

AEC Approves College To Use Radioisotopes

Penn State is one of more than 300 institutions qualified to employ radioactive isotopes, which are by-products of the Oak Ridge, Tenn., atomic energy plant, for research work, according to a report of the Atomic Energy Commission to Congress.

Radioactive isotopes are abnormal atoms that disintegrate radioactivity, can be detected and counted by Geiger counters, and hence may be used to "tag" certain chemical building units, permitting them to be traced throughout chemical and biological reactions.

The biosynthesis of penicillin is the first College project to be approved for obtaining radioactive carbon, in the form of barium carbonate. The project, headed by Dr. Robert W. Stone, professor of bacteriology, will be conducted by the department of bacteriology,

School of Agriculture; and the department of chemistry, School of Chemistry and Physics.

Dr. Richard C. Raymond, assistant professor of physics, is chairman of a committee on the use of radio-active elements. It passes on all campus requests to the Atomic Energy Commission for the isotopes from the Oak Ridge uranium piles.

Other members of the committee are Dr. Henry M. Davis, associate professor of metallurgy; Dr. Michael A. Farrell, assistant director of the agriculture experiment station; Dr. Herbert R. Glenn, director of Health Service; Dr. Arthur Rose, associate professor of chemical engineering; and Dr. John A. Sauer, head of the department of engineering mechanics.

Dr. Glenn, a naval reserve officer, has applied for a two-week course in radiology, given at the National Naval Medical Center in Bethesda, Md.

Penicillin

The mechanism by which certain Penicillium molds synthesize the molecule of penicillin is to be studied. Various carbon compounds will first be added separately to fermentation mediums.

The resulting penicillin will be carefully purified. Radioactivity of the drug will be compared with that taken up by the mold and the residual radioactivity of the medium.

In more advanced studies, penicillin tagged with C-14, radioactive carbon, will be chemically broken down into simpler compounds, which will be isolated and tested to discover where the radioisotope was located.

Three Year Studies

Future plans call for experimentation with radioactive sulfur, S-35, and with stable isotopes of carbon, C-13, and of nitrogen, N-15. The expected duration of the studies is three years.

Supported by the Schools of Agriculture and Chemistry and Physics and by industrial grants from four pharmaceutical manufacturers, the project expects to work on a first year budget of \$25,500.

Bacteriologists, chemists and physicists are cooperating in the program. Romeo B. Wagner and Harry D. Zook, assistant profes-

In 1905 there were nine fraternities.

sors of chemistry, will have charge of the chemical degradations.

Metallurgy

Source of the carbon dioxide gas bubbles formed when vitreous enamels are fired will be investigated by Dr. Davis and co-workers when their request for radioactive carbon is approved.

The special isotope will be placed either in the glass of the enamel, or in the steel backing by a carbonization process. The gas liberated during firing will be collected and tested with counters to measure the radioactivity.

Special problems will be encountered because of the use of carbon in the gaseous compound. Radiation of C-14 is so weak that it is easily stopped, even by the skin. Precautions, however, must be taken to prevent breathing of the radioactive gas.

Another proposed study in metallurgy, involving the use of radioactive sulfur, is to trace the slag reactions in blast furnace operation.

Equipment is now on order for the laboratory which is expected to be set up in the fall. Space in Mineral Industries has been assigned for it.

Scott-

(Continued from page one)

ing by enabling him to imitate closely the styles of leading popular pianists. Haunting South American dance halls while on shore leave from a cruise ship gave his man understanding of rumbas and tangos.

Carnegie Hall

Scott has made two appearances in Carnegie Hall and presented concerts in Town Hall as well as in Philadelphia, Boston and Chicago.

At various times he has had a school of music, a successful orchestra, composed, and invented a special mitten to strengthen fingers during practice. These mittens appear on the program as props for an arrangement called "Mittens on the Keys."

In addition to being a versatile concert pianist, Scott, a Syracuse University alumnus, is a composer, arranger, humorist, actor, writer, educator and inventor.

Dancing was not permitted on the campus until 1890, then because of the lack of girls, the boys sometimes held dances among themselves.

Church Calendar

VESPERS

Services will be held at 7:30 p.m. Sunday in Schwab Auditorium. The guest speaker will be Claude S. Conley, executive secretary of the Presbyterian Synod of Pennsylvania. Mr. Conley will speak on "Releasing the Power of God." Reverend Donald Carruthers will assist at the services.

WESLEY FOUNDATION

A picnic at Po Pattie Park will be held Saturday afternoon for all Methodist students and their friends. Anyone interested in attending should call the Foundation office for reservations by Friday noon. The cost will be approximately \$1 which will include transportation and the evening meal. The group will leave from the Foundation at 2 p.m. Saturday.

The church school service for students will be conducted by Louise Seitzinger at 9:30 a.m. Sunday.

EPISCOPAL

Sunday services will be held. The sermon will be delivered by

at the Episcopal church at 7:45 and 10:45 a.m. There will be Holy Communion this Sunday. The Reverend John W. Peabody, Open House for all Episcopal students will be held in the rectory from 7 p.m. to 9 p.m. Sunday.

HILLEL

Services will be held at the Phi Sigma Delta fraternity house at Fairmount and Allen street, at 8 p.m. Friday. Refreshments will be served after the service.

A combined swimming party and weiner roast, sponsored by IXFA, will be held 1:30 p.m. Sunday. The group will leave from Hillel Foundation. The price is fifty cents per person.

BAPTIST

Sunday services will be held at the Roger Williams Baptist church at 9:40 a.m. There will be Holy Communion at 10:45 a.m. The student group will meet for a discussion at 6:30 p.m. Sunday.

LUTHERAN

The Lutheran Student Association will meet at the Lutheran Church at 6:30 p.m. Sunday.

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