RANDOM SAMPLES

edited by CONSTANCE HOLDEN

Brain Cell Creation Spurred in Rats

Because of the importance of the hippocampus in cognitive activity, the so-called CA1 neuron "is probably the most intensely studied neuron in the brain," says stem cell researcher Ronald McKay of the National Institute of Neurological Disorders and Stroke. Now it appears that, at least in rats, massive regeneration of these neurons is possible.

Researchers at the University of Tokyo say that by injecting growth factors they have coaxed stem cell–like "progenitor cells" into making new neurons in injured rat hippocampuses. Most significantly, the treatment restored some cognitive function.

A team led by neurobiologist Masato Nakafuku briefly shut off the rats' neck arteries to mimic stroke. Then over several days they infused a cocktail of growth factors directly into their brains. Within a month, rats had regained 40% of lost neurons—more than twice the regeneration that would occur without the infusion of growth factors, the scientists report in the 23 August issue of *Cell*. What's more, the treated rats performed better on a water maze where they had to find a submerged platform.

Many scientists believe that stimulating resident stem cells to repair damage would be the ideal treatment for some types of nervous system damage, circumventing problems raised by injecting stem cells into a patient. But that's difficult in the brain, where little cell regeneration normally occurs outside the olfactory bulb.

The demonstration of regeneration in the hippocampus makes this "a very important study with implications for the treatment of patients," says neuroscientist Mark Mattson of the National Institute on Aging's Gerontology Research Center in Baltimore, Maryland. "These neurons are critical for learning and memory and are selectively damaged in stroke and Alzheimer's disease."

Reassuring Words

"NASA does not have the capability to read minds."

—20 August NASA press release responding to "published media reports" that it plans to read the minds of potential terrorists.

Shark fins on display in Hong Kong market.

Stemming the Fin Trade

A new genetic test for identifying endangered species from dismembered body parts might help conservationists better document the fast-growing trade in shark fins.

Shark fin soup is a 2000-year-old Asian delicacy, and the demand for it is on the rise, despite prices of up to $90 a bowl. This has led to the growing practice of "finning"—hacking the valuable appendages off sharks and tossing the mutilated animals back in the sea.

Monitoring finning's impacts on individual species is practically impossible, says Mahmood Shivji of Nova Southeastern University in Dania Beach, Florida. Existing genetic tests entail many time-consuming steps, and a separate procedure is required each time a sample of fin DNA is compared with DNA of a known species.

But Shivji and his colleagues think they've found a shortcut. The procedure, detailed in the August issue of *Conservation Biology*, cuts lab time and costs by more than half, he says, and by combining multiple primers scientists can compare a fin DNA sample to DNA from up to 10 different shark species in a single go. Shivji's team says it can now spot fins from favorite soup sharks such as blue, mako, silky, and hammerhead. They hope to expand the technique to identify some 50 species most at risk.

The new method could be a boon for those monitoring finning, "a huge problem in open-sea fisheries," says George H. Burgess of the Florida Museum of Natural History in Gainesville. Shivji says the method could be applied to tracking trade in other wildlife products, such as tiger parts used in Chinese medicine or whale meat.

The Happy Narcissist

Narcissistic people can't be happy because they are incapable of loving others and are compensating for inner emptiness, right?

Well, no. Many narcissists are quite happy with themselves, according to research from the State University of New York, Buffalo. Although narcissists may be arrogant, deceitful, and manipulative, they can be more outgoing and optimistic than average, and they really do believe in their own superiority, says Paul Rose, a Ph.D. candidate in psychology.

Rose studied both "covert" and "overt" narcissists. The former, he says, are unhappy and feel inferior, but the overt ones—the types we all think of as narcissists—feel just fine. He administered several narcissism scales as well as measures of happiness, self-esteem, and self-deception to 262 undergraduates. Those on the overtly narcissistic end of the spectrum scored high on traits such as grandiosity (an exaggerated sense of one's abilities, attractiveness, and worth), a strong sense of entitlement, and exploitativeness in personal relationships. But they also rated themselves high on measures of self-esteem and happiness.

The grandiose tendency to self-deceive seems to confer psychological benefits that the average person does not enjoy, reports Rose in a paper in the August issue of the *Journal of Personality & Individual Differences*. Such people will lash out defensively in reaction to criticism, he says. But having "unrealistic illusions" as well as "looking down on others" are shown in this as well as other research to be associated with "better health and adjustment."

Rose's study adds to evidence belying the popular assumption that narcissists must be basically unhappy, says psychologist Keith Campbell of the University of Georgia, Athens. In fact, they tend to be "more extraverted and less socially anxious," he says. "There's no good evidence that deep down, narcissists hate themselves."

Narcissus found love looking in a pool.

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