Re-Inventing the Self-Destruct Syringe?

Schoolgirls' Device Wins Big Prize, But Many Patents Already Issued

Two 17-year-old juniors at a private New York City girls school have won a prestigious science competition and $15,000 college scholarships. They won for inventing a non-reusable, self-destructing (SD), syringe to prevent AIDS from being transmitted between intravenous drug abusers on shared injection equipment. The girls attend the Brearley School.

"Creativity and originality of ideas" count for 40% of contestants' score in the competition, according to the entry form. The contest is co-sponsored by NYNEX, the northeastern telephone company, and the National Science Teachers Association (NSTA) in Arlington, Va.

What is not altogether clear is how creative and original the girls' design — which was judged by a panel that included two Nobel laureates — really is.

International health officials have said that hundreds of SD syringe designs were submitted as part of a contest they ran more than a decade ago, and some have been produced. The U.S. Patent and Trademark Office was reported, in 1991, to have more than 100 patents issued or pending for this kind of device.

Some are already on the market.

Subclass Described

In the last year alone, from July to July, the Patent Office registered 80 new patents in a subclass of instruments "for introducing or removing material from the body for therapeutic purposes" that have "means for preventing reuse of the device," an official, John J. Love, said last month by phone.

"Most of them are syringes," Love said. "It's a fairly active area."

These devices have been described and discussed in the technical and general press, including the New York Times.

The clash, between the girls' claim, endorsed by their teacher, school, judges, and sponsors, and the substantial published record of this technology also raises questions about the responsibilities of the adults who participated in the continued on page 4

Quiz for Grown-ups on Science, Environment

It's exam time again!

Respond to the following 12 statements as true, probably true, probably false, false, or can't answer. Then turn to page 6 for the answers; a breakdown of other Americans' scores on each question; and a comparison with scores from other countries. Our score to beat: 11.

1. All radioactivity is made by humans.
2. Antibiotics kill bacteria, but not viruses.
3. Astrology, the study of star signs, has some scientific truth.
4. Human beings developed from earlier species.
5. All man-made chemicals cause cancer if you eat enough of them.
6. If someone is exposed to any amount of radioactivity, they are certain to die as a result.
7. Some radioactive waste from nuclear power stations will stay dangerous for thousands of years.
8. The greenhouse effect is caused by a hole in the earth's atmosphere.
9. Every time we use coal or oil or gas, we contribute to the greenhouse effect.
10. All pesticides and chemicals used on food crops cause cancer in humans.
11. Human beings are the main cause of plant and animal species dying out.
12. Cars are not really an important cause of air pollution.

Now turn to page 6.
Follow-up
‘Diet Teas’ Contain Medicinal Doses

Toxicologists in the California Department of Health Services have now confirmed in tests that widely popular dieter’s teas, implicated in three deaths and many upset guts, contain medicinal amounts of powerful laxative ingredients.

These ingredients are sennosides A and B. They are released from the leaves of senna plants when they are immersed in boiling water in a tea bag.

Regulatory action has been sought by an angry San Francisco lawyer, Christopher E. Grell, whose wife died several years ago after drinking Laci Le Beau® Super Dieter’s Tea® — the leading brand of its class. But California health officials and the federal Food and Drug Administration (FDA) have taken years to investigate, and start to protect the public from the senna teas (PROBE, May ’94).

The investigations of the Laci Le Beau company, of Fresno, Calif., and other senna tea distributors demonstrate the difficulties — and resistance — health agencies face in trying to regulate dangerous products labelled as “food” or “dietary supplements.” The thousands of products in these categories have been only loosely regulated in the past. Under a new federal law, enacted last year, consumer protections have been further diluted.

Doctors Warned

The safety investigators strongest wedge in the senna teas situation is that senna is regulated as a food flavor and dietary supplement, on the one hand, and also as a laxative drug. As a matter of policy, an FDA official told PROBE last year, the agency would not permit medicinal doses of senna, and its medicinally active sennosides, to be sold as food.

FDA Is on Slippery Slope

A Food and Drug Administration advisory committee on foods has recommended warning labels on “diet teas” like the Laci Le Beau products that are widely sold as “food”. According to Food Chemical News (June 19) and other trade press accounts, one proposal, which is supported by tea makers, would say:

**WARNING:** Contains herbs (names listed here) that can act as a stimulant laxative. Prolonged steeping time can increase the risk of adverse laxative effects, including: nausea, vomiting, abdominal cramps and diarrhea. Chronic use . . . can impair colon function. Use of laxatives may be hazardous . . . and may result in serious injury or death. herein what’s wrong with this proposal:

It is a green light for herbal companies to sell medicinal products as foods, which are loosely regulated, rather than as drugs, which are regulated tightly by FDA.

Agency staffers told the advisory committee that it’s not

continued on page 7

The FDA ran some tests of the teas last year. Without announcing the exact results, it sent a warning — to doctors — last autumn saying “adverse reactions . . . reported to FDA related to these products are characteristic of . . . laxative abuse syndrome, and include severe electrolyte imbalances leading to cardiac arrhythmias and death” (PROBE, Dec. ’94).

Whether this warning reached consumers’ eyes is unclear. FDA did not take any regulatory action against the tea makers.

The FDA-approved medicinal dose for laxative use is 12 to 50 mg. sennosides A and B once or twice a day, for no longer than one week. The minimal medicinal dose therefore is 12 mg.

Company Aims Low

In a phone interview last year, Laci Le Beau CEO Fred Stine told PROBE that in formulating the tea, “we shoot for a lot less than [12 mg.]. We look for between 2 and 6,” he said, to keep it “way below” the “laxative area.”

Meanwhile state toxicologists in California, where most of the senna tea distributors are located, were testing the products’ sennoside content. Senna tea bags were brewed for two to five minutes as instructed on the packages.

The researchers found last November that eight varieties of Laci Le Beau tea had from 10 to 16 mg. sennosides A and B when brewed for 2 minutes as directed. The original Laci Le Beau product — like the one that attorney Grell says his wife, June, drank the night she died, in 1991 — contained 16 mg. sennoside A and B when one tea bag was brewed for 2 minutes in 8 ounces of boiling water. When bags were left in the water for 5 minutes, the concentration of sennosides A and B, as measured by high-performance liquid chromatography, rose above 20 mg. in some of Laci Le Beau’s and another company’s products.

“Teas sold as foods or dietary supplements contained quantities of sennosides within the range of OTC laxative drugs,” Stuart E. Richardson, Jr., M.P.H., chief of the department’s Food and Drug Branch, wrote in an intra-agency memo on the data.

“OTC laxative drugs must bear warnings to not use them for more than one week, or when abdominal pain, nausea, or vomiting are present, unless directed by a physician. Teas

continued on page 8
Science Leaders Yawn at Political Call to Arms

Last month we described White House science advisor John H. Gibbons' distress at destructive federal research budget cuts. We suggested, based on a talk he gave in New York, that he and other leaders were acquiescing to the cuts — and we also suggested that rank-and-file scientists (and doctors) become politically active to persuade Congress and the voters to restore the funding.

We're happy to report, now, that presidential advisor Gibbons shares our activist views. In a guest editorial in Science (July 14), he wrote:

"There are those who believe that scientists should stay out of politics. This is not a luxury we have; in truth, it is a luxury we never had." Gibbons goes on to define the requisite politics:

Each of us needs to be a partisan for science, to embrace a partisanship born of hope for the future. It is not partisanship based on party ideology, but on concern over the possibility that the work of generations that has put us at the forefront of world science and technology could be undone in a few budget cycles. It is a personal partisanship based on conviction, and such partisanship is the moral calling of every citizen in a democracy.

Can — and will — the science leadership transform this impulse into effective political action? A report on a late June conference, "Unity Under Adversity," called by the American Association for the Advancement of Science (AAAS) with 85 of its affiliated science and technology educational organizations, suggests that, on both counts, they won't.

The report was written by Daniel S. Greenberg, in his Washington newsletter, Science & Government Report, of July 15.

"What drew them together was the sound of chain saws coming at research budgets on Capitol Hill," Greenberg writes. "But at the end of a long day of agonizing, it was evident that the victims were not disposed to fight back with anything more potent than a courteous appeal for tender treatment."

Timidity Decried

Greenberg is a persistent critic of scientists "whining" for money. He nevertheless blasted AAAS and its affiliates' leaders for their "uncombative response" to the budget cutting, and "the scientific community's traditional avoidance of conventional political warfare."

He noted that one "quixotic" proposal was made — and largely ignored by the assembled science honchos: The scientific community should emulate the aggressive and potent Christian Coalition in pursuing its goals through politics.

The idea was advanced by a consultant to John Gibbons' White House Office of Science and Technology Progress. The proponent: Washington University management specialist William G. Wells, Jr., Ph.D.

In answer to the What to do? question, Wells advised: "Build a coherent alliance among yourselves! Look to other coalitions as models, particularly the Christian Coalition.

Coalition Has Impact

"With only 1.6 million members," Wells explained, and "a budget of $25 million (an average of $15 per member), and the leadership of an astute executive director, Ralph Reed, the Christian Coalition has become one of the most potent political forces in the nation — with easy access to political powers at the national and state levels."

The Coalition is centrally organized, from Washington, Wells told the science heads, but can energize and activate "hordes" of local volunteers on short notice. Politicians, including presidential candidates, seek its counsel — not about religion, but about politics.

"By contrast," Wells declared, "the science and technology worlds are not even a blip on politicians' radar screens."

Wells' proposal was "the outer reach of potential political activism" at the AAS meeting, Greenberg reports. He added: "It stirred little response, not surprisingly, given the traditional political passivity of the science establishment."

We said long ago (PROBE, Oct. '92) that there are enough doctors and scientists to counterattack the Animal Rights movement one-on-one at the local school level — where animal rights activists currently are enormously successful. By the same token, there are enough scientists — some of whom are now un- or under-employed — to build a wide grass roots coalition to support research. Industry could and should provide the seed money.

One tactic would be to get to know the individual congressmen and women, and the doctors and other healthcare providers whom they know. We find that people who are disinterested in medicine and science, generally speaking, quickly become very focused when they, or a loved one suddenly needs a liver transplant or some other high tech service. They then become supporters of that particular sci/med endeavor. The trick will be to broaden this concern, and refocus it on the legislative arena.

Most families sooner or later need — and use — the high-tech products of contemporary research. So there is potential for political support — if the scientific community will mobilize.

(We note that New York sociologist Barry Gross, Ph.D., whom we quoted last month urging political action against the New Age anti-science movement, died suddenly in mid-July. He was 58.)

Issue Is Delayed

This issue of PROBE was delayed by production problems. We regret this inconvenience to our readers. — D.R.Z.
Prize . . .

continued from page 1

process. Did they check to see if the girls' idea and design were original? If so, how well did they check?

Contests have become a major focus of high school science education. The NYNEX-NSTA competition is only in its second year. But the national Westinghouse Science Talent Search, now in its 55th year, provides important benchmarks for students, schools, parents, and of course college entrance and scholarship officials. Westinghouse also gives scholarships to its winners. What is less clear is how much these competitions — and the student and teacher time and energy they demand — contribute to the learning of science.

Officials of NSTA said recently, in phone interviews, that some 475 teams or individual high school students entered their contest this year. These students, too, have a stake — as losers — in the outcome.

Discovery Is Described

The girls who invented the new syringe, Elizabeth Nathan and Gabriella Pollack, attend the Brearley School on Manhattan's Upper East Side. They worked on their project with their science teacher, Laurie Seminara, according to the contest sponsors.

The Brearley team and other finalists displayed their work at a science fair in May, at the Boston Museum of Science, where the results were announced. Their models were briefly on public display there, an NSTA official said by phone, and the New York girls' winning entry was photographed for an East Side neighborhood newspaper in Manhattan, Our Town (May 18). It appeared under a huge headline identifying the girls as "Young Einsteins." The newspaper quoted one judge, Nobel Laureate physicist Sheldon L. Glashow, Ph.D., as saying:

"Their's was an invention in the spirit of the safety pin or velcro." He added: "It's an important concept: a syringe that can't be abused."

Another judge added that Nathan and Pollack's invention "had everything — good scientific imagination, technical competence, and important social consequences."

The judges, however, were not informed or aware that patents have been issued for this kind of device, according to a second Nobel Laureate on the panel, physicist Rosalyn Yalow, Ph.D., of the Bronx Veterans Administration Medical Center in New York.

"It wasn't brought out," Yalow said recently by phone. A second judge confirmed this.

Boredom Was Productive

The inventors were interviewed by Our Town reporter Nelson Williams, Jr. He reported that Nathan, a physics major, came up with the idea first.

"When I was bored in class," she told Our Town, "I'd sketch diagrams of potential designs."

More than a dozen designs were considered, and discarded, according to Nathan.

"We ran all the designs we were psyched about by our advisor," co-inventor Pollack, a sports fan and pianist, added. "And we ruled them all out until we hit on the best one."

The news report continues:

"We tested it and it worked," says Pollack, still sounding a little surprised herself.

After a news story on their success appeared in the New York Times (May 10), PROBE phoned NYNEX, which had issued a news release on the winners, to find out more about the girls' syringe, and how it was judged original and creative. A NYNEX public relations man referred us to NSTA. A public relations person there referred us to the teacher, Ms. Seminara. She referred us to a Brearley administrator, Jo David.

David in turn referred us back to NSTA, where public relations specialist Diane Thornton said she would ask the chief judge to phone us. PROBE did not hear back from him.

Williams reported, in Our Town, that "the key to the [girls'] non-reusable syringe is that its plunger can't be re-engaged. If you attempt to get a second use out of the needle, it simply breaks."

Brearley and the NSTA declined to provide additional information on the device. Administrator David said that the students and their teacher had scattered for the summer, and could not be reached.

Repeated phone calls to the girls' homes, near Brearley, earlier this month were not returned. They did not respond to requests to see their winning entry, which had been publicly displayed in Boston.

Calls to their teacher, Laurie Seminara, were not returned. The concept Williams described in Our Town does not appear to be new: For example, a number of SD devices are depicted

continued on next page
in the transactions of the *First International Conference on Self-Destructing (Non-Reusable) Syringes*, published by New York University, after a 1991 conference there. (See illustration, P. 4) Some of these devices, including Becton Dickinson's "Soloshot™" syringe, are now being commercially distributed.

A variety of inserts and other mechanisms that can disarm a syringe after its first use are depicted in the transactions. For example, one called Entrap (U.S. Patent 4,986,813, issued Jan. 22, 1991) contains a tiny spring that "deflects" the needle to the barrel's side wall. Needle retention is thereby achieved...

PROBE has no evidence that the girls, who could not be reached for comment, were aware of any of the previous designs for these syringes.

Whether the Brearley girls' invention is truly unique and creative — and hence patentable — is a technical decision: Only the Patent Office can decide. But published information and patent official Love's comment indicate that a mechanism that disarms a syringe after its first use, preventing re-use, lacks the "originality" sought in the NYNEX-NSTA contest.

**Sponsor Explains**

PROBE phoned Jo David at Brearley again. She referred us back to NSTA, this time to the program director for the contest, Elisabeth Tobia, who originated the project.

 Asked if the contest's "creativity and originality of ideas" referred to real world achievements, or, rather, learning-exercise creativity, Tobia replied:

"More the former than the latter."

The students "definitely" need "to do their research and try to come up with an innovative idea," Tobia said.

She said contestants "have to be aware of what's out there, and come up with something that's mostly creative." But, she added, "a complete and thorough" scientific project "might in some situations be beyond the scope of the contestants."

Asked who decides if the entry is creative and original, she answered, "the judges." Tobia also said, however, that the teacher or other advisor has to sign off on the work's originality.

A preliminary panel and then a final panel chose the winners, Tobia said. The chief of both panels, she added, was a Westchester County, N.Y., high school teacher, Arthur Eisenkraft. She said she would discuss PROBE's questions about the judging with him.

**Silence Is Urged**

Tobia then wrote to judges in the contest, asking that they not discuss the competition with PROBE, one of the judges, biologist Lynn Margulis, Ph.D., of the University of Massachusetts, at Amherst, said early this month by phone.

One medically trained observer has noted that scientific research papers always have an introductory section, in which the relevant technical literature is reviewed. This makes the authors accountable for what they do — or do not — list as antecedent work.

*Originality Is Backed*

Asked who had checked the girls' work, Tobia said they had interviewed medical professionals about their device. It was "certainly original" for them, she said. It was based on "some common physical principles, and four or five interviews with people in the medical profession."

Tobia said she was aware that there were other self-destruct needles around. Asked what, then, the girls did that was creative, she replied:

"They came up with a device that appeared to all of the judges to be original." But, she added, "they didn't have the 18 months to do the kind of study that the Patent Office does."

Tobia added:

"If the hypothesis is that they stole the idea, that's absolutely wrong."

She continued:

"Because they did their research, and they showed in their paper how they came up with it."

Two panels of judges, she added, were sufficiently satisfied that the girls had done their own research, and that the project they came up with was "original with them."

Tobia said "we don't have anything to hide about the device." She added, "Isn't it possible that these girls came up with one that in whatever way is original?"

It is.

Asked if she would make the entry available, Tobia said she could not, since it is the students' property. Tobia said she would check with chief judge Eisenkraft on the panels' criteria for originality. She did not call back, and when contacted again early this month declined further substantive comment. She did indicate that she had been in touch with Brearley, but not with the winners or their teacher.

Biologist Margulis, who was a judge, said that the judging was "extremely fair and open," and included several written and oral presentations by the 12 finalist teams. Winners Nathan and Pollack, she said, "were extremely articulate."

Margulis, like Yalow, said the judges were not aware that patents had previously been issued for non-reusable syringes.

"Openness is the criterion for good science," Margulis continued. "I see no reason at all why you can't have access" to the girls' presentation. It would be "bizarre", she added, for it not to be made available.
Americans Flunk Evolutionary Biology Because Creationists Lower the Scores

Public opinion experts have found that Americans rank 7th among 20 advanced nations in their understanding of scientific and environmental information and issues. But we are dead last in our understanding — or acceptance — of the fact that humans evolved from earlier species, as Darwin established more than a century ago.

Only 48% of Americans identified the statement “Human beings developed from earlier species” as the correct answer to the pollsters’ question. The majoritarian ignorance is based, the pollsters think, on the strong influence of Christian fundamentalists who believe God created man de novo — along with all of the rest of the world — in six days, as it says in Scriptures.

These findings come from University of Chicago sociologist Tom W. Smith, Ph.D., the director of the General Social Survey at the National Opinion Research Center (NORC) there. The NORC interviewers asked 12 questions of a representative sample of 2,800 adult Americans. Foreign colleagues conducted similar surveys in the other countries, as part of a 1993-94 worldwide assessment of environmental knowledge.

Canadians Know Most

The top scorers were Canadians, with 7.6 correct answers; at the bottom was Poland, with 4.3. Americans’ average score was 6.6.

In some countries, Smith said in his report, science and the environment are important school topics — which accounts for the generally higher scores in Western European nations. In the U.S., by contrast, weak schooling is somewhat compensated by media coverage.

“Many people consider the U.S. to have an inadequate educational system, a situation that diminishes scientific and environmental knowledge . . . compared with other countries,” Smith said. But one reason scores in the U.S. aren’t worse is that there is greater diversity of media [here] than anywhere else . . . People can get information about the environment and science from a vast number of sources.”

On the one evolution question, Smith said the drastically low U.S. score, 48% correct is due, both directly and indirectly, to religious influences.

Smart Creationists Are Cagey

Fundamentalists’ scores reflect this influence. They were “much lower” than other Americans’ scores on the evolution question, Smith said in a phone interview from Chicago, even when the responses were corrected for educational level. Better educated fundamentalists, he noted, tend to opt for the “can’t choose” option; less educated ones say simply — and erroneously — that the statement of man’s evolutionary descent simply is false.

The fundamentalists make up a third of the population, Smith noted, so their direct influence on the average American score is significant. They also have a major indirect effect, he thinks: “They have lowered both the quantity and the quality of evolutionary education,” Smith explained. “It’s watered down in order not to offend the fundamentalists, and presented as one theory, among others.”

In fact, Smith said, evolution is critically important.

“You can’t have a well-rounded understanding of biology without it,” he added, “and it has to be presented in a more fundamental manner.

“The problem is, I don’t think that’s politically possible in America!”

Extinction Answers Explained

In the University of Chicago news report on the study, Smith is quoted as saying that Americans’ low score on statement 11, that “Human beings are the main cause of plant and animal species dying out,” may reflect the wide interest here in dinosaurs. Many Americans understand that the dinos were long extinct before mankind showed up, he explained by phone. For this reason, they are less likely to attribute current species’ extinction to human activity.

(This was the one statement we responded to incorrectly, as false. We’re not aware of a study that demonstrates that humanly-induced extinctions outnumber non-human, natural ones among the many millions of species that inhabit the earth. Smith attributes “all current species extinctions to humans” — which certainly is wrong.)

The survey’s general findings — of relatively poor scientific and environmental understanding in countries around the globe — is distressing, Smith concluded:

“Effective citizen action on the environment depends on public knowledge of environmental problems,” he said. But,

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Americans . . .

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"today, 25 years after the first Earth Day and three years after the Earth Summit [conference] in Rio de Janeiro, we see that knowledge of science and the environment is deficient and limited in the U.S. and other countries around the world."

National Scores Are Compared

These are the average number of correct answers by nation:

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FDA . . .

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what's in a product, but what it's called that differentiates a "food" from a "drug". This is a serious abdication of FDA's responsibility under the Food and Drug and Cosmetic Act to regulate products that influence physiologic function or structure under its tight drug rules.

The agency's power to designate a product as "drug", as against "food", appears to have been compromised by recent federal laws and rulings. Nevertheless, an FDA food official told us last year that as a matter of "policy", the agency would not allow medicinal amounts of products to be sold as food. Although FDA has not announced its own test results on "diet teas," tests by the state of California now prove that these products contain medicinal amounts of the laxative senna (See main story).

For the FDA to renege, and permit continuing sale of these teas as "food", would deal a severe blow to consumer safety. Unscrupulous manufacturers will rush to sell all kinds of dangerous herbal products and medicinal substances as food.

Darwinian Doubts Cast on Ebola's Mutation to Flyer

We complained in June about the New York Times' scarifying editorial comment that "a modest genetic change might enable Ebola [virus] to spread rapidly through the air (May 12)."

We said: Poppycock!

Since then, we've done a bit more research. Here is the official word on the subject, from the Centers for Disease Control's Morbidity and Mortality Weekly Report of June 30:

"Airborne transmission involving humans has never been documented and is considered a possibility only in rare instances from persons with advanced stages of disease (e.g., one patient with [closely related] Lassa fever who had extensive lung involvement may have transmitted infection by the airborne route.)" Some evidence suggests that these diseases may be transmitted through the air between monkeys, CDC adds.

The one possible human case thus involved close contact in a health care setting. The monkeys were caged. Both therefore represent extraordinary circumstances, not the natural spread of an airborne virus such as flu, TB, or — worst case — anthrax.

There is no evidence, either, of a genetic change that turned body fluid parasites into airborne flyers.

This possibility is very remote. Major genetic change would be needed, and evolutionists long ago concluded that such sudden major change — which is called saltationism (from the Latin saltare, to leap, jump, or skip) — does not and cannot occur.

Starting with the Greeks, explains Harvard evolutionist Ernst Mayr, Ph.D., in his book on Darwin, One Long Argument (Cambridge: Harvard, 1991), scientists speculated that "an existing species could give rise to a new species, by a sudden leap or saltation."

The problem, Mayr writes, is that "Sudden new origins . . . are not evolution. The diagnostic criterion of evolutionary transformation is gradualness [emphasis added]."

After Darwin published On the Origin of Species in 1859, many evolutionists did interpret it as a confirmation of saltationism. A German Darwinian, August Weismann, pointed out however that this couldn't work in nature. The radically changed offspring of a virus or any other natural organism would no longer be specifically adapted — fitted — to its natural surroundings, which it would need to be in order to survive. Mayr quotes Weismann as writing, in 1886:

"An abrupt transformation of a species is inconceivable, because it would render the species incapable of existence."

So: It's too bad the Times' editorialist, and fabulizers like author Michael Crichton don't know, or don't care, to constrain their fantasies with solid understanding. We all could do with a lot less of the mad scientists and their deadly mutants!
Teas ...

continued from page 2

sold as foods or dietary supplements bear no such warnings," he added.

Hazard Cited

In a related Food and Drug Branch memo, state toxicologist Susan M. Loscutoff, Ph.D., noted that Laci Le Beau Super Dieter's Tea “is probably the most widely sold brand of ‘dieter’s’ tea in the U.S.A.” She reported that another branch of the California health department already had concluded that this tea is “a potentially dangerous food.”

Dieter’s teas are “unsafe” when sold as foods or food supplements, Loscutoff said.

Her memo notes that FDA approved senna and other laxative ingredients, including castor oil and aloe, for use as food flavorings in the 1960s. Unlike the senna teas, there often is a hundred-fold to thousand-fold difference in the amounts of castor oil or aloe used for flavoring, vis-à-vis the amounts used for laxative purposes. With senna, in the “dieter’s” teas, however, they are almost the same.

Only 230 pounds of senna were used as flavoring in the U.S. in one recent year, the toxicologist writes. By contrast, “each lot of Laci Le Beau Super Dieter’s Tea begins with 700+ pounds of senna.”

This indicates, she suggests, that the teas contain medicinal, not flavoring amounts, of senna.

Based on these findings, the California Health Services decided to hold a meeting to discuss the matter with manufacturers and distributors of teas that contain high levels of sennosides.

Stay Tuned.

— D.R.Z.

second fold

Readers told us they enjoyed the school kids’ scientific definitions, plucked from the Internet (Scifraud, May 24), that we published in June. Here are a few more:

“LITER: A nest of young puppies.”

“MAGNET: Something you find crawling all over a dead cat.”

“MOMENTUM: What you give a person when they are going away.”

“PLANET: A body of Earth surrounded by sky.”

“RHUBARB: A kind of celery gone bloodshot.”

“VACUUM: A large, empty space where the pope lives.”

“BEFORE GIVING a blood transfusion, find out if the blood is affirmative or negative.”

“TO REMOVE DUST from the eye, pull the eye down over the nose.”

“FOR A NOSEBLEED: Put the nose much lower then the body until the heart stops.”

“FOR DOG BITE: Put the dog away for several days. If he has not recovered, then kill it.”

“FOR HEAD COLD: Use an agonizer to spray the nose until it drops in your throat.”

“TO KEEP THE MILK from turning sour: Keep it in the cow.”

PROBE

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