

2013 Recipient IETS Distinguished Service Award

Dr. Andrzej Bielanski has served as a member of the Health and Safety Advisory Committee (HASAC), formerly the Import/Export Committee, of the International Embryo Transfer Society for many years, and with outstanding dedication and commitment. He certainly deserves this testimony of gratitude from the IETS—the Distinguished Service Award.

Andrzej was born in 1944 in Cracow, Poland, during a dramatic year for Europe, but was raised in an environment of horse breeding with a father who was also a veterinarian. Andrzej soon decided to follow studies in veterinary medicine; he graduated as a DVM in Wroclaw in 1967 and then defended his PhD in reproductive biology at Cracow University in 1973. He began his research career at the Animal Production Institute in Balice/Cracow, where he concentrated on endocrinology of pregnancy and the effect of leptospirosis on fetal mortality in pigs. It is noteworthy that he began his career studying the relationship between pathogens and procreation physiological function (pregnancy and fetus)—this has remained his primary interest throughout his career.

As a visiting scientist, he pursued his studies with Drs. J. Raeside and R. Thompson at the Ontario Veterinary College, University of Guelph, Canada, and in 1982, he was awarded a research fellowship from the Natural Sciences and Engineering Research Council of Canada and posted at the Animal Diseases Research Institute (ADRI), Nepean/Ottawa, to study disease transmission by embryo transfer. This gave him the main guidelines for research that he pursued over the next three decades. He took a break for a year when he joined the embryo transfer research team directed by Dr. R. Mapletoft at the Western College of Veterinary Medicine, University of Saskatchewan, Canada, to study the integrity of zona pellucida during cryopreservation of bovine embryos and to provide the very first on-farm embryo cryopreservation services in Western Canada. In 1985, Dr. Bielanski returned to the Nepean Institute and Dr. D. Hare's research group as a senior research scientist, to continue his work on disease control via assisted reproductive technologies (ART), where he has remained until the present time.

Together with ADRI scientists at Nepean, and in collaboration with USDA researchers at Plum Island, New York, Dr. Bielanski contributed to the first study on the potential transmission of BLV and FMDV by embryo transfer. The findings that these two pathogens were not transmitted by embryo transfer, for the first time convincingly demonstrated that embryos can be safely transferred without the risk of disease transmission, even from acutely infected donors with highly infectious agents.

Dr. Bielanski's research has included development of methods for disinfection of embryos and semen, and detection of pathogenic microorganisms in infected micromanipulated embryos. He developed an *in vitro* fertilization program to study the interaction of pathogens with the zona pellucida of *in vitro*-produced embryos. This included a variety of viral (IBRV, BVDV, BIV, PCV), bacterial (Bovine TB, Johne's disease, *Leptospira*, *Campylobacter fetus*, *Mycoplasma*) and parasitic agents (*Tritrichomonas fetus*, *Neospora caninum*). More recently, his research has been directed toward the risk of contamination and cross-contamination of

animal and human embryos via vitrification and sanitary aspects of banking germplasm in liquid nitrogen.

Andrzej started working with the Import/Export Committee of the IETS in 1989, reinforcing the impressive contributions of Dr. D. Hare and L. Singh from Canada in the early nineties. He has since attended all IETS meetings and has contributed greatly. He has been sharing with his thoughts and reflections, and has been very attentive in listening to what colleagues had to say regarding pathogen–embryo interactions. Andrzej has been very serious in ensuring that the embryo would remain the safest means of exchanging genes. His many experiments have demonstrated how “tricky” this interaction could be, and he has always been open-minded when confronted with challenging facts. In this regard, he has been scrupulously important to the IETS/HASAC group. For example, all members of HASAC were recently captivated by his electron microscope pictures pointing out details that many would have missed, and yet so critical to the subject at hand.

Dr. Bielanski’s work has produced novel findings on the transmission of infectious agents by embryos and semen, which are of international concern. These findings have the potential to influence international trade of germplasm. He has published more than 100 research papers and reviews in peer-reviewed international journals pertinent to his expertise and co-authored chapters in the last two editions of the IETS Manual as well as two text books.

The Board of Governors, on behalf of the membership of the IETS, is indebted to Dr. Andrzej Bielanski, who has had a very significant impact on the considerable work done by the IETS/HASAC group, sharing facts and ideas and reviewing with extreme care all published papers on pathogen–embryo interactions. His contributions have been of great benefit to our society and to the embryo transfer industry at large.

