



Williams, John R.; Sir Frederick Banting: An Appreciation (1946 October)

SIR FREDERICK BANTING

AN APPRECIATION

Down through the pages of history there emerges from obscurity now and then an individual who, without the benefit of long training and elaborate institutional facilities, projects an idea which in time influences the destiny of man. For example, in the 16th century a young English clergyman, William Lee, distressed by the long arduous toil of the housewife in knitting the family stockings, designed a machine to replace the fingers of woman in this laborious task. This was the first attempt to relieve the drudgery of hand labor by machinery. Lee laid the corner-stone of the modern industrial age.

More familiar is Sir Isaac Newton, born of humble parentage in the 17th century. At the age of twenty-three Newton wrote an original treatise on mathematics known today as differential and integral calculus, laying the foundation for the modern sciences of chemistry and physics with their vast and unpredictable implications.

Today we honor the memory of Frederick Grant Banting. By his discovery of insulin he made possible the control of a disease that had been a scourge of mankind for a thousand years. But he did more. He gave an impetus to medical research throughout the world that has proven most productive. Banting's biography is now well known. On this occasion, let us consider his fine qualities of mind and heart. Foremost of these were loyalty and curiosity. Loyalty is that sacred quality of character which binds one devotedly to a worthy cause, be it friendship, patriotism or the search for truth. Curiosity is that eager concern which prompts one to explore the darkness of the unknown in the quest of light. That fortunate individual who is blessed with these attributes seeks little other reward than the infinite satisfaction of achievement. Loyalty and curiosity are foundation stones of success, be it in busi-

ness or in scientific research. They were strikingly evident in Banting's character. He was loyal to the friends of his humbler days. These he never forgot even when his fame became worldwide. He was loyal to his Alma Mater, to whom he gave the valuable patent rights of his discovery for the promotion of research. This loyalty is further illustrated by an episode which I had the privilege of witnessing. In May 1922 when Banting was but little known and his discovery of insulin not yet wholly accepted or appreciated, he visited Rochester. He shared with me his anxieties and difficulties, and they were many. Debt and lack of means for the research which he hoped to continue hung heavily over him. We were at a luncheon as guests of the late George Eastman, founder of the Kodak Company and benefactor of many cultural and humanitarian institutions. Mr. Eastman in a round-about way had heard of Banting's distressing problems and tactfully offered him a sum of money adequate to equip and operate a research laboratory, provided he would affiliate with the new University of Rochester Medical School, in which Mr. Eastman was much interested. Banting promptly declined with thanks, stating that his duty was to his own country and that it was his greatest desire to see Canada take its place in the field of scientific research. Mr. Eastman was deeply moved by this reaction and, turning to me, said, "If ever one deserved a halo, this young man does."

Loyal also to his country in the throes of war and to his comrades-in-arms, as at the battle of Cambrai in 1918 when, although seriously injured himself, he remained on duty at the grave risk of his own life tending the wounded and dying all day and far into the night. And finally, and most important, was the fine loyalty to his associates with whom he ever insisted on sharing full credit for the accomplishments of his laboratory.

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Curiosity was another of his praiseworthy characteristics. This was insatiable. He rarely was satisfied with usually accepted explanations as, for example, the problem of cancer, the cause of death in drowning, of sudden death in heart disease, the black-out of aviators. Indeed, it was while engaged in this last piece of investigation in the service of his country that he lost his life. These are but a few and in the field of medicine, but his curiosity was really universal in scope. He was intrigued by the legends and habits of the American Indian and the optical effects of sunlight on the snows of the frozen North which he delighted to reproduce in oils. Far afield from these, the principles involved in the study and detection of crime interested him greatly. Once when in New York together, we spent several exciting hours in the office of a world-renowned expert exploring this fascinating subject and examining the protocols of some of the famous criminal cases of recent history. Banting had the mental equipment of a Sherlock Holmes. To a high degree he combined logical deduction with scientific experiment.

Late one evening, shortly after the announcement of the discovery of insulin, he received an urgent phone call from a Toronto hotel. An anxious voice with a foreign accent demanded his services immediately. Explanations that he did not practice medicine failed to satisfy or assuage the distressed patient. It so happened that none of Banting's clinical colleagues was available at that hour and, piqued by curiosity as to the identity and needs of the alarmed stranger, he volunteered to give emergency aid. The patient proved to be an opulent banana exporter from a Central American country, with a long and fantastic history of bouts of illness which had been diagnosed as diabetes. The doctors of his native land, the specialists of Harley Street, and the savants of Paris had studied, pondered, and disagreed over his case. The patient continued to suffer. He had returned home and was filled with despair. Then one day there was flashed across the world the news of the wonderful discovery of insulin. Here at last

was hope. Urgent cablegrams and energetic New York agents soon had an ampoule of the precious medicine at his bed-side. The anxious doctor felt that speedy and heroic treatment was imperative so injected the entire contents of the ampoule at one dose. The result in a few minutes was both startling and violent—a severe insulin reaction. In most hotels there will be found an all-wise mind who has all the answers. In this hotel, the home of the patient, the genius of infallibility was the porter. When it became evident that the victim would survive, the porter ventured that he knew the famous Dr. Banting, the discoverer of the miraculous remedy, and that he had worked as an orderly in the Toronto General Hospital. So with all the speed of travel, the thoroughly-alarmed sick man hastened to Toronto and lost no time in contacting the great doctor. Something about his appearance aroused the investigative instinct of the young scientist. A sample of urine was obtained, a hurried trip to the laboratory, back again to the bed-side, more questions, then a dramatic diagnosis and conclusion. Banting's inquiry revealed that the man was a victim of recurrent malarial attacks which were temporarily relieved by quinine, but were always followed by severe muscle pains. These were controlled by a medicine prescribed by the hotel drug clerk; next in sequence was the questionable diagnosis of diabetes. The combination of Dr. Banting's alert mind and a few simple laboratory tests suggested that too much aspirin, rather than diabetes, was the cause of the international medical disagreement.

When this puzzling aspect of the case was explained to the patient, his relief and gratitude knew no bounds. Jumping to his feet in the ecstasy of joy, he pulled out a big roll of bills and exclaimed, "Dr. Banting, how much I owe you—one thousand dollars? Two thousand dollars, maybe three thousand dollars?" The startled Banting, when his amazement had subsided so that he could speak, replied quietly, "You owe me nothing, Sir. I am not a practicing doctor, just a research worker." Then, in despairing

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gratitude, the patient picked up his valuable Panama hat and clamped it down over Banting's ears, saying, "Well, if you won't take money, keep this to remember me by." This amusing story reveals the active, alert reasoning mind of the scientist and the kind, sympathetic nature of the man. In 1923 King Gustave of Swe-

den presented to Banting the highest award in medicine, the Nobel prize, and in 1934 King George V of England conferred knighthood upon him. But long before, the King of all Kings had set the seal of true nobility upon his brow. Fred Banting was indeed one of Nature's noblemen.



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