

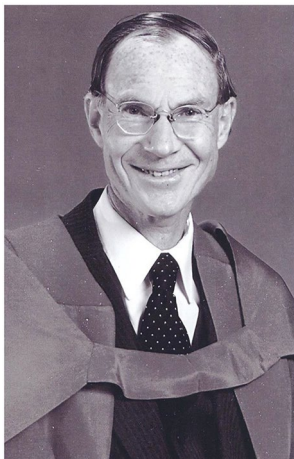


Donald Millis McLean (1926–2022): a humble and devoted scientist

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Donald M. McLean passed away on July 12, 2022 just 14 days short of his 96th birthday. His passing was marked with sadness and deeply-felt emotion by many colleagues and friends from around the world.

Don McLean was an Australian-born Canadian with a passion for arbovirology. After receiving his B. Sc., M.B., and M.D. degrees from the University of Melbourne (Australia), Don pursued post-doctoral fellowships at both the Rockefeller Foundation (USA) and Clare College, Cambridge (England). Don's subsequent professional activities included a Visiting Instructorship in Microbiology at the University of Minnesota Medical School, and Medical

Officership at the Commonwealth Serum Laboratories in Melbourne.

Leaving Australia, Don was appointed as Virologist at the Hospital for Sick Children in Toronto (1957–1967) with an additional appointment at the University of Toronto (1962–1967). Soon after his arrival in Canada an event occurred that would help shape Don's career path. In 1958, a 5-year-old boy residing on a farm near the town of Powassan in Northern Ontario experienced twitching and an inability to control his eyes [1]. After seeing his family doctor in Powassan, the youngster was immediately transported to the Hospital for Sick Children in Toronto. He died two days later. Don, along with colleague Dr W.L. Donahue, isolated a virus, subsequently named Powassan virus, from the boy's brain tissue [2]. Realizing they had a novel virus of the tick-borne complex of flaviviruses, Don initiated studies in Northern Ontario. These studies, undertaken in the late 1950's and early 1960's, resulted in confirmation that Powassan virus is a tick-transmitted virus, identifying a cycle involving *Ixodes* species ticks and numerous small mammals.

Don continued his Canadian adventure by moving west to Vancouver in 1967 to become Professor and Head of the Medical Microbiology Division at the University of British Columbia. Soon after his arrival in British Columbia he initiated studies to look for arboviruses active in British Columbia, after which the Yukon and Northwest Territories became the target of his research interests. At the time, many associated arbovirus transmission with tropical and temperate climates but, as colleague Thomas Monath noted, "While the rest of us were focused on the tropics, Don McLean went to the Yukon"! That decision was fortuitous.

Don documented robust cycles of bunyavirus activity, specifically snowshoe hare (SSH) and Northway viruses, in these far northern regions [3]. As was his scientific nature, Don was thorough in his studies (1972–1982), obtaining snowshoe hare virus isolates from different *Aedes* species and complementing his field studies by propagating the viruses under laboratory conditions. Don confirmed

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transovarial transmission of snowshoe hare virus by isolating it from field-collected *Aedes* larvae.

A couple of Don's anecdotes related to his field work are in order. Don noted that he could walk into a boreal forest and confidently predict where he would find active transmission cycles of snowshoe hare virus. In addition, he described driving to the Yukon, drilling through the ice on a frozen lake and isolating snowshoe hare virus from larval *Aedes communis* collected from them back in Vancouver. Some of these adventures are described in his textbook of medical virology, although, characteristic of Don, in the pages of this multi-edition work he speaks modestly of his own accomplishments.

Don retired from the University of British Columbia in 1991, after which a Donald M. McLean prize in Medical Microbiology was established to be awarded to a graduating student in the Bachelor of Medical Laboratory Science program. Don was also made Professor Emeritus in the Department of Pathology at the university.

Canada was fortunate to welcome two outstanding arbovirologists about 50 years ago – Dr Donald McLean and Dr Leslie Spence, former Director of the Trinidad Regional Virus Laboratory. Both lived until their late 90's and contributed greatly to their adopted country. Harvey Artsob was fortunate enough to have benefitted from the wisdom of these men. Dr Spence was contracted to establish a Canadian Arbovirus Reference Service housed at the University of Toronto and Harvey was hired to run the program. Dr Spence was wise enough to ask Don to serve as a consultant to this Reference Service, thus allowing Harvey to have frequent contact with Don.

Harvey found Donald McLean to be a shy, reserved man even when dealing with a much junior scientist, but Don simply bubbled with enthusiasm and became more and more animated as he talked. His passion for arbovirology was evident. Even after his retirement, Don regularly attended the annual meetings of both the American Society

of Tropical Medicine and Hygiene and the American Epidemiological Society (AES), having been elected to the latter honorary society as one of its youngest members in almost a century. In over 60 years, until infirmity prevented travel in the last years of his life, he rarely missed a meeting of either society, apparently becoming the longest serving member of both. He was also a regular at meetings of the International Conference on Diseases in Nature Communicable to Man. Through these meetings, Don had exposure to several generations of young scientists and delighted in mentoring them. In his last scientific presentation, at the annual AES meeting in 2016, Don presented an unforgettable talk with fascinating historical photographs of his career accomplishments, including isolation of and studies with snowshoe hare virus and Silverwater virus, and his work with luminaries of the (US) Armed Forces Epidemiology Board.

Don's interests went well beyond science. He loved to cultivate roses and was a writer for the Vancouver Rose Society. He spent his last few years at a retirement home in Vancouver after the passing of his wife, while continuing to serve as an elder at his church.

Don will be remembered with fondness and deep respect by all who knew him.

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