

Shuttle is site of testing

Astronauts will sort cells

United Press International
CAPE CANAVERAL, Fla. — Two astronauts will use a machine aboard the shuttle Challenger this week to separate living cells in space for the first time in experiments that someday could lead to improved treatment for diabetes and other ailments.

Guion Bluford and Dale Gardner, set for launch with three others Aug. 30, will try to separate specific hormone-producing cells from a human kidney, pituitary glands and a dog pancreas.

The idea is to demonstrate that a process known as electrophoresis can take advantage of the weightlessness of orbital flight to select out the desired cells with greater purity and in larger amounts than can be accomplished on Earth.

Doctors would like to use implants of such cells in humans to produce hormones to correct a variety of ailments. One promising technique

would be to implant insulin-producing islet cells from a pancreas into diabetics.

Dr. David W. Scharp of Washington University in St. Louis said islet cells implanted in four dogs appeared to cure them of diabetes. But he said there are many problems involved with such a technique in humans and he cautioned against the expectation that the shuttle experiment will lead to a diabetes cure in the near future.

"Obviously, that's our final goal," he said.

The cell separation machine is the same unit that flew on three previous shuttle flights and separated proteins with more than four times the purity of that achieved on Earth and in quantities greater than 700 times that obtained on the ground.

The electrophoresis machine was developed by the McDonnell Douglas Corp., and the company plans to use it to start producing large amounts of a protein this winter for use by the Ortho Pharmaceutical Co. in human testing. The companies decline to identify the protein for competitive reasons.

David Richman, deputy manager of the program for McDonnell Douglas, said the cell separation experiments will be laying the groundwork for practical applications that are farther in the future.

"The possibility of implanting cells is now being investigated at universities throughout the country," he said. "We're happy to be starting with some research in support of this kind of work."

Dr. Wesley Hymer of Pennsylvania State University is in charge of the cells from the pituitary gland, one of the body's master hormone-producing glands.

Hymer is particularly interested in growth hormone. Not only is it important for the development of children, but it promotes muscle growth, breaks down fats and enhances carbohydrate metabolism and promotes long bone growth in adults.

The pituitary also produces five other major hormones, each coming from a different type pituitary cell.

The object of the shuttle experiment is to sort all of the various hormone-producing cells so they are collected in different sample containers. Hymer said weightlessness may or may not improve the cell separation compared to what can be achieved on Earth. Only partial separation was obtained using the machine on the ground.

Once they get the cells back, Hymer and his associates will grow the cells in the laboratory to make sure space processing didn't affect their ability to make hormones.

Dr. Dennis Morrison of the Johnson Space Center is working with the kidney cells and he also will attempt to have the machine sort out cells that produce different hormones.

Sinking teacher morale marks start of classes

United Press International
AUSTIN — Three million Texas children began classes this week amid tight local school budgets and sinking teacher morale tempered by a "reserved optimism" that a long-awaited pay raise will materialize before the year ends.

A state financial crunch and the Legislature's unwillingness to raise taxes resulted in status quo salaries this year for Texas school teachers. They receive an average of \$17,582 a year.

The economic crisis also meant local school districts received few new dollars from the state, forcing many districts to hold the line on operating expenses and to cut back on programs.

"There will be some districts that are hurting, that are having significant financial problems and will be faced with the situations of even reducing services in some areas," said David Thompson of the Texas Association of School Boards.

"I don't think we're going to have that many districts that are verging on bankruptcy, but I do think we'll see a lot more cautious approach to finance."

Thompson said those districts that were raising taxes were keeping the boosts within 8 percent since increases above that amount are subject to an election.

"That 8 percent is a boundary they will not cross, and that kind of caution is well placed," he said.

Because of the tight budgets, school districts also were providing only modest supplements to base teacher salaries financed by the state. Few districts were able to offer more than a 2 or 3 percent local raise, according to the Texas Education Agency.

Teachers were optimistic at the beginning of 1983 when Gov. Mark White promised them a 24 percent pay raise, but

the optimism waned when the Legislature — particularly the House leadership — refused to approve a tax increase to finance the raises.

The disappointment was tempered by optimism among some teachers who hoped a new gubernatorial committee would complete its evaluation of Texas' educational system in time for the Legislature to meet in special session this school year to approve raises.

"I think there's no question teachers feel bad about pay raises," said Brad Ritter, a spokesman for the state's largest teacher group, the Texas State Teachers Association.

"But in light of the work the Select Committee on Public Education is doing, there's also a reserved optimism that something meaningful will happen to us before Christmas. I don't think it's all gloom and doom."

Intern survives in D.C.

by Stephanie Smith

United Press International
WASHINGTON — Each summer at the nation's capital, hundreds of eager, ambitious college students make their pilgrimages to Capitol Hill to pay their dues to a future occupation.

Joining them the last two summers, I quickly realized I was not only paying my dues, but also paying for housing, transportation and food. I work for free.

I came from Denton, Texas, where I am a journalism student at North Texas State University. I am an intern for a United Press International investigative reporter. UPI pays me with invaluable experience, but landlords and merchants do not consider it a fair exchange for their goods.

For this reason, I sometimes catch myself thinking longingly of soup kitchens. Some interns go to induction centers for Sun Wong Moon's Unification Church for free meals. The accompanying "Moonie" rhetoric is not intolerable in the face of starvation.

I have not resorted to such

measures yet, but sometimes "pilfer" salines from the Senate cafeteria. Being here in the midst of Debatagate, I have learned "pilfering" or "purling" is OK at the capital. In Texas, we call it stealing.

On the job, I read internal government audits about waste of taxpayer dollars, such as the Pentagon's payment of \$100 for a nickel aircraft part. I have learned other things about Washington, too.

Walking to work in the morning, the first thing I see on the east steps below the Capitol dome is "Tacky Jesus," a white-robed, long-haired, plastic mannequin with white styrofoam doves perched on its shoulders.

In its arms is a stuffed lamb. Two more sheep with detachable heads are at each side. For more effect, religious music is piped out through a portable stereo behind the scene.

Moving right along, I see a choir, which is dressed like refugees from the senior prom in polyester gowns and tuxedos, has set up speakers and microphones on the massive steps leading to the House chambers.

They do not sing well, but they sing loud. No one is stop-

ping to listen to them, but they do not seem to mind.

They are elated to be here. They are singing at the steps of the Capitol. The folks back home will be proud.

On the Capitol grounds, a network newsman is on his 21st take. His makeup is streaking and melting from the broiling sun. He is posed on a stool like a soap box preacher so a cameraman can get a shot of the Capitol dome over his left shoulder.

Screens and lamps are artistically set up so the harsh, unflattering light of the sun will not make him look like a drag queen in full makeup, but someone the "Neilson family" can trust with the news.

Beyond the treacherous revolving doors, where homicidal young tourists play merry-go-round, a security officer waits to frisk my bag lunch for hidden weapons.

While I wait for an elevator, a group of congressmen rushing to the House floor for a vote mows me down. None of them was on the floor for the debate, but all will try to make it for the vote.

One day, a fellow intern sat at the edge of her House gallery

seat eagerly anticipating a heated debate about the MX missile. She was excited, she said, to be able to witness Congress in action.

There were only three congressmen on the floor. There were more congressmen in the chambers the day they discussed the Republican-Democrat baseball game.

The congressmen were so excited about the game one, Rep. Silvio Conte, D-Mass., even sang "Take Me Out To The Ballgame" before Speaker Tip O'Neill interrupted to remind him of the House rules.

But there comes a time when the often bewildering and savings-depleting experience of interning at Capitol Hill pays.

If I chain myself to the typewriter for the next few years, I am told, I might get promoted to a job in this crazy place. Maybe I'll even have my own intern.

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