

No sex without kiss! Researchers discover how the brain controls sex

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A research team led by Professor Julie Bakker at Liège University (Belgium) and Professor Ulrich Boehm at Saarland University (Germany) has made a major advancement in the understanding of how

the brain controls sex. Their research results are published today in *Nature Communications*.

Using female mice as a model, the researchers found that a hormone in the brain, appropriately called kisspeptin, drives both attraction to the opposite sex and sexual behavior. They discovered that pheromones secreted by the male mouse activate these neurons, which, in turn, transmit this signal to another population of neurons (gonadotropin-releasing hormone neurons) to drive attraction to the opposite sex. In parallel, they also transmit this signal to cells that produce the neurotransmitter nitric oxide to trigger sexual behavior.

"This work has provided new insight into how the brain decodes signals from the outside world and then translates these environmental cues into [behavior](#). In many animals, [sexual behavior](#) is timed to occur with ovulation to ensure the highest possible chance of fertilization and therefore, continuation of the species. Until now, little was known about how the brain ties together ovulation, attraction and sex. Now we know that a single molecule, kisspeptin, controls all of these aspects through different [brain](#) circuits running in parallel with one another," said Ulrich Boehm, Professor of Experimental and Clinical Pharmacology and Toxicology of Saarland University.

Taken together, these findings show that puberty, fertility, attraction and sex are all controlled by kisspeptin. This work opens up new and exciting possibilities for the treatment of patients with psychosexual disorders such as hyposexual desire disorder. "There are currently no good treatments available for women suffering from [low sexual desire](#). The discovery that kisspeptin controls both [attraction](#) and sexual desire opens up exciting new possibilities for the development of treatments for low sexual desire," explained Professor Julie Bakker, who is leading the Laboratory of Neuroendocrinology at Liège University.

More information: Vincent Hellier et al, Female sexual behavior in mice is controlled by kisspeptin neurons, *Nature Communications* (2018).
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