



CHARGERS LOSE IN OVERTIME

D1 • Nick Novak, who missed two field goal attempts, and the Chargers lose to the Broncos by a score of 16-13. The Bolts have lost six in a row.

MONDAY • NOVEMBER 28, 2011

MORE THAN 1,000,000 READERS WEEKLY

SIGNONSANDIEGO.COM



THE DAILY DEAL



Today's deal is brought to you by our paid advertising partner LEGOLAND California Resort. Get two visits to LEGOLAND California parks, including LEGOLAND California and SEA LIFE Aquarium, for only \$50 today at signondailydeal.com

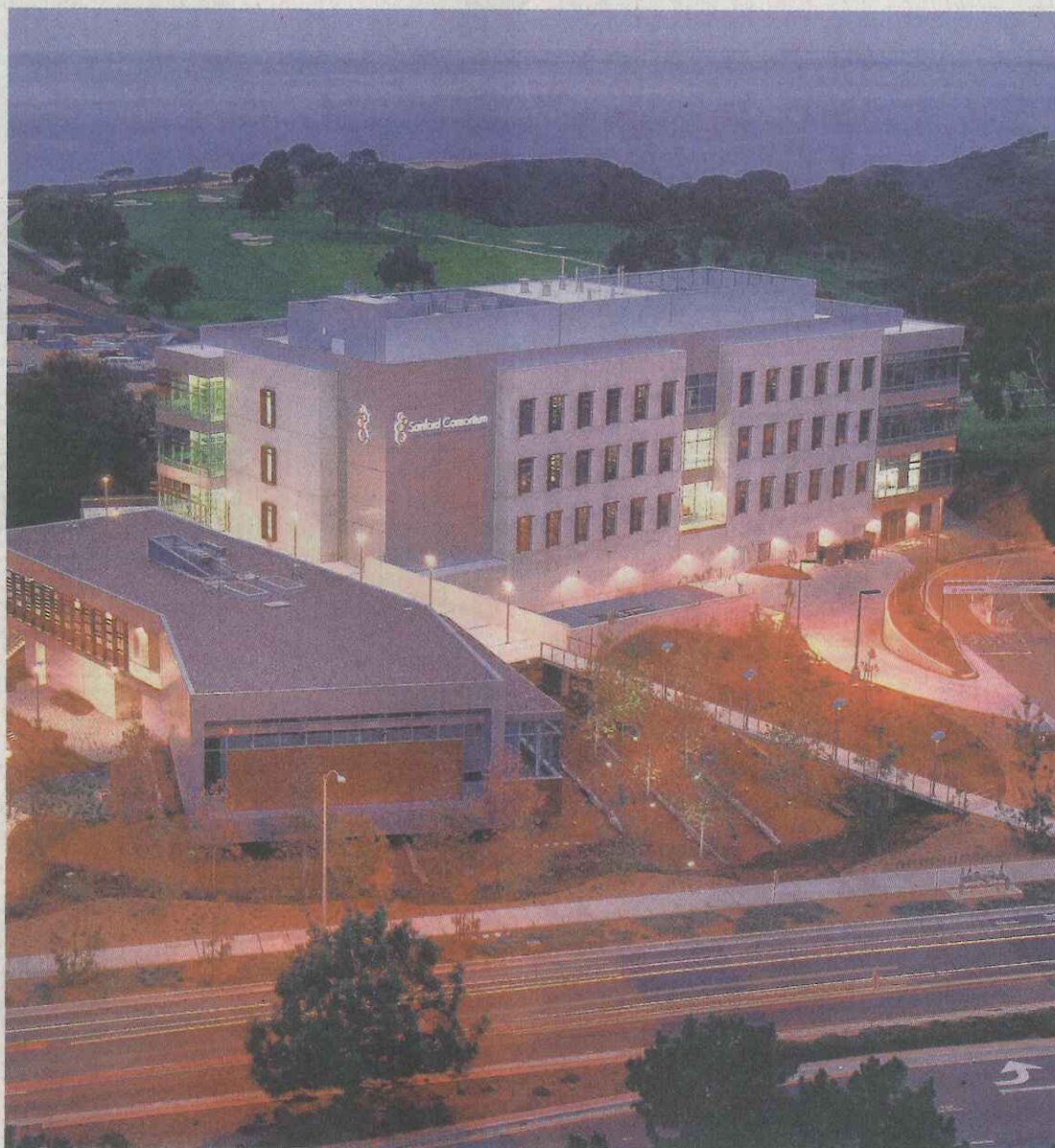
THIS WEEK

CONVENTION CENTER VOTE: On Tuesday, the San Diego Unified Port District board is due to vote on a \$3 million annual payment for 20 years toward the \$550 million expansion of the San Diego Convention Center. Set to open in 2016, the expansion would be financed from proposed increases in hotel-room taxes and perhaps more charges on downtown taxi and restaurant patrons.

SENIOR CENSUS: On Wednesday, the U.S. Census Bureau is scheduled to release 2010 statistics about the country's seniors. The report is expected to show the size, growth and geographic distribution of this demographic group at the national, state and regional levels.

VISION OF THE FUTURE: The San Diego Foundation will launch voting on growth scenarios for the county. Starting Wednesday, participants will be asked to indicate preferences for development patterns and educational, employment and public amenity options at ShowYourLoveSD.org. Results will be included next year in a report outlining a long-term vision for the region.

DECEMBER NIGHTS: San Diegans will continue holiday traditions with the annual Balboa Park December Nights event on Friday and Saturday. The free celebration is expected to attract about 300,000 people, so plan your visit here: balboapark.org/decemberevents.



The Sanford Consortium for Regenerative Medicine building, which opens Tuesday, has been nicknamed the "Collaboratory" for its emphasis on teamwork. K.C. ALFRED • U-T

New vista opening up for stem cell research

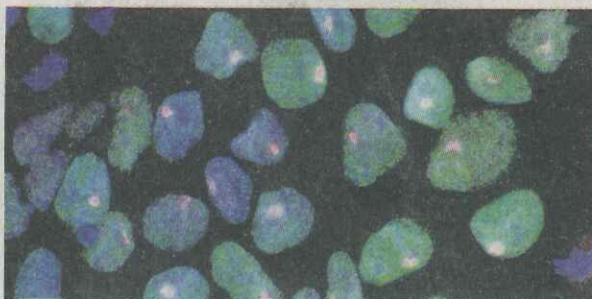
Sanford Consortium for Regenerative Medicine will be a hub for collaboration

GARY ROBBINS • U-T

The quest to figure out the nature of stem cells and how to use them to treat disease will greatly expand Tuesday with the opening of the Sanford Consortium for Regenerative Medicine, a \$127 million center in La Jolla that will draw scientists from five major research institutions.

The 150,000-square-foot complex will be the largest of its kind in California, housing 335 people, including such eminent scientists as Salk Institute geneticist Fred Gage and biologist Martin Friedlander of The Scripps Research Institute.

SEE CONSORTIUM • A3



Stem cells and scientists



Salk Institute geneticist Fred Gage will be among those involved with the new complex. For more profiles of scientists and a closer look at the key features of the building, see A3. UCLA

SCIENCE A3

RETAILERS RING UP RECORD WEEKEND SALES

Black Friday promotions paid off as U.S. customers swarmed stores, websites

JEN LEBRON KUHNEY • U-T

Earlier openings and an abundance of discounts kept the crowds coming during a record-breaking Thanksgiving weekend.

A record 226 million shoppers visited stores and websites during the four-day holiday weekend starting on Thanksgiving Day, up from 212 million last year, according to a National Retail Federation survey released on Sunday.

Not only did more shoppers hit the malls, but they also opened their wallets in a way they had not since the recession. The average shopper spent \$398.62 over the four days, up from \$365.84 last year, according to the survey. Spending per shopper surged 9.1 percent over last year — the biggest increase since 2006.

Total spending, including online sales, reached an estimated \$52.4 billion, according to the survey. About 35 percent of that total was spent online, slightly higher than last year, the federation said, suggesting that online retailers' attempts to attract in-store shoppers worked well.

There were more people than ever waiting in lines Thanksgiving evening for door-buster deals. The survey showed nearly a quarter of Black Friday participants were at a store by midnight Friday, up from 9.5 percent in 2010 and 3.3 percent in 2009.

Meya Alomar, a stay-at-home mother, was at the Walmart at Grossmont Center in La Mesa at 9 p.m. to get a head start on her shopping and was in line for the midnight sale at the nearby Target.

She took advantage of the sales to buy her 4-year-old son and 13-week-old daughter toys and clothes, but said she always enjoys the thrill of Black Friday

SEE SHOPPING • A6

Big spenders

226 million: Shoppers who visited stores and websites Thursday to Sunday.

\$52.4 billion: Total spent during that period.

\$398.62: Average amount spent per shopper.

9.1 percent: Increase in spending per shopper from last year.

Source: National Retail Federation

U-T INDEX

| | |
|-------------|----|
| Bridge | C4 |
| Classifieds | C3 |
| Comics | C6 |

ARAB LEAGUE IMPOSES SANCTIONS ON SYRIA

SCIENCE & ENVIRONMENT

CONSORTIUM • New building's design places emphasis on teamwork

FROM A1

Scientists from the University of California San Diego, Sanford-Burnham Medical Research Institute and the La Jolla Institute for Allergy and Immunology will also be participants in the Consortium.

The Consortium is part of a long-term effort to find ways to do everything from repairing spinal cord injuries to growing healthy heart tissue to preventing Alzheimer's disease.

The new building has been nicknamed the "Collaboratory" for its emphasis on teamwork. The center's interior features almost 3,000 square feet of glass so that scientists from different disciplines will regularly see one another. Laboratories are linked by informal meeting areas. And seating in the auditorium was limited to 150 in the belief that crowds bigger than that discourage people from being social.

"The design means that you can't walk from spot A to B to C without meeting other people," said Alan Trounson, president of the California Institute for Regenerative Medicine (CIRM), a state agency that provided \$43 million in public funds for the project. "This is not a conventional building. The idea is to integrate people from various places. Instead of taking a year and a half to meet, they'll have done so in three months."

The Collaboratory is one of a dozen new research institutions that CIRM has been helping to create throughout California to promote the study of stem cells. Special attention is being paid to human embryonic stem cells, which can turn into any type of cell in the body.

Scientists have made significant advances in many areas, notably in approaches to diabetes and heart disease. But

the work on embryonic stem cells has yet to lead to widespread breakthroughs and lots of clinical trials. The field also suffered a major setback as the Geron Corp. in Menlo Park recently ended its work with embryonic cells to save money for other research. Geron had been conducting the world's first clinical trial that involved a therapy based on embryonic cells.

"I do not think that (Geron's) decision takes away from the promise of stem cell research, but it does point out that new therapeutic strategies such as stem cells and gene therapy may well be more challenging to bring to the clinic than the use of small molecules or biologics," said Edward Holmes, president of the Sanford Consortium.

gary.robins@uniontrib.com • (619) 293-1228 • Twitter: @grobins

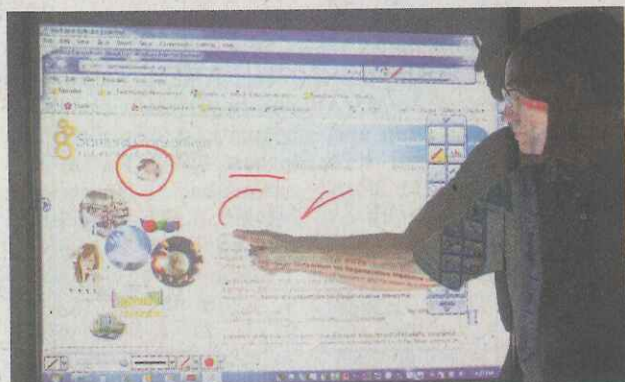
Key features of the building

Glass walls: The Collaboratory features almost 3,000 square feet of glass, some of which was used to create fishbowl-like offices in the building. The extensive use of glass enables people to see each other, encouraging collaboration and socialization.



Medical cyclotron: The Sanford Consortium for Regenerative Medicine is trying to convince the private sector to build and operate a medical cyclotron, a particle accelerator that produces radioisotopes. Scientists need the isotopes for Positron Emission Tomography scanning, high-resolution imaging that is essential in drug discovery research. It's important to have a cyclotron on site because many isotopes have a very short half-life (a matter of minutes). There is only one other medical cyclotron in San Diego County. It is located in Sorrento Valley, too far away to be of regular use in La Jolla. Estimated cost of a cyclotron: \$2 million.

11.7 Tesla magnetic resonance imaging machine: The high-powered machine will enable scientists to see where cells are located and how they're behaving and changing inside research mice. Such images help scientists understand the nature of stem cells, and how they might behave if they were turned into therapeutic drugs. The machine is one of only four 11.7 Tesla MRIs in the country. The sort of MRI machines used on humans are 3 Tesla in power. The new MRI cost \$3 million.



StarBoard whiteboards: The building will have 12



Main auditorium: The auditorium was limited to 150 seats due to Dunbar's law, the belief that the level of socialization among people declines if the crowd gets much higher than that figure.



Staff research associate Antonio Fernandez (left) and Karl Marquez prepare a laboratory for the opening of the Sanford Consortium for Regenerative Medicine in La Jolla. The complex will open on Tuesday. K.C. ALFRED • U-T PHOTOS

The people

Fred Gage, geneticist, Salk Institute: Searching for stem cell-based therapies to treat psychiatric disorders and neurodegenerative diseases, such as autism, schizophrenia and Parkinson's disease. Gage is using stem cells from Parkinson's patients to try to replicate the disease in a lab while also studying the role inflammation plays in the disorder.



Anjana Rao, geneticist, La Jolla Institute for Allergy and Immunology: Exploring what happens in embryonic stem cells as they turn into different types of cells. Such information could prove valuable in efforts to coax stem cells into becoming liver, heart and other organ cells for transplant purposes.



Catriona Jamieson, University of California San Diego: Directs stem cell research at the Moores Cancer Center, where she also treats patients with blood disorders, such as leukemia. She studies early cells that give rise to cancer stem cells, hoping to develop more personalized and less toxic cancer therapies. She led the first human clinical trial for a cancer therapy developed through CIRM-funded stem cell research.



Robert Wechsler-Reya, cancer biologist, Sanford-Burnham Medical Research Institute: Studies how normal stem cells make decisions, including when to divide and when to develop into other cell types. He identified a new type of stem cell that can give rise to medulloblastoma, the most common malignant brain cancer in children.



Martin Friedlander, cell biologist, The Scripps Research Institute: Conducts stem cell research that focuses on the eye and potential treatments for a range of retinal vascular and degenerative diseases, including diabetic retinopathy, age-related macular degeneration, glaucoma, retinitis pigmentosa.



Sources: UCSD; Sanford-Burnham Medical Research Institute; Salk Institute; The Scripps Research Institute; La Jolla Institute for Allergy and Immunology; U-T research

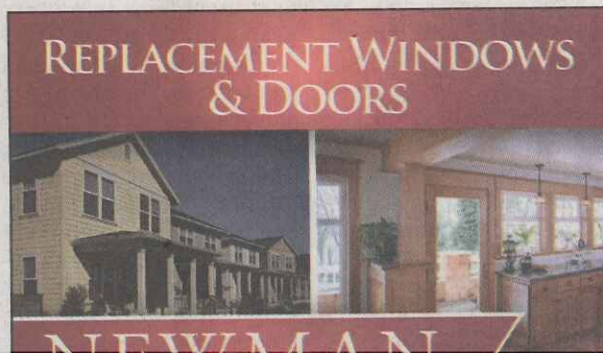
The cost and financing of the building

The cost to build and equip the Sanford Consortium for Regenerative Medicine building is being shared by taxpayers (through the California Institute for Regenerative Medicine), philanthropy and a license fee or rent for the share of the building that the five local research institutions occupy.

The Sanford Consortium for Regenerative Medicine building

| Cost in millions | Total | CIRM | Philanthropy | Debt |
|------------------|-------|------|--------------|------|
| Construction | \$105 | \$21 | \$19 | \$65 |
| Equipment | \$22 | \$22 | — | — |
| Total | \$127 | \$43 | \$19 | \$65 |

Source: Sanford Consortium for Regenerative Medicine



Economy Got You Down?

