

Hormone study gives scientists a sense of how animals bond

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Scientists have pinpointed how a key hormone helps animals to recognise others by their smell.

Researchers at the University of Edinburgh have shown that the [hormone](#) vasopressin helps the brain differentiate between familiar and new scents.

The study, published in the journal *Nature*, suggests that when the hormone fails to function, animals are unable to recognise other individuals from their scent.

The ability to recognise others by smell is crucial in helping animals to establish strong bonds with other [animals](#).

The research, funded by the Biotechnology and Biological Sciences Research Council (BBSRC), may offer clues about the way people make emotional connections with others through smell and deepen our understanding of the role scent plays in memory.

Many scientists think a failure in this recognition system in humans may prevent them from forming deep emotional bonds with others.

It is thought that it may be at the root of conditions such as some forms of autism and social phobia.

Researchers, including scientists in Germany and Japan, reached their

conclusion by studying the way rats familiarise themselves with other rats through smell.

They placed an adult rat in an enclosure with a baby rat and left them to sniff and interact with each other.

After a short separation, they placed the baby back in the adult's enclosure, together with an unknown baby.

Adult rats whose vasopressin had been blocked failed to recognise the baby they had already met.

Professor Mike Ludwig, who led the study at the University of Edinburgh, said: "This study gives us a window into understanding the biological basis of social interactions.

It may be that vasopressin helps to filter sensory information according to its emotional significance."

Professor Janet Allen, BBSRC Director of Research said, "Research that helps us to gain a fundamental understanding of how our brains work is vital if we are to know what is happening when something has gone wrong. The biological basis of psychological responses can often be extremely complicated, so finding this direct relationship between a hormone and a psycho-social phenomenon could open up a whole wealth of knowledge in this area."

Provided by University of Edinburgh

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