Doctors of the University Department of Ophthalmology. 
November, 2002.
ONE HUNDRED YEARS
OF THE DEPARTMENT OF OPHTALMOLOGY
“SESTRE MILOSRDNICE” UNIVERSITY HOSPITAL

The Department of Ophtalmology of Sestre milosrdnice University Hospital has got a long and rich history. More than a hundred years ago the Third department – including ophtalmology, otorhinolaryngology, dermatoveneorology and urology - was founded after the hospital “Sisters of Mercy” had moved to Vinogradskaja cesta in 1894.

The following year, the emperor Franz Joseph paid a visit to the Hospital and he was amazed by its size and organization. The hospital had eight patients' pavilions, central heating and gas illumination.

By 1919 the head of the Department was Dr. Dragutin Mašek, who was later one of the first professors and founders of the School of Medicine in Zagreb. However, the Department of Ophtalmology became separated very soon, headed by Dr. Mihajlo Musulin from 1901 to 1904.

In 1904 the department was taken over by a famous Dr. Kurt Hühn. By 1914 the Department had already had 250 beds and in the course of the First World War it had 400 beds, which made it the largest department in the Hospital in the first twenty years of the last century. It has also been the largest department of ophtalmology in this part of Europe (2). Dr. Kurt Hühn, who was especially responsible for the development and rise of the Department of Ophtalmology in the first twenty years was - just like Mašek, Čačković, Durst and Blašković – a student of Dr. Teodor Wickerhauser, who trained a number of surgeons in the Hospital, the ones who later became the founders of many fields of specialization in the Hospital or somewhere else. Furthermore, he was one of the pioneers in radiology for a short time, because in 1901 the Hospital bought the first x-ray machine. However, from 1904, having been the head of the Department of Ophtalmology, Hühn and his associates made a large and significant department of ophtalmology which held its pace with contemporary European ophthalmology. This can be seen from the published works, as well as from the record of surgeries performed during that time at the Department. In 1905 dr. K. Hühn went on a fellowship to the First Ophtalmological Clinic in Vienna that was led by prof. dr. Schnabel. Dr. Hühn published eight original scientific papers in the journal Liječnički Vjesnik and he published some of the articles in German Zeitschrift für Augenheilkunde. He received his postdoctoral lecturing qualification in 1919 at the Karl University in Prague under the mentorship of prof. dr. Deyl. The title of the lecture was: “My experience with some etiologic and therapeutic aspects of the trachoma”. It is worth mentioning that dr. Hühn was the first Croatian physician who received his postdoctoral lecturing qualification (1).

In 1913 the Department of Ophtalmology was rebuilt and a new storey, which held exclusively trachoma patients, was added. Thus, if we look at the Report on the activities of the Department of Ophtalmology by 1915 (1) we can see that 706 operations were performed and in 100 cases the general antaesthesia with chlorophorm was used. Back then the Department of Ophthalmology performed all of the contemporary procedures performed in Europe. 105 cataract extractions with total iridectomy have been performed that year, followed by linear extractions of cataract with or without iridectomy, optical iridecomies, foreign body extractions, antiglaucoma operations, numerous plastic operations as well as 272 abrasions to treat the consequences of the trachoma(3). Under the leadership of Doc. Dr. Hühn numerous ophthalmologists have been trained at the Department. To name a few: Pačac, Čosić, Meixner, Spevec, Certin, Bival, Domac, Marčetić, Bratković, Čira...
In 1923 Doc. Dr. Hühn became the president of the newly formed Medical Association and later the president of the Ophthalmological Society in Zagreb. After Dr. Hühn's retirement in 1940 the Department was taken over by Prim. Dr. Vilko Panac who was - along with Prim. Dr. Meixner - among the first physicians educated at the University of Zagreb School of Medicine. He successfully led the Department until 1945 when he was appointed the head of the Department of Ophthalmology of Hospital ‘Dr. J. Kajfeš’ in Zagreb. He was also an active member of the Ophthalmological Society of the Medical Association.

Prim dr. Neven Čosić took over the department in 1945. After completing his residency in 1921 he went to Šibenik where he founded the Department of Ophthalmology. He published two articles worth mentioning: “Treatment of ulcer serpens considering its etiology” and “Diabetes and the eye”. He took great care to transfer his knowledge to younger colleagues. His assistants have become chiefs of ophthalmological departments all over Croatia: Dr. Maretić in Pula, Dr. Šoša in Dubrovnik. He returned to Zagreb in 1941 and started the campaign for the modernization of the Department. He was the first ophthalmologist in the state who performed operations of the retinal detachment using scleral thermocoagulation. He also performed intracapsular cataract extraction using Arruga tweezers. He campaigned for the purchase of keratoplasty instruments. He even paid for those instruments himself and started performing this novel operation. In lagophthalmus treatment he devised his own method of transposition of the upper lid skin and the plastic of the external eye canthus.

Prim dr. Jelka Spevec was one of the few women ophthalmologists of the time. She spent some time at the Hotel-Dieu Eye Clinic in Paris where she participated in an ocular surgery course held by prof. dr. Terrien. She devised, in cooperation with the well known ENT specialist Prof. Dr. Šercer, a new procedure of lacrimal passage reconstruction (dacryocystorhinostomia) that is performed even today and which was first published in 1950.

A lot of young physicians were educated under the mentorship of dr. Čosić and they later introduced new diagnostical and therapeutical procedures in ophthalmology. Some of them were: Jurković, Laktić, Štriga, Trogulić, Čoti, and Kalebić.

Dr. Meixner took over the Department in 1956. He was the president of the Ophthalmological Society for a number of years. In 1956 Doc. Dr. Sc. Sonja Jurković Pagon founded the Glaucoma cabinet which was at that time one of the kind in the country. After the fellowship at the Eye Clinic in Lyon held by prof. Pauifique she started performing perforative as well as lamellar keratoplasty. She has also modified operation of congenital ptosis combined with epicanthus. She held a lot of lectures and published many scientific papers dealing with glaucoma prevention and she also tried to draw attention to the importance of glaucoma as a cause of blindness. She received her PhD in 1965 with a thesis: “Comparison of impression and applanation tonometry in primary glaucoma”. Thus she pointed to the great importance of applanation tonometry that would become, in somewhat modified form, a golden standard in IOP measurement worldwide. She received her post doctoral lecturing qualification with another paper: “Surgical treatment of primary glaucoma with a specific accent on linear sclera resection combined with iridencleisis”. That paper has been reviewed as a contribution to the antiglaucomatous operations in simple trabecular glaucomas. Zagreb School of glaucoma will thus carry great importance in Croatian ophthalmology that can be even seen today.

Another generation of young physicians entered their residency: Padovan, Car, Ljubibratić, and Borčić.

Prim dr. Krešimir Ćupak became the head of the Department in 1964 and took it to new heights. He received his PhD in 1968 and his post doctoral lecturing qualification in 1969. Between 1969 and 1975 Jurković and Laktić have received their PhD at the University of Zagreb School of Medicine while Padovan, Štriga, Trajer and Kušić have received the same at the University of Zagreb School of Dentistry. In 1971 the hospital became a teaching ground of the University of Zagreb School of Dentistry and the Department of Ophthalmology became a Clinic. Dr. Ćupak became a professor at the University of Zagreb School of Dentistry and he was also the associate dean of the University of Zagreb School of Dentistry. Jurković, Laktić and Trogulić have received their postdoctoral lecturing qualification at the University of Zagreb School of Medicine and were to become professors. Štriga, Padovan and Trajer did the same at University of Zagreb School of Dentistry. Dr. Štriga would later take
over the position of dr. Ćupak thus becoming a professor himself. Dr. Trajer held undergraduate courses at the University of Zagreb School of Defectology. Physicians at the Clinic held postgraduate lectures organized in other clinics at the hospital as well as in the School for Nurses. A lot of new diagnostic and operative procedures were introduced in that period, among others, electroretinography in 1967 and echography in 1968. Dr. Trogrlić devised his own method of sciascopy called photosciascopy. He published a monography in 1982 called “Intraocular localization and virtual character of the inverted image of the eye’s fundus viewed during indirect ophthalmoscopy” (1). Cryoextraction of cataracts was introduced in 1966. Retinal detachment operations were modernized by the introduction of cryotinopexy and the use of silicone materials. Lamellar and perforating keratoplasty were introduced as routine procedures in the surgery of the anterior segment. Fluorescein angiography was introduced in 1974 and by purchasing argon laser in 1975 our Clinic was among the first in the country to start using laser photocoagulation in the treatment of posterior segment eye diseases. The Clinic’s ophthalmologists under the leadership of Prof Dr. Ćupak organized meetings called “Days of Ophthalmology” held once a year. Those meetings were open for all ophthalmologists from Croatia and from abroad. Lectures held at the “Days of Ophthalmology” were published in the “Annals of Clinical Hospital dr. M. Stojanović” either in regular circulation or as a supplement. Nine supplements dedicated exclusively to ophthalmological articles have been published by 1985. First ophthalmological articles appeared sporadically in “Annals of Clinical Hospital dr. M. Stojanović” in 1962 and were published in that way until 1967. From 1968 they were published either as a special edition or as a supplement. When the Department of Ophthalmology became a clinic in 1971 it took over the organization of “Zagreb Days of Ophthalmology” (8,9).

Professor Ćupak left the Clinic in 1977 to become the head of the Eye Clinic of the University of Zagreb School of Medicine. His place was taken by Prof Dr. Nikola Laktić. Experienced ophthalmologists worked together as a team: Vraneš, Kušić, Hrabar, Pentz, and a group of younger ophthalmologists: Mandić, Bilić, Bačani, Kargačin, Štambuk, Vašarević, Korišić. At that time Klinger, Šikić, Ćurković, Pokupec, and Raguž left the Clinic. Prim. Dr. Davorin Nola took over the Cabi-
departments and physicians who subspecialize in diseases of the anterior or posterior segment, diseases of the orbit and lid reconstructive surgery as well as pediatric ophthalmology. Phacoemulsification is developed and used in more complex cases of trauma, congenital cataracts glaucoma and cornea transplantation (Mandić). Special attention was given to the field of vitreoretinal surgery (Vatavuk, 1998) as well as the lacrimal and orbit surgery (Iveković). Apart from numerous laser procedures a computerized videoangiography, which enables a better approach to treating macular diseases, was established (Grgić). Donations have provided opportunity for purchase of computers which led to the informatization of the Clinic and gradual use of intranet and internet. A continuous medical education has been introduced and a significant number of young physicians are improving their skills at respectable European clinics. Croatian ophthalmologists have recognized the high professional and scientific work of the Clinic and have granted the leadership of the Croatian Ophthalmological Society to the employees of the Clinic.

In the desire to improve versatility, maintain continuous improvement and increase of operative procedures, an old operative room was transformed into two new ones in 2001, which now contain new operative microscope and various modern microsurgical instruments. After completing the renovation of the operative rooms the Clinic has all the necessary resources to perform out-patient surgeries which has become a trend in contemporary ophthalmology.

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**Doctors and nurses of the Department of Ophthalmology.**

*The photo was taken in 1950s.*
IN MEMORIAM

Dr. MILADIN ŠTRIGA

M.D. Ph. D.

(28th September 1922 – 14th July 1998)

After having fought against an insidious illness for a longer period of time Dr. Miladin Štriga lost his final battle on 14th July 1998. The great-grandson of a distinguished member of the Illyrian movement, the musician Ognjan pl. Štriga, he was born in Popovača on 28th September 1922, where his father Branko, a teacher and a writer, was teaching at the Institute for Education of Blind Children. He attended primary and grammar school in Zagreb and was conscripted into the Croatian Home Guard from 1942 to 1945.

He started to study medicine in 1945, got a degree in 1951 and began his residency in ophthalmology on the 21st August of the same year at the General Hospital “Dr. Mladen Stojanović” in Vinogradska street, inspired by his father’s life who had been completely blind since childhood due to a tragic accident.

Having accomplished his residency in 1955 he continued work at the Department of Ophthalmology of the same hospital where he worked until his retirement on 31st October 1988. From 1958 to 1974 he was the head of the department and from 1974 he was the head of the Department for Microsurgery and Retinal Surgery. In 1975 he was one of the founders of the Division for laser photocoagulation. In 1972 he got his doctorate degree with a thesis on the treatment of diabetic retinopathy by radiation of the pituitary gland. In 1973 he was appointed assistant professor with a scientific paper on the diagnostics of diabetes-associated retinopathy by fluorescein angiography. In 1979 he was elected associate professor and in 1984 full professor at the Faculty of Dental Medicine, University of Zagreb, where he was the head of the Department of Ophthalmology. At the same time he was lecturing at the
School of Medicine, University of Zagreb at post-graduate studies in diabetology, endocrinology and ophthalmology. He had the opportunity for training in various clinics abroad, especially in Zürich (in photocoagulation) and Prague (in microsurgery). Retirement was a mere form for him; he founded and managed laser centres and educated ophthalmologists in Zagreb Military Hospital (1988-1990), General Hospital in Osijek, (1988-1990) and Clinic for Ophthalmology in Skopje (1990-1991). At the same time he was a consultant at the Laser Division of the Institute for Diabetes Vuk Vrhovac in Zagreb.

His major scientific contribution is the study of eye diseases in the patients with diabetes - especially diabetic retinopathy; the introduction of fluorescein angiography as a routine clinical diagnostic method for the early detection and control of various retinal diseases as well as the application of laser photocoagulation in the treatment of numerous pathological disorders of the eye.

On the basis of fluorescein angiography he compiled the current classification of diabetic retinopathy particularly by studying the first signs of that disease: the phenomenon of microaneurisms and the flow of fluorescein dye. He was analysing the relationship of this disease and insulin antibodies and so contributed to the research of pathophysiological processes. Moreover, he studied epidemiology, risk factors, sight and system prognosis, prevention and social and medical aspects of diabetes - associated retinopathy. He investigated the general principles and indication for argon laser photocoagulation in diabetic retinopathy and maculopathy, age related macular degeneration and central serous retinopathy, which was a new clinical entity elaborated by him.

Furthermore, he made an important contribution to the laser photocoagulation in the occlusion of the central retinal vein. He also improved the method of laser trabecular retraction as well as laser reconstructive microsurgery of the iris. He analyzed the pathogenesis of the unilateral glaucoma, particularly the developing glaucoma and finally, he developed his own modification of goniotrepanation in treating glaucoma.

He proposed the method of parallel quantitative examination of antibodies in blood serum and humor aqueus of etiological confirmation of uveitis. His special area of interest was the research of vascular diseases of the retina in connection with vasoocclusive syndrome.

In the field of ophthalmic surgery he gave an original contribution to the surgery of lacrimal sack as well as a personal modification of dacriocystorhinostomy and the congenital ptosis. He was the first to develop the method of cryocoagulation in virus affected cornea of the herpes type introducing the method which he named “keratotomia abrasiva”. In pediatric ophthalmology he especially studied the changes in the eyes of albino children, he drew attention to refraction anomalies in children with cerebral palsy.

He also detected the first forms of eye tularaemia in Croatia and as a unique case in our medical literature he described the Reiter syndrome on his own case. His papers were published in general medical, ophthalmic, diabtic magazines and magazines for social medicine, both at home and abroad. He collaborated on the Medical Encyclopedia and on several of our textbooks and reference books. He was also the mentor or a member of the committee for many theses as well as a member of editorial staff of several medical magazines.

From 1968 to 1978 he was the secretary of the Ophthalmic section of the Croatian Physicians Association. In 1988 he was elected full member of the Croatian Academy of Medical Science and in 1991 he became a full member of the exclusive cultural association The Brethren of Croatian Dragon. In 1993 he was awarded the most prestigious scientific award The Prize of the Republic of Croatia for life achievement.

Professor Štriga gave a significant contribution to our ophthalmic profession and science; but first and foremost, we will all remember him as a concerned physician, sincere friend and a selfless educator of younger generations of ophthalmologists.

My our dear teacher have eternal honor and gratitude.

Zdravko Mandić, M.D. Ph.D.
Dr. VJEKOSLAV KUŠIĆ
Assistant Professor
(18th March - 26th July 1999)

Dr. Vjekoslav Kušić, who worked for many years at the Department of Ophthalmology the Clinical Hospital “Sestre milosrdnice” died in Zagreb on 26th July 1999 after a long illness. Although we knew that he was seriously ill, the news of his death came as a shock to all of us. Having won so many battles, he lost the final one.

Dr. Vjekoslav Kušić was indeed a remarkable person. A fruitful, rich and eventful life, which had started in Marija Bistrica on 18th March 1932, came to an end. He was the youngest child in the big and poor family of Ljuba and Janko Kušić. The place of his birth marked him for life. His love for Zagorje and for his profession were constantly present throughout his life. The poor family did not have sufficient means to educate their children. However, little Vjekoslav’s talent was discovered early on. With the help of his elder siblings, he was educated first in Marija Bistrica and then at a residential school in Zelina. After that he moved to Zagreb and enrolled in the 4th grammar school for boys.

That period left deep traces on his life and he was connected to many of his classmates all his life. Then he enrolled in the School of Medicine of University of Zagreb, which he graduated from in 1960. He had fond memories of his student days and he was keen on sharing them with others, being proud of the generation of his fellow students who became our reputable medical experts and scientists.

Having earned his degree he completed his internship in General Hospital in Varaždin.

Afterwards he returned to Zagorje for a brief period of time working as a general practitioner in Krapina. In 1965 he returned to Zagreb and started work at our “Vinogradska hospital” then called Clinical Hospital “Dr. M. Stojanović”, where he stayed almost literally to the very end.
Already during his residency he had shown particular interest for pediatric ophthalmology, so very soon he focused his specialist efforts on this field. Together with Dr. Dragan Trajer he started work at the Department for Pediatric Ophthalmology and Strabismus. It is the area that generations of patients, their parents, colleagues and students remember him for and which he was faithful to all his life.

In 1976 he was appointed the head of the Department of Pediatric Ophthalmology.

Along with his regular work at the clinic he was continuously involved in scientific work so in 1977 he received a doctorate degree for his thesis Magnesium in humor aqueus and its role in the retention of the humoral-lenticular barrier. As soon as 1978 he became a senior consultant. From the very beginning he worked at the Department of Ophthalmology the Faculty for Special Education (today known as Faculty for Rehabilitation and Education), first along with prof. Trajer after whose retirement he became the head of the department. Due to his scientific educational work he was appointed an assistant professor in 1986 and an associate professor in 1990.

Dr. Vjekoslav Kušić dedicated practically all of his professional and scientific work to pediatric ophthalmology, constantly improving his own performance and that of his co-workers. He visited and stayed for training in the famous university clinic in Giessen several times, every time returning with new surgical and diagnostic procedures which he introduced with a lot of enthusiasm. He took part in numerous domestic and international seminars and congresses and published various papers relating to strabismus and pediatric ophthalmology. Along with strabismus, a major area of his interest were the problems regarding tear ducts in children. He was dealing with the matter in his practice and he also published a series of scientific papers. There is one aspect of Dr. Kušić’s work which should not be left out and that is the education of young ophthalmologists.

Many colleagues remember their resident days and his persistent and patient teaching and explanations of seemingly complex problems in a simple way.

Every life, and the life of a doctor is no exception, leaves a trace on those who were an integral part of it. It is our patients that we doctors leave a trace on. Many generations of children “went through” Dr. Kušić’s able hands. They are definitely the ones who remember him best. They also remember his specific approach, which enabled him to reach every child and every parent and which he was famous for.

Everyone who knew Dr. Kušić knows how dedicated he was to his work. When he was already seriously ill he did not give up his work. He almost seemed to have ignored his illness and its limitations. Even at his death bed he continued to make plans with us and was eager to find out what was going on at the clinic. He had one more wish, which unfortunately could not be fulfilled. He wanted once again to go for a stroll in his Zagorje hills to breathe in the scent of his place of birth, which he had never departed from in his heart and which he had always belonged to. Dr. Vjekoslav Kušić was really an exceptional man. His death left an emptiness in everyone he shared his life with, his family foremost, then all of us who shared with him the difficulties and joys of work and there is definitely a void in our pediatric ophthalmology. Nevertheless, to quote a poet:

There are people who leave a space behind them when they leave,
All of a sudden we feel the fan of life spreading itself.

(by S. Lice)

We can only hope that the space that Dr. Vjekoslav Kušić created with his lifetime of devoted work is a field where new fruits will sprout.

Biserka Bašani M.D.
IN MEMORIAM

Dr. NIKOLA LAKTIĆ
M. D. Ph. D.
(25th January 1921– 12th December 1999)

Professor Nikola Laktić left us for good on 12th December 1999. He died in Sestre milosrdnice University Hospital, where he worked for no less than twenty seven years.

He was born in a small village called Ričice – Lovinac on 25th January 1921. He attended primary and grammar school in Osijek except for the last years of grammar school which he attended in Zagreb where he also graduated.

He studied medicine at the University of Vienna and Zagreb. During his studies he survived Bleiburg and «Križni put» which later caused him frequent difficulties and obstacles.

He began his residency in ophthalmology on July 7th 1950 at the General Hospital «Dr. Mladen Stojanović» in Vinogradska street. Having finished his residency in 1954, he continued working at the hospital as a specialist ophthalmologist. From 1958-1978 he runs the Department and from 1974 he was the head of the Department for the diseases of the posterior eye segment. In January 1969 he got his doctorate degree: Electroretinographic analysis of children with impaired vision and its role for detection and categorization in impaired vision.

At the beginning of July 1971 he was appointed the senior counselor by the Ministry of Health while at the end of July the same year he presented himself at the School of Medicine with his work: »Electroretinogram and visual evoked potential in acromats» and became an assistant professor. In December 1976 he was elected associate professor and in May 1981 full professor at the School of Medicine, University of Zagreb. On 16th of January 1978 he became the head of the Department of Ophthalmolo-
He held his position until his retirement on 31st July 1987. During many years of hard work he also had the opportunity for training at a few leading University hospitals. (Berlin, München, Paris, Zürich, Tübingen and Essen).

He published more than seventy scientific and professional papers in various journals at home and abroad.

In Croatian Association of the Blind and Impaired Vision Persons he was the main counselor for over thirty years, as well as the President of the Committee for rehabilitation of impaired vision. Furthermore, he organized the work on keeping record of blindness and impaired vision expansion in Croatia. He also organized the doctors' education in this matter. At the School of Medicine, University of Zagreb, he was the leading figure at postgraduate studies in lecturing about retinal diseases as well as blindness and impaired vision. His contribution in development of electrodiagnostical methods fluorescein angiography, application of photocoagulation, diagnostic method and treatment of various retinal diseases and retinal detachment were specially notified.

When he became the chief of the Department of Ophthalmology in 1978, he was the first to introduce subspecialization and educate the doctors who will treat the diseases of anterior eye segment, posterior eye segment, children's ophthalmology, glaucoma, immunology in ophthalmology, etc.

Professor Laktić was a senior scientific counselor, member of Croatian Doctor's Association, Croatian Academy of Medical Sciences and International Agency for the Prevention of Blindness.

He was especially proud of his origin from Lika and this is what he said in May 1988 for the newspaper «Vila Velebita»: »I survived the extremely difficult circumstances in twentieth century. I experienced my Croatia for the second time. I also experienced all the beauty of my profession and the deep gratitude of my patients was ever lasting value for me«. I would like to add - the deep gratitude of his students because the professor has taught us all the skills in ophthalmology and above all, he emphasized and taught us the human approach to our patients.

My dear teacher have eternal honor and gratitude.

Ante Pentz, M.D. Ph.D.
Senior counselor
INSTRUCTION TO AUTHORS

Acta clinica Croatica publishes original scientific papers, preliminary scientific papers, reviews, professional papers, and conference papers, reviews and reports from congresses and symposia, book reviews and letters to editor, unless they have previously been published in other journal or books.

All manuscripts should be written in English.

Manuscripts should be limited to a maximum of 20 pages (including annexes). Too long papers are not accepted, unless ordered, and they will be returned to the authors.

Priority in publishing is given to original scientific papers from the field of clinical medicine, especially those dealing in an interdisciplinary way with medical problems met in hospital work.


1. Text

Manuscripts, including all supplements, should be submitted in triplicate. The should be typed double-spaced throughout on one side only on foolscap paper with a 4 cm margin on the left side.

The title of the paper should be concise and clear, typed on a separate sheet of paper, with first and last name of the author and underneath full name of the institution from which the work originated. The full name of the author to whom communications and requests for reprints should be sent should be typed at the bottom.

The author should also suggest a short title of the paper of up to 40 characters to be printed as the current title on the pages on which the paper is published.

– An abstract of maximum 200 words should be typed double spaced on a separate page. The abstract should be substantive rather than purely descriptive and should contain all essential facts presented in the paper: short and concise description of the problems involved; the purpose of the paper, the methods used, essential results (with specific, if possible, numerical data), and basic conclusions.

– On the paper with the Croatian or English abstracts 2-5 key words essential for quick identification and classification of the paper’s content should be written under the abstract. The key words must be in accordance with subject heading in Index Medicus.

The paper should be divided into the following sections: Introduction, Material and Methods, Results, Discussion and Conclusions.

– The introductory part of the paper should give a short and clear review of the problems involved and purpose of the work. A short reference should be made to other papers directly connected with the problem dealt with in the paper.

– The methods used in the work should be briefly described but in sufficient detail to enable readers to repeat the work described. Papers directly associated with the problems discussed should be briefly mentioned. Methods already reported in the literature should not be described and only references should be cited. Drugs should be referred to by their generic names.

– Results should be presented clearly and concisely. Their significance should be statistically analyzed, using SI units.

– Discussion and Conclusions. The purpose of discussion is to interpret the results obtained and compare them with major relevant findings from which clear conclusions can be arrived at.

2. Tables and figures

– If the paper contains tables and figures, they should be typed on a separate sheet of paper. Tables should be intelligible, without abbreviations, except for standard units of measurement. Vertical title columns should be avoided in tables. The place of tables and figures in the manuscript should be indicated by pencil.

– Photographs enclosed should be on glossy black and white paper or on tracing-paper. On the back of the photographs their number and title of paper should be marked in pencil together with an arrow pointing to the top.

– Drawings should be made in Indian ink on white or tracing paper. Characters and signs should be clear and of the same size. Photocopies of tables, figures and drawings are not accepted.

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References are written on a separate sheet of paper and are numbered consecutively in the order in which they appear in the text (the first reference in the paper has number 1).

References are cited in the following way:

Papers in journals
In the list of references all authors should be quoted and et al can be used in the text only

Journal supplements

Journals marked by number

Books and monographs
Personal author or authors

Editor

Chapter in book

Collection of works (Proceedings)

Abbreviations of journal should conform to those used in Index Medicus.

Together with the manuscript, a statement by the author should be enclosed certifying that none of the material in the manuscript has been published previously and none of this material is currently under consideration for publication elsewhere. In an accompanying letter, the first author should confirm that the manuscript has been seen and approved by all other authors. Written permission from the publisher and author to reproduce any previously published figures and/or tables should be included.

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