

Editorial

In memoriam Björn Sigurdsson born 100 years ago



Björn Sigurdsson was appointed the first director and founder of the Institute for Experimental Pathology, University of Iceland at Keldur, in 1946. Research started in new facilities in 1948, focused from the beginning on diseases in sheep. This was specifically due to new infections imported into Iceland in 1933 by Karakul sheep, which were causing paratuberculosis, maedi/visna and adenomatosis/jaagsiekte diseases. The diseases were devastating for the Icelandic farmers as the geographically isolated Icelandic sheep breed had a different or higher sensitivity to these diseases than do other breeds.

Björn Sigurdsson was born in Iceland on the 3rd of March, 1913. He studied medicine at the University of Iceland, finishing his MD in 1937. After an internship in Reykjavik Hospitals he studied at the Carlsberg Fund Institute for Biology in Copenhagen and worked at the Danish State Institute for Serology. In Iceland he also worked at the University Institute for Anatomical Pathology and then left for the United States to work at the Rockefeller Institute in Princeton, New Jersey. After returning to Iceland he made preparations for planning and building a science institute, the Institute for Experimental Pathology, which was to become the platform for his future research and achievements. The Rockefeller Foundation in the USA was the original financial supporter of the institute, with the requisite that Sigurdsson would be the director. Björn Sigurdsson defended his doctoral thesis on paratuberculosis in sheep at the University of Copenhagen in 1955.

Björn Sigurdsson made several major contributions in microbiology. His major breakthroughs were on the introduction of the concept of slow viral infections, still acknowledged as a major breakthrough and now referred to as the legacy of Dr Björn Sigurdsson. His work resulted in the first description of a lentivirus, the MVV. The striking feature that Sigurdsson discovered is the slow progression to disease after primary infection. He developed a framework of experimentation for studying slow and usually progressive and fatal brain infections. Sigurdsson originally presented his theory on atypical slow infections in a series of lectures at the University of London in 1954. Together with his collaborators they managed to grow MVV *in vitro*, the first *in vitro* growth of a lentivirus. His ideas were also based on brain infections that are now proposed to be caused by prions.

Björn Sigurdsson died from cancer, only 46 years old, on the 16th of October, 1959. Despite his short lifespan he accomplished early pioneering work towards a better understanding of retrovirology.

Today there are ongoing scientific projects at the Institute for Experimental Pathology on sheep diseases, as well as on diseases in other mammals, birds and fish, both farmed and wild.

The publication list of Björn Sigurdsson can be found on the Institute's homepage at www.keldur.is

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