Development of the Institute for the History and Philosophy of Science during 65 years since its foundation in 1960

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Summary:

Introduction: The paper presents the history and development of the Institute for History and Philosophy of Science of the Croatian Academy of Sciences and Arts on the occasion of 65 years of its existence. **Material and Methodes:** The startigpoint of this work were the Academy's yearbooks from the 1950s onwards, especially in tracking the sequence of employees in the title from assistant to academician of the Institute, which we organized in a table. **Results:** The Institute for the History of Natural, Mathematical and Medical Sciences, a new multidisciplinary institution, was established in 1960 consisting of four different foundations: the Department for the History of Medicine of the Academy's Institute for Medical Research, the Ruđer Bošković Memorial Museum in Lokrum, the Institute for the History of Medicine of the Faculty of Medicine in Zagreb, the Institute for the History of Pharmacy with its collection, and the Museum for the History of Healthcare of the Croatian Medical Association. The founder and first director of the Institute was Mirko Dražen Grmek, who was also the initiator of the publishing series Debates and material for the history of science, lounched in 1963. From the very beginning, the Institute established the methodology of work in the field of history of science in Croatia, its content and the profile of researchers. Its organization fell under the leadership of three Academy's departments: Department for Mathematical, Physical and Technical Sciences, later on Department for Mathematical, Physical and Chemical Sciences (heads: Željko Marković, Mihovil Proštenik and Žarko Dadić), the Department of Natural Sciences (head: Slavko Krvavica) and the Department of Medical Sciences (heads: Branko Kesić, Sergej Forenbacher and Vjekoslav Jerolimov). In 1992, on the initiative of academician Ivan Supek, the Department of Philosophy of Science joined the Institute, and the institution was renamed the Institute for History and Philosophy of Science. The Divisions of the Institute initially had individual directors (Žarko Dadić and Snježana Paušek-Baždar - Division for History of Natural and Mathematical Sciences; Biserka Belicza and Stella Fatović-Ferenčić – Division of Medical Sciences; Jasmina Lelas - Division for Philosophy of Science), and since 2020 Stella Fatović-Ferenčić has been appointed director of the entire Institute. The Institute was the driving force behind the establishment of the Croatian Museum of Medicine and Pharmacy HAZU, founded in 2014 by the Ministery of Culture.

Conclusions: Although with reduced personnel potential, the Institute for History and Philosophy of Science continues to monitor the development of scientific theories and their influence on the creation of knowledge in the fields of mathematics, physics, chemistry, biology, biomedicine and philosophy of science. It is a unique institution in Croatia that, by researching, presenting and preserving the

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national scientific heritage, values the achievements of national development, harmonizing its activities with the fundamental mission of the Croatian Academy of Sciences and Arts.

Keywords: Croatian Academy of Sciences and Arts, Institute for History and Philosophy of Science – history, Mirko Dražen Grmek, history and philosophy of science - institutionalization of the history of science, Croatia

Sažetak:

Razvoj Zavoda za povijest i filozofiju znanosti tijekom 65 godina od njegova osnutka 1960.

Uvod: U radu se iznosi povijest i razvoj *Zavoda za povijest i filozofiju znanosti* Hrvatske akademije znanosti i umjetnosti u povodu 65 godina njegova postojanja. Prikazana je uloga Andrije Štampara i Mirka Dražena Grmeka u razvoju preteče ove ustanove *Odjela za historiju medicine* osnovane 1952. kao sastavnice Akademijinog Instituta za medicinska istraživanja. **Materijal i metode**: Okosnicu ovog rada činili su Akademijini ljetopisi od 1950-ih godina nadalje osobito u praćenju slijeda zaposlenika u zvanju od asistenta do akademika Zavoda koje smo prikazali i tablično. **Rezultati**: *Institut za povijest prirodnih*, *matematičkih i medicinskih znanosti* osnovan je kao nova interdisciplinarna ustanova 1960., a činili su ga : Odjel za historiju medicine Akademijinog Instituta za medicinska istraživanja, Spomen-muzej Ruđera Boškovića na Lokrumu, Zavod za povijest medicine Medicinskog fakulteta u Zagrebu, Institut za povijest farmacije sa zbirkom te Muzej za povijest zdravstva Zbora liječnika Hrvatske. Osnivač i prvi direktor Instituta bio je Mirko Dražen Grmek, ujedno i pokretač izdavačkoga niza *Rasprave i građa za povijest znanosti* koje počinju izlaziti 1963. godine. Od samih početaka Institut utemeljuje i definira metodologiju rada na području povijesti znanosti u Hrvatskoj, njezin sadržaj i profil istraživača te svojom organizacijom potpada pod vodstvo Akademijinog Razreda za matematičke, fizičke i tehničke znanosti, kasnijeg Razreda za matematičke, fizičke i kemijske znanosti (voditelji: Željko Marković, Mihovil Proštenik i Žarko Dadić), Razreda za prirodne znanosti (voditelj: Slavko Krvavica) i Razreda za medicinske znanosti (voditelji: Branko Kesić, Sergej Forenbacher i Vjekoslav Jerolimov).
Godine 1992. Zavodu se na inicijativu akademika Ivana Supeka priključuje Odsjek za filozofiju znanosti, te je ustanova preimenovana u *Zavod za povijest i filozofiju znanosti*. Odsjeci Zavoda isprva imaju pojedinačne upravitelje (Žarko Dadić i Snježana Paušek Baždar – Odsjek za povijest prirodnih i matematičkih znanosti; Biserka Belicza i Stella Fatović-Ferenčić - Odsjek za medicinske znanosti; Jasmina Lelas - Odsjek za filozofiju znanosti), a od 2020. upraviteljicom cjelovitog Zavoda imenovana je Stella Fatović-Ferenčić.
Zavod je pokretač osnutka *Hrvatskog muzeja medicine i farmcije HAZU* kojemu je inicijalna začetnica Stella Fatović-Ferenčić. Muzej je osnovan 2014., kao sedmi Akademijin muzej i prvi muzej znanosti u toj ustanovi te i nadalje usko surađuje sa Zavodom.

Zaključak: Premda smanjenim kadrovskim potencijalom, Zavod za povijest i filozofiju znanosti nastavlja pratiti razvoj znanstvenih teorija i njihov utjecaj na stvaranje znanja u području matematike, fizike, kemije, biologije, biomedicine i filozofije znanosti. Riječ je o jedinstvenoj ustanovi u Hrvatskoj koja istražujući, prezentirajući i čuvajući nacionalnu znanstvenu baštinu vrednuje dosege nacionalnog razvoja, usklađujući svoje djelovanje s temeljnom misijom Hrvatske akademije znanosti i umjetnosti.

Ključne riječi: Hrvatska akademija znanosti i umjetnosti, Zavod za povijest i filozofiju znanosti – povijest, Mirko Dražen Grmek, povijest i filozofija znanosti – institucionalizacija povijesti znanosti, Hrvatska

Introduction

This year we celebrate 65 years since the foundation of the Academy's Institute for History and Philosophy of Science. As the Institute was founded on the initiative of the historian of medicine Mirko Dražen Grmek in 1960, the commemoration took place as part of a symposium in the Library of the Croatian Academy of Sciences and Arts (HAZU), on January 9, 2025, precisely on Grmek's 101st birthday. On this occasion, we presented in this paper the history and development of this institution, unique in the territory of Croatia and in the wider environment, with an emphasis on its management and personnel structure until today. With regard to the prominent personalities who led it and worked in it, and the results that were created during the 65 years, we emphasized the need for its revitalization and role, with regard to nurturing scientific heritage and monitoring the epistemological, sociological, and humanistic aspects of the science development to this day.

The backbone of this work were the Academy's yearbooks from the 1950s onwards, especially in tracking the sequence of employees in the title from assistant to academician of the Institute, which we also presented in a Table 1. During the years, assistants - trainees, young researchers and scientific novices were employed at the Institute over the years: Nevenko Boroš, Ivanka Mustač, Marin Šubarić, Melita Rastija, Jadranka Boljunčić, Snježana Šain, Ana Borovečki, Tatjana Buklijaš, Vanja Flegar, Neva Grgičević-Mihalić and Vedran Duančić. The aforementioned were not included in the table, because they were not in a permanent casual relationship at the Institute.

Section for the History of Medicine of the Institute for Occupational Hygiene – Forerunner of the Institutionalization of the History of Science in the Yugoslav Academy of Science and Arts (Yasa)

The 1950s brought reorganization in the then JAZU, so in 1946 and 1947 the Academy's departments were founded.[1] For example, the III Department of Natural and Medical Sciences of the JAZU was founded, and the first regular members of that department were the otolaryngologist Branimir Gušić and the dermatovenerologist Franjo Kogoj (1947).[2] However, not all physicians belonged to the III Department, so Andrija Štampar, a public health strategist and one of the founders of the World Health Organization, was elected as a regular member of I Department of Philosophy and Social Sciences in 1947.[3] After World War II, Štampar was the director of the School of Public Health in Zagreb, dean of the Faculty of Medicine of the University of Zagreb, rector of Zagreb University (1945–1946) and president of YASA (1947–1958). [4] As an envoy of the World Health Organization, he studied public health and medical education in Afghanistan, Ethiopia, Egypt, Sudan, and from his travels and experiences in the field, he could certainly see how important knowledge of the culture and history of each individual nation is in accessing health and disease prevention. It was a time when his public health models of health care, confirmed in the period between the two world wars, were taking off through the social and health care of the population in the entire territory of the former Yugoslavia.[4-6] Particular care was taken of to protect the health of the working population, which is confirmed by the fact that precisely on Štampar›s initiative, on December 27, 1947 by the decision of the Yugoslav Academy of Sciences and Arts, the Institute for Occupational Medicine was founded, which already had 34 employees at the beginning. During 1948, all preparations for the work of the Institute were carried out, and a year later, the scientific research activity of this institution officially began. [7]

At the same time, Mirko Dražen Grmek, a young doctor, completed his studies at the Faculty of Medicine of the University of Zagreb, who, thanks to his professor role models, Andrija Štampar and Lujo Thaller, gradually decided to research the history of medicine. He chose that field of medicine, which he saw as a kind of counterbalance to the processes of fragmentation in medicine, but also as an opportunity to connect biomedical, natural and humanistic sciences.[8] Štampar quickly recognized Grmek's ambitions and invited him to organize the Section of History of Medicine within the Institute for Occupational Hygiene at YASA, which Grmek readily accepted. The YASA Yearbook for 1952 notes that at the session of the Institute's Expert Council on July 4, 1952, it was concluded that it would consist of: Section of Biochemistry, Section of Leptospirosis, Section of Oncology, Section of Viruses and Rickettsia, Section of Medical Parasitology, Section of Zoonoses, and Section of History of Medicine.[9] In the description of the work of the last unit within the Institute, it is stated that the Section for the History of Medicine shall study materials from various State Archives, work on historical-medical articles for the Encyclopaedia of Yugoslavia as well on the editing of the Medical encyclopedia.[9] Thanks to the report that he submitted to the Academy after his field research in Zadar, which took place from April 1 to June 28, 1952, it is possible to realize the ambitious work plan that Grmek outlined at the beginning of his employment. It is visible that he devoted the most important part of his research to the study of documentation on health conditions in Dalmatia during the French rule (1806-1813) and data on the history of medical and pharmaceutical courses at schools in Zadar and Trogir. [10] Those topics were the main goal of his research and the starting point for the preparation of his future doctoral dissertation. The materials stored in the Zadar archive, library and archaeological material opened his eyes to numerous areas, which he would later cover in his works. The richness of the material created an insight into the scope of the yet unexplored medical heritage.

During 1953, the Academy attached all its units that dealt with biomedicine to the Institute for Occupational Medicine,

Table 1. Heads, directors and researchers of the Institute for the History and Philosophy of Science

HEAD	DIRECTOR	RESEARCHER	INSTITUTION / LOCATION
Željko Marković (1960 - 1974)	Mirko Dražen Grmek Institute Director (1960 -1963)	Hrvoje Tartalja (1960 - 1977) Lavoslav Glesinger (1960 - 1975) Žarko Dadić (1960 – 2023) Ilinka Senčar -Ćupović (1960 - 1994) Renata Peroš (1960 - 1977) Antun Dorn (1960 – 1963)	**Institute for the History of Natural, Mathematical and Medical Sciences** Zagreb, Opatička 18 Zagreb, Demetrova 18
	Hrvoje Tartalja Institute Director (1964 - 1977)	Vladimir Dugački (1966 - 1969) Biserka Belicza (1969 - 2005) Marija Weiss (1974 - 1977) Snježana Paušek- Baždar (1974 - 2019) Josip Balabanić (1975 - 1988) Zdenka Šušnić-Fliker (1978 - 1989.)	
Brako Kesić (1979 - 1982) **Mihovil Proštenik (1982 – 1986)** **Slavko Krvavica (1986 - 1990)** **Sergej Forenbacher (1990 - 1992)**	Biserka Belicza Division Director (1980 - 2005)	Biserka Belicza (1969 - 2005) Zdenka Šušnić-Fliker (1978 - 1989) Stella Fatović-Ferenčić (1985 - 2025) Željko Dugac (1997 -)	**Institute for the History of Natural, Mathematical and Medical Sciences – *Division for the History of Medical Sciences*** Zagreb, Demetrova 18
Žarko Dadić (1992 - 2023)	Žarko Dadić Division Director (1982 - 1995) Snježana Paušek-Baždar Division Director (1996 - 2019)	Snježana Paušek- Baždar (1974 - 2019) Josip Balabanić (1975 - 1988) Stipe Kutleša (1984 - 2000) Marijana Borić (1991 -) Branko Hanžek (2003 - 2023)	**Institute for the History and Philosophy of Science – *Division for the Natural and Mathematical Sciences*** Zagreb, Ante Kovačića 5
	Jasmina Lelas Division Director (1992 - 1998)	Zdravko Radman (1992 - 1994) Tihomir Vukelja (1992 - 1998) Bojan Marotti (1992 - 2022)	**Institute for the History and Philosophy of Science - *Division for the Philosophy of Science*** Zagreb, Ante Kovačića 5
	Biserka Belicza Division Director (1980 - 2005) Stella Fatović-Ferenčić Division Director (2005 - 2019) & Institute Director (2020 - 2025)	Stella Fatović-Ferenčić (1985 - 2025) Željko Dugac (1997 -) Martin Kuhar (2009 -)	**Institute for the History and Philosophy of Science – *Division for the History of Medical Sciences*** Zagreb, Demetrova 18 Zagreb, Gundulićeva 24
Vjekoslav Jerolimov (2024 -)	Stella Fatović-Ferenčić Institute Director (2020 - 2025)	Stella Fatović-Ferenčić (1985 - 2025) Željko Dugac (1997 -) Martin Kuhar (2009 -)	**Institute for the History and Philosophy of Science – *Division for the History of Medical Sciences*** Zagreb, Gundulićeva 24
		Marijana Borić (1991 -)	**Institute for the History and Philosophy of Science – *Division for the Natural and Mathematical Sciences*** Zagreb, Ante Kovačića 5

so the Institute changed its name to the Institute for Medical Research.[11] It had seven subunits, including the Section for History of Medicine, which was located at Demetrava Street 18 in Zagreb. The Director of the Department was Mirko Dražen Grmek, with whom one administrative person works - a typist. Establishing the methodology of scientific research within the field he deals with, Grmek continues his research in the State Archives and various libraries, collects data for the Croatian medical bibliography.[12] He published most of this material while he was working in Croatia. Most importamtly we cite his doctoral dissertation Medical Faculties in Dalmatia in the French Era reign (1806-1813), which he defended in 1958, becoming the first doctor of science in this field. It was an important step in the struggle to position the history of medicine as a scientific discipline at the University of Zagreb. In addition together with Štampar, Grmek compiled a script and then a manual Introduction to Medicine for students at the beginning of medical studies, which would later go through three editions (1961, 1971, 1996). he obtained an assistant professorship, and in 1960 he became a professor at the Faculty of Medicine of the University of Zagreb. [13]

In an era in which the fragmentation of medicine is intensifying in accordance with the development of specialist and subspecialist areas, Grmek develops views on a broader view of the incidence and approaches to the treatment of diseases, on the processes of forming scientific theories and ideas about science, and becomes a recognizable personality in the field of the history of science in the entire territory of Yugoslavia at the time. In this sense, the logical sequence of his activities was aimed at the foundation of an institution that would interdisciplinaryly deal with that topic in the field of connecting basic and biomedical sciences.

Foundation of the Institute for the History of Natural, Mathematical and Medical Sciences Jazu

At the end of the fifties of the last century, Grmek's intention to connect individual institutions that dealt with the history of science was realised on May 7, 1959 with the decision of the JAZU Presidency on the establishment of the Institute for the History of Natural, Mathematical and Medical Sciences. Then his tasks are defined: *to organize, encourage and carry out scientific work in the field of history of natural, mathematical and medical sciences, with special regard to the development of these sciences in South Slavic countries, primarily in Croatia; to develop and improve historical methodology in the field of sciences represented in the work of the Institute; to collect and process archival, bibliographic and museum materials related to the scientific activities of the Institute and to take care of the maintenance and development of such collections within the Institute, so that they are trained for scientific use; to work on the improvement of scientific and professional personnel and the creation of scientific and professional youth; to publish the results of his scientific and professional work in periodical and other publications of the Institute, taking into account their significance for the national, social and cultural interests of the country; to provide assistance in matters of organization and conduct of teaching in the history of sciences that fall within the scope of work of the Institute, especially to help the improvement of such teaching at the appropriate faculties of the University of Zagreb and other higher education institutions with its recommendations.* [14]

Fundamental preparations for the organization of the Institute were thus started, however, its organization was carried out only in 1960. The core of the Institute was the Section for the History of Medicine of the Institute for Medical Research, which with its staff and inventory was transferred to the newly founded Institute on January 1, 1960. On June 10, 1960, the leadership of the Institute was entrusted to Mirko Dražen Grmek as permanent director (Figure 1). In January 1960, the Ruđer Bošković Memorial Museum in Lokrum was added to the Institute, and on March 1, 1960, the Institute for the History of Medicine of the Faculty of Medicine in Zagreb was taken over. On May 17, 1960, based on an agreement with the Pharmaceutical Society of Croatia, it was incorporated into this Institute and the previous Institute for the History of Pharmacy with its collection. Finally, on December 13, 1960, the Croatian Medical Association handed over the material of the Museum for the History of Healthcare to the Institute for permanent use and safekeeping. During 1960, the Council of the Institute was formed, and the academician Željko Marković was elected as the president of the Council, who soon after assumed the role of the head of the Institute. Based on the announced competition, three senior scientific associates (Prof. Dr. Lavoslav Glesinger, Prof. Dr. Mirko Dražen Grmek and Assistant Professor Dr. Hrvoje Tartalja) and three assistants (Žarko Dadić, Antun Dorn and Renata Peroš) were selected. Independent administration and accounting operations of the Institute were also set up. [15]

The Institute was located in Zagreb's Upper Town, in two locations, at Demetrova Street 18 and Opatička Street 18. In Demetrova Street, the natural and medical sciences were located, and in Opatička Street, the pharmaceutical collection was located, led by Hrvoje Tartalja. From the very beginning, all professions, united in the Institute, work with great enthusiasm. It begins with arranging the museum material, books, photo library and bibliographic files. The Institute cooperates with various institutions, primarily with the Medical Faculties in Zagreb and Rijeka, the Lexicographic Institute, the Faculty of Pharmacy in Zagreb and institutes for the history of science abroad. Employees present the results of their research at national and international conferences, as well as in professional and scientific periodicals. On the initiative of Mirko Dražen Grmek, the Institute's publishing initial book series entitled *Debates and material for the history of science* (*Rasprave i građa za povijest znanosti*) were

launched in 1963, with the first book edited by Hrvoje Iveković and Mirko Dražen Grmek. From 1963 to 1969, the *Debates* were published in a single volume of the entire Institute, while from book 4 (1983) a special edition of the Academy's Department for Mathematical, Physical and Technical Sciences was published, and from book 5 (1989) a special edition of the Department for Medical Sciences was published. So far, 21 books have been published. The contents of these books, which will soon be fully digitized, have grown into reference literature and a fundamental starting point for research into the history of science in our region.[16]

Figure 1. Mirko Dražen Grmek (Krapina, 2024 – Paris, 2000), the founder of the Institute. Bust (40 x 27 x 25 cm; No. HMMF - 4344).

After Grmek's Departure from Croatia

During 1963, there were changes in the personnel composition of the Institute, since the three-year directorship of the then director M. D. Grmek expired on June 10, 1963. Given that he was called to settle the legacy of Claude Bernard, Grmek leaves Croatia and goes to live and work permanently in Paris. In the same year, assistant archaeologist and art historian Antun Dorn left the Institute. In 1964, Hrvoje Tartalja was appointed director of the Institute, and Nevenko Boroš, a graduate philosopher, was appointed assistant, while dr. Žarko Dadić was transferred from Dubrovnik to Zagreb upon request.[17] The new director of the Institute, Hrvoje Tartalja, brings a new research and museum dimension to the Institute. He started to deal with the history of pharmacy after the Second World War, he was also the founder of the Section for the History of Pharmacy, which became a member of many international organizations during his leadership. In 1950, with Tartalja's efforts, the compulsory subject History of Pharmacy was introduced into the curriculum of the Faculty of Pharmacy, and with the help of the newly founded Pharmaceutical Society of Croatia, the Institute for the History of Pharmacy was founded on April 19, 1952. The Institute organized the collection by taking over objects that were in the Pharmaceutical Society of Croatia and in other institutions, and was located at Tomašićeva Street 12 in Zagreb. However, Tartalja was not satisfied with the development of that institution, nor with the previous collection status therefore he joined the Institute for the History of Natural, Mathematical and Medical Sciences at Grmek's invitation, which he headed after Grmek's departure to Paris. [18] In addition to Tartalja, the Institute for the History of Natural, Mathematical and Medical Sciences received Renata Peroš, pharmacyst, who will later hold the position of head of the library and archives.[19] The psychiatrist Lavoslav Glesinger, and a historian of medicine, who after Thaller taught the history of medicine at the Faculty of Medicine in Zagreb from 1946, worked as Hrvoje Tartalja's deputy, and worked at the Institute from 1960 to 1975, when he retired. Mathematician Žarko Dadić and chemist Ilinka Senčar-Ćupović also worked at the Institute at that time. Since 1966, Vladimir Dugački has also worked at the Institute, who primarily works on bibliographies, and after his departure in 1969, Biserka Belicza, doctor of medicine, joined the Institute, who then began researching the history of medicine under the mentorship of Lavoslav Glesinger. Since December 1974, Snježana Paušek-Baždar has been employed at the Institute as an assistant and historian of chemistry. In March 1974, another pharmacyst, Marija Weiss, was admitted to the Institute, who was involved in research on the organization of the pharmacy service in Istria since the 13th century. At the Institute research related to the history of healthcare in Vojna Krajina, the history of healthcare in Istria, and research into the history of exact sciences in Croatia continues. [19]

The head of the Institute until the end of 1974 was Željko Marković from the Department of Mathematical Sciences. In 1975, Josip Balabanić was employed at the Institute for the History of Natural, Mathematical and Medical Sciences as an assistant for the history of biological sciences. This scientist of the Institute also created a doctoral dissertation, entitled Darwinism in Croatia until 1918, under the mentorship of M. D. Grmek, and defended it in 1980. Balabanić worked at this institution until 1988, when he was employed at the Natural History Museum in Zagreb. In the period from 1960 to 1974, as part of the

History of the Croatian Nation project, the Institute conducted research into the history of natural, mathematical and medical sciences in Croatia, which in 1977 was divided into two themes: "History of exact and natural sciences in Croatia" and "History of medicine and pharmacy in Croatia". A total of eight researchers worked on this task.

During 1977, there were more drastic changes in the Institute's research staff. Namely, assistant Marija Weiss mouved to another work organization, and Renata Peroš, senior professional associate, retired. At the same time, Hrvoje Tartalja, scientific advisor, retired too, so the filling of empty positions has been initiated. At the same time Biserka Belicza spends the academic year 1978/1979. in the postdoctoral study of history of science and history of medicine at Harvard University (USA). [19] In 1978, the Division for the History of Medical Sciences employed Zdenka Šušnić-Fliker, who deals with research into the scientific research aspects of Croatian physicians, the historiography of the development of professional societies and journals, and individual personalities in the field of pharmacy. She completed postgraduate studies in the history and philosophy of science in Dubrovnik, where Mirko Dražen Grmek was also teaching at the time. Zdenka Šušnić-Fliker's master's degree is mentored by Mirko Dražen Grmek, who, despite moving to France, still maintains contact with our scientists.[19]

Two Divisions, Two Directors, Two Location

In the eighties of the last century, it was proposed to the Presidency of the Academy that the Institute for the History of Natural, Mathematical and Medical Sciences of the Research Center of the Academy should be separated into two research units, namely: the Institute for the History of Natural and Mathematical Sciences under the jurisdiction of the Department for Mathematical, Physical and Technical Sciences, and the Institute for the History of Medicine and Pharmacy under the jurisdiction of the Department for Medical Sciences. However, the Presidency decided not to split the Institute into two research units, but to establish two divisions: the Division for the History of Medical Sciences and the Division for the History of Natural and Mathematical Sciences within the Institute. The first one is led by associate member Biserka Belicza, and the second department associate member Žarko Dadić. It was further decided that the Head of the Institute for a period of three years would be proposed by the involved Departments of the Croatian Academy of Sciences and Arts (II, III and IV), and that, according to the Presidency's conclusion at the time, the first head would be proposed by the Department of Medical Sciences. At the proposal of the Department of Medical Sciences, the Presidency of the Academy elected academician Branko Kesić as head of the Institute for the History of Natural, Mathematical and Medical Sciences of the JAZU Research Center. [20]

The divisions were also physically separated in such a way that the pharmaceutical collection and library from Opatička 18, which was led by Hrvoje Tartalja, was attached to the Medical Division located at Demetrova 18, and the Mathematics and Natural Sciences Division was moved to Ante Kovačića Street 5, where it is still located today. In the Division for the History of Natural and Mathematical Sciences, Žarko Dadić, scientific advisor, continues his research on the history of mathematics, physics and astronomy, Ilinka Senčar-Čupović, scientific associate and Snježana Paušek-Baždar, scientific assistant, are engaged in research on the history of chemistry, Josip Balabanić, scientific assistant, studies the history of biology and in 1980 he obtained his doctorate. During 1984, Stipe Kutleša joined the work of this Division, who graduated in history and philosophy at the Faculty of Philosophy in Zagreb in 1979, and in physics at the Faculty of Science and Mathematics in 1982. Jadranka Merlin is working on organizing the reference library and creating a catalog of works from the history of science. [21]

In the Division for History of Medical Sciences, Biserka Belicza, senior research associate, studies the history of medicine, Zdenka Šušnić-Fliker, assistant, studies the history of pharmacy. The Institute also employs Jadranka Tokić as an administrator and Jelica Trčak as an assistant clerk. The task and work of the Division for the History of Medical Sciences continued to aime at creating a foundation for the systematic study of the history of medicine and pharmacy, health conditions and the health culture of the people of Croatia. [21] In the mid-1980s, in the Division for History of Natural and Mathematical Sciences, work was carried out on the project "Development of Marxism and its current theoretical currents" with the program "Research of the history of mathematics, physics, astronomy, chemistry, biology, geology and technology in Croats", which was financed by SIZ-VII., "Croatia through the centuries — sources, aids and contributions to history", which was financed by SIZ VII and part of the program from the Basic Plan of the Academy.[21] In December 1985, Stella Fatović-Ferenčić, doctor of medicine, was hired in the Division for History of Medical Sciences. She previously wrote a thesis on the history of the plague in Croatia under the mentorship of Biserka Belicza, which she defended at the Faculty of Medicine of the University of Zagreb in 1984. In October 1989, Jadranka Boljunčić came to the Institute for History of Natural, Mathematical and Medical Sciences as an assistant trainee for the history of biology. In the same year, Snježana Šain was employed as a temporary assistant trainee in the Division for History of Medical Sciences, while Zdenka Šušnić - Fliker terminated her employment in the Division on October 2, 1989. [22]

During the 1980s, several heads of the Institute were replaced. After academician Branko Kesić, the Institute was led by an extraordinary member of the Academy, later academician Mihovil Proštenik (1982-1986), an extraordinary member of the Academy, later academician Slavko Krvavica (1986-1990), and academician Sergej Forenbacher (1990-1992). [23]

Change of the Institute's Name and a New Research Unit Addition

At the session in 1991, the Presidency of the Academy supported the initiative of the Academy's departments, in which the majority of members declared that the name of the Academy should be changed from the then Yugoslav Academy to the Croatian Academy of Sciences and Arts. The very next year, in 1992, the Division for Philosophy of Science was added to the newly named Institute for History and Philosophy of Science, which came from the Institute of Philosophy of Science and Peace, which was then headed by academician Ivan Supek. That Institute was also the administrative center of the Yugoslav Pugwash Conference of which Supek was the president since its foundation. Employees of different professions worked in the Division of Philosophy of Science: Jasmina Lelas, who dealt with the theory of the development of science, and was also the director of the Division of Philosophy of Science, after it was merged with the Institute for History and Philosophy of Science (until 1998, when she died), then Zdravko Radman, who dealt with the philosophy of science and was also active in the Pagwash movement, then Tihomir Vukelja, who dealt with the philosophy of physics, and Bojan Marotti, who deals with the philosophy of language, the theory of meaning and the history of Croatian philosophy.[23, 24]

In 1992, academician Žarko Dadić became the head of the newly created Institute for History and Philosophy of Science, who intensively dealt with the history of exact sciences in Croats for a number of years, which by then resulted in several published syntheses: Marini Ghetaldi Opera omnia (1968), Marin Getaldić, Collected Works, I., (1972), History of Exact Sciences in Croats (1982), Ruđer Bošković (1987), Exact Sciences of the Croatian Middle Ages (1991), History of Ideas and Methods in Mathematics and Physics (1992), Croats and Exact Sciences at the Dawn of the Modern Age (1994), Exact Sciences in Croats in the Age of Enlightenment (1994).[25] Žarko Dadić's deputies in that period were Biserka Belicza, manager of the Division for History of Medical Sciences, and Jasmina Lelas, manager of the Division of Philosophy of Science. In addition to the aforementioned, Ilinka Senčar-Čupović, Zdravko Radman, Snježana Paušek-Baždar, Stipe Kutleša, Stella Fatović, Bojan Marotti, Marijana Buljan-Klaić, Tihomir Vukelja, and Snježana Šain also worked at the Institute.

Žarko Dadić retired in 1995, and in 1996 the chemist Snježana Paušek-Baždar took his place as director of the Division for the History of Natural and Mathematical Sciences. The Division continues to work on the project "History of Natural and Mathematical Sciences in Croats" (principal researcher Academician Žarko Dadić), which contains a program of research into the history of mathematics, physics, astronomy, chemistry, biology and technology in Croats, and is financed by the Ministry of Science and Technology of the Republic of Croatia. [26]

In that period, the work of the Division for the History of Medical Sciences was focused on the study of the development of medical scientific thought; research on the state and problems of medical practice and health care; analysis of the health status and health culture of the inhabitants of Croatia throughout the centuries. During 1998, Tatjana Buklijaš and Željko Dugac came as novices to the Study of Croatian Medical Heritage project, led by Biserka Belicza in the Division for History of Medical Sciences. [27] Tatjana Buklijaš will work here intermittently due to her postgraduate education abroad until mid-2005. In 1999, Stella Fatović-Ferenčić started an inter-academic project (Croatian Academy of Sciences and Arts and Austrian Academy of Sciences) named Iconography in Dermatovenerology, as part of which two international books and a number of papers were published. [27]

Institute for History and Philosophy of Science in the Period 2000 - 2025

The Institute welcomed the third millennium with reduced capacities. In addition to Snježana Paušek-Baždar, others work in the Division for History of Natural and Mathematical Sciences Marijana Buljan-Klaić (later M. Borić), and since 2003 Branko Hanžek. Snježana Paušek-Baždar works on the History of Alchemy in Croats project, which is financed by the Ministry of Science, Education and Sports of the Republic of Croatia. Marijana Buljan-Klaić participates in the project History of Natural and Mathematical Sciences in Croats (principal researcher Academician Žarko Dadić), which is financed by the same Ministry. Branko Hanžek works on the project Croatian medical identity and its European context (principal researcher Stella Fatović-Ferenčić). In the Division for History of Medical Sciences, of the new recruits who worked on the Biserka Belicza project, including Ana Borovečki who arrived in 2000, only Željko Dugac is employed for an indefinite period. The director of the Division, Biserka Belica, died in April 2005, so Stella Fatović-Ferenčić was appointed as the new director of the Division. The function of the Division continues with the relocation of the library, archive and museum inventory to new premises at Gundulićeva Street 24 in Zagreb. In 2005, the research student Neva Grgičević-Mihalić, was employed on the Iconography in Medicine project, which will remain in that capacity for the next three years. After her, Martin Kuhar joined the Croatian Medical Identity and its European Context project as a newcomer. [23]

After a break of 15 years, the Division for History of Medical Sciences, in cooperation with the Department of Medical Sciences of the Academy, revitalized the publication of the publication *Discourses and Materials for the History of Science* with the eighth book of the publishing series dedicated to Mirko Dražen Grmek. The editors of the new edition of the publishing series were Marko Pećina and Stella Fatović-Ferenčić, under whose editorship a total of eight books have been published so far. [16]

The revitalization of this edition within the Division for History of Natural and Mathematical Sciences is due to Snježana Paušek-Baždar, who, together with academician Ksenofont Ilakovac

from the Department of Mathematical, Physical and Chemical Sciences of the Academy, is revitalizing the publication of six books of this publishing series.[16]

In the Division for History and Philosophy of Science, several new novices participate in various projects. In the Division for History of Natural and Mathematical Sciences, Vanja Flegar continues her work in history of chemistry in 2013, and after returning from maternity leave, continues to work part-time. During 2014, the Division of Philosophy of Science includes Bojan Marotti and Željko Dugac, as well as postdoctoral student Vedran Duančić. The latter participate in the project Croatian Scientific and Philosophical Heritage: Transfers and Appropriations of Knowledge from the Middle Ages to the Twentieth Century in the European Context of the Croatian Science Foundation, led by Željko Dugac.[23] In 2015, Martin Kuhar defended his doctoral dissertation entitled Eugenics in Croatian medicine and its impact on the public in the period from 1859 to 1945, under the mentorship of Stella Fatović-Ferenčić, and in 2019 he was accepted to the Division for History of Medical Sciences.

At the very beginning of her directorial mandate, Stella Fatović-Ferenčić initiated the project of establishing the Croatian Museum of Medicine and Pharmacy HAZU, which was allocated the space of the former printing house at Gundulićeva street 24, and which was formally established by the decision of the Ministry of Culture of the Republic of Croatia in 2014. During 2015, the Museum's curator and its head Silvija Brkić Miđić, was employed in the premises of the Division for the History of Medical Sciences at Gundulićeva 24 (3rd floor). In terms of its mission, activity and content, the museum is closely related to the work of the Division for the History of Medical Sciences of the Institute, from which it was born, and develops and functions accordingly. Academician Marko Pećina was appointed head (2015) and Stella Fatović-Ferenčić, the director of the Division, deputy head of the Museum (2016). She is also the co-author of its museological concept (2016) and the script for the permanent exhibition (2018). [28] By the Decision of the Academy's Management in 2020, Stella Fatović-Ferenčić was appointed director of the entire Institute for History and Philosophy of Science, who is now leading it already in her second term.[29] During 2022, the Division for History of Medical Sciences was moved from Gundulićeva 24 to Veliko Trgovišće due to the reconstruction of the building as a result of the earthquake. The return is expected in 2025. Since two more employees (Bojan Marotti and Branko Hanžek) retired from the Institute in 2023, four employees remain in the Institute today, in three divisions: Stella Fatović-Ferenčić, Marijana Borić, Željko Dugac and Martin Kuhar.

In March 2024, academician Vjekoslav Jerolimov, the first representative of dentistry in the Department of Medical Sciences of the Academy, was appointed head of the Institute.[30] He deals with prosthodontics, temporomandibular disorders and dental materials, and more recently sports dentistry and the history of dentistry. Bearing in mind the significant reduction in the number of scientists at the Institute in recent years, the new head, in agreement with the Academy's Management, will try to change this situation, thereby contributing to the mission and scientific role of the Institute, and also of the Academy itself.

Conclusion

The work of the Institute for the History and Philosophy of Science began 65 years ago with the aim of exploring the history of science in Croatia. Over time, it changed names and organization (incorporating the Division of Philosophy of Science) as well as locations (Demetrova 18, Opatička 18, Ante Kovačića 5, Gundulićeva 24). It was under the leadership of the Academy's Departent for Mathematical, Physical and Technical Sciences, later Department for Mathematical Physical and Chemical Sciences (academicians Marković, Proštenik and Dadić), Department for Natural Sciences (academician Krvavica) and Department for Medical Sciences (academicians Kesić, Forenbacher, Jerolimov). Employees of the Division for History and Philosophy of Science continue to monitor the development and structure of scientific theories and their impact on the creation of knowledge in the fields of mathematics, physics, chemistry, biology and biomedicine, comprising the results of their research in a global context. All three components of the Institute complement each other with their research, establishing links between the history of science and the history of philosophy. By evaluating national achievements in the history of science and monitoring the impact of the development of science and technology on social justice, politics and democracy, the results of their research continue to question the ethical implications and challenges in science and advance the understanding of science and its development model. The institute is a unique such institution in Croatia, which by researching, presenting and preserving the national scientific heritage values the achievements of national development, harmonizing its activities with the fundamental mission of the Croatian Academy of Sciences and Arts.

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