

Home · News · Sports · Business · Features · Scene · Velocity · Classifieds · Jobs · Cars · Homes · Shopping · Co Search

**More AP News:** [Top Stories](#) | [Ky.](#) | [Ind.](#) | [U.S.](#) | [World](#) | [Business](#) | [Sports](#) | [Entertainment](#)

May 10, 10:54 AM EDT

## Gay men respond differently to pheromones

By **RANDOLPH E. SCHMID**  
Associated Press Writer

WASHINGTON (AP) -- The sexual area of a gay man's brain works a lot like that of a woman when exposed to a particular stimulus, researchers say.

In an experiment, men and heterosexual women sniffed a chemical from the male hormone testosterone. The homosexual men's brains responded differently from those of heterosexual males, and in a similar way to the women's brains.

"It is one more piece of evidence ... that is showing that sexual orientation is not all learned," said Sandra Witelson, an expert on brain anatomy and sexual orientation at the Michael G. DeGroot School of Medicine at McMaster University in Ontario, Canada.

Witelson, who was not part of the research team, said the findings clearly show a biological involvement in sexual orientation.

The study, published in Tuesday's issue of Proceedings of the National Academy of Sciences, was done by researchers at the Karolinska Institute in Stockholm, Sweden.

They exposed heterosexual men and women and homosexual men to chemicals derived from male and female sex hormones. These chemicals are thought to be pheromones - molecules known to trigger responses such as defense and sex in many animals.

Whether humans respond to pheromones has been debated, although in 2000 American researchers reported finding a gene that they believe directs a human pheromone receptor in the nose.

The brains of different groups responded similarly to ordinary odors such as lavender, but differed in their response to the chemicals thought to be pheromones, lead researcher Ivanka Savic said.

The Swedish researchers divided 36 subjects into three groups -

**Subscri**  
Click [he](#)  
get the (   
delivere  
your doc

Advertisement

[Click here!](#)



**Latest Health News**

heterosexual men, heterosexual women and homosexual men. They studied the brain response to sniffing the chemicals, using PET scans. All the subjects were healthy, unmedicated, right-handed and HIV-negative.

When they sniffed scents like cedar or lavender, all of the subjects' brains reacted only in the olfactory region that handles smells.

But when confronted by a chemical from testosterone, the male hormone, portions of the brains active in sexual activity were activated in straight women and in gay men, but not in straight men, the researchers found.

The response in gay men and straight women was concentrated in the hypothalamus with a maximum in the preoptic area that is active in hormonal and sensory responses necessary for sexual behavior, the researchers said.

When the female hormone estrogen was used, there was only a response in the olfactory portion of the brains of straight women. Homosexual men had their primary response also in the olfactory area, with a very small reaction in the hypothalamus, while heterosexual men responded strongly in the reproductive region of the brain.

Savic said the group is also doing a study involving homosexual women, but those results are not yet complete.

In a separate study looking at response to body odors, researchers in Philadelphia found sharp differences between gay and straight men and women.

"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," said neuroscientist Charles Wysocki, who led the study.

It's hard to see how a simple choice to be gay or lesbian would influence the production of body odor, he said.

Wysocki's team at the Monell Chemical Senses Center studied the response of 82 heterosexual and homosexual men and heterosexual and homosexual women to the odors of underarm sweat collected from 24 donors of varied gender and sexual orientation.

They found that gay men differed 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, while odors from gay men were the least preferred by heterosexual men and women and by lesbian women in the study. Their findings, released Monday, are to be published in the journal *Psychological Science* in September.

The Swedish research was funded by the Swedish Medical Research Council, the Karolinska Institute and the Magnus Bergvall Foundation. Wysocki's research was supported by the Monell Center.

---

On the Net:

**Center to test radio  
wave cancer treatment**

**Gay men respond  
differently to  
pheromones**

**Study: Meanness in girls  
can start at 3**

**WHO: Polio  
immunization vital in  
Indonesia**

**Low-fat dairy may lower  
risk of diabetes**



Proceedings of the National Academy of Sciences: <http://www.pnas.org>

Karolinska Institute: <http://info.ki.se/index-en.html>

Monell Center: <http://www.monell.org/>

© 2005 The Associated Press. All rights reserved. This material may not be published, broadcast, rewritten or redistributed. Learn more about our [Privacy Policy](#).

 [Purchase this AP story for reprint.](#)

[^^](#) [Back to top](#)

[Home](#) • [News](#) • [Sports](#) • [Business](#) • [Features](#) • [Louisville Scene](#) • [Classifieds](#) • [Jobs](#) • [Cars](#) • [Homes](#) • [Shopping](#) • [Co](#)  
[Search](#)



Copyright 2004 The Courier-Journal.

Use of this site signifies your agreement to the [Terms of Service](#) (updated 12/18/2004).  
Send questions and comments to [The Webmaster](#).