

RHODA BLOSTEIN, FRSC

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**Rose Mamelak Johnstone**  
**1928-2009**



Dr. Rose Mamelak Johnstone, B.Sc. 1950 and Ph.D. 1953 (McGill University) Professor Emeritus, Biochemistry, who was the Chair of the Department of Biochemistry from 1980-1990 passed away in Montreal in 2009 at age 81. Rose was born in Lodz Poland in 1928 and immigrated with her family to Canada in 1936. As a science student initially planning to specialize in Microbiology, she became enchanted with David Thomson's lectures in biochemistry and switched fields to finally obtain a B.Sc degree with first class honors. She then went on to graduate studies at McGill, in the laboratory of the distinguished professor, J.H. Quastel, head of the McGill-Montreal General Hospital Research Institute, where she studied anaerobic amino acid interactions in bacteria. Following her PhD studies, she undertook post-doctoral research at leading English laboratories including the National Institute of Medical Research at Mill Hill, the Chester Beatty Research Institute in London and the Strangeways Research Laboratory in Cambridge.

In 1956, Rose returned to McGill to take up a position as research associate at the McGill-MGH Research Institute. Then, in 1961, she joined the faculty of the Department of Biochemistry at McGill as an Assistant Professor, and remained there until the end of her life, becoming an Associate Professor in 1966 and a Full Professor in 1977. In 1985 she was named to the Gilman Cheney Chair in Biochemistry.

Rose had a distinguished research record and was elected as a Fellow of the Royal Society of Canada in 1987 in recognition of her many scientific contributions. Her early research dealt primarily with the metabolism of cancer cells, but soon after, she focused her work on membrane proteins and transport systems. Her major interest became sodium-dependent amino acid transport in mammalian cells and some of her major contributions to this field were insights into the electrochemical component of this process. Starting in the late 1970's, collaborative studies aimed to understand the intriguing decline of certain transport systems that occurs during red blood cell maturation led Rose into an adventure, which she called "Alice in Blunderland". Here, she and her colleagues "stumbled" on "Exosomes" that correspond to intraluminal vesicles within the cell. She then went on to show that shedding of exosomes comprises a route for eliminating specific membrane proteins as the immature red cell (reticulocyte) matures. This serendipitous adventure underscores Rose's intense curiosity and insightfulness. Since her identification, there has been considerable interest in exosomes and their function in health and disease, for example, their role in antigen presentation.

Rose's accomplishments extended beyond her research. As a Professor of Biochemistry, Rose was a dedicated and engaging teacher. She loved the subject and worked assiduously to stimulate her students with a clear understanding of basic principles. She was also a very active member of the McGill community. She served as a member of the McGill University Senate as well as on countless committees of the University, the Board of Governors, and the Faculty of Medicine. Rose was a member of the Council of the McGill Association of University Teachers (MAUT) and held the positions of Secretary and Treasurer in that organization. She also served the scientific community at large: she was a Past President of the Canadian Biochemical Society, a Past President of the Montreal Physiology Society and served as the Treasurer of the Royal

Society of Canada between 1991 and 1994. Among the honours bestowed upon her was the Queen's Jubilee Silver Medal in 1978.

Rose Johnstone was a warm and generous person with a keen sense of humour and love of life. She spent the last fourteen years of her life with her partner Professor Roy Caplan, living in Israel during fall and winter and in Montreal during spring and summer. They not only had fruitful scientific collaborations, but they shared a love of theatre and opera and travelled extensively throughout the world. Rose was a valued colleague and friend. To her family and friends she was a source of wisdom and strength to which they were always free to turn. She was deeply loved and is sorely missed.

Rose Mamelak Johnstone was predeceased by her husband Douglas and leaves to mourn her partner Roy Caplan, sons Michael and Eric and their children, and siblings Joseph, Helen and Mortimer.

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*(Author's title given as of the time of writing)*