

THE CENTENARY OF THE BIRTH OF ACADEMICIAN SERGEJ FORENBACHER – veterinarian, scientist with an international reputation, expert in the flora and fauna of Velebit and the Zumberak hills, an enthusiastic mountaineer and philatelist*

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Academician Sergej Forenbacher, dr. med. vet., (Karlovac, 24th April 1921 - Zagreb, 26th May 2010) was one of the most distinguished Croatian veterinarians and one of the most important, best-known and most influential Croatian scientists in the field of veterinary sciences, recognized and respected world wide. His research had a major influence on the development of the clinical pathology of the digestive system and metabolism, and the neuroendocrine system of domestic animals. He was a great connoisseur of Velebit and its plant and animal life, as well as the flora of the Zumberak hills, and wrote several books about them, richly illustrated with photographs he had taken himself whilst hiking across their peaks. He was an enthusiastic nature lover, mountaineer and philatelist. To mark the 100th anniversary of his birth, the Croatian Post Office issued a specially designed postcard in his honour.

He began his university career in 1946 after obtaining a degree from the Faculty of Veterinary Medicine of the University of Zagreb. He attained his PhD in 1948 and began his what was later to prove to be brilliant scientific work. He was Head of the Internal Diseases Clinic at the Faculty of Veterinary Medicine from 1960 to 1977, and held the position of Dean of the Faculty of Veterinary Medicine of the University of Zagreb in the 1968/69 and 1969/70 academic years. Alongside his teaching work at his home faculty, where he was the head of the subject *Internal Diseases of Domestic Animals*, the course *Introduction to Scientific Work* and the subject *Selected Fields of Pathology in the Nutrition of Domestic Animals*, he also taught at the Agricultural Faculty of the University of Zagreb and at the Veterinary Department of the Biotechnical Faculty in Ljubljana.

He was a visiting professor at *Die Tierärztliche Hochschule, Hannover*, (the Hanover Veterinary High School) where he taught a course entitled *Stoffwechselkrankheiten* (Metabolic Diseases). He also taught at the Veterinary Faculty in Munich (*Die Tierärztliche Fakultät der Ludwig-Maximilians Universität München*) and the Veterinary Medical University in Vienna (*Veterinärmedizinische Universität Wien*).

He was elected to be a corresponding member of the Croatian (former Yugoslav) Academy of Sciences and Arts in 1960 and a full member in 1975. He was a member of the Department of Medical Sciences of the Croatian Academy of Sciences and Arts and a member of Presidency of the Academy from 1994 to 1997. Alongside his activities on various Academy committees, his work

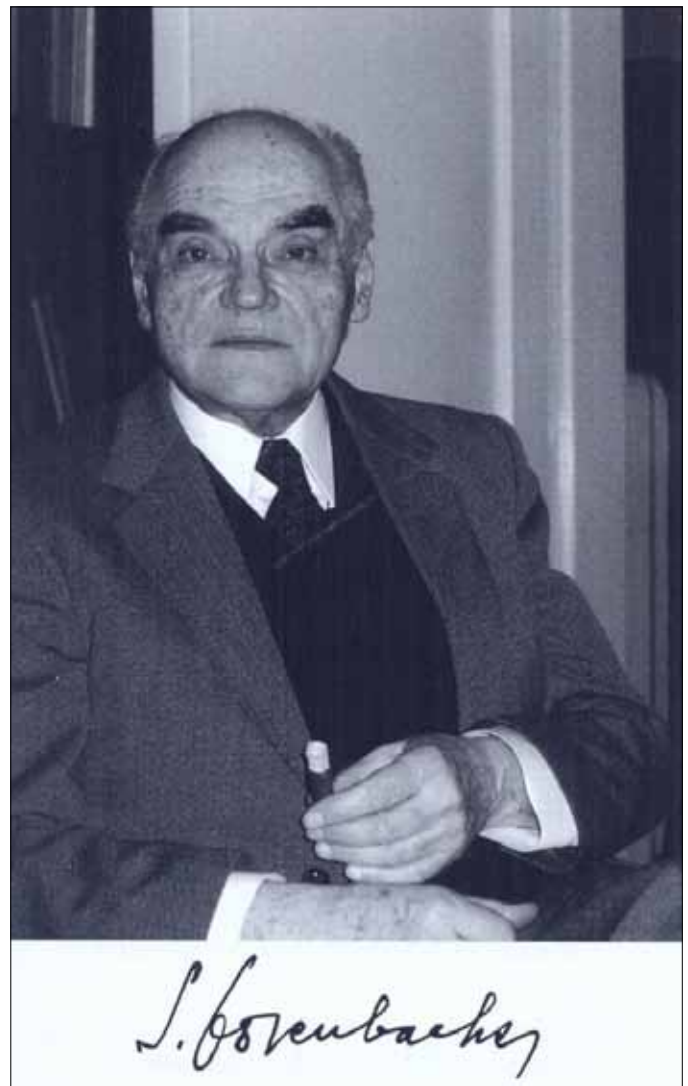


Figure 1. Photograph of Academician Sergej Forenbacher.

on the Lexicographical Committee was particularly noteworthy, where, in addition to several lexicon entries, he worked with dedication as the editor of the Encyclopaedic Dictionary of Human and Veterinary Medical Terminology.

The scientific work of Academician Sergej Forenbacher was extensive and diverse. In his earlier and most important scientific work he dealt with the metabolism of carbohydrates and fats with specific enzymopathic processes. He proved that specific ingredients of the field horsetail bracken (*Equisetum arvense* and *E. palustre*)

and the eagle fern (*Pteridium aquilinum*) have an anti-vitamin effect in horses and young cattle, whereby he paved the way for new research into plant thiaminases, the knowledge of whose anti-vitamin effect was very sparse at that time. He proved the cancerogenic effect of fern and bracken on the bladder in chronic haematuria in cattle. In experiments he researched the toxic nature of Austrian Leopard's Bane (*Doronicum austriacum*) for lambs and rabbits, and the pathophysiological and clinical aspects of haemorrhagic diathesis in dairy cows caused by sugar beet. His research was founded on his knowledge of equine paralytic myoglobinuria and the etiopathogenesis of fatty liver in ketosis in dairy cows. Academician Sergej Forenbacher was one of the first in the world to begin research in the field of the biochemical diagnostics of hepatopathy in horses and cattle, whereby he made an enormous contribution to our knowledge of liver disorders and the possibilities of preventing enzootic cirrhosis, protecting horses' livers in the production of immune serums, and knowledge of equine plasmapheresis.

In his extensive research, he explained the process of the etiopathogenesis of "acid indigestion" and alimentary metabolic acidosis in dairy cows and beef cattle, and issued instructions on their prevention in the contemporary breeding conditions. His major contribution was to our knowledge of the role of the endocrine organs in adaptation syndrome and its clinical importance in horses, cattle and swine. Experimentally making use of various stress factors to stimulate the endocrine organs, he researched the role of the adrenocortical, thyrohormonal and insular apparatus. He demonstrated that multiple muscular dystrophy and myocardia in beef cattle, and equine enzootic myoglobinuria occur due to deficiency of vitamin E and selenium in the diet.

By the results he achieved in animals he prompted similar research in comparative medicine. Due to his research, he is deemed to be the father of veterinary endocrinology. However, prompted by questions in human medicine, primarily through research into liver pathologies and goitre, he also worked a great deal with medical scientists and institutions promoting links between human and veterinary medicine.

He published tens of scientific papers, expertly dealing with questions of contemporary interest in his profession. His professional work also included editorial work on three editions of the Veterinary Manual in Croatian, publications by Vademecum (Pliva), the publication of the International Encyclopaedia of Veterinary Medicine (Edinburgh-London, 1966) and the publication of new achievements in veterinary medicine and cattle farming, and material on swine diseases. He gave tens of lectures at professional veterinary conferences around the former Yugoslavia, and it is particularly noteworthy that he gave many lectures at the invitation of foreign veterinary schools, institutions and veterinary societies, and at international scientific and professional conferences.



Figure 2. Academician Sergej Forenbacher receiving the title of Honorary Citizen of Hanover in 1970, for establishing and developing scientific and professional collaboration with the Veterinary High School in Hanover.

He enriched the scientific and professional literature with his capital work, the trilogy: *Clinical Pathology of the Digestion and Metabolism of Domestic Animals: Clinical Pathology of Digestion and Resorption*, Volume I/1, (1975), 511 pages, 1151 quoted references; *Clinical Pathology of the Digestion and Metabolism of Domestic Animals, Clinical Pathology of Digestion and Resorption*, Volume I/2, (1983), 734 pages, 1717 quoted references; and *Clinical Pathology of the Digestion and Metabolism of Domestic Animals, the Liver*, Volume II, (1993), 709 pages, 2803 references. The trilogy was his life's work on which he worked from 1975 to 1993. In collaboration with Prof. Žubčić he completed and prepared for printing his final book *Diseases of the Digestive System of Domestic Animals*, which was published in 2010, the year of his death.

In the book *Poisonous Plants and Plant Poisoning of Animals* (1998) on 436 pages, with 110 original colour photographs, he gave a specific contribution, almost unique in the world, to veterinary toxicology, phytopathology, and treating animals suffering from plant poisoning.

People who write about the life and work of Academician Sergej Forenbacher emphasize the fact that “his scientific, professional and teaching materials are written knowledgeably, thoroughly, simply, with love and extensively, they are pleasant to read and easy to master.”

As a skilled lecturer, he captured his students’ attention through his knowledgeable and well-prepared lectures. He was able to present the symptomatology of diseases in a picturesque way, on the basis of his own clinical experience and scientific achievements. Whilst he was Head, the Internal Diseases Clinic grew significantly, and under his leadership it attained the level of other clinics in Europe. He was mentor for 18 dissertations and many Master’s papers.

Apart from his duties as Dean of the Faculty of Veterinary Medicine of the University of Zagreb, he was also the chair or member of several committees, boards and administrative bodies. His membership in foreign professional associations is particularly noteworthy, such as: The World Association for Buiatrics, the Academic Society for Large Animal Veterinary Medicine, the World Association of Veterinary Medicine and the World Association of Veterinary Physiologists, Pharmacologists and Biochemists. He was a prominent member of the professional board of the journals *Deutsche tierärztliche Wochenschrift* and *Tierärztliche Praxis* and on the editorial board of the journal *Veterinarski arhiv*. He had a broad and productive range of interests beyond the veterinary profession. He was a lover and connoisseur of classical literature and the visual arts, and a passionate collector of stamps and coins. However, a large part of his life was marked by his love of nature, especially the mountains and hilly areas of Croatia, its meadows, flowers and animals. In his desire to spend as much time as he could in nature, at his own request, he took early re-

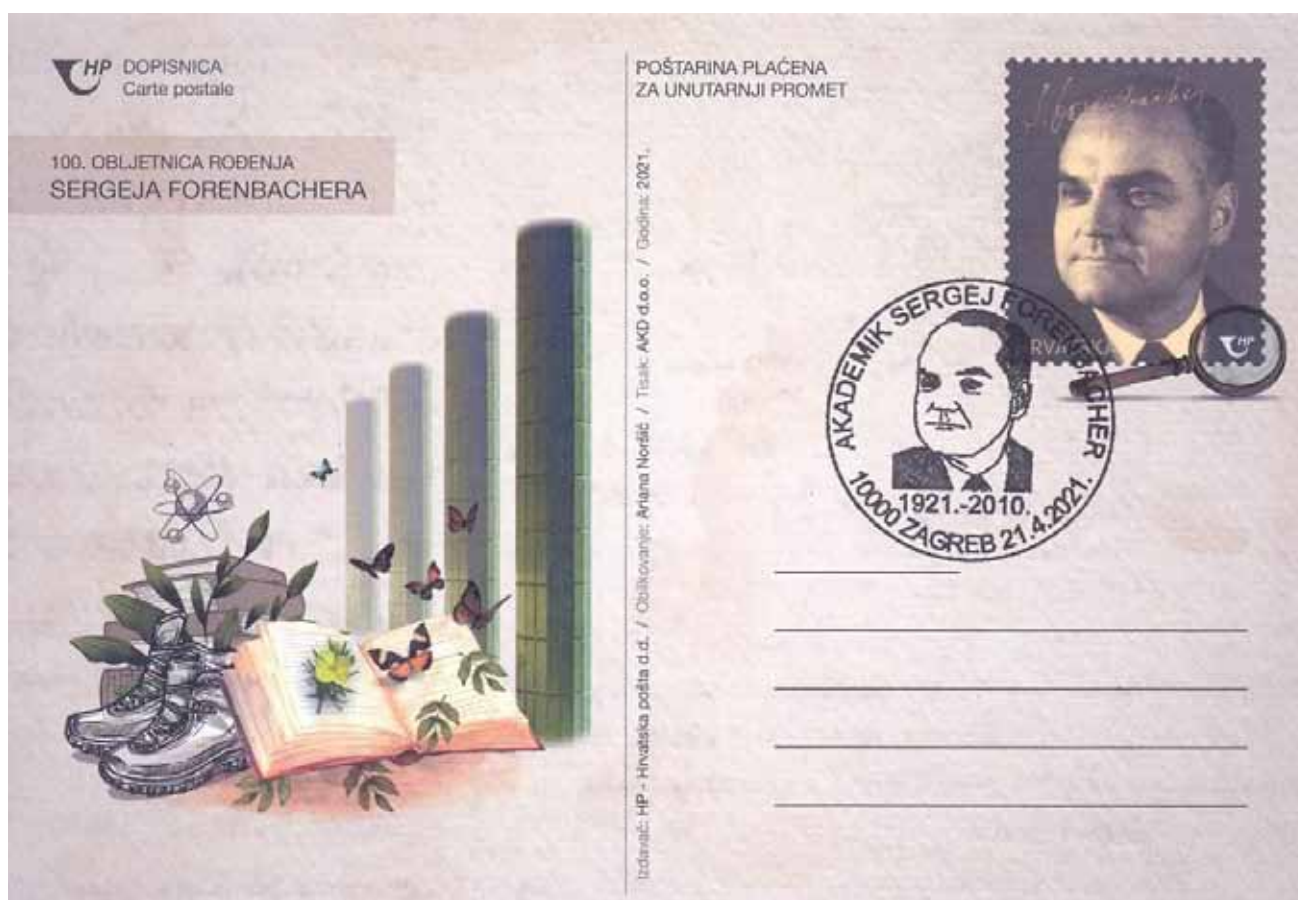


Figure 3. The Croatian Post Office issued a specially designed postcard in the honour of Academician Sergej Forenbacher.

tirement in 1982 and spent his time in the mountains with even greater passion, especially Velebit, which, as he mentioned in the foreword to his book *Velebit and its Plant World*, 1990, he had visited “90 times for at least three and at most about twelve days”, from the beginning in 1957 to 1990. Velebit was a constant part of his entire life. Studying the flora and fauna of Velebit “over three decades, he covered hundreds of kilometres of paths and wilderness, took thousands of colour pictures and wrote a large number of notes.”

“He poured his observations of nature into inimitable books”, first of all the magnificent work already mentioned *Velebit and its Plant World* covering 800 pages, with 854 original colour photographs. Then in the book Žumberak, *A Calendar of Flora from the Žumberak Hills*, covering 652 pages, with many original colour photographs, a book dealing with the plant world of his “great mountaineering and botanical love”. Both books received the Josip Juraj Strossmayer Prize. He dedicated his work *Compendium of the Fauna of Velebit*, vol. I. *Vertebrates* and vol. II. *Invertebrates*, to nature lovers, especially lovers of the animal world of Velebit. His work on Velebit also includes his writings *From my Velebit Journal - Notes and Memories*, with three small volumes of his Velebit diaries, which he began writing below Zavižan in July 1957 on the pieces of paper he had to hand.

Academician Sergej Forenbacher loved mountaineering from his youth. For his enthusiastic mountaineering over the mountains of Croatia he received the well-regarded recognition of the Croatian Mountaineering Association: the silver badge in 1987 and the golden badge in 1997, and he became an honorary member in 1991. In 1982 the Bergwacht-Hessen Nature Preservation Society (Germany) declared him an honorary member. The Velebno Mountain Trail was drawn up on the basis of his idea, with eight control points. His idea was realized by the Zagreb-Matica Mountaineering Society, of which he was a member, and the Visočica Mountaineering Society from Gospić. In this way he founded an important and interesting mountain trail across central and southern Velebit. One location on that trail, with a view over Lika and the highest peaks of Velebit, is called Forenbacher’s Lookout Point.

His favourite hobby was stamp collecting. As a member of the Association of Stamp Examiners of the Croatian Philatelic Association, he was an authorized examiner of classical European stamps. For many years he was a member of the Governing Board and president of the Zagreb Philatelic Club and an associate of the journal *Filatelija*.

Academician Sergej Forenbacher received many awards and recognition for his work. We will mention just some of them: The Order of Labour with a Golden Wreath (1961), the title of Honorary Citizen of Hanover (1970), a Diploma from the Marquis Biographical Institute of New York, Life’s Work Award (1984) and three Josip Juraj Strossmayer Awards.

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