THOUGHTS FROM THE LAKE

BOOK BY GEORG WICK

CHAPTER 28

A LONG-STANDING RELATIONSHIP, A DARING ESCAPE AND *THE ORIGIN OF THE TATRA IMMUNOLOGY CONFERENCES*

(WRITTEN FOR A LAY READERSHIP AND TRANSLATED FROM GERMAN BY HANNES STOCKINGER)

Lake of Millstatt, Carinthia, Austria

During the surreal seclusion of pandemic life, many people liked looking back on various events in their lives with joy, gratitude, amazement – but also with disappointment and resignation. I did the same, sitting in privileged, contemplative calm at my lake.

In 1968, a scientific conference was held in Buffalo, USA, to mark the retirement of my teacher and mentor, the famous immunologist **Ernest Witebsky**. This event, beautifully and old-fashionedly titled the ***"Convocation on Immunology"***, gathered the most renowned immunologists from around

the world. As a postdoc in Witebsky's lab, I was informally assigned to look after some of the prominent participants. One such duty was to take leading international immunologists to the nearby Niagara Falls—one reason why I must have visited this world-famous natural monument some twenty times during my years in the USA, in every season.

Among those, I was asked to accompany **Milan Hašek**, a Czechoslovak researcher I already knew from the scientific literature. He had built a globally respected school of immunology in his hometown of Prague. However, at the time of his visit to our convocation in the USA, he found himself stranded. That summer of 1968, the political "Prague Spring" initiated by Alexander Dubček had been brutally crushed by Soviet tanks, supported by the armies of other communist "brother states." Despite this, Hašek returned to Czechoslovakia after the conference—a risky decision. As a known dissident, he was immediately arrested, stripped of all positions (including leadership of his institute of 500 staff), and banished to a small lab with only a single technical assistant.

Meeting Milan Hašek, our conversations during the Niagara visit, and our shared interest in the development and function of the immune system, became a deeply important and unforgettable milestone in my scientific journey. Here's why: Hašek had achieved worldwide acclaim for a brilliant immunological experiment. He showed that experimentally linking the blood circulation of two genetically different chicken embryos resulted, after hatching, in their mutual tolerance of skin grafts — even though they were, genetically speaking, incompatible. This linking of blood circulation—achieved by surgically joining two eggs containing embryonic chicks—is called **parabiosis**. For me, it was an unforgettable experience when the great Milan Hašek personally demonstrated this essentially simple but, at the time, completely new method to me in our lab.

The explanation for this transplant tolerance lies in the embryonic learning process of the immune system. During development, it learns to distinguish between "self" and "non-self" and normally tolerates only the former. In parabiosis, however, each embryo is exposed to molecules originating from the other and this enables its immune system to accept these foreign components as self.

Unfortunately, like many Eastern Bloc scientists, Hašek was influenced by Stalin's chief geneticist, Trofim Lysenko. Hašek misinterpreted his elegant results as evidence that genetic control of the immune system could be modified by environmental factors—an ideologically convenient explanation in line with communist doctrine (especially as Lysenko's theories also applied to child education—or indoctrination—in schools). This misinterpretation cost Hašek the Nobel Prize, which instead was awarded to the British immunologist **Sir Peter Medawar**. Medawar correctly interpreted the immune system's "self-recognition" mechanism through his work in mice. He, too, attended our convocation and left a lasting impression on me through that and later encounters.

That first meeting with my later friend Milan marked the beginning of an "immunological love affair" between my team and the Czech and Slovak scientific community after I returned from the USA to Austria. Perhaps the landscapes and the youthful spirit of renewal among my Czech colleagues helped reconcile me with the fate of my own family, who had been expelled from Bohemia after World War II.

Czechoslovakia possessed outstanding scientists, especially immunologists from Hašek's school, but like all researchers behind the Iron Curtain, they lacked funds for modern equipment and costly Western reagents. However, they had exceptionally well-run animal facilities staffed by skilled

personnel. For scientific collaboration, it was crucial that our partners in Prague had established several inbred strains of chickens (genetically homogeneous like identical twins)—a globally unique achievement at the time. Meanwhile, in Vienna and later Innsbruck, we had a chicken strain I had brought from the USA that spontaneously and hereditarily developed an autoimmune thyroid disease identical to the human condition known as **Hashimoto's thyroiditis**. By crossbreeding these normal, healthy inbred strains from Prague with our autoimmune-prone chickens, we were able to show for the first time that the development of an autoimmune disease depends not only on genetic disturbances in immune self-recognition. We discovered that the target organ (in our case, the thyroid) must also be genetically susceptible to immune attack—a finding later confirmed in humans.

In the 1970s and 1980s, the Czechoslovak researchers regularly organized exclusive symposia on **"Avian Immunology"** in a remote region of eastern Czechoslovakia, near the borders with East Germany and Poland. These meetings took place at the fairy-tale but dilapidated castle **Hrubá Skála**, once the summer residence of the princely Waldstein family (their magnificent city palace still stands in Prague at the foot of Hradčany, near the Schwarzenberg Palace). The castle lies in a dense, romantic forest dotted with towering sandstone cliffs, known as "Bohemian Paradise"—a landscape that might remind Austrian visitors of Biedermeier-era paintings by Ferdinand Waldmüller or Friedrich Gauermann.

Castle Hrubá Skála, Bohemian Paradise, Slovakia CR Wikimedia.Commons.org

"Avian Immunology" focused, as the name implies, on bird immune systems, which occupy a pivotal role in the evolutionary history of immunity. Much of what we know today about human immunology originated in chicken studies.

Traveling to the Hrubá Skála conferences posed no major obstacles for neutral Austrians or Scandinavians—unlike for our West German or American colleagues—even though we too had to navigate cumbersome bureaucracy and endure long waits at the borders. We often hid Austrian Schillings in the soles of our shoes—an invaluable currency inside the Eastern Bloc, though the thought of police inspections was enough to make our hearts race.

Many castle rooms were bugged. Conversations—especially with West Germans—required caution. The organizers could not prevent these privacy intrusions but knew which rooms were affected and warned us not to express politically sensitive opinions. In the convivial late-night gatherings, however, caution often faded, and Milan, after a few beers, held nothing back.

A regular participant from England was geneticist **Douglas Gilmour**, father of Pink Floyd frontman David Gilmour. I often mention this in lectures on immune system evolution to make sure students paid attention.

Among the attendees were many of Milan's former colleagues who had stayed in Czechoslovakia rather than fleeing westward. One of them was **Karel Hala**, a somewhat stocky young man with already white hair, sharp eyes, a critical mind, and an irresistible booming laugh. In the 1970s, Karel made a major internationally acclaimed discovery: he identified specific genes regulating the strength and specificity of chickens' immune responses—especially to viral infections. To us, Karel became "**Mr. Chicken Genetics".**

Over several Hrubá Skála conferences, Karel and I—scientifically and personally aligned—grew closer. Such trust was risky in a surveillance-heavy environment. I was therefore surprised when Karel discreetly confided his wish to flee to Austria with his wife and three small children and to continue his work at our institute in Innsbruck. His collaboration would be an immense intellectual gain in understanding autoimmune diseases. I suggested discussing it during a forest walk to escape the castle's "contaminated" atmosphere, but Karel declined, fearing unexpected encounters and informants—precautions that seemed absurd to a Westerner like me, straight out of a Cold War spy movie, but I respected his fears.

I tried again in our car, driving through Prague's bustling Wenceslas Square. Again, he declined—too many people, possible microphones, remote surveillance. We finally agreed to meet at a future immunogenetics conference in Brno, the city where Augustinian monk Gregor Mendel had conducted his famous pea plant experiments. It felt like an auspicious setting.

In Brno, we discreetly walked to a small lake, rented a rowboat, and—beyond the reach of microphones or informants — devised an escape plan. Karel and his family would travel to Yugoslavia, then return "officially" to Prague via Italy and Austria. My task was to secure Austrian entry visas so they could remain legally. I promised Karel to find an "Austrian solution" for everything else.

Said and done. A friend of mine was stationed at the Austrian embassy in Rome in 1980. I alerted him to provide the necessary documents. He prepared the visas for an undetermined "Day X." Eventually, Karel called from Italy. I guided him to the embassy in Rome, where the visas were handed over. To this day, I remain grateful to this diplomatic friend.

A few days later, Karel arrived in Innsbruck on a chilly November evening, his aging East German *Wartburg* car packed with their belongings. I will never forget seeing him and his family at my doorstep—turning a theoretical plan into a reality was something else entirely. I felt the full weight of responsibility for five brave individuals who had made a life-changing decision and carried it out with courage.

Well before their arrival, I had rented a nearby apartment. Many friends and colleagues had provided winter clothing, appliances, toys, and more. However, I was not able to offer Karel an immediate job—universities back then still lacked autonomy. So, I traveled to Vienna and requested a meeting with the responsible minister, who had appointed me as a professor in Innsbruck five years earlier. I described Karel's precarious situation and convinced her of the intellectual value he would bring to Austrian science. I am still grateful to this intelligent, decisive, and elegant woman: after that trip, I returned to Innsbruck with a permanent position for Karel.

To everyone's joy, he was soon thereafter granted an university assistant's apartment. After a short acclimatization period, he could fully focus on research. Karel quickly learned German (not quite as well as his wife and children, since our Institute mainly used English), became a star in the also economically vital field of chicken genetics, built his own research team, qualified for professorship, and was eventually appointed professor. We—and our wives—remain close friends, reminiscing about those difficult, yet ultimately "good old days." Karel held his prestigious position until retirement—astonishingly, the University of Innsbruck never filled the position again but eliminated it entirely!

P.S.

My deep relationship with Czech and Slovak immunologists had an unexpected sequel. In 1989, after the fall of the Iron Curtain, a former colleague from Milan Hašek's circle—**Juraj Ivanyi,** who had emigrated to England—invited me to co-organize an **Immunology Conference** in the **Tatra Mountains** of Slovakia. The aim was to connect young Eastern Bloc immunologists with the international scientific community and give them access to global speakers.

The conference was held at a secluded alpine lake in the High Tatras, far from urban distractions. These "**Tatra Immunology Conferences",** organized by Czech, Slovak and Austrian immunologists, have grown into a prestigious biennial event. As one of its initiators, I am still invited, enjoy the stimulating discussions, and feel right at home in **"My Tatras".** Perhaps once the pandemic settles into an endemic phase, I will again leave my large Carinthian lake in Austria and head to the small mountain lake in Slovakia.

Štrbské Pleso, High Tatras, Slovakia