

Medical Philately (Medical Theme on Stamps)



25 NU Bhutan Stamp of Dr. Golgi & Cajal (2000)

CAMILLO GOLGI AND RAMON Y CAJAL WHO PEEPED INTO THE MYSTERIOUS WORLD OF NERVOUS SYSTEM

Camillo Golgi and Ramon Y Cajal shared the Nobel Prize in Physiology and Medicine in 1906 for their studies on the structure of nervous system. Strangely they met only at Stockholm. Golgi gave his Nobel lecture first in which he described his reticular theory of neuronal network. This was contradicted by Cajal in his Nobel lecture, who advocated the cellular basis of structure of nervous system. Sharing the same passion and dedication to science, both had different personalities. Cajal was impetuous and burning with enthusiasm; Golgi was a cooler and academic.

Camillo Golgi was born on July 07, 1843 in Corteno village in northern Italy. He studied medicine in University of Pavia and graduated in 1865. Financial problems in 1872 turned out to be a blessing in disguise when he accepted the post of chief medical officer at the hospital of chronically ill in Abbiategrasso. In the seclusion of this hospital, he worked hard and discovered a method of staining nervous tissue in 1873. This discovery of black reaction based on nervous tissue hardening in potassium bichromate and impregnation with silver nitrate (Golgi stain) permitted for the first time visualization of nerve cell body with its processes in entirety.

Golgi was gifted in stimulating his students. In Golgi's laboratory, Adelchi Negri (1876-1912) discovered Negri bodies in Rabies. Among many other findings, Golgi described morphological features of glial cells, tendinous sensory corpuscles in the Golgi tendon organs. In 1898, he described cellular internal reticular apparatus or Golgi apparatus. This organelle makes Golgi the most frequently cited scientist in cell and molecular biology. He died in Pavia in 1926.

Santiago Ramon Y Cajal was born on May 01, 1852 in the village of Petilla in northeast Spain. Cajal was a rebellious teenager. His father apprenticed him for a while to a shoemaker and to a barber. Cajal, however, wanted to become an artist. His passion and talent in drawing had a great hand in his success as medical scientist. Shortly after graduating in medicine at the University of Zaragoza in 1873, he was drafted into army as a medical officer and dispatched to Cuba. He contracted malaria and tuberculosis in Cuba and returned to Spain a sick man.

In 1887 Cajal travelled from Valencia to Madrid to meet Dr Luis Simarro Lacabra who showed him some specimens of nervous tissue stained with Golgi stain. Nerve cells appeared brownish black to their finest branches, standing out clearly against a transparent yellow background. This was like a flash of lightning to Cajal. A look was enough and he was enraptured. Cajal's painstaking work on nervous tissue gave him strong belief that the basic unit of nervous system was individual nerve cells (christened as neurons by Waldeyer in 1891). He continued to work productively at the University of Madrid until his death in 1934.

Although Golgi misinterpreted the overall view of the organization of nervous system, Nobel Committee aptly awarded Nobel Prize jointly to them in 1906 as Golgi's initial work and stain helped Cajal in correctly interpreting the overall structure and organization of nervous system.