

## MEMORIAL RESOLUTION

### ROBERT GORDON GOULD, JR. (1909 – 1918)

Robert Gordon Gould, Professor Emeritus of Medicine, died on May 19, 1978 at his home on the University campus. He was sixty-eight years old. His death brought to a close almost fifty years of unbroken biochemical and biomedical research.

Gordon Gould was born in Chicago, Illinois on June 24, 1909, the only son and second of the three children of Robert and Anne Gould (nee Vallette). At age 11 he moved with his family to New York and attended first a preparatory school in Riverside and then the Lincoln School, where he graduated head of his class.

He entered Harvard in 1926, received his B.S. *cum laude* in biomedical sciences in 1930, and then proceeded to a Ph.D. in organic chemistry under the direction of James Bryant Conant. This was conferred in 1933. During this period he was an instructor and tutor in biochemical sciences at Harvard. With encouragement from Alwin Pappenheimer he applied for and was awarded a National Research Council Fellowship in chemistry; he held this at the College of Physicians and Surgeons at Columbia University, where he worked with Hans T. Clarke, a chemist whose concerns for the preservation of our environment and the quality of life had a profound influence on Gordon Gould's attitudes subsequently.

After the year back in New York he became an instructor in biochemistry and organic chemistry at the University of Iowa for another year, and then returned in 1936 to the Rockefeller Institute in New York as Assistant in Chemical Pharmacology, where he stayed until he became caught up in the war. During his six years at Rockefeller he worked principally on the structure and synthesis of ergot alkaloids and published a series of papers in the *Journal of Biological Chemistry*. The war intruded and he found himself first back at Harvard working on sulphonamide resistance in gonococcus, a problem which he approached in a characteristically fundamental way, studying a range of growth factors essential for this organism. Gordon then volunteered his services and entered the U.S. Army as a 1st Lieutenant in August 1943. After his initial training he became a member of a team studying anti-malarial drugs and for some time worked for the Army Malaria Board.

In March 1944 he became officer in charge of the Medical Section, Army Service Forces Equipment Intelligence Team with the rank of Captain and was responsible for collecting information about medical equipment and drugs available to the enemy in the Pacific theatre of war. This took him to Iwo Jima and Okinawa in 1944-45. In December 1945 he was awarded a Bronze Star Medal for meritorious service, and he finally separated from the Army on February 13, 1946.

The return of peace saw Gordon back as an Associate in the Department of Biological Chemistry at Harvard and it was at this time that he entered what was then a rapidly-developing

field, the application of radioactive isotopes to educate and characterize metabolic pathways in biological systems. Together with Anfinsen, Baird Hastings, Solomon and others he examined the incorporation, intermediary metabolism, and excretion of catabolic products of bicarbonate, acetate and succinate both *in vitro* and *in vivo*.

His own interests inclined increasingly to the problem of how mammalian tissues handle cholesterol, an interest that persisted throughout the whole of his subsequent career. He made what has proved to be one of the most widely influential discoveries about the metabolism of cholesterol. Essentially, he demonstrated the feedback inhibition of the mechanisms regulating its synthesis, a discovery that has been central to all subsequent work relating to knowledge of hypocholesterolemia, cholesterol deposition, atherosclerosis and the relation of dietary intake of cholesterol and precursor substances to cardiovascular disease.

Gordon Gould pursued these problems while an Associate Professor of Biochemistry at the University of Illinois, an appointment he held while a biochemist at Presbyterian Hospital in Chicago (1947-52), and, subsequently, while leader of the biochemistry section of the health division of the Los Alamos Scientific Laboratory, where he remained until 1960. It was then that Dr. John Luetscher invited him to come to Stanford as Associate Professor of Biochemistry in Medicine and as Director of the newly-opened Clinical Chemistry Laboratories. At Stanford, Gordon continued both his research and his administrative activities for nine years.

He never claimed to enjoy the latter. His metier was always research, in which he displayed great enthusiasm, originality, and scientific vigor to the highest degree, all backed up by a knowledge of his own and related fields both broad and deep. The demands of a routine service rapidly expanding in an area too small to contain it, were ones that Gordon met with characteristic courage and great effort, but he breathed many sighs of relief when he could relinquish the task in 1969 and devote himself to what was his major interest. This he did as Professor and then Professor Emeritus up to within a few weeks before the end of his life. His contributions to knowledge were many. Two deserve special mention, other than the important one of regulation of cholesterol synthesis.

In 1953 he published a short communication with F. N. Hayes in Science on the feasibility of measuring tritium by liquid scintillation counting, an original prediction that has turned out to be of great importance in metabolic studies. Later, he pioneered some of the work demonstrating cholesterol-membrane exchange that has culminated in current thinking about atherosclerosis.

He was a member of many scientific societies, including the American Society of Biological Chemists, the Society for Experimental Biology and Medicine, the Radiation Research Society, the American Heart Association, and Sigma Xi. He was President of the American Society for the Study of Arteriosclerosis in 1957-58, was on the executive committee of the Council on Arteriosclerosis of the American Heart Association, and was a Consultant to the California State Department of Public Health.

This is, so far, a bald account of Gordon Gould's scientific career. But he had a very full life outside his science, and yet one often informed by it, particularly in the matter of the social functions of science.

In 1938, while on holiday in Zurich, he met Edda Renouf, whom he married on a family farm in Massachusetts in 1939; the subsequent honeymoon in Europe being cut short by the war, the couple barely escaping being stranded there. Any who had the privilege of enjoying the especially civilized and warm hospitality that Edda and Gordon dispensed in their home on campus will have realized what a remarkable complementarity they displayed, born of shared interest and yet a sturdy independence of spirit.

Clearly this was the case throughout the 40 years they shared together, for friends from the New York and Los Alamos days were always visiting them, a sign of enduring and strong friendships and of the attraction of their home. Both delighted in their children's visits and in their grandchildren.

Both shared a serious interest in music and the fact that their son-in-law was a professional musician, a cellist and a member of a quartet well known on the west coast, gave them much pleasure. Gordon was not known as a performer during his time at Stanford. As a clarinetist he had been a member of the Pierian Sodality at Harvard, said to be the oldest musical society in the United States, and he played in several enthusiastic amateur groups in New York. During the New Mexico stay Gordon also tried his hand at the bassoon and played in a community orchestra in Santa Fe. But, on reaching California, the hobby of wine-making, which had begun as a small experiment in Los Alamos, seems to have occupied an increasing amount of his spare time. He grew grapes and he experimented with wine-making. His creative talents and his scientific rigor found in wine-making a happy balance, which resulted in wines of which many were outstanding and all interesting.

Gordon's other great interest and concern, stemming from his early contacts with Hans Clarke and Alwin Pappenheimer, was the quality of life. He served for many years on the board of the Santa Clara County Planned Parenthood Association, he conducted Freshman Seminars on population control, and was an outspoken conservationist. This account does poor justice to a colleague who was a fine scientist and a warm and truly civilized man. His impeccable courage, displayed especially during the last weeks of his life, his unflinching honesty, and his unfailing modesty impressed all who loved him, his family and his many friends, as a man of rare character, worthy of any attainment to which he might have aspired.

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