Stem Cells Meet With Controversy, Promise

By CLARA VARONE
Daily Sun Senior Writer

The treatments have been found to help patients with cancer and blood disorders, but funding gaps remain for research.

For the future of medicine, scientists are looking to the building blocks of life. Stem cells, the origin of all organs and tissues in the body, have generated controversy and funding debates since they were first separated from human embryos.

New administration health officials outlined the development of new embryonic stem cell lines — groups of stem cells grown in a lab — though research could continue on existing lines.

That research was suspended in 2009, but a decade later, scientists say the field is still in its early stages.

Birds, cells derived from eggs, and various other embryos became the focus of this discussion. This is also a discussion of embryonic stem cell lines, which are groups of stem cells grown in a lab. These cells will help treat diseases by replacing cells damaged by disease, injury or aging.

Researchers are now looking into ways of growing heart tissue, replacing damaged kidneys, and making insulin for people with type 1 diabetes through stem cell research.

But they’re not trying to.

Through the National Institutes of Health, a new kind of stem cell research, called adult stem cell research, is being done.

Here are some of the new reports.

SUNDAY EXTRAS INSIDE

Grab: a cup of coffee. Find a comfortable seat and dive into this edition of expanded, comprehensive local coverage.

Parade Magazine
Find out how chef David Burke and Neil Patrick Harris make every day a celebration.

Sports Spotlight
A national round-up of all your favorite teams. Plus news from Gulf Coast Athletics, Section D.

Villages In Depth
A look inside the world of target sports in The Villages, Section C.

Extra Activities
A full guide to fun in The Villages, Section D.

RWP Destinations
Travel far and wide with others as they explore the world, Section E.

Additional Sections
On TV this week, Section A. Plus pages of other sections.

FACES IN THE NEWS
Liz Hernandez
China’s vice president will lead his nation’s delegation when it visits the United States next month for talks aimed at ending a trade dispute.

World News, D2

COMMUNITY & CONNECTIONS

Love & Lifestyle

Neighborhood Roundup
Catch the fun from a recreation center near you: D2

Plan Ahead
A pet forum is a great way to keep your pet happy.

Plan your day.
Open up your neighbor’s photo album: C8

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THE VILLAGES Daily SUN

THE NEWSPAPER OF FLORIDA’S FRIENDLIEST HOMETOWN

Local, C9
Club’s spring craft fair set for Monday.

National News
BARR ANALYZING SPECIAL COUNSEL’S REPORT ON RUSSIAN INQUIRY
By the Associated Press

Nation: Former coal-mining town in southeastern Kentucky is coming to tourism, counting on its natural beauty, history and culture to help reverse years of economic decline, A17

World: Three years of Brexit impasse and mayhem have ended U.K. Prime Minister Boris Johnson’s government’s plans to strengthen trade and stability, many European officials who warned the crisis squarely on May, A20

Sports
Noles Roll, Gators Fall

The Weather
High 79F | Low 59F
Mostly cloudy C1

Outdoor show their support during Walk MS at The Villages Polo Club.

Local, D12

Today’s weather: High 79F, Low 59F, Mostly cloudy

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STEM CELLS

professor of medicine and director of the Stem Cell and Regenerative Medicine Center at University of Wisconsin-Madison, who human embryonic stem cells were first isolated.

He is confident in the promise of stem cell treatment, but said availability outside of clinical trials is three to five years away. Optimally, all patients would have access to all types of stem cells within five years, but in the meantime, many different things under development for many different diseases," Kemp said. "I think we're just on the cusp of some of these therapies being clinically useful.

While scientists move toward unlocking their potential, Kemp said, "As for human patients, we'll be looking at the treatments the FDA status won't be shown to work. Right now, some patients say the treatments have saved them from pain, surgery, and even death.


On The Market

The rapid rise in potential technologies, researchers say the rapid increase in stem cell clinics could be endangering patients. "People are hearing about innovative cancer treatments, they're lured in, but they're not really educated," said Sam Allen, professor of bioethics, law and medical practice at the University of Florida College of Medicine.

All stem cell uses beyond treatment for diseases of the blood that are outside of a research setting are unapproved, Allen said.

"The clinic charges thousands for treating ailments ranging from chronic pain to lung disease. These clinics use cells derived from umbilical cord cells from a patient's baby. Patients are not solicited for their blood but extracted from their baby's umbilical cord as it's poked out into a syringe," he said.

"These stem cells are derived from umbilical cord cells from a patient's baby. Patients are not solicited for their blood but extracted from their baby's umbilical cord as it's poked out into a syringe. The stem cells are then placed in a syringe, akin to the fact that he had just injected them. The patient either by injection or through IV.

"A woman-resident returned to a Daily Sun inquiry saying these conditions improved following stem cell treatments. A woman named B. of the Village of Bridgeport at Lake Sumter, who has arthritis, has been treated with stem cells to repair damaged ligaments. She said that her pain has been reduced and she's able to walk again, she says. Her husband, B., who has been treated with stem cells, has been able to walk again. His condition has improved tremendously, and he's now walking without assistance.

"I have the energy of a 10-year-old," she said. "These stem cells have turned my life around."

Valerie Palm, of the Villages of St. James, said stem cell therapy from umbilical cord cells alleviated her knee pain enough that she could return to work. Then there's Penny Walton, who has tried to Mexico in 2005 for the treatment of chronic pain. At the time, Walton couldn't make it to its mailbox without external oxygen, and she didn't think she'd live past the spring. His condition had improved since then, the Center's resident Walton said. "I'm able to walk again, I'm able to walk again. His condition has improved tremendously, and he's now walking without assistance.

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Walton's husband, also a resident, returned to the closet periodically. Neighbors John and Jean Brown, both treated with Walton to receive treatments. "I was unable to sleep..." He now breathes deeply, and John is able to return to his duties as a nurse. He is now living a normal life.

"The man, "Whatever you're doing there, it's working," he said.

But insurance does not pay for many of the costs. Walton said his treatments in Tijuana average $4,000. On the low end, one respondent said she paid $5,000 for a single stem cell treatment in the U.S. The majority paid $5,000 or more.

"I'm not sure if it's a miracle cure," she said. "I'm not sure if it's a miracle cure," she said. "I'm not sure if it's a miracle cure," she said. "I'm not sure if it's a miracle cure," she said.

Cracking Down

Eric Poinseth, the Village of Briston, said he knew it was a gamble when he sought stem cell therapy. "I'm not saying it didn't drastically improve his knee pain," he said. "I'm not saying it didn't drastically improve his knee pain," he said. "I'm not saying it didn't drastically improve his knee pain," he said. "I'm not saying it didn't drastically improve his knee pain," he said.

Researchers warn patients these treatments are unproven and may cause harm. Last year, a patient sued the company U.S. Stem Cell Inc. over complications from stem cell injections into their eyes to treat age-related macular degeneration with stem cells.

Frank Lozano received injections from a Central Florida clinic in November. The Village of Charlotte resident said his big toe has not improved. "It felt like it was dripping," he said. "It felt like it was dripping," he said. "It felt like it was dripping," he said. "It felt like it was dripping," he said.

Lozano said he can't sleep at night because of the pain caused by bone in his big toe. "I do a business, and I know what it is," he said. "I do a business, and I know what it is," he said. "I do a business, and I know what it is," he said.

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Patrick L. Smith, Attorney at Law
Joe P. Poppen, Jr. & Associates

"Medicare Part D copays vary based on plan design, and $9 copays may not apply to all drugs or be available with all plans or at all pharmacies in a given plan. CVS Pharmacy is preferred with some Medicare Part D plans. CVS Pharmacy accepts most Medicare Part D plans and does not endorse any particular plan. Your costs and savings may vary depending on your premium, deductible, a plan’s cost-sharing obligations for your prescription drugs, any Medicare Part D penalty that may apply and whether you qualify for Extra Help from Medicare with paying your prescription drug costs.
Kashkari, and his team are currently looking into the currently untreatable cause of blindness in the white of the eye. Dry age-related macular degeneration occurs when cells in the macula, the central area of the retina, die. Guided by microarrays, UNC researchers imaged new cells derived from embryonic stem cells in hopes of finding a cure. Since they were only studying safety and the five enrolled patients were at advanced stages of the disease—at most able to see the large letter on an eye chart—Kashkari said they did not expect any positive effects in this stage of testing. However, Said they were encouraged when patients vision improved, allowing the patient to read an additional 17 letters on the chart. "What's the next step?" said. "This has been a significant step forward and Kashkari expects it will be even more effective at other testing sites. Dr. Richard Friedler, professor of neurosurgery at Rush University Medical Center, has seen the joy stem cell-derived changes can bring. Friedler is treating patients with Parkinson's disease, severe injury to the brain, and has observed the potential to improve quality of life for these patients. "Patients often have dramatic effects on a patient's life and quality of life," he said. "It's a big deal."

A Bright Future

Stem cell research was limited to animal models until two recent discoveries from the same lab allowed researchers to study stem cells in a human setting.

Shinya Yamanaka, professor of stem cell biology at the University of Wisconsin-Madison, and Martin Pera, director of the Johns Hopkins University, successfully induced adult cells to revert to a pluripotent state in 1998. Because stem cells can produce any cell type in the body, they opened the door for researchers across medical fields.

"It is exciting to think that you think you can think of a disease that has a cure, but most diseases, you can potentially think of a way that a stem cell-derived therapy can help dig you out of it," he said. "It’s a big deal."

""The human embryonic stem cells provided was a way for us, in a way, to get human heart cells in order to understand how they function," he said. "For our health care applications, we are currently limited for the majority of patients with severe heart disease. But we can also use these cells in other areas, like stem cell research, or even clinical trials," said. Early results from some trials have shown promise in improving heart health and meeting patients’ expectations, however.

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