

# Best Natural Preservative: Money

Woodsman, spare that plant:

Botanist Paul Cox  
rescues an ecotourist  
paradise from loggers.

BY MICHAEL MAIELLO

# A

HUNDRED FEET IN THE AIR, A NETWORK OF ROPE AND CABLE BRIDGES CRISSCROSSES the 30,000-acre Falealupo Preserve in westernmost Samoa. From the fern- and orchid-rich canopy hikers look up to see cloud-ringed Mount Sili Sili, which juts 6,800 feet into the air. The preserve has one of only nine such aerial rain forest walkways in the world. That it exists at all can be credited to a resourceful scientist named Paul Cox.

Cox, who has a doctorate in biology from Harvard, became persuaded that Samoa's jungle contained rare botanicals of potential use against AIDS and cancer. To protect them, Cox had to engage in some pretty unscientific behavior—such as letting himself be made a god. Thirty-four native chiefs insisted he accept the name of

the Samoan war goddess, Nafanua. They meant it as an honor, and Cox couldn't very well say no. His scheme for saving flora depended on his rapport with the chiefs. He admits, though, that he worried about committing the cardinal sin of anthropology: As a fan of Joseph Conrad's novels, he feared he might be just one more white guy succumbing to heat and his own hubris.

Cox, 49, might have lived a less colorful life had he not lost his mother to breast cancer in 1984. The trauma inspired him to take a leave from his post as a botany professor at Brigham Young University and to return to Samoa, where he'd lived as a missionary dur-



Samoa healer Pea Lilo applies herbs to a Falealupo patient.

TIM RUE FOR FORBES

From the leafy mamala plant, Cox hopes soon to derive a potent AIDS-fighting drug.





**Green another 50 years: A commercial covenant now protects Samoa's botanical-rich forest.**

ing college. With his fluency in the Samoan language and his knowledge of plants, he embarked on an experiment in ethnobotany (the study of the relationship between plants and cultures).

Working with Falealupo's native healers, he determined that bark from the indigenous mamala plant, used to treat everything from incontinence to hepatitis, should be screened for antiviral properties. He sent samples to the National Cancer Institute in Bethesda, Md.

The plant itself, meanwhile, was threatened with destruction. Falealupo faced a financial crisis that put the survival of the very forest at risk. The Samoan government had demanded the village build a school or risk the expulsion of its children from the nation's public education system. To raise the \$85,000 needed for the school, Falealupo had sold logging rights to Samoa Timber Products, which had begun clear-cutting. To stop that—and to protect the mamala and the forest's other botanicals—Cox had to buy back the rights and strike a deal with local chiefs.

He offered to sell his home in Utah and solicited donations from backers who included Rex Maughan, a member of The Forbes 400 who runs an Amway-style marketing business in natural products called Forever Living. Cox also drafted what he calls the Falealupo Covenant between himself, the village and the other parties that stood to gain from preserva-

tion of the forest's botanical treasures. The village agreed to keep loggers out for 50 years and to allow Cox to continue his research. In exchange Falealupo got money already donated (\$85,000) plus 33% of Samoa's shares of royalties on any commercial drugs derived from mamala. Says Cox, "It was the first time that we've recognized the intellectual property rights of a native population in drug research."

At the National Cancer Institute researchers isolated a compound known as prostratin from mamala. This was bad news for mamala's potential as a cancer

## One more white guy succumbing TO HIS OWN HUBRIS.

drug, since prostratin belongs to a class of compounds—phorbols—that promote tumor growth. So the NCI decided to see if it had any potential as an AIDS drug.

Bingo. NCI researchers discovered prostratin counteracted one of the most insidious strengths of the HIV virus—its ability to lie dormant in cells and thus survive virus-killing medicines. Current AIDS cocktails knock a patient's viral load to nearly nothing; but as soon as a patient stops taking the cocktail, dormant HIV viruses leave the cells and spark a new bout of AIDS. Prostratin flushes out the virus, so the cocktail can kill it.

The NCI and Cox share a patent on

prostratin for use in AIDS treatments, which has been licensed to the nonprofit AIDS Research Alliance of West Hollywood, Calif. The Alliance will put prostratin through three phases of human trials. It hopes to find a pharmaceutical partner after Phase I is completed sometime next year. Inspired by Cox's Falealupo Covenant, the Alliance has signed a contract that would give the government of Samoa, the village of Falealupo and its healers 20% of any profits. So far it has made a \$5,000 good faith payment and has agreed to pay an additional \$70,000 when and if the drug passes its Food & Drug Administration trials.

Cox can't promise that the corporate partners needed to bring prostratin to market will share their profits with the Samoans, but he hopes they will, and that his covenant will serve as a model for fair dealing. "It would go a long way," he says, "toward helping drug companies improve their tense relationships with developing countries."

As Cox waits for prostratin to worm its way through FDA trials, he's turned his attention to neurodegenerative diseases like ALS and Parkinson's. He believes that a mid-20th century spike in ALS cases among the Chamorro tribe of Guam can be explained by their consumption of a bat that dines on the poisonous cycad tree. By 1978 the Chamorro had hunted

Guam's bats to extinction and started to import bats from cycad-free Falealupo. ALS cases immediately declined. Cox is studying the cycad-ALS link with neurologist and writer Oliver Sacks.

In 1997 Cox published his memoir, *Nafanua: Saving the Samoan Rain Forest*, winning the Goldman Environmental Prize (\$37,500) for work described in the book. Through a foundation, that money, too, has gone to Falealupo's villagers, who have used it to maintain the aerial hiking trails that draw ecotourists from around the world.

For more information on Falealupo and how to get there, visit [forbes.com/falealupo](http://forbes.com/falealupo). **F**

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