

Local

Severe anemia may now be treated

Past A&M research pays off

Two man-made amino acids studied nearly a generation ago by Texas A&M University scientists now show promise as a treatment for Cooley's anemia, a hereditary blood disorder that affects 5 percent of all Americans of trace family roots to the Mediterranean as well as about 2 million Greeks and Italians.

Cooley's anemia in its more severe form invariably leads to death before age 21 because the bodies of young victims are unable to transform iron into hemoglobin, a pigment that makes blood red and carries oxygen from the lungs to other tissues.

The two compounds, known in scientific shorthand as EHPC and EHPG, provide encouraging results because they act as effective

agents called iron chelators that remove iron from the body, said Texas A&M researcher Dr. Arthur E. Martell, who holds the rank of distinguished professor of chemistry.

Chemists here have begun more studies under a three-year contract from the National Institutes of Health to study ways to make improved iron chelators that may even be superior to HBED and EHPG.

Martell has been asked to present his findings at the American Chemical Society's international meeting in NNEW York on Aug. 23.

Although the most recent modifications of HBED and EHPG were done by Dr. Colin Pitt of the Triangle Research Park in North

Carolina, the first synthesis and discovery of the compound's effectiveness as iron chelators were carried out at Texas A&M during the 1950s and 1960s by Martell and other scientists conducting basic research.

Martell said recent developments surrounding the two synthetic amino acids are examples of the need for pure research that may not result in immediate applications.

"These compounds wouldn't have been looked at for Cooley's anemia if we hadn't realized from our early work they were very good for 'complexing' iron," he said.

Cooley's anemia, Martell explains, takes two forms. The severe form (thalassemia major) leaves rust-like deposits of iron which build up to impair the heart, liver, spleen and other vital tissues. The less severe form of

thalassemia makes the person a carrier although he or she appears perfectly normal otherwise.

If two carriers have offspring, they may produce normal children, other children with the disorder, or children that also become carriers, said the Texas A&M chemist.

Only a complex blood test can confirm the condition and the only effective treatments are blood transfusions and a drug called desferrioxamine (DFB) which helps the body eliminate excess iron.

Both new drugs are potentially far superior to DFB and are undergoing tests as replacements for desferrioxamine in treatment for Cooley's anemia, Martell said.

Researchers here have completed one three-year contract with NIH to study new chelating agents. That work was done under the leadership of post-doctoral researcher Dr. R.J. Motekaitis.

A&M professor says lie detectors aren't reliable

Many people can lie and not be detected by a polygraph test, and for that reason the tests shouldn't be used alone in job interviews, says a Texas A&M management professor.

"Giving lie detector tests for employment is on par with trying to measure intelligence based on body builds," said Dr. Doug Stone of the College of Business Administration. "Not all tall and thin people are intelligent."

This year more than a million Americans will take a lie detector test. While the tests are used at police stations and in court cases, the greatest number will be given in the workplace, or during job interviews.

Stone said none of the Fortune 500 corporations for which he has worked or consulted use such tests while interviewing prospective employees. More often smaller firms, particularly retail businesses, tend to use them. The tests are often used

to question employees in connection with inventories, cash flow or other issues involving a firm's fiscal or technological security.

The American Management Association estimates that as many as 20 percent of the firms that go out of business do so because of employee crime.

"The tests don't detect lies or liars," said Stone, "but they detect excitability."

Psychologists say the tests are unreliable because they confuse emotions such as fear and anger or health conditions with guilt.

"Each of us differs considerably as to whether the test will say we're being honest," Stone said. "Some innocent people are judged to be deceptive while some deceptive people will pride themselves in their ability to get through a lie detector test undetected."

Stone explained the polygraph test only responds to emotional reactions to ques-

tions asked, measuring breathing, sweating responses and blood pressure. People don't have to take the test, he said, but refusing to do so could prevent them from being hired or promoted. Objecting to the test is often interpreted as admitting guilt.

Stone advises people who feel they must take such tests for furthering their careers to be honest when they answer the questions. People who want to beat the test often try to raise responses on control questions. They do so by biting their tongue, breathing slightly faster, rubbing a toe against a nail in a shoe and the like.

Stone also advises people to refuse to answer questions that are personal and may be a basis for illegal discrimination, such as questions pertaining to one's religion, political beliefs, sex, marriage, physical and mental handicaps or national origin.

Architects return to '40s style homes

Returning to the architectural standards of the pre-1940s would be a step forward in energy efficiency, says a Texas A&M architecture expert.

In the days when cool air came from a change of the seasons rather than with a flip of a switch, architects knew how to design buildings that stayed relatively cool on their own, said R.D. Reed, professor of architecture and a member of the American Institute of Architects (AIA) national energy committee.

The committee is developing a \$1 million program to re-evaluate the nation's architects.

With the advent of air conditioning after World War II, the thrust of training in architecture shifted from buildings that were sensitive to the climate to buildings that were indifferent to climate, he said.

"The architect became more of a sculptor," Reed said. "From 1940 to 1975 architecture schools throughout the country were training their students to design buildings that were connected to a lot of machines that ran on a lot of exp energy."

Although cheap energy has been on the way out since the 1973 embargo, Reed said the majority of the nation's architects and schools of architecture still have returned to designs that minimize the need for mechanical climate control.

Porches, breezeways and white exterior paint were devices used to keep houses cool in the pre-war days that may experience a revival

when architects begin to look for more energy-efficient designs, he said.

A return to that kind of architectural design would mean significant energy savings without a loss of comfort.

"We could easily cut our energy costs in half," Reed said. "But this doesn't mean we're returning to the bad old days. These next few years can become the best of times instead of the worst. The idea is that you can design with nature as opposed to overcoming nature with a machine."

Reed believes political and economic pressures have not been strong enough to make energy conservation a top priority with today's architects.

"You would think because it is so expensive they would design more energy efficient buildings, but they don't," he said.

Reed said part of the reason is that energy costs can be passed on as rent and are tax-deductible as an operating cost.

Beginning next month a series of workshops will be offered to professional architects to prepare them to design more energy efficient buildings.

Texas A&M is the first university to offer the same material to its students, Reed said.

"We will be offering our students the same educational material that is being offered to the practicing professional," he said. "Our students will graduate with the ability to design energy efficient buildings."

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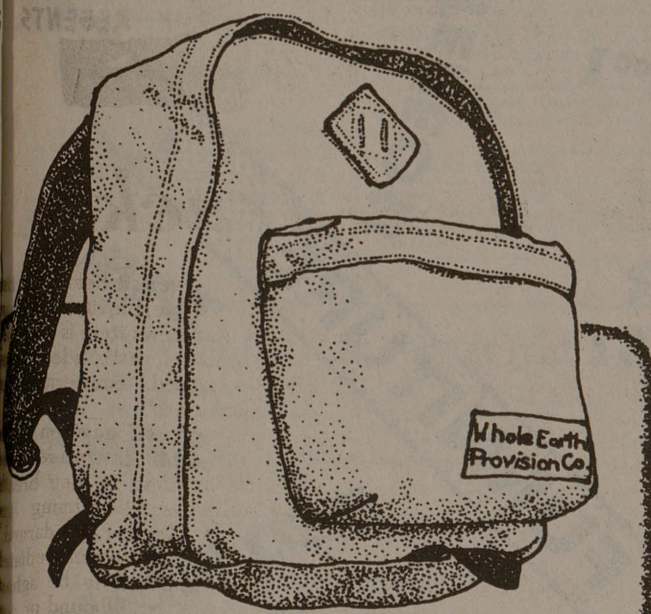
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