Fungus Among Australian Frogs

A fungus is on the verge of being convicted of causing mass frog deaths in Australia. Researchers gathered in Cairns last week to review growing evidence that the chytrid *Batrachochytrium*, a fungus implicated in frog declines elsewhere in the world (*Science*, 30 April 1999, p. 728), is also the major killer of Australian amphibians.

Prior to the 2-day conference, "there was considerable doubt in the community that the chytrid was a serious threat" to the country's frogs, says Ken Aplin of the Western Australian Museum in Perth. But findings presented at the meeting "served to convince the skeptics," he says.

His own work, for instance, concluded that the fungus is a relatively recent invader. Aplin found no trace of the killer on 600 museum specimens collected between 1950 and 1985, but the telltale spores showed up on frogs collected more recently. Other researchers showed that frogs living in some of Australia's cool upland regions, where the fungus thrives, were harder hit than populations in adjacent but warmer lowlands.

Government officials in Australia's Northern Territory are convinced of the fungus threat; they have just enacted a ban on the import of amphibians into the so far chytrid-free state. And researchers are recommending that the government mount a national campaign to prevent the killer's spread, starting by formally designating the fungus as a problem. That move may come too late for the remote and rugged Kimberley region in the north of Western Australia; its first infected frog has just been found. The outbreak is "a great concern," says Aplin, because of the region's great frog biodiversity.

Clinical Crime

In what scientific misconduct experts say is an unusual case, a federal judge has sentenced a former drug company executive to 3 years in prison for falsifying data in a clinical trial. Prosecutors charged that Harry Snyder, a former vice president of BioCryst Pharmaceutical in Birmingham, Alabama, and his wife, nurse Renee Peugeot, conspired to make BCX-34, a drug developed to treat psoriasis and skin cancer, appear effective. The couple planned to cash in by selling stock in the company when the share price rose on news of the drug's success, they alleged. But BioCryst abandoned the drug several years ago after informing regulators about study irregularities. Last month a jury convicted the couple of conspiracy, mail fraud, and making false statements to the Food and Drug Administration.

Snyder and Peugeot's lawyers have appealed the verdict, maintaining that the pair made only record-keeping errors. Criminalizing research mistakes is "unprecedented," says Mark White, Peugeot's lawyer.

Regulators routinely prosecute stock manipulators, but researchers don't often face criminal charges for falsifying data, says Chris Pascal, director of the government's Office of Research Integrity. Misconduct cases, he says, typically end up in court only if the researcher appeals government disciplinary action.

MOST-CITED INSTITUTIONS AND RESEARCHERS IN MOLECULAR BIOLOGY AND GENETICS, 1994–98

Rank	Institution	# citations	Researcher	# papers/citations
1	HHMI	76,554	Michael Karin, UCSD	15/6677
2	Harvard	37,118	Joan Massagué, HHMI (Sloan-Kettering)	15/5402
3	MIT	15,966	John C. Reed, Burnham Inst.	13/5268
4	Johns Hopkins	13,570	Charles J. Sherr, HHMI (St. Jude Hosp.)	12/5435
5	UCSD	12,942	Ronald Evans, HHMI (Salk Inst.)	12/4646

The 300 or so biomedical research all-stars recruited by the Howard Hughes Medical Institute (HHMI) in Chevy Chase, Maryland, have easily outpaced the competition in publishing prominent papers in molecular biology and genetics. A new analysis by the Institute for Scientific Information in Philadelphia, which tracks scientific publishing, found that HHMI-funded researchers—who actually work at numerous campuses—published papers that other researchers cited more than 76,000 times from 1994 to 1998, more than double the number produced by runner-up Harvard University (see table). The survey also found that nine of the 17 most cited scientists were HHMI investigators, but not the leader of the pack: cell signaling and gene transcription researcher Michael Karin of the University of California, San Diego (UCSD). Among journals, *Cell* published the most high-impact papers, 371; *Nature* and *Science* tied for second with 159 each.

Patient Plant Breeders Harvest Food Prize

Two Mexico City researchers who worked for 30 years to perfect a high-protein corn have won the $250,000 World Food Prize, awarded by a Des Moines, Iowa–based foundation. The new variety of corn, or maize as it is known outside North America, produces up to twice as much lysine and tryptophan—two essential amino acids for building proteins—as most modern varieties of tropical maize.

Evangeline Villegas and Surinder Vasal of the International Maize and Wheat Improvement Center (CIMMYT) in Mexico City used traditional trial-and-error breeding techniques to incorporate a newly discovered gene into plants that had the same yield and pest resistance as traditional strains. Getting a combination of traits acceptable to both farmers and consumers proved a tough row to hoe, says Kendall Lamkey, an agronomist at Iowa State University in Ames. But perseverance produced a "quality protein maize" that looks like traditional varieties. "The only difference is the superior [nutritional] quality," says Villegas.

Farmers have planted at least 1 million hectares of the maize—which can boost harvests by 10%—in 10 countries in Asia, South America, and Africa.

Villegas, left, and Vasal, above, show off their handiwork.

CREDITS: (TOP) LEE BERGER; (BOTTOM) CIMMYT