inquiry into the "manifestation of a disease or disorder" in an employee's family member as distant as a great-grandparent or child of a first cousin can be deemed a prohibited request for "genetic information," even if the inquiry otherwise appears to be unrelated to genetics. Supervisory and management personnel also need to be trained to avoid such inquiries.

Finally, employer antiharassment policies must be updated to prohibit the harassment of employees due to their genetic information as that term is defined in Title II.

Conclusion

In enacting GINA, Congress sought to encourage a promising new area of medical science by prohibiting what many feared could be its misuse. Only time will

tell whether GINA will serve its intended purpose. In the meantime, employers need to assure compliance with the provisions of Title II in order to avoid liability, and labor and employment attorneys must familiarize themselves with GINA in order to counsel their clients properly. **TFL**



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Endnotes

¹Pub. L. No. 110-233, 122 Stat. 881 (codified as amended in various sections of chapters 26, 9, and 42 of the U.S. Code), Genetic Information Nondiscrimination Act of 2007, H.R. 493, 110th Cong. (chronology of major actions), available at thomas.loc.gov/cgi-bin/bdquery/z?d110:HR00493:@@C@R.s.

²Senate Report 110-48 (2007).

³Jessica L. Roberts, *Preempting Discrimination: Lessons from the Genetic Information Nondiscrimination Act*, 3 VAND. L. REV. 439, 445 (2010).

⁴Genetic Information Nondiscrimination Act; see also 29 C.F.R. § 1635.8(a)-(b), § 1635.8(a), b(1)(i); see also EEOC: *Questions and Answers for Small Businesses*, www.eeoc.gov/laws/regulations/gina_qanda_smallbus.cfm; see also www.eeoc.gov/eeoc/foia/letters/2011/ada_gina_confidentrequire.html.

⁵See Genetic Information Nondiscrimination Act, § 207, § 208.

⁶www.eeoc.gov/policy/docs/qanda_geneticinfo.html.

⁷P.L. 110-233, § 210, 42 U.S.C.A. 2000ff-9.

⁸29 U.S.C. § 1191b(d)(7)(A), 29 U.S.C. § 1191b(d)(7)(B).

⁹*National Conference of State Legislation*, www.ncsl.org/default.aspx?tabid=14280. The states that have their own genetic discrimination laws are as follows: Arizona § 41-1463, Arkansas, § 11-5-401 to 405, California Govt. § 12926, Govt. § 12940, Connecticut § 46a-60, Delaware

§ 19-710 to 711, District of Columbia § 2-1401.01, Hawaii § 378-01 to 10, Illinois § 410-513/25, § 215 ILCS 5/356v, Iowa § 729.6, Kansas § 44-1002, § 44-1009, Louisiana § 23:302, § 23:303, Maryland, Human Relations Commission § 49B-15 to 16, Massachusetts § 151B, Michigan § 37.1201, § 37.1202, Minnesota § 181.974, Missouri § 375.1300, § 375.1306, Nebraska § 48-236, Nevada § 613.345, New Hampshire § 141-H, New Jersey § 10:5-5, § 10:5-12, New Mexico § 24-21-1 to 7, New York EXC § 292, 296, North Carolina § 95-28.1A, Oklahoma § 36-3614.2, Oregon § 659A.300 to 306, Rhode Island § 28-6.7-1, South Dakota § 60-2-20, Texas Labor Code 2 § 21-402, Utah § 26-45-103, Vermont § 18-9333, Virginia § 40.1-28.7:1, Washington § 49.44.180, and Wisconsin § 111.372.

¹⁰Roberts, *supra* n.3; see also 527 U.S. 471 (1999).

¹¹See, e.g., *Norman-Bloodsaw v. Lawrence Berkeley Lab.*, 135 F.3d 1260 (9th Cir. 1998) (holding that blood tests for sickle-cell anemia violated Title VII).

¹²Final Vote Results for Roll Call 234," *Clerk of the House of Representatives*, May 1, 2008, clerk.house.gov/evs/2008/roll234.xml.

¹³110th Congress, Committee Reports (2007–2008), Senate Report 110-048.

¹⁴Human Genome Project Information, available at www.ornl.gov/sci/techresources/Human_Genome/home.shtml (accessed June 28, 2011).

¹⁵Nat'l Insts. of Health, U.S. Dep't. of Health & Human Servs., *Human Genome Project: Fact Sheet*, available at www.orni.gov/sci/techresources/Human_Genome/faa/faqs1.shtml#HGP (accessed on Oct. 20, 2011); Nancy Lee Jones and Amanda K. Sarata, *Congressional Research Service Report for Congress*, No. RL34584, The Genetic Information Nondiscrimination Act of 2008 (GINA) 2 (updated Oct. 8, 2008), available at fpc.state.gov/documents/organization/108319.pdf.

¹⁶Roberts, *supra*, n.3, at 445–482.

¹⁷Philip R. Reilly, *Genetic Discrimination*, in GENETIC TESTING AND THE USE OF INFORMATION 106 (Clarisa Long, ed. 1999); Gaia Bernstein, *The Paradoxes of Technical Diffusion: Genetic Discrimination and Internet Privacy*, 39 CONN. L. REV. 241, 245 (2006).

¹⁸Patricia Alten, *GINA: A Genetic Information Non-Discrimination Solution in Search of a Problem*, 61 FLA. L. REV. 379, 390 (2009); Janet Stokes Trautwein, Executive Vice President and CEO, National Association of Health Underwriters, Statement to the House Committee on Education and Labor Regarding H.R. 493: The Genetic Information Nondiscrimination Act of 2007 (Feb. 14, 2007), available at www.nahu.org/legislative/genetic/GeneticsEdLaborStatement.pdf.

¹⁹P.L. 110-233, Section 2(5), 42 U.S.C.A. § 2000ff (Findings of Congress, para. (5), Notes); P.L. 110-233, Section 209(a)(1), 42 U.S.C.A. § 2000ff-8(a)(1).