

Health update: Alzheimer's research continues



Submitted photo

Larry Sparks, lead scientist at the Sun Health Research Institute in Sun City, is the principal investigator of the pioneering studies. His AD Cholesterol-Lowering Treatment Trial showed that Lipitor can slow down the progression of Alzheimer's and improve depression in patients with the disease.

Sun Health seeks participants

By Cecilia Chan

Independent Newspapers

Marshall Pond can still do the rumba, waltz and tango.

The 86-year-old can even belt out a few bars from the "Battle Hymn of the Republic," which is remarkable considering he was diagnosed with the brain-deteriorating Alzheimer's disease some 15 years ago.

"I think without the added help we've had from Lipitor and the Sun Health Research Institute, he would be much further along (in his disease)," said wife June Pond in the living room of her Sun City home. "I think they have done wonders for him. I do think it has helped slow it down."

Mr. Pond was the first of 63 participants who signed up four years ago for a break-through research study that showed the cholesterol-lowering medication Lipitor can slow the progression and reduce the ravages of Alzheimer's disease. The AD Cholesterol-lowering Treatment Trial results were released in April.

A separate trial called LEADe is under way to validate the



Independent Newspapers/Cecilia Chan

Rose and Marshall Pond share a dance at the Sun Health Residence for Alzheimer's Care. Mr. Pond still goes out dancing once a week. The couple plans to take their annual pre-Christmas trip next month to visit family in Kansas.

findings of the first research.

As many as 4.5 million Americans suffer from Alzheimer's, according to the Alzheimer's Disease Education and Referral Center. A form of dementia, Alzheimer's disease usually begins after 60, with the risk increasing with age. The

cause is unknown and there is no cure.

In the clinical trial, which Mr. Pond was involved, two-thirds of the 63 patients on active medication derived some clinical benefit and half of the

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patients stabilized or actually improved.

The Estee Lauder Trust awarded a \$450,000 grant for the study. Pfizer Pharmaceutical, Inc. supplied the Lipitor and placebo for the research.

Patients showed significant improvement in memory and cognition six months after treatment with Lipitor and in one year's time symptoms of depression improved, said Larry Sparks, Ph.D, senior scientist at the Sun Health Research Institute and principal investigator of the study.

"It extended the quality of the treated individual's life by a year or more," said Dr. Sparks, contacted last week in New Orleans where he presented his findings to the American Heart Association.

"Someone who came into the trial with mild to moderate Alzheimer's would have been in a fetal position, bedridden or dead (by now)," he said. "Mr. Pond is still dancing. We extended the

The LEAD clinical trial needs participants

The trial will investigate the connection between cardiovascular disease and Alzheimer's disease by using a cholesterol-lowering drug.

The trial will use an FDA-approved statin in a 20-month, multi-center, double-blind, randomized and placebo-controlled study.

To be eligible participants must meet the following criteria:

- Be between 50 and 90 years old.
- Have a diagnosis of mild to moderate Alzheimer's disease and have been prescribed a stable dose of 10 mg per day of Aricept.
- Are not currently taking a cholesterol-lowering medication.
- Have a stable medical condition.
- Have a study partner or caregiver available.

For more information about this clinical trial, call Sun HealthLine at 876-5432.

quality of this man's life by two years easily. We can only hope the larger trial will demonstrate the exact same benefits we have seen."

Ms. Pond says her husband has his good days and bad.

"Most people don't see a difference in him," she said. "He's danced all these years and can still dance. As far as we are concerned, it definitely has slowed down the progression of the disease."

A choir singer for 60 years, Mr. Pond at times will hum a tune or break out in a song like he did one day at the Sun Health Residence

for Alzheimer's Care.

Although he remembered the death of a brother who died young, he forgot he viewed a morning news show featuring him and the clinical trial that very morning.

He knows his favorite vacation spot is Hawaii and his favorite dance is the waltz.

Asked about his recent sea trip, after some prompting from his wife, he replied, "It was a delightful cruise."

The LEAD trial will be conducted at 40 different sites, including at Sun Health, in 14 countries with 600 participants, Dr. Sparks

said. Sun Health's study will use 16 participants and so far five participants signed on for the trial. He said it will take three years to complete this second study. Call 876-5432.

"The drug has some benefits in the treatment of individuals and the next step is proving it with the LEAD trial," Dr. Sparks said. "After that, we would demonstrate it may have preventative (qualities). If it is taken before someone is demented does it stop it or delay them from becoming demented?"

If the studies bear out, it might be 10 to 15 years down the road before the drug is prescribed as a preventative measure against Alzheimer's, he said.

In the meantime, he recommends against people with Alzheimer's from taking Lipitor until the Federal Drug Administration approves it.

Although the widely used cholesterol drug seems to slow down the debilitating disease, Dr. Sparks said he does not believe cholesterol is the cause of Alzheimer's, but "it's clearly a promoting factor." He noted Mr. Pond's cholesterol levels at the onset of the trial was "fairly high."

Dr. Sparks said when Mr. Pond entered the study he was in the mild to moderate stage of Alzheimer's and now he is considered "more moderate."

Mr. Pond will continue taking Lipitor and also takes Namenda, a medication specifically used to treat the disease, Ms. Pond said.

The couple just returned from a cruise on the East Coast and plan future trips.

He was placed in an Alzheimer's assisted living facility in May because her health problems prevented her from giving him the care he needed, Ms. Pond said. But every Saturday, she picks him up for church services and every Sunday, they still go dancing.

"It's terrible what has happened to a great mind," said Ms. Pond as she talked about Mr. Pond's double master's degrees in civil engineering and electrical engineering from California Institute of Technology and his career as a business owner.

"But we couldn't be in a better place than we are now in Sun City," she said.

Sun Health study lifts Alzheimer's research

Cholesterol-lowering meds used to slow disease's progression

MITCHELL VANTREASE
DAILY NEWS-SUN

A cholesterol-lowering medication could help slow down the progression and deterioration of Alzheimer's disease, according to a study by Dr. D. Larry Sparks of the Sun Health Research Institute.

"It provides a glimmer of hope," he said. "This would help the caregiver and patient a lot."

Sparks unveiled his latest findings this week at the eighth International Symposium on Advances in Alzheimer's Therapy in Montreal, Canada, attended by more than 300 scientists from 15 countries.

"We're going in the right direction," he said.

The drug, Lipitor, was

used on 63 participants for the one-year treatment trial. More than half the patients stabilized or improved.

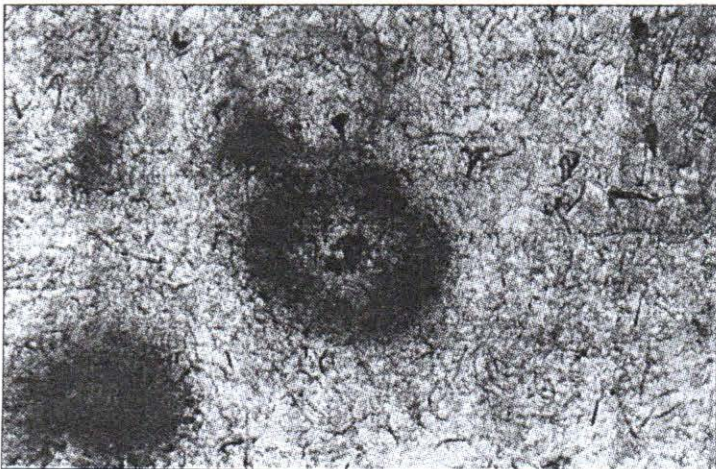
In the study, people weren't excluded from medications taken for pre-existing conditions. The results indicated Lipitor's effectiveness in real life scenarios.

"This is truly exciting news," he said. "No other prior clinical trials have shown long-term improvements with Alzheimer's



Sparks

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SUBMITTED PHOTO

Senile plaque, larger one with a few smaller plaques around it, is characteristic of Alzheimer's disease. The main constituent of the plaque is a protein whose production is enhanced by excess cholesterol. Dr. D. Larry Sparks has shown that lowering cholesterol is of clinical benefit to people with Alzheimer's disease.

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disease."

It's the first clinical trial of its kind to test the medicine in both memory and behavioral measures.

The study received support from the Institute for the Study on Aging, which awarded Sparks a \$450,000 grant. Additional funding came from Pfizer Pharmaceutical Co., which supplied the Lipitor and placebo.

The IOSA, a New York-based private foundation established by Estee Lauder Trust whose mission is drug discovery for Alzheimer's, gave its support to Sparks realizing the full potential.

"They, together with Pfizer, supported the study because

they believed in research rationale and really took a chance that I was right on track," said Sparks. "Today, everyone is a winner with this news because it brings us one step closer to another effective treatment for this mind-robbing disease," Sparks said.

Although the study shows promise, he said people should consult with their physicians regarding the suitability of using the cholesterol-lowering medication.

"I don't suggest Alzheimer's patients use Lipitor until their doctors say it's OK," he said.

Sparks has been involved with several studies on the disease at the institute. Along with this trial, Sparks is

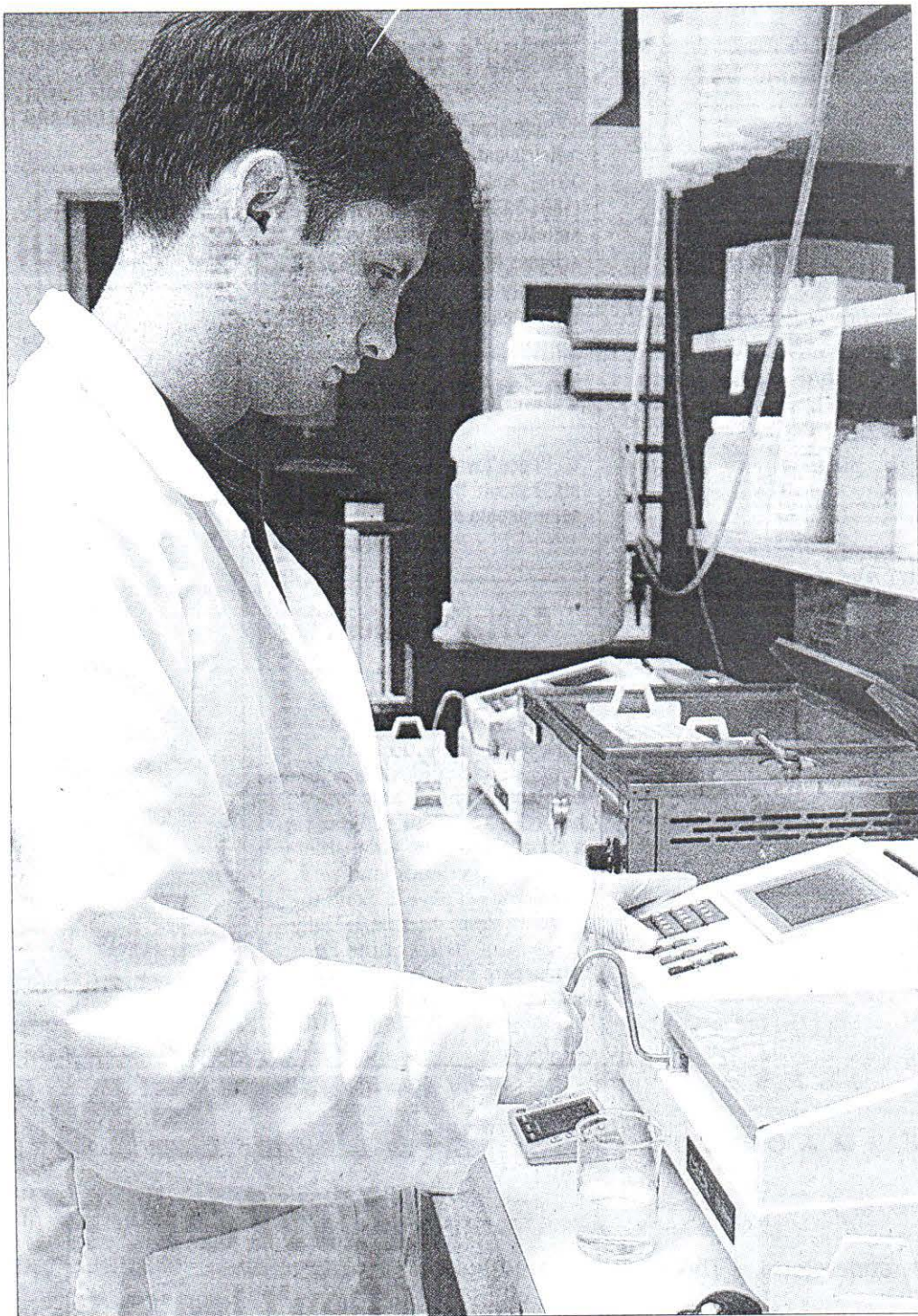
involved with the ongoing LEADe study sponsored by Pfizer, which compares the safety of Lipitor in combination with another medication, Aricept, in patients with mild to moderate Alzheimer's disease.

In November, he also unveiled that distilled water could help reduce the illness.

Pioneering studies by Sparks linking high blood pressure, coronary artery disease and elevated cholesterol levels to Alzheimer's, have been highlighted by several magazines and television shows, including Newsweek, Reuters, ABC World News Tonight and CNN.

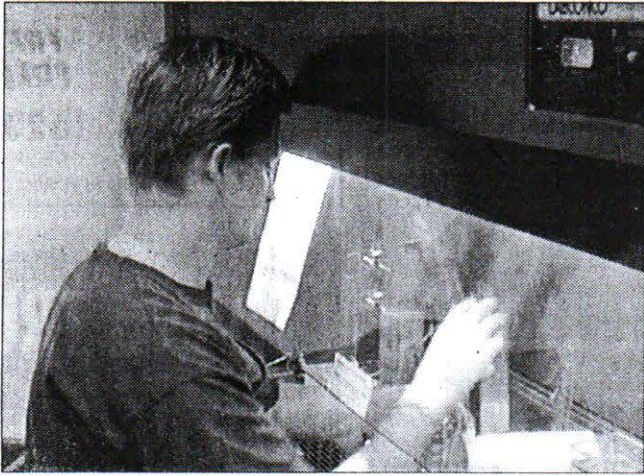
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JOY LAMBERT-SLAGOWSKI/DAILY NEWS-SUN

Jeff Lochhead, a research technician at Sun Health Institute in Sun City, runs enzymes through a spectrophotometer as part of an Alzheimer's study.



Spencer Guest, a research technician at Sun Health Research Institute, studies tissue cultures at the facility's "brain bank." The institute's brain repository collects donor tissue, which is shared by nearly 200 scientists around the world.

Dr. Joseph Rogers, president of Sun Health Research Institute, explains ongoing research into Alzheimer's and other brain related diseases to visitors at the 50,000-square foot facility in Sun City. The institute hosts monthly tours of its laboratories and adjoining library.

Photos by TOM BARRY/Independent Newspapers

Banking on Your Brain

Brain bank vital to institute's ongoing research

By TOM BARRY
Independent Newspapers

"Rats, cats and dogs don't suffer from Alzheimer's — only people do," says Dr. Joseph Rogers.

The same is true for many age-related disorders, he explains to the dozen or more assembled guests at the Sun Health Research Institute. "For this reason, research is critically dependent on obtaining brain tissue samples from willing donors."

Dr. Rogers is a highly-regarded research scientist in the field of geriatric neurological disorders, such as Alzheimer's and Parkinson's disease. He also serves as president of the prestigious non-profit institute located on the campus of Boswell Memorial Hospital in Sun City.

Once a month Dr. Rogers leads his guests on a tour of the vast 50,000-square-foot facility, which he was instrumental in building. Wide eyed, the guests eagerly follow him through the serpentine corridors and the multitude of laboratories on each floor, where

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We're so close, maybe three or four years away from finding an effective cure for Alzheimer's.

Dr. Joseph Rogers
Research Scientist
Sun Health Research Institute

scores of scientists study every facet of Alzheimer's and Parkinson's disease in the hopes of some day finding a cure.

Situated on the second floor is a little known feature of the complex — the institute's brain bank, where human brain tissue is collected, stored and shared with nearly 200 scientists the world over for vital research.

"We're so close, maybe three or four years away from finding an effective cure for Alzheimer's," said Dr. Rogers,

whose optimism is fueled by the recent development of a vaccine that has shown great promise in laboratory mice.

But researchers won't truly know the vaccine's effectiveness without human trials, which must await federal approval. Meanwhile, at Sun Health Research Institute, they must rely exclusively on human brain tissue donors for their research.

"Unfortunately, the demand far outweighs the availability of donor tissue," said Dr. Rogers.

Since its inception in 1987, the institute has enrolled approximately 1,000 voluntary donors from residents of surrounding communities in the west Valley. To date, more than 500 brain autopsies have been performed.

Those enrolled in the program — both normal and sufferers of neurological disorders — are visited annually by a neuropsychologist and neurologist to see how they are doing and to keep them abreast of new developments. There is no charge to the family or donor, except

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for transportation to Boswell Memorial Hospital upon death so the autopsy can be performed.

Dr. Rogers said removal of the brain takes about a half-hour and is non-disfiguring.

After death, an evaluation of the brain is conducted and the results are shared with the family. "For Alzheimer's, in fact, this is the only certain way to know that a family member actually suffered the disease and not something else," said Dr. Rogers.

Normal brain tissue is as important as abnormal tissue if not more so, he noted. Nationally, only about 3 percent of donor tissue comes from normal individuals.

"In the Sun Cities, however, we've made a special effort to recruit such people, and the community has responded with great generosity," Dr. Rogers said. In fact, about 30-40 percent of those enrolled in the tissue donation program are so-called non-demented

elderly volunteers, he added.

Unlike other organs, he emphasized that brain tissue donation must follow a unique procedure and autopsies must be performed within two to three hours of death. "You cannot simply indicate on a driver's license that you're an organ donor. You have to enroll in the program should you decide to donate your brain," said Dr. Rogers.

At the conclusion of the 60-minute tour he hands each guest an information packet, including consent forms, and tells them in all seriousness, "Although monetary donations are always welcome, we want something more personal than a check: Your brain."

It is hoped that at least a few will oblige him in his quest for a cure.

Free public tours of the institute are conducted on the first Tuesday of each month. Additional information about the program may be obtained by calling (602) 876-5328.

Institute makes difference

Alzheimer's research booms

By MAMIE LIMERICK
Staff writer

Since its inception in 1986, the Sun Health Research Institute in Sun City has been a pioneer in research on aging disorders.

Joseph Rogers, Ph.D., the founding director and senior research scientist at the institute, recently was presented a Zenith award, which provides up to \$300,000 for funding research.

While Rogers expressed elation over the grant, he credited members of the Sun City communities for the ongoing success of the institute.

In his introduction at a monthly tour of the institute, he paid tribute to Sun Citians who "have donated everything to the institute from the bricks and mortar to money for research."

The institute is known worldwide for its contributions to the search for cures to debilitating age-related diseases such as Alzheimer's, Parkinson's and arthritis.

"We send brain tissue all over the world for study," said Rogers. "If we find a cure for Alzheimer's, it most likely will come from a Sun Citian, if not from Sun City."



Dr. Joseph Rogers, director of the Sun Health Research Institute, shows brain tissue to Jane Matlock of Sun City, right, and another visitor. Dr. Rogers gives a monthly tour of the institute.

Mollie J. Hoppes/Daily News-Sun

Rogers was one of the first scientists to show that inflammatory mechanisms similar to those that damage joint tissue in arthritis also damage the brain in Alzheimer's disease.

His research led to the conclusion that anti-inflammatory drugs similar to ibuprofen can delay the onset and slow the progression of Alzheimer's disease. Researchers are studying more sophisticated drugs which attack the inflammation at its specific site in the body, thus sparing the rest of the body from side effects, such as stomach upset.

Rogers is joined in his studies by Dr. Alex Roher, head and senior scientist of the Robert S. Haldeman Laboratory for Alzheimer's Research. Roher is researching the proteins which cause the brain to deteriorate.

At the Robert J. Hoover Center for Arthritis Research, Dianne Lorton, Ph.D., researches the role of nervous and immune systems in causing arthritis. She is examining the possibility of altering nervous system pathways with drugs and surgery.

Rogers pointed out the importance of what he called the "brain bank" of the institute, otherwise known as the Harold Civin Histopathology Center.

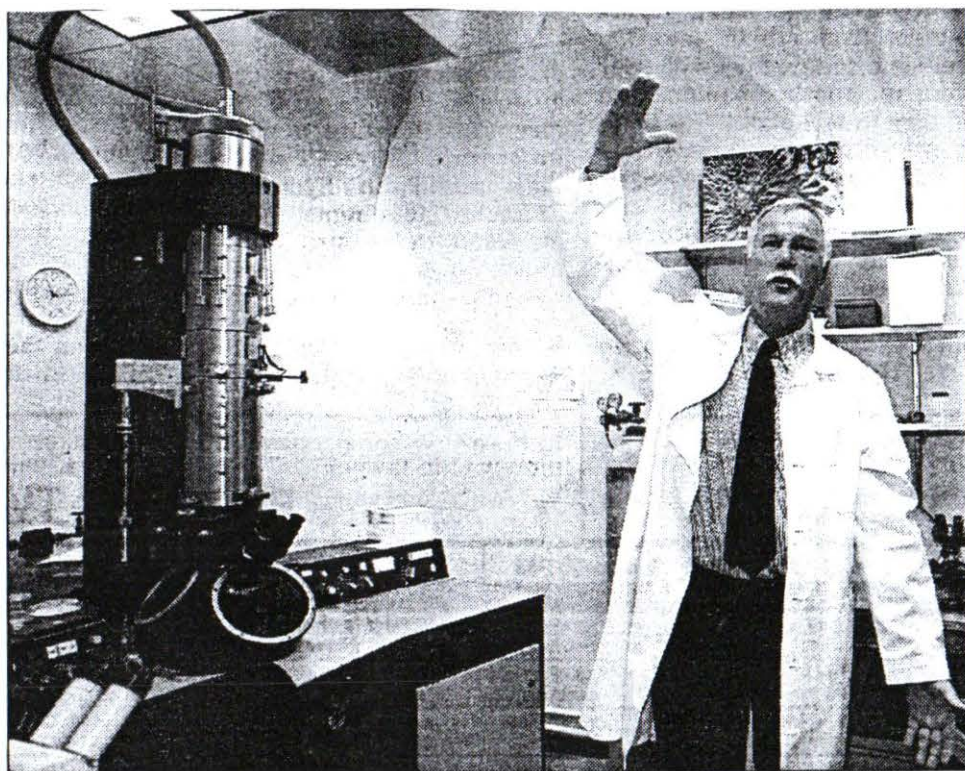
"If we find a cure for Alzheimer's, it will most likely come from a Sun Citian, if not in Sun City."

*-Dr. Joseph Rogers, Ph.D.,
founding director and senior
research scientist at the Sun Health
Research Institute in Sun City*

In this area of the institute, donated brains are autopsied, preserved and prepared for research. Since Alzheimer's does not occur in animals, the institute relies on human brains for its research.

Most of all, the brain bank needs normal brain tissue, said Rogers. "We need to compare normal brains to Alzheimer's brains," he said.

Rogers and his colleagues developed an innovative and crucial breakthrough when they discovered a method for keeping cells alive in a test tube. This new technology enables scientists to perform disease-specific research.



Mollie J. Hoppes/Daily News-Sun

Dr. Joseph Rogers tells visitors how the electron microscope magnifies the brain tissues hundreds of thousands of times.

At this time, 890 donors are listed in the brain-tissue donation program at the institute, Rogers said. Out of this total, 400 donors have been autopsied.

For information on the weekly guided tours of the Sun Health Research Institute, scheduled on the first Tuesday of each month, call 876-5387.

Sun City study hints Alzheimer's advance

Drug shows promise in slowing disease

By David Cannella
The Arizona Republic

In a small but promising study, a Sun City researcher has found that a commonly prescribed anti-inflammatory drug slows and may even halt the progression of Alzheimer's disease.

Cautioning that further study is needed, Dr. Joseph Rogers of the Sun Health Research Institute said the drug indomethacin appears to inhibit the destruction of brain cells, which in Alzheimer's patients are attacked by the body's own immune system.

"I don't think it's so much a breakthrough as it is a progression of good research that's been going on over the last several years," Rogers said Wednesday.

"We're on the right track, and this latest trial is very, very encouraging."

Willard Lende also is encouraged. His wife, Birdien, participated in the trial and showed marked improvement while on the drug.

"It seems like when she's off the medication, she deteriorated to a new plateau," said Lende, of Sun City. "While on it, she would still forget her keys once in a while, things like that, but she was holding on."

"That's what we're hoping for, that she can continue to hold on to where she is."

Birdien Lende, in her 80s, was diagnosed with Alzheimer's disease in 1988.

"It's a terrible disease," said Willard Lende, who also is in his 80s. "It's like she's in the middle of the quicksand of forgetfulness, and me and her doctors and her friends are all standing on the side unable to do anything."

Currently, there is no drug approved for the specific treatment of Alzheimer's disease. Various medications are used to combat specific effects from Alzheimer's, such as depression.

Rogers, working with Dr. Patrick McGeer of

the University of British Columbia Medical School in Vancouver, published the results of their study this week in the medical journal *Neurology*.

The study is giving hope to patients as well as to those in the scientific community.

Dr. Jo Ann McConnell, senior vice president for medical and scientific affairs at the national Alzheimer's Association in Chicago, said the study is "another important piece in the Alzheimer's jigsaw puzzle."

Alzheimer's disease is characterized by a progressive loss of nerve cells in certain areas of the brain. It strikes people over age 50, and is the leading cause of dementia among the elderly. In its early stages, people forget simple things, such as where they placed their keys. But late stages incapacitate victims, leaving them unable to feed or care for themselves.

More than 4 million Americans suffer from some form of Alzheimer's. More than 100,000 will die from its effects this year.

In the study, 44 people from the Sun City retirement community with mild to moderate symptoms of Alzheimer's were divided into two groups. Twenty-four were given the drug, and 20 were given a placebo, or fake pill. Researchers gave the participants a battery of standard memory tests before, during and after the six-month trial.

The results showed that those who got the placebo showed a nearly 10 percent decline in memory function, while those who got the drug showed a slight improvement, about 2 percent, Rogers said.

Indomethacin is a non-steroid anti-inflammatory drug widely prescribed for arthritis patients. It is equivalent to about 15 aspirin tablets.

Local study encourages Alzheimer's caregivers

By BRITT KENNERLY
Daily News-Sun staff

SUN CITY — Those who love or live with an Alzheimer's patient live in anticipation of a cure for the progressive, degenerative disease of the brain.

Local Alzheimer's caregivers also are awaiting more research, and comment, on the use of indomethacin, a drug which controls inflammation in arthritic joints and was used earlier this year in a study of 44 Alzheimer's patients at Sun Health Research Institute in Sun City.

Results of the study are being re-

leased to the public today.

A big part of the rest of their life, caregivers say, is dealing with the frustration of caring for someone with Alzheimer's, the most common form of dementia.

The fact that there's no cure is possibly most frustrating of all.

Marilyn Porter, facilitator of Sun Health's Alzheimer's support group, is eager to see increased attention paid to Alzheimer's.

Porter's mother died of the disease five years ago, at age 83, and the Sun Health employee donated her mother's brain to Sun Health Re-

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U.S. should boost Alzheimer's research, group says

—From A1
search Institute.

"This research means a great deal to anybody who has taken care of, or cares for, an Alzheimer's patient," she said. "There's no cure. There's no preventative measures out there at all. What Dr. Rogers is doing is really important, especially if this new study comes up with something that may begin to slow the progression of the disease."

Another Northwest Valley resident concerned with research at Sun Health Research Institute is former Peoria mayor Ron Travers,

whose wife, Barbara, was diagnosed with Alzheimer's three years ago.

"I feel that there's been very little progress made over the years," said Travers, a member of Porter's Sun City support group. "My feeling is that we as citizens, and our government, have to do more in terms of contributions for research. We've sent people to the moon several times, but when it comes to Alzheimer's research, we're back in the old poorhouse."

A common feeling among members of his support group, he said, is that the U.S. gov-

ernment should spend at least as much money on Alzheimer's research as it does on AIDS research.

In 1992, the federal government spent approximately \$280 million on Alzheimer's research, or \$1 for every \$320 the disease costs the public, says the Alzheimer's Association. The same report says that federal funds spent on heart disease, cancer and AIDS is four to seven times more.

"Alzheimer's has been around a long time now, and there hasn't been that much of an effort until now to find a

remedy," Travers said.

Travers, 59, said that joining the support group has been very helpful, making it easier for him to cope with the debilitating effects of his wife's slowly progressing illness.

He's also doing things he didn't know he'd be doing 38 years into his marriage, such as learning to tint his wife's hair.

"For the last two years, I've been doing the cooking," he said. "One good plus, though, is that for the most part, she can still take care of herself."

Just as devastating as the medical effects, he said, is the financial drain of caring for an Alzheimer's patient.

The Alzheimer's Association reports that for patients remaining at home, the cost of care averages about \$18,000 annually. Families cover most of those expenses.

"You almost have to be extremely rich or a pauper," Travers said. "If you're in between, you often don't qualify for Medicare. The health insurance industry needs to address that."

Alzheimer's study boosts hope

SC researchers hail discovery

By IAN MITCHELL
Daily News-Sun staff

SUN CITY — A commonly prescribed anti-arthritis drug may slow or stop the mental deterioration of Alzheimer's disease, according to a report released today by scientists at Sun Health Research Institute.

Although researchers caution that additional studies are needed, the results of the 44-patient trial may offer hope to the 4 million Americans who suffer from the progressive brain disorder.

In the six-month study, a group of Alzheimer's patients who received indomethacin, a drug which controls inflammation in arthritic joints, per-

The dementia, or mental deterioration, caused by Alzheimer's disease is frequently confused with symptoms of other diseases or signs of aging.

There is no standard test for the disease; doctors diagnose the disease through its symptoms, a study of a patient's medical history and a battery of tests to eliminate other causes of dementia.

Some common symptoms in Alzheimer's patients are:

Sources: Alzheimer's Association, Department of Veterans' Affairs, Health Response Ability Systems.

■ Decreased attention span, sometimes as little as five seconds.

■ Memory loss, confusion, disorientation and difficulty understanding ideas.

■ Difficulty finding words and finishing thoughts.

■ Decreased sensitivity to heat or cold.

■ Wandering and becoming "lost" even within one's own neighborhood.

■ Personality changes such as frustration, depression, and anxiety.

formed better on a battery of memory and mental skills tests than patients with the disease who were given placebos.

A report on the study, conducted

by Sun Health researchers and scientists at the University of British Columbia Medical School, was published in the August issue of Neu-

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Drug used in test holds FDA approval

—From A1

rology, the official publication of the American Academy of Neurology. The journal was mailed to subscribers Friday.

Joseph Rogers, director of the research institute, said his team's work built upon more than a decade of research which indicates that Alzheimer's disease involves the body's own immune system destroying brain cells.

Scientists conducting autopsies have found abnormal clumps of beta-amyloid, a protein, in the brains of Alzheimer's patients. An earlier study conducted by Sun Health researchers and scientists at the Scripps Clinic and Research Foundation in La Jolla, Calif., found that beta-amyloid could trigger an attack by white blood cells, the soldiers of the immune system.

Rogers said Alzheimer's is similar to rheumatoid arthritis, another disease in which the immune system attacks the body's own cells.

The similarity between the two conditions led Rogers' scientists to research whether drugs used to fight inflammation — proof of the immune system at work — in arthritis patients might also help Alzheimer's patients.

The proposed treatment is a new approach to combating the disease, Rogers said.

"Alzheimer's destroys brain tissue first and foremost," he said. "Other approaches have been largely directed at patching what's left rather than stopping the damage."

About 60 potential study participants were screened by

Scientists at Sun Health Research Institute are looking for about 60 volunteers with Alzheimer's disease to participate in a second trial of indomethacin and a second

anti-inflammatory drug.

Alzheimer's patients interested in participating should discuss the study with a local neurologist.

neurologists and 44 with clear-cut cases of Alzheimer's disease were ultimately selected for last year's study, Rogers said.

The 44 patients were divided into two groups: About half received indomethacin and half a look-alike sugar pill which had no medication. Neither study participants nor researchers knew who was in what group until the study was concluded.

Rogers said 21 percent of the patients taking indomethacin had to drop out of the study because of severe stomach problems, a side effect of the medication.

About 20 percent of the patients taking the placebo pill also dropped out of the study because their condition deteriorated to the point they could no longer cooperate with researchers, Rogers said.

At the end of the six-month trial, the test scores of the 14 Alzheimer's patients remaining in the control group — those who received sugar pills containing no medication — were 10 percent lower than at the beginning of the study.

In contrast, the scores of the 14 Alzheimer's patients receiving indomethacin improved an average of 2 percent on the memory and mental skills tests.

"Those studies have to be expanded and replicated in many centers simply because with all clinical applications

it's necessary to reproduce and triple-check results to be absolutely certain," said Dr. Patrick McGeer, director of the Kinsman Laboratory at the University of British Columbia. McGeer participated in the pre-clinical trial phase of the study.

Two indomethacin patients in the study did not do as well as the rest, although their test scores were higher than the placebo group's average, and two patients who were receiving no medication did not show marked deterioration, Rogers said, adding that such variances were to be expected in a small trial.

"In order to be convincing, you need to do a study with a couple hundred people, not just 40 people," he said.

The results of the Sun Health trial mean that anti-inflammatory drugs may be the new frontier of Alzheimer's research.

But although the immune-system explanation for Alzheimer's does not offer a complete explanation of the malady and is one of several theories about how Alzheimer's disease works, Rogers said it is gaining ground in the medical community.

"It's very gratifying, actually. We have gone from sort of being the Rodney Dangerfield of Alzheimer's research (to now) ... I think

we've finally gotten everybody's attention," he said.

A larger clinical trial of indomethacin and another anti-inflammatory drug is already under way, Rogers added; About 60 volunteers with Alzheimer's disease have stepped forward and 60 more are needed.

Rogers said Cognex, also called THA or tacrine, is the only drug approved by the Food and Drug Administration for Alzheimer's patients, but its effectiveness has not been proven.

Since indomethacin has already received FDA approval as a treatment for arthritis, doctors may prescribe the medication for Alzheimer's patients without any additional regulatory action.

"That decision is in the clinician's hands, after discussing its use with the patient or caregiver," said Dr. Louis Kirby, a neurologist who performed patient screenings for the study. "It's their decision whether it's worth the risk for the potential benefits."

But McGeer said indomethacin needs more testing before seeking FDA approval to label the drug as a treatment for Alzheimer's.

"I certainly wouldn't recommend that physicians start putting their patients on this, just on speculation," he said.

Although prescribing a drug

for an unlabeled use is legal, it is not common practice, he added. "Therefore, a physician would be taking a risk and if something went wrong it would be the physician's fault."

Rogers said the research institute will continue testing the drug and added that researchers at other medical centers have expressed interest in joining the trials.

"The only place right now you can legitimately receive it (indomethacin) as treatment for Alzheimer's disease is at the institute," Rogers said.

Indomethacin and similar drugs may offer a promising approach to treating Alzheimer's, but the experimenters' work is not over, McGeer said.

"There are side effects, and the correct dose has not been worked out and the studies need to be replicated. There are many things that need to be done which will require a lot of specialized clinical testing to determine," McGeer said.

"The best that we can say is that there's hope," he concluded.

The study's results and the possibility of treating the disease with drugs should encourage Alzheimer's patients and their families, Rogers said.

"There is something you can do now," he said. "Before the only thing you can do was go home and weep, because there was no treatment at all for Alzheimer's, none."

Staff writer Britt Kennerly contributed to this story.