

SPOTTED

Misjudging monkeys; consoling voles; canine connection

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Misjudging monkeys

In case you missed it, Chinese researchers have **engineered monkeys with autism-like behaviors**. They performed this feat with the help of a virus, which inserted extra copies of the autism-linked gene MeCP2 into the monkey genome.

But the resulting animals aren't "**monkeys with autism**" as some headlines suggest. Yes, they have extra copies of **MeCP2**, a gene duplicated in people with **MeCP2 duplication syndrome**, many of whom have autism. And yes, the animals show some **repetitive behaviors** and social deficits.

But as Nicholette Zeliadt reports in our article on this paper, there are **many, many caveats**. Unlike people with MeCP2 duplication syndrome, the monkeys have neither seizures nor learning disabilities. And those with seven extra copies of the gene have symptoms similar to those with just one copy — again diverging from the human disorder.

The monkeys are a technological feat and may provide clues about brain circuits relevant to autism. But "**autistic monkeys**" they are not.

Consoling voles

Prairie voles are fascinating creatures. The tiny rodents have **lifelong mates** and share in the care of their young. A new study shows that **they also console their partners** after stressful events.

The finding, published last week in *Science*, suggests that voles of the prairie variety have

empathy, just as we do. Blocking the rodents' receptors for **oxytocin**, the so-called 'love hormone,' abolishes this consoling behavior, the study found.

The study offers clues about the potential role of oxytocin in conditions such as autism, the researchers write. "Understanding the neurobiology of oxytocin-dependent consolation behavior in prairie voles may help us to understand the diverse deficits in detecting and responding to the emotions of others that are present in many psychiatric conditions, including autism, schizophrenia, and psychopathy."

SOURCES:

Science / 22 Jan 2016

Oxytocin-dependent consolation behavior in rodents

<http://science.sciencemag.org/content/351/6271/375.short>

Human maze

The Morris water maze is a mainstay in memory labs. Researchers use the large pool of water with a barely submerged platform, which rodents try to locate, to **spot memory problems in mice**. Control rodents remember the position of the platform. Those with memory-blocking mutations spend some extra time swimming.

To help bridge the gap between mice and people, researchers have developed the **human equivalent of the water maze**: a virtual rocket ride in which users have to find a hidden treasure as quickly as possible. The researchers hope the modified 'maze,' which they described in a study published last week in the *Journal of Clinical Investigation*, will help translate discoveries in animals into treatments for people with memory disorders, such as Alzheimer's disease. It's worth noting that some autism-linked mutations are tied to memory problems in people and mice.

SOURCES:

Journal of Clinical Investigation / 19 Jan 2016

Cross-species translation of the Morris maze for Alzheimer's disease

<http://www.jci.org/articles/view/78464>

Canine connection

Researchers are on the hunt for genes linked to obsessive-compulsive disorder (OCD) — a psychiatric condition that's **common among people with autism**. And they're enlisting the help of a certain best friend.

It turns out some dog breeds are particularly prone to compulsive disorders that resemble OCD. By sequencing DNA from thousands of dogs, researchers hope to **uncover clues about OCD and other psychiatric disorders in people**.

Organizers of the project, called **Darwin's Dogs**, have enrolled 3,000 dogs since October 2015. They hope to get 2,000 more and plan to start analyzing DNA in March, according to *Nature*.

SOURCES:

Nature / 26 Jan 2016

Dog DNA probed for clues to human psychiatric ills

<http://www.nature.com/news/dog-dna-probed-for-clues-to-human-psychiatric-ills-1.19235>

Paper problem

A cheeky column in last week's *Science* describes the **sinking feeling** early-career scientists get when reading a scientific paper.

"Nothing makes you feel stupid quite like reading a scientific journal article," writes **Adam Ruben**, author of the book "Surviving Your Stupid, Stupid Decision to Go to Grad School."

Riffing on the 5 stages of grief, Ruben outlines 10 stages of reading a scientific paper, which include optimism, regret, bafflement, distraction and rage. The final stage is "genuine contemplation of a career in the humanities."

SOURCES:

Science / 20 Jan 2016

How to read a scientific paper

<http://www.sciencemag.org/careers/2016/01/how-read-scientific-paper>
