

No. 14-5291

**IN THE UNITED STATES COURT OF APPEALS
FOR THE SIXTH CIRCUIT**

GREGORY BOURKE, ET AL.,
Appellees,

v.

STEVE BESHEAR, ET AL.,
Appellants.

On Appeal from the Western District of Kentucky

**BRIEF OF AMICUS CURIAE GLMA: HEALTH PROFESSIONALS
ADVANCING LGBT EQUALITY IN SUPPORT OF PLAINTIFFS-APPELLEES
AND IN SUPPORT OF AFFIRMANCE**

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CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1, the undersigned states that *Amicus Curiae* GLMA: Health Professionals Advancing LGBT Equality is a 501(c)(3) corporation that issues no stock and has no parent corporation.

/s/ Nicholas M. O'Donnell

*Attorney for Amicus Curiae GLMA: Health
Professionals Advancing LGBT Equality*

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<i>Njenga v. United States Attorney General</i> , 216 F. App'x 963 (11th Cir. 2007)	5
<i>Nyquist v. Mauclet</i> , 432 U.S. 1 (1977).....	6
<i>Obergefell v. Wymyslo</i> , 962 F. Supp. 2d 968 (S.D. Ohio 2013)	10, 11
<i>Pedersen v. Office of Personnel Management</i> , 881 F. Supp. 2d 294 (D. Conn. 2012).....	7, 10, 11
<i>Perry v. Schwarzenegger</i> , 704 F. Supp. 2d 921 (N.D. Cal. 2010)	11, 27
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<i>United States v. Windsor</i> , 133 S. Ct. 2675 (2013).....	9
<i>Watkins v. United States Army</i> , 875 F.2d 699 (9th Cir. 1989)	6, 11
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Docketed Cases

<i>Bourke v. Beshear</i> , 13-cv-00750 (JGH) (W.D. Kentucky February 12, 2014)	10
--	----

Other Authorities

Adelson, S.A., et al., <i>Practice Parameters on Gay, Lesbian, or Bisexual Sexual Orientation, Gender Nonconformity, and Gender Discordance in Children and Adolescents</i> , JOURNAL OF THE AMERICAN ACADEMY OF CHILD AND ADOLESCENT PSYCHIATRY (Sept. 2012).....	28
Allen, L.S., et al., <i>Sexual Orientation and the Size of the Anterior Commissure in the Human Brain</i> , PROCEEDINGS, NATIONAL ACADEMY OF SCIENCES (Aug. 1992).....	25

American Academy of Pediatrics, <i>Policy Statement, Homosexuality and Adolescence</i> , AMERICAN ACADEMY OF PEDIATRICS (1993).....	28
American Psychological Association, <i>Just the Facts About Sexual Orientation and Youth, A Primer For Principals, Educators and School Personnel</i> , reproduced and available at http://www.apa.org/pi/lgbt/resources/just-the-facts.pdf (2008)	27-28
American Psychological Association, <i>Report of the American Psychological Association Task Force on Appropriate Therapeutic Responses to Sexual Orientation</i> (2009)	27, 29
Bagemihl, B., <i>Biological Exuberance: Animal Homosexuality and Natural Diversity</i> (St. Martin's Press 1999)	8
Bailey, J.M., et al., <i>A Genetic Study of Male Sexual Orientation</i> , ARCHIVES OF GENERAL PSYCHIATRY (Dec. 1991)	14
Bailey, J.M. et al., <i>A Family History Study of Male Sexual Orientation Using Three Independent Samples</i> , BEHAVIOR GENETICS (1999).....	16, 25
Bailey, J.M., et al., <i>Genetic and Environmental Influences on Sexual Orientation and Its Correlates in an Australian Twin Sample</i> , JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY (March 2000).....	15
Baron, M., <i>Genetics and Human Sexual Orientation</i> , BIOLOGICAL PSYCHIATRY (June 1993)	15
Blanchard, R., <i>Fraternal Birth Order and the Maternal Immune Hypothesis of Male Homosexuality</i> , HORMONES AND BEHAVIOR (Sept. 2001).....	17, 18
Blanchard, R., <i>Quantitative and Theoretical Analyses of the Relation Between Older Brothers and Homosexuality in Men</i> , JOURNAL OF THEORETICAL BIOLOGY (Sept. 21, 2004)	17
Bogaert, A.F., et al., <i>Sexual Orientation, Fraternal Birth Order, and the Maternal Immune Hypothesis</i> , FRONTIERS IN NEUROENDOCRINOLOGY (2011)	17
Bouchard, T.J., et al., <i>Sources of Human Psychological Differences: the Minnesota Study of Twins Reared Apart</i> , SCIENCE (Oct. 12, 1990).....	14

Breedlove, S.M., <i>Organizational Hypothesis: Instances of the Fingerpost</i> , ENDOCRINOLOGY (Sept. 2010).....	21
Carey, Benedict, <i>Psychiatry Giant Sorry for Backing Gay 'Cure'</i> , NEW YORK TIMES (May 18, 2012)	30
Cohen-Bendahan, C.C., et al., <i>Is There an Effect of Prenatal Testosterone on Aggression and Other Behavioral Traits? A Study Comparing Same-Sex and Opposite-Sex Twin Girls</i> , HORMONES & BEHAVIOR 47 (2005), available at www.sciencedirect.com	19-20
Cohen-Bendahan, C.C., et al., <i>Prenatal Exposure to Testosterone and Functional Cerebral Lateralization: A Study In Same-Sex and Opposite- Sex Twin Girls</i> , PSYCHONEUROENDOCRINOLOGY (Aug. 2004), available at www.sciencedirect.com	20
Culbert, K.M., et al., <i>Prenatal Hormone Exposure and Risk for Eating Disorders: a Comparison of Opposite-Sex and Same-Sex Twins</i> , ARCHIVES OF GENERAL PSYCHIATRY (Mar. 2008).....	20
Dempsey P.J., et al., <i>Increased Tooth Crown Size in Females With Twin Brothers: Evidence For Hormonal Diffusion Between Human Twins in Utero</i> , AMERICAN JOURNAL OF HUMAN BIOLOGY: THE OFFICIAL JOURNAL OF THE HUMAN BIOLOGY COUNCIL (Sept. 1999).....	20
Dessens, A.B., et al., <i>Prenatal Exposure to Anticonvulsants and Psychosexual Development</i> , ARCHIVES OF SEXUAL BEHAVIOR (Feb. 1999).....	22
Dessens, A.B., et al., <i>Association of Prenatal Phenobarbital and Phenytoin Exposure with Genital Anomalies and Menstrual Disorders</i> , TERATOLOGY (Oct. 2001)	22
Ehrhardt A.A., et al., <i>Sexual Orientation After Prenatal Exposure to Exogenous Estrogen</i> , ARCHIVES OF SEXUAL BEHAVIOR (Feb. 1985).....	22
Ehrhardt, A.A., et al., <i>Psychosexual Development: an Examination of the Role of Prenatal Hormones</i> , CIBA FOUNDATION SYMPOSIUM (Mar. 14-16, 1978)	21

Gay and Lesbian Med. Association, GMLA Marriage Initiative: Same Sex Marriage and Health (Sept. 2008), available at http://glma.org/document/docWindow.cfm?fuseaction=document.viewDocument&documentid=146&documentFormatId=236	2
Graham, T.C., <i>The Shifting Doctrinal Face of Immutability</i> , 19 VIRGINIA JOURNAL OF SOCIAL POLICY & THE LAW 169 (Spring 2012)	7
Haldeman, D., <i>The Practice and Ethics of Sexual Orientation Conversion Therapy</i> , JOURNAL OF CONSULTING & CLINICAL PSYCHOLOGY (1994)	27
Hall, L.S. and Love, C. T., <i>Finger-Length Ratios in Female Monozygotic Twins Discordant for Sexual Orientation</i> , ARCHIVES OF SEXUAL BEHAVIOR (Feb. 2003)	15
Hamer, D.H., et al., <i>A Linkage Between DNA Markers on the X Chromosome and Male Sexual Orientation</i> , SCIENCE (Jul. 1993)	23
Herek, G.M., et al., <i>Demographic, Psychological, and Social Characteristics of Self-Identified Lesbian, Gay, and Bisexual Adults in a US Probability Sample</i> , SEXUALITY RESEARCH & SOCIAL POLICY (2010)	26
Hines, M., et al., <i>Androgen and the Development of Human Sex-Typical Behavior: Rough-and-Tumble Play and Sex of Preferred Playmates in Children With Congenital Adrenal Hyperplasia (CAH)</i> , CHILD DEVELOPMENT (Aug. 1994)	21
Iemmola, F., et al., <i>New Evidence of Genetic Factors Influencing Sexual Orientation in Men</i> , ARCHIVES OF SEXUAL BEHAVIOR (2009)	18
Jannini, E.A., et al., <i>Male Homosexuality: Nature or Culture?</i> CONTROVERSIES IN SEXUAL MEDICINE (2010)	18
Kirk, K.M., et al., <i>Measurement Models for Sexual Orientation in a Community Twin Sample</i> , BEHAVIOR GENETICS (2000)	14
LeVay, S., <i>A Difference in Hypothalamic Structure Between Heterosexual and Homosexual Men</i> , SCIENCE (Aug. 1991)	24, 25
Marcosson, S.A., <i>Constructive Immutability</i> , 3 UNIVERSITY OF PENNSYLVANIA JOURNAL OF CONSTITUTIONAL LAW 646 (2001)	7

Meyer-Bahlburg H.F., et al., <i>Gender Development in Women With Congenital Adrenal Hyperplasia as a Function of Disorder Severity</i> , ARCHIVES OF SEXUAL BEHAVIOR (Dec. 2006).....	22
Meyer-Bahlburg, H.F., et al., <i>Sexual Orientation in Women With Classical or Non-Classical Congenital Adrenal Hyperplasia as a Function of Degree of Prenatal Androgen Excess</i> , ARCHIVES OF SEXUAL BEHAVIOR (Feb. 2008).....	21
Money, J., et al., <i>Bisexually Concordant, Heterosexually and Homosexually Discordant: A Matched-Pair Comparison of Male and Female Adrenogenital Syndrome</i> , PSYCHIATRY (May 1987)	21
Mustanski, B.S., et al., <i>A Critical Review of Recent Biological Research on Human Sexual Orientation</i> , ANNUAL REVIEW OF SEX RESEARCH (2002) ...	13, 16
Mustanski, B.S., et al., <i>A Genomewide Scan of Male Sexual Orientation</i> , HUMAN GENETICS (2005).....	16
Mustanski, B.S., et al., <i>Mental Health Disorders, Psychological Distress, and Suicidality in a Diverse Sample of Lesbian, Gay, Bisexual, and Transgender Youths</i> , AMERICAN JOURNAL OF PUB. HEALTH (Dec. 2010).....	16
Newcomb M.E., et al., <i>Examining Risk and Protective Factors for Alcohol Use in Lesbian, Gay, Bisexual, and Transgender Youth: a Longitudinal Multilevel Analysis</i> , JOURNAL OF STUDIES ON ALCOHOL AND DRUGS (2012).....	16
Nordenskjold, A., et al., <i>Type of Mutation and Surgical Procedure Affect Long-Term Quality of Life For Women With Congenital Adrenal Hyperplasia</i> , JOURNAL OF CLINICAL ENDOCRINOLOGY & METABOLISM (Feb. 2008).....	22
Nygren, U., et al., <i>Voice Characteristics in Women With Congenital Adrenal Hyperplasia Due to 21-Hydroxylase Deficiency</i> , CLINICAL ENDOCRINOLOGY (OXF.) 70 (Jan. 2009)	21
Pasterski, V., et al., <i>Increased Aggression and Activity Level in 3- to 11-Year-Old Girls With Congenital Adrenal Hyperplasia (CAH)</i> , HORMONES AND BEHAVIOR (Sept. 2007)	21

Pattatucci, A.M.L., et. al., <i>Development and Familiality of Sexual Orientation in Females</i> , BEHAVIOR GENETICS (Sept. 1995).....	16
Pattatucci, A.M.L., <i>Biopsychosocial Interactions and the Development of Sexual Orientation</i> , in Patterson, C., et al., <i>Lesbian, Gay, and Bisexual Identities in Families</i> (Oxford University Press 1998).....	23
Pattatucci, A.M.L., <i>Molecular Investigations into Complex Behavior: Lessons from Sexual Orientation Studies</i> , THE INTERNATIONAL JOURNAL OF POPULATION BIOLOGY AND GENETICS (Apr. 1998).....	23
Peper, J.S., et al., <i>Does Having a Twin-Brother Make For a Bigger Brain?</i> , EUROPEAN JOURNAL OF ENDOCRINOLOGY 160 (Feb. 18, 2009).....	20
Pillard, R.C., et al., <i>Evidence of Familial Nature of Male Homosexuality</i> , ARCHIVES OF GENERAL PSYCHIATRY (Aug. 1986)	16
Pillard, R.C., <i>Homosexuality from a Familial and Genetic Perspective</i> , in TEXTBOOK OF HOMOSEXUALITY AND MENTAL HEALTH (R.P. Cabaj, et al., eds. 1996).....	14-15, 16
Pillard, R.C., <i>The Search for a Genetic Influence on Sexual Orientation</i> , SCIENCE AND HOMOSEXUALITIES (V.A. Rosario, ed. 1997).	15
Posner, R. A., <i>Sex and Reason</i> (Harvard University Press 1992)	27
Ryan, C., et al., <i>Family Rejection as a Predictor of Negative Health: Outcomes in White and Latino Lesbian, Gay and Bisexual Young Adults</i> , JOURNAL OF PEDIATRICS (2009).....	28
Shapiro, M.R., <i>Treading the Supreme Court's Murky Immutability Waters</i> , 38 GONZAGA LAW REVIEW 409 (2002-03)	7
Swaab, D.F. et al., <i>An Enlarged Suprachiasmatic Nucleus in Homosexual Men</i> , BRAIN RESEARCH (Dec. 1990)	25
Swaab, D.F., et al., <i>Sexual Differentiation of the Human Brain in Relation to Gender Identity and Sexual Orientation</i> , FUNCTIONAL NEUROLOGY (Jan.-Mar. 2009).....	19
Turner, W.J., <i>Homosexuality, Type 1: An Xq28 Phenomenon</i> , ARCHIVES OF SEXUAL BEHAVIOR (Nov. 1995)	14

Voracek, M., et al., <i>Digit Ratio (2D:4D) in Twins: Heritability Estimates and Evidence For a Masculinized Trait Expression in Women From Opposite-Sex Pairs</i> , PSYCHOLOGICAL REPORTS (Feb. 2007).....	20
Whitam, F.L., et al., <i>Homosexual Orientation in Twins: A Report on 61 Pairs and Three Triplet Sets</i> , ARCHIVES OF SEXUAL BEHAVIOR (June 1993).....	14, 15
Yoshino, K., <i>Assimilationist Bias in Equal Protection: The Visibility Presumption and the Case of “Don’t Ask, Don’t Tell,”</i> 108 YALE LAW JOURNAL 485 (1998)	7

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Pursuant to Fed. R. App. P. 29, *Amicus Curiae* GLMA: Health Professionals Advancing LGBT Equality (“GLMA”), by its undersigned counsel, respectfully submits this brief in support of Plaintiffs-Appellees Gregory Bourke et al., in the above-captioned appeal before this Court, and asks this Court to uphold the judgment of the District Court for the Western District of Kentucky and find that heightened scrutiny must be applied to the laws that discriminate against lesbians and gay men, discrimination that the Equal Protection Clause of the Fourteenth Amendment forbids.

STATEMENT OF INTEREST OF *AMICUS CURIAE* GLMA: HEALTH PROFESSIONALS ADVANCING LGBT EQUALITY

*Amicus Curiae*¹ GLMA, a 501(c)(3) corporation with no parent corporation, is the largest and oldest association of lesbian, gay, bisexual and transgender (“LGBT”) healthcare and health professionals of all disciplines, including physicians, nurses, physician assistants, behavioral health specialists and researchers. GLMA’s mission is to ensure equality in healthcare for LGBT individuals and healthcare professionals, using the medical and health expertise of

¹ Counsel for Plaintiff-Appellees et al. consented to the filing of this brief. Counsel for Defendant-Appellants et al. neither objected nor consented to the filing of this brief. GLMA respectfully requests that the Court grant its concurrently submitted motion for leave to file an *amicus curiae* brief. No counsel for any party authored this brief in whole or in part, and neither any such counsel nor any party nor any person or entity other than *Amicus Curiae* or their members or their counsel made a monetary contribution intended to fund the preparation or submission of this brief.

GLMA members in public policy and advocacy, professional education, patient education and referrals, and the promotion of research. GLMA was founded in 1981 as the American Association of Physicians for Human Rights (changing its name to the Gay and Lesbian Medical Association in 1994), in part as a response to the call to advocate for policy and services to address the growing health crisis that would become the HIV/AIDS epidemic. Since then, GLMA's mission has broadened to address the full range of health issues affecting LGBT people, including ensuring that all healthcare providers provide a welcoming environment to LGBT individuals and their families and are competent to address specific health disparities affecting LGBT people.

GLMA's 2008 publication, *Same-Sex Marriage and Health* (O'Hanlan, K., et al.),² documents the large body of scientific research indicating that the denial of marriage rights to gay men and lesbians can negatively impact their health and well-being and that of their children. The denial of marriage rights to same-sex couples is a form of discrimination that perpetuates stigma. Because marriage can help protect and promote the mental and physical health of lesbians and gay men

² Kate O'Hanlan MD, a Gynecologic Oncology surgeon, and past President of GLMA, has made significant contributions to the field of sexual orientation and marriage equality, contributions that added greatly to GLMA's submission as *Amicus Curiae*. Among her many accomplishments, Dr. O'Hanlan gives invited lectures about the science of gender identity and sexual orientation at grand rounds in universities and medical schools. The GLMA study cited above is available at <http://glma.org/document/docWindow.cfm?fuseaction=document.viewDocument&documentid=146&documentFormatId=236>.

and their children, GLMA supports efforts to secure marriage equality for same-sex couples.

INTRODUCTION AND SUMMARY OF THE ARGUMENT

GLMA submits this brief as *Amicus Curiae* to make clear the scientific and empirical record concerning sexual orientation. Put simply, sexual orientation is an innate human characteristic that is treated unequally in the constitutional and statutory bans on recognition of legal same-sex marriages granted in other states by § 233A of the Kentucky Constitution and Kentucky Revised Statutes §§ 402.005-.045 (the “Kentucky marriage recognition bans”). Government discrimination on that basis warrants strict constitutional scrutiny. Although proving that a particular characteristic is immutable is not a required element to apply heightened scrutiny to a legal classification, the Supreme Court’s prior protection of immutable traits is particularly apt in the case of the Kentucky marriage recognition bans, which single out a community for one of its inherent characteristics in depriving it of the ability to marry.³ All credible study of sexual orientation establishes that genetic, hereditary and biological influences are major factors in determining sexual orientation.

Scientists have studied the determining factors of sexual orientation from a variety of perspectives. These include family studies, twin studies, sibling studies,

³ These laws are also irrational by any measure, but this brief is devoted to the scientific consensus on the issue of immutability.

brain studies, prenatal hormone studies and surveys. Not one shows a post-natal, behavioral cause sufficient to account for differences in sexual orientation between people. Moreover, misguided attempts to change individuals' sexual orientation have had results that ranged from ineffective at best to tragic at worst. Even apart from the science, experience with gay and non-gay people reveals that sexual orientation is a deep seated part of a person's identity. The Kentucky marriage recognition bans persecute a group of Americans solely on the basis of something about themselves that is fundamentally determined, and the Kentucky marriage recognition bans are unconstitutional as a result.

ARGUMENT

I. LAWS MUST BE ANALYZED WITH HEIGHTENED SCRUTINY WHEN THEY DISCRIMINATE AGAINST A SUSPECT CLASS

If the government discriminates against a suspect or quasi-suspect class, courts will review the law with heightened scrutiny. *City of Cleburne, Tex. v. Cleburne Living Ctr.*, 473 U.S. 432, 437, 440–41 (1985). The Supreme Court takes into account four considerations when determining whether a class is suspect or quasi-suspect, and thus entitled to heightened scrutiny: historical discrimination, defining characteristics relative to the ability to contribute to society, “obvious, immutable, or distinguishing characteristics,” and minority status and/or lack of political power. *Frontiero v. Richardson*, 411 U.S. 677, 686 (1973) (plurality opinion); *Windsor v. United States*, 699 F.3d 169, 181–82 (2d Cir. 2012) *aff'd*, 133

S. Ct. 2675 (2013); *see also Bowen v. Gilliard*, 483 U.S. 587, 602 (1987); *Cleburne*, 473 U.S. at 440–41; *Golinski v. U.S. Office of Pers. Mgmt.*, 824 F. Supp. 2d 968, 983 (N.D. Cal. 2012). The Supreme Court views classifications based on race, national origin, and alienage as “suspect” and applies strict scrutiny where the government discriminates on these bases. *See Cleburne*, 473 U.S. at 440–41.

Discrimination is ““more clearly unfair”” when it is based on a characteristic over which people have no control, as those people are not responsible for the characteristic and have no ability to change it. *Id.* at 436 (quoting *High Tech Gays v. Def. Indus. Sec. Clearance Office*, 909 F.2d 375, 377 (9th Cir. 1990)).

Differentiating among people based on an immutable characteristic violates ““the basic concept of our system that legal burdens should bear some relationship to individual responsibility.”” *Frontiero*, 411 U.S. at 686 (quoting *Weber v. Aetna Cas. & Sur. Co.*, 406 U.S. 164, 175 (1972)).

A characteristic should be considered immutable if it is “so fundamental to the identities or consciences of its members that members either cannot or should not be required to change it.” *Hernandez-Montiel v. I.N.S.*, 225 F.3d 1084, 1093 (9th Cir. 2000), *overruled in part on other grounds by Thomas v. Gonzales*, 409 F.3d 1177 (9th Cir. 2005); *see also Njenga v. U.S. Attorney Gen.*, 216 F. App’x 963, 966–67 (11th Cir. 2007) (immutable characteristics are fundamental to individual identities or consciences); *Zavaleta-Lopez v. U.S. Attorney Gen.*, 360 F.

App'x 331, 333 (3d Cir. 2010) (“[I]mmutable characteristics [are those] such as race, gender, or a prior position, status, or condition, or characteristics that are capable of being changed but are of such fundamental importance that persons should not be required to change them, such as religious beliefs.”). In other words, a trait is immutable if “changing it would involve great difficulty, such as requiring a major physical change or a traumatic change of identity.” *Watkins v. U.S. Army*, 875 F.2d 699, 726 (9th Cir. 1989) (en banc) (Norris, J., concurring); *Cleburne*, 473 U.S. at 440–41.

Nevertheless, the Supreme Court has frequently defined the “traditional indicia of suspectness” without reference to immutability. *See, e.g., San Antonio Indep. Sch. Dist. v. Rodriguez*, 411 U.S. 1, 28 (1973) (defining the “traditional indicia of suspectness” as those marking a class “saddled with such disabilities, or subjected to such a history of purposeful unequal treatment, or relegated to such a position of political powerlessness as to command extraordinary protection from the majoritarian political process”). Groups that are defined by a changeable characteristic have been held to be a suspect class—without mention of immutability. Aliens are a suspect class, despite the fact that non-citizens can and often do become citizens of their own initiative. *Graham v. Richardson*, 403 U.S. 365, 372 (1971); *see also Nyquist v. Mauclet*, 432 U.S. 1, 9 n.11 (1977) (rejecting the dissent’s argument that “strict scrutiny is inappropriate because under § 661(3)

a resident alien can voluntarily withdraw from disfavored status”). Similarly, illegitimate children are recognized as a quasi-suspect class even despite the fact that illegitimacy, at least for legal purposes, is also a mutable characteristic.

Mathews v. Lucas, 427 U.S. 495, 505–06 (1976); *see also Miller v. Albright*, 523 U.S. 420, 431 (1998) (recognizing that a non-marital child can be “legitimated” through actions of the father); *Pedersen v. Office of Pers. Mgmt.*, 881 F. Supp. 2d 294, 320 (D. Conn. 2012).

Indeed, of the four considerations set forth in *United States v. Carolene Prods. Co.*, 304 U.S. 144 (1938), “immutability is the one that the Court has most readily abandoned, and that scholars have most persistently criticized.” Graham, T.C., *The Shifting Doctrinal Face of Immutability*, 19 VA. J. POL’Y & L. 169, 179 (Spring 2012); *see also* Marcossan, S.A., *Constructive Immutability*, 3 U. PA. J. CONST. L. 646, 647 (2001) (noting that the concept of immutability has been in decline in Supreme Court equal protection analysis and may even be considered irrelevant); Shapiro, M.R., *Treading the Supreme Court’s Murky Immutability Waters*, 38 GONZ. L. REV. 409, 412 (2002–03) (asserting that the Supreme Court appears interested in “phasing out the immutability concept”).⁴

⁴ *See also* Yoshino, K., *Assimilationist Bias in Equal Protection: The Visibility Presumption and the Case of “Don’t Ask, Don’t Tell,”* 108 YALE L.J. 485, 490–91 (1998) (criticizing the concept of immutability and arguing for its demise in constitutional analysis).

II. THE SUPREME COURT HAS NOT VIEWED SEXUAL ORIENTATION AS BEHAVIORAL

Although the Supreme Court has never specifically addressed, in an equal protection analysis, whether laws discriminating on the basis of sexual orientation should be subject to heightened scrutiny, it has also declined the opportunity to hold sexual orientation to be behavioral. *Lawrence v. Texas* stated that: “[w]hen homosexual *conduct*⁵ is made criminal by the law of the State, that declaration in and of itself is an invitation to subject homosexual *persons* to discrimination both in the public and in the private spheres.” 539 U.S. 558, 575 (2003) (emphasis added). Similarly, in Justice O’Connor’s concurrence, decided upon equal protection grounds, she states, “[w]hile it is true that the law applies only to conduct, the conduct targeted by this law is conduct that is closely correlated with being homosexual. Under such circumstances, Texas’ sodomy law is targeted at more than conduct. It is instead directed toward gay persons *as a class*.” *Id.* at 583 (O’Connor, J., concurring) (emphasis added).

In a related vein, the Supreme Court found that “[o]ur decisions have declined to distinguish between status and conduct in this context,” *i.e.* sexual orientation. The Supreme Court rejected the Christian Legal Society’s (“CLS”)

⁵ Further to the points in Section IV, below, Bruce Bagemihl’s book *Biological Exuberance: Animal Homosexuality and Natural Diversity* (St. Martins Press 1999) revealed that over 450 species of animals (birds, mammals, lizards, insects) engage in repeated sexual behaviors with their same sex, in the presence of opposite sex potentials, some in life-long pairings.

claim that Hastings College of Law violated its First Amendment rights by refusing to recognize CLS as a registered student organization for requiring agreement with the belief that sexual activity should not occur outside of marriage between a man and a woman. *Christian Legal Soc’y Chapter of the Univ. of Cal., Hastings Coll. of the Law v. Martinez*, 130 S. Ct. 2971, 2990 (2010).

Most recently, in *United States v. Windsor*, the Supreme Court had the opportunity to distance itself from the language in *Lawrence* and *Martinez*; however, it declined to do so. 133 S. Ct. 2675 (2013) (citing *Lawrence* for the proposition that the Constitution protects moral and sexual choices).

III. HEIGHTENED SCRUTINY SHOULD APPLY TO SEXUAL ORIENTATION

This Court’s precedent, which has declined to apply heightened scrutiny to laws that discriminate against homosexuals, is antiquated and must be overruled. In *Davis v. Prison Health Services*, this Court relied on its precedent in *Scarborough v. Morgan County*, 470 F.3d 250 (6th Cir. 2006), which in turn relied on this Court’s decision in *Equality Foundation of Greater Cincinnati, Inc. v. City of Cincinnati*, 128 F.3d 289 (6th Cir. 1997), to find that “this court has not recognized sexual orientation as a suspect classification.” 679 F.3d 433 (6th Cir. 2012) (citing *Scarborough*, 470 F.3d at 260). But *Equality Foundation*’s holding is based squarely on *Bowers v. Hardwick*, 478 U.S. 186 (1986), which was emphatically

overturned by the Supreme Court in *Lawrence v. Texas*.⁶ 128 F.3d at 293. Given the doctrinal developments in Supreme Court cases decided since *Equality Foundation* and its progeny, this Court should, as courts in this circuit and others⁷ have done post-*Lawrence*, apply heightened scrutiny to classifications based on sexual orientation and find sexuality to be an immutable characteristic.⁸

Persuasive authority from this circuit and others, both pre and post-*Lawrence*, properly finds sexual orientation to be an immutable characteristic. *See, e.g., Hernandez-Montiel*, 225 F.3d at 1093 (“[s]exual orientation and sexual

⁶ *Lawrence*, 539 U.S. at 578 (declaring that “*Bowers* was not correct when it was decided and is not correct today”).

⁷ Post-*Lawrence*, courts in this circuit and others have rightfully applied traditional equal protection analysis to sexual orientation, finding that classifications based on sexual orientation are entitled to some form of heightened scrutiny. *See, e.g., Windsor*, 699 F.3d at 185 (applying intermediate scrutiny); *Golinski*, 824 F. Supp. 2d at 990 (applying strict scrutiny); *Pedersen*, 881 F. Supp. 2d at 314–33 (setting forth detailed analysis of the factors); and *Obergefell v. Wymyslo*, 962 F. Supp. 2d 968 (S.D. Ohio 2013) (setting forth detailed analysis of the factors). Persuaded by this authority, the District Court for the Southern District of Ohio in *Henry v. Himes* recently held that “classifications based on sexual orientation must pass muster under heightened scrutiny to survive constitutional challenge.” 14-cv-00129, 2014 WL 1418395, at *14 (S.D. Ohio April 14, 2014)(noting that the District Court’s “entire *Obergefell* analysis applies and controls here”).

⁸ The District Court for the Western District of Kentucky found that the Kentucky marriage recognition bans fail even rational basis review, which is another sound reason to strike down these laws, although not to GMLA’s purpose as amicus curiae. But the District Court for the Western District of Kentucky also stated that “[i]t would be no surprise, however, were the Sixth Circuit to reconsider its view” and apply heightened scrutiny. *Bourke v. Beshear*, 13-cv-00750 (JGH), slip op. at 8 (W.D. Kentucky February 12, 2014).

identity are immutable; they are so fundamental to one's identity that a person should not be required to abandon them"); *Karouni v. Gonzales*, 399 F.3d 1163, 1173 (9th Cir. 2005) (agreeing that homosexuality is a fundamental aspect of human identity and seeing "no appreciable difference between an individual . . . being persecuted for being a homosexual and being persecuted for engaging in homosexual acts"); *Watkins*, 875 F.2d at 726 (en banc) (Norris, J., concurring) (finding sexual orientation to be immutable in the eyes of the Equal Protection Clause because immutability is satisfied when the identifying trait is "so central to a person's identity that it would be abhorrent for government to penalize a person for refusing to change [it]"); *Perry v. Schwarzenegger*, 704 F. Supp. 2d 921, 966 (N.D. Cal. 2010) ("No credible evidence supports a finding that an individual may, through conscious decision, therapeutic intervention or any other method, change his or her sexual orientation."); *Golinski*, 824 F. Supp. 2d at 987 ("The Court finds that a person's sexual orientation is so fundamental to one's identity that a person should not be required to abandon it. Therefore, this factor weighs in favor of the application of heightened scrutiny."); *Pedersen*, 881 F. Supp. 2d at 326 (finding sexual orientation to be an immutable characteristic); *Obergefell*, 962 F. Supp. 2d at 991 ("Under any definition of immutability, sexual orientation clearly qualifies. There is now broad medical and scientific consensus that sexual orientation is immutable."); *In re Marriage Cases*, 43 Cal. 4th 757, 842, 183 P.3d 384, 442

(2008) (“Because a person’s sexual orientation is so integral an aspect of one’s identity, it is not appropriate to require a person to repudiate or change his or her sexual orientation in order to avoid discriminatory treatment.”). As the Connecticut Supreme Court put it:

In view of the central role that sexual orientation plays in a person’s fundamental right to self-determination, we fully agree with the plaintiffs that their sexual orientation represents the kind of distinguishing characteristic that defines them as a discrete group for purposes of determining whether that group should be afforded heightened protection under the equal protection provisions of the state constitution.

Kerrigan v. Comm’r of Pub. Health, 289 Conn. 135, 186–87, 957 A.2d 407, 438 (2008).

IV. SEXUAL ORIENTATION IS AN INNATE HUMAN CHARACTERISTIC

Whatever weight that the Court ultimately gives to the importance of immutability, the innate nature of sexual orientation fits squarely within the contours of the scope of equal protection previously expressed by this Court and discriminated against by the Kentucky marriage recognition bans. Indeed, sexual orientation is a perfect example of why certain laws require heightened scrutiny. For all citizens to enjoy the equal protection of the law, none can be the target of the law for something inherent to their very humanity. Legion scientific evidence and study proves that sexual orientation is just such a trait. Moreover, the

scientific evidence is equally clear that the consequences of trying to change that orientation have disastrous personal and social consequences.

No peer-reviewed published scientific studies support the hypotheses that life experience causes homosexuality, that sexual orientation is learned, that there is a psychological cause of homosexuality, or that sexual orientation is chosen. This scientific consensus comes from a broad range of methodologies that includes pedigree studies (the research of family history); prenatal hormone studies; twin studies; molecular biology; brain anatomical studies, biophysiological studies; and hormonal linkages. These studies themselves fall primarily into either prenatal hormone or genetic studies. *See Mustanski, B.S., et al., A Critical Review of Recent Biological Research on Human Sexual Orientation, ANNUAL REVIEW OF SEX RESEARCH (2002).*

A. Twin Studies Confirm the Biological Component of Sexual Orientation.

Twins present a unique opportunity to control for genetics and environment. Identical, or monozygotic, twins share identical genetic material. Fraternal twins are, genetically speaking, no different from siblings born in sequence, but can be compared relative to identical twins as a control for environmental factors. Moreover, in circumstances where identical twins are raised separately, examination of traits gives additional insight into whether that trait's driving force is genetic or environmental.

Overall, a homosexual identical twin is generally *twice as likely* to share that same-sex attraction with his or her identical twin as is a gay fraternal twin with his or her non-identical twin. In one study the ratio was 52% to 22%. See Bailey, J.M., et al., *A Genetic Study of Male Sexual Orientation*, ARCHIVES OF GENERAL PSYCHIATRY (Dec. 1991); see also Whitam, F.L., et al., *Homosexual Orientation in Twins: A Report on 61 Pairs and Three Triplet Sets*, ARCHIVES OF SEXUAL BEHAVIOR (June 1993) (“Whitam 1993”); Turner, W.J., *Homosexuality, Type 1: An Xq28 Phenomenon*, ARCHIVES OF SEXUAL BEHAVIOR (Nov. 1995). A recent comprehensive study involving a large cohort (4,901) of twins in Australia found “statistically significant support for the existence of significant genetic contributions to the trait of homosexuality.” Kirk, K.M., *Measurement Models for Sexual Orientation in a Community Twin Sample*, BEHAV. GENET. (2000). Any such genetic contribution is, by definition, innate.

Looking then to studies of adopted twins raised in separate environments, approximately half of the heritability in sexual orientation appears attributable to a genetic component. Bouchard, T.J., et al., *Sources of Human Psychological Differences: the Minnesota Study of Twins Reared Apart*, SCIENCE (Oct. 12, 1990). Critically, however, identical twins, whether raised together or raised apart, showed roughly the same outcome. Pillard, R.C., *Homosexuality From a Familial and Genetic Perspective*, in TEXTBOOK OF HOMOSEXUALITY AND MENTAL HEALTH

(R.P. Cabaj, et al., eds. 1996) (“Pillard 1996”); Pillard, R.C., *The Search for a Genetic Influence on Sexual Orientation*, SCIENCE AND HOMOSEXUALITIES (V.A. Rosario, ed. 1997). Some studies show that, given one twin with a same-sex orientation, the other twin will have a similar sexual orientation in roughly 50% of both male and female identical twins, but with lower rates in fraternal twins (males: 22%, females: 16%) and non-twin siblings (males: 9%; females: 14%). Baron, M., *Genetics and Human Sexual Orientation*, BIOLOGICAL PSYCHIATRY (June 1993); *see also* Bailey, J.M., et al., *Genetic and Environmental Influences on Sexual Orientation and Its Correlates in an Australian Twin Sample*, JOURNAL OF PERSONALITY AND SOCIAL PSYCHOLOGY (Mar. 2000). These data confirm a strong genetic contribution to sexual orientation, and although “the precise nature of these factors [has] yet to be understood” (Whitam 1993), the point is the same: whatever the proportion of that genetic contribution, it is not changeable.

The absence of a 100% concordance in sexual orientation between identical twins does not mean that sexual orientation is behavioral. This contention fails for a number of reasons, including because of the different prenatal influences that even identical twins can experience. Hall, LS and Love CT, *Finger-Length Ratios in Female Monozygotic Twins Discordant for Sexual Orientation*, ARCH. SEX. BEHAV. (Feb. 2003).

Lastly, twin studies consistently show that male sexual orientation is moderately heritable. For example, two twin studies in population-based samples both report moderate tendency to inherit characteristics, with the remaining variance being explained by non-genetic biological factors. *See* Mustanski, B.S., et al., *A Genomewide Scan of Male Sexual Orientation*, HUMAN GENETICS (2005).

B. Pedigree Studies Have Found that Sexual Orientation is Heritable in Families.

A pedigree study examines a particular family tree in an attempt to discover whether certain traits are prevalent coming down from a specific set of ancestors. Both male and female homosexuality appears to run in families. Pillard, R.C., et al., *Evidence of Familial Nature of Male Homosexuality*, ARCHIVES OF GENERAL PSYCHIATRY (Aug. 1986); Pattatucci, A.M.L. et al., *Development and Familiality of Sexual Orientation in Females*, BEHAVIOR GENETICS (Sept. 1995); Pillard 1996; Bailey, J.M. et al., *A Family History Study of Male Sexual Orientation Using Three Independent Samples*, BEHAVIOR GENETICS (1999). “Powerful evidence exists that homosexuality runs in families, and no evidence contradicts it.” Pillard 1996.⁹

⁹ Mustanski B.S., et al., *A Critical Review of Recent Biological Research on Human Sexual Orientation*, ANNUAL REVIEW OF SEX RESEARCH (2002); Mustanski B.S., et al., *A Genomewide Scan of Male Sexual Orientation*, HUMAN GENETICS (Mar. 2005); Mustanski B.S., et al., *Mental Health Disorders, Psychological Distress, and Suicidality in a Diverse Sample of Lesbian, Gay, Bisexual, and Transgender Youths*, AMERICAN JOURNAL OF PUB. HEALTH (Dec. 2010); Newcomb M.E., et al., *Examining Risk and Protective Factors for Alcohol Use in Lesbian, Gay, Bisexual, and Transgender Youth: a Longitudinal Multilevel Analysis*, JOURNAL OF STUDIES ON ALCOHOL AND DRUGS (2012).

C. Fraternal Birth Order Effect Confirms a Biological Origin of Sexual Orientation.

Over seventeen published reports of sexual orientation reveal that homosexual orientation in men was statistically significantly correlated with increasing number of older brothers but not sisters. Dozens of analyses have reached the conclusion that the most consistent biodemographic correlate of sexual orientation in men is the number of older brothers (fraternal birth order). *See* Bogaert, A.F., et al., *Sexual Orientation, Fraternal Birth Order, and the Maternal Immune Hypothesis*, FRONTIERS IN NEUROENDOCRINOLOGY (2011). The 2011 study also demonstrated that non-biological siblings (*i.e.*, adopted or step older brothers) had no effect on men's sexual orientation. *Id.* Accordingly, the fraternal birth order effect cannot be attributed to social causes.

Ray Blanchard, PhD has likewise found that the most broadly established finding in the area of etiological research on homosexuality is that biological older brothers increase the odds of homosexuality in later-born males, even if they were reared in different households. In contrast, sisters, stepbrothers or adoptive brothers have no effect on sexual orientation. *See* Blanchard, R., *Fraternal Birth Order and the Maternal Immune Hypothesis of Male Homosexuality*, HORMONES AND BEHAVIOR (Sept. 2001); Blanchard, R., *Quantitative and Theoretical Analyses of the Relation Between Older Brothers and Homosexuality in Men*, JOURNAL OF THEORETICAL BIOLOGY (Sept. 21, 2004).

Two recent discoveries, using a sample of 944 homosexual and heterosexual participants, showed that biological older brothers increase the odds of homosexuality, even if these older brothers were reared in a different household. To quantify the effect, “each additional older brother increases a male’s odds of homosexuality by 33%.” See Jannini, E.A., et al., *Male Homosexuality: Nature or Culture?* CONTROVERSIES IN SEXUAL MEDICINE (2010). Other studies have found that the effect of fraternal birth order would exceed all other causes of homosexuality in groups of gay men with three or more older brothers and would equal all other causes in a theoretical group with 2.5 older brothers. *Id.*

Lastly, in a 2008 study, it was found that homosexuals had a significantly greater number of brothers compared with heterosexuals. Mean numbers of older sisters, younger brothers and younger sisters did not differ between homosexuals and heterosexuals. Iemmola, F., et al., *New Evidence of Genetic Factors Influencing Sexual Orientation in Men*, ARCHIVES OF SEXUAL BEHAVIOR (2009). Blanchard’s theory attributes the birth order effect to H-Y androgens that do not affect older sisters. Blanchard, R., *Fraternal Birth Order and the Maternal Immune Hypothesis of Male Homosexuality*, HORMONES AND BEHAVIOR (Sept. 2001).

D. Prenatal Hormone Levels Affect Sexual Orientation.

Prenatal androgenic (male-like) hormone variations have been repeatedly highly correlated with many neurological, physiological and anatomical traits as well as sexual thought patterns, sexual orientation, and gender identity. Because all these innate traits typically express together with sexual orientation and gender identity, there are significant areas of overlap in their respective, mutual, biological causes.

The sexual determination of sexual organs happens in the first trimester, well before the sexual differentiation of the brain, which is completed in the second trimester. Swaab, D.F., et al., *Sexual Differentiation of the Human Brain in Relation to Gender Identity and Sexual Orientation*, FUNCTIONAL NEUROLOGY (Jan.-Mar. 2009). It is therefore possible for the fetal brain to be imprinted differently than the fetal genitals, resulting in diversity of gender identity, and sexual orientation.

Another example of high prenatal androgen exposure among females is seen with girls who were gestated with a fraternal male co-twin. Some of the baby boy twin's testosterone in the amniotic fluid seeps into the baby girl's amniotic fluid, causing a cluster of androgenizing changes in the sexually dimorphic play patterns, neuroacoustic functioning, bone structure, teeth, subsequent risk of eating disorders, fetal brain anatomy, and sexual orientation. Cohen-Bendahan, C.C., et

al., *Is There an Effect of Prenatal Testosterone on Aggression and Other Behavioral Traits? A Study Comparing Same-Sex and Opposite-Sex Twin Girls*, HORM. BEHAV. (Feb. 2005); Cohen-Bendahan, C.C., et al., *Prenatal Exposure to Testosterone and Functional Cerebral Lateralization: A Study In Same-Sex and Opposite-Sex Twin Girls*, PSYCHONEUROENDOCRINOLOGY (Aug. 2004); Voracek, M., et al., *Digit Ratio (2D:4D) in Twins: Heritability Estimates and Evidence For a Masculinized Trait Expression in Women From Opposite-Sex Pairs*, PSYCHOLOGICAL REPORTS (Feb. 2007); Dempsey P.J., et al., *Increased Tooth Crown Size in Females With Twin Brothers: Evidence For Hormonal Diffusion Between Human Twins in Utero*, AMERICAN JOURNAL OF HUMAN BIOLOGY: THE OFFICIAL JOURNAL OF THE HUMAN BIOLOGY COUNCIL (Sept. 1999); Culbert, K.M., et al., *Prenatal Hormone Exposure and Risk for Eating Disorders: a Comparison of Opposite-Sex and Same-Sex Twins*, ARCHIVES OF GEN. PSYCHIATRY (Mar. 2008); Peper, J.S., et al., *Does Having a Twin-Brother Make For a Bigger Brain?*, EUR. J. ENDOCRINOLOGY (Feb. 18, 2009).

1. Congenital Adrenal Hyperplasia.

There is also compelling evidence for a contribution of prenatal hormones to the development of homosexual orientation. This is illustrated best by congenital adrenal hyperplasia (“CAH”) due to 21-hydroxylase deficiency, a genetic condition in which female fetuses are exposed to unusually high levels of

androgens produced by their own adrenal glands. In CAH, a specific gene causes a disturbance in the development of an enzyme (P450c21) in the cortisol synthesis pathway, resulting in a buildup of androgens (male hormones) in the fetal blood.

Money, J., et al., *Bisexually Concordant, Heterosexually and Homosexually Discordant: A Matched-Pair Comparison of Male and Female Adrenogenital Syndrome*, PSYCHIATRY (May 1987); Ehrhardt, A.A., et al., *Psychosexual Development: an Examination of the Role of Prenatal Hormones*, CIBA FOUND. SYMP. (Mar. 14-16, 1978); Meyer-Bahlburg, H.F., et al., *Sexual Orientation in Women With Classical or Non-Classical Congenital Adrenal Hyperplasia as a Function of Degree of Prenatal Androgen Excess*, ARCHIVES OF SEXUAL BEHAVIOR (Feb. 2008). In 1976, this adrenal disease was called “adrenogenital syndrome” because infant girls were born with large clitorises and more male-like active play patterns,¹⁰ voices,¹¹ and some of the skeletal structure typical for boys.¹² Many of the affected females were observed to later identify as lesbian or bisexual in

¹⁰ Hines, M., et al., *Androgen and the Development of Human Sex-Typical Behavior: Rough-and-Tumble Play and Sex of Preferred Playmates in Children With Congenital Adrenal Hyperplasia (CAH)*, CHILD DEV. (1994); Pasterski, V., et al., *Increased Aggression and Activity Level in 3- to 11-Year-Old Girls With Congenital Adrenal Hyperplasia (CAH)*, HORM. BEHAV. (Sept. 2007).

¹¹ Nygren, U., et al., *Voice Characteristics in Women With Congenital Adrenal Hyperplasia Due to 21-Hydroxylase Deficiency*, CLINICAL ENDOCRINOLOGY (Oxf.) (Jan. 2009).

¹² Breedlove, S.M., *Organizational Hypothesis: Instances of the Fingerpost*, ENDOCRINOLOGY (Sept. 2010).

adulthood, and a small proportion were observed to have transitioned to a male gender identity.¹³

2. Xenoandrogens.

From 1940 to 1970, diethylstilbestrol was prescribed for women in the first trimester of pregnancy to prevent miscarriage, but was later found to be ineffective and harmful. It also raised in a statistically significant way the chances of lesbian orientation in the female offspring, and possibly also male-to-female transsexualism in the male offspring. Ehrhardt A.A., et al., *Sexual Orientation After Prenatal Exposure to Exogenous Estrogen*, ARCHIVES OF SEXUAL BEHAVIOR (Feb. 1985). Prenatal exposure to phenobarbital and phenytoin has been linked to higher rates of undescended testes, genital anomalies, male homosexuality, and male-to-female transsexualism. Dessens, A.B., et al., *Association of Prenatal Phenobarbital and Phenytoin Exposure With Genital Anomalies and Menstrual Disorders*, TERATOLOGY (Oct. 2001); Dessens, A.B., et al., *Prenatal Exposure to Anticonvulsants and Psychosexual Development*, ARCHIVES OF SEXUAL BEHAVIOR (Feb. 1999).

¹³ Meyer-Bahlburg H.F., et al., *Gender Development in Women With Congenital Adrenal Hyperplasia as a Function of Disorder Severity*, ARCHIVES OF SEXUAL BEHAVIOR (Dec. 2006); Nordenskjold, A., et al., *Type of Mutation and Surgical Procedure Affect Long-Term Quality of Life For Women With Congenital Adrenal Hyperplasia*, J. CLIN. ENDOCRINOL. METAB. (Feb. 2008).

E. Analysis of Male Genetic Material Indicates that Sexual Orientation is Heritable.

Research into the actual genetic material carried by males also shows that sexual orientation in men is a trait housed in their very DNA. Each person has two sex chromosomes, X and Y. A female has two X chromosomes while a male has an X and a Y, and any two parents each supply one chromosome each. A mother's contribution is always an X chromosome, a father's can be either an X or a Y, and will thus determine the chromosomal sex of the child. Thus, a threshold question in considering the heritability of certain traits is whether that characteristic occurs in the X or Y chromosome.

For any male, a gene (or genes) located in the X chromosome is necessarily inherited from his mother. By means of comparative genetic studies of a number of pedigrees, William Turner's research in 1995 indicated that gene(s) for same-sex attraction of some homosexuals reside in the terminal region of the long arm of the X chromosome (denoted Xq28); *see also* Hamer, D.H. et al., *A Linkage Between DNA Markers on the X Chromosome and Male Sexual Orientation*, SCIENCE (Jul. 1993); Pattatucci, A.M.L., *Biopsychosocial Interactions and the Development of Sexual Orientation*, in *Lesbian, Gay, and Bisexual Identities in Families* (Oxford Univ. Press 1998); Pattatucci, A.M.L., *Molecular Investigations into Complex Behavior: Lessons from Sexual Orientation Studies*, THE INTERNATIONAL JOURNAL OF POPULATION BIOLOGY AND GENETICS (Apr. 1998).

Turner based his conclusions on evidence derived from his pedigree studies showing that homosexual males had a significantly higher incidence of having maternal uncles who are also homosexual, implicating some component of the X chromosome.

F. Brain Studies Show the Biologic Roots of Sexual Orientation.

With analysis of human genetic material on one end of the spectrum, and outward manifestations (*i.e.*, sexual orientation) on the other, examination of subsidiary biology—in particular the brain anatomy and function—further undercuts the constitutionality of the Kentucky marriage recognition bans. Studies dealing with brain differences between heterosexual and homosexual men showed several significant differences. The interstitial nucleus of the anterior hypothalamus (“INAH3”), located more or less in the center of the brain, is two to three times larger in straight men than in gay men. LeVay, S.A. *A Difference in Hypothalamic Structure Between Heterosexual and Homosexual Men*, SCIENCE (Aug. 1991) (“LeVay 1991”). LeVay’s study is highly suggestive that hormones and fetal brain development may be interrelated, and that the INAH3 structures of gay men were more similar to those of heterosexual females than to those of heterosexual males.

Moreover, other studies of the brain involving the anterior commissure, and the suprachiasmatic nucleus also showed structural differences between gay and

straight men. Allen, L.S., et al., *Sexual Orientation and the Size of the Anterior Commissure in the Human Brain*, PROC. NAT'L ACAD. SCI. (Aug. 1992); Swaab, D.F. et al., *An Enlarged Suprachiasmatic Nucleus in Homosexual Men*, BRAIN RESEARCH (Dec. 1990). For example, experimental studies more than forty years ago at the University of Kansas showed that manipulating the levels of testosterone during fetal development of guinea pigs and rats could influence the sexual behavior of the adult. These manipulations also affected the size as well as the structural characteristics of the sexually dimorphic nucleus in the brain. See LeVay 1991. As Bailey and his colleagues state, “[t]he most influential biologic theory of sexual orientation is that male homosexuality” results from less masculinized “relevant brain structures during prenatal development.” Bailey, J.M. et al., *A Family History Study of Male Sexual Orientation Using Three Independent Samples*, BEHAVIOR GENETICS (1999).

G. The Overwhelming Majority of Humans Self-Describe Their Sexual Orientation as Innate.

Taking a view of the scientific data as a whole, it can come as no surprise that they are consistent with the views of innateness of all sexual orientation shared by members of the gay and lesbian community. For example, in a national survey conducted in 2010 with a representative sample of more than 650 self-identified lesbian, gay and bisexual adults, 95% of the gay men and 83% of the lesbian women reported that they experienced “no choice at all” or “small amount of

choice” about their sexual orientation. *See* Herek, G.M., *Demographic, Psychological, and Social Characteristics of Self-Identified Lesbian, Gay, and Bisexual Adults in a US Probability Sample*, SEXUALITY RES. & SOC. POL’Y, (2010). No peer-reviewed published scientific studies support the hypotheses that life experience causes homosexuality, that sexual orientation is learned, that there is a psychological cause of homosexuality or that sexual orientation is chosen.

V. MISGUIDED EFFORTS TO CHANGE SEXUAL ORIENTATION PROVE THE INNATENESS OF THE TRAIT

Sexual orientation change efforts (“SOCE”) are also relevant in considering the immutability of sexual orientation—regardless of what causes sexual orientation. The corollary to the argument in support of the Kentucky marriage recognition bans that sexual orientation is mutable and changeable is the grim reality that follows efforts to change individuals’ sexual orientation. That is to say: if it were correct that gay people bore the brunt of the Kentucky marriage recognition bans because of their own “choice” and not because of innate characteristics, what would the practical consequence be of suggesting that the law’s discrimination could be avoided by making a different “choice”? The answer, unfortunately, is sobering, and entails the causation of severe depression, anxiety, and suicides. The clinical research disproves what some blithely misunderstand as merely a change in temporal expressions. Indeed, the most

prominent proponent of SOCE has actually retracted his position on the grounds that the effects of SOCE were severely harmful to participants, as discussed below.

The consensus among the established medical community is that SOCE are generally futile and potentially dangerous to an individual's well-being, suggesting that sexual orientation is innate. *See* American Psychological Association, REPORT OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION TASK FORCE ON APPROPRIATE THERAPEUTIC RESPONSES TO SEXUAL ORIENTATION (2009) (“[E]fforts to change sexual orientation are unlikely to be successful and involve some risk of harm.”); *see also* Posner, R. A., SEX AND REASON (Harvard Univ. Press 1992) (describing “failure of treatment strategies . . . to alter homosexual orientation”); Haldeman, D., *The Practice and Ethics of Sexual Orientation Conversion Therapy*, J. CONSULTING & CLINICAL PSYCHOL. (1994) (describing “lack of empirical support for conversion therapy”); *see also* *Perry v. Schwarzenegger*, 704 F. Supp. 2d 921, 966 (N.D. Cal. 2010) (“No credible evidence supports a finding that an individual may, through conscious decision, therapeutic intervention or any other method, change his or her sexual orientation.”).

In fact, every major mental health organization has adopted a policy statement cautioning against the use of so-called “conversion” or “reparative” therapies to change the sexual orientation of gay and lesbian people. These policy statements are reproduced in a 2008 publication of the American Psychological

Association, available at <http://www.apa.org/pi/lgbt/resources/just-the-facts.pdf>.

In a 2012 article, the American Academy of Child and Adolescent Psychiatry (“AACAP”) advised clinicians that “there is no evidence that sexual orientation can be altered through therapy, and attempts to do so may be harmful.” Adelson, S.A., et al., *Practice Parameters on Gay, Lesbian, or Bisexual Sexual Orientation, Gender Nonconformity, and Gender Discordance in Children and Adolescents*, J. AACAP (Sept. 2012). In a 2009 article in PEDIATRICS, documentation supported the conclusion that “minors who experience family rejection based on their sexual orientation face especially serious health risks.” Ryan, C., et al., *Family Rejection as a Predictor of Negative Health: Outcomes in White and Latino Lesbian, Gay and Bisexual Young Adults*, J. PEDIATRICS (2009). The Pan American Health Organization, a regional office of the World Health Organization, issued a statement in May, 2012, that sexual orientation change efforts “lack medical justification and represent a serious threat to the health and well-being of affected people.” The American Academy of Pediatrics has found that “[t]herapy directed at specifically changing sexual orientation is contraindicated, since it can provoke guilt and anxiety while having little or no potential for achieving changes in orientation.” *Policy Statement, Homosexuality and Adolescence*, AM. ACAD. PEDIATRICS (1993). The American School Counselor Association, American Medical Association Council on Scientific Affairs and Public Health, National

Association of Social Workers, American Counseling Association Governing Council, and American Psychoanalytic Association have all issued statements opposing SOCE.

The American Psychological Association summarized this history in its 2009 Task Force paper, *Report of the American Psychological Association Task Force on Appropriate Therapeutic Responses to Sexual Orientation*. The Task Force posed three questions: (1) are SOCE effective at changing sexual orientation; (2) are SOCE harmful; and (3) are there any additional benefits reasonably attributable to SOCE? To do so, the Task Force “decided to conduct a systematic review of the empirical literature on SOCE.” *Id.* at 81. The Task Force found that “negative side effects” of those efforts included “loss of sexual feeling, depression, suicidality, and anxiety.” *Id.* at 83. Moreover, the Task Force found that it does not work: “scientific evidence shows that SOCE is not likely to produce its intended outcomes. . . .” *Id.*

These empirical findings are borne out by tragic and personal experiences. *Amici Curiae* in the matter of (then) *Welch v. Brown* before the Ninth Circuit (now *Pickup v. Brown*), addressing a statute that proposed to ban SOCE in California, stated their perspective: “the serious harms that [survivors of SOCE], their families, and others suffered because they were submitted to dangerous practices, illustrating the serious risk” involved. The personal testimony described the

lengths to which SOCE tried to go (because the innate characteristic was naturally unresponsive to mere suggestion), including teaching participants that they were the result of “inadequate parenting,” and being “sinful,” all of which led to “periods of drug abuse and homelessness.” Tragically, one of the *Welch Amici Curiae* took his own life. More happily, the Ninth Circuit upheld the ban on SOCE last year, noting, “the well documented, prevailing opinion of the medical and psychological community that SOCE has not been shown to be effective and that it creates a potential risk of serious harm to those who experience it.” *Pickup v. Brown*, 728 F.3d 1042, 1050 (9th Cir. 2013).

Conversely, the misguided view that SOCE proponents take is perhaps best illustrated by the experience of Dr. Robert L. Spitzer. An early proponent of destigmatizing the “disorder” classification of homosexuality, Dr. Spitzer nonetheless argued for years that SOCE could be effective. Dr. Spitzer presented a study in 2001 that claimed a majority of its participants had reported change “from a predominantly or exclusively homosexual orientation to a predominantly or exclusively heterosexual orientation.” Benedict Carey, *Psychiatry Giant Sorry for Backing Gay ‘Cure’*, NEW YORK TIMES (May 18, 2012). After years of corrective analysis, however, Dr. Spitzer was appropriately forceful in his retraction.

CONCLUSION

GLMA respectfully requests that the Court uphold the District Court for the Western District of Kentucky and find § 233A of the Kentucky Constitution and Kentucky Revised Statutes §§ 402.005-.045 to be violations of the Equal Protection Clause and that heightened scrutiny must be applied to classifications based on sexual orientation.

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RESPECTFULLY SUBMITTED,

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June 16, 2014

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