

# MICROSCOPES, PATHOLOGY & VGH SCHOOL OF NURSING CONNECTION

By Gloria (Webb) Stephens 2024

## FIRST A FEW EARLY HISTORICAL FACTS

- When was the microscope invented? There seems not to be a clear person named for this achievement. About 1600 there was a father and son team, Hans and Zacharias Janssen in Holland who made spectacles. Zacharias, given credit for possibly making one of the earliest compound microscopes.



Z. JANS SEN

- Robert Hooke dramatically improved the microscope technology with the invention of the modern compound microscope. He placed three mirrors in sequence to magnify the images and added a light for better viewing. Hooke is also credited for the invention of the wheel barometer and the hydrometer. His most successful scientific achievement is the discovery of the 'living cell' in 1665, which opened the way for many of today's scientific advancements.



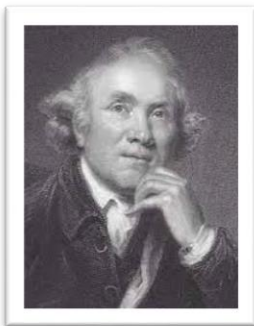
ROBERT HOOKE

- In 1674 Anton Van Leeuwenhoek, a Dutch tradesman and scientist with his simple microscope using only a single biconvex lens, was the first to discover free-living algae Spirogyra cells in water. He originally called these cells 'animalcules'. Anton Van Leeuwenhoek is known as the 'Father of Microscopy'.



VAN LEEUWENHOEK

- About the mid 1700's the microscope was introduced in to England by Dr John Hunter (1728 -1793) and then not used generally until mid-19<sup>th</sup> century. Hunter was a Scottish surgeon and doctor to King George III, (1738 – 1820), who reigned 1760 to 1820. Scotland was about twenty five years ahead of England when it came to formal education of the medical profession. Even France and Germany were using diagnostic devices, such as thermometers and microscopes. Hunter was renowned for his anatomy teachings, as well as other medical advances, which included a thorough understanding of anatomy and physiology as it related to disease and then he treated the patient accordingly. Hunter also made major contribution to dentistry which was likely the most impactful of his Legacy.



JOHN HUNTER

## SKIPPING YEARS AHEAD TO LOCAL PATHOLOGY LABORATORIES

### ANATOMY ACT

There was an Anatomy Act established through the Royal College of Surgeons, London, England in 1832 but not accepted in Nova Scotia until June 10, 1869, and was passed in the NS legislature authorizing doctors to perform the dissection of men who died in a Poor House and on bodies from the 'Dead House' who were not claimed. (The 1869 Act was 'Procurement & Transfer of Human Tissue & Organs'). The Act was to prevent 'grave robbing' as was the practice at the time. Dr. E. Jennings in Halifax, did most of the post-mortems as he taught the medical students anatomy. Unfortunately, he had a terrible reputation as he was so focused on his teaching that he ignored the feelings of relatives and has been documented that he would take his students into homes and perform post mortems without permission, especially in the poorer section of town. This was basically the practice until a proper lab was built. (Story from a report in the VG Nurses Archives, Bethune Building)

A rudimentary lab was set-up first in 1894, as a small space behind the main stairway of the VG Hospital in which Dr. Hattie worked on a very limited scale, using a limited microscope. There was no incubator and interns were required to incubate the culture tubes overnight in the pockets of their night shirts. Before this time facilities for pathology at the VG were not very extensive. (From VG Annual Report)



VICTORIA GENERAL HOSPITAL 1890

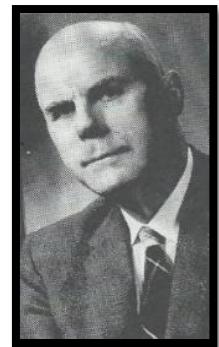


Dr. A. W. H. Lindsay

Eventually a Provincial Pathology Laboratory was built and Dr. Alexander W. H. Lindsay was the first full time pathologist in 1911, who did much with the planning and equipping for this institution. He unfortunately had a tragic death in the sinking of the steamship, Empress of Ireland in the St. Lawrence River, in 1914 when the ship was torpedoed by a German submarine during WW1.

Lela Hamm, (Donovan), VG School of Nursing graduate of class 1906, was granted a Certificate in Pharmaceutical/Laboratory for Materia Medica and she worked in the lab with Dr Lindsay as his assistant. She served in WW1 with the #7 Dalhousie Stationary Medical Unit as a Nursing Sister in [France](#).

In 1921, Dr. D J MacKenzie was appointed Assistant Pathologist and he immediately set-up a blood transfusion service. Insulin was now available in 1912, so it became necessary to have a blood chemistry service, so an addition to the Lab occurred in 1924. In 1940 the building was renamed to be Pathology Institute and again renamed to be the MacKenzie Laboratory and Diagnostic Centre after its first Provincial Director of Laboratories in Nova Scotia, Dr. D J MacKenzie. This Laboratory continues to service the citizens of Nova Scotia (2024)



DR.D.J. MacKenzie

## MICROSCOPES

The microscopes below are stored in the VGH School of Nursing Archives, Bethune building, VG Site of the QE2 Complex, Halifax, NS.



### DESCRIPTION:

*Small compound microscopes by E. Leitz of Wetzlar about 1880.*

*Horseshoe is of brass, Rotatable concave mirror and the back surface is plain and blackened. Fixed rectangular stage with diaphragm disk.*

The microscopes were donated by Dr Ronald Martin. He used these microscopes in the MacKenzie Laboratory, 1950 -1970 under direction of Dr C E Van Rouen, a distinguished scientist and Professor of Bacteriology at Dalhousie University. Van Rooyen was active in the 1961 polio trials in Nova Scotia with the trivalent Sabin vaccine .

Dr Martin also taught Bacteriology in the Faculty of Medicine and Dentistry at Dalhousie University. As a member of the “International Physicians for the “Prevention of Nuclear War”, Martin received the Noble Prize in 1985. He continued with his research at Dalhousie University until 1999.



The black microscope was used in teaching nurses at the Victoria General School of Nursing and donated by Jean Magee RN, BScN, Director of Nursing Education VG (1974 -1985, when she became Director of Educational Services. She served on many provincial boards such as the NS College of Physicians and Surgeons Disciplinary Hearing Committees and the NS Cancer Foundation Board. Jean was a graduate of the VGH School of Nursing in the 1956B class



JEAN (Higgins) MAGEE