

# A review of Zvonimir Krajina's professional heritage in the light of the hundredth anniversary of the Department of Ear, Nose and Throat Diseases and Head and Neck Surgery of the Zagreb School of Medicine

Drago Prgomet<sup>1</sup>

<sup>1</sup> The Department of Ear, Nose and Throat Diseases and Head and Neck Surgery  
University Hospital Centre Zagreb

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## Correspondence:

Drago Prgomet  
dprgomet2@gmail.com  
orcid.org/0000-0002-7393-5224

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## ABSTRACT:

Among the many great physicians who headed the Department for Ear, Nose and Throat Diseases and Head and Neck Surgery at the Zagreb School of Medicine a significant place belongs to professor Zvonimir Krajina since his scientific and professional work was through his entire career centred around this department. He was elected Head of the Department in 1971, exactly half a century after its founding. Since then, he sought to enrich it with a series of innovations in professional and scientific areas, as well as make organisational changes in its management. Zvonimir Krajina was equally skilful in all areas of head and neck surgery. He developed rhinology and functional nose surgery, head and neck oncology, and especially functional laryngeal surgery. Besides running the Department, Professor Krajina was also the vice dean of the School of Medicine in the period of 1970 – 1974, and dean in 1974 – 1978. At the University of Zagreb, he was Head of the Committee on International Relations from 1978 – 1982, and in the period of 1982 – 1986 he was the rector of the University of Zagreb. He was a member of many international scientific societies and was a visiting professor at universities in Europe, USA and Japan. Professor Krajina was truly an exceptional person and doctor and we can claim with full conviction that Zvonimir Krajina is one of the representative personalities of Croatian otorhinolaryngology.

**KEYWORDS:** Zvonimir Krajina, otorhinolaryngology, ENT Department, Zagreb

## SAŽETAK:

OSVRT NA PROFESIONALNU BAŠTINU ZVONIMIRA KRAJINE U SVJETLU STOTE OBLJETNICE KLINIKE ZA BOLESTI UHA, NOSA I GRILA I KIRURGIJU GLAVE I VRATA MEDICINSKOG FAKULTETA U ZAGREBU

Među mnogim velikim liječnicima koji su vodili Kliniku za bolesti uha, nosa i grla i kirurgiju glave i vrata Medicinskog fakulteta u Zagrebu važno mjesto pripada profesoru Zvonimiru Krajini, s obzirom na to da je njegov znanstveni i profesionalni rad tijekom cijele karijere bio usmjeren na ovu kliniku. Krajina je za predstojnika Klinike izabran 1971. godine, točno pola stoljeća nakon njenog osnutka. Od tada, nastojao je obogatiti serijom inovacija u profesionalnim i znanstvenim područjima, kao i organizacijskim promjenama u njenom vođenju. Zvonimir Krajina bio je podjednako vješt u svim područjima kirurgije glave i vrata. Razradio je rinologiju i funkcionalnu kirurgiju nosa, onkologiju glave i vrata i, osobito, funkcionalnu kirurgiju larinksa. Osim vođenja Klinike, profesor Krajina bio

je zamjenik dekana Medicinskog fakulteta u razdoblju 1970. – 1974., te dekan u razdoblju 1974. – 1978. Bio je voditelj Odbora za međunarodne odnose Sveučilišta u Zagrebu od 1978. do 1982., a u razdoblju 1982. – 1986. obnašao je dužnost rektora Sveučilišta u Zagrebu. Bio je član mnogih međunarodnih znanstvenih društava i gostujući profesor na sveučilištima u Europi, Sjedinjenim Američkim Državama i Japanu. Profesor Krajina zaista je bio izvanredna osoba i liječnik te možemo tvrditi s punim uvjerenjem da je jedna od reprezentativnih osobnosti hrvatske otorinolaringologije.

**KLJUČNE RIJEČI:** Zvonimir Krajina, otorinolaringologija, Klinika za ORL, Zagreb

This year, Croatian otorhinolaryngology is celebrating an exceptional jubilee: one hundred years since the founding of the Department for Ear, Nose and Throat Diseases and Head and Neck Surgery at the Zagreb School of Medicine. This department began its work in the premises of a former primary school at 17 Draškovićeva Street. As one of the first three departments of the then newly established medical school, it provided the first clinical lecture for its students.<sup>1</sup> The lecture was entitled *The Scope and Importance of Otorhinolaryngology* and it was given by Dragutin Mašek, the first Head of Department and one of the three founders of the Zagreb School of Medicine.<sup>2</sup> After this, the Department was officially opened, positioning itself as a reference place for scientific work, clinical practice and teaching, and it was among the first such institutions in Southeast Europe. Following the development of its practices and the need for expansion and modernisation, the Department changed its location on two occasions, first by moving to Zagreb's Šalata in 1933, and then to University Hospital Centre Zagreb in 2007.<sup>3</sup> If we consider the historical development of otorhinolaryngology as a profession, we should certainly emphasise the very

beginnings of its formation within the establishment of the joint Third Department of Otorhinolaryngology, Ophthalmology, Dermatovenerology and Urology at the Sisters of Charity Hospital in Zagreb's Vinogradska Street in 1894.<sup>4</sup> The department was managed by Dragutin Mašek himself. It first grew into the ENT Department and then in 1964, under the management of Professor Ante Šercer, into Zagreb's second Otorhinolaryngology Clinic. The rich tradition and history of the otorhinolaryngology profession was marked by its outstanding people, the greats of this profession and socially engaged otorhinolaryngologists such as Dragutin Mašek, Ante Šercer, Branimir Gušić and Ivo Padovan. They left an indelible impression on this profession and on science in general, as well as on the activities within the School of Medicine at the University of Zagreb and the Yugoslav / Croatian Academy of Sciences and Arts.<sup>5</sup> Observing from today's perspective, and having in mind a significant historical gap, we can state with utmost credibility that Zvonimir Krajina also belongs to the greats of Croatian otorhinolaryngology, since his scientific and professional work was through his entire career centred around this very department at



*Figure 1. Medical staff, Šalata 1967. Lower row: Ivanka Lenarić Čepelja, Vera Conić Carnelluti, Radovan Subotić, Mibajlo Pražić, Branimir Gušić, Branko Femenić, Zvonimir Krajina, Đurđa Zambeli. Uper row: Vladimir Bauk, Dragica Popek, Ivo Barada, Boris Pegan, Josipa Starčević (Head Nurse), Vladislav Kosovski, Boris Salaj, Željko Poljak, Franjo Kosoković.*

the Zagreb School of Medicine. Despite having achieved an impressive career, his role and contribution for some reason eluded more comprehensive historiographical appraisals and analyses. He was born on January 12, 1923 in Šibenik. He graduated from the Zagreb School of Medicine on May 1, 1946, as the first graduate physician after the end of the Second World War. He started his early medical training in Zagreb as an ambulance doctor and continued it shortly afterwards at the Department of Gynaecology and Obstetrics in Šibenik.<sup>6</sup> In the meantime, he spent several months in Bosnia as part of a prevention team against the spread of epidemic typhus and relapsing fever. In 1947, after completing his military service in Strumica, Macedonia, where he was the only physician and responsible for the entire hospital and army, he began his work at the Otorhinolaryngology Department at Šalata in Zagreb, where he then spent the rest of his working life. His admission to the Department, with otorhinolaryngology being his personal vocational choice, was decided upon the insistence of the then Head of Department, Professor Gušić, who, as Krajina himself said, felt his inclination towards the profession, his innate skill and desire for knowledge, even though he was still a student (Figure 1).<sup>7</sup> In fact, while most students used their free time for holidays, Zvonimir Krajina wanted to improve his knowledge of foreign languages, so he attended private lessons in French and German, as well as English.<sup>6</sup> His cosmopolitan orientation and the need to get to know the world through languages during his studies remained present throughout his life and was later enhanced by the need to get to

know the profession more widely, by improving and expanding the network of professional contacts on an international level.<sup>8</sup> He passed his specialty examination in 1952 at the ENT Department in Vinogradska Hospital before a committee of professors Ante Šercer and Milovan Ćurković. In 1962, he defended his thesis entitled “Rhinitis vasomotoria”. He habilitated as a private assistant professor in 1956, he was elected assistant professor at the Zagreb School of Medicine in 1959, associate professor in 1964 and full professor in 1968. He underwent training in Sweden (three months in Gothenburg and Stockholm in 1956), in France (three months in Lyon in 1958) and in the United States (twelve months in St. Louis and New York, 1969).<sup>8</sup> In 1961 he became a member of the renowned association *Collegium otorhinolaryngologicum amicitiae sacre* (ORLAS) at the age of only thirty-eight, as the youngest Croatian member. In 1963 he participated in the first European rhinology course in Leiden, and from then on he continuously took part as a guest lecturer on all the courses and congresses organised by the European Rhinology Society every year for the following twenty-five years.<sup>6-8</sup> When he was elected Head of the Department in 1971, exactly half a century after its founding, he sought to enrich it with a series of innovations in professional and scientific areas, as well as make organisational changes in its management, including the construction modifications of the department building which had already begun falling into disrepair. Krajina demanded that everyone in the profession choose a narrower field of study, which was the forerunner of today’s sub-specialisations. This was



Figure 2. Temporal bone and otosurgical course. From left: Ivo Barada, Željko Poljak, Jakov Baotić, Zvonimir Krajina, Aleksandar Andreveski

contrary to his predecessor Branimir Gušić, who insisted that every doctor be a universal connoisseur of every part of the ENT profession, the so-called all round surgeon.<sup>9</sup>

Krajina's reorganisation was carried out so that the operating tract was separated from the rest of the Department, which resolved a significant functional problem, given that by then the operating block was connected to a huge corridor and the Department's main communication line. A new children's ward was completely renovated and opened, adapted to the specifics of paediatric ENT pathology and suitable for the accommodation of children and parents at the Department. In 1976 he commissioned the construction of a new building for the Centre for Audiology and Phoniatrics at Šalata, so these two important parts of the otorhinolaryngology received appropriate premises and modern equipment. Therefore, Centre for Audiology was finally returned to the Department, since it had previously for many years been located within the School of Medicine Polyclinic, today's Traumatology Hospital on 19 Draškovićeve Street.<sup>3</sup>

Zvonimir Krajina was equally skilful in all areas of head and neck surgery. He possessed those rare traits, such as scientific curiosity and surgical dexterity, and he did not hesitate to engage in the most complicated surgical challenges (Figure 2). He developed rhinology and functional nose surgery, head and neck oncology, and especially functional laryngeal surgery. During 1969, he began using cervical fascia in the reconstruction of the throat after partial laryngectomies, which was well received in the world, and is today known as the Zagreb method of partial laryngectomy (Figure 3).<sup>10,11</sup> He was a lecturer at a major international symposium on partial laryngectomies in 1982 in Erlangen and also two years later in Mainz. The Croatian company Školska knjiga published a monograph on this surgical technique in 1994, which additionally propelled its use in the profession, as well as promoted scientific papers and doctoral theses about it.<sup>12,13</sup> Besides running the Department, Professor Krajina was also the vice dean of the School of Medicine in the period of 1970 – 1974, and dean in 1974 – 1978. At the University of Zagreb,

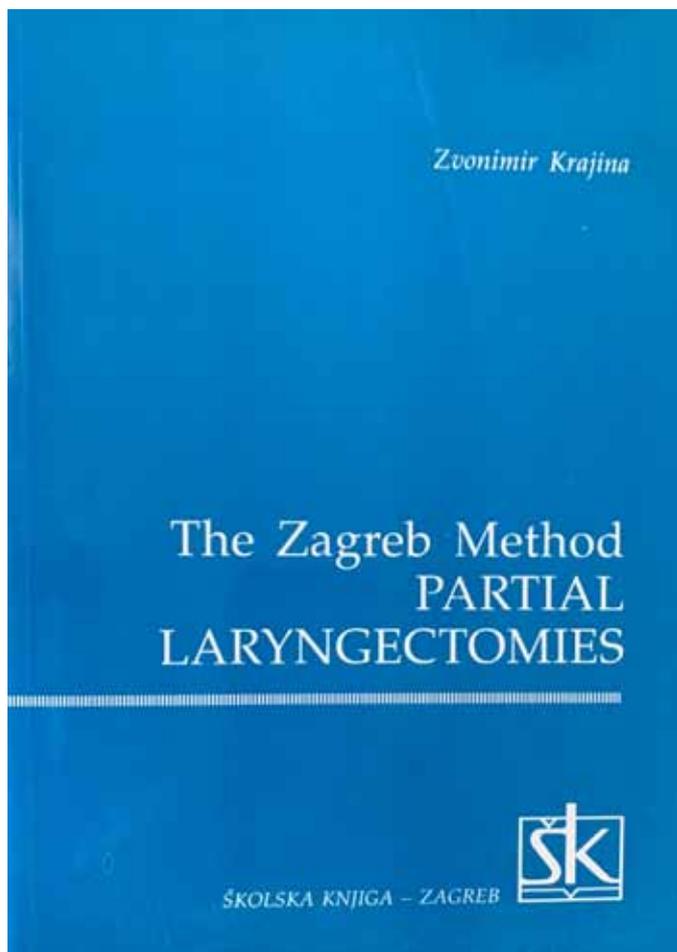


Figure 3. Cover of Zagreb Method Partial Laryngectomies

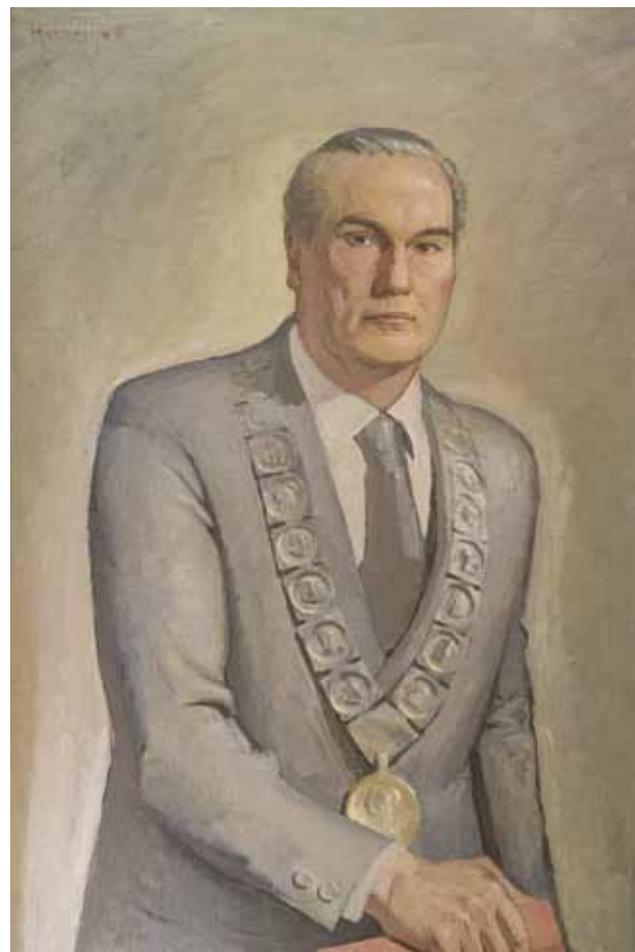


Figure 4. Zvonimir Krajina, The Rector of the University of Zagreb

he was Head of the Committee on International Relations from 1978 to 1982, and in the period of 1982 – 1986 he was the rector of the University of Zagreb (Figure 4). In addition to strengthening international ties, he introduced topics related to Laser in Medicine, Throat and Pharynx Cancer, Progress in Rhinology and Ear Cholesteatoma in the work of Inter University Centre in Dubrovnik, as part of their postgraduate study program.<sup>14</sup>

Professor Krajina was a fellow of the Croatian Academy of Medical Sciences since its founding and twice its vice president. He was an honorary member of the European and American rhinologic societies, a member of the Austrian, German, Brazilian, and Greek otorhinolaryngologist societies. He was the president of the Zagreb branch of the Croatian Medical Association, since 1967 the president of the Allergology and Otorhinolaryngology Section of the Croatian Medical Association, the president of the Association of Allergologists and Clinical Immunologists of Yugoslavia (later honorary president) and president of the

Oncology Centre at the University Hospital in Zagreb. He was a member of the International Society of Inflammation and Allergy of the Nose (ISIAN). He was a visiting professor at universities in Europe, USA and Japan. His major work is *Otorhinolaryngology and Cervicofacial Surgery* in two volumes (Figure 5). He also published a number of textbooks: *Otorhinolaryngology for Practitioners* (1972), *Laser in Medicine* (1984), *Zagreb Advances in Nose and Sinus Surgery* (Zagreb 1985), *Nasal Polyposis* (1998), and *Paediatric Otorhinolaryngology* (1998).<sup>6,8</sup>

He published around three hundred and twenty papers, about a half of which in foreign journals, and a dozen books, and gave four hundred and fifteen lectures. He was awarded around fifty diplomas, letters of gratitude and recognitions, including the Order of Merit for the People with Silver Rays. The University of Zagreb awarded him the title of Professor Emeritus, and in 1991 he became a laureate of the Croatian Academy of Medical Sciences. He is the third European to have received the Golden Award of the American Rhinologic Society (1968).<sup>8</sup>

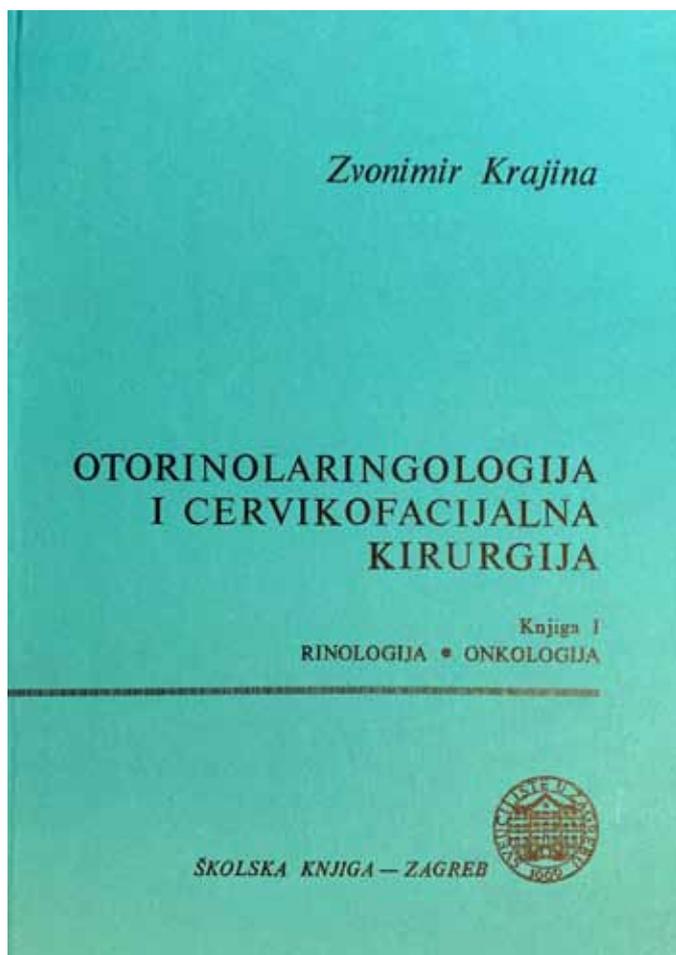


Figure 5. Cover of *Otorhinolaryngology and Cervicofacial Surgery*



Figure 6. Cover of *Memories of a Doctor*

He won the Ruđer Bošković State Award for Science in 1978 and the Lifetime Achievement Award in 1985. His autobiographical books are *Memories of a Doctor* (1994) (Figure 6) and *Three Rhinologists - Wishes, Endeavours and Traces* (with Ž. Poljak and R. Mladina; 2003). He retired at the age of sixty-three, still at the height of his creative power.

Therefore, we can claim with full conviction that Zvonimir Krajina is one of the representative personalities of Croatian otorhinolaryngology, who we can remember with pride. Furthermore, the words of his associates and acquaintances (Figure 7), as is very often the case, offer a more accurate description of someone as a person, as they keep in mind the circumstances and the time in which that person lived. Zvonimir Krajina's associate, otorhinolaryngologist Željko Poljak wrote the following: "Professor Krajina is easy to get to know for anyone, and you can quickly get to the bottom of his soul because he has always been like an open book. His Dinaric origins are reflected not only in his stout and strong physical appearance, but also in the typical characteristics of the mind, such as sharp

judgement, resourcefulness, dynamism, endurance, and sincerity almost to the point of rudeness. In addition, he has always been an inexhaustible source of ideas and energy, a driving force that his associates could not always follow". He continues: "He believed that he had to read all professional journals, bring the most eminent world experts to the Department, participate in all important congresses."<sup>6</sup> Professor Krajina was truly an exceptional person and doctor. Thus, towards the end of his life, looking back on his rich professional life and experience, in his short autobiographical book *Memories of a Doctor* he wrote the following lines: "I have experienced many things in my life. There were devastating moments both in my professional work and private life. It is curious how many opportunities and hardships we go through in such a short human life span, and yet we stay alive and in a way we meet our end gladly. I remember the life I have lived as a collection of events in which the main role was played by those for whom I chose my profession and worked all my life. I leave knowing I satisfied countless of my patients by respecting my Hippocratic Oath."<sup>7</sup>



Figures 7. From left: Radovan Subotić, Zvonimir Krajina and Željko Poljak

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