

Pride, prejudice and the 'Darcin effect'

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The pheromone that attracts female mice to the odour of a particular male has been identified. Named 'darcin' by researchers writing in the open access journal *BMC Biology* (after Darcy, the attractive hero in Jane Austen's novel "Pride and Prejudice"), this unusual protein in a male's urine attracts females and is responsible for learned preference for specific males.

Jane Hurst led a team of researchers from the University of Liverpool to carry out the study on over 450 captive bred adult female house [mice](#). The mice were presented with two urine scent marks, one male and one female, and the amount of time they spent near each was recorded. In some tests the mice could physically contact the scent mark, in other tests they received only airborne scent.

Hurst said, "Contact with darcin consistently doubled the time spent near a male's scent. Touching darcin with the nose also made [females](#) learn that particular male's odour, subsequently tripling the time spent near to the airborne scent of that individual male but showing no attraction to other males".

Sexually attractive [chemical signals](#) are common to many animals, from nematode worms to elephants. In mice, urinary scent marks are known to be used as a means of advertising location, successful territory ownership and dominance and are used by females in mate selection. The identification of darcin as a key component of this messaging system is the first time that a specific protein has been shown to drive inherent sexual attraction to individual males in a complex vertebrate.

According to Hurst, "Although darcin is species-specific, similar pheromones that stimulate learning of an individual's [scent](#) could even underlie some complex, individual-specific responses of humans".

More information: Darcin: a male pheromone that stimulates female memory and sexual attraction to an individual male's odour , Sarah A Roberts, Deborah M Simpson, Stuart D Armstrong, Amanda J Davidson, Duncan H Robertson, Lynn McLean, Robert J Beynon and Jane L Hurst , BMC Biology (in press), www.biomedcentral.com/bmcbiol/

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