RANDOM SAMPLES

edited by CONSTANCE HOLDEN

Neuron Growth and ApoE

One form of a gene that has been linked to Alzheimer's disease appears to stimulate growth in mouse nerve cells, although a less common form does not, scientists have found. The research could shed light on how people recover from brain injuries as well as how Alzheimer's disease develops.

The gene in question codes for apolipoprotein E (apoE), a protein made in the brain's astrocyte cells. ApoE seems to help spur nerve cell growth and clear up debris from injuries brought by head trauma or stroke. But no one knows just what the protein does in the human brain and how its various versions, or alleles—E2, E3, and E4—differ.

Mouse studies have been of limited use because mice make only one form of apoE, which only partly resembles human apoE. But now a Washington University team led by neuroscientist David Holtzman says it's gotten around that problem. The scientists first injected fertilized mouse eggs with genes to produce human apoE3 or apoE4. Then, they report in the 1 May *Journal of Neuroscience*, they bred those mice with those lacking the gene for apoE, creating offspring that make only human apoE. The team then took some of the offspring's astrocytes and cultured them with neurons to mimic the cells' interaction in the brain.

Holtzman found that neurons exposed to apoE3 grew dendrites and axons about twice as long as did those exposed to apoE4 or to controls exposed to no apoE. "It could be that the ability of neurons to repair after injury might be related to your apoE genotype—and that could also be important in Alzheimer's," says Holtzman.

"This is an excellent paper that presents new data about the potential differences in function of apoE3 and apoE4 in the brain," comments Allen Roses, a leading Alzheimer's genetics researcher and vice president at Glaxo Wellcome Research and Development in Research Triangle Park, North Carolina. The model may help reveal the role of apoE in response to brain injury and stress, he says.

Moscow Dino Egg Scramble

Moscow was the site of paleontological intrigue last month after construction workers supposedly unearthed a dinosaur egg in the middle of the city. But it looks to have all been just a joke.

On 27 April, a steam shovel excavating at the site of a huge trade and entertainment center picked up a whitish oval object about 35 centimeters long. A supervisor for Ingeocom, the construction company, says the firm contacted the Russian Academy of Sciences' Paleontology Institute (PIN) and was told the object might be a dino egg. Company President Mikhail Rudyak, a former geologist, says that at PIN's request, he halted work at the site so scientists could check it out.

Ingeocom then invited journalists to come ogle the egg. But when they arrived at the site they found no one to answer questions except an anonymous man calling himself "a St. Petersburg paleontologist." Rudyak then swept up in a limousine and announced that the egg would be put temporarily in a "safe place." As photographers clicked away, the "egg" was taken out of the trench, put in a Xerox carton, placed in an armored van from Russian International Bank, and spirited away.

A later inquiry to PIN revealed that no one there had been notified of the discovery. "The possibility of finding a dinosaurus egg in the center of Moscow is practically nil," says director Alexei Rozanov. No explanation has been forthcoming from Ingeocom, but to some observers it looked like a publicity stunt. Indeed, Rudyak told a reporter the egg might inspire a name for the center after Jurassic Park—in Russian, *Yurski Kurski*.

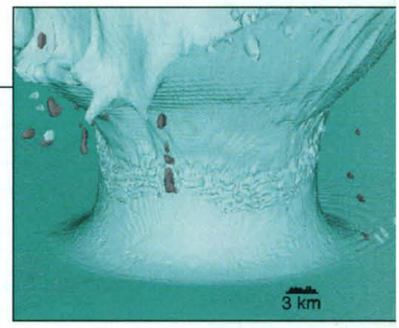
KAY CHERNUSH

Vogelstein

Most looked-to labs. Cancer gene researcher Bert Vogelstein leads the citation sweepstakes for the '90s, handily beating the more prolific Salvador Moncada, according to the Institute for Scientific Information in Philadelphia, which recently totted up citations from 1990 through mid-1997. Howard Hughes researchers (Vogelstein included) make up 10 of the top 50 most highly cited.

SUPERSTARS IN BIOMEDICINE, 1990–97

	Name	Affiliation	Field	Papers	Cites
1.	Bert Vogelstein	Johns Hopkins	cancer genetics	190	27,901
2.	Salvador Moncada	Univ. College London	nitric oxide	342	20,354
3.	Solomon H. Snyder	Johns Hopkins	neuro-transmitters	251	19,793
4.	Joseph Schlessinger	NYU Med. Ctr.	cell signaling	228	18,315
5.	Pierre Chambon	Inst. Gen./Mol. Biol., Strasbourg	receptors	328	15,035
6.	Kenneth W. Kinzler	Johns Hopkins	cancer genetics	117	14,008
7.	David P. Lane	U. of Dundee	cancer genetics	184	13,955
8.	Tadamitsu Kishimoto	Osaka U.	interleukin	349	13,513
9.	Neal G. Copeland	Natl. Cancer Inst.	apoptosis	398	13,313
10.	Nancy A. Jenkins	Natl. Cancer Inst.	apoptosis	395	13,190



Big splash. Sandia impact simulation.

Authentic *Deep Impact*

It's been almost 5 years since comet Shoemaker-Levy 9 broke up and smashed into Jupiter, but shock waves from the impacts are still reverberating around the Hollywood solar system. Last week, Steven Spielberg unleashed *Deep Impact*, the fifth comet-strikes-Earth film made in the past 20 years and, scientists who have seen it say, by far the most technically accurate one.

According to NASA's impact-hazard impresario, David Morrison of Ames Research Center in Mountain View, California, *Deep Impact* does a bang-up job in realism and technical accuracy. The film "gets high marks for understanding the nature of the impact threat and for the quality of its special-effects imagery," he says, thanks in part to a flock of technical advisers that included the late Gene Shoemaker of comet Shoemaker-Levy fame. Both the comet impact in the Atlantic and the ensuing tsunami crashing into the East Coast are strikingly authentic looking, Morrison says. The folks at New Mexico's Sandia National Laboratories, who have been simulating comet crashes and tsunamis with a supercomputer, are also impressed. "They produced superior visuals that appear remarkably realistic," says Sandia simulator Arthurine Breckenridge.

In contrast, this year's other big-budget treatment of an almost-end-of-world-by-impact scenario, *Armageddon*, stumbles right off the bat, says Morrison. Its asteroid is the size of Texas, a million times more massive than any asteroid that could threaten Earth. And, absurdly, no one notices it until a few weeks before impact.