

Recipient of the 2013 IETS Pioneer Award: Prof Dr Joachim Hahn

Joachim Hahn was born in December 1924 in a small village in North Germany. After finishing his high school education he was drafted into the army at the end of 1942. In 1944, he was wounded and remained in a military hospital until he was discharged at the end of the war. In the spring of 1946, he enrolled as a student at Humboldt University, Faculty of Veterinary Medicine, in Berlin, Germany. After his final examination in 1951, he became an assistant at the Clinic of Gynaecology and Obstetrics at the Veterinary School of Humboldt University. In 1958, he moved to the Veterinary School of Hannover and was research assistant at the Clinic of Obstetrics and Gynaecology. He finished his habilitation in 1968. He then accepted an invitation to become a research associate in the Animal Science Department at Cornell University, Ithaca, NY, where he carried out research studies for two and a half years in the reproductive physiology laboratory of Dr R. H. Foote.

After returning to Hannover, he assumed a professorship and became head of a Department of Experimental Reproductive Biology. Later, he became full professor in the same position. He retired on 1 October 1992. The Department of Reproductive Biology has since been changed to the Institute of Female Reproductive Biology.

Prof Dr Hahn's career spanned more than 40 years. During this time, his research efforts were entirely in the area of embryo transfer and related technologies in several species. His work resulted in the publication of over 200 peer-reviewed articles and several book contributions. He directed the research activities of more than 70 graduate and post-doctoral students and has provided instruction to countless veterinary students. He also had the opportunity to conduct training programs for post-doctoral, graduate, and undergraduate veterinary students in different countries such as Italy, Poland, Russia and Brazil. His career work in the field of reproductive biology has gained recognition around the world. His honors include president of the German Society of the Study of Fertility and Sterility (1983–1987), foreign member of the Russian Academy of Agriculture Science (1985–present), speaker of the German Embryo Transfer Group (1974–1991), vice-president of the European Embryo Transfer Association (1986–1990) and European Pioneer of Cattle Embryo Transfer (1993) and the Lower Saxony Cross of Merit (2005).

In addition to his dedication to research activities, Prof Dr Hahn was active on several committees of his veterinary school and his church. He has participated in many other scientific and applied associations of cattle breeders in Germany. As special recognition of his activities, he has been honoured with medals from universities in Giessen, Berlin, Brunn and Kiel, as well as from three German animal breeding organisations.

At the time he was working as a research associate for Prof R. H. Foote in the reproductive biological group of the



Animal Science Department of Cornell University, he performed numerous experiments on superovulation and the flushing and cultivation of embryos with rabbits and mice, and began the first experiments with cattle. After returning to Germany in 1969, he immediately contacted the two largest insemination organizations, the Besamungsverein Neustadt a.d. Aisch and the Rinderproduktion Bremen-Hannover, and attempted to convince the farmers of the usefulness of this new biotechnical method. This gave him the possibility of experimenting in the area of embryo transfer and to work on the associated techniques. It took another 4 years until the Besamungsverein Neustadt a.d. Aisch and its technical director Rudolf Hahn first agreed to begin carrying out practical experiments on embryo transfer in cattle. In 1975, he began the first embryo transfer experiments at RPN, the largest insemination organisation in Northern Germany. At first, the embryos were recovered surgically. It soon became clear that breeders would only provide their best cows when surgical recovery with its associated after effects of abdominal adhesions (among others) could be replaced by nonsurgical recovery. A worldwide search began in the 1970s for a practical method of nonsurgical recovery. Prof Dr Hahn developed a flushing tube at that time, the 'flushing catheter Neustadt/Aisch,' which is still used at many transfer stations today. A further problem of embryo transfer was the surgical transfer of embryos. He also reported on the successful use of nonsurgical transfer back in 1975 at the 'Seminar on egg transfer in cattle' in Cambridge. Whereas the initial results with nonsurgical transfer were still unsatisfactory, the instruments were soon so improved that, already in 1978, the change from surgical to nonsurgical transfer was made. In the early 1980s, he produced the first genetically identical twins by splitting embryos. Later on, this technique was further

simplified and, when carefully performed, was very practical. In connection with micromanipulation, he conducted experiments in which cattle chimeras from two and three genetically different embryos were produced and could show that, on the basis of their offspring, gonadal chimerism was present in the chimeric bulls. It is important to mention this experiment because he was already convinced that production of chimeras with the help of embryonic stem cells would be of importance in the production of transgenic cattle.

He has been a pioneer in the truest sense through his work in the European embryo transfer industry. He dedicated his academic life to the improvement of embryo-related technologies into livestock production around the world. There can be no doubt of the importance of Prof Dr Hahn's pioneering contributions to the practice of embryo transfer in Germany and the world. In recognition of the significant contributions he has made over the last 50 years, the IETS is proud to award Prof Dr Joachim Hahn with the 2013 Pioneer Award.

Selected Pertinent References

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