

## Obituary

# Obituary: A K Tarkowski (1933–2016) – an outstanding mammalian embryologist



Scientists are often seen as unusual people who pursue their interest in the world around them passionately, almost to the exclusion of other aspects of life. They are preoccupied with finding answers to questions about their chosen field. Andrzej Tarkowski was a typical scientist in respect of his passion for his work, but he was a larger man, contributing to the rich Polish artistic world with his inspired photography of nature, leading to many exhibitions in Poland, and enthusiastically embracing a general interest in the great pageant of life.

In the natural sciences, questions usually seek to define the subject, find out how it works and why it works the way it does. Tarkowski's main interest was the early mammalian embryo and he made major pioneering advances that enhance our understanding of how and why the embryo develops the way it does, with cells forming an inner group that give rise to the embryo and an outer group forming the placenta. He demonstrated how this happens and in doing so he pioneered many of the techniques of manipulation and analysis of the early mammalian embryo, and made a number of other major breakthroughs including: the analysis of single cell potency during early development; demonstrating that a cell's fate is a result of its position in the embryo; development of the first mammalian chimaera; and analysis of the roles of the egg and sperm nucleus by developing nuclear transfer techniques, thus creating parthenogenetic embryos and haploid blastocysts. His work facilitated many of the recent major advances in mammalian embryology: cloning, genetic sampling of individual embryos via preimplantation genetic diagnosis, and embryonic stem cell development.

He died on the 23 September 2016 at the age of 83 and remained an active experimental researcher until the end, even though he officially retired in 2003. He graduated from Warsaw University, which also awarded him a PhD and a DSc. He joined the University staff in 1955, quickly became a Professor and the Director of the Institute of Zoology. He worked closely with colleagues internationally and was a Fellow of the Rockefeller Foundation at the University College of Wales, UK from 1960–61 and Visiting Royal Society Professor at the Department of Zoology, University of Oxford, UK from 1984–85. His general interest in other mammalian embryos led to visits to Australia, to Adelaide and La Trobe Universities as a Distinguished Visiting Fellow. He was highly regarded in Poland and was awarded the Polish National Award 'for research in mammalian embryology' (1980) and the Commander's Cross with the star of the Order of Polonia Restituta (2012) and was a Member of the Polish Academy of Sciences from 1974 and of the Polish Academy of Arts and Sciences from 1990.

His work received international recognition demonstrated by award of the Albert Brachet Prize of the Royal Academy of Belgium 'for research in experimental mammalian embryology' (1980), the Alfred Jurzykowski Foundation (USA) Award 'in recognition of pioneering work in the field of mammalian embryology and new techniques in analyzing chromosome abnormalities in mammals' (1984), the Embryo Transfer Pioneer Award from the International Embryo Transfer Society (1991), and the Prize of the Japanese Science and Technology Foundation, which he shared with Anne McLaren in 2002. He was a member of the French Academy of Sciences, the National Academy of Sciences, USA and the Academia Europaea.

He leaves his widow Teresa and his daughter Monika, and his many friends and colleagues share their grief. We will all miss his joyous nature and sense of fun. He has also left a fine legacy in his many students, whom he inspired to make further contributions to this important field.

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