

Professor Stanisława Stokłosowa (1927–2019)

The Polish Society for Histochemistry and Cytochemistry has been deeply affected by the announcement that Professor Stanisława Stokłosowa passed away on October 20, 2019. She was a meritorious member of the Society which conferred the distinction of Honorary Member on her in 1995. Her efforts to organize the Polish Branch of the European Tissue Culture Society, which actively acted as the Tissue Culture Section of the Polish Society for Histochemistry and Cytochemistry cannot be overlooked.



Professor Stanisława Stokłosowa was born on February 8, 1927 in Dobczyce near Krakow, Lesser Poland. During World War II, she attended undergraduate classes at the secondary school of humanities in Myślenice. Then she studied biology at the Faculty of Mathematics and Natural Sciences of the Jagiellonian University in Krakow where she graduated with a MSc thesis (1949) completed in the Department of Zoology. From 1949 till 1997 Professor Stokłosowa continuously worked in the Department of Animal Physiology in the Institute of Zoology, Jagiellonian University.

In 1962 she completed her PhD dissertation, and in 1972 obtained her “habilitation”, a higher degree qualifying for an associate professor. In 1974, she was appointed Reader and in 1980 — Professor.

We highly value the opportunity to present her accomplishments and pay tribute to them. She founded the Laboratory of Endocrinology and Tissue Culture and headed this unit until her retirement (1962–1997). Today her Laboratory exists as the Department of Endocrinology, Institute of Zoology and Biomedical Research, Faculty of Biology, Jagiellonian University in Krakow.

In co-operation with Charles University and the Czechoslovak Academy of Sciences in Prague, she published two pioneering papers in which she demonstrated sexual dimorphism in the structure of skin of

the bull trout. They have become classics in the body of scientific literature.

Professor Stanisława Stokłosowa had a long-term research stay at the University of Illinois, Urbana-Champaign, USA, where she was trained in radiocompetitive and radioimmunological assays of steroid hormones. She later adapted them for use in Krakow. At that time, Professor Stokłosowa gathered around her a group of young scientists and students and initiated studies on the isolation and culture of theca cells of the

ovary which offered a new *in vitro* research model. The results are often cited as pioneering studies. Developing the theca cell culture model enabled studies of interactions among different types of ovarian cells in co-cultures and of the regulation of hormonal function in isolated follicular ovarian cells. In 1976, she extended her studies to the model of isolated Leydig cells and Sertoli testicular cells. In 1980, studies of the effects of prolactin on various components of the ovary were initiated. These data were the first, providing an important contribution regarding the role of prolactin in reproduction. At the same time she commenced a pioneering study on the hormonal function of ovarian follicles isolated from seasonally reproducing rodents.

This line of *in vitro* research supplemented by histochemical, immunocytochemical, immunohistochemical and radioimmunological methods were important for building a good reputation for the Tissue Culture Laboratory in Poland and abroad. In these years her Laboratory was among the first Polish research units introducing these methods. Hence, there was a continuous influx of researchers and technicians from various domestic and foreign institutions, coming for training in these methods, which for years were valuable methodological foundations of the research in Professor Stokłosowa’s lab.

In the 1980s in a joint project with the Department of Molecular Genetics at the Czechoslovak Academy of Sciences in Prague, research was initiated on the localization of cytoskeletal elements in gonadal cells. To achieve this, immunocytochemical methods with monoclonal antibodies against tubulin α and β and vimentin were used. In cooperation with the Department of Ichthyobiology and Fisheries at the Academy of Agriculture in Krakow, Professor Stokłosowa adapted fish ovarian cells to tissue culture and performed studies on the hormonal regulation of steroidogenesis in the annual cycle. Moreover, she initiated a project on dynamics and hormonal regulation of androgen, estradiol and progesterone receptors in ovarian tissues.

Professor Stokłosowa cooperated with the Institute of Animal Reproduction and Food Research of the Polish Academy of Sciences (PAN) in Olsztyn, the Institute of Animal Physiology and Nutrition of PAN in Jabłonna, the Department of Molecular Genetics, Prague, the Research Institute of Animal Production, Uhřetíněves near Prague, the Department of Steroid Biochemistry in Glasgow, Scotland, the Institute of Hormone and Fertility Research, Hamburg, Germany, and the University of Caen, Laboratory of Biochemistry, Caen, France. She organized symposia with international participation on cell and tissue culture in the frame of her section within the Polish Society for Cytochemistry and Histochemistry. During the Symposium *Progress in techniques of cell and molecular biology* organized in Poznan (2000) her plenary lecture on the tissue culture models confirmed conference attendees how an invaluable role plays the cell culture system in histochemical studies.

The scientific output of Professor Stokłosowa comprises more than one hundred publications on the physiology and endocrinology of ovaries. She is the author of the textbook "Cell and Tissue Culture" published in Polish by the Polish Scientific Publisher (PWN) which has played a role of an indispensable

guide to the newcomers to these techniques. She kindly shared her wide knowledge and experience when teaching younger coworkers and students. She supervised 52 Master of Science theses, eight graduate students preparing their Ph.D. dissertations and five post-docs applying for habilitation (*veniam legendi*).

The scientific accomplishments of Professor Stanisława Stokłosowa and her position as a founder of the Cracow school of endocrinology of reproduction were awarded with the Jagiellonian Laurel by the Rector of the Jagiellonian University. The Polish state authorities honored her with Medal of the National Education Commission. In recognition of her scientific achievements and long-lasting cooperation between the scientific units in Olsztyn and her home University in Krakow she was awarded the doctor *honoris causa* title by the Senate of the Warmia and Mazury University in Olsztyn, Poland.

Finally, it is worth mentioning that Professor Stokłosowa's enormous efforts to found the international journal *Reproductive Biology* were successful. The official journal of the Society for Biology of Reproduction was launched in 2000 and she was the first Editor-in Chief until 2012.

Stanisława Stokłosowa was a stimulating and generous teacher, always open to suggestions and ever ready to provide a hypothesis and explanations with good will and humor. In addition to her passion for science, Professor Stokłosowa was an enthusiastic painter, loved flowers, still lifes, and portraits. In 2017, to celebrate her 90th birthday the exhibition of her paintings was organized in Collegium Maius of the Jagiellonian University in Krakow.

Her scientific, academic and editorial activities may be a significant message for early-stage researchers and future generations of scientists. Even after her death, Professor Stokłosowa's ideas and efforts are continuously promulgated and used by others.

Let her memory be eternal...

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