Muriel and G. W. Beadle

Chicago's New Chancellor

George W. Beadle, chairman of the division of biology, and acting dean of the faculty at Caltech, leaves the Institute next month to become chancellor of the University of Chicago.

"The University of Chicago is to be sincerely congratulated," said Caltech President L. A. DuBridge, "on securing as its leader so great a scholar, teacher, and administrator as George W. Beadle. Under his leadership the University of Chicago, already one of the nation's great educational institutions, is certain to attain new heights of educational distinction. The whole nation will profit from such a development.

"At the same time, the loss of Dr. Beadle is a most serious blow to the California Institute of Technology. In the past 14 years he has built here one of the greatest research centers in biological science in the country, and he has brought distinction to the entire Institute. In his new capacity as dean of the faculty

he was about to launch a vigorous new program of educational advancement. He cannot be replaced.

"Dr. and Mrs. Beadle were beloved members of the Caltech faculty and they carry with them into their new endeavors the best wishes of a host of friends and admirers in southern California."

Dr. Beadle has been head of the division of biology at Caltech since 1946, and has been serving as acting dean of the faculty since last year. In 1958 he won the Nobel Prize in medicine with Dr. Edward L. Tatum (now of the Rockefeller Institute in New York) for their discovery that genes act by regulating definite chemical events.

How genes work

The Beadle-Tatum discovery gave science its first proof of how genes actually work. Before 1941 there were some indications that genes controlled chemical reactions, but this was not a widely accepted fact. In that year, though, Beadle and Tatum, working at Stanford University, made the significant discovery that the synthesis of vitamins and amino acids in the living cell is under the control of the genes. This in turn suggested that each of the biochemical reactions of a cell is governed by a particular gene.

This discovery opened up a whole new field of research which has led to new knowledge of genes themselves, to new knowledge in biochemistry, and even in bacteriology – where, for the first time, it made possible the study of bacterial genes. During World War II the application of genetic principles resulted in a fourfold increase in penicillin production, as well as the development of new means of assaying vitamins and amino acids in food and tissues.

In making their discovery the men used the red bread mold *Neurospora crassa* (subjecting it to x-rays and ultraviolet light to produce genetic mutations). They have since been identified not only with the discovery, but with the addition of this new tool for genetic research.

A native of Nebraska, Beadle was born in Wahoo in 1903. He got his BS in 1926 and his MS in 1927 from the University of Nebraska School of Agriculture, then went to Cornell University, where he became interested in genetics. After receiving his PhD in 1931, he came to Caltech as a National Research Council fellow. He became an Institute research fellow in 1932, and instructor in biology in 1935. In that same year he went to the University of Paris to work with Dr. Boris Ephrussi, whom he had met at Caltech. While there he made his first important discovery – that a gene controls the eye color of the fruit fly, *Drosophila*, by producing a particular chemical substance.

After a year on the biology faculty at Harvard, Beadle went to Stanford as professor of biology in 1937. He returned to Caltech in 1946 to succeed the late Thomas Hunt Morgan as chairman of the division of biology.

In his 14 years at the Institute, Beadle, with boundless enthusiasm and unflagging energy, has built the biology division into one of the best in the country. As acting dean of the faculty for the past year he has been directing the program, financed by the Carnegie Corporation of New York, to extend scholarship and research at the Institute in the humanities, the social sciences, and public affairs.

Not that administration occupies all his time and talents. He is equally as active, and as adept, as fund-raiser, teacher and public lecturer. He is past president of the American Association for the Advancement of Science, and of the Genetics Society of America. He was a member of President Eisenhower's Science Advisory Committee. He was chairman of the National Academy of Sciences' committee on the Genetic Effects of Atomic Radiation, and chairman of the American Cancer Society's Scientific Advisory Council.

He belongs to the Royal Society of London, and to the Danish Royal Academy of Sciences. In 1958-59 he was appointed Eastman Visiting Professor at the University of Oxford, England. He is co-author with Dr. A. H. Sturtevant (Thomas Hunt Morgan professor of genetics at Caltech) of *An Introduction to Genetics*. Name all the possible honors and awards that can come to a biologist and he has most of them.

All of this professional activity still leaves Beadle with plenty of time for an active private life as well. Since his home (which used to belong to T. H. Morgan) is located directly across the street from his office on campus, there is a good deal of blending of his private and professional activities. He is a successful gardener, but a good many of the lovely flowers – and the corn – that he raises in his home garden are grown for genetic studies too. So are the Siamese cats he raises.

Beadle leaves the Institute for his new position next month. Mrs. Beadle and their 17-year-old son, Redmond, follow at the end of the school year.

An exciting future

"Caltech is a wonderful place," says Beadle. "I am grateful to have been here and to have had a small part in its growth during these past 14 years. Leaving it is painful. But Chicago is a great institution, too, with a long history of educational leadership. Its future is exciting to contemplate, and I am looking forward with enthusiasm to making whatever contribution I can."

As chancellor of a university with 8,000 students, over 800 faculty, over 55,000 alumni, and an academic budget of over $32,000,000, Beadle will have an opportunity to make plenty of contributions – and make them he will. Chicago's future is even *more* exciting to contemplate now that Beadle's there.