

THE MONTH AT CALTECH

Chemical Biology

THE NORMAN W. CHURCH LABORATORY of Chemical Biology, a major addition to the research facilities at Caltech, will be officially opened on November 15. The new laboratory accommodates the Institute's rapidly expanding research in areas where chemistry and biology overlap, in relation to medicine.

The building, which cost more than \$1,500,000, is equipped for the newest advanced techniques in chemistry and biology. Located at the northwest corner of the campus, at the intersection of Wilson Avenue and San Pasqual Street, it is 305 feet long and 52 feet wide, with five floors over half its area and four floors over the other half. A wing connects it with the Crellin Laboratory of Chemistry on the east, and another wing connecting it with Kerckhoff Biological Laboratories on the south is planned for the future, when funds are available.

The building was constructed from August 1954 to August 1955—financed by a gift of the late Norman W. Church and a sum of \$510,000 advanced by the Caltech Board of Trustees. The total cost of the laboratory, when fully completed and equipped will probably run to more than \$2,000,000.

There will be no formal ceremony at the dedication of the laboratory on November 15, but an Open House will be held for Associates and Trustees, chemical biology faculty members and special guests. In the evening, at a dinner in the Athenaeum on campus, guests will hear a talk by Warren Weaver, vice president for the Natural and Medical Sciences of the Rockefeller Foundation.

The Rockefeller Foundation is supporting the work in chemical biology at Caltech with a \$700,000 seven-year grant. Additional supporting funds for the new building and equipment have been given by the National Foundation for Infantile Paralysis, the Carl F. Braun Estate, the Ford Foundation and anonymous donors.

Nobel Prize

WILLIAM SHOCKLEY, who received his BS at Caltech in 1932, and spent a term here in 1954 as visiting professor of physics, is one of three American scientists to share in the 1956 Nobel Prize in physics. The \$38,634 award will be divided equally between Dr. Shockley, Dr. Walter Brattain of Murray Hill, New Jersey, and Dr. John Bardeen of Champaign, Illinois, for their work in inventing and developing the transistor.

The development of this small, inexpensive device which performs practically every function of a vacuum tube in electronics and communications, was first announced in 1948, when the three men were all at the Bell Telephone Laboratories in Murray Hill, New Jersey—Shockley and Brattain working together, as members of the research staff, and Bardeen working independently.

Dr. Brattain is still with Bell Labs, as a member of the technical staff; Dr. Bardeen is a professor of physics at the University of Illinois; and Dr. Shockley is now director of the Shockley Semiconductor Laboratory in Mountain View, California. A division of the Beckman Instruments Company of Fullerton, the laboratory was set up under Shockley's direction in December, 1955, to further development of the semiconductors of which transistors are made.

Plant Research

FRITS W. WENT, Caltech professor of plant physiology, received a doctorate from The Sorbonne in Paris early this month, in recognition of his outstanding research on plant life. This honorary degree is given only once every six years in the field of botany. While in Paris, Dr. Went will give several lectures at the University of Paris and at The Sorbonne, speaking in particular on

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smog in Paris and the resulting damage to plants. In his studies of air pollution in Paris in 1950 and 1952, he found no smog, but in 1954 Dr. Went found that a gradual development of smog was causing serious damage to certain plants in the French capital.

Dr. Went is in charge of Caltech's Earhart Plant Research Laboratory and is also president of the California Arboretum Foundation, Inc., in Arcadia.

Russian Astronomy

DR. JESSE L. GREENSTEIN, professor of astrophysics at Caltech and staff member of the Mount Wilson and Palomar Observatories, returned last month from a one-month trip to Russia, where he was a guest of the Soviet Academy of Sciences at the opening of the new Bjurakan Observatory, near Erevan in Soviet Armenia. Only seven other non-Russian scientists attended the conference—two from the United States, two from Red China, and one each from France, Yugoslavia and Mexico.

By American standards Bjurakan is not a particularly remarkable observatory, according to Dr. Greenstein; it is equipped with 20-inch telescopes. The largest telescope in Russia today is a 50-inch reflector. But the Russians are placing a good deal of emphasis on astronomy, and their effort is at least as great as ours, Dr. Greenstein says; they are certainly spending as much money on it as we do, and they have twice—maybe three times—as many astronomy students as we have in this country. It seems certain that the Russians will eventually overcome the deficit in equipment, and they are already planning construction of 80-inch and 100-inch telescopes.

President Clark

DONALD S. CLARK, professor of mechanical engineering, director of placements, and secretary of the alumni association at Caltech, was installed as president of the American Society for Metals on October 10, at the society's annual meeting in Cleveland, Ohio.

Dr. Clark was National Trustee of the American Society for Metals in 1939-40, served as Edward DeMille Campbell Lecturer of the society in 1953, and has been national vice-president for the past year.

Ford Aid to AUFS

THROUGH ITS MEMBERSHIP in the American Universities Field Staff, Inc., Caltech will share in the benefits of a new Ford Foundation grant of \$1,800,000.

Caltech is one of 10 educational institutions that control and help to support the activities of the AUFS, a nonprofit corporation that was established in 1951 by a group of college presidents who wanted to breathe a little life into the study of foreign nations and cultures.

The new Ford grant assures continuation of the AUFS program.

The AUFS selects and trains qualified young men, and sends them into the foreign field for two-year periods. These correspondents send back a total of more than 100 reports a year to the institutions sponsoring the AUFS program. After each two-year stint, correspondents return to the United States to visit the member campuses and report personally on current conditions, problems and personalities in the areas they are covering.

Each year four AUFS men visit the Caltech campus to give a series of lectures and informal talks. First to arrive this year will be Lawrence Olson, home from Japan, who will be on campus from January 7 to 16. On January 21 Edwin S. Munger will be here to talk about events in Africa south of the Sahara; this will be Mr. Munger's third visit to Caltech. Albert Ravenholt will also be here for the third time, reporting on the Philippines and the Far East, from February 4 to 13. Finally, Charles Gallagher will check in on February 25 to discuss Northwest Africa.

To finance the AUFS program, each of the 10 sponsoring institutions contributes the equivalent of the average salary paid to an associate professor on its faculty. Additional income to support the program comes from the use of correspondents' reports by business firms, other institutions and publications, and endowments. The new Ford Foundation grant may make it possible to add more correspondents to the AUFS staff.

Campus Poll

IT'S PAST HISTORY now, but students in Dr. James Davies' course in political parties and pressure groups—in cooperation with the Caltech YMCA—took a pre-election poll last month of campus opinion on candidates, parties and campaign issues. The results, though they could not be said to have forecast the election with the accuracy of Gallup or Roper, should at least provide Dr. Davies' students with enough baffling information to analyze for the rest of the year.

A random sample consisting of half the faculty, one-quarter of the graduate students, and one-quarter of the undergraduates was used for the poll. Returns came in from 70 percent of the undergraduates, 57 percent of the graduate students and 59 percent of the faculty. With a total of 63 percent returns, the Caltech community went 52 percent for Eisenhower, 43 percent for Stevenson and 5 percent Undecided.

The breakdown by "class" was more interesting:

	Eisenhower	Stevenson	Undecided
Undergraduate	63%	32%	3%
Graduate	55%	36%	9%
Faculty	22%	76%	2%

History 25 students are already at work trying to find out what it all means.