

JGL PHARMACY MUSEUM IN RIJEKA, CROATIA

Last year, more precisely, on October 22, 2020, JGL Pharmacy Museum was opened for the public in Užarska Street 11 in Rijeka. It is a specialized museum in which the history of pharmacy in the world, Croatia and Rijeka, is presented in a modern way. The museum's founder is Jadran-Galenic laboratory, in cooperation with the City of Rijeka and the City Museum of Rijeka. JGL Pharmacy Museum is the only museum established by a private company in Croatia, with the approval of the Ministry of Culture and Media, and is registered in the Register of Public and Private Museums in the Republic of Croatia.

JGL PHARMACY MUSEUM – WHY AND HOW?

“Pharmacy has made an undeniable contribution to human civilization and culture. I believe that this rich and interesting permanent exhibition will arouse the interest of many citizens of Rijeka, as well as our guests. I am overjoyed that we from JGL have successfully implemented this project and that we can give our city, in the year in which it bears the title of European Capital of Culture, another cultural and educational content and convince all visitors how advanced Croatian pharmacy has been and is.” - said at the opening of the museum Ivo Usmiani, President of the Board of JGL and the initiator of the founding of the JGL Pharmacy Museum.

The museum's founder wanted to contribute to the European Capital of Culture Rijeka 2020 program, promote pharmacy, and further increase the reputation of his own company.

Of course, the museum's establishment is not exclusively related to the enrichment of Rijeka's offer as the European Capital of Culture for the simple reason that the museum as an institution is established for an indefinite period. The founder wants the valuable material, current and future, to be kept in one place, according to all the rules of the museum's profession.

JGL Pharmacy Museum should give its all in future research on the history of pharmacy throughout Croatia and play a quality role in the education of future employees in pharmacy, which is the vision of the newly established museum.

The museum's mission is to affirm pharmacy as part of our health and cultural identity, which throughout history has been a significant factor in the spiritual and economic progress of the city and county and is today. Also, the mission is the preservation, protection, and presentation of materials related to the rich history of pharmacy in Rijeka and Croatia.

The museum's mission is also to actively participate in the life of the local community as a place of meeting, learning, and entertainment, especially for younger generations. Furthermore, the museum must speak about the importance of health to which pharmacy significantly contributes. Therefore, it must have a general dimension in its foundations and remind us of the importance of the profession.

In the JGL Pharmacy Museum, you can find out why the snake is a symbol of pharmacy, when and why Emperor Frederick II separated pharmacy from medicine, who first devised quarantine as a way to prevent the spread of the epidemic, what are pharmacopeias, see the original recipes, bottles, and packaging of Rijeka pharmacies from the early 20th century, then the stand for Egyptian ointment from 1551, the oldest exhibit in the museum, see the Croatian national flower, Iris Illyrica and much more.

COOPERATION WITH THE CITY OF RIJEKA AND THE CITY MUSEUM OF RIJEKA

The JGL Pharmacy Museum has been established in cooperation with the City of Rijeka, which supports a private initiative that opens a non-profit institution with a cultural program to the public and includes it in the cultural content of the city and contributes to the enrichment of museum life. The cooperation was also encouraged with the City Museum of Rijeka, which helped with professional assistance and borrowing material from its holdings related to the history of pharmacy in Rijeka.

Special support for the establishment of the JGL Pharmacy Museum and the enrichment of the museum's holdings was given by material donors, among whom are Prof. Dr. Vladimir Grdinić, a historian of pharmacy and the County Health Institution, Pharmacy "Jadran" Rijeka.

Thanks to the quality cooperation with the City, a space of 150 m² was provided in the center of Rijeka, more precisely in Užarska Street 11. A project team was formed consisting of Eva Usmiani Capobianco, member of the JGL Board and project manager, Ivo Usmiani, President of the Board, architect Gorana Stipeč Brlić, Studio for Architecture and Urbanism AO16, interior designer, Veronika Uravić Čolak, Reedesign studio, graphic designer and author of the visual identity of the museum, and Marin Pintur, senior museum documentarist and JGL Pharmacy Museum manager. Landscaping work began in early 2020. The biggest challenge was to place everything that was on display and show in a relatively small space, find the right balance between historical and modern, and satisfy the tastes of visitors of all profiles and ages.

“This museum is the best proof of how museum material can be presented in an interesting way to all generations, even the youngest ones. I am glad that we had the opportunity to be a silent partner of this project, to participate in the professional support and lending of exhibits, and today to enjoy the combination of modern and historical. I am sure that this museum will attract a lot of attention from visitors “, said Ervin Dubrović, director of the City Museum of Rijeka.

PERMANENT EXHIBITION OF THE JGL MUSEUM OF PHARMACY

The permanent exhibition consists of ten interconnected parts:

Hortus sanitatis (Garden of Healing) with live medicinal plants, attractive weather bar with 18 significant events in Croatian and world history of pharmacy, pharmacy laboratory, presentation of the most deserving people in the history of Croatian pharmacy and chemistry, pharmacy library, unit showing the history of pharmacy in Rijeka, museum unit on the development of the Jadran-Galenic laboratory, front-end office of the historic pharmacy, a zone of medicinal plants showing the path of the plant from nature to medicine and a museum souvenir shop.

The first part of the permanent exhibition, located in the outer part of the museum, the so-called “green wall”, consists of seven species of living medicinal evergreens that are regularly maintained. At the end of each plant, there is a graphic with a description and properties of that plant: the immortelle, yarrow, valerian, peppermint, creeping rosemary, and small evergreen. We also named the exhibition unit Hortus sanitatis or Garden of Healing, another synonym for medicinal herbs.

The second unit is a souvenir shop where tickets are sold and various souvenirs with motifs and the museum's logo. Among other things, the souvenir shop also provides professional literature by Professor Vladimir Grdinić.

One of the most important parts of the permanent exhibition of the JGL Pharmacy Museum is the imposing tempered glass timeline, 20 meters long. The attractive ribbon in its 18 points leads visitors through the most important events and personalities from the history of medicine and pharmacy, both world and Croatian. The events are chronologically arranged from ancient times until the beginning of the 20th century. The timeline stretches through the central space of the museum. It goes then around the museum's central exhibit, the front-end office of the historical pharmacy, which, in a duet, form a perfect blend and balance between modern and historical, which was one of the main tasks and biggest challenges of the museum project team.

In the pharmacy laboratory, which is divided into galenic and analytical, there are many instruments that were once used in the manufacture of galenic preparations (creams, ointments, essential oils, tinctures, syrups, etc.). Dishes and stands and other utensils such as reagents, analytical scales, pills, spatulas, paten, pycnometers, and alcoholometers are on display in two large display cases and on the laboratory table... when medicines were made exclusively in pharmacies.

One side of the wall in the permanent exhibition is dedicated to the most important personalities in the history of domestic pharmacy and chemistry. There are many scientists who have left a significant mark in developing pharmacy and chemistry in Croatia, and here we have singled out four: Gustav Janeček and Julije Domac, two extremely deserving pharmacists from the late 19th and early 20th century, and two Nobel laureates Lavoslav Ružička and Vladimir Prelog.

The next exhibition unit is a workspace and library with original pharmacist Eneo Forempoher's items. In 2015, his 200-year-old Venetian front-end pharmacy office from Komiža on the island of Vis was bought by Jadran Galenic laboratory and placed in his JGL Pharma Valley pharmaceutical complex. Along with some other valuable documents, such as a diploma and work permit, equipment for the production and control of galenic preparations as well as stalls, the pharmacy is now part of the holdings of the JGL Pharmacy Museum.

The “Croatian-Slavonian Pharmacopoea” (Pharmacopoea Croatico-Slavonica) by Julije Domac and Gustav Janeček from 1901 is the most historically significant subject exhibited.

In the exhibition unit dealing with the history of pharmacy in Rijeka, we are proud of the established quality cooperation with the City Museum of Rijeka and the State Archives in Rijeka. Many original items from Rijeka’s pharmacies from the beginning of the 20th century are on display. The first record of the existence of a pharmacist in Rijeka dates back to 1437 when the records of the city notary Antun de Renno mention the “apothecarius” Antonio Pertussano. In 1453, a Franciscan monastery was built on Trsat, and it is justifiably believed that there was a pharmacy within the monastery.

A special place in the history of pharmacy, but also entrepreneurship in Rijeka is occupied by the Pharmacy and Cosmetic Laboratory ALGA Sušak, founded in 1926 by pharmacists Vlado Kezele and Dinko Budak. The laboratory was named after the company’s first and most popular preparation - Alga for massage, which Budak developed at the beginning of the 20th century in his pharmacy Indeficienter in Rijeka. *Alga for massage* was prepared from natural juices of domestic plants, and it quickly earned recognition for quality at exhibitions of pharmaceutical products in Genoa, Paris, London, St. Petersburg. The representation for the distribution of this product was sought even from Chicago.

The speciality of Alga was in the quality and variety of marketing, which included occasional leaflets, brochures, pocket books, calendars, and items for everyday use. They advertised their products in the daily and periodical press in the country and abroad, and they could boast of a file of as many as 228 thousand users.

The Alga Palace on Sušak in Rijeka still stands as proof and a reminder of Alga’s success. It is a five-story business and residential building that in 1937 housed a plant for the development, production, and storage of increasingly popular Alga products. The palace became the seat of the Italian police during World War II and was nationalized after the war.

The bust of the famous Rijeka doctor Antonio Grossich, who was remembered for using iodine tincture to disinfect the skin of the preoperative field and superficial wounds, is also exhibited. Although iodine tincture was used before Grossich’s publication in the *Zentralblatt für Chirurgie* in October 1908, he was the first to prove the value of this method by bacteriological

tests, which was soon accepted worldwide. His method of applying iodine in skin disinfection is still practiced today.

The central exhibit of the permanent exhibition of the JGL Pharmacy Museum is the front-end office of the historical pharmacy "Kolodvor" from Rijeka. *Oficina* (lat. *Officina* - workshop, laboratory) is a room in a pharmacy intended for the reception of patients in which the proper dosage, preparation, and dispensing of medicines is determined. The offices were always entered from the street, and their health, ethical, and aesthetic significance was especially important. Nearly 500 pharmacy bottles of various sizes, colors, and inscriptions are on display on the office shelves, and it can be said that each is a small masterpiece.

On the massive pharmacy table, a part of the pharmacy office, several attractive items from the museum's holdings are on display: Unguentum Aegyptiacum - A vessel for Egyptian ointment from 1551, donated by professor Vladimir Grdinić. This stand is the oldest exhibit in the holdings of the JGL Pharmacy Museum.

A particularly attractive exhibit is the 1909 cash register used in a pharmacy. The mechanism was manufactured in a factory in Dayton, USA, and parts of the repayment were made in Germany, where the cash register was assembled. The cash register was purchased for the needs of the pharmacy in Lovran in 1913. In the post-war period, it was used in Jadran Pharmacies.

One exhibition unit is dedicated to the founder of this museum, an international pharmaceutical company, the Jadran-Galenic Laboratory. By starting the production of medicines in 1991, Jadran-Galenic Laboratory has become a part of Rijeka's long and rich pharmaceutical tradition and history, on the solid foundations of which it has grown into an international company with a recognizable identity.

The beginning of market activity marks the enterprising spirit of the founding pharmacists. They started with one confectionery mixer in which creams and ointments were produced and with systematic work and visionary moves they have grown into an international pharmaceutical company present on more than 60 markets with more than 150 brands and over 1000 employees and an innovative leader in using seawater for health purposes.

The last, tenth, exhibition unit is a story about medicinal plants, more precisely, 16 plants, their origin, appearance, medicinal properties, and stages on the path of one plant from nature to the final product - medicine. We divided the herbs into four categories: indigenous medicinal herbs (nightshade, sage,

pyrethrum, and iris), medicinal herbs against cough (Iceland moss, plantain, ivy, and marshmallow), medicinal herbs with psychotropic action (mandrake, cannabis, coca, and opium-poppy) and other medically significant medicinal herbs (bearberry, aloe vera, red hermit crab, and yarrow).

A special attraction is multimedia realized with the company Novena. Through augmented reality technology, historically significant personalities are revived (Galen, Emperor Frederick II, Paracelsus, Julius Domac, Vladimir Prelog, and Leo Henryk Sternbach), and visitors are addressed by the 3D snake as a pharmacy symbol and the 3D pharmacist Pablo. Also, with interesting VR technology, it is possible to monitor the drug Fosfomycin destroying urinary tract infections. The guests' attention will certainly attract modern interpretation of herbariums realized in collaboration with the Natural History Museum of Rijeka and lighting installations in the form of molecules JGL's prominent brands - Dramina and Meralys.

EDUCATIONAL ACTIVITY OF THE MUSEUM

One of the main motives for founding the JGL Pharmacy Museum is its educational activities, primarily for students of pharmaceutical schools and pharmacy students from all over Croatia, but also for every visitor to the museum. The founders' wish is that every pharmacy student from Croatia visits this museum at least once during their education. In cooperation with experts from the pharmaceutical profession from JGL, the museum organizes visits for many school groups from Rijeka and the rest of Croatia and prepares an interesting workshop for them to make a tube of cream with essential oils. In this way, our youngest ones become pharmacists for a while and get familiarized with some segments of the work of this valuable profession.

EXHIBITION ACTIVITY OF THE JGL PHARMACY MUSEUM

So far, the JGL Pharmacy Museum has realized two valuable exhibitions. During the summer, the exhibition "Pharmacies of Rijeka and Sušak from the beginning of the 20th century" was set up on billboards on Rijeka's Korzo. Interestingly, some of the pharmacies are still in the same places, among which the former pharmacy "All'Arcangelo" owned by Giovanni Prodam, which is now known as the Pharmacy "Korzo", stands out. In the "golden age" of Rijeka, at the turn of the 19th and 20th centuries, Rijeka's pharmacies were not only health institutions, but also gathering places for intellectuals. The exhibition can still be viewed in virtual form at the JGL Pharmacy Museum.

The second valuable exhibition can still be seen in the Sugar Palace of the City Museum of Rijeka until January 9, 2022. Croatia is a country with a long pharmacy tradition. Our oldest pharmacy in Trogir certainly dates back to 1271, when the oldest archival data on the existence of a pharmacy in Croatia go back. The task of an institution dealing with the history of pharmacy is to mark such a valuable 750th anniversary of the first mention of pharmacy in Croatia. JGL Pharmacy Museum, with the help of the City Museum of Rijeka, and generous borrowers of valuable material exhibited material from the history of our pharmacy, with special emphasis on historically important pharmacies from Trogir, Dubrovnik, Zagreb, and Rijeka. The exhibition also marked another “round” anniversary - 120 years since the publication of the “Croatian-Slavonian Pharmacopeia”, the first originally Croatian pharmacopeia. The Pharmacopeia is a state book of standards, a professional code containing lists and descriptions of medicinal substances and auxiliary medicinal products, with requirements on the required quality, regulations for their testing, description of their preparation, and regulations on the handling of listed substances.

Authors of the manuscript, which came into force on November 26, 1901, were professors Julije Domac as the author of the pharmacognosy part and Gustav Janeček as the author of the general part.

This edition of the pharmacopeia was considered one of the best pharmacopeias of the time, as evidenced by reviews of the profession, for example in the journal *Pharmazeutische Post*: “In its entirety, the new Croatian Pharmacopeia is at the peak of its time in every respect; a work that, to the credit of the authors, deserves supreme recognition.”

Marin Pintur



Figure 1. Exhibition unit dedicated to the founder of the museum, the Adriatic-Galenic Laboratory.



Figure 2. Museum interior: one of the main tasks of the project team was to find a quality balance between historical and modern and thus satisfy all categories of visitors.

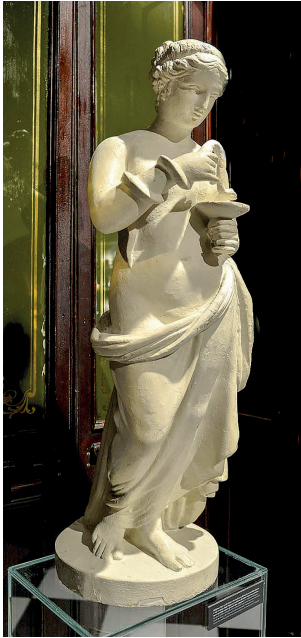


Figure 3. The Greek goddess of health Hygieia statue, from which today's word "hygiene" originates. This statue was exhibited about 100 years ago in the window of the All'Arcangelo pharmacy on Rijeka's main street, Korzo.



Figure 4. The timeline with 18 important events in the history of pharmacy is as long as 20 meters.