In memoriam of Stan Fakan

Prof. Stan Fakan suddenly passed away on January 21st, 2023.

He was born in České Budějovice in 1941 and studied at the University of Prague. Before completing his Ph.D., Czechoslovakia was invaded by the Soviet Union and Stan moved to Villejuif, France, in 1969 to join Wilhelm Bernhard's lab. Ultrastructural cytochemistry and high resolution autoradiography were at their height in Bernhard's lab, where they were applied to study the cell nucleus. By combining the EDTA regressive technique with autoradiography with the Elon development technique, a remarkable paper was published in 1971[1]: for the first time, pre-mRNA transcription was shown to occur at the periphery of condensed chromatin in what was to be called the perichromatin region. After several papers in which he first used extrashort or prolonged ^{3}H-uridine incorporation times[2] localizing the nucleolar transcription sites, Stan and his wife Jitka moved to Switzerland, at the Institut Suisse de Recherche sur le Cancer (ISREC) in Lausanne. He obtained his Ph.D. with distinction in 1972 at the University of Lausanne. There, he continued his studies on the cell nucleus at electron microscopy, and started to apply the first antibody-based detection techniques. He was also the first to make use of the terminal transferase at electron microscopy[3], a technique that will have a new life some 20 years later. In 1981 Stan was offered the Deputy Director position at the Centre de Microscopie Electronique (CME) of the University of Lausanne. Within a few years, he contributed to make the Centre probably the best equipped in Europe, in terms of top performing electron microscopes.

In this context, he published two more remarkable papers[4,5] where the idea of co-transcriptional splicing was originally proposed. A decade later, Iain Mattaj acknowledged his contribution in an editorial on Nature[6].

The lab at the CME became a meeting point for researchers from Europe and USA (those who write worked there for years); to cite a few, Jean-Luc Courtens, Dusan Cmarko, Scott Kaufmann, Vaclav Kopecny, George Leser, Gerardo Vazquez-Nin, Carlo Zancanaro, and many others. The cell nucleus was studied in many tissue and cell models, ranging from physiological modifications (hibernation and embryogenesis) to drug effects to hormonal stimuli deprivation.

Stan was capable, until the end, of quoting a paper published even 20 years before and finding it in its impressive collection of reprints, well before the web search we currently use. He has always been extremely interested in new ideas of technical developments to be applied in science, while being always very cautious in considering the results before publishing. After his retirement, he continued to collaborate with several groups, both at the Munich University and at the Ecole Polytechnique Fédérale de Lausanne (EPFL), always on the fascinating cell nucleus.

One of his research articles[1] was selected by the American Society for Cell Biology to be republished in the book "Landmark Papers in Cell Biology", celebrating forty years of the Society[7].

In 2003, Stan Fakan was awarded the "Maffo Vialli International Award for Histochemistry" and "The Wilhelm Bernhard Medal" presented at the 18th Wilhelm Bernhard International Workshop on the Cell Nucleus in Pavia, Italy, and in 2004 he was invited to give "The Robert Feulgen Lecture" at the Symposium of the Society for Histochemistry on The Cell Nucleus in Prague, Czech Republic.

Stan leaves his wife, Jitka with whom he spent an entire life, a beloved daughter, Noemie and two grand-daughters who brought

new joy in the last years. Stan was a kind, gentle person and to work with him and learn from him has been a privilege. Our scientific career has been deeply influenced by him.

On a lighter note, we will never forget how he always asked "Are you going to make a fundamental discovery?"

A wise colleague once said that we, working in a lab and doing science, are all researchers, but only few are scientists. Stan was a scientist.

Marco Biggiogera and Manuela Malatesta

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