



Monell Chemical Senses Center
Press Release

Contact: Charles Wysocki, PhD
wysocki@monell.org
215-898-6666
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Gender and sexual orientation influence preference for human body odors

Underarm odor may send very specific signals to potential mates

(Philadelphia, May 9, 2005) -- Your nose, whether big or small, male or female, heterosexual or homosexual, may play a big role in selecting your potential mate. According to scientists at the Monell Chemical Senses Center in Philadelphia, one person's preference for another person's body odor depends in part upon the gender and sexual orientation of both sender and receiver.

"Our findings support the contention that gender preference has a biological component that is reflected in both the production of different body odors and in the perception of and response to body odors," remarks Monell neuroscientist Charles Wysocki, PhD. Wysocki and Yolanda Martins, PhD co-directed the research effort.

In the study, 82 heterosexual and homosexual men and women were asked to indicate their preference for the odors of underarm sweat collected from 24 odor donors of varied gender and sexual orientation. Subjects made four comparisons, evaluating and choosing between odors from (i) heterosexual males versus gay males, (ii) heterosexual males versus heterosexual females, (iii) heterosexual females versus lesbian females, and (iv) gay males versus lesbian females.

Homosexual men and lesbian women had patterns of body odor preferences that were different from those of heterosexual men and women. In particular, gay men were strikingly different from heterosexual men and women and from lesbian women, both in terms of which body odors gay men preferred and how their own body odors were regarded by the other groups. Gay men preferred odors from gay men and heterosexual women, whereas odors from gay men were the least preferred by heterosexual men and women and by lesbian women.

Overall, odor preference was related to perceptions of odor pleasantness or unpleasantness, but not to odor intensity. Because the perceptual differences were related to odor quality, this suggests that at least some of the chemical attributes that contribute to human body odors are related to an individual's gender and sexual orientation.

Martins comments, "We need to understand how the biological mechanisms responsible for production of body odor differs in these groups of people, who are defined by gender and gender preference. We also need to identify the factors that lead men versus women and heterosexuals versus homosexuals to perceive body odor differently."

The results will be published in the September 2005 issue of Psychological Science. George Preti, PhD, and Christina Crabtree also contributed to the research.

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The Monell Chemical Senses Center is a nonprofit basic research institute based in Philadelphia, PA. Scientists at the Monell Center conduct research devoted to understanding the senses of taste, smell, and chemical irritation: how they function and how they affect our lives, from before birth through old age. The Center's approach is multidisciplinary. Scientists from a variety of backgrounds collaborate to address topic areas in sensation and perception, neuroscience and molecular biology, environmental and occupational health, nutrition and appetite, health and well being, and chemical ecology and communication. For more information about Monell, visit the Center's web site at www.monell.org or email inquiries to media@monell.org.

Reference: Yolanda Martins, George Preti, Christina R. Crabtree and Charles J. Wysocki. Preference for Human Body Odors Is Influenced by Gender and Sexual Orientation. Psychological Science, in press, 2005.