The (un)REAL STORY OF ENZYMES

Zinovij Masinovský et al.

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Enzymes and enzyme therapy

Dear readers,

The first part of this book presents the story of systemic enzyme therapy and people around it as seen through the very eyes of its protagonists. If you want to learn why and how this healing method works, you too can enter the wonderful world of enzymes. They are inside all of us, regulating our life processes and health, and this is the very basis for systemic enzyme therapy. And that's what the second part of the book is about. May the natural human curiosity and desire for knowledge never fail you.

The authors

INTRODUCTION

As a kind of "founding father" of the field, I was asked by the co-authors to write an introduction to this book, which summarises the 30 years that have now passed since the introduction of systemic enzyme therapy, a modern enzyme therapy method, in the former Czechoslovakia. It is with great pleasure that I do so, since the drug Wobenzym runs like an unmistakable thread through this story and it would indeed be impossible to begin the book otherwise than with the name of the man without whom all that follows would not have come to fruition.

The story begins with Karl Ransberger, who was born 90 years ago in Rosenheim, Bavaria. He was not only a scientist, businessman, cosmopolitan, a great humanist, musician and art connoisseur, but also, a teacher and a friend to me and my wife Radana.

We met for the first time in October 1983 in Bad König, Germany, at a symposium on advances in breast cancer treatment organized by the Hessian Academy for Advanced Training of Physicians. After the symposium, Karl Ransberger, then the owner of MUCOS Pharma GmbH, invited me to his beautiful mansion in Grünwald near Munich, where his friend and the creator of Wobenzym, Professor Max Wolf, used to stay with him sometimes. We became friends and when we said goodbye to each other, he gave me a framed quote from Sir Winston Churchill: "Socialism is the philosophy of failure, the creed of ignorance, and the gospel of envy." We then promised to work closely together to promote systemic enzyme therapy.

In December 1989, I obtained a trade license, and shortly after, I founded my first company which became the parent company to MUCOS Pharma CZ s.r.o.

The first ten years of the company were not purely about business aimed at promoting systemic enzyme therapy medicines on the domestic and foreign markets. For me and my co-workers, and also our employees, it was part of an effort to rebuild a damaged society. I had a clear idea of what decent and prosperous business should be like and everything that went with it. John Amos Comenius' quote – "We all stand on the stage of the great world and whatever takes place here, concerns us all" – was my personal creed, already instilled in me by my wise parents. In addition to becoming established in Central and Eastern European markets, we have also pioneered what is now called "corporate social responsibility".

And so, dear readers, you are holding in your hands a book that wants to be your guide through the world of our little helpers – the enzymes, without which there would be no life on Earth. The technical parts were written by the evolutionary biologist and long-time general director, corporate agent and co-owner of MUCOS Pharma CZ, Dr. Zinovij Masinovský. The fact that today, thousands of people in large parts of Central and Eastern Europe benefit from the therapeutic effect of systemic enzyme therapy, is very much to his credit.

The life of Professor Max Wolf, a true renaissance man who was simultaneously a scientist, engineer, talented painter, and above all a dedicated physician, will be presented by historian and journalist Dr. Jiří Halousek. For a quarter of a century, he has been popularising the discoveries of scientists around the world in the area of new therapeutic possibilities of the "re-discovered" enzyme therapy, in the press, radio and television. As a PR manager, he also contributed significantly to the successes achieved by MUCOS Pharma CZ in the Czech Republic, Slovakia and other countries.

Although the book is inspired by the 30th anniversary of systemic enzyme therapy, as well as of Mucos Pharma CZ s.r.o. in Central and Eastern Europe, it is not intended to serve as a complete and exhaustive historical account. In Part I, Chapters 3 to 5, it contains rather the respective authors' personal accounts regarding the events and people who participated in them in the periods most significant from their perspective.

The book we have authored together is intended to commemorate the gracious and successful collaboration with hundreds of our employees and co-workers in the Czech Republic and abroad. Without them, and without the understanding and support of our loved ones, the difficult and decades-long work would not have been successful. However, our book also aims to be an inspiration for those of you who are interested in human health and in the magical versatility of Nature, of which we are a part. "Reason, knowledge and truth are the pathway to true wisdom, by which the human soul pursues its perfection," said Avicenna, the medieval Persian scholar and physician and it is perhaps the work of fate that Wobenzym is now available in his ancestral homeland, today's Uzbekistan.

Jiří Wald
September 2021

Part I
Wobenzym Story

1 | MAX WOLF – FOUNDER OF SYSTEMIC ENZYME THERAPY

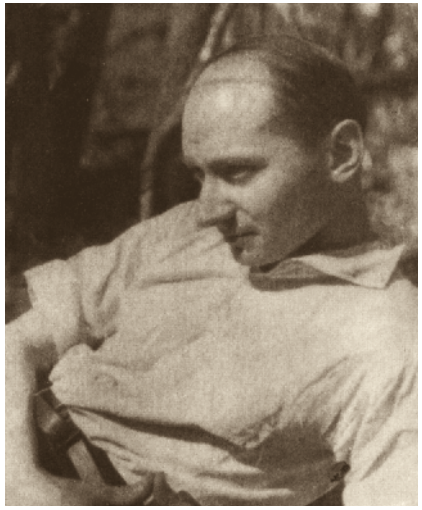
JIŘÍ HALOUSEK

Max Wolf was born on 22 October 1885, the fifth of six children of David Wolf and his wife Kunigunde née Sommer, in Vienna, the capital of Austria-Hungary. His father came from a German family from Olomouc in Moravia, his mother was born in the Austrian village of Wieselburg near the Hungarian border and was of Jewish origin. There were several doctors in his father's family, but David was a merchant in colonial goods and also dealt in real estate.

Childhood in Bohemia

When Max was in the fourth grade, his family moved from Vienna to Palič, a village on the western border of Bohemia in the Cheb (Eger) district. His father bought a large estate with stables, barns and buildings for servants. Young Max discovered his love for nature here. Everything was important to him, everything smelled of mystery and life. Perhaps it was the years in Palič when his conviction that "the physician cures, but nature heals" was born. In Palič, Max Wolf also became acquainted with folk medicine, which drew heavily on the knowledge of nature to treat illnesses.

Max's studies at a grammar school were quite tumultuous. At first, he and his brother Oskar attended a grammar school in Cheb. In 1895, however, the whole family moved to Prague after his father exchanged his estate in Palič for lignite mines in Bohemia and a brickyard in Prague.



Max Wolf in his youth

In Prague, Max began attending the renowned German State Grammar School in the Kinský Palace in the Old Town. However, at that time there were street scuffles between Germans and German-speaking

Jews on the one hand and Czechs on the other, so for weeks people were afraid to go out on the street at all. Worst of all, Max's father, David Wolf lost all his fortune practically overnight. The family, penniless, quickly left Prague for Vienna.

Studies

In the summer of 1903, eighteen-year-old Max passed his school graduation examination. His father recommended that he followed on with technical, practical studies that would enable him to quickly achieve decent financial security. He discouraged him from studying medicine, arguing there was an abundance of physicians in Vienna, and that many of them, lacking influential connections, could not even find suitable employment. Max listened to his father and applied to study civil engineering.

Throughout his studies he earned his living as a home tutor and in his spare time he devoted himself intensively to painting. He was an assistant to, for example, the then well-known Hungarian portraitist Laszlo, who was commissioned to portray hundreds of wealthy Austrians and members of the Viennese nobility. The painter limited himself to quick oil sketches, while Wolf's task was to complete these with appropriate finishing touches. So it happened that when Laszlo moved to England in 1905– where he was later elevated to the status of nobility by the king – Max Wolf inherited not only his studio in Vienna, but also his clientele. By the end of his university studies, Max Wolf regularly participated in the Viennese artistic and intellectual life. Three times a week he met with a group of writers, painters and philosophers at the Café Museum. His circle of acquaintances included writer and journalist Karl Kraus, poet Hermann Hesse, Franz Kafka and painters Gustav Klimt and Oskar Kokoschka.

Max Wolf: Old Man's Portrait (etching)

In America against his will

In 1908, Max Wolf received his ivil ngineering diploma. While most of his classmates sought employment with construction companies, Max opened his own design studio. He found early success and was soon winning large and well-paid contracts.

"I employed four good engineers and draftsmen and immediately a good income," he later recalled. He was earning enough to financially support the other members of his family, to America between 1905 and 1912. However, he saw no reason why he should emigrate to the United States as well – his company was doing well and Max had many friends in Vienna. However, he made several short trips to New York to visit his family. For this reason he also to New York in 1914, shortly before the outbreak of World War I.

When the Great War began in the summer of 1914, he enlisted as a ivil ngineer subject to conscription at the Austrian embassy in New York. Along with two thousand other Austrians and Germans who had enlisted to fight for their countries, he boarded the Leviathan, then the largest ship in the German fleet. However, the ship was surrounded by British submarines after five days of sailing and forced to return to port. Max Wolf thus involuntarily stayed in the US until the end of the war.

In New York, he initially tried to establish himself in his field as a civil engineer. However, he soon discovered that American construction methods were very foreign to him. He therefore gave up on his field and began to study medicine. Together with his brother Willy, he enrolled at Fordham University in New York.

A medic and a professor

After only two semesters, Max and Willy become the best students in class. Since many of the regular professors were drafted into the military, and the university administration was having a hard time finding people to teach classes, Max and Willy were simply admitted as members of the faculty. Of course, they also continued as students and had to pass the required examinations. However, they could conduct lectures and seminars on their own.

Max never confined his lecturing at the university merely to the technical parts of the subject, and always tried to make his students pay attention to

Max Wolf (in the middle) with his brothers

the ethics of medicine: "I have always viewed the medical profession as a serious one that carries a great responsibility. A sick man who is suffering gives himself completely to the doctor, seeking compassion and help. Thorough knowledge and medicines often play a less important role. The most important thing is a humane approach on the part of the physician, his ability to empathise with the patient's suffering and to try and help him," said Max Wolf later in his memoirs.

He had previously become a successful civil engineer out of ambition, but then he became a physician out of passion.

First medical experience

Two years before graduation, Max Wolf became the head of the Berwind Free Maternity Clinic, which was, in terms of its clientele, the largest maternity hospital in New York City. The hospital was frequented primarily by the black population of Haarlem and poor German and Italian residents of the emergency shelters on the east side of Manhattan. In poor families, women were often giving birth at home, sometimes on the kitchen table, and came to the clinic during pregnancy only for routine check-ups.

Max Wolf directed the work of ten physicians and four nurses. Every day and every night at the clinic required his full commitment. Sometimes the work was even dangerous in these conditions: "I once had to deal with a twisted umbilical cord, which is a common occurrence in childbirth: however, the new-born suffers a momentary cardiac arrest. When the father, a black man, saw my distraught face, he pulled a dagger out of his pocket and madly waved it around, shouting 'If baby dies, doctor dies too!' Fortunately, it all ended well," recalled Max Wolf later concerning tense moments he frequently experienced at the hospital.

Over 2,000 women delivered their babies in the clinic each year. Although the young and ambitious Max Wolf had a good salary, he soon realised that this work, despite all its variety and constant excitement, did not bring any opportunities for further professional growth.

Co-authoring of a bestselling book

In 1920, Wolf's research ambitions led him to endocrinology (the study of the endocrine system in the human body and its products, the hormones).

As a member of the university's faculty, he pushed for endocrinology to be taught as a separate subject. Together with his brother Willy, he then decided to write a seminal work on endocrinology that would summarise all the existing knowledge in the field.

The two brothers worked on the manuscript for two years. The book was published in 1921 under the title "Wolf's Endocrinology" and was a great success. Over the next two years, it was translated into two other languages, not to mention that it was soon hopelessly sold out.

A wedding in a rush

Max Wolf first opened a private medical practice in the Lower East Side of Manhattan, where many small businessmen and low-skilled workers lived. Soon the young Viennese pianist Edith Berge became his patient, when she was hired by the music director of the Capitol Theatre in New York to join his orchestra. She began helping Max Wolfe in his new private clinic on West End Avenue, which he had opened shortly before, so that he could also treat a more affluent clientele an appropriate. However, in the evenings he also continued to run his practice in the slums of the lower town.

Max Wolf (right) with his wife Edith (second from the right) photographed in the English Garden in Munich in his later life with Prof. Haubold (left)

A few months later, on 26 March 1924, he and Edith got married. “We were married for fifty years, but we had no children,” Max Wolf later wrote of the most important woman in his life.

The elites in the office

Thanks to his wife’s connections and also those of his patients from artistic circles, more and more artists came to his doctor’s office, until in 1925 he became the for the Metropolitan Opera. He continued in this role until 1941 and treated the famous conductor Arturo Toscanini and the opera singer Fyodor Chaliapin.

Soon theatre and film stars began to visit the practice as well and with them came their acquaintances – the rich and the powerful. In a few short years, Max Wolf became the go-to physician for the most powerful and influential families in the United States. His patients travelled from Washington and Hollywood to New York, only to have him use his unusual methods to heal them. This is how Max Wolf became, in the true sense of the word, the American miracle healer of the 1930s and 1940s.

New office

By that time, the Mr and Mrs Wolf were living in a neighbourhood appropriate to their current social standing. Edith discovered a beautiful five-story house on the 79th Street, East Side, next to an upscale house on the corner of Park Avenue. At first glance, she knew that this was what she was looking for.

The Herrman family ha never once thought of selling the house in the forty years. However, Edith became friends with the Herrmans in the following weeks and discovered that Mr Herrman had diabetes and high blood pressure, and his wife also suffered from arthritis. She convinced them both that such an old, impractical multi-storey house in need of renovation would only bring them trouble in the long run and that one should truly enjoy sunset years in an exclusive retirement residence.

And so in 1924, the Wolfs bought the house for 72,500 US dollars. The price included Victorian-style furniture, a large library and beautiful Rococo frescos.

Other furniture was provided by many of the patients, with wealthy New Yorker E. F. Hutton even donating an elevator. In 1925, they added a small balcony with a canvas canopy on the roof, so that in the years that followed they would sleep under open skies in summer.

This 1845 building was Max Wolf’s home and workplace until 1969, when it had to be demolished to make room for a skyscraper.

Max Wolf’s house on 79th Street near Central Park in New York

European experience

In addition to his undeniable talents and enormous enthusiasm for his work, his success was also due to the fact that he regularly travelled to Europe to attend special postgraduate medical courses at local clinics. He particularly focused on cancer research and endocrinology.

Each year, he spent about three months in Europe, closely observing the work of various physicians and scientists. As a young professional, he was introduced to medical techniques that were not yet widespread in America.

In 1932, Max Wolf met Dr. Ernst Freund, director of the Institute for the Treatment of Cancer at the Rudolfinerhaus Hospital in Vienna. He and his assistant, Dr. Kaminer, thought they had found a substance in the blood serum of healthy people and animals that was capable of dissolving cancer cells.

Dr. Freund attempted to isolate the substance that dissolves cancer cells from the serum of healthy people and administer it to patients in order to prevent tumours from growing or to achieve tumour remission.

In 1938, the Nazis occupied Austria and expropriated the hospital where Dr. Freund and Dr. Kaminer worked. To save them from arrest, Max Wolf helped them to escape to England, where they nevertheless both died shortly afterwards.

Wolf's house in Millwood, New York, built in the style of an Alpine chalet

A protector of refugees

Max Wolf may have gained much from European physicians and scientists, but he did repay his debt to them, too. He helped save the lives of many Jewish physicians and researchers after the outbreak of World War II.

In the 1930s, his practice in New York grew significantly. He had up to thirty patients a day. Wolf employed two full-time nurses who also performed some routine treatments, such as physiotherapy, and he made enough money to buy a country estate with surrounding land near New York.

He used his financial means to help Jewish doctors flee Austria after the Nazi Anschluss. He signed over fifty so-called "declarations of guarantee", which were then required for obtaining a residence permit, and he also deposited the necessary funds to allow the scientists threatened by the Nazi regime to enter the US.

Wolf knew only a tiny number of them personally. However, his name and address were apparently circulated in European Jewish circles and he was known as someone who would help. The first went to Portugal and from there they moved to the United States.

"We paid for the expenses and travel costs. Upon their arrival in New York, we put them up for five to ten days at our country farmhouse in Millwood. Only then I would ask the Jewish assistance organisations to take care of them. Most of these newly arriving physicians later passed a simple qualifications recognition exam and settled with their families on the East Coast," Max Wolf recalled.

Famous patients

The list of Dr. Wolf's prominent patients and astounding achievements alone is so long that only a fraction of it can be mentioned here. In terms of actors, Charlie Chaplin, for example, made an extraordinary impression on him, but he was not too impressed by Marilyn Monroe and did not speak of her very flatteringly: "Privately, she was a simple and insecure introvert with little education and pedestrian interests. She was always reserved in conversation, obviously not wanting her limited education to show. She knew that the only thing that attracted people to her was her body," Max Wolf said. His patients also included Gary Cooper, Clark Gable and Marlene Dietrich.

The Wolfs became increasingly at home in the cream of society, especially Edith, who understood well the need to cultivate "social capital" and so she regularly organized parties which gradually became an established part of New York social life. When the Wolfs would go to their country estate in Millwood, New York, for the weekend, they would always invite friends and acquaintances from New York's elite.

The power of prestige

Due to time, Max Wolf resigned his medical post at the Metropolitan Opera in 1941. In the following years, patients from the world of film and revue shows were, to some extent, replaced by a more "serious" clientele, although no less famous and wealthy.

For example, Wolf's patients included Henry Wallace, Vice President of the United States during Roosevelt's second term. His country estate was very close to Millwood estate and so the two soon became fast friends.

Pablo Picasso was also a patient of Wolf's. France's representative the UN and Picasso's friend Logier had been treated by Max Wolf after an injury from a serious car accidentThis highly-placed official then came to the professor with a request that he also treat the famous artist. Picasso had a painful ulcer on his ankle that prevented him from walking, and this health problem prevented him from marrying the woman he loved.

Max Wolf, once an aspiring painter himself, made no secret of his opinion of the famous artist. He did not respect Picasso professionally at all and thought he was making fun of people with his ridiculous scribbles.

However, painting and health are two completely different things. Professor Wolf sent Picasso a large quantity of his enzyme preparation and the ulcer on his ankle disappeared shortly. Since the famous doctor refused payment, Picasso rewarded him with his painting, which did not impress Wolf at all. He called it a huge, uninteresting canvas, some kind of a still-life with lanterns, crawfish and fruit. The painting soon appeared in an auction at Sotheby's in London...

Full commitment to research

Max Wolf was not only an excellent practitioner, but also a passionate researcher with a very broad scope of interests. In the 1940s, besides medicine, he was mainly concerned with plant breeding and the problem of increasing cereal yields. He was also attracted by the cultivation and use of new species of protein-rich plants that could meet the growing demand.

He experimented with micro-organisms and found that their proteins could, if grown in sufficient quantities, become useful substitutes for animal proteins to meet the needs of a growing population.

Max Wolf lectures at the International Symposium in Barcelona

In medicine, he found increasing scientific interest in gerontology and geriatrics. Could the aging process be controlled, slowed down, or even stopped? In essence, this interest was also based on his passion for medicine. After all, mitigating the ageing process means nothing more than fighting old age diseases, to which most people eventually succumb.

He gathered around him patients over seventy-five years of age and formed an association with them. Each member of this "Senior Club" was to follow a certain diet and way of living and to return for a thorough check-up once a year. The idea was to find a lifestyle that would generally prevent the most serious causes of death – arteriosclerosis and cancer.

With the help of then US Secretary of State John Foster Dulles, also his patient and friend, Professor Wolf succeeded in establishing the "Biological Research Institute" within the prestigious Columbia University in New York. Starting in 1952, other research laboratories were added to the Institute, which Max Wolf either rented or established directly. One of the main areas he was involved in was research into enzymes with the consequent development of therapeutic preparations.

Origin of WoBe

Max Wolf began to study enzymes as early as 1932. Building on Dr. Ernst Freund's experiments, he found that his "normal substance" contained a number of proteolytic enzymes, including urokinase, an important activator of fibrinolysis (see Part II, Chapter 3).

However, it was not until the first half of the 1950s that he began to systematically pursue enzyme research at the Biological Research Institute. Together with his assistant Helena Benitez, he explored thousands of mixtures and concentrations before finding the optimum combination of proteases for therapeutic purposes. He called it WoBe after the initial letters of his and his assistant Benitez's surnames.

With this combined mixture of enzymes, Max Wolf began treating experimental animals and then his New York patients. At that time, there were still many unknowns associated with the preparation. For example, Wolf did not know how to prolong the effect of the enzymes. He also did not know how the preparation was taken up by the body and which Galenic formulations were most effective.

It was collaboration with the young German scientist and entrepreneur Karl Ransberger (see Chapter 6) that helped him to answer these questions.

Final years

Max Wolf's eightieth birthday in 1965 was an opportunity to look back on and appreciate his life's work. And so, despite his aversion to titles and sumptuous celebrations, he received a number of honours: in Vienna he was elected president of the American Medical Association, an important thousand-member institution fostering scientific relations between Austrian physicians and their colleagues from English-speaking countries. Honorary degrees were also awarded by both Fordham University and the University of California, USA. The English Royal Academy of Health and the American Association for the Advancement of Science also mae him an honorary member.

In his professional and personal life, Max Wolf became steadily calmer and more moderate as he grew older. He eventually traded his country home in Millwood near New York City for a house in Miami Beach in warm Florida, where he would spend winters. In May 1973, his wife Edith died. A year later, the eighty-nine-year-old professor married his longtime housekeeper Margot, forty-five years his junior.)

Max Wolf in his old age

In 1975, Max Wolf wrote in his notes: "I am nearly done with my active medical practice, so apart from my old patients, I am now only dealing with a few geriatric and oncological cases. There are only a few of them per day. Yet my life remains as rich and interesting as before. I usually wake up shortly after 4 a.m. and go to bed around 9 p.m. At ninety, I have to accept that I won't be around for much longer. I am at peace with that knowledge and I live calmly and without pain."

In 1976, at the age of ninety-one, Max Wolf was diagnosed with stomach cancer. He flew to Bonn to be examined and treated by experts from the renowned Janker Clinic, with whom he had worked closely for years. The Janker Clinic arranged for a burial at a crematorium in Cologne. At the request of Wolf's wife, the urn was placed in a cemetery near Kaiserslautern, Germany.

Wolf's legacy as a doctor and scientist

Max Wolf's notebooks contain the following words: "Life has brought me very much joy and very little sorrow. In my not unreasonable efforts I achieved success, I was healthy and never bored. I had some good ideas that might one day prove to be a blessing and advancement for many people. Of course, I would like to live a bit longer and shorten a little the long list of plans I've only just begun putting in motion. But it is not essential, because better people than I will follow where I left off. I consider the development of enzyme therapy to be the focal point of my career and my contribution to society."

2 | KARL RANSBERGER – MUCOS PHARMA RESEARCH AND BUSINESS

JIŘÍ HALOUSEK

From Bavaria to the USA and back

If Professor Max Wolf was the leading figure in the development of WoBe products, the most famous of which is Wobenzym, then Karl Ransberger made a decisive contribution to their further development and to the establishment of systemic enzyme therapy as one of the therapeutic methods employed by contemporary medicine.

Karl Ransberger was born in 1931 in Rosenheim, Bavaria. His father was an engine driver on the locomotives of the German Reichsbahn, so he did not have to enlist as a soldier in the Wehrmacht. After the war, the young Karl longed to leave the devastated Germany and experience the land of his country's liberators. At the age of eighteen, he left for the USA, where, after several adventures and odd jobs, he landed in distant Seattle on the Pacific Coast. There he also began studying economics at the University of Washington.

After four years, in 1953, he returned to Germany and in 1955 received a diploma in economics from the University of Munich. After two more years of study at the Technical University of Stuttgart, he went back to Munich, where at the age of 26 he started working as head of the sales department of a small pharmaceutical company.

MUCOS Pharma

This company was founded in 1949 in Munich by the physician, endocrinologist and nutritional biologist, Professor Hellmut Haubold. The company produced highly concentrated preparations of vitamins A and E. Prof. Haubold was a specialist in the preparation of fat-soluble mixtures, and his vitamin oil emulsions soon proved to be considerably better than the conventional oil preparations of the time.

Karl Ransberger

There, Karl Ransberger began his career as an economist. In parallel, he continued his studies in biology at the University of Munich from 1958 to 1961. Biology and medicine soon became his passion and he gained extraordinary knowledge, which he continuously improved throughout his life.

Meeting Max Wolf

In New York in 1959, Max Wolf met with Professor Haubold, who was accompanied by the young Karl Ransberger. At that time, Wolf tried to win Haubold over for a collaborative project. However, as Karl Ransberger later recalled, the dinner party at Wolf's house did not end very well. While Max Wolf was talking about his new enzyme preparation, Haubold fell asleep, probably because he had drunk too much wine. Deeply insulted, Wolf bade his guest a stern farewell. The humiliated Haubold then wanted to hear no more about Wolf.

Co-operation begins

However, Karl Ransberger was captivated by the information of the new enzyme preparation. He begged for a second meeting for so long that Max Wolf eventually agreed to see him. From the very first moment, they understood each other well and when they parted, the young guest from Germany was tasked to go back to Munich and study the absorption of WoBe enzymes in rats.

Max Wolf (right) and Karl Ransberger in the garden of Wolf's home in Miami, Florida

In the years that followed, the co-operation between Wolf and Ransberger strengthened, but the problem remained that the owner and director of MUCOS, Hellmut Haubold, did not want to have anything to do with Wolf.

So when Haubold decided to sell his company and retire in 1963, Karl Ransberger decided to make his move. With money he borrowed from friends and Max Wolf, he bought MUCOS and from the following year, 1964, he reoriented the company mainly to the therapeutic use of enzymes.

Development of systemic enzyme therapy medicines

During the 1950s, Max Wolf collaborated with the biochemist Helen Benitez in their research laboratory at Columbia University in New York on testing and producing several mixtures containing primarily a combination of certain animal and plant proteolytic enzymes.

He found that the combination of several proteases with different substrate specificity and, moreover, somewhat different optimal pH, yielded a better therapeutic effect than individual enzymes on their own. He added rutin to enhance the antioxidant effect and calf thymus extract to enhance the immunostimulatory effect.

In this first phase, these preparations did not yet have a standard Galenic formulation or a fixed name. They were administered either locally by injection or systemically mainly by enema per rectum. Collectively, they were referred to as WoBe-enzymes.

It was only in the following years that – especially thanks to the collaboration with Karl Ransberger and his expert team – it became clear that tablets were the most convenient route of administration of these drugs for both the physician and the patient, which also minimised the occurrence of side effects, such as they were.

The first drug developed was Wobe-Mugos, which contained papain, trypsin and relatively high doses of the very expensive chymotrypsin. It was first registered as a drug in 1963 and was originally meant to be used mainly for the treatment of cancer, especially the side effects of chemotherapy and radiation, and for the treatment of certain viral diseases.

In 1966, Wobenzym – a drug to treat swelling and inflammation and to promote immune processes – was registered in West Germany for the first time.

In the early 1990s, the drug Phlogenzym was also developed. One tablet contains twice the amount of bromelain, trypsin and rutin compared to a tablet of Wobenzym, which, however, contains 5 other enzymatic components not found in Phlogenzym. The therapeutic focus of Phlogenzym is similar to that of Wobenzym, except that the former has a slightly stronger effect in the treatment of acute inflammation, while the latter is more suitable for the treatment of recurrent and chronic inflammation and weakened immunity.

Although Max Wolf's early research focused primarily on the possible use of enzymes in the treatment of cancer, subsequent research and practice have shown that the main benefit of systemic enzyme therapy drugs lies in their anti-inflammation and immune boosting effects. Very soon after its introduction to the market, Wobenzym became by far the most important and well-known drug.

Efficacy of SET confirmed by clinical research

On the initiative of Karl Ransberger and his team, a number of other (post-registration) experimental and clinical studies were carried out in the 1970s and 1980s, mainly in Germany, Austria and the United States, but also in Mexico and some other countries. These studies became the basis for the spread of systemic enzyme therapy to Central and Eastern Europe, including Czechoslovakia, and for further scientific and clinical research in this region.

Prof. P. V. Lehmann from Case Western Reserve University in Cleveland, USA, and Dr. S. N. Emancipator from the University Hospital Medical Center also in Cleveland, Dr. L. Desser from the Institute for Cancer Research of the University of Vienna and Prof. A. Heidland from the University of Würzburg, Germany, were among the long line of physicians and biologists who contributed to the development of the SET in the first decades after its inception.

Dr. S. Barsom of Hannover, Germany, has been involved in improving the effectiveness of antibiotics by the simultaneous administration of enzyme drugs. Prof. H. Wrba, long-time director of the Institute for Cancer Research of the University of Vienna, and Dr. W. Scheef, medical director of the renowned Janker Clinic in Bonn, made other contributions in the field of oncology.

Pioneering work was accomplished by Dr. R. Wohlrab in respiratory diseases, while Dr. P. Schlüter made contributions in urinary tract infections and Prof. F.W. Dittmar in gynaecology. Dittmar even observed the beneficial effect of SET drugs during pregnancy and in cases where women previously had repeated spontaneous abortions. All three of the aforementioned physicians were from Bavaria.

Wobenzym tablet production

In surgery, mention should be made of the work accomplished by Dr. H. D. Rahn of the Traumatology Clinic in Wiesbaden on fractures of the thigh and tibia, and M. W. Kleine of the Sports Medicine Research Centre of the Bavarian State Sports Association in Grünwald near Munich, who studied the distortion of the ankle joint. Prof. O. Rokitanski from the University of Vienna worked in the field of vascular surgery and Prof. K. Vinzenz from the Evangelical Hospital also in Vienna carried out a clinical study in dentistry, specifically in the extraction of impacted wisdom teeth.

In rheumatology, F. Singer from the Rehabilitation Centre for Musculoskeletal Disorders and Rheumatic Diseases in Laab im Walde, near Vienna, investigated the effect of enzymes on activated knee arthrosis, and G. Klein from the Rehabilitation Centre for Cardiovascular and Rheumatological Diseases in Saalfelden, also in Austria, studied the effect of SET drugs on hip arthrosis.

In the field of sports medicine, the work of the Bavarian physicians Dr. S. Wörschhauser and Dr. M. Baumüller are of particular interest. Sports physicians and athletes in Germany and other countries soon discovered that the use of the SET significantly reduced the healing time after

injuries and surgeries and improved recovery. Probably the best-known expert in this field is H. W. Müller-Wohlfahrt, a long-time physician of FC Bayern Munich and the German national football team, who has treated and operated on hundreds of top athletes from various countries around the world during his decades-long practice, often with the use of SET supportive care.

This is just to highlight the names of some of the experts who have contributed to the development of SET in various fields of medicine. Of course, this list could go on and on.

Wobenzym's journey around the world

Soon after the first registration of Wobenzym in West Germany in 1966, the drug became increasingly popular among customers. Soon enough, the capacity of the small MUCOS Pharma production plant on the outskirts of Munich was no longer sufficient and the company moved 35 kilometres south to Geretsried, where a new production plant was located.

Company HQ in Geretsried

Another 10 years later, however, even this plant could no longer meet the demand of an ever-growing market. So in the mid-1980s, Karl Ransberger decided to join the West German government's subsidy programme and, with state aid, built a brand new pharmaceutical factory in what was then West Berlin. From there, SET medicines have been exported all over the world to this day.

MUCOS plant in Berlin

In the plant

The first countries where Wobenzym appeared on the market were West Germany and the United States, followed by Austria, Mexico and other countries.

The fall of the Iron Curtain at the end of 1989 opened the door to formerly communist countries. Thanks mainly to Karel Ransberger's connections with Jiří Wald from Prague, Wobenzym made its way not only to former Czechoslovakia, but soon afterwards also to other countries of Central and Eastern Europe (see Part I, Chapters 3 and 4).

Wobenzym was registered as a medicine in Czechoslovakia on 19 November 1991 and has been on the Czech market for 30 years.

3 | SYSTEMIC ENZYME THERAPY IN THE CZECH REPUBLIC AND SLOVAKIA

JIŘÍ WALD

Fateful meeting: Karl Ransberger and Communist Czechoslovakia

I first met Karl Ransberger in October 1983 in Bad König, at a symposium on advances in breast cancer treatment organized by the Hessian Academy for Advanced Training of Physicians. At that time, a former prisoner of conscience, Dr. Miloš Adámek, a friend of Karel Ransberger, went to Germany with me, along with two other Czech physicians.

In 1951, Adámek was sentenced by the communist regime to 15 years of forced labour in Jáchymov uranium mines. It was there that his first studies on radioactive moulds were made and there he also created a biochemical laboratory within the prison hospital where he was able to study the effect of exposure to radioactivity on prisoners. He was released from prison in 1960 due to an amnesty and was able to finish his studies. In the late 1960s, after a lecture in Munich, he met Karl Ransberger, who began to supply him with medicines for former prisoners from the uranium mines.

Ransberger smuggled medicines for Adámek and the miners in various ways. Unfortunately, in the early 1980s, he was detained when crossing the border to Czechoslovakia, interrogated and subjected to a humiliating body search in order to ensure that his trips to Czechoslovakia to supply medicine for the Jáchymov miners would not continue.

A difficult trip to the West

I was glad that I had been able to meet Karl Ransberger in person at that time, for I owed him a great debt of gratitude for the quantity of enzyme-based medicines which he had been sending me for my seriously ill wife for two years.

Dr. Miroslav Pekárek, who also travelled with us together with Dr. Laboný, managed to obtain what was then known as the "travel permit", without which one was not allowed to travel from Czechoslovakia to the West. This was because he was personally acquainted with Bohuslav

In 1990 former political prisoners invited their benefactor to Prague to thank him. In a small ceremony, they symbolically accepted him among them and presented him with a miner's uniform and a piece of uranium ore. Right: Dr. Miloš Adámek – Vice Chairman of the Confederation of Political Prisoners and its chief physician; Karl Ransberger; Jiří Wald and Stanislav Stránský, chairman of the Prague chapter of the Confederation of Political Prisoners.

Kučera, the chairman of the Czechoslovak Socialist Party and – during the period of "Normalisation" in the 1970s and 1980s – also the chairman of the Chamber of the People of the Czechoslovak Federal Assembly and a minister of the Czechoslovak Communist government. A secretary to Kučera at that time was Dr. Stanislav Křeček, who was given the task of securing the travel permits by him.

I never dreamed that I could get a permit to go to West Germany. A few days later, however, we all found a notice in our mailboxes telling us to pick up our travel permits. Dr. Křeček arranged everything perfectly and it was very likely him who made sure that future trips to the West would be less problematic.

Looking for allies for our concept of prevention and prophylaxis of civilisation diseases (Switzerland, 1986). Dr. Miroslav Pekárek with Jiří Wald in the Alps.

At home with Karl Ransberger

After the symposium, Karl Ransberger invited us to his beautiful mansion in Grünwald near Munich. His friend Professor Max Wolf, who formulated the composition of drugs for systemic enzyme therapy and called them "WO-BE" enzymes (together with his collaborator Dr. Helena Benitez), used to stay there during his visits to Germany.

Together we talked about enzyme therapy all day and all night, especially in the context of immunology. Karl Ransberger was enthusiastic about the field of immunology. He was convinced that if the idea of the "normalizing" capabilities of proteolytic enzymes in the human immune system (as our close collaborator, immunologist Dr. Karel Nouza, later aptly called it) could be promoted, then enzyme therapy would be very successful. We listened attentively to Ransberger's ideas then and were surprised by the broad extent and depth of his medical knowledge.

He was a man extremely sensitive to the suffering of others and the patient always came first for him. I will not forget how he also inquired at length about the desperate state of my family after my wife's death. Finally, he shocked me when he offered me a job in his company, a place to live and a nanny for my two young children.

How was he going to arrange our emigration from Czechoslovakia? I never learnt.

It was only in the course of the following years that I realised that nothing was actually impossible for Karl Ransberger, and if it was connected with accelerating the fall of the "evil empire", as he called the Communist bloc, he was prepared to take immediate and quite substantial risks.

I could not accept his offer in the autumn of 1983 because of my brother Martin's family and our parents, but we hit it off, as they say, and a fateful, but in any case extremely adventurous life story began to unfold for me. We promised to each other that regardless of the political situation and the Iron Curtain standing between us, we would start working systematically with his enzyme drugs in Czechoslovakia.

Czechoslovak Academy of Sciences

At that time I was employed at the Czechoslovak Academy of Sciences, in the so-called Centre for Inventions and Discoveries, and therefore I had a fairly good idea of where co-operation with MUCOS could possibly be

established in the future. At that time, the Academy was a kind of a bubble in the Communist regime with the capacity to implement projects that no other institution could have pursued. When, by coincidence, I was offered a transfer to the newly built prognostic and application department at the Institute of Microbiology of the Czechoslovak Academy of Sciences in the following year, I did not hesitate at all.

The Institute of Microbiology was the best place to pursue enzyme therapy, and the department to which I was recruited had all the prerequisites for finding a way to officially collaborate with Karl Ransberger. His and my efforts were gradually directed towards one goal – the registration of Wobenzym and other drugs produced by his company in Czechoslovakia.

Andrea Waldová, a courageous lawyer who fearlessly defended the rights of oppressed citizens during the Communist era.

A family tragedy

When did I come to believe that systemic enzyme therapy was the treatment we desperately needed? Unfortunately, my wife and I, alongside our whole family, had to go through a difficult ordeal to really understand the issue.

In 1981, my wife Andrea was treated for a small lump in her breast at the 1st Faculty of Medicine of Charles University by Professor Baláž; treatment "succeeded" to the extent that she entered the stage of inoperable breast cancer with lymph nodes metastases. Since the tumour itself was no longer operable (it reached the size of a child's head), the doctors decided to surgically remove the whole breast. What followed then was a horrific experience; there is no other way to describe it.

After the diagnosis was finally made, the clinic immediately lost all records of the examinations that my wife had already undergone, which made further treatment all that much harder. Her condition was so serious that no oncologist we contacted in Prague was interested in further treatment of this 33-year-old patient. To use expensive cytotoxic drugs, which were in desperately short supply in Czechoslovakia at the time, seemed a waste for the oncologist at the Faculty of Medicine as she considered my wife to be a hopeless case. She only recommended palliative treatment with opioid painkillers to be administered at home.

Of course we could not accept that, so I wrote to my friends – oncologists – abroad. They recommended that my wife undergo treatment with high doses of cytotoxic drugs and radiation, and they also advised to administer high doses of proteolytic enzymes to mitigate the side effects of this aggressive therapy. That was the first time I heard about systemic enzyme therapy in practice, so to speak.

A friend of mine, an oncologist from a specialised clinic in Bonn, advised me to try to get my wife admitted in the hospital at Žlutý Kopec in Brno, which he regarded as the best cancer treatment facility in Czechoslovakia. But how to get her in, when at that time one could not freely choose his or her physician?

In the end, we were helped by a friend, Dr. Ivana Hadačová, whose mother was responsible for supplying the equipment to this institution. Thanks to her connections, we were able to transfer my wife to Brno, and

the aforementioned doctor also helped us obtain the necessary cytotoxic drugs for her treatment using a special import permit. We received the proteolytic enzymes in the form of Wobenzym and Wobe-Mugos, together with emulsified highly concentrated vitamins A and E, as a gift from the German company MUCOS Pharma GmbH, that is, directly from Karl Ransberger.

This marked a major turning point in my wife's struggle with cancer. I asked for unpaid leave at work and my sympathetic boss granted it immediately. I found a flat to rent in Brno near the hospital – today called "Masaryk Memorial Cancer Institute" – my parents took over the care of our children and together we fought for my wife's life.

She had to undergo aggressive treatment with cytotoxic drugs and radiation, and she was taking high doses of enzyme drugs. To the general surprise of the physicians in Brno, this supportive treatment proved to be very effective. My wife's medical condition soon stabilised, and after a relatively short time she could even switch to outpatient treatment.

At a time when my wife should have long been dead, at least according to the Prague oncologist's original prognosis, she and I were able to go skiing together with our children. We then spent a beautiful summer holiday in Finland. Of course, we were only allowed to travel there with the state travel agency (Čedok) and without the children, who stayed at home as "insurance" lest we wanted to defect to the West.

Throughout the entire course of the very challenging chemotherapy and radiation, my wife suffered almost no side effects. This even allowed her to partially return to her law practice in Mělník. The fact that she did not need to take any painkillers certainly improved her quality of life profoundly.

Unfortunately, the cancer's progression could not be stopped entirely. We spent our next holiday at our cottage knowing that the end was near. However, the almost two extra years of life had allowed us to prepare for it and cope with it. My wife was 35 years old when she passed away at home on the evening of 8 August 1983.

All the physicians who had treated her agreed that the extra two years were due to a well-chosen comprehensive treatment, in which the enzyme drugs played their role. They have shown anti-inflammatory, anti-swelling and analgesic effects, including an important role in repairing the disturbed homeostasis of the immune system.

League Against Cancer

My brave wife's story was clear evidence for many of our physicians regarding the importance of a comprehensive approach to cancer therapy. This was also the reason for me to begin, after the Velvet Revolution and the fall of the Communist regime, to start supporting the League Against Cancer, whose Czechoslovak branch was founded by Professor Zdeněk Dienstbier in 1990. The League cared for cancer patients after completion of their treatment in a medical facility.

Our co-operation with the League has been tremendous. I was also a member of the League's committee for several years, and the idea of my fellow committee member Marie Koutná, the famous 'Flower Day' (to raise awareness of combating cancer), was established thanks to our collaboration. I believe that to this day it is still one of the most successful charitable projects and I am really proud that my company was at its inception.

In 1994, we even founded an association together with the League whose main mission was to fight cancer by providing reliable and regular information to the public on ways to reduce risks likely leading to cancer and on early detection of the symptoms of the disease. We supported the publication of hundreds of thousands of leaflets and became the main partners of the national campaign against smoking. In 2010, on the occasion of the League's 20th anniversary, I became an honorary member of its branch in Prague.

Zdeněk Dienstbier with Jiří Wald at a meeting of the League Against Cancer in 1996.

But how to convince the others? How to move the stagnant waters of the socialist health care system? The meeting with Karl Ransberger in the autumn of 1983 left a deep impression on me, and after my return to Prague, I decided to put all my strength into the promotion of systemic enzyme therapy in Czechoslovakia. It was only the fall of the Communist regime in our country that made it possible to build on my wife's legacy in full.

Project for the Prevention and Prophylaxis of Diseases of Civilisation

Prevention and Prophylaxis of Diseases of Civilisation was a name we gave in October 1983 to a large-scale programme under which our circle of courageous physicians and natural scientists wanted to carry out smaller-scale research projects in the field of holistic medicine. These projects would certainly not have passed the approval process at the Department of Science and Research of the Ministry of Health if we had called them by their true name.

It was clear to us that if we wanted to push for changes in socialist healthcare – both at the level of preventive medicine and at the level of treatment – we had to devise and push through a particularly broad umbrella project. However, this was impossible without the support of the political elites of the time. But where could we get it, when we were not even members of the Communist Party, let alone know some of the Communist dignitaries personally?

Fortunately, some of the physicians, as it happens, had influential patients. Dr. Miroslav Pekárek, the head of the Oncology and Radiotherapy Department of the Public Health Institution (IPH) in Prague 5 helped us again. He was a kindred spirit and an enthusiast for everything that was not officially permitted by the Communist officials in the field of cancer treatment. As I mentioned at the beginning of this chapter, he was a friend of the Deputy Chairman of the Federal Assembly, the Socialist Party member Bohuslav Kučera, and he was also very well acquainted with the rector of the University of Chemistry and Technology (UCT), Prof. Jiří Mostecký, whose wife was one of his patients.

When Dr. Pekárek learned of our intentions, he did not hesitate and arranged a meeting with Prof. Mostecký. We met him in his university office in Dejvice sometime after we returned from our meeting with Karl Ransberger and here we "cooked up" our next strategy.

Prof. František Wald

As it turned out, Jiří Mostecký was one of the secret admirers of the work of my great-grandfather Prof. František Wald, who was the first rector of the Czech Technical University (CTU) after the dissolution of Austria-Hungary. I say "secret" because the Communist regime had the name Wald erased from the history of Czech science for ideological reasons and Mostecký, as a member of the Communist Party, could hardly go against the party line.

Mostecký knew everything about Wald's scientific work and told me that he had tried – in vain – to obtain our family archive from my father, Dr. Milan Wald.

My great-grandfather was a friend of the prominent European scientist and non-Marxist philosopher Ernst Mach and, therefore, when the Communists seized power in 1948, his name was censored from textbooks, the lecture hall bearing his surname was renamed, and the bust of František Wald that used to be displayed in front of the lecture hall was kept by the rectors in secret for the next forty years. Reportedly, it was kept behind a curtain next to the sink in the rector's office... Such was life under the Communist regime in Czechoslovakia.

Wald considered the problems of theoretical chemistry to be the focus of his work, which also won him fame and recognition, especially abroad. His extensive correspondence with the most prominent scientists of his time, Wilhelm Ostwald, Josiah Willard Gibbs, Pierre Duhem, Henry Louis Le Chatelier, Nikolai Semyonovich Kurnakov, Ernst Mach and Paul Ehrlich, has been preserved.

He always implemented his solutions in a completely original way, with mathematical reasoning always being the backbone. The ideal of science, according to Wald, was a description of reality that was as mathematical and free of hypotheses as possible. Wald's scientific research had many admirers. These included the German philosopher and physical chemist, Nobel Prize winner Wilhelm Ostwald, the Swedish physicist and chemist, also a Nobel Prize winner Svante Arrhenius, and in Czechia the chemist Jiří Baborovský, Nobel Prize winner Jaroslav Heyrovský and Otto Wichterle. Karel Čapek used Professor Wald as an inspiration for a character in his novel "Krakatit", in an episode in which Wald is faithfully portrayed as the examiner of a fictional character, the student Prokop.

Wald was also very active in public life, especially as a contributor in the magazines Živa, Naše doba and Přehled. Together with professors Mareš, Nušl and others, he participated in the ideological struggles for national existence. His protector and supporter was even Tomáš G. Masaryk. Accordingly, he was one of the first and one of the few professors of the Czech Technical University to sign the Czech writers' anti-Austrian manifesto of 1917.

Few people in our country know that Wald assisted Paul Ehrlich, physician, immunologist, founder of modern chemotherapy and Nobel Prize winner, in calculating vaccine serum dilution. This was what caught the attention of Karl Ransberger in Germany, who found more detailed information about it in our family archive. He and his people began thinking about whether a similar mathematical model to the one used by Wald in the aforementioned case could be applied to the creation of new combinations of enzyme drugs.

František WALD 1861 – 1930

9 January 2021 marks the 160th anniversary of the birth of František Wald, Rector of CTU (1919-1920) and professor of theoretical and physical chemistry and chemical metallurgy.

The struggle to get our project off the ground

More importantly, Prof. Jiří Mostecký was also a fan of holistic medicine. He himself came up with the idea to implement our project, based primarily on the search for sick workers in the Spolana chemical plant in Neratovice, which was a major contributor to air pollution in the surrounding area. This was a public secret, so to speak, and official documents proving the catastrophic health condition of the local population threatened by dioxins were allegedly circulating at the Central Committee of the Communist Party of Czechoslovakia at that time.

It was no hearsay, but a sad reality. I myself was quite well informed about this issue, because after our study at the university, my wife and I lived in Neratovice for some time and I learnt a lot from the "insiders" of Spolana who lived in the prefab residential blocks I used to clean as a janitor.

However, the decisive factor for the implementation of our project was not the alarming environmental situation, but the fact that Prof. Mostecký was well-acquainted with the managing director of Spolana, Karel Ježek, who was a protégé of the then General Secretary of the Central Committee of the Communist Party of the Soviet Union, one Yuri Andropov. Yes, the same Yuri Andropov who, at the end of his life and probably in remorse for the crimes he committed as head of the KGB, tried to "shake up" the collapsing Soviet empire.

It was also extremely important that Mostecký was a friend of the director of the State Commission for Scientific and Investment Development, Mr. Rychtařík, who was probably the only person who could secure funding for our project.

In other words – the meeting in the rector's office was quite crucial for us. Professor Mostecký and I finally agreed to try to demonstrate the usefulness of the "new concept of prevention and prophylaxis of the diseases of civilisation" in Spolana. The main emphasis of this study was to provide a holistic view of the human being, a view that was quite incompatible with the doctrines of socialist healthcare. It seemed that, after a series of difficult negotiations, we were quite close to our goal. Under the research task designated "Oncogenesis with biological, chemical and physical agents", which was finally approved under pressure from "above", were also hidden trials of drugs based on proteolytic enzymes produced by Ransberger's company MUCOS Pharma GmbH. The only thing needed

was just to initiate the whole project and the door to the registration of Wobenzym and Wobe-Mugos could have been opened in socialist Czechoslovakia. But then an unexpected blow came and the door slammed shut again with a bang – Yuri Andropov, the leader of the USSR, had died.

Today it is hard to believe that the death of one frail old man could have influenced events in so many countries and in so many fields of human activity. General Secretary Yuri Andropov died in Moscow in February 1984 and his alleged protégé in Czechoslovakia, Karel Ježek, managing director of Spolana, gradually started to lose the ground under his feet. Naturally, this impacted his support for the project in the Neratovice chemical plant; indirectly, he protected us from the infamous Jaroslav Prokopec, then Minister of Health.

At this point, the opponents of holistic medicine rallied and launched a fierce counter-offensive. Karel Ježek could no longer resist and the political influence wielded by our sympathiser Mr. Kučera, Deputy Chairman of the Federal Assembly, was not sufficient. Since he was a member of the Socialist party, government ministers for the Communist party did not take him very seriously.

When it seemed that our whole project was doomed, Prof. Mostecký managed to save the group of people surrounding Dr. Karel Černý from the Department of Endocrine Oncology of the Research Institute of Endocrinology in Prague 1. He made sure that this scientific organisation, which was of great importance to us in terms of testing the possible carcinostatic effects of new preparations, was transferred under the University of Chemistry and Technology. This took the wind out of the sails of our opponents from the Ministry of Health, who of course did not want to allow drugs like Wobenzym and Wobe-Mugos to be tested in Czechoslovakia at all. Thanks to Prof. Mostecký, every further research programme of Dr. Černý, which also largely concerned Wobenzym, was to be carried out under the Ministry of Education, where Mostecký had an unshakable position for the time being.

With the support of my boss František Slavíček in the prognostic and application department of the Institute of Microbiology of the Czechoslovak Academy of Sciences (CSAS), I also prepared another project on the use of proteolytic enzymes. I managed to negotiate that the Institute of Microbiology would be entrusted with the co-ordination of the research, and both the newly established UCT research institution in Prague, again headed by Dr. Karel Černý, and the Department of Clinical Oncology at IPH Prague-West, where Dr. Miroslav Pekárek was the head physician.

We seemed to have overcome the crisis. We were always in contact with the MUCOS company in Germany through various connections – the most important of which was the former political prisoner, haematologist and friend of Ransberger, Dr. Miloš Adámek.

The undisguised hatred on the part of some medical workers could no longer hinder us thanks to the protection now provided by the CSAS. We were thus free to develop our ideas. Soon, a group of people formed around us who worked on projects outside the "mainstream" state-approved approach to medicine.

It was only later, after the Velvet Revolution, that I understood that not everyone who had helped us and co-operated with us was primarily concerned with promoting new approaches to medicine. Researchers could perhaps find out who played what role in this resistance against the dictates of state medicine by searching the archives of the StB, the former secret police.

Visits to Ransberger in Grünwald

Visits to Karl Ransberger in Grünwald near Munich in the second half of the 1980s were always extremely interesting. We met with him in the house where Max Wolf used to stay and where he left indelible traces of his creative spirit. Many prominent patients from all parts of the world came to see Wolf during his German sojourn, and discussions about healing, art and politics often took place there. Karl Ransberger settled there for a while after the death of Max Wolf.

Thanks to him, I had the opportunity to meet a number of very interesting people from various fields and to join in discussions in an environment that resembled more of an art gallery rather than a scientist's dwelling. All this left a deep impression on me.

Karl Ransberger in atelier of sculptor Jan Pichl

The beginning of a "world spring"

The second half of the 1980s was the beginning of a kind of a "world spring". An apt analogy could be the second half of the 1960s which we experienced at home as teenagers during the revival process that resulted in the Prague Spring, which was then brutally suppressed by the Warsaw Pact armies led by the Soviet Union.

This time, however, the revivalist trio of Gorbachev, Thatcher and Reagan seemed to be up to something more fundamental. The atmosphere of the imminent end of the "evil empire" seemed to release the curtailed creative abilities in people, which was already unquestionably felt in our discussions about the possibilities for future co-operation.

Karl was convinced that in order to further expand systemic enzyme therapy east of Germany, it would be necessary to boost our physicians' knowledge in the field of immunology. Therefore, he asked me to identify doctors in Czechoslovakia who might be interested in the field. Above all, he wanted me to establish co-operation with immunologists who had already worked in Czechoslovakia. This was not easy, however, as there were not many who were open to the idea of a holistic view of human health and illness.

Karl also came up with the idea that it would be appropriate to involve our clinical institutions in the co-operation through clinical trials, which he was ready to generously support not only with drugs and finances, but also by purchasing various medical devices that were in desperately short supply in our hospitals and clinics.

My brother Martin, a physician, had already been fully involved in these preparations and had managed to draft in advance the necessary documents for the registration of Wobenzym, Phlogenzym and Wobe Mugos. However, this had to wait until the fall of the Communist regime.

Olga Winklerová, who since 1981 had held the position of institutional pharmacist at the Motol University Hospital and since 1983 also had the position of a regional expert in clinical pharmacy, made an extraordinary contribution to the preparation of clinical studies. We had known each other since childhood, we trusted each other – which was extremely important during the totalitarian era – and she was truly an expert who knew exactly what we needed. She gradually introduced us to a number of doctors in Motol who were ready to join the clinical trials.

Her colleague, Dr. Martin Bojar, a neurologist from Motol, also played an extraordinary role and we became friends. He had a great sense of humour, was very brave and was not afraid to take risks. At the time when we were signing the anti-communist manifesto "A Few Sentences", he came to me to add his signature and we handed it over to the Charta 77 member Dana Němcová for registration. The clinical study we prepared with him concerned Lyme disease, a neurological condition.

Despite opposition from the director of State Institute for Drug Control, Professor Jiří Elis, and people close to him, clinical trials were prepared as soon as 1987, under the auspices of the Institute of Microbiology in the form of prospective randomised studies with proteolytic enzymes (Wobenzym and Wobe-Mugos) and with an emulsified form of concentrated vitamin A (A-Mulsin forte and A-E-Mulsin forte). At the same time, Dr. Černý's group began to prepare an independent unit for biochemical research and testing of these preparations under the auspices of the UCT.

In the meantime, preliminary work continued at the Institute of Microbiology to establish a technology laboratory to search for other, mainly microbial enzymes that could be used in enzyme therapy.

Research underground – pharma dissent

The recently deceased Ivan Martin Jirous, also known under his nickname Magor ("Nutjob"), characterised what the cultural underground was about back in the days of the Communist regime: "The aim of the underground in Czechoslovakia was to create a parallel culture. A culture that would be completely independent of the official communication channels and the social evaluation and hierarchy of values as determined by the establishment. A culture that could not aim at the destruction of the establishment, which was the goal of the underground in the West at the time, because this would drive it into its arms. A culture which would relieve those who wanted to join it of the scepticism that nothing could be done, and show them that much could be done when those who did it wanted little for themselves and more for others."

Indeed, this was exactly the pattern according to which underground culture was created, and operated in, in other areas of society as well.

Today, I am convinced that our culture of a holistic view of health and illness, as advocated in the Prevention and Prophylaxis of Diseases of

Civilisation project, has given our actions a profound sense of purpose. I find it very strange, even mysterious, how many people helped us – even those who were officially on the other side of the barricade. Perhaps even then, many of them could see the deep problems in the Communist regime and its disastrous impact on people's health.

Denial of treatment to the seriously ill on the grounds of their age, religion or political "non-affiliation" was common. The government lacked Western currency reserves to buy quality drugs, and domestic production lagged behind. This challenged us to find new treatments and develop new medicines. At the Academy of Sciences, we often took on patients who had been written off by other doctors and sent home to die.

This was also the case of the parish priest of Mcely and Loučeň, Rudolf Zimandl, a friend of our family, who – like my late wife – was refused chemotherapy with cytotoxic drugs after his tumour surgery. He was a hopeless case for the hospital where he was operated on. They sent him home to die with the gleeful advice that he should get the necessary drugs from the Vatican.

Perhaps this was also due to the fact that he was not a "pacoš", which was a derogatory nickname for priests collaborating with the Communist regime as part of the church organization Pacem in Terris. He was renowned throughout the region for his bold Sunday sermons, which we often copied and spread. When he became ill, we of course provided him with imported medicines that had gotten across the border thanks to the "research underground" at the Institute of Microbiology. Perhaps thanks also to this treatment, he eventually defeated the serious illness and lived on until 2010. He died at the blessed age of 91.

In 2009, Father Zimandl was able to meet the Pope in Stará Boleslav.

Business negotiations with the Swedish company Alfa-Laval, which supplied technology for the new research facility at the Institute of Microbiology of the Czechoslovak Academy of Sciences. From the left: J. Bárta, J. Spížek, F. Slavíček, J. Wald, V. Krumphanzl with Alfa-Laval Fermenters Division Director.

The darkest place is under the candlestick

The transfer of our activities to the Institute of Microbiology of CSAS marked a qualitative and quantitative change for the research work on Ransberger's proteolytic enzymes. Firstly, there were excellent experts working at the Institute, who willingly helped with solving a number of individual problems that accompanied our unusual project. Secondly, the technological equipment at the Institute was really top-notch by the standards of Communist-era science, so after an agreement with Karl Ransberger, we decided to try to generate trypsin by means of biotechnology. The director of the Institute, academician Prof. Vladimír Krumphanzl, was a strong political figure, which was crucial in securing the funding for the organisation at that time. Thanks to his connections, the Institute was apparently able to secure the money needed to build a modern biotechnology facility with equipment that could also serve our purposes.

We all knew that thanks to the director's frequent inebriation, the institute was actually run by the head of our department, František Slavíček, and he was sympathetic to our plans. He gave us a free hand in all respects, and we also managed to establish co-operation with people from other CSAS institutes who were working on similarly unusual projects, as well as with some Western scientific institutions.

Our co-operation with Professor Günther Heim from the Department of Occupational Medicine at Heidelberg University, who has been working on the development of new diagnostic devices for the early detection of tumorous processes in the human body, was very important. Thanks to him and thanks to the support of Prof. Mostecký, we managed to travel again to West Germany at the end of 1985 to meet with the representatives of Ultrakust, a company which produced instruments for our screening. On this trip to Germany I visited Ransberger again in Munich.

In the meantime, I was "lured" by researchers from the Institute of Physics into another very interesting project, which concerned the desulphurisation of flue gases from coal-fired power plants. This event probably aroused the interest of the secret police (StB), and so one day they invited me to what was then known as the "special department" of the Institute of Microbiology, where they asked about my work on the desulphurisation project and asked me to meet them after my return from a business trip abroad. Fortunately, there was no mention of enzymes, so I went to the meeting without much fear.

At their request, we met in the Kriváň Hotel café in Prague, and it soon became clear that they wanted to recruit me. Naturally, I refused and so they gave me time to think by walking me to another café at Náměstí Míru. Here they presented me with a "binding act" to sign and, after I refused them again, they wanted me to sign at least a declaration of confidentiality. I attached my signature after I crossed out several passages, having learned what to do from Radio Free Europe, the only broadcast besides the Voice of America that we listened to in my family.

One of the two StB officers made a displeased comment that I was probably the only one in the entire Academy of Sciences who had done something like that.

November 1989: The Velvet Revolution

My brother and I, as I have already mentioned, made a number of friends among clinicians in Czechia and Slovakia who were interested in systemic enzyme therapy, and we prepared trips with them to visit Karl Ransberger in Germany. The first one, with the participation of Dr. Martin Bojar, was to take place on 19 November 1989. At the time when we were preparing the trip, we had no idea that this would be the first "free" travel beyond the Iron Curtain.

But we still had to experience the horrific trauma of the clashes with the police at Národní třída, where my friend, the neurologist Jan Hadač, my brother Martin, I and many students were brutally beaten by members of the National Security Corps (SNB) and the secret police. If it had not been for the courageous Majka Tomsová, the TV presenter who hid us together

The revolution started at Albertov in Prague – 17 November 1989

with dozens of other battered students in her small apartment at Mikulandská street, it is hard to say whether we would have even been able to make the trip to visit Karl Ransberger at all.

Beginnings: Biocentrum E and MUCOS Pharma CZ

The company MUCOS Pharma CZ, s.r.o., originally named BIOCENTRUM-E, s.r.o., where the letter E stood for our company's focus on enzymes, was founded in 1991 with the aim of promoting systemic enzyme therapy, especially the drug Wobenzym, on the Czechoslovak pharmaceutical market.

However, Karl Ransberger, the owner of the German company MUCOS Pharma GmbH and a very experienced businessman, knew that the turnover we had in Czechoslovakia was not enough to provide the funding for our big plans. Since it was him who directed the development of systemic enzyme therapy in the West, I proposed that in addition to Czechoslovakia, we would also expand and conduct professional and commercial activities throughout Central and Eastern Europe. It was clear to me, however, that getting established on the market in the former Soviet Union would require someone who understood this challenging region and preferably came directly from there.

Like Karl Ransberger, I was also aware that the focus of our business potential laid in Russia and Ukraine, given their population size. I had never visited the Soviet Union and there was a popular saying among my friends that "one would rather be a shoe shiner in New York than a millionaire in the Soviet Union". Knowing this, I refused to continue my studies in Moscow after completing my postgraduate studies at the Institute of patent office, even though continuing would have meant it possible for me to pursue an interesting career in the field of intellectual property protection in the former Comecon countries.

Strategic direction: Eastern Europe

The collapse of the Soviet Union and the subsequent recognition of the independence of the former Soviet republics led to the formation of the Commonwealth of Independent States. This was a positive signal for us. However, the pace of change was quite fast for my liking and, in terms of building a business strategy in this vast area, it was quite incomprehensible, so I was completely clueless in my search for the right person. But I was very lucky. At the beginning of the 1990s, Dr. Vlastimil Liebl, a colleague from the Institute of Microbiology of the CSAS visited me and asked if I needed an experienced biologist for our new company. When I learnt that the biologist was originally from Ukraine and a graduate of Lomonosov Moscow State University, I did not hesitate to inform Karl Ransberger about the possibility of co-operation. Very soon he met with Dr. Zinovij Masinovský and was amazed by the extent of his knowledge; consequently, he approved my request to employ him.

This moment – together with my condition that I laid out to Karl Ransberger that wherever in the world we achieve registration of Wobenzym as a medicine, we will register the trade marks to our company – was in many ways crucial.

Masinovsky's scientific background, his commercial talent and connections in the former Soviet countries, my trade marks for Wobenzym, Ransberger's absolute confidence in the economic abilities of my wife Radana, and a huge international team of committed employees and scientific collaborators have thus determined the value of our work for a quarter of a century. In 2013, when we sold our Czech business to the German manufacturer MUCOS Emulsionsges GmbH, which was then owned by the Canadian company Atrium Innovations, our orders for Wobenzym from the Berlin plant made up over 60% of its production.

Anyone who makes any trade goods knows that it is usually much less of a problem to produce them than to sell them on the market, no matter what the product is.

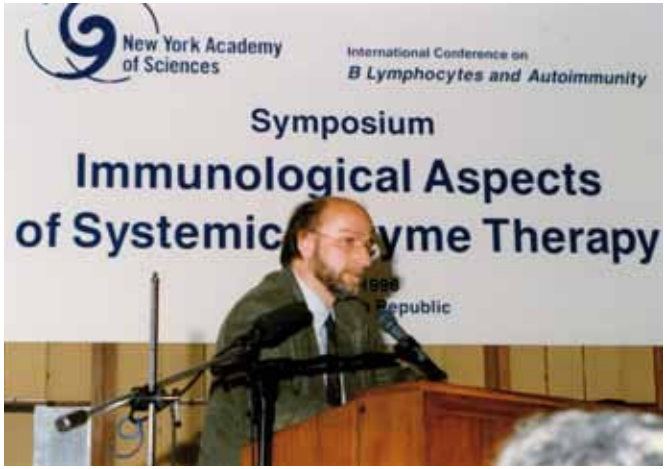
Among the first

Systemic enzyme therapy initially raised doubts among many experts because the therapeutic effect of Wo-Be drugs, demonstrated through dozens of clinical studies, contradicted the old biochemical paradigm of the inability of macromolecules to be reabsorbed by the intestinal wall. It was not easy to change this belief, but with time we managed to do so. In explaining the effects of our drugs, we relied mainly on immunology, a medical field that was not at the centre of Communist-era medicine, and therefore the knowledge on the part of Czech doctors in this area was not very profound. I was very lucky here too, when, on recommendation of the immunologist and microbiologist Prof. Ctirad John, I started co-operating with the leading Czech immunologist Dr. Karel Nouza. It was he who was in charge of our journal Fórum imunologie (Immunology Forum), which we published on behalf of the Immunology Society of the Czech Medical Association of J. E. Purkyně, as well as Imunologie dnes (Immunology Today), a special section which was published regularly in Medicína, our physician-oriented newspaper. He was fascinated by the ability of enzymes to normalise immunity and was able to write and lecture about it in an extremely engaging way.

Together with immunologists Dr. Inge Vokálová, Dr. Eva Závadová, Dr. Jaroslav Svoboda and others, they formed a strong professional team in our company and an inexhaustible source of information and inspiration for our medical team, led by my brother Martin.

Assistant Professor Jan Trnka taking over the management of St. Elizabeth Hospital from Clara, Mother Superior of the Order of St. Elizabeth.

In the first half of the 1990s, we began to build our own clinical facility, complete with a well-equipped laboratory focused on the diagnosis of immunodeficiencies of various aetiologies. The director was Dr. Jan Trnka, a surgeon from the Motol University Hospital, who led this medical facility diligently and successfully for two decades. The authors of this hospital concept, including the laboratory complement, were immunologist Dr. Jaroslav Svoboda and my brother Dr. Martin Wald.



New York Academy of Sciences Symposium, Prague 1996

Difficult beginnings in the Czech Republic

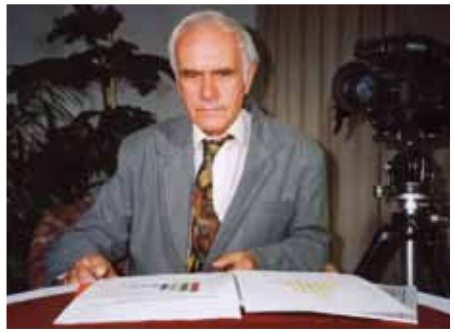
In its early days, our company had no financial backing. My wife Radana and I started our business with a loan from the then Czechoslovak Savings Bank in the amount of CSK 300,000 at an interest rate of 17.5%. We used the loan in one of the first ever auctions within the framework of what was known as the "small privatisation", and the company obtained a two-year lease of the premises where we built one of the first private pharmaceutical distribution warehouses in the country. However, apart from obtaining the dilapidated vegetable shop in Prague 4 in the Na Klaudiánce street, the small privatisation auction also attracted an enormous media interest to us, both in Czechia and abroad, which was very important.

Thanks to the auction, we met Věra Černochová, who handed over the documents to the auctioned vegetable shop to us at the Municipal Office in Prague 4, where she worked in the trade and services department. She later became our co-worker. Her knowledge and ability to uncompromisingly bring things to the planned result were essential for us at the time when we were building our company headquarters in Průhonice, the training centre for doctors at Parkhotel Průhonice, and many other important buildings.

Biocentres – Green Pharmacies

We still had to wait a long time to make a profit that would allow us to fulfil our own business vision related to systemic enzyme therapy, and so it was initially necessary to raise funds through secondary activities. We opened "green pharmacies" and called them Biocentres. They were actually sales and consulting centres, focusing on quality food supplements, literature and, of course, also on systemic enzyme therapy .

Pharmacists and pharmaceutical laboratory technicians worked there, and the goods we offered were rigorously tested in our laboratory, which was also equipped with a polarograph. This, too, made us more visible and, given the unprecedented media interest, it was a very important business step for the dissemination of information about systemic enzyme therapy . Václav Havel and his wife Olga regularly visited the Biocentre in Žitná street, where the surgeon Dr. Josef Fanta gave consultations on Wobenzym treatment.



Assistant Professor J. Fanta takes part in production of a TV show about systemic enzyme therapy.

Biocentres- Green Pharmacies

As soon as the new legislation allowed the establishment of private pharmacies, we converted the Biocentres into proper pharmacies and the revenues from them helped us cover the costs of developing systemic enzyme therapy for a long time. They were also to become the property and source of funding for the Harmony credit union, with which I wanted to complete the mosaic of enterprises we had created to support systemic enzyme therapy . Prosperous pharmacies were supposed to give our employees better interest on their deposits than the banks were offering, and they were supposed to develop various social programmes for their members, i.e., our employees. Unfortunately, this plan was not approved by the regulatory authority, and the credit union plan, which was to become a cement in our employee relations, was scrapped.

Partners of the company

Each of the partners in our company was responsible for a specific area. Olga Winkler was responsible for the area of pharmacy, Zinovij Masinovský for the development of research and trade in the countries of the former Soviet Union, and Radana Waldová, my wife, was in charge of controlling, i.e., everything related to the economic aspects of running a business. Although Dr. Martin Wald (my brother and later co-owner) left the company in the early 1990s and devoted himself to medicine as a surgeon at the Motol University Hospital, he initially worked in the company part-time and took charge of the medical area. He built a medical department and administered the MIS, or Medical Information System.

In terms of the know-how of both ours and the German company, this was a very sensitive area, as it contained all the studies, patent application drafts, information about our co-operation with experts, and above all the common strategic plans. Although he only became a co-owner later, Dr. Wald had my full confidence.

I considered the results of our hard work to promote systemic enzyme therapy to be "family silver" of sorts and assumed he felt the same way. In 1999, my wife Radana and I decided to allow my brother to rejoin the company as a co-owner. This was at a time when we were already selling 40 million Wobenzym tablets a year and the estimated value of the business was around CZK 200 million. In 1999, this was a respectable amount of money. In the meantime, Martin became a well-respected and sought-after surgeon, which were ideal credits for his own research too, which also supported our professional objectives.

My parents PharmDr. Věra Waldová and Dr. Ing. Milan Wald were also at the birth of MUCOS CZ

Synergy – one of the foundations of our success

The unusual starting conditions led to an unorthodox strategy in all areas related to our business. We were the pioneers of Czech post-revolutionary Capitalism, the kind that we knew only from the stories of those who remembered the 1st Czechoslovak republic. We were not only building our own company, but also assumed our deal of responsibility for the transformation of the entire society. What was most important then? To make sure that people – after years of the disastrous Communist experiment – start believing in normal Western values again.

It was a wonderful, adventurous time, both full of ideals and hard work, but also full of naivety. Everywhere there was a need to work hard.

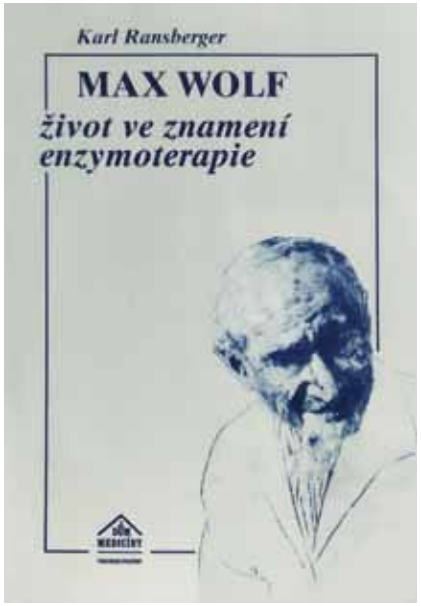
Offers for co-operation were coming on their own due to our popularity.

Since we did not have the financial backing necessary to streamline and simplify our business in the beginning, and since the business consisted of only the family and a few employees with no business experience, I bet everything on synergy. This way of thinking and acting, characterized by boldly connecting seemingly unrelated things, has gradually become the most powerful tool in our business arsenal, especially in the field of marketing.

Elixir of life

During our holiday stay in Audabiac, Provence, where my wife and I were running a project for children from Czech orphanages, a friend Dr.Aleš Pejchal with his wife Vladimira came to visit us. He told us about the Ta Fantastika theatre, which was owned by Petr Kratochvíl and Lucie Bílá and had gotten into trouble. The theatre had started having problems with the funding of new musical shows, so he asked us if MUCOS Pharma would like to sponsor the theatre, since we were so committed to supporting culture. I told him at the time that we were too small a business to sponsor a theatre, but that I would be thinking about ways to link our interests with the needs of Ta Fantastika.

First I had the idea to write a musical about the founder of systemic enzyme therapy , Max Wolf, and to combine this musical with the promotion of our new dietary supplement, Prevenzym. It was actually a sort of a "diluted" Wobenzym and for our company it was supposed to be a kind of a backup in case – due to the increasing volumes of Wobenzym sold – MUCOS Germany was unable to meet our demand for products and we had to rely on our own production.



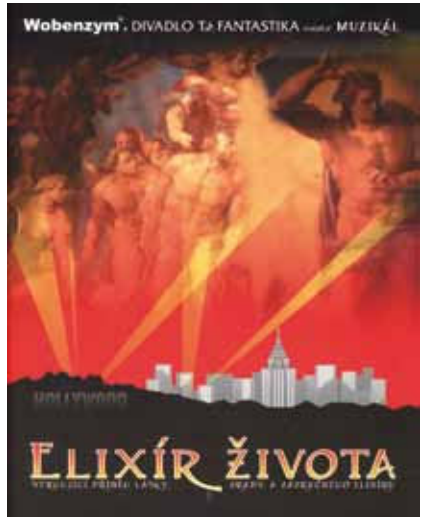
The book that inspired the creators of the Elixir of Life musical

Max Wolf's eventful life was a perfect inspiration for the script of such a musical. There was Karl Ransberger's book Max Wolf – Ein Leben für die Enzymtherapie, our films about the life and work of Max Wolf and also a concept for a science-fiction story that Karl Ransberger told me about. At the core of this was the idea that if everyone took Wobenzym regularly as a prophylaxis after turning 40, the economy would soon collapse because people would live on average ten years longer, precipitating the collapse of Western welfare state and pension schemes which would not be able to cope. It immediately occurred to me that an interesting spy plot could be woven out of Karl's vision, involving the clash between Russia and Western civilization. So it was a matter of finding a good screenwriter who would be able to develop the story, in the event that we struck an agreement with Petr Kratochvíl.

The well-known publicist Jefim Fištejn and his wife were also at Audabiac at that time. I knew a number of his texts that I liked, and I decided to approach him to see if he would be willing to take on such a task. I outlined to him my ideas about the content of the musical. Subsequently, we met many times and after a short time, Fištejn sent the first draft of his script.

It was different from what I had originally imagined, but certain essential elements were retained, so I approved the work. The result was spectacular for both Ta Fantastika theatre and MUCOS. Kratochvíl brought in busloads of viewers from all over the country, and that was a great marketing coup for us.

A stellar cast, headed by Lucie Bílá, Miroslav Táborský, Kamil Střihavka, Vilém Čok and many others, and the authorial duo of Soukup and Oswaldová took the audience into a world in which Max Wolf developed a miracle elixir. And what was absolutely essential, was that the famous musical director Jozef Bednárik, who was literally fascinated by the life story of Max Wolf, took over as director.



The poster that brought thousands of visitors to the Ta Fantastika theatre

Immediately after the premiere, the headline of an important daily newspaper Hospodářské noviny read: "A precious elixir? More of a subtle marketing" and continued: "Lucie Bílá traditionally excels in the musical Elixir of Life. However, she also became the face of an advertising campaign for Wobenzym, the musical's main sponsor."

Let us leave that judgement to the journalist. It may have been a subtle marketing campaign, perhaps, but mainly it was synergistic. We brought something completely new to the Czech musical scene,

and, just like many years before, we were pioneers of what came to be called "product placement" and is now strictly regulated.

Being first is more useful in terms of marketing than being better. Some musicals may appeal to wider audiences, but for us, this particular one that we sponsored worked perfectly synergistically with our marketing activities. Although it was primarily aimed at another of our products, the main attention was naturally drawn to our flagship product – Wobenzym.

Elixir of Life – afterparty. Dagmar and Jefim Fištejn, Karel Steigerwald and Radana and Jiří Wald (photo by Bohdan Holomíček).

Z. Masinovský and his wife Eva Masinovská in an interview with the scriptwriter Jefim Fištejn.

Applause. The premiere of Elixir of Life was a great success thanks to the star-studded cast and the script, music and lyrics.

Musical score composer Ondřej Soukup enthusiastically praises Lucie Bílá in the presence of Radana and Jiří Wald. She gave an incredible performance.

Friends and staff did not miss any of the cultural events. From the left: Saša Vovsová, Věra Černochová and Jiří Wald.

Elixir of Life – afterparty. Happy Lucie Bílá after the premiere of the musical where she played the lead role of Edith Wolf.

A dream come true

Karl Ransberger's dream had come true. In Czechia, he had found a team of people who were able to achieve his global goals and take systemic enzyme therapy to a new level both professionally and commercially. Over Bavarian beer and roasted pork knuckle, he and I often said that Max Wolf had a Czech nanny and the systemic enzyme therapy he had helped create had one too, but in the form of a team of people who were instrumental in its further development.

Science and clinical research

Systemic enzyme therapy drugs first appeared in Czechoslovakia in 1968 – initially brought via Dr. Adámek's contacts with Karl Ransberger to treat former political prisoners who had been forced to work in uranium mines, then as a result of Max Wolf's friendship with his colleague from studies in Vienna, Mr. Reinisch, thanks to whom the drugs were delivered to a hospital in Příbram. However, with the onset of the "Normalisation" era following the Soviet invasion of Czechoslovakia, these links were severed. In the 1980s, some departments, especially in the areas of sports medicine and neurology, explored the possibilities of using systemic enzyme therapy, especially Wobenzym.

It was only at the end of the 1980s that other physicians in the Czech and Slovak academic community showed interest in professional co-operation in deepening their experience with systemic enzyme therapy. Of fundamental importance for the promotion of enzyme therapy in wider medical practice were the works that were produced in university hospitals in the Czech Republic and Slovakia. In April 1994, their results were presented at the International Conference on Systemic Enzyme Therapy in Prague.

At that time, we approached all Czech and a significant number of Slovak physicians with an offer to attend the conference and received 4500 applications. Few people expected such a huge interest. We attributed it, among other things, to the privatisation in the healthcare sector at that time and the demand for new knowledge as a competitive advantage for doctors starting their private practice.

Because the large conference hall of the Atrium Hotel (now Hilton) could only accommodate 1,300 guests, we repeated the entire expert part two days in a row; still, only about 2,500 physicians were able to attend. We had to apologise to the other applicants and send them the complete conference materials in print. Even now, more than 25 years later, this very special event is still remembered among many physicians.

In addition to general lectures in the field of enzymology and systemic enzyme therapy, the first clinical experiences of Czech and Slovak physicians were also presented at the conference. The speakers included A. Sakalová, Department of Haematology and Transfusiology, University Hospital Bratislava; M. Wald, J. Adámek and J. Prausová, Motol University Hospital; M. Bechyně, Pilsen University Hospital; H. Krejčová, St. Elizabeth Hospital, Prague; J. Rovenský, Research Institute of Rheumatic Diseases, Piešťany; J. Strejček, 1st Clinic of Internal Medicine, Královské Vinohrady University Hospital, and others.

On the occasion of the conference, the Enzyme therapy Section of the Society of General Medicine of Czech Medical Association of J.E.Purkyně was founded, with Dr. Josef Fanta becoming its first chairman.

The interest in systemic enzyme therapy issues required the publication of a set of articles devoted to theoretical aspects of systemic enzyme therapy in the Journal of Czech Physicians (Journal of Czech Physicians 134, 1995, No. 19, pp. 19–607).

The conference was a sort of a culmination of the initial stage of systemic enzyme therapy in Central and Eastern Europe. This new method of treatment undoubtedly appealed to a large number of Czech and Slovak physicians, who contributed significantly to its development in the following years.

At the conference in the Atrium Hotel in front of the information stand of the medical section of MUCOS CZ. From the left: M. Wald, R. Muchová, V. Zímová, Z. Masinovsky.

Social responsibility

DECENCY, RELIABILITY AND RESPONSIBILITY IN BUSINESS

In the first phase of our business, the company was like a big family, which had its advantages in shaping the philosophy of social responsibility towards both its employees and the environment.

Corporate social responsibility should mean nothing more than decency, reliability and responsibility of business owners, managers and employees, manifested both externally and within the organisation itself. But what is decency, reliability and responsibility? In a globalised world, do these words still mean the same thing as in our parents' and grandparents' era?

They certainly do and in my opinion; they play a key role in repairing the damage caused by globalisation to society and to the planetary environment.

Older generations still remembered that a mere two per cent of the United States' gross domestic product was enough to rebuild Europe – devastated after World War II – with the Marshall Plan. Today, disproportionately greater material and intellectual resources are available, and the social responsibility movement that has been on the rise since the second half of the 20th century will perhaps help bring about much-needed change. It is a movement that is also promoted by various corporations wielding enormous financial and intellectual capacity. It could help close the widening gap between the rich and the poor. This movement should be characterised by the aforementioned decency, reliability and responsibility.

MUCOS Pharma CZ strategy

From the very beginning, our company has operated in the healthcare sector, and this has meant that the focus of our corporate social responsibility has been human health, both mental and physical. We were convinced that if we wanted to do business successfully in this area, we first had to prepare the company and, at the same time, we had to prepare the whole of society for the upcoming fundamental changes.

In practice, this meant popularising ideas such as healthy lifestyle, promoting a shift away from the paternalistic concept of care, supporting privatisation in healthcare, and helping to educate physicians, especially in fields that were close to our hearts and were not sufficiently developed under the Communist regime. We had to start engaging with the mass media because without their participation, our efforts would have not been effective. Through our family publishing business, we published printed materials for the general audience as well as for professionals, and distributed them free of charge. I have already mentioned the journals such as Fórum imunologie (Immunology Forum), Medicína (Medicine), Zdravá rodina (Healthy Family) and Sanquis.

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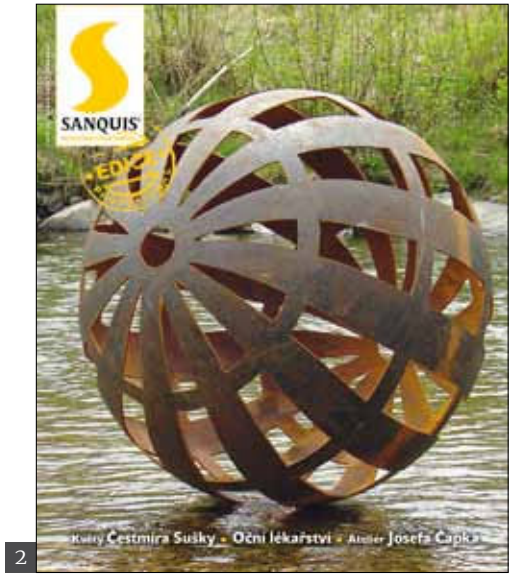

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1: Immunology Forum – a professional journal
2: SANQUIS – an art and health magazine
3: Medicína – a magazine for physicians
4: The original newspaper edition of the Medicína magazine
5: Zdravá rodina – a health magazine

Managing Your Health

We collaborated in the production of radio and television educational programmes, the most extensive of which was the "Managing Your Health" project. Its aim was to encourage the Czech population to adopt a healthier lifestyle and to increase their sense of responsibility for their own health. Under the leadership of our colleague, Dr. Jiří Halousek, a team of people headed by leading physicians, all experts in various fields of medicine, took care of its implementation. This project did not rely on any government or public grants and was financed by advertising revenue, primarily by our company. It provided the expert community and the general public with the necessary information for free, through all the essential segments of modern media – print, radio and television.

From 1998 to 1999, a free special insert in regional daily newspapers called Zdravá rodina (Healthy Family) was published every month with a circulation of 400,000 copies, which succeeded in reaching a wide public audience even in the most remote places of our country. The editor-in-chief of this magazine was the popular actress Zlata Adamovská.

This was immediately followed by a television project airing on the public broadcaster, Czech Television, where every Monday from January 1999 to June 2000, before the main news bulletin, well-known figures from the world of science, art or politics spoke briefly about what they were doing for their health. The programme continued in the following years with the series titled Manažerem vlastního zdraví (Managing Your Health), which was hosted by actor Pavel Kříž and Dr. Milan Kvapil.

In the programme, medical experts introduced the audience to various medical problems and their solutions and advice on how to stay healthy as long as possible. This series aired 70 episodes in total.

Support for physicians

In parallel with these activities, the medical community was informed through our magazine Medicína (Medicine), which was delivered to the homes of all Czech doctors free of charge.

Being the manager of your own health

Since the beginning of 1992, we have also provided free consultancy to physicians in setting up privatisation projects, collaborated on national healthcare policies, and organized exhibitions, lectures, and many other activities. The necessary privatisation of parts of the healthcare sector has been associated in the public mind with question marks and concerns about the future and funding of healthcare. A much more difficult situation, however, was faced by the doctors who had to deal with the decision of whether or not to open a private practice.

Most of our activities were not actually directly related to drugs for systemic enzyme therapy; we were basically organising health education in the broadest sense of the word. We wanted to open people's eyes and take the fear out of the necessary steps that the transformation of the economy required.

Also in the following period, an integral part of our company's activities involved the support for education in the healthcare sector, especially through the Academia Medica Pragensis Foundation. In 2004, our company became a general partner of the Czech Medical Academy, which brings together the most prestigious figures of Czech medicine. Here, too, we were at the birth of something profound: this esteemed medical institution.

A mosaic of activities

From the very beginning, it was clear to us that our activities went well beyond the boundaries of the regular pharmaceutical business. We put together a mosaic of different activities where we chose the individual pieces very carefully, aware of the need to create the synergistic reaction I mentioned earlier. I tried to make sure that the resulting picture was of exceptional quality and, above all, true to life.

We built our corporate culture on the foundations of T. G. Masaryk's motto "to fear not and to steal not" and Comenius' "strike while the iron is hot". This was how I was brought up and what enabled my parents to embark on a number of bold projects even within the confines of the Communist system behind the Iron Curtain.

We have always been committed to playing fair with everyone involved in our business, and this attitude has proven to be a great upfront "investment" that has benefited us and the company as a whole. We cared very much about the reputation of the company and guarded it closely.

Visit of the Swedish King Carl XVI Gustaf and Queen Silvia in Průhonice. The royal couple planning a tour of Prague with Dr. Masinovsky and Dr. Halousek in front of the Parkhotel Průhonice, where they were staying.

President V. Havel welcomed by Radana and Jiří Wald at the Parkhotel Průhonice for the international meeting of his publishers.

President Václav Klaus discusses the effects of Wobenzym treatment in orthopaedics with Jiří Wald.

We were building on family traditions and we knew that a good reputation takes a long time to build, but also that it can be lost overnight.

Sue Ryder Home

In the early 1990s, when we were not yet making a profit that could support non-profit organisations, we had to respond to the needs of society in a "non-financial" manner. My family and I, at the request of Pavel Smetana, an evangelical theologian and synod elder of the Evangelical Church of Czech Brethren, took over the guarantee for the completion of the Sue Ryder Home in Michle, Prague, after the bankers sitting on the board of this non-profit organisation decided to end the project. For a long time I became Chairman of the board of the Sue Ryder Foundation and Benevolent Society.

Since the early 1990s, our company has become a partner of the world-famous Sue Ryder Foundation, based in London, which cares for the elderly in difficult health situations. Our colleague Věra Černochová contributed decisively to the reconstruction of the Sue Ryder Home in Prague. The co-operation with the Sue Ryder Foundation lasted for many years and for these activities our company received the prestigious VIA BONA award at the residence of the U.S. Ambassador in Prague at the end of 2003.

In the early 1990s we also provided a financial guarantee for the building of a Waldorf-type school in Prague – Jinonice, because we felt that raising children for a life in freedom must be based on a free educational system. We were convinced that you cannot change society without the selfless courage to take risks. We have participated in various ministerial committees, and boards of directors of non-profit organisations. All of this would not be possible without the dedicated work of our entire team of associates. Our corporate creed was the following: "We, our customers, our suppliers, our retailers and everyone involved in our business will do well to think not just of their own benefit, but of the common good."

Waldorfschool in Jinonice

The League Against Cancer and the Through Art to Freedom project

Because our company supported the League Against Cancer Prague branch, we were at the birth of one of the most successful charity projects in the Czech Republic, Květinový den (the Flower Day), to raise both awareness about the disease and funds for its treatment. In addition, we supported a number of non-profit organisations caring for women after breast cancer, which was related to my personal experience, that I've described in previous chapters.

In our own non-profit projects, we have always tried to respond promptly to various problems that the government was unwilling or unable to deal with. After a big flooding in Moravia in the summer of 1997, our company initiated the "Air purifiers for flooded orphanages" project. This was because in the affected areas, there was a danger coming from mould as its airborne spores could cause allergies or even more serious illnesses. Air purifiers provide the most effective defence against it. Together with other sponsors, we arranged for the delivery of hundreds of air purifiers to hundreds of children's rooms in flood-damaged orphanages.

Conductor Jiří Bělohlávek with the Prague Philharmonic Orchestra at the Audabiac Fortress as part of the Art for Freedom project.

Jiří and Ondřej Wald at the Audabiac Fortress with a travelling cup for children from the Children's Home in Hranice na Moravě.

Art for Freedom with Matěj Forman at the Audabiac Fortress

Veronika Waldová presents harpist Jana Boušková with flowers after her performance for the Art for Freedom project.

Jiří and Radana Wald with sculptor and painter František Mertl (FRANTA) and his wife Jacqueline. FRANTA created the sculpture Eighth Day for the Art for Freedom project, which has become a symbol of the Audabiac association.

Actress Zlata Adamovská at the Audabiac Fortress with children from orphanages in Hranice na Moravě. Photo by Mgr. Radoslava Dubanská, who was very active withher husband Tomáš in project Art for Freedom.

During the work on this project, we got to know the real problems of children living in orphanages, which led us to initiate another project, which we called "Art to Freedom". The aim was to help create an environment for children living in institutions in which their positive identity, self-awareness and self-worth could develop in the most natural way. In 2002, the ancient fortress of Audabiac in Provence, southern France, was reconstructed to serve children from orphanages in the Czech Republic during summer holidays.

At the fortress, children participated in creative workshops led by leading Czech artists – painters, sculptors, musicians, actors, photographers and filmmakers. This gave the kids an opportunity to observe the birth of an artistic idea and its realisation in an organic way and to experience free creative work on the spot. An integral part of the project was to help integrate these children into society after they left the institution.

Orbis Pictus PLAY

The idea of the Art to Freedom project was also embodied in the new project named Orbis Pictus PLAY, inspired by The Labyrinth of the World and the Paradise of the Heart by John Amos Comenius. This project was aimed at the general public. It was an original concept of an interactive international travelling exhibition with an extensive accompanying programme and the participation of leading Czech and foreign artists and specialists led by Petr Nikl. He also served as the art director of this project for ten long years.

The creative human imagination that our company fostered there gives rise to art, but is also undoubtedly one of the important sources of science. Anything truly ground-breaking in science has always involved the exercise of unbridled imagination. By the nature of its activities, any pharmaceutical company is closely linked to science, and since MUCOS Pharma CZ has been involved in the development of systemic enzyme therapy as a new therapeutic field since its foundation, this approach was particularly close to our hearts.

The project began in 2006 with an exhibition in Paris and continued with exhibitions at the Museum of Music in Prague, in Brno, Ostrava, Opava, České Budějovice, Florence, Rome, Moscow, Sofia and Vancouver, Canada, at the famous TELUS World of Science exhibition centre. It was part of the European Year of Creativity and Innovation 2009 and was one of the main accompanying events of the Czech Presidency of the European Union in Brussels. This interactive project of ours, which has been visited by hundreds of thousands of visitors at home and abroad, has inspired dozens of other organisations, which was also our goal. Exempla trahunt, examples compel, as the Latin saying goes, and if the examples support life, the whole society flourishes.

Transparency first

Corporate social responsibility in the economic area was applied in the company primarily through transparency in all its activities. From the very beginning, our business was audited by prominent auditors. HR and payroll were also regularly audited by the competent government authorities, which found no major issues.

The company's corporate social responsibility principles naturally included anti-bribery and honest relations with customers, suppliers and manufacturers. The same applied to the timely fulfilment of all financial obligations towards the government and employees. We have never considered moving the company's registered office offshore for tax reasons, as that would go against the principles we have espoused.

On the business side of things, I was also very lucky with my co-workers. Since the company was founded, the accounting was managed by Olga Jeřábková, an experienced accountant, and this was very important for its continuity. I also recruited another experienced economist, Brigita Štětinová, who ran the company's control until she left for Brussels to join her husband, who was elected a Member of the European Parliament.

Creative lab of the Orbis Pictus PLAY exhibition at Telus World of Science, Vancouver.

Employee loyalty

We also placed great emphasis on the application of social responsibility principles within the company. This included both providing comprehensive care for employees and involving as wide a range of employees as possible in the company's own non-profit projects. This has led to a sense of a job well done for each individual employee and their greater engagement with the company.

The absolute majority of our employees have been with the company for decades and we have never let anyone go due to retirement age, redundancy or to cut costs. The immunologist Dr. Karel Nouza participated in writing articles until he was 88 years old, while Dr. Josef Fanta provided personal consultations on systemic enzyme therapy to patients until his old age.

MUCOS Pharma CZ employees on a holiday trip to France.

Appreciation of our work

MUCOS Pharma CZ has received numerous awards for its extensive long-term activities in the humanitarian and cultural sphere. In 2004, it was awarded the Ansted's Social Responsibility International Award (ASRIA 2004) on the occasion of the 2nd International Conference on Corporate Social Responsibility in Penang, Malaysia. In the same year, we received the Enterprise of the Future Award in the Spanish Hall of Prague Castle, where the award ceremony was hosted by Jefim Fištejn, and, as I have already mentioned, we also received the VIA BONA Award for our partnership with the Sue Ryder Foundation.

In the TOP Corporate Philanthropist 2008 awards for socially responsible companies in the Czech Republic, according to the funds invested, we took

Spanish Hall of Prague Castle. MUCOS CZ received the Enterprise of the Future Award. From the very beginning, the following people contributed to the success of the company. From the left: Dr. Masinovsky, B. Čermáková, B. Zatřepálková, O. Jeřábková. The last one on the left is the author of the award, FRANTA.

3rd place among the participating companies, and we were the only representative of small and medium-sized companies among the top awardees.

MUCOS Pharma CZ has demonstrated through its activities that even small and medium-sized companies can have a well-thought-out corporate social responsibility strategy. The important thing is that this should be a form of symbiosis, so that corporate social responsibility benefits both society and the company that acts in accordance with these principles.

For their initiative and management of many NGO projects, Jiří and Radana Wald became the first recipients of the Czech Television Award for Entrepreneurial Contribution to Culture, which was awarded for the first time as part of the Ernst & Young Entrepreneur of the Year 2016 competition. From the left: Director General of Czech Television P. Dvořák, J. Wald, R. Waldová and musician Dan Bárta.

4 | NEW CHALLENGES: WOBENZYM IN CENTRAL AND EASTERN EUROPE

ZINOVIJ MASINOVSKÝ

Wobenzym came into my life in the spring of 1993. When Jiří Wald, the managing director of Biocentrum E, s.r.o. (later MUCOS Pharma CZ, s.r.o.), approached me with an offer to join the company, I had 22 years of experience in basic research, including international scientific collaborations. For four years I was a member of the Executive Committee of the International Society for the Study of the Origin of Life (ISSOL) based in the United States of America. I had had experience in running a small academic institute and of organising international scientific conferences, the most important of which was the International Conference on the Origin of Life in Prague in 1989.

I knew nothing about business or systemic enzyme therapy, yet I accepted the offer, partly because my scientific work focused, among other things, on the origin and early development of enzymes. The general atmosphere of the early 1990s also played a role: when unprecedented opportunities opened up and changes in people's interests and endeavours – and consequently their jobs – were the order of the day. And most of all, it was a challenge!

From the very beginning, MUCOS Pharma CZ s.r.o. (hereinafter referred to as MUCOS) was conceived as a centre for the development of systemic enzyme therapy throughout Central and Eastern Europe.

Wobenzym came to Czechoslovakia 25 years after its first registration in Germany. It had completed not only the mandatory preclinical research, but also several dozen controlled clinical trials that have demonstrated its efficacy and very good tolerance in treatment of a number of diseases. Although there has been some experience with the use of certain enzymes in treatment since the 1960s, systemic enzyme therapy (SET) as defined by Max Wolf and Karl Ransberger was a completely new treatment method for the vast majority of Czechoslovak physicians. It was based on somewhat unorthodox but nonetheless confirmed assumptions (especially regarding protein absorption in the small intestine). We encountered a similar hesitance in every new market where we introduced Wobenzym.

Therefore, our main task was to inform physicians and other professionals about the relevant scientific findings and results of clinical trials so that patients could benefit from qualified advice.

At the very beginning was the International Conference on Systemic Enzyme Therapy held in Prague in 1994, as mentioned in Chapter 3. In addition to almost two and a half thousand Czech and Slovak doctors present, we arranged for the participation of about 60 physicians from Eastern Europe, mainly from Russia and Ukraine. A debate on our plans and perspectives for the introduction of SET in their countries was subsequently organized for them at the Institute for Postgraduate Medical Education in Prague. It was a good start for our work in other Central and Eastern European countries.

However, any activity in the pharmaceutical market starts with the registration of medicines. You can present the results of the best research and the most convincing clinical trials to the experts, but all will remain rather academic if physicians have no way of verifying the efficacy and safety of the drug in their own patients.

Wobenzym was registered in Czechoslovakia in 1991. After Czechoslovakia split into the Czech Republic and Slovakia in 1993, the registration was accepted by both successor states. For obvious reasons, our business plan for Eastern Europe envisaged priority registration in the two largest countries: in Russia and Ukraine. The second wave was to include Latvia, Lithuania, Kazakhstan and Azerbaijan.

I visited Moscow in May 1993, immediately after joining Biocentrum-E, with a suitcase full of registration documents partly in German and partly in English. The roughly one-week resulted in preparation of the required summary of production and technical documentation in Russian and the submission of the registration application with all supporting documents to the competent authority. Dr. N. Zimakova was of great help to me during and after the registration process. We knew each other from my academic days, when she, as a researcher for the Institute of Experimental Oncology of the Oncological Scientific Centre of the Academy of Medical Sciences of the USSR, co-operated with the Laboratory of Evolutionary Biology of the Czechoslovak Academy of Sciences (CSAS). The registration clinical trial designated "Wobenzym in the treatment of superficial venous thrombophlebitis" included 120 patients in three top clinical centres and was extremely successful (the results were subsequently published in an international peer-reviewed journal) and Wobenzym was registered in Russia already in 1994.

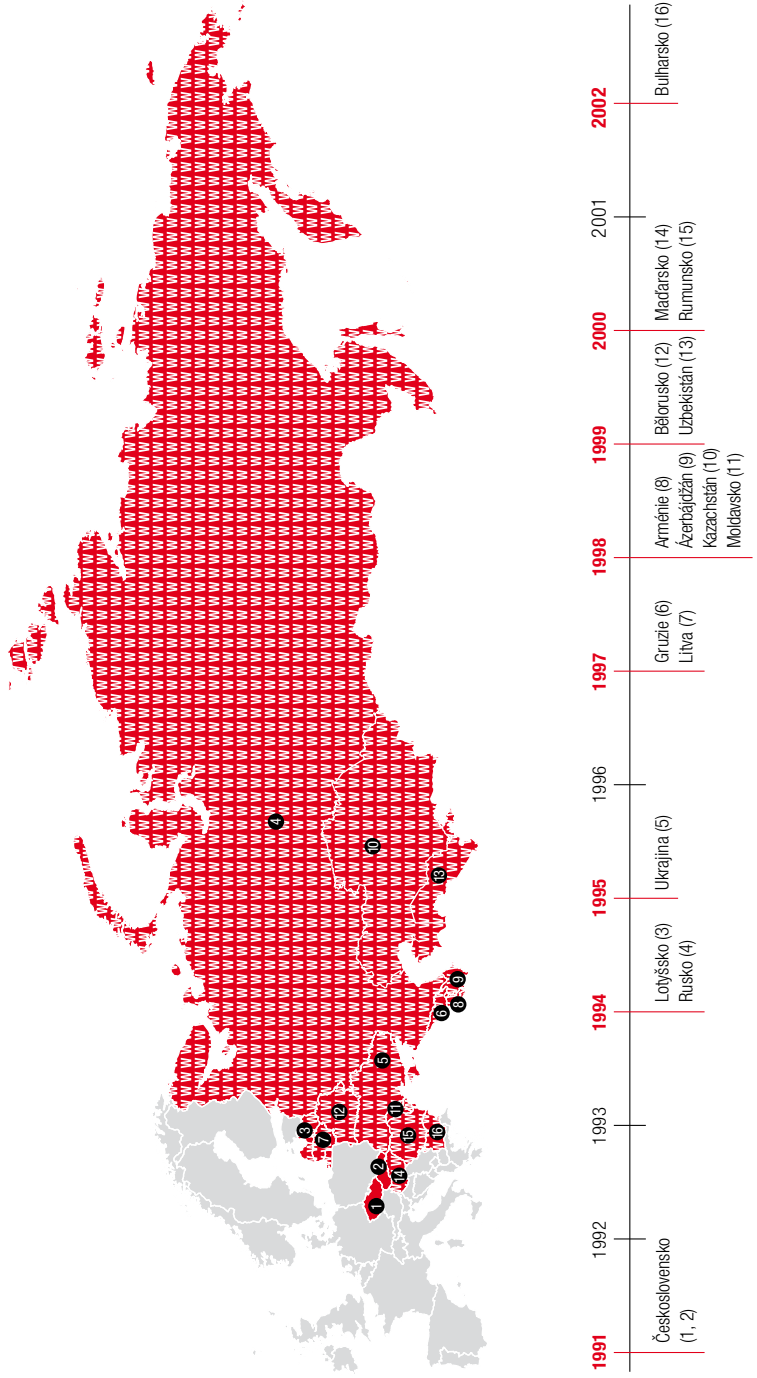


Fig. 1. The Wobenzym March: The Registration Process in Central and Eastern Europe

In the same year, we secured registration in Latvia, then in 1995 in Ukraine and in 1997 in Lithuania. Kazakhstan and Azerbaijan were added to the list in 1998. Our priorities were achieved, but information about systemic enzyme therapy was spread to other post-Soviet countries through scientific and medical contacts. New and new offers for co-operation were coming in and this caused the registration of Wobenzym to go ahead in other countries: Georgia in 1997, Armenia and Moldova in 1998, and Belarus and Uzbekistan in 1999 (Fig. 1). Registration in other Central European countries (Bulgaria, Hungary and Romania between 2000 and 2002 was of great importance to us.

In addition to Wobenzym, other SET drugs have subsequently been registered in a number of countries, namely Phlogenzym and Wobe-Mugos E.

While the registration process was ongoing, MUCOS continued to build its organisational structure in Central and Eastern Europe*. At the beginning, three main footholds were planned: Russia, Ukraine and Latvia.

From Karl Ransberger I received contact details for Dr. Juris Vecvagars in Riga, Latvia. At that time he was the head of Softwerhause Medical Centre, a private medical facility, but above all he was a very experienced doctor. He mainly used traditional therapeutic procedures with his patients, but he was also open to new not-so-traditional methods. When I told him about Wobenzym, he listened attentively and then very politely remarked that he had actually known about it since the 1980s. At that time, he'd been working in a clinic that mainly took care of Latvian state and Communist Party leaders; similar clinics (something like the Czechoslovak Communist-era State Institute of National Health, better known as SANOPZ) existed in all Soviet republics. In Moscow they heard about Wobenzym and it was decided that they must have it for the party elites. They bought it directly in Germany and then distributed the stock to the individual republics. Since Dr. Vecvagars was a very responsible

*Former USSR countries can be divided into three groups: central European, now members of the EU (Estonia, Lithuania, Latvia), eastern European (Belarus, Moldova, Russia, Ukraine), and Asian (Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan). For simplicity, Eastern European and Asian countries have been categorised as "Eastern Europe" in the MUCOS corporate structure.

physician, he did not just read the information leaflet in the package, but read everything he could about enzyme therapy as well. Naturally, he was the right man for the job. In 1994, we established a joint venture with his company SWH Medical Centre – named Mucos Balt SIA – as a Latvian legal entity based in Riga. Dr. Vecvagars delegated two of his colleagues to the new company: Dr. Janis Ansbergs, who became the managing director for many years (replaced by Vigrita Rozenfelde in 2006) and Inga Titova, the office manager. Mucos Balt operated not only in Latvia, but also in Lithuania, where it had representatives: Rasa Šnaideriene and later Iveta Balčiuniene. They all did a perfect job and Wobenzym has become a common part of medical practice in Latvia and Lithuania.

One of the events that significantly influenced the future of our efforts in Eastern Europe was my meeting with Prof. V. N. Kovalenko and Dr. A. I. Terzov in 1993. They both attended the International Medical Congress in Prague, where we also had a kiosk to present systemic enzyme therapy. They were interested in SET and our collaborator Dr. Radmila Muchová, who was managing our kiosk, gave them my contact details. It was the first visit from Eastern Europe to Biocentrum-E, based at that time still in our original premises in Španělská street. In hindsight, I can say that it was a serendipitous meeting for both parties, which not only laid the foundations for our future business in Ukraine, but more importantly provided a new impetus for the further development of theoretical foundations and clinical applications of systemic enzyme therapy. Dr. Terzov soon (in 1995) became a long-standing head representative of MUCOS in Ukraine; for Prof. Kovalenko, SET became an important part of his entire professional career.

Our very successful venture in Russia is associated with two names: Dr. Yuri Sternin, now a full professor, and Dr. Yuliya Khokhlova.

Dr. Sternin, as an already experienced pharmaceutical manager, became the head representative of MUCOS Pharma CZ in the Russian Federation, with an office based in St. Petersburg. He served in this position for more than 20 years and was very successful. In a relatively short period of time he managed to build a large and functional structure for the Russian branch that covered virtually the entire territory of Russia. It included two main offices (in St. Petersburg and in Moscow) and 6 to 8 regional representatives whose teams were responsible for the most important regions of the country.

Dr. Khokhlova was a long-time collaborator of the State Institute of Rheumatology in Moscow. For decades, this scientific and medical institution was not only the main rheumatology centre in Russia, but also a training centre for the whole Soviet Union. Over the years, especially its director, Prof. V. A. Nasonova, managed to create a familiar atmosphere there for rheumatologists from all over the country. Dr. Khokhlova knew them all, and this was a great advantage for MUCOS not only in disseminating information about systemic enzyme therapy throughout the Commonwealth of Independent States (CIS), but also in finding suitable representatives for the Russian regions and other CIS countries. It is therefore no coincidence that the majority of our representatives in these countries are rheumatologists. They have done a lot for the development of SET and for the commercial success of Wobenzym in their countries, starting with its registration with the relevant authorities. That is why I am very happy to list them here:

The first representative of MUCOS in Kazakhstan was a prominent Kazakh rheumatologist Prof. Rajchan Bajmuhamedova. She was at the birth of the official representation of MUCOS Pharma CZ in Kazakhstan, which we decided to establish with the success of our business and expansion of activities in the country. Later, Dr. Askar Bajmuhamedov took over this function from her and successfully continued it.

Other prominent rheumatologists joined in. Our representative in Azerbaijan was Prof. Nadir Guseinov, in Moldova Prof. Liliana Groppa, and in Belarus Dr. Valery Apanasovich.

Georgia was the first of this group of countries where Wobenzym was registered. Much of the credit goes to Dr. Levan Shalamberidze, our representative in this country for many years. I recall our first visit to Tbilisi in the mid-1990s (together with Karl Ransberger and Dr. G.Stauder, vice-president and head of clinical research at MUCOS Pharma GmbH). The country had huge energy problems and the large hall where the SET conference was held was basically without heating even in mid-winter. People in the audience had to keep their coats on (except for us lecturers), but they came in large numbers and the interest was great. An important assistant to Dr. Shalamberidze was his wife, Dr. Maja Cuckiridze.

SET received great support in Uzbekistan by Prof. Viktoria Garib, who contributed not only by her scientific erudition, but also a number of innovative marketing approaches, e.g. participation in a national project focusing on family and sexual health.

In Armenia, our representative for many years was Dr. Araik Mikaelyan.

The co-ordination and organisational support of the representation office and the representatives themselves, as well as the business co-operation with customers in Central and Eastern Europe, were taken care of diligently by the employees of the parent company Mrs. Helena Hejdová and her colleagues Zuzana Mlejnková-Jandová, Drahoslava Boukalová and later also Iveta Bartáková.

Matters concerning the registration of SET drugs in all countries where we were active from 2001 to 2011 were handled by Dr. Michaela Lysíková in a competent and timely manner and always with the active co-operation of our representatives. The "liaison officer" in scientific and medical matters for many years was Dr. Marta Honzíková.

The marketing strategy for Eastern Europe was based both on the nature of SET as a new treatment method and on the specific conditions, both common to the countries of the former USSR and specific to individual countries. Here is a brief summary of the initial conditions:

- SET was completely unknown to the general public; moreover, it was quite difficult for physicians to grasp because of the prevailing belief in the non-absorbability of macromolecules (see Part II, Chapter 4). Understanding it requires some knowledge of biochemistry, physiology and medicine, and most importantly a willingness to learn more. In the first place, this concerned those who should have informed the experts and the public about SET, i.e., MUCOS medical representatives.
- The public space was literally flooded with advertisements for all sorts of dubious products, especially dietary supplements. Bad experiences with these products had led to a growing distrust of new things on the part of physicians as well as the public.
- There was a traditional trust of patients towards their doctors, supported by a significantly paternalistic attitude on the part of physicians and pharmacists towards patients.
- Key experts among doctors enjoyed a great deal of authority in the respective disciplines.
- The countries were generally low-income with correspondingly low purchasing power.

For the marketing strategy, this meant:

- We had to spread the information to as many physicians as possible.
- We also had to prepare professional materials for both internal and external consumption. We started with two publications, which were published in Russian in 1994 in Prague (*Fig. 2).* The first (K. Nouza, Z. Masinovský, R. Muchová. Systemic enzyme therapy: Research and Clinical Practice) was intended for physicians. The second one (K. Ransberger, S. Neu. Enzymes and Enzyme Therapy) was meant for the general public. This contribution by the parent company was followed up especially by the Russian and Ukrainian offices, with an impressive editorial activity ranging from specialist monographs and detailed methodological brochures on individual medical disciplines to numerous printed materials for patients. Significantly, these materials were also available to the representations in other Eastern European countries.
- We had to choose suitable representatives and provide them with appropriate training. All of our representatives had a medical background (MDs). When they talked to doctors, it was a discussion between experts about specific diseases and the possible use of SET (Wobenzym) in their treatment.
- For physicians, the experience with a medicinal drug obtained in the treatment of their own patients is the most convincing. Therefore, the decision taken by Karl Ransberger to provide free samples of the drug during the initial years, the quantity of which was limited only by the legislation of the country and our logistic capacity, proved quite beneficial to us.

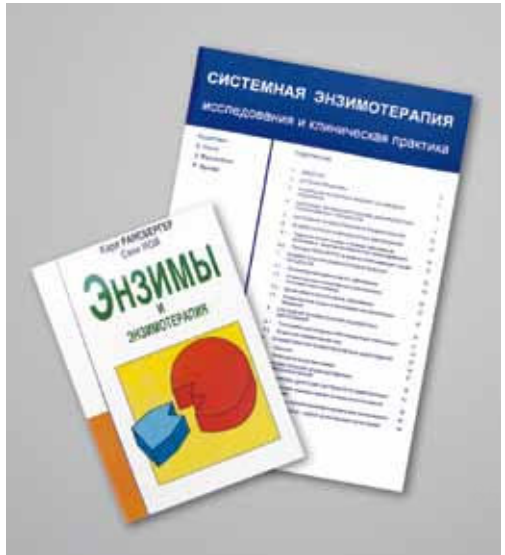


Fig. 2. Beginnings: The First Books on SET in Russian

In addition, there were one-off humanitarian shipments of Wobenzym. The first of these was provided by MUCOS Germany in the 1980s, long before we were established in Eastern Europe, for the treatment of the men who had participated in the clean-up after the Chernobyl disaster, as well as other victims of this accident. When I first came to Kiev in 1993 as a representative of MUCOS Pharma CZ, Prof. L. P. Kindzelskiy, one of the immediate co-ordinators of medical assistance to these patients, remembered this gift with gratitude. He had already been able to evaluate the positive effects of Wobenzym treatment in a number of serious conditions.

To a much greater extent than any advertising, the post-registration practical experience of physicians and their patients was the main reason why Wobenzym has become a standard part in the treatment of various, especially inflammatory diseases.

A large endeavour can select for and educate managers capable of succeeding in business. Few of us had any managerial, let alone entrepreneurial, experience when we joined MUCOS. Almost all of us came from the field of science or medicine and we had to learn many new skills. A strong incentive for us was our conviction based on our expertise that this was indeed an extremely interesting and very promising project. From this came a great deal of personal commitment to the cause on the part of all team members.

This personal conviction was not prevalent merely among MUCOS employees; it was equally widespread among a large number of medical practitioners, led by a number of prominent experts in their fields. Therefore, I will summarise here the contribution of Eastern European physicians to the practical application of systemic enzyme therapy. This section can be divided into two parts: expanding practical experience and deeper understanding of the SET mechanisms of action in traditional fields, and innovative inputs into other areas of medicine.

First of all, however, I want to mention the name of a person whose contribution to the origin and development of enzyme therapy itself was quite extraordinary: Prof. K. N. Veremeenko, a pioneer in this field in the former USSR. Already in the 1950s, he developed a method for the industrial production of high-purity proteases – pepsin, trypsin and chymotrypsin – for medical purposes, making him one of the world's leading experts in the field. However, he did not stop with this significant biotechnological achievement. With great enthusiasm, he set about promoting these preparations in medical practice. Since his scientific career was from the very beginning linked to research on the role of proteases in the processes of blood coagulation and fibrinolysis (Part II, Chapter 2), he was close to understanding some of the basic mechanisms behind enzyme therapy. When he then became one of the researchers who discovered the protease inhibitor α2M in the 1960s (contemporaneously, but independently of B. Haverback), this understanding deepened even further (Part II, Chapter 4). Already in 1959 he published an insightful article titled "Proteolytic enzymes in medicine"; in 1967, he published the first of a series of books on enzyme therapy titled "Proteolytic enzymes of the pancreas and their application in clinical practice".

I must admit that I had some concerns about how this "founding father" of the field would accept the new SET methods. In 1995, the first international conference on SET of its kind was held in Ukraine. In the same year our representative A. I. Terzov met Prof. Veremeenko for the first time and in the beginning of 1998, we welcomed him and his wife and long-time collaborator, Dr. A. I. Kizim, in Průhonice. I was present at the debate between them and Karl Ransberger and it was unforgettable.

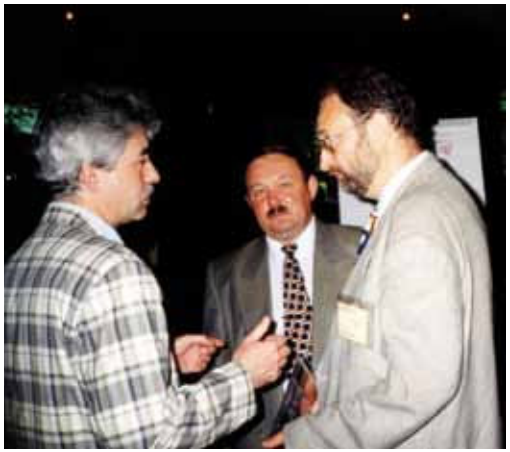
K. N. Veremeenko – Co-founder of SET

The diplomatic skills of A. I. Terzov, but above all the scientific knowledge and character of Prof. K. N. Veremeenko enabled him not only to accept the new method without any jealousy, but also to become its great advocate and promoter. As a true scientist, however, he approached some of its aspects, and especially its hypotheses critically, which resulted in further development of SET theory and practice. Therefore, I believe that K. N. Veremeenko can be considered, along with Max Wolf and Karl Ransberger, a co-creator of systemic enzyme therapy as a novel therapeutic method.

Traditional SET areas include: Otorhinolaryngology (ENT) and respiratory diseases; rheumatology; urology, gynaecology and obstetrics; traumatology, orthopaedics and sports medicine; surgery and plastic surgery; phlebology, lymphology and paediatrics. Innovative areas include: cardiology and angiology; hepatology, nephrology, dermato-venerology and cosmetology; ophthalmology. Further on I mainly mention those areas where international experience with the application of SET preparations in clinical practice had been significantly improved in Central and Eastern Europe.*

Rheumatology

In this area, Wobenzym is used in virtually all Eastern European countries, especially in the treatment of osteoarthritis and rheumatoid arthritis. Clinical experience gained at the Ukrainian Rheumatology Centre in Kiev under the leadership of Prof. V. N. Kovalenko, especially during long-term (5 years or more) follow-up monitoring of patients, was subsequently shared with other centres throughout the country. Their findings resulted in the inclusion of SET in the Standards of Diagnosis and Treatment recommended by the Ukrainian Association of Rheumatologists.



V. N. Kovalenko (in the middle) with G. Stauder and Z. Masinovský.

*This was done in accordance with the national legislation of the respective countries; for the Czech reader, the information on the use of SET preparations in the Czech Republic (package leaflet including therapeutic indications, approved by the State Institute for Drug Control) is most relevant.

V. I. Mazurov (second from the left) with A. Mikaelyan, R. Bajmuhamedova, Yu. Sternin, and N.Guseinov.

In Russia, the main academic institutions from which SET was introduced into rheumatology practice were the Moscow State Institute of Rheumatology and the St. Petersburg Medical Academy of Postgraduate Education. A key figure in this was Prof. V. I. Mazurov, who was not only a prominent rheumatologist, but also a versatile internal medicine specialist and an excellent immunologist. He and his collaborators, especially Dr. A. M. Lila (later professor and director of the Moscow Institute of Rheumatology), published dozens of articles summarising the results of SET in treatment of various rheumatic diseases in the national and international scientific journals. Under his supervision, a number of doctoral theses and dissertations on this topic were successfully defended. Not only his clinical experience, but also the immunological research he conducted were valuable for the development of the entire field; both were then very actively presented at various medical forums at home and abroad.

One absolutely exceptional figure of Russian and international rheumatology, Prof. V. A. Nasonova, has to be mentioned. Prof. Nasonova was the head of the State Institute of Rheumatology from 1970 until her death in February 2011, but also the first ever female president of EULAR, the European League Against Rheumatism. Although she herself is not credited as a co-author of any of our specific clinical studies, she has supported SET research in every way possible, and not only at her institution. When I mentioned to her at an international rheumatology conference that MUCOS had an interest in the "antiphospholipid syndrome", she not only recommended a consultation with Prof. R. A. Asherson, the world's foremost expert in this area, but also introduced me to him and together we arranged a meeting. The meeting place was Prague, where Prof. Asherson made a stopover on his way from London to Cape Town, where he was working, and Karl Ransberger and G. Stauder arrived from Munich.

Gynaecology, urology and nephrology

The possibility of treating inflammatory diseases of the urogenital system using SET has attracted the attention of many leading experts in Eastern European countries. They built mainly on the German experience (F. W. Dittmar, S. Barsom, P. Schlüter, J. Sökeland, A. Heidland; see Part I, Chapter 5).

Clinical results obtained in this area at a number of centres in Russia, Ukraine, Belarus, Latvia, Lithuania, Kazakhstan and Uzbekistan have significantly expanded the range of diseases that can be effectively treated with the aid of SET. It would be difficult, and somewhat beyond the scope of this publication, to list all those involved and to discuss the details of individual clinical studies. However, I would like to mention two personalities who undoubtedly deserve the main credit for the development of SET in this area in the region of Eastern Europe: Prof. M. A. Repina from St. Petersburg Medical Academy of Postgraduate Education and Prof. G. T. Suchich from the Moscow Centre of Obstetrics, Gynaecology and Perinatology of the Russian Academy of Medical Sciences.

In gynaecology and obstetrics, the local experience covered complications during pregnancy and the postpartum period, inflammatory diseases and their consequences, endometriosis, infectious diseases (e.g. chlamydia), and surgical gynaecological interventions.

In urology, SET has proven its efficacy in the treatment of prostate adenoma, male infertility, inflammatory infectious and non-infectious urogenital diseases, and some erectile disorders.

Following on from the work of Prof. S. N. Emancipator from Case Western University, Cleveland, USA, focused on the enzyme therapy in experimental glomerulonephritis in various animal models, Ukrainian physicians have achieved very promising clinical results in the treatment of glomerulonephritis and similar kidney diseases.

Surgery, orthopaedics and traumatology

While surgery was historically one of the oldest fields where proteolytic enzymes were used in Eastern Europe, the 1990s were not a mere renaissance of this method. There were completely new (peroral) preparations containing a mixture of enzymes of animal and plant origin, and above all the concept of SET itself was completely unknown.

Prof. V. A. Neverov and his group started to use Wobenzym in orthopaedic patients as early as 1995 and after two years they published the results of their study in an international journal; the study included 140 patients and provided a pathogenetic justification for the use of SET in orthopaedics and traumatology.

At the same time, similar results were published by Prof. V. I. Levenec and his colleagues.

Based on his extensive clinical experience, Prof. L. J. Naumenko developed his own strategy for the use of Wobenzym in patients with various hand injuries.

Wobenzym was applied in a completely new field by Prof. S. V. Minaev, namely paediatric surgery, including complex surgeries in the abdominal cavity. These results were met with a great deal of interest internationally.

Phlebology, angiology and cardiology

Prof. V. M. Koshkin stood at the very beginning of SET in Russia, since he was the co-ordinator and one of the investigators of the clinical study titled "Wobenzym in the treatment of superficial venous thrombophlebitis", whose promising results enabled the registration of Wobenzym in the country. However, it did not stop with this study. Together with Prof. A. I. Kirienko, they extended the application of SET to angiology (vascular diseases) as well. The new treatment method also attracted the attention of a number of other experts in cardiovascular diseases, especially from the Institute of Cardiology of the Academy of Medical Sciences of Ukraine under the leadership of V. N. Kovalenko. Prof. I. K. Sledzevskaya, Prof. V. I. Mazurov and others introduced the first experience with the use of SET in the treatment of coronary artery disease, atherosclerosis and rehabilitation of patients after myocardial infarction. An interesting example of international co-operation in this field was a collaborative Latvian-Austrian-Czech publication on the results of experimental work which demonstrated that the SET drug Phlogenzym was able to prevent metabolic myocardial damage in rats.

Ophthalmology

The topical use of proteolytic enzymes (trypsin, papain, urokinase, etc.) in ophthalmology has a tradition in Eastern Europe going back to the late 1960s. Prof. V. F. Danilichev and other experts in this field have included SET into their methodological toolkit and have achieved very promising results in the treatment of inflammatory eye diseases. The successful use of Wobenzym in patients with diabetic retinopathy is also worth mentioning.

Dermatology

In January 1999, the "New Aspects of Systemic Enzyme Therapy" Conference focusing on both theory and practice was organized in Moscow by the Institute of Plastic Surgery and Cosmetology. It was almost entirely devoted to the results of the treatment of various dermatological diseases in adult patients and especially in children. According to the authors from this institute and other centres, their clinical results suggested that the combination of anti-inflammatory and immunomodulatory effects with good tolerability was a promising basis for the application of SET in this field.

The value of a project can be determined, among other things, by how many and what kind of people it can attract. Already in the early years, the strong and scientifically comprehensive SET project has proven to be a magnet for many experts with a mind open to new things. Central and Eastern European scientists and physicians quickly grasped the essence and enormous medical potential of SET and contributed significantly to its further development. They became the co-creators of the theoretical foundations and clinical application of systemic enzyme therapy.

MUCOS Pharma CZ has always stood out among pharmaceutical companies thanks to its one special feature: the incredible stability of its team. Many of the employees, not only in management but in all other departments, have worked for the company for decades. I attribute this mainly to our common interest in the subject matter, strong relationships between employees and a friendly atmosphere in the workplace.

This was also completely true for our core employees and representatives in Eastern Europe. For them, as well as for many scientists and physicians, Prague became the centre of all events in the field. At the turn of the year, they gathered in Průhonice at a traditional gathering to present the results of their work and, together with the management, set plans for the next year, exchanged the latest findings from clinical practice and shared experience in marketing. Whenever possible, Karl Ransberger also attended. He was interested in everything that was going on, but above all he liked to discuss science and medicine; he was here among his own people, and that pleased him very much. A full-day sightseeing trip at the end of the work week was everyone's favourite part. Jiří Halousek would prepare an engaging programme every time. After we gradually visited most of the most interesting places in Bohemia and Moravia, we travelled further afield to Slovakia, Germany and Austria. Going to Prague was like going home. The gatherings resembled almost a family reunion, a meeting of close people who had dedicated a significant part of their lives to a common cause – systemic enzyme therapy.

5 | MUCOS PHARMA: PRESENT AND FUTURE

JIŘÍ HALOUSEK

Karl Ransberger, a German scientist and entrepreneur, owner of MUCOS Pharma GmbH, played a key role in the establishment of systemic enzyme therapy as a treatment method in contemporary medicine and for its further development in various parts of the world. Therefore, all further developments in this area were extremely strongly impacted by his untimely death.

I still remember how we, the authors of this publication, went to congratulate him on behalf of MUCOS Pharma CZ on his 70th birthday in May 2001. It was a wonderful meeting, attended by dozens of personalities from many different countries with whom Karl Ransberger maintained professional and friendly relations. We never dreamed that it would be the last time we saw him.

Less than a month later, in June 2001, the sad news came that he had died suddenly. He had been suffering from kidney disease for a long time and during one of his dialysis sessions, which he preferred to take not in a hospital but at his home, his heart gave up.

MUCOS Pharma GmbH after the death of Karl Ransberger

Karl Ransberger had no children, so his wife Monika became the universal heir. In particular, she inherited an enzyme production plant in Berlin, a trypsin enzyme plant in Argentina and the company's headquarters in Geretsried, south of Munich.

Pharma GmbH, and this trend continued when she sold the entire company, including production plants, to the German businessman Otto Prange in 2005. The situation inside the company began to gradually stabilise again only after Otto Prange sold it in 2007 to a buyer from far away Canada – Atrium Innovations, a corporate group based in Quebec City owning several medium-sized pharmaceutical companies, namely Douglas Laboratories in Pittsburgh, Pure Incapsulations in Boston and Garden of Life in Florida, US as well as Canada's Seroyal, the Netherlands' MCO and two smaller companies in Belgium and

Spain. The German MUCOS Pharma GmbH has thus become part of this international family.

MUCOS Pharma CZ with Czech owners

A completely different development took place in MUCOS Pharma CZ, based in Průhonice. Many months of negotiations with representatives of Mrs. Ransberger, who apparently never understood the importance of our company for the global development of systemic enzyme therapy (SET), resulted in an agreement that included, in addition to new business terms, a fundamental change in the ownership structure. Jiří Wald, Radana Waldová, Martin Wald and Zinovij Masinovský became partners with majority share, while Olga Winterová became a minority partner. The company, including its offices in the countries of Central and Eastern Europe, has thus come under a company structure with purely Czech owners.

After the dissolution of Czechoslovakia, a subsidiary company MUCOS Pharma Slovakia started operating in Slovakia. In the first few years, it achieved even higher turnover per capita than its counterpart in the Czech Republic. However, this was at a time when, unlike in the Czech Republic, Wobenzym was partially covered by Slovak health insurance scheme for some indications. When the government later cancelled the coverage alongside that of many other OTC drugs for cost reasons, sales plummeted and in 2004 MUCOS Pharma Slovakia had to be closed down for financial reasons. All necessary activities in Slovakia were then carried out directly from the HQ in Průhonice.

Radim Kočí, director for Czech Republic and Slovakia

Due to the growing revenues from Wobenzym in the Czech Republic, Radim Kočí became the director for the Czech Republic in the summer of 2001 and took over responsibility for the Slovak market.

In the following years, the management structure of MUCOS Pharma CZ settled down in the following form: Jiří Wald served as the executive director, Zinovij Masinovský served as the corporate agent and general director focused mainly on the region of Eastern Europe, and Radim Kočí served as director for the Czech Republic and Slovakia.

In the following decade, Wobenzym sales in MUCOS CZ area of operations grew significantly. Although the 2008 financial crisis affected the markets in Eastern Europe for some time especially the Baltic countries of Latvia and Lithuania Wobenzym sales in the Czech Republic and Slovakia were not affected at all.

In per capita terms, the Czech Republic overtook Germany – the leading market at the time – in the 2000s, and sales in Slovakia, after the aforementioned slump in 2004 and 2005, also began to increase rapidly. Slovakia then ranked second in the world in Wobenzym sales per capita, just behind the Czech Republic.

Atrium Innovations acquires MUCOS Pharma CZ

MUCOS Pharma CZ has always had a co-operation contract with its German counterpart MUCOS Pharma GmbH, including the conditions under which the German manufacturer supplied enzyme preparations for the Central and Eastern European markets. This contract was concluded after the death of Karl Ransberger; it was subsequently modified after negotiations with the new owner of MUCOS Germany, Otto Prange. A completely new contract 2007 for a period of 7 years was concluded following the takeover of the German company by the Canadian Atrium Innovations.

When the contract was about to expire, the president of the Canadian company, Pierre Fitzgibbon, announced to the Czech owners that his company wanted to acquire MUCOS Pharma CZ. For him, the greatest benefit would be the access to the Russian market, which at that time

accounted for 64% of MUCOS Pharma CZ's total turnover. The Czech and Slovak markets together accounted for 26% and all other Eastern European countries accounted for the remaining 10%.

The Czech shareholders agreed to this offer at the end of 2013 and Atrium Innovations acquired a 70% stake in the company through its wholly-owned German company MUCOS Pharma GmbH. Two years later, it bought the remaining 30%. The Russian business was transferred to the newly established Atrium Russia.

In the spring of 2014, however, another important change took place. The shareholders of Atrium Innovations had sold their shares in the company to Permira, a London-based global investment fund. As a result, the HQ of Atrium Innovations was moved from Quebec to Montreal, and an American, Peter Luther, became president of the company instead of Pierre Fitzgibbon. The new boss brought with him a predominantly American management.

The European companies that belonged to Atrium Innovations, including MUCOS Pharma GmbH and MUCOS Pharma CZ, were subsumed under the European division headed by the Dutchman Hans Schraa.

The management of MUCOS Pharma CZ in Průhonice also changed. After the full takeover by Atrium Innovations, Radim Kočí became the director from the beginning of 2016; however, he de facto continued to manage mainly the business in the Czech Republic and Slovakia. The management of the Eastern European markets – with the exception of Russia, which was now managed directly by Mr. Schraa, the head of the European division – was taken over by Helena Hejdová, the long-standing head of the Eastern Europe department. She, too, was subordinate to Hans Schraa. However, when it came to everyday operations, there were no major changes in the Czech Republic and Slovakia, nor in the countries of Eastern Europe; each country continued largely independently, following the time-honoured path. Sales in the Czech Republic and Slovakia in particular continued to grow quite well. In recent years, Wobenzym has been ranked second to third in the Czech Republic and fifth to sixth among all OTC medicines on the market in terms of expenditures.

The right marketing mix

The foundations for successful development in the Czech Republic and Slovakia were laid in the first decade of MUCOS Pharma CZ in large part by executive director Jiří Wald, who played a key role in setting the strategy, as well as in everyday operations. In terms of marketing, he believed that Wobenzym was a unique product that called for unique marketing strategies – such that no other pharmaceutical company was using at the time.

Since systemic enzyme therapy was something completely new not only to the general public but also to experts, we paid a lot of attention to popular science activities that were not product-specific but raised awareness about enzymes in general and their use in medicine. In cooperation with some agencies, but with the decisive participation of the responsible employees of the company (including yours truly, since the summer of 1997), Czech Television broadcasted several scientific and popular programmes on enzymes and the uses of systemic enzyme therapy. I would like to mention the twelve-part series "Tajemný doktor Enzym" (Mysterious Dr. Enzyme) that aired in 1998, in which Veronika Žilková and Ilja Racek played the guides to the world of enzymes, with then eighteen-year-old Ondřej Brousek Jr. playing one of the students. In the following year, a total of 12 episodes of ČT Ostrava regular programme "Zdraví" (Health) devoted to individual indications where systemic enzyme therapy can help were broadcast in prime time on ČT1.

We were also the first pharmaceutical company in the Czech Republic to come up with the idea that a medicinal product can be a Christmas present. In TV and other commercials, we pointed out that Wobenzym was a suitable gift for those it can help. Later, when Christmas TV commercials for various medicines and food supplements became literally ubiquitous, we abandoned this form of advertising and went down a path where we could again have more visibility than the competition.

On Jiří Wald's initiative, the "Managing Your Health" project was also launched and the magazines *Zdravá rodina* (Healthy Family) and *Medicína* (Medicine) were founded; the musical titled *Elixír života* (Elixir of Life) and other projects were mentioned already in Part I, Chapter 3.

When in the summer of 2001 Radim Kočí became the director for the Czech Republic, Jiří Wald retained decision-making only in major strategic areas and left the day-to-day management of the company to him. The new director built on what had been accomplished and prepared so far and it even further with his own initiatives.

It became the company's article of faith that only informed patients could freely decide on their own treatment. That's why the starting point

of each of our marketing messages was not the product itself, but the health problem with which people were struggling. MUCOS Pharma CZ has always placed a particular emphasis on the education of physicians, pharmacists and especially patients. It must be an all-round marketing, a combination of many different channels – from the press to radio and television to the latest digital media.

Leaflets, brochures, posters for individual indications, spots playing on LCDs and other communication materials are placed where they can help the customer – in hospitals, surgery waiting rooms and pharmacies, as well as on the web and Facebook. The patient needs to find out about Wobenzym wherever he or she needs it (permanent marketing).

In addition, seasonal campaigns run in parallel, especially on radio, in the press, on Facebook and the web, and in pharmacies. Over time, it has become clear that while all of these communication channels re important, radio had a special place among them, because other pharmaceutical companies were not nearly as active there. Television advertising, on the other hand, has played a rather complementary role for us – it is very expensive, other pharmaceutical companies have a strong presence there, so product may have trouble standing out, and many viewers do not watch the advertising blocks at all and switch to other channels.

Wobenzym Christmas poster 2020

These massive seasonal campaigns were always devoted to a specific indication in which Wobenzym could help the most at a given time: ski injuries in January and February, strengthening weakened immunity after winter in March and April, recurrent gynaecological mycoses and inflammations in May and June, injuries and holiday respiratory inflammations in July and August, healing after surgery in September and strengthening weakened immunity before winter in October.

In recent years, marketing campaigns before Christmas have been particularly successful. From November of the previous year until mid-January of the following year, customers who bought a large pack of 800 Wobenzym tablets at the pharmacy were entitled to an extra gift worth several hundred Czech crowns. For many years the reward was in the form of a voucher, but in 2020 they received a gift directly at the pharmacy for the first time. That the campaign is working is shown not only by the regular significant increase in sales of Wobenzym at the end of the year, but also by the fact that it the best-selling over-the-counter medicine on the Czech market in December.

The basic premise of this marketing strategy is that Wobenzym needs to be heard about and talked about constantly and campaigns need to follow one after another. If we were to reduce our visibility for a period of time, we would find it difficult to regain the consumer awareness that we have earned over the past three decades.

Pharmacies and distributors

The marketing strategy I wrote about in the previous section has been in place for more than two decades in the Czech Republic and for a slightly shorter period in Slovakia. In other countries in Eastern, but also Western Europe, more emphasis is placed on working with physicians (especially in Russia, Ukraine and other countries) and pharmacists (more so in Germany, Latvia and Lithuania). In the Czech Republic, we assumed that the person ultimate making the decision to purchase Wobenzym (an over-the-counter medicine) is the consumer, so we focused primarily on them. It is a costly approach, both financially and in terms of staffing, but it resulted in the highest sales and Wobenzym becme a household name.

However, this in no way means that we do not pay attention to working with doctors and pharmacies. On the contrary, they form an integral part of the overall marketing mix, all parts of which are essential to achieve maximum overall effectiveness.

In addition, MUCOS Pharma CZ, unlike in other countries, has obtained a distributor license for supplying drugs to pharmacies in the Czech Republic. Over time, these direct supplies have far exceeded sales through pharmaceutical distributors. This the great advantage that we know the immediate reaction to our campaigns and to various changes in economic or political environment. We can also communicate better with pharmacists and accommodate their suggestions and requirements where possible. But it also means that we need to work with them more closely. For a number of years we have had a total of five regional representatives in different parts of the country; recently this number has been increased to seven. The organisation of regional seminars on systemic enzyme therapy for pharmacists in different parts of the Czech Republic, which are always attended by several dozen professionals, has proved to be a particularly effective tool in this regard.

One of regional seminars for pharmacists

On the other hand, however, we also need to be very sensitive regarding pharmaceutical distributors so that disputes do not arise because we cut them out by supplying most of the goods directly to the pharmacies. Radim Kočí has always paid close attention to the difficult balancing act maintaining an acceptable price of the medicine for consumers while protecting the interest of the business.

In Slovakia and other countries, Wobenzym is sold through distributors.

Science and clinical research

Since the death of MUCOS Pharma GmbH owner Karl Ransberger, the number of clinical studies conducted in Germany and other Western countries has decreased significantly. Among the experimental studies, it is necessary to mention Prof. C. Neumayer from Vienna, who investigated the effect of SET on inflammatory mechanisms. Of great importance was the comprehensive publication by Dr. G. Lorkowski from Munich on the mechanisms of enzyme absorption. In the clinical field, studies focused mainly on sports medicine and rheumatology: Dr. W. W. Bolten from Wiesbaden, Germany, studied the effect of SET on pain reduction in knee arthrosis, while M. A. Ueberall from the Institute of Neurological Sciences in Nuremberg conducted a large meta-analysis on the effect of SET in the treatment of knee arthrosis. Also of great interest is the study by a Canadian team led by O. Sczurek on the effect of SET in the treatment of tendonitis in Canadian postal workers caused by long-term routine sorting of letter mail.

Many more studies were carried out in the areas covered by MUCOS Pharma CZ. For more on clinical research in Eastern European countries, see Chapter 8. In the Czech Republic, the following results deserve particular attention:

Lymphology

Czech physicians have gained the most extensive experience in this area compared to other countries. I should highlight especially the works of Dr. M. Wald, Dr. J. Prausová and Dr. J. Adámek from the Motol University Hospital, as well as Prof. M. Bechyně from the University Hospital Plzeň and Dr. M. Macháňová from Liberec Regional Hospital.

Otorhinolaryngology (ENT)

In otorhinolaryngology (ENT), I should mention the work of Dr. L. Vyhnánková and Dr. Z. Veldová, both from Prague, which dealt with the beneficial effect of enzyme drugs on ear and throat inflammation.

Immunology

The treatment of recurrent inflammation of the respiratory tract with enzymes, especially in children, has long been the professional focus of Dr. I. Vokálová from Kralupy nad Vltavou, Dr. P. Gricová from Uherské

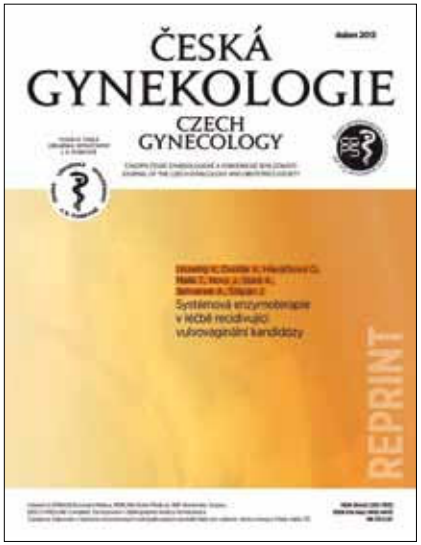
Hradiště and Dr. B. Hubková from Kladno. The three physicians were also part of a larger team of paediatricians involved in a large retrospective study released in 2003, which evaluated the outcomes of treatment of 468 children aged 3 to 18 years.

Gynaecology

Another very important work was presented by Czech physicians in the field of gynaecology, namely the effect of SET in the treatment of recurrent vaginal mycoses. This work was published in 2013 by Prof. V. Unzeitig from Brno and was co-authored by leading Czech gynaecologists, including Dr. V. Dvořák, President of the Czech Gynaecological and Obstetric Society of the Czech Medical Association of J. E. Purkyně and President of the Association of Private Gynaecologists of the Czech Republic. Dr. J. Eim from Vyškov was particularly interested in the effect of SET after gynaecological surgeries.

Surgery, plastic surgery and dentistry

In the field of general surgery, we should mention the work of Dr. V. Kameníček from Bílovec on the importance of SET in the treatment of post-traumatic and post-operative oedema, while Dr. L. Pekar from Královské Vinohrady University Hospital in Prague evaluated the use of SET after intervertebral disc prolapse surgery. Prof. M. Dušková from Prague studied the effects of SET in plastic surgery and dentist Prof. T. Németh, also from Prague, summarised his experience with the administration of SET drugs after difficult tooth extractions and implantations.



Title - page of work on the treatment of recurrent vaginal mycoses

Orthopaedics and treatment of wounds

Dr. J. Martínková from Brno studied the use of SET in the treatment of ankle joint distortions, Dr. L. Kubíček of St. Anne's University Hospital in Brno observed the results of supportive treatment of chronic wounds on the lower limbs, and Dr. J. Říhová from the Department of Sports Medicine of the General University Hospital in Prague published her experience with SET in the treatment of frostbites.

Urology

Dr. M. Förstl from the Hradec Králové University Hospital and Dr. K. Bartoníčková from Prague researched the treatment of chlamydial infections and boosting the effect of antibiotics with the simultaneous administration of SET drugs.

Occupational medicine

Dr. A. Zlámal from Kolín published the results of an evaluation and comparison of the duration of inability to work in patients working in the automotive industry, who most often suffered from tendonitis in the forearm; about one-fifth of them had carpal tunnel syndrome. Dr. M. Nakládalová, University Hospital Oloumouc, also investigated the effectiveness of SET in the treatment of more advanced carpal tunnel syndrome. The results of both doctors confirmed good overall effectiveness of the enzyme treatment.

Science and clinical research in Slovakia

In Slovakia, I should mention studies by Prof. A. Sakalová, a long-standing head of the Department of Haematology and Transfusiology at the Comenius University Hospital in Bratislava and Prof. J. Rovenský, a long-serving director of the Research Institute of Rheumatic Diseases in Piešťany. Dr. A. Džupina from Bardějov investigated the effect of SET in the treatment of lymphedema and post-thrombotic syndrome, while Dr. K. Bergendiová from Bratislava studied anti-inflammatory treatment in patients with bronchial asthma; Dr. J. Mudrák from Košice also published his experience with SET in the treatment of recurrent papillomatosis (viral disease) of the larynx. In 2016, Dr. E. Dosedla from Košice, together with Prof. P. Calda from the Gynaecology and Obstetrics Clinic of the 1st FM CU and the General University Hospital in Prague, presented the results of a study of SET effects on healing of the scar after caesarean section.

Educational activities

In addition to extensive scientific and publishing activities, the education of medical professionals was also of great importance. Here I should highlight the long-standing lecturing and publishing activities of Dr. Martin Wald from the Motol University Hospital and the leading Czech immunologist Dr. Karel Nouza from the Institute for the Care of Mother and Child in Prague-Podolí. In particular, Dr. Martin Wald has worked extensively on SET in the treatment of lymphedema after breast ablation, and Dr. Karel Nouza has authored numerous publications covering all areas of SET. Of particular importance were the publications of Prof. J. Jezdínský from Palacký University Olomouc in the field of pharmacology.

MUCOS Pharma CZ – one big family

From the very beginning, the company was built as a kind of a family business. We all knew each other, people could do their jobs without unnecessary formalities, and the final result as always the main criterion of success. The same approach applied in relation to our branches and representatives in Eastern European countries.

The company had about 40 employees in the Czech Republic; the largest branch was Russia with 140 employees. Once a year, in mid-January, representatives from all these countries to Průhonice (see Part I, Chapter 4). Of the week-long meeting, two days were dedicated to a conference with the participation of Czech representatives devoted both to marketing and the latest results and ongoing medical studies.

After the company was acquired by Atrium Innovations and its European Division was established under the management of Hans Schraa, these joint meetings were also organized in some Eastern European countries – in Riga, Tbilisi, Kiev, Baku, Vilnius, St. Petersburg and Bucharest.

We all felt that it was extremely important to know what was going on in our international "family" and what each country was doing. We were able to enrich each other's knowledge and experience and learn from what had worked elsewhere if it was useful.

The whole system of work in MUCOS Pharma CZ and the family-firm atmosphere made people feel good there and most of the employees – not only in the Czech Republic but also in Eastern European countries – have worked in the company for many years or even decades. This stability has also contributed to the successes that we achieved.

Brand value

Wobenzym is a unique product, a real phenomenon on the Czech pharmaceutical market. Few medicines so popular among consumers can boast a history of more than 60 years on the market. Wobenzym's unique reputation is also based on the fact that while the vast majority of other drugs only ever help with a single health issue, Wobenzym can be used to treat a wide variety of different health conditions. It helps combat inflammation in all parts of the body and boosts weakened immunity, which also means it significantly accelerates healing after injuries and surgeries. Independent surveys have shown that almost ninety percent of customers have expressed their satisfaction with Wobenzym, which is an extremely high number for a medicine to which each patient may react differently. Wobenzym is a brand that every pharmacy in the Czech Republic offers, and almost every Czech consumer is familiar with it to some degree. This is confirmed by the fact it has repeatedly won the Superbrands award; in 2021, Wobenzym won this award also in Slovakia for the first time.

The best brands compete for this prestigious award in more than 90 countries around the world based on unified criteria and methods. The Superbrands award marks the brand's special status in the relevant market. Individual brands cannot apply for the Superbrands programme; in the Czech Republic they are selected on the basis of consumer surveys of their familiarity and popularity conducted by GfK Czech Republic.

New perspectives within the Nestlé multinational group

In March 2018, the Canadian company Atrium Innovations, the owner of MUCOS Pharma CZ, was acquired by Nestlé Health Science. In the two years that followed, the organisational structure of the individual representative offices was modified and there were some changes in the management staff.

The fact that MUCOS Pharma CZ and MUCOS Pharma GmbH have become part of the global Nestlé group opens up new opportunities for business and further development of systemic enzyme therapy. This is already shown by, for example, the fact that from 2020, after more than 15 years, Slovakia will again have an independent team of regional representatives.

This important change has other undeniable advantages, such as the strong financial, staff and logistical background and also a robust scientific base in the form of a research centre. The potential for further development of systemic enzyme therapy has broadened. Now we need to fulfil this potential.

Nestlé Headquaters, Vevey

Author's note

"I joined MUCOS Pharma CZ years ago, so more than half of my professional life has been connected with Wobenzym. However, I first learned about this drug even before that. At that time, in the 1990s, I had been a correspondent in Bonn for the Czechoslovak Radio and – after the country divided into Czechia and Slovakia – its Czech successor for over 7 years. In Germany, Wobenzym was already one of the best-known and best-selling over-the-counter medicines. After returning to Prague, I was responsible for the promotion of Wobenzym and relations with the media, the public and VIP clients in the Czech Republic and Slovakia. Over the more than two decades, I have had the opportunity to talk to thousands of Wobenzym customers who overwhelmingly expressed their satisfaction with this product. Many of them even thanked me because Wobenzym had helped them. I was actually very lucky to work with a product that benefits people so much – not everyone gets to do that. I believe that all those who have dedicated a part of themselves to the development of systemic enzyme therapy, including the co-authors of this book, feel the same way."

Part II

Enzymes and enzyme therapy

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Zinovij Masinovský, PhD., born 1949

Graduated from the Faculty of Biology, M. V. Lomonosov Moscow State University, field of study biophysics, in 1971, and completed his postgraduate studies there in 1974. 1975-1993: Institute of Microbiology, and then Laboratory of Evolutionary Biology, both Czechoslovak Academy of Sciences. 1993-2016: Biocentrum E Ltd., later MUCOS Pharma CZ Ltd. (gradually as a manager for the Central and Eastern Europe, company manager, and general director).

Jiří Wald, born 1950

Graduated on the Faculty of Agriculture, Prague in 1975, and completed his postgraduate studies on Institute of Industrial Property, Prague in 1980. Together with his wife Radana Waldová are founders of several business companies. The first one was registered in 1990 and laid foundations for an important pharmaceutical company MUCOS Pharma CZ (CEO 1991-2013). Mr. and Mrs. Wald made history of the contemporary Czech philanthropy with their extensive support of a number of charitable social and healthcare projects. For these long-term activities they were awarded many times at home and abroad.

Jiří Halousek, PhDr., born 1952

Graduated from the Faculty of Philosophy, Charles University Prague, field of history. 1976-1997 editor of Czechoslovak, from 1993 Czech Radio, of which 1989-1997 radio correspondent in Bonn, Germany. 1997-2020 PR manager and spokesman MUCOS Pharma CZ, s.r.o. He was also significantly involved in marketing activities and care of VIP´s.