

NOGLSTP *Bulletin*

Winter 2005

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Defining Male and Female— Research Casts Further Doubt on Newborn Sex-assignment Surgeries

—from the AAAS Press Office

WASHINGTON, DC --Gender, often said to depend solely upon anatomy or hormones, may depend also on hard-wired genetics, according to new research that could help doctors and lawyers better understand the one in 4,000 babies born with both male and female traits.

“The biology of gender is far more complicated than XX or XY chromosomes and may rely more on the brain’s very early development than we ever imagined,” researcher Eric Vilain, M.D., reported at the American Association for the Advancement of Science (AAAS) Annual Meeting in Washington, D. C.

“Surgical sex assignment of newborns with no capacity to consent should never be performed for cosmetic reasons, in my opinion,” said Vilain, an associate professor of human genetics who also serves as a chief of medical genetics and director of research in urology and sexual medicine within the David Geffen School of Medicine at the University of California, Los Angeles. “We simply don’t know enough yet about gender to be making surgical or legal assumptions.”

Another AAAS speaker, William G. Reiner, M.D., agreed. “The most important sex organ is the brain,” said Reiner, a psychiatrist and associate professor in the Department of Urology, Oklahoma University Health Science Center. “We have to let these children tell us their gender at the appropriate time.”

An estimated 1 in 4,000 to 1 in 5,000 babies may be classified as “gender ambiguous” because intersex conditions affecting their genitalia, reproductive systems or sex chromosomes make an immediate assessment impossible, Reiner explained.

Yet, many laws -- including U.S. marriage laws -- assume that everyone is clearly male or female, a concept known in legal circles as sexual dimorphism, or binary law, legal expert Susan Becker of the Cleveland State University explained at the AAAS Meeting. At the same time, children with ambiguous genitalia continue to undergo surgical sex assignment. Baby girls with a condition called congenital adrenal hyperplasia (CAH), for example, may undergo clitoroplasty to reduce male-looking anatomy, as well as vaginoplasty if the labia are fused together.

“The U.S. Constitution promises equality, rights and benefits

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NOGLSTP Honors Aberson, Conway, and Raytheon at Awards Ceremony

The National Organization of Gay and Lesbian Scientists and Technical Professionals is pleased to announce this year’s recipients of its GLBT Scientist and Engineer of the Year Awards and its National Corporate Award: Sim Aberson, Lynn Conway, and Raytheon Company, respectively. These awards were presented at a ceremony during the NOGLSTP Reception at the 2005 AAAS Annual Meeting in Washington DC on February 19.

Dr. Sim Aberson is the recipient of the 2005 NOGLSTP GLBT Scientist of the Year Award, which honors a lesbian, gay, bisexual, or transgender scientist or educator who has made outstanding contributions in their field, and recognizes sustained contributions in design, production, management, education, or research. Dr. Aberson, a research meteorologist at National Oceanic and Atmospheric Administration (NOAA), performs hurricane research which has led to significant improvements in hurricane track forecasts. He flies into and above hurricanes aboard NOAA’s research aircraft to collect data for not only research but for use by the National Hurricane Center. His research group received the US Dept of Commerce Gold Medal for their performance during Hurricane Andrew; he was a NOAA Research Employee of the Year, and wrote the award-winning scientific article, “The Impact of Omega Dropwindsondes on Operation Hurricane Track Forecast Models” for the Bulletin of the American Meteorological Society.

Dr. Lynn Conway is the recipient of the 2005 NOGLSTP GLBT Engineer of the Year Award, which honors a lesbian, gay, bisexual, or transgender engineer who has made outstanding contributions in their

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for all citizens," Becker noted. "But, as the Constitution is structured and interpreted, individuals who do not meet the binary definition for male versus female don't have the same benefits and aren't completely protected from discrimination."

Children may be particularly vulnerable to negative consequences resulting from binary or gender-based laws, Becker added. If one partner in a same-sex union dies, for example, the surviving partner may face a legal battle to retain custody of the children, thus inflicting a second major trauma on the grieving children. A host of legal documents that convey rights and benefits, from birth certificates to passports and drivers' licenses, require declaration of one gender or the other, which may be impossible for some people.

Various conditions can cause genital ambiguity. For example, a condition called Congenital Adrenal Hyperplasia (CAH) in genetic girls (XX chromosomal makeup) results in prenatal exposure to androgen, the steroid that triggers male development. Genital features of girls born with CAH may appear to be male. In other cases, collectively known as Androgen Insensitivity Syndrome (AIS), genetic males (46 XY chromosomal makeup) may have female characteristics when a mutation of the gene that encodes for the androgen receptor results in resistance to androgen's masculinizing effects during development. Depending upon the timing of exposure to androgens in the uterus, a host of other conditions may result in ambiguous genitalia.

Through his clinical work with some 100 patients, Reiner said, those who are genetically male, with the 46 XY makeup, will tend to identify themselves as boys if they can react and respond to male hormone, and even if they are born without a penis, underwent surgical reassignment and were raised as girls. "These children know who they are," Reiner said. "It's encouraging that many more surgeons today are choosing to postpone surgical gender assignment until the patient is mature enough to take that step. Of course, social and legal gender assignment still must be carried out at birth."

Scientific evidence on gender is revealing an increasingly complex picture. For example, conventional wisdom has held that gonadal hormones dictate whether the brain becomes masculine or feminine during development.

But, even before hormonal influence, Vilain has reported, embryonic mouse brains show clear gender-specific differences. Building on his previous discovery, Vilain said, he and colleagues have since identified 54 genes that were differentially expressed in the brains of male and female embryonic mice just 10 days after conception, prior to hormonal exposure.

"Differences of gene expression between male and female brains, very early on, suggest that our brains may be hard-wired at a very early stage to become male or female," according to Vilain.

Biological differences have clear implications for laws related to sexually dimorphic traits, including sexual preferences, Vilain said. Understanding male versus female development also could help provide new clues to diseases such as autism, which occurs most often among males, or depression, an illness

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A genome wide scan of male sexual orientation

In the January 2005 issue of *Human Genetics*, Mustanski, et. al., part of the Dean Hamer consortium at the NIH, reported the first genome scan for loci involved in the complex phenotype of male sexual orientation. They identified several chromosomal regions and candidate genes for future exploration. The molecular analysis of genes involved in sexual orientation could greatly advance the understanding of human variation, evolution, and brain development. In the absence of obvious animal models, genetic linkage and association studies provide the best opportunity for discovering these loci. This is the first report of a full genome scan of sexual orientation in men. The results of this first genome screen for normal variation in the behavioral trait of sexual orientation in males should encourage efforts to replicate these findings in new samples with denser linkage maps in the suggested regions.

Permanent Partners Immigration Act

As many LGBT Scientists know from first hand experience, U.S. immigration is largely based on the principle of family unification, which allows U.S. citizens and legal permanent residents to sponsor their spouses (and other family members) for immigration purposes. Same-sex partners of U.S. citizens and permanent residents, however, are not considered "spouses" and are hence excluded from family-based immigration rights. Even couples who have legally married in other countries, such as The Netherlands, cannot immigrate together to the U.S. even when one of the spouses is an American citizen. Thousands of lesbian and gay binational couples are kept apart, torn apart or forced to live in fear of being separated.

The Permanent Partners Immigration Act (PPIA) is a bill that will allow U.S. citizens and permanent residents to sponsor their same-sex partners for immigration to the U.S, extending to same-sex couples the same immigration rights currently enjoyed by legal spouses. PPIA will be introduced in the late spring or early summer in both the House of Representatives and the Senate. The PPIA was previously introduced on Valentine's Day, but the lead sponsors and advocates for the bill's passage decided that more time was needed to do a proper introduction with press conferences and events leading up to the introduction date. Commitment to the bill is as high as ever, and the later introduction will give proponents a chance to do more education, increase co-sponsorship and give the bill the best possible start in the 109th Congress.

In the meantime the non-profit organization Immigration Equality is soliciting stories of couples who would benefit from the bills passage. Please send your stories of how discriminatory immigration laws have impacted your life to Adam Francoeur at info@immigrationequality.org with the title PPIA stories in the subject line of the email. For more information about the PPIA and Immigration Equality, point your web browser to www.immigrationequality.org

Rare HIV Strain Detected in New York Man

Officials at New York City's Department of Health and Mental Hygiene (DOHMH) announced last week that a city resident was diagnosed with 3-DCR HIV, a highly drug-resistant strain of HIV that rapidly progresses into full-blown AIDS. The man, in his mid-40s, told health officials that he had unprotected anal sex with a number of male partners, often under the influence of crystal methamphetamine. Health officials told reporters during a press conference in Manhattan that the man was first diagnosed with the strain last December and "appears to have been recently infected." They also indicated that the man has since developed AIDS.

This case is a wake up call to those who indulge in high risk behavior. HIV infection, recently manageable as a chronic disease thanks to advanced drug regimens, may well become the death sentence it was in the early days.

"We have to double our efforts and resources to maintain treatment and prevention education for people who are infected as well as those who are not," said a spokesperson for the Gay Men's Health Crises. "New Yorkers must be vigilant and know that infection with resistant strains of HIV can be avoided."

Out and Equal Leadership Summit Update

As reported in the Fall, 2004 NOGLSTP Bulletin, while attending the Equal 2004 Workplace Summit in Tempe, AZ, Rochelle Diamond met with an IBM representative who is developing outreach programs for GLBT technical students. Amy Ross, longtime NOGLSTP member, is now working with Rochelle on the IBM project. We are pleased to report that follow-up conversations with IBM representatives have opened a productive dialogue on the importance of nurturing GLBT employees and students in the technical workplace. NOGLSTP looks forward to sharing its expertise and prominence in the scientific/technical field with the enthusiastic folks at IBM.

("Defining Male and Female" Continued from page 2)

that is more common among females. In fact, Vilain said, his group already is investigating a specific region of the brain, the *substantia nigra*, which is damaged more often in men with Parkinson's disease.

Becker, the legal expert, said that straight-forward public discourse on gender will be essential for developing improved public policy: "In U.S. society, sex, sexuality and sex appeal is used to sell everything from toothpaste to cars," Becker commented. "It seems that we can handle sexual caricatures in the media and sexually explicit movies, but we aren't equipped to have open, honest discussions regarding sexuality and gender. The time has come to move beyond our discomfort to engage in more product dialogue, informed by the best possible scientific information."

Becker's sentiments were echoed by Rochelle Diamond of the National Organization of Gay and Lesbian Scientists and Technical Professionals, co-organizer of the AAAS session, with Mark Tumeo of Cleveland State University. "Policymakers, surgeons, parents and patients all need to know more about gender ambiguity from the scientists' viewpoint," she said.

The AAAS session also included Mara Keisling of the National Center for Transgender Equality; James P. McGovern of the U.S. House of Representatives (D-MA); and Stephanie J. Bird of Massachusetts Institute of Technology. The symposium and related news briefing were held in memory of David Reimer. A man raised as a girl after a botched circumcision, Reimer played a key role in raising public awareness of gender ambiguity. He took his life in May 2004 at the age of 38.

IS IT TIME TO RENEW YOUR MEMBERSHIP DUES?

Check your mailing label. If it says 200501-200504, it is time to renew your membership. If it says 200408-200412, or trial2, it is past time to renew or join, and this will be your final newsletter unless we hear from you. We need and appreciate your continued support. You may renew online (and pay with a credit card) at www.noglstp.org/memberservices.php, or fill out the form below (and on the other side of this page), and return it with your check to NOGLSTP, PO Box 91803, Pasadena CA 91109. Remember to add \$5US if you are subscribing outside of the US. You may also use this form to inform us of any address or area code changes.

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Membership Form

To renew your NOGLSTP membership or become a member of NOGLSTP, support its activities, and receive a newsletter, complete this form and send it with a check or money order to:

**NOGLSTP
PO BOX 91803
Pasadena CA 91109**

Annual Membership Dues are:

\$15-35 (sliding scale) (tax deductible after the 1st \$10)

\$10 for students and unemployed*

*inquire about our limited free memberships to 'starving students'

\$5 extra for memberships outside of the US
(for the extra postage) (US Funds only, please!)

Renewal New Info change only

Name: _____

Address: (don't forget your zip code!)

Telephone: _____

Email/URL: _____

Technointerest or profession:

Latest Degree/Subject:

Do you want your name and phone/email printed on a membership roster to be released to other NOGLSTP members?

YES

NO

Do you want your email/URL to be placed on the NOGLSTP web page?

YES

NO

Don't forget to fill out the other side



field, and recognizes sustained contributions in design, production, management, or research. Dr. Conway, Professor Emerita of Electrical Engineering and Computer Science at University of Michigan, Ann Arbor, is internationally recognized for her innovations in VLSI chip design methods, and is co-author of the book Introduction to VLSI Methods. Her major contribution to super-computer system architecture is the invention of "dynamic instruction scheduling", which has become a classic hardware method for enhancing the performance of VLSI superscalar processors. More recent research has focused on visual communications and control, probing for basic system and user interface concepts as applicable to hybridized internet/broadband-cable communications. She received five U.S. Patents for her inventions from this research.

The Raytheon Company is the 2005 recipient of our National Corporate Award. These awards are given to the corporation or company which has demonstrated outstanding support for NOGLSTP, its programs and objectives. In addition to having a commitment to building a diversity-inclusive corporate culture, Raytheon has an active community outreach program in the way of grants and volunteerism. Through its community grants program, Raytheon has provided financial support to help NOGLSTP grow and become a stronger advocate for GLBT engineers and scientists. Raytheon is an industry leader in defense and government electronics, space, information technology, technical services, and business aviation and special mission aircraft.

Membership/Renewal Form (continued):

Please list any other professional organizations that you belong to:

Special Techno-Interests or Expertise:

For New Members: How did you learn of NOGLSTP?

WHAT WOULD YOU LIKE TO HELP US WITH? (CHECK ANY THAT INTEREST YOU)

- BOARD OF DIRECTORS
- HOLD OFFICE
- AAAS
- FUNDRAISING
- NEWSLETTER ARTICLES
- EDIT NEWSLETTER
- PRODUCE NEWSLETTER
- NEW PAMPHLET TOPICS
- GRANT WRITING
- G/L/B/T CAUCUS OF PROFESSIONAL SOCIETIES (which one?)
- OTHER _____

Article of interest, featuring some NOGLSTP folks:

"GLBT engineers & IT pros are visible & thriving"
http://www.diversitycareers.com/articles/pro/04-decjan/divUpdate_glb.htm
Published in the Dec2004/Jan2005 issue of Diversity/Careers

ABOUT NOGLSTP

NATIONAL ORGANIZATION OF GAY AND LESBIAN SCIENTISTS AND TECHNICAL PROFESSIONALS, INC., is a nation-wide organization of lesbigaytrans scientists and technical professionals and others interested in technical matters and the glbt community. NOGLSTP's goals include dialog with professional organizations, providing information, improving our member's employment and professional environment, opposing homophobia and stereotypes, educating the queer, scientific and general communities, and fostering inter-city contacts among our members. National Organization of Gay and Lesbian Scientists and Technical Professionals, Inc. is a tax-exempt educational organization under IRS section 501(c)3, incorporated in the State of California (TAX ID # 95-4358685), and is an affiliate of the American Association for the Advancement of Science (AAAS). Written correspondence may be addressed to: NOGLSTP, PO BOX 91803, Pasadena CA 91109-9813. For more information, see our web page at www.noglstp.org

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