Historic Cornell

A recurring feature looking back in time at our fair University

H1N1 First Attacked in 1918 Under Alias of Spanish Flu

By EVAN PREMINGER
Sun Staff Writer

With each day, fear of the swine flu epidemic continues to surround campus. This year's battle with H1N1 is not, however, the first that Cornell has encountered. In 1918 the Spanish flu, a similar strain of the H1N1 influenza virus, made its way through Tompkins County, claiming the lives of students, faculty members and citizens of Ithaca.

"The flu of '18 was unique in that it had an effect on young adults, a fact that put students at risk," said Barbara Hammond, a medical technologist who researched the impact of influenza on the Tompkins county population. "The infirmary was so overrun with cases that the University opened Cascadilla Hall as an emergency hospital."

According to a report written by Hammond while she worked in the microbiology lab in Stockton Hall, there were approximately 900 cases of the flu among the students of Cornell University and Sage College and 37 deaths among students during the primary months of infection in October and November of 1918. In addition to the Cornell students, there were approximately 1,300 cases and 40 deaths in the city of Ithaca's hospitals.

"At that time, there was an outbreak with no containment. There were no antiviral medications, no antibiotics and no ventilators. Under Prohibition, which came to Tompkins County in early 1918, doctors were not allowed to treat fevers with alcohol rubs," Hammond said. "The epidemic had to run its course naturally."

The Spanish flu, which began to spread throughout Europe, Asia and North America in early 1918, was a highly contagious and lethal form of the H1N1 influenza type-A virus. According to a 2006 report from the National Institute of Health, approximately 500 million people, a third of the world's population at the time, were infected with the H1N1 flu strain between 1918 and 1920 in every region of the world.

Of those infected, between 30 and 50 million died. Many of those who died were soldiers and diplomats associated with the First World War, including Willard Straight '01 for whom Willard Straight Hall is named.

A marked difference in the 1918 strain was the high mortality rate among younger adults. During the outbreak, approximately half of the deceased were individuals between 20 and 40, with only about 1 percent of the deaths attributed to those over the age of 65. Although a direct cause for this spike has yet to be determined, likely theories include the overstimulation of the immune system in otherwise healthy individuals and the presence of flu antibodies from an 1890 outbreak in older individuals.

Despite their strong relationship, there are significant differences between the current novel H1N1 outbreak and the pandemic of 1918.

"The current strain of H1N1 does not have the same genetic makeup as the 1918 flu and is not causing the same scope of virulence," Tom Skinner, a spokesperson for the CDC, said. "We have been keeping an eye out for genetic mutations and we are not seeing those changes."

Advancements in medical technology

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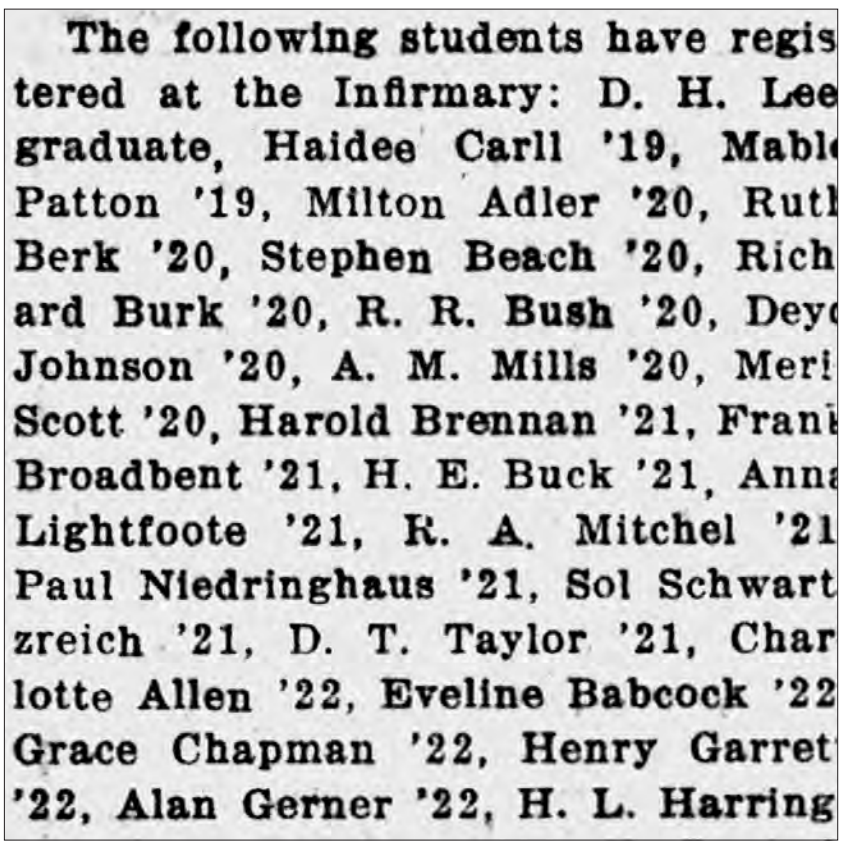
Stuck in the former Sage Infirmary



The following students have regis
tered at the Infirmary: D. H. Lee
graduate, Haidee Carll '19, Mabl
Patton '19, Milton Adler '20, Ruth
Berk '20, Stephen Beach '20, Rich
ard Burk '20, R. R. Bush '20, Dey
Johnson '20, A. M. Mills '20, Meri
Scott '20, Harold Brennan '21, Fran
Broadbent '21, H. E. Buck '21, Anna
Lightfoote '21, R. A. Mitchel '21
Paul Niedringhaus '21, Sol Schwart
zreich '21, D. T. Taylor '21, Char
lotte Allen '22, Eveline Babcock '22
Grace Chapman '22, Henry Garret
'22, Alan Gerner '22, H. L. Harring

SUN ARCHIVES

The Sun on April 18, 1919 was a bit less respectful of personal privacy than it is now, printing the names of those admitted to the former Sage Infirmary with the Spanish flu. The former infirmary building still exists above Schuyler Place between East Seneca and East State Streets.

Below Ground, Synchrotron Moves Science Forward

By COREY EARLE
Sun Contributor

This is the second in a series examining Cornell's underground hot spots.

Last week's electrical fire brought unexpected attention to the Wilson Synchrotron Laboratory, making it quite literally an "underground hot spot". The synchrotron itself, originally constructed in 1967, was the world's largest electron synchrotron at its opening and was considered the largest single construction project at Cornell. But despite the prestige it held at its inception, Cornell students know little about its purpose or even its existence.

Buried nearly 40 feet beneath the track complex and extending to its east, west and south, the synchrotron is a giant ring that is almost one-half mile in circumference. The Wilson Lab that houses the facility is named for Robert R. Wilson, the physicist who served as director of the Cornell Laboratory of Nuclear Studies from 1947 to 1967. One of the many Cornell physicists who worked on the Manhattan Project during World War II, Wilson came to Cornell in 1947 and was responsible for the design of Cornell's particle accelerators. Wilson passed away in 2000 at age 85.

A synchrotron is a device that uses a magnetic field to accelerate particles (e.g. electrons) at faster and faster speeds by boosting their energies as they travel around the ring. Synchrotrons assist in the discovery and study of the smallest elements of matter and their interactions with each other.

Cornell's synchrotron is part of a group of devices that includes a linear particle accelerator and the Cornell Electron Storage Ring, which was added in 1979 to allow the synchrotron to collide particles into each other. The radiation generated by the synchrotron is also harnessed and used for research in physics, chemistry, biology, materials science and environmental science. At Cornell, the synchrotron radiation facility is named the Cornell High Energy Synchrotron Source.

Cornell has been a leader in particle physics for decades and was declared "the atom-smashing center of the East" by The Cornell Daily Sun as early as 1936, when Cornell's first particle accelerator was constructed — only the second of its kind in the United States.

In the late 1940s, a more advanced accelerator, the first Cornell synchrotron, was located in the basement of Newman Laboratory. This first synchrotron was capable of accelerating electrons to an energy of 300 million electron volts, compared to the approximately 10 billion electron volts of today's iteration.

Perhaps last week's electrical fire can serve as the spark that will bring attention back to Cornell's synchrotron, an area that brought pride to Cornell since it was first installed in the late 1960s.

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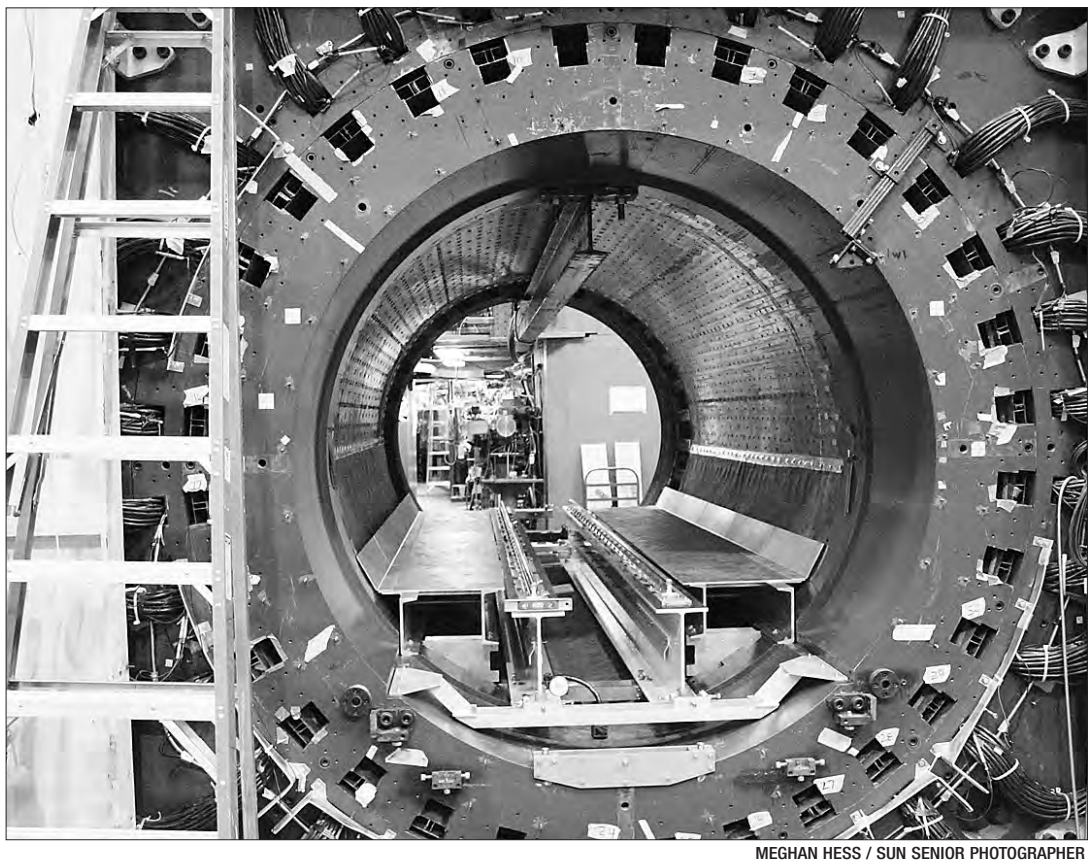

MEGHAN HESS / SUN SENIOR PHOTOGRAPHER

Synchrotron | A section of retired equipment at the Wilson Synchrotron Laboratory.