



Ingemar Gustavsson

In 1964 Ingemar Gustavsson found the first chromosome abnormality in domestic cattle, the 1/29 Robertsonian translocation. Since its first discovery in Sweden this abnormality has been found in five continents in more than 60 different breeds of cattle, both *Bos taurus* and *Bos indicus* (Zebu) type.

This abnormality is responsible for a 5-10% reduction of fertility. This is due to an increase in embryo mortality caused by the formation of unbalanced gametes in the translocation heterozygotes. After the publication, in 1969, of Ingemar Gustavsson's PhD thesis in *Hereditas*, a consistent eradication policy of this abnormality was adopted first in Sweden, and subsequently in many different countries. Cytogenetic laboratories have been created in many countries, especially in Europe, to search for the presence of this abnormality in cattle livestock.

Ingemar Gustavsson studied biology and veterinary medicine. His cytogenetic work started in 1962 under the supervision of Professor Albert Levan at Lund University. He was first an associate professor and later a professor at the Royal Veterinary College in Stockholm and the Swedish University of Agriculture Sciences in Uppsala, Sweden. In 1989 Ingemar Gustavsson obtained a personal professorship in Cytogenetics in the Swedish Council of Forestry and Agricultural Research. He has received several awards and has published more than 200 papers in international journals on clinical cytogenetics, embryo technology and gene mapping in domestic animals.

Ingemar Gustavsson played an important role in the national and the international cytogenetics community by participating in almost all the scientific meetings on domestic animals in Europe and North America. Many young cytogeneticists have been trained in his laboratory and several obtained a PhD degree under his supervision.

In July 2004, the E.C.A. Permanent Working Group "Animal Cytogenetics" celebrated the 40th anniversary of the 1/29 translocation during a whole-day meeting in INRA-Jouy-en-Josas, France. Ingemar Gustavsson presented the history of the discovery of 1/29 translocation and its importance for the development of the cytogenetics of domestic animals.