

## Robert Spiro Obituary

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Spiro, Robert Gunter, M.D., Professor Emeritus (Biological Chemistry and Medicine) at Harvard Medical School died on May 16, 2015, at age 86 after a courageous battle with stomach cancer.

Robert was born in Berlin, Germany, the son of Harry and Kate (Löwenstein) Spiro. After his father was briefly interned in Dachau concentration camp and then released due to his service in World War I, Robert's parents made arrangements to leave for

London with his older brother, Walter, while Robert was sent to school in Gstaad, Switzerland, for 2 years. In 1940 while World War II was in progress, Robert traveled by train and airplane to London after which the reunited family sailed to New York as part of a slow moving convoy always on the watch for German submarines. Unfortunately, other members of his small family did not survive and his beloved maternal grandmother was murdered in Auschwitz in 1943. Robert attended Forest Hills High School, Columbia College and SUNY Upstate Medical University, graduating from all with high honors. After a year's Medical Residency in Syracuse, he moved in 1956 to the Harvard Medical School in Boston for postdoctoral studies and was associated with this institution for over 40 years until his retirement in 2000.

I first met Robert Gunter Spiro in 1966 when I was an Assistant Professor in the Department of Biochemistry at the University of Toronto. I had been publishing on glucosamine and other such sugars since 1962. I wanted to get a speaker who could outline the latest findings in this field and thereby stimulate my research program. I scanned the literature for a leading researcher in glycobiology. The name that came to the top of the list was Robert Spiro. Robert had been active in the glycobiology field since 1959. He was one of the pioneers! So I invited Robert to visit Toronto.

It soon became clear that Robert was not only a top-notch researcher but also a man with many other interests. Robert was a Type 1 diabetic. Therefore, not surprisingly, a visit to the actual Toronto laboratory in which Frederick Banting and Charles Best had carried out their experiments on insulin was at the top of Robert's list. It so happened that the rather small laboratory in which I carried out analyses was the room in which Banting and Best had worked! Robert was absolutely delighted when he saw this room.

Robert Spiro had a long and distinguished research career. After training at the Massachusetts General Hospital, his research was conducted primarily at the Joslin Diabetes Center

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and he focused not only on the kidney complications of diabetes but also on the field of Glycobiology in which he was a pioneer, studying the structure and biosynthesis of glycoproteins. His laboratory trained more than 60 postdoctoral fellows and students, many of whom hold prominent positions in medicine world-wide.

Five years into his career at the Joslin Diabetes Center, Robert welcomed a colleague to his lab, his wife Mary Jane Spiro, Ph.D. They collaborated on diabetes research for more than 35 years. Robert has described his relationship with Mary Jane as the most significant factor in his living successfully with diabetes. Together with his life-long partner Mary Jane, Robert went on to publish many high quality original research papers. Of equal importance was the publication by Robert of several highly detailed, much quoted, magnificent reviews that have become classics in the glycobiology field.

While Robert was a senior medical student in 1954, he noticed the signs and symptoms of Type 1 diabetes in himself. He suffered from this dangerous disease for the rest of his adult life. To quote Robert, “I prepared myself to live with diabetes with a minimum disruption to my career.” And Robert did just that!! This major achievement was due to his fantastic discipline and was in fact “celebrated” by the award, several years ago, of a 50-Year “survival” Medal by the Joslin Diabetes Center. When Robert received his 50-Year Medal, he gave something back—announcing the establishment of the Robert G. Spiro, M.D. Endowed Campership Fund. This fund’s annual distribution goes to children who need financial assistance to attend the Elliott P. Joslin Camping Programs.

Robert had academic appointments at Harvard Medical School and the Joslin Diabetes Center from 1961 until his retirement. He established a “Glycoproteins and Biomembranes Research Laboratory” at Joslin and served as Chief of this Section. His studies on the kidney glomerulus in diabetes provided a biochemical rationale for tight blood glucose control. This concept is now universally accepted. This work was recognized in 1968 by the American Diabetes Association’s Lilly Award.

Robert’s early research on glycoproteins became the primary scientific backing for the importance of maintaining a tight grasp on one’s blood sugar levels. This concept is now among the most fundamental components of diabetes care. In 1975 Robert received the Claude Bernard Medal from the European Association for the Study of Diabetes, one of the highest honors in the field of diabetes. In 2008, Robert

received the Rosalind Kornfeld Lifetime Achievement Award from the Society for Glycobiology. Last Fall, Robert received the Diabetes Center Lifetime Achievement Award from Joslin for his significant contributions to the fight against diabetes and its many complications and also for Robert’s successful fight against this disease—more than 60 years without complications. Joslin’s CEO and President John L. Brooks III extended a “hearty thank you” on behalf of the staff at Joslin and commented that “The Lifetime Achievement Award is one that recognizes people who have made a huge impact on our organization and Dr. Spiro is certainly one of them.”

Robert Spiro’s Curriculum Vitae lists 134 original papers and 32 Review articles, published in high-quality journals: *J.Biol.Chem.*, *Ann.N.Y.Academy of Science*, *Science*, *Nature*, *Diabetes*, *Biochem.J.*, *Arch.Biochem.Phys.* and others.

Since January, 2013, Robert and I have exchanged frequent E-mail messages covering a vast variety of topics. Robert’s wide knowledge of many events other than medicine and his humor were nothing short of phenomenal. One of Robert’s more recent quotes goes as follow: Quote: I also treasure the story of Oliver Wendell Holmes who when lying in bed during his terminal illness was found reading a Greek grammar and, when asked why, responded “I am attempting to improve my mind”. Unquote.

Robert was very generous with his gifts to me of several books and other material. His very last gift, sent to me just a few weeks ago, was a CD of 17th century “Baroque Music for the Synagogue and the Royal Court (Salamone Rossi Hebreo, sung by The Zamir Chorale of Boston)”. The gift was accompanied by Robert’s lengthy description and analysis of this beautiful and haunting music. Our E-mail exchanges since January, 2013, generated 69,682 words.

Robert is survived by his wife of more than 62 years, Mary Jane (Paisley), his sons David (Jillian) and Mark (Elizabeth), grandchildren, Alex, Lilia, Joshua, Aleah and Porter, his brother-in-law William Paisley (Matilda), nieces Karen Spiro, Amy Spiro and Pamela Spiro Gowers (Liam), a nephew, Paul D. Spiro, M.D. (Kathy), and a cousin, Herman (Robert) Loewenstein (Lee).

Robert Gunter Spiro was an amazing man, an absolutely brilliant scholar, and a much treasured friend!

He will be greatly missed by all who knew him!

And Bob - I will miss your wonderful E-mail letters!

Harry Schachter