

## Mediawatch

### Good news for mice! Richard F. Harris

Each December, science reporters dutifully sit down and compose stories about all the good things science has done for humanity in the past year. As my colleagues and I at National Public Radio contemplated this annual rite, we reluctantly came to the conclusion that 1999 hasn't been all that notable a year, scientifically, for human beings. But it has been a spectacular year for mice.

The first signs really came last year, when the biggest story was how Judah Folkman had used angiostatin and endostatin to eradicate cancer in mice (see *Mediawatch*, *Curr Biol* 1999, **9**:R232). James Watson's reported claim (later denied) that "Judah is going to cure cancer in two years" was laughed off the front page of the *New York Times*. But nobody has disputed the assertion that the mice in question were cured of this dread disease.

Readers of this column will also recall that Alzheimer's disease was vanquished this year, in mice (see *Curr Biol* 1999 **9**:R580), and that researchers have genetically engineered intellectually superior mice some reporters daringly compared with Einstein (see *Curr Biol* 1999, **9**:R756). But there is more, much more.

Consider this: "Canadian researchers have genetically engineered mice to resist weight gain even when fed very fatty foods," the *Financial Times* reported in March. This gene not only liberates the weight-conscious mouse from fretting over excess mouse-chow calories, but the mice "were also resistant to type II diabetes."

Other research suggested further benefits to mice who simply nibble

at their food. "Lower-calorie diet could be 'fountain of youth'," announced the *Ottawa Citizen* in August. According to the AP dispatch, "genes that normally deteriorate with age tend to continue functioning in a youthful way when the mice were underfed."

On another front, *New Scientist* noted that "mice given caffeine survive radiation." According to a June report, scientists in India discovered that 70% of mice could survive a hefty blast of  $\gamma$  rays if given a jolt of caffeine. (This study was not such good news for the 196 mice used as a control group.) Although the value to mice of this experiment is self-evident, the reporter noted that a human would have to drink 100 cups of coffee to get the same dose of caffeine. That, somehow, seems impractical in the midst of a nuclear emergency.

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**This year saw the medical breakthrough that nude mice have been waiting for**

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Mice more concerned about mere vanity, as opposed to survival, had a lot to be thankful for in 1999, as well. As Reuters reported in May, Anthony Perry at the University of Hawaii took the gene that makes jellyfish emit green light and transferred it into mouse cells. "It was absolutely fantastic to see these little mice glowing green," Perry said. (This is the same lab that reportedly cloned male animals from the tip of a mouse's tail and also used "dead" mouse sperm to fertilize eggs.) A side-effect of the jellyfish gene experiment was that the mice were also bald. But not to worry.

"Researchers at Cornell University in New York State have genetically kick-started hair follicles in mice by exposing them to a particular gene," the *Times* (London) reported in October. "When we saw the result we thought, Wow — it was

so dramatic," said Ronald Crystal. This is undoubtedly the medical breakthrough that nude mice have been awaiting ever since they were unceremoniously depilated.

And if a full coat of hair is not enough to get a mouse a hot date, how about a gene transplant? "By tinkering with a single gene, scientists have transformed socially aloof laboratory mice into more agreeable creatures that spend much of their time cuddling," the *Montreal Gazette* reported in August. (British reporters had previously dubbed this creature "monogamouse," though when the paper actually appeared in *Nature*, there was no claim of murine monogamy.)

But just when it seemed that all of mousedom's ills would be cured in 1999, along came scientists at the University of Texas Southwestern Medical Center in Dallas. As the *Daily Telegraph* (London) noted in August, "Scientists have unexpectedly created a rodent with the sleep disorder narcolepsy." And, as reported in *Newsday*, "A strain of mice genetically bred to be nervous has been developed" at UCSF. "We want to develop mouse psychiatry," Laurence Tecott told the newspaper. Apparently, left to their own devices, mice have the good sense not to be neurotic.

Saddest of all, Agence France Press reported that, as humans gear up for the New Year party of the century — if not the millennium — another research team at UCSF has developed a strain of mice that can't tolerate alcohol. The mice "rushed around in their cage after drinking only tiny doses of ethanol... and they slumped over and went to sleep from too much drink while their natural littermates were still having a party." Of course, you don't have to be a mouse to accomplish that.

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