

# Scientists looking to take the ouch out of vaccines

By Cliff Edwards  
The Associated Press

SAN FRANCISCO — The days of being on pins and needles while you wait for your flu shot or insulin injection could soon be a thing of the past.

Devices that deliver drugs into the skin at the speed of a supersonic jet, controlled-release microchips, and foods genetically modified to carry medicine were just a few of the approaches being discussed at a gathering of scientists as alternatives to the needle and syringe.

"Why don't people like needles? Very simply, it hurts — and people don't like what hurts," said Mark Prausnitz, a chemical engineering professor from the Georgia Institute of Technology. "The needle's been around for quite a while, but we believe there are ways of achieving better drug delivery and getting across the various barriers in the body."

Prausnitz worked five years with electrical engineer Mark Allen to develop a prototype device, which looks like a nicotine patch, of 400 silicon-based micro-

scopic needles, each no wider than a human hair.

The tiny, hollow needles are so small, the researchers say, that medication can be delivered through the skin without reaching the nerve cells that register pain. Microelectronics within also could control the time and dosage of the medicine delivered.

Tests of the device in delivering insulin found it significantly reduced blood sugar levels in diabetic rats, Prausnitz said in a presentation this week at a meeting of the American Chemical Society.

The race to develop alternatives comes amid concern about the danger of used needles transmitting diseases to health care workers and their patients. The researchers also noted that youngsters can develop an aversion to needles after receiving 12 to 19 childhood vaccinations.

Many of the devices discussed at the conference are undergoing human testing but are at least two years away from coming to market.

Taking a page from the hypodermis seen on television's "Star

Trek" in the 1960s, Powderject Pharmaceuticals of Fremont, Calif., is testing a device that uses pressurized helium to launch dry powder medicines through the skin.

Electronic inhalers could deliver dosages of tiny liquid particles to the bloodstream by way of the mouth and small airways.

Scientists also are turning to genetically engineered food. More than 25 papers were expected to look at the benefits of modifying plants and foods to deliver drugs or pack a more nutritional punch.

## Cancer victims file suit against tobacco giants

■ The industry responds with allegations that the cancer was caused by sources other than tobacco

By Catherine Wilson  
The Associated Press

MIAMI — The tobacco industry should be required to compensate three cancer-stricken smokers for lying to them and the American public about their sickening and addictive product, the smokers' attorney told jurors today.

"They succeeded beyond their wildest expectations," attorney Stanley Rosenblatt said of the nation's five biggest cigarette makers. "Let them now reap the consequences for the harm they have caused good, decent people."

Rosenblatt was expected to ask the jury for a specific dollar figure during the afternoon before tobacco company lawyers began their final arguments.

The six-member jury is being asked to order compensatory damages for the three ailing smokers who represent an estimated 500,000 other Florida smokers in the first class-action case against the tobacco industry to go to trial.

If jurors award compensatory damages, they then will be asked

to set a dollar figure to punish the industry. Company officials fear a potentially ruinous \$300 billion punitive damage verdict.

The six-member jury decided

“Let them now reap the consequences for the harm they have caused...”

Stanley Rosenblatt  
attorney

last July that the industry fraudulently conspired to make a defective product.

Doctors have testified that the three smokers' cancers were caused by smoking.

The industry has offered evidence that bronchioalveolar cancer — a form of lung cancer the jury decided is not linked to smoking — caused the cancers in two of the smokers. It blamed industrial wood dust as a possible cause of throat cancer in the third.

The defendants are Philip Morris Inc., R.J. Reynolds Tobacco Co., Brown & Williamson Tobacco Corp., Lorillard Tobacco Co., Liggett Group Inc. and the industry's Council for Tobacco Research and Tobacco Institute.

## Pennsylvania to give money to families of organ donors

■ The state will provide the family members with \$300 to cover funeral, incidental costs

By Hope Yen  
The Associated Press

HARRISBURG, Pa. — Pennsylvania will move ahead with a novel plan to offer \$300 to the families of organ donors, but the money can only cover incidental costs such as food, housing and transportation, the state health secretary said Wednesday.

A governor's advisory committee last fall recommended offering the money for funeral costs in hopes of encouraging organ donations, because demand for transplants is surging.

But amid concerns the plan amounted to an illegal cash payment for organs, Health Secretary Robert Zimmerman said he was modifying the program to cover only incidental costs.

"I try to look at this in terms of the end rather than the means," Zimmerman told members of the advisory committee. "The end is to promote and support and provide benefits to people who

make difficult decisions."

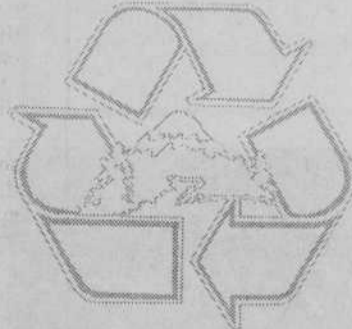
A 1984 federal law prohibits payments or other considerations for organs and tissue. The law exempts "reasonable payments" for incidental costs associated with recovering and transporting the organ, but it does not specifically mention funeral expenses.

Pennsylvania's three-year pilot program, the first of its kind in the nation, could begin as early as September after the advisory committee works out details. Many states, including New York and Hawaii, have said they will be watching closely to see if it is worth pursuing on their own.

Some members of the Pennsylvania advisory committee said the program's attempts to comply with laws against organ buying made it confusing. And other skeptics wondered whether the modest payment offer would increase donations.

"It's probably legal but it doesn't make a lot of sense," said George Annas, who writes on health law for the New England Journal of Medicine. "I can't imagine that throwing in transportation costs would make a difference."

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