

neurons and accessory cells called Schwann cells make a molecule called vascular endothelial growth factor (VEGF), which is found in a variety of tissues and has been shown to spur blood vessels to sprout and grow. In test tube experiments, the team found that VEGF compels undifferentiated blood vessels to take on characteristics of arterial cells. Anderson hypothesizes that VEGF secreted by nerves first attracts primitive blood vessels, then tells them to become arteries.

Although people have long noted the anatomical similarities between arteries and nerves, there has been little evidence that their development is coordinated, says molecular geneticist Peter Carmeliet of the University of Leuven in Belgium: "Until now there have been no molecular clues."

The research could also help explain a number of disorders that have baffled physicians, according to Folkman. Children with Möbius syndrome, for example, fail to develop several cranial nerves and have improperly formed arteries. The link between nerve and artery development could be a step toward an explanation, Folkman says.

—GREG MILLER

CANADA

Act Seen as First Step In Protecting Species

OTTAWA, CANADA—Canada's House of Commons last week approved the country's first law to protect endangered species. But although federal officials say the legislation, which relies on incentives rather than punishments, sets a new standard for cooperation between public and private sectors, environmental groups grumble that the approach leaves much to be desired.

"We want to get ahead of the curve, with stewardship programs," says Environment Minister David Anderson. But that approach "is just a starting point," complains the International Fund for Animal Welfare's national director, Rick Smith. "It will still leave the majority of species in the country without mandatory protection."

The parliamentary vote caps a decade-long debate over how best to protect Canadian plants and animals and their habitats (*Science*, 24 August 2001, p. 1417). In addition to first-ever mandatory

protection on federal lands, the Species at Risk Act will offer incentives and compensation to landowners and industry to do the right thing, says Anderson. Those inducements will amount to \$29 million this year and an expected \$38 million next year. The government can wield a big stick if necessary, he adds, including arrests and fines of up to \$650,000.

Despite giving private landowners financial incentives to cooperate, the new bill seemed headed the way of its predecessors until Anderson struck a compromise with all sides. He appeased the rural caucus of his own Liberal party by promising that property owners will receive adequate compensation if their lands are declared protected areas because of their value to at-risk species. He mollified the environmental caucus with a pair of olive branches. The first gives slightly more power to scientists on the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). If the committee declares a species endangered, its decision will now be final unless politicians vote within 9 months to overturn it and put their reasons in writing. The second makes habitat protection mandatory on federal land (about 6% of Canada's land mass) and waters, and on all land north of the 60th parallel not governed by aboriginal land-claim agreements.

For private lands, the bill relies on a different model of governance from what he calls the "coercive command-and-control approach" of the U.S. Endangered Species Act, says Anderson. Pressure from U.S.-linked environmental groups for more stick and less carrot "have not been helpful to the debate," he adds.

Others hold a decidedly less rosy picture of the bill. "I really don't think it will do the job," says ecologist David Schindler of the University of Alberta in Edmonton, who

says that the legislation defers to the provincial governments, which have a mixed record of species and habitat protection. "I would be surprised if we saw any slowdown whatsoever in the rate at which new species are added to the list."

Environmentalists calculate that the bill leaves about two-thirds of the 402 species within various COSEWIC risk categories without any form of mandatory habitat protection. "If we're going to save species, we have to save spaces for them, and the government is only delivering on federal

lands and for aquatic species," says Kate Smallwood, endangered species program director of the Sierra Legal Defense Fund. Migratory birds are at special peril, she says, "unless the nest and its habitat are in a post office, military base, an airport, a Coast Guard station, or a national park." Anderson disagrees. An existing agreement with the United States already obliges Canada to protect migratory fowl habitat, he points out.

The bill's final parliamentary hurdle—Senate approval—is a low one, because only once in the past decade has the upper chamber overturned legislation. And that's fine with an exhausted Anderson. "I'll be glad to have it over with," he says.

—WAYNE KONDRÓ

Wayne Kondro writes from Ottawa.

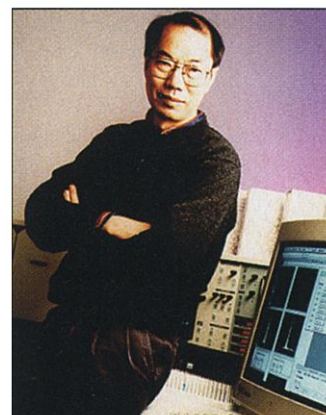
CANADA

Amgen Splits With Lab, But Its Money Lingers

OTTAWA, CANADA—Amgen has decided to sever its ties to the University of Toronto (UT)—based research institute it has funded for nearly a decade. But in an unusual twist, it's going to continue paying millions of dollars a year for work to which the university will hold all intellectual property rights.

The Amgen Institute was created in 1993 by the California biotechnology company, and the agreement was updated in 1999 to run through 2008. But soon thereafter the company installed a new management team, which last month decided that the institute's basic research into the functions of similar genes in mice, *Drosophila*, and *Caenorhabditis elegans* didn't fit into its new corporate strategy to focus on applied research. Earlier this month it negotiated a settlement with the university, and last week the lab set up shop under the umbrella of UT's network of teaching and research hospitals.

UT officials say that they are precluded from discussing the terms of the settlement. But both sides agree that the company negotiated an end to paying indirect research costs—administrative overhead, utilities, and the like—in exchange for renouncing any commercial claims to discoveries. "We have a contract with them to



New deal. Toronto's Tak Mak says "we're happy to be on our own."



Wise decision? A new Canadian law will try to help endangered friends of this great owl.