



A leading figure in the field of plant genetics

RNDr. Tomáš Gichner, DrSc.

passed away on 6th January 2019 at the age of 83.

RNDr. Tomáš Gichner, DrSc was an accomplished geneticist, a valued colleague, a wise mentor, and a dear friend to many of us. His great enthusiasm for research was an inspiration for all who knew him.

Tomáš Gichner was born on 10th October, 1936, in Most, Northwest Bohemia. As a child, he spent several years in the United Kingdom where his family immigrated to escape the anti-Semitic persecutions, which took place during World War II. His career choice was greatly influenced by his mother, who was a scientifically minded and highly educated medical doctor. Tomáš's formal introduction to science, however, was at the Faculty of Biology at Charles University in Prague where he graduated from the genetics program in 1959. He then joined the Department of Plant Physiology and Genetics at the Biological Institute of the Czechoslovak Academy of Sciences (later the Institute of Experimental Botany of the Academy of Sciences of the Czech Republic) and received his PhD. (CSc.) degree in 1963. Tomáš remained affiliated with the Institute for his entire scientific career, which spanned close to 50 years. He received the highest scientific degree awarded to Czech scientists (DrSc.) in 1989.

*In the sixties, Tomáš worked at several prestigious institutions in Western Europe such as Max Planck Institute in Köln am Rhein and the University of Stockholm. These formative experiences fueled his long-standing interest in mutagenesis and put him at the forefront of the mutation research. In his early work, he explored the mutagenic potential of radiation and various chemical agents. One of his seminal discoveries was the plant metabolic activation of promutagens, the intriguing process by which plants mediate the conversion of non-mutagenic chemicals (promutagens) into compounds with mutagenic activities. He later studied the formation and resolution of chromosomal aberrations using *Hordeum vulgare* and *Vicia faba* as model systems and published numerous highly cited articles on this topic. Tomáš was also one of the first researchers who spearheaded the use of *Arabidopsis thaliana* as a model organism in genetics and plant physiology research. Tomáš was also the first who used the Single Cell Gel Electrophoresis (Comet) assay as a method to study DNA damage and repair in plant cells. He became an expert in this technique and trained many local and international scholars how to use this method. The increased pollution of the environment with man-made chemicals motivated Tomáš to study the effects of these pollutants on the integrity of plant DNA, and his favorite Comet assay was uniquely suited for this task. These studies resulted in numerous publications and several book chapters and earned him an even bigger recognition of the international community of plant biologists and geneticists.*

In addition to his remarkable scientific achievements, Tomáš will always be remembered for his great appreciation for the people he worked with and for his generosity. He had the unique ability to foster remarkable friendships and collaborations, many of which lasted a lifetime. The articles he published with Dr. Jiri Velemínský, who was his colleague at the Institute of Experimental Botany and later became the Institute director, are highly regarded in the field of plant mutagenesis. The foundation of the Velemínský-Gichner team was their friendship, which was legendary! Another remarkable collaboration was the one Tomáš established with Dr. Michael Plewa and Dr. Elizabeth Wagner, American researchers from the University of Illinois at Urbana, Champaign. Tomáš counted Michael and Elizabeth among his closest friends, and their collaborative work lasted several decades. It led to numerous highly regarded publications, book chapters, and exchange of productive visits. His lab technician, Lenka Vondráčková, who worked with him for over 30 years, remained a family friend

and visited him frequently even after his retirement. In short, Tomáš valued the people he worked with and cared about them. I myself experience this firsthand.

I first met Tomáš in the spring of 1994. I was looking for a job as my husband and I had moved from Bulgaria to Prague where he was starting a PhD program. I wrote a letter to Tomáš and Dr. Velemínský to ask them if I could work in their lab, but I got a very polite decline. After arriving in Prague, I decided to visit the lab and speak in person with them if the situation had changed. Tomáš and Dr. Velemínský smiled when I offered to work without pay, but they sensed my love for science and decided to give it a try! The rest is a history and I will be eternally grateful for this opportunity! In fact, Tomáš probably saved my scientific career altogether. In the early 1990s, my PhD advisor Dr. Hristo Nikoloff had unexpectedly died in the middle of my graduate studies and, given that everything in Bulgaria was in turmoil at that time, the prospects of a scientific career were grim. In this difficult time for me, Tomáš hired me and gave me an opportunity to restart my thesis and finish my PhD. I will be always immensely grateful for the encouragement and support I got from him.

The early 1990s were a very exciting time. The Berlin Wall had fallen and made it possible to freely travel and collaborate. Tomáš himself was thrilled by all these possibilities. He was writing grants, learning new computer skills (in the early 90's the desktop computers and the Internet were still new to us), and running experiments on a daily bases. He was an early bird, a very early bird, indeed! He arrived to the lab before dawn and expected us to be there and running experiments before 7 a.m. His enthusiasm for research was truly amazing and at that time, I did not fully appreciate that this is not so typical for someone who is almost 60! He was also not shying away from new techniques and later introduced the Comet assay and an automated analysis system in the lab.

Tomáš was a great mentor. He encouraged me to share my thoughts on the experiments and science in general, and took my opinions seriously. He was skillfully balancing between guiding me in the lab, while also letting me design experiments, supporting my ideas for projects, and encouraging me to write my papers. From the very beginning, he treated me with respect and collegiality. That was a priceless experience for me!

In 2001 after being in Tomáš's lab for more than 7 years, my family and I moved to the United States where I joined a lab at the National Cancer Institute. But, we continued to stay in touch, and whenever travelling to Prague, I made sure to visit the lab and meet with him and former colleagues. It was truly inspirational to witness how over all these years, he sustained his great enthusiasm for research, kept his long-time collaborations and fostered some new ones while remaining the same generous and thoughtful person.

Unsurprisingly, many of his colleagues stayed close friends with him even after his retirement. A number of them visited Tomáš in October 2018 on his birthday, and he shared with me how happy he was to see them. He truly loved people and these visits meant a lot to him! Even though he was one of the most hardworking people I have ever met, he would always find time to talk to people, listen to them and try to help. The doors of his office were always open for his colleagues and in the afternoons, long after experiments were finished, he had the habit of gathering colleagues to talk, sip tea and sometimes Becherovka. We all loved these short breaks.

The day I got the said news about Tomáš's death, I was recalling all the amazing time I had while working with him, and I realized that I have an old bottle of Becherovka. I opened it and poured the glasses to share the sad news with my family. "He was a great person and we should celebrate his life" said my husband, lifting his glass. I couldn't agree more. We will all miss Tomáš dearly.

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