

Seminal Moments in Canadian Urology



Charles Brenton Huggins was born in Halifax NS on September 22, 1901. His father was a local pharmacist. He was educated in Halifax public schools and then moved to Wolfville NS where he attended Acadia University and earned his BA in 1920. He then attended Harvard Medical School in Boston and received his MD degree in 1924. From there Charles moved to University of Michigan at Ann Arbor where he completed an internship (1924-26) and became an instructor in surgery (1926-27) under the tutelage of Dr. Frederick A. Collier. He then went on to the University of Chicago, where he was to remain for the rest of his career.

In Chicago he initially became an instructor in surgery. Despite having trained as a general surgeon, the young Huggins was given the position as director of the Division of Urology which he held for 25 years. Taking this position seriously, he promptly acquired a urology textbook and committed it to memory. He excelled as a urologist and was promoted to Full Professor at the tender age of 35.

Over time, Huggins became more interested in translational research than the daily practice of clinical medicine. His early research interests included cellular transformation from one tissue type to another by altering the underlying matrix, and the relation of body temperature to bone marrow hematopoiesis.

In the 1930's he switched his focus to prostate function and physiology and was assisted with this work by two students: Clarence Hodges and William Wallace Scott. Scott went on to become the Professor of Urology at Johns Hopkins and founding editor of *Investigative Urology*. Obviously Huggins surrounded himself with talent! Huggins' landmark study on the response of prostate cancer to hormonal influence was published in 1941 along with Hodges. They treated patients with metastatic prostate cancer with either castration or estrogen therapy, and monitored their response by clinical status, measuring prostate size and serum prostatic acid phosphatase levels. They showed a marked improvement in the patients due to hormonal manipulation. This established the basis for the current treatment of hormonally responsive metastatic prostate cancer, which is a mainstay of urological oncology.

Huggins was awarded the Nobel Prize in Physiology or Medicine on October 13, 1966. He was one of two urologists (Werner Forssmann, 1956) awarded this Nobel Prize and was one of six Canadians so awarded (John Macleod 1923, Frederick Banting 1923, David Hubel 1981, Jack Szostak 2009, and Ralph Steinman 2011). Although he became an American citizen in 1933, Canada still claims him as her own. Huggins died in 1997 in Chicago after a long and distinguished career. His contributions to the management of prostate cancer are truly remarkable and constitute a major discovery by a Canadian Urologist.