PHARMATRANS

All Things Apothecary in 16th–20th-century Transylvania. The Pharmacy Collection in Cluj-Napoca

Vol. 1

Overviews and Case Studies

Editura MEGA

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MINISTRY OF CULTURE
NATIONAL MUSEUM OF TRANSYLVANIAN HISTORY

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OVERVIEWS AND CASE STUDIES

Edited by Ana-Maria Gruia

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Introduction

Ana-Maria GRUIA

The publication of a new and exhaustive catalogue of the History of Pharmacy Collection of the National Museum of Transylvanian History in Cluj-Napoca is an overdue initiative since the first, partial catalogue was published in 1996 and in the recent years the number of artifacts in its patrimony has increased by ca. 30%. The latter phenomenon, the inclusion of more than 1000 artifacts in the collection between 2020 and 2023, is mainly due to the most significant event in the recent life of the collection, namely the relocation of the entire patrimony for the restoration of the Hintz house that hosts the Pharmacy Museum.

It may seem a bit outdated to publish an extensive collection catalogue in print in 2023. We chose this for several reasons. First, the National Museum of Transylvanian History (henceforth MNIT) prepares a new database (with an interface for the general public) that will include the History of Pharmacy Collection. Thus, a separate database for the smallest sub-collection of the museum would not have been justified. Second, there is a sense of impermanence about online data and, as museographers, we like objects. The printed catalogue will be sent to several libraries in Romania and abroad that will contribute to its preservation. We also wish to create a useful tool for colleagues from similar museums, and imagine them working with the printed volumes in their collections, looking for analogies or similar inscriptions. Still, the catalogue is also accessible digitally, as an open source on the website of our project – https://pharmatrans.mnit.ro/en/catalogue/.

In fact, we envisage that a wide array of specialists and the general public will use and enjoy this catalogue. Though aspects such as the administrative issues connected to the management of the collection will not be very interesting to the general public, clarifying the inevitable errors regarding inventory numbers, dating, the origin and history of the artifacts is a necessary

part of this work. Other categories of data are likely to raise the interest of researches of history, pharmacy, science, healthcare, conservation, entangled history, economic history and many other domains. The artifact files include the results of the most recent chemical analyses of content and materials, the transcription of almost all inscriptions and texts, brief data regarding their conservation, investigations performed, and restoration interventions. Collectors, pharmacists, material culture experts, evaluators and many others might find the raw data useful as basis for their work. For this reason, we wanted to make the catalogue practical and easy to use for non-historians as well, by including in each artifact file full bibliographic references (so that users do not have to turn to a separate bibliographic list) and avoiding excessive abbreviations (for measurements, for example, as each category of items requires a different system of measurement for best recording their features).

The catalogue consists of seven volumes, meant to be used together, but that can also be consulted individually. The first volume reunites all introductions (project presentation, history of the collection, overviews of the collection in its entirety and of two sub-collections, namely the books and the manuscripts, overview of conservation measures and overview of investigations performed), while the rest of the volumes only have brief introductory data on structure and intended use. The first volume aims at providing some context on the History of Pharmacy Collection in Cluj-Napoca through a series of case studies, dealing with the history of pharmacies in the city, two of the owners of the pharmacy that hosts the Pharmacy Museum, an interesting coin hoard recently discovered in the basement of the Hintz House, and a study of pharmaceutical education in Cluj. Almost each volume has specific indexes and a different structure: volume 1 ends with an index of placenames and pharmacy names, volumes 2, 3, and 4 present apothecary containers according to materials and lots and is completed by an index of catalogue and inventory numbers, volumes 5 and 6 present the manuscripts and the books in chronological order and are also completed by an index of catalogue and inventory numbers, while volume 7 lists various pharmaceutical-related (and sometimes medical or random) artifacts in the collection according to their function, also ending in a list that presents the correspondence between catalogue and inventory numbers.

The general idea was to have a one-page entry for each artifact in the collection, but there are, naturally, exceptions. Several of the printed volumes in fact reunite two or more books between the same covers, so in order to make entry categories easier to read (not to have six long texts under the heading *Title*, for example), volume 6 has each individual book in one

catalogue entry, even if, in fact, it is just part of a larger artifact. Homeopathy sets with dozens of identical small bottles, even if individually inventoried, are presented in a single catalogue entry because they have almost identical characteristics.

Pharmaceutical material culture is highly heterogenous and it was difficult to decide how to structure the catalogue. The easiest method would have been employing the inventory number criterion. Still, there are inevitable inventorying errors and inconsistencies, with numbers skipped and items inventoried twice, larger donations or lots of similar containers not given subsequent inventory numbers etc. The chronological criterion was not feasible throughout due to the uncertain dating of many artifacts, especially the strictly functional ones. We have thus opted for a mixed structure, combining the functional and chronological criteria. Containers are presented according to material (which partly suggests their function, as wooden containers were mainly used for vegetal matter, for example) and then according to lots. Manuscripts and books and presented chronologically, as this makes more sense in their analysis. The final volume was the most difficult to structure and the resulted functional groups are rather permeable, with items that could be part of several at the same time. Sets have also been kept together in the presentation, even if they include items made of different materials (for example a wood and metal medicine chest with glass containers with paper or lead caps, manuscripts on paper, and *materia medica*).

The data published for each artifact represents a stage of research. The reconstruction of the history of material culture is difficult both for the era of historical use and their time in various collections and museums. There are also difficulties in data recovery from multiple sources (new inventory ledgers in Romanian, old inventory ledgers in Hungarian, donation documents, correspondence, even labels, notes, and stamps on the objects themselves), difficulties due to human error (in dating, the transcription of inscriptions, sometimes even the correct identification of function), and difficulties due to loss of data (dissociation artifact –data).

One disadvantage for using a printed catalogue and not a database is the fact that future additions to the collections will have to be printed in subsequent volumes. This is an accepted drawback, as museum collections are never closed. The catalogue represents the current status of the collection, with all the recent additions and clarifications. There will likely be a new wave of donations after the reopening of the Pharmacy Museum in 2023 and a number of artifacts that could not be processed for the present catalogue due to time limits and will be added in due course, especially the large lot of

20th-century accounting documents from the Hintz pharmacy and part of several archaeological druggist glass containers from Cluj that will be inventoried in the near future. A remarkable archaeological discovery was made in May 2023 during researches in the yard of the Hintz House itself, consisting of hundreds of pharmaceutical artifacts (as well as household goods) dated to the 19th and early 20th century, that have been taken to the conservation and restoration laboratory of the MNIT.

The completion of this catalogue is deeply connected to the relocation of the collection and the creation of the new display of the Pharmacy Museum. The two initiatives have supported each other and together have managed to create an impressive context of enthusiasm and interest. Though extensive acknowledgements are expressed in the presentation of the Pharmatrans project in the present volume, I would like to thank not only project team members and collaborators, but all my colleagues from the National Museum of Transylvanian History, from the management to the technical and acquisitions department. I am also grateful to all those outside the museum and the project who have taken an interest and have supported our efforts in countless ways. I hope the catalogue matches their expectations and is only the beginning of greater things to come.

NOTES ON CONTRIBUTORS

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Ana-Maria Gruia has a BA in art history and one in sociology, both at the Babeș-Bolyai University in Cluj. She has completed an MA in medieval studies at the Central European University and a PhD, defended in 2009 at the same university. She has benefited from a scholarship at the New Europe College in Bucharest and research stays at the Institut für Realienkunde des Mittelalters und der frühen Neuzeit, Krems, Austria and the Warburg Institute in London. Since 2007 she has been employed as museographer at the National Museum of Transylvanian History in Cluj-Napoca, since 2014 in charge of the History of Pharmacy Collection. She has conducted two research projects funded by the Romanian state (UEFISCDI), a post-doctoral project focusing on the introduction of smoking in Transylvania and the present exploratory research project on the history of pharmacy in the same region.

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Ágnes Găzdac-Alföldy is coin keeper at the National Museum of Transylvanian History. She has 20 years of experience in ancient numismatic, taking part of several research projects and publishing articles and books in the field of Roman coins and archaeological studies. Her doctoral thesis focuses on coins in funerary context in the ancient Roman provinces of Dacia and Pannonia. As coin keeper at the museum, she is dealing with the most important coin collection from Transylvania with more than 100.000 coins and medals dating from the 7th century B.C. until nowadays. In this quality she organized several temporary exhibitions and undertook research on coins and medals kept in the Coin Cabinet of the museum.

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Márta Guttmann graduated in organic chemistry and chemical technology at the Babeș-Bolyai University in Cluj (1985), where she also obtained her PhD in chemistry (2012), her thesis dealing with the study of organic materials in painted surfaces. She has an MA in monument conservation (Technical University, Budapest, 1996), has completed several ICCROM courses (Paris, 1997; Tokyo, 2003; Ottawa, 2006) and other courses on conservation science and preventive conservation. She has worked as conservation scientist at the ASTRA Museum in Sibiu (1996–2009), where she also coordinated the Training center for conservators, offering several short-term training courses for Romanian conservators, among which

the ICCROM-CCI–ICN course Reducing Risk to Collections (2007). In 2009 she edited a preventive conservation volume (*Tendințe în conservarea preventivă*, Ed. ASTRA); she is the coauthor of several ISI articles. Between 2014 and 2020 she coordinated the Conservation Department of the National Museum of Transylvanian History in Cluj. Since 1998 she has been involved in the academic training of conservators at the Lucian Blaga University of Sibiu, currently working here as a senior lecturer.

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Magó Andrea Beatrix has a BA and an MA in organic chemistry at the Babeș-Bolyai University in Cluj-Napoca and a PhD in the same field at the Eötvös Loránd University in Budapest. Between 2008 and 2020 she was employed as a chemist; in this period, she gained experience in the investigation of different types of masonry materials used in built cultural heritage (wood, brick, stone, mortars). Currently she works in the restoration laboratory of the National Museum of Transylvanian History in Cluj-Napoca where she is in charge of performing different types of investigations and analyses on objects from the museum's collections.

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OVERVIEWS

PROJECT PRESENTATION. PHARMATRANS. ALL THINGS APOTHECARY IN 16TH–20TH-CENTURY TRANSYLVANIA. THE HISTORY OF PHARMACY COLLECTION IN CLUJ-NAPOCA

Ana-Maria GRUIA

Abstract: This is an overview of the goals, activities, and results of the three-year exploratory research project that has led to the publication of the present catalogue. The project was implemented by the National History Museum of Transylvania in Cluj-Napoca and funded by the Romanian Ministry of Education and Research through Unitatea Executivă pentru Finanțarea Învățământului Superior, a Cercetării, Dezvoltării și Inovării (UEFISCDI).

Keywords: research project, museum studies, exploratory research, history of pharmacy, National History Museum of Transylvania.

The present catalogue is the main result of the exploratory research project *PHARMATRANS. All Things Apothecary in 16th–20th-century Transylvania. The History of Pharmacy Collection in Cluj-Napoca*, implemented through the National History Museum of Transylvania in Cluj-Napoca, project code PN-III-P4-ID-PCE–2020-1562, financed by the Romanian Ministry of Education and Research through the UEFISCDI (2020–2023). The **team** consisted of Ana-Maria Gruia, PhD, project leader, academic researchers Mária Pakucs, PhD, and Ioana Savu-Gruiță, PhD, conservator Ioana Cova, doctoral candidate, and Alexandru Rădulescu, PhD, as photographer. The project has also benefited from the collaboration of several other specialists: Melinda Mitu, PhD, Melinda Mihály, PhD, Ágnes Găzdac

Alföldy, PhD, all museographers at the National Museum of Transylvanian History, Andrea Beatrix Magó, PhD, chemistry researcher, also from the museum, Márta Guttmann, PhD, chemist and expert conservator, lecturer at the University of Sibiu, and Dr. Robert Offner from Regensburg who have contributed with studies to the introductory volume of the catalogue; Cornelia Rotariu, expert in the restoration of ceramic cultural goods, Radu Cordoș, engineer, expert restorer of metal items, Tudor Tomescu, expert restorer of artifacts made of ceramic, glass, faience, and porcelain, all working for the National Museum of Transylvanian History, have put their skills and expertise to good use performing cleaning, consolidation, and completion interventions on items in the collections, under the coordination of Ioana Cova. We are also grateful to numerous others who have aided us along the way: Eva Crișan, PhD, the first curator of the collection, who has kindly answered all our questions regarding the history of the items and their display, Dr. Georg Hintz, current owner of the Mauksch-Hintz house, patron of the recent extensive renovation of the monument, who has granted us several interviews regarding the history of his family and their pharmacy in Cluj and has revealed a number of previously unknown sources (photographs, documents) regarding these topics. Gábor Hintz, who has initiated the recovery process of the Hintz pharmacy from the Romanian State, has also talked to us about his family and his recollections of the old pharmacy. The type of parchment and/or velum of some of the pharmacist diplomas and old books has been determined with the aid of Lucreția Miu, PhD, from Institutul Național de Cercetare-Dezvoltare pentru Textile și Pielarie in Bucharest. Mária Kovács, PhD, has aided us in the identification of some of the pewter marks on measuring cups and jars in the collection. Several other colleagues from the MNIT have been kind enough to help us translate from Hungarian the old inventory ledgers, donation documents, correspondence etc. We gratefully acknowledge all the support the project has received along the way.

History of pharmacy as an independent field of research is relatively new, dating to the first third of the 19th century. The International Society for the History of Pharmacy was founded in 1926, thus marking the maturity of the field during the 20th century. 29 national societies are now members, including the Romanian Society for the History of Pharmacy, founded in 1992. Apothecary history is nevertheless gaining new momentum in recent years, as it is very suitable to inter-disciplinary approaches pertaining to multiple historical domains, such as entangled and colonial history – starting from the commerce in goods included in the often exotic *materia medica*; the

history of technology – through the actual pharmaceutical practice that partially overlaps practical alchemy, early chemistry, and medicine; social history through the (mostly written) evidence on the identity, travels and interactions between pharmacists, their clients, and local authorities – a rich and incompletely addressed aspect is the overlapping between various early healing-related professions or between the practitioners of the apothecary art and witchcraft; economic history through the study of how pharmacies were often at the fore of innovation in retail and marketing, the research of how and where apothecary containers, tools, and books were produced, as well as the way the apothecary business shaped and was shaped by mercantilism; cultural studies through the research of how pharmacies evolved from the perspective of the history of mentalities regarding health and disease, the body, and novelty goods; but also museum studies that provide a special approach combining conservation, restoration, overall research, display and communication of apothecary/pharmaceutical-related artifacts.

Some of the new approaches in the field of pharmaceutical history focus on the identification of the substances used in the past, in the wider context of archaeometric researches performed with the goal of reconstructing the evolution of science, technology, and knowledge. Other projects take the research one step further, by reconstructing the historical processes and recipes. In 2007, the Department of Chemistry and Industrial Chemistry of the University in Pisa has developed a national project entitled *Colors and balms in Antiquity: from the chemical study to the knowledge of technologies in cosmetics, paintings and medicine* that involved analytical studies of pharmaceutical preparations from historical collections (17th–19th centuries), performing and interpreting the results of chromatographic and mass spectrometric analyses and creating a database of biomolecular markers through the analysis of reference materials, replicas of old formulations, and artificial ageing of both reference materials and replicas.[1] The results are subsequently interpreted in the context of historical written sources in order to reconstruct the original recipes of the formulations and the processes involved, thus with the cooperation of the institution holding/commissioning the analyses. Attracting several grants, a Spanish team led by Prof. Luisa Vázquez de Ágredos Pascual from the University of Valencia has analyzed and researched in details the Baroque Santa Maria della Scala pharmacy in Rome and its entire contents (2014-2021).[2] A more recent project has been implemented

[1] Rocchi 2011.

[2] Vázquez, Cavallo, Pagiotti 2021.

in Poland, at the Institute of History of the University in Wrocław, with funding from the National Science Center, entitled *Reconstruction and analysis of medicinal preparations identified on the basis of ego documents of the Old Polish era (XVI–XVIII centuries)* (2018–2023). The project focuses on gaining knowledge on medicaments popular in Poland in the 16th–18th centuries as well as defining their real biochemical activity. Having met the team led by Jakub Węglorz, PhD, in 2022 in Milan, we have set the basis on a fruitful cooperation in analyzing a set of 14 samples from the collection in Cluj (see more details in the description of the objectives below). Another project should be mentioned in this context, though it deals with various other kinds of reconstructions through experiment, not only pharmaceutical. *The Making and Knowing Project*,[3] an initiative in the Center for Science and Society at Columbia University, envisaged the creation of a digital critical edition of an intriguing anonymous sixteenth-century French artisanal and technical manuscript (that also included recipes for medicinal products) and the recreation with students of the described art and artisanal procedures in this text.

In Romania the history of pharmacy as a field of research dates back to the 1920s. In 1921 Prof. Jules Guiart founded in Cluj-Napoca de Institute for the History of Medicine, Pharmacy and Medical Folklore. Part of the collection of the History of Pharmacy Collection today consists of the medical and pharmaceutical items that Guiart collected and used to illustrate his lectures at the University of Cluj, completed by those gathered by his disciple, Prof. Valeriu Bologa, who taught history of pharmacy in 1933, before it had become a usual subject for students in Western Europe. Another pioneer in the field was Dr. Orient, professor of toxicology at the Hungarian and then Romanian University in Cluj, author of the study entitled *The History of Pharmacy in Transylvania and Banat* published in Hungarian in 1926, in Romanian in 1927, and in German in 1928. Ever since 1897 Dr. Orient started to collect pieces of furniture from old pharmacies, apothecary jars made of glass and faience, apothecary tools, old treatises of medicine and pharmacy, diplomas of pharmacists, donating around 1800 such objects to the museum in Cluj, the oldest artifacts in the present-day collection.[4]

The PHARMATRANS project was aimed at reducing the lacunae in Romanian history of pharmacy by publishing the exhaustive and up to date catalogue of the collection in Cluj, the second largest such collection in the country and at implementing the latest research methods, namely performing

[3] https://www.makingandknowing.org/ (accessed 21.04.2023).

[4] See Gruia, *The History of the Collection*, in the present volume.

explorative research on some of the most valuable items in the collection. The only catalogue of the collection, published in 1996, is partial (dealing with ca. 1700 of now 3819 artifacts), only includes a few black-and-white poor-quality reproductions, and is only available in French.[5] Other limited data is scattered in articles and studies. None of the organic remains of *materia medica* have been chemically analyzed and many of the artifacts required conservation and restoration, while none of the old books and more than half of the manuscripts have never been published (edited or translated).

The project happily coincided with the major renovation of the old pharmacy that houses the collection. The Mauksch-Hintz House in Cluj-Napoca, one of the city's landmark historical monuments, has gone through a major renovation, including archaeological researches in the basements, wall face research, architectural analysis, wall painting recovery and restoration, so the history of the building is also presented in connection to the lot of artifacts from that very pharmacy (that was active on the same spot between the second half of the 16th century and until 1949 when it was nationalized by the Communist regime).[6] Architect Xenia Furu has designed, in close cooperation with curator Ana-Maria Gruia, the new display of the pharmacy museum, that occupies part of the ground floor and the entire basement of the house. Zsolt Csók, PhD, coordinates the archaeological research of the house, still ongoing in the courtyard.

Publications dealing with the history of pharmacy in Transylvania printed after 1989 are particularly few and usually focus on pharmacies from certain areas and/or periods. The oldest book, Eva Crișan's *Materia Medica de Transylvanie* includes studies regarding entire Transylvania and contains the only (partial) catalogue of the collection in Cluj. The author was the curator of the collection and during the 1970s organized the laboratory-type display in the basement of the Hintz House.[7] Other contributions focus on the history of pharmacies in certain areas, such as Sibiu[8] and Oradea,[9] while a larger study includes the presentation of the Romanian Society for the History of Pharmacy.[10] A well-documented book on the history of pharmacies and pharmacists in Transylvania in general is only available in Hungarian.[11]

[5] Crișan 1996.
[6] See Găzdac-Alföldy, Csók in the present volume.
[7] See Gruia, *The History of the Collection*, in the present volume
[8] Maior 2014.
[9] Budaházy 2007.
[10] Grecu, Mermeze 2005.
[11] Péter 2002, including the inevitable errors in details.

Very recent works are highly valuable for fully transcribing and publishing for the first time written sources on the matter such as 18th-century reports of inspections of pharmacies from Transylvania[12] and the 1650 inventory of the pharmacy in Alba Iulia and the entire context of healers from the princely entourage in Transylvania during the 17th century.[13] The lot of pharmaceutical goods preserved and partially exhibited by the History Museum in Sighișoara has also been published recently, in 2021.[14] Several articles discuss types of pharmaceutical wares, apothecary furniture, apothecary ingredients, pharmaceutical education and other narrow topics (including the project leader's articles on the topic). The growing interest in the field is also illustrated by the opening of a new pharmacy museum in Oradea in 2019, under the patronage of the Roman-Catholic Bishopric of Oradea, in the rooms of the old Rodia apothecary shop of the Misericordian order. Only two such other museums are active in Transylvania, also inside ancient apothecary shops (the oldest in Sibiu, catalogue not published, and ours, in Cluj), though pharmacy-related artifacts are kept (and little researched) in other museums as well.

In the context of this surge in interest for the history of pharmacy in Transylvania and of recovering the delay as compared to European specialized collections that benefit from published catalogues, one can certainly identify the current need to make the sources (written, artifacts, organic contents) available to both specialists and the general public for future research, use, and education. The PHARMATRANS project aimed at providing this extensive tool, in the form of the full catalogue of the collection published in English, made accessible to a wide array of specialists and the wider international audience. Printed copies were sent to all members, collaborations and specialists that have become part of a growing network of contacts. The seven volumes were thus sent to ca. 150 museums and libraries in Romania and abroad through the book exchange network of the National Museum of Transylvanian History and the network of specialist and museums created through the project. The digital variant of the catalogue is available, in pdf format, on the dedicated website.[15]

Several activities were needed in the preparation of the catalogue: professional photographs of all 3819 artifacts, books, and manuscripts recorded under 2491 inventory numbers, i.e. more than 24500 photographs in total;

[12] Péter 2010
[13] Kovács 2018
[14] Veress 2021.
[15] https://pharmatrans.mnit.ro/en/catalogue/

search for information in old museum documents (donation contracts, correspondence, publications); extensive research of pharmaceutical material culture and historical context; reading of inscriptions and notes on preserved artifacts; measuring all patrimony goods in the collection; conducting interviews (see collaborators) and even advice seeking on Facebook groups reuniting pharmacists (in the identification of the function of certain specific tools).

The project also had several intermediate/secondary objectives. The first was to provide team members the opportunity to **visit history of pharmacy museums** in order to gain insight into their conservation, restoration and display strategies, to acquire specialized secondary literature regarding such collections for analogies and an in-depth knowledge of the state of the art, and for networking.

Most of these visits took place in 2021, as team members traveled to see a number of significant museums, in five countries: Romania, in Oradea (Muzeul Farmaciei – Apotheca Rodia), Sibiu (Muzeul de Istorie a Farmaciei), and Sighișoara (Muzeul de Istorie); Hungary, in Budapest (Arany Sas Patikamúzeum, the Semmelweis Museum of the History of Medicine), Székesfehérvár (Fekete Sas Patikamúzeum), Kőszeg (Aranyi Egyszárvu Patikaháza and Fekete Szerecseny Patikaháza), and Kecskemét (Orvos- és Gyógyszerészettörténeti Gyűjtemény); the Czech Republic, in Český Krumlov (the Jesuit pharmacy collection part of the Regionální muzeum Český Krumlov), Klatovy (the Barokní Lékárna u Bílého Jednorožce), Kuks (the impressive Czech Pharmaceutical Museum Hospital Kuks), and Prague (the Historical Museum and the Natural History Museum); Austria, in Graz (the pharmacy collection of the Graz Museum, currently closed to the general public) and Mauthausen (the history of pharmacy collection inside the Pragstein Castle); and Italy, in Venice (Ca Rezzonico for the original baroque Farmacia ai do San Marchi; the library, pharmacy and pathology museum of the old hospital Scuola Grande di San Marco; Palazzo Mocenigo, for the rooms dedicated to perfume-making in Venice; Muzeo d'Historia Naturale di Venezia for the reconstruction of a Wunderkammer; the Gallerie dell'Academia art museum for Petro Longhi's painting "The Pharmacist"; and several old apothecary shops, with original furniture, preserved inside current pharmacies and perfume shops: Farmacia All'Ercole d'Oro in Santa Fosca, L'antica Farmacia in Campo San Fantin, the old pharmacy sign Testa D'Oro on the Rialto. These visits have provided a general context for the research of the collection in Cluj and have allowed team members to establish personal connections with specialists in the field from Central and Eastern Europe. Mária Pakucs has also performed research in libraries such as the

Institute for History of the Hungarian Academy and the ELTE Medieval Library (of the Eötvös Loránd University) in Budapest, the National Library of the Czech Republic in Prague, and the Sibiu County Archives in Sibiu and Cluj Branch of the State Archives, Romania.

In September 2022 Ana-Maria Gruia has visited the history of pharmacy collection of the Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci in Milan, the History Museum of the Ospedale Maggiore, with a collection of pharmaceutical and medical items from the hospital of Milan founded in the 15th century, including an impressive archive, and the Civico Museo di Storia Naturale, with a new exhibition of minerals (some of which were also used in the making of medicines), as well as the old but scientifically very interesting display of fossils and natural specimens that were also in the attention of pharmacists throughout history.

Though the third year was dedicated to the completion of the catalogue, Ana-Maria Gruia has traveled to Valencia in May and visited the Botanical Gardens and the Illustrious Official College of Pharmacists there. On this occasion she has officially become a member of the International Association Aromas Itinerarium Salutis, meeting curators of pharmacy museums from Florence, Lisbon, Rome, Pinyol, Llivia, Bern, Roccavaldina, Rijeka, and the Aboca Museum. She also managed to visit the pharmacy museum in Krakow, administered by the Faculty of Pharmacy of the Jagiellonian University, the largest museum of its kind in Poland.

The second objective was to **clean, consolidate, and restore the artifacts** that require such specialized interventions. 254 artifacts from the collection have been cleaned, conserved, or restored by the specialists of the MNIT in 2021. The selected items, made of paper, parchment, glass, ceramics, and metal, have been processed and documented by Ioana Cova and several colleagues from the conservation and restoration department that she coordinates: Cornelia Rotariu, Tudor Tomescu, Radu Cordoș, engineer, and Adriana Bulbuc. Except for a few cases of actual restoration (broken containers), the interventions were focused on the cleaning and consolidation of the patrimony goods. In 2022, 264 selected items, made of paper, parchment, glass, and ceramic, have been processed and documented by Ioana Cova, Cornelia Rotariu, Tudor Tomescu and Radu Cordoș. Ioana Cova has performed most of the interventions focused on the cleaning and straightening of manuscript books, recipes, pharmaceutical diplomas on paper and parchment, and 20th-century financial records of pharmacies.[16]

[16] See Cova in the present volume.

The third objective was to gain new knowledge on the artifacts in the collection through the latest methods: **microscope investigation, micro-photographs, and especially chemical analyses** of *materia medica* preserved in some of the old containers. The observation of surfaces and details was performed at the National Museum of Transylvanian History by Andrea Beatrix Magó, with the aid of a powerful portable microscope acquired through the project – Mic-Fi – VIS/IR/UV digital microscope. In 2021 she has performed an initial set of four in-depth analyses of pottery jars in the collection, revealing some of their layers, past interventions, degradations and inscriptions.[17] In 2022 she has completed the microphotographic investigation of eight complex artifacts. She has performed microscopic analyses under transmitted, reflected, and polarized light on several textile, paper, thread and *materia medica* samples from the medicine chest, discovering that the paper employed as cover for the containers was handmade out of vegetal fibers (rags were recycled, shredded and made into a paste, leaving colored microfibers in the structure of the paper). The investigations have also revealed the structure of the thread used for securing the paper covers (made of twisted fibers). She has also confirmed that the content of some of the bottles matches the inscriptions. The analysis of the paper components of the Baroque medicine chest included the identification of paper pH and the quantity of glue employed. Some samples were basic and other acidic, but this may be explained by the interaction of the paper covers with the medical preparations and the specific preservation conditions. Beatrix Magó has also checked the type of paper glue. This test reveals the excessive, normal, weak or absent quantity of glue in the paper based on the absorption of a micro water drop during a set interval. The absorption times differed considerably, pointing again to the possible change of paper covers due to the interaction with the contents, or the possible use of different types of paper when the covers were replaced (the change in content required the change of cover, with a new inscription).[18]

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[17] Documentation file 11/13.08.2021 (IF 659), 12/16.08.2021 (IF 710), 13/18.08.2021 (IF 656), 14/19.08.2021 (IF 1274).

[18] Analysis bulletin 98/16.06.2022 (paper, textile thread, IF 1905), 99/17.06.2022 (paper, textile thread, IF 1904), 100/20.06.2022 (paper, textile thread, IF 1906), 101/20.06.2022 (paper, textile thread, IF 1907), 102/21.06.2022 (paper, textile thread, *materia medica*, IF 1910), 103/22.06.2022 (paper, textile thread, *materia medica*, IF 1911), 104/23.06.2022 (paper, textile thread, IF 1913), 105/24.06.2022 (paper, textile thread, *materia medica*, IF 1917), 121/23.08.2022 (paper type, glue – loose label from IF 1903) by Magó Andrea Beatrix. See Guttmann and Magó in the present volume.

The series of planned investigations has continued with a number of non-invasive XRF (X-ray fluorescence) tests in collaboration with SC Union SRL Cluj-Napoca, under the coordination of Andrea Beatrix Magó. The tests have led to the identification of the metal alloys used for several components of the 18th-century apothecary chest. We have thus discovered that the key and rivets of the chest are made of an alloy rich in iron, the other metal components are made of copper and tin, while the screw caps of the glass containers are made of lead (toxic, but soft and easy to process).[19] The museum has supported the XRF analysis of four more items in the collection, confirming the metal composition of a set of apothecary weights, a pot, a mortar and a metal artifact discovered in a jar.[20]

The type of parchment and/or velum on some of the pharmacist diplomas and old books has been determined with the aid of Lucreția Miu, PhD, from Institutul Național de Cercetare-Dezvoltare pentru Textile și Pielărie in Bucharest. This was a chance, but very useful collaboration, mediated by Ioana Cova, as the project team and museum staff lack a specialist in parchment and leather.

During 2022 team members have also selected, sampled and sent for analysis *materia medica* to two institutions abroad. 14 such samples were sent for chromatographic and mass spectrometric analyses at the Department of Chemistry and Industrial Chemistry of the University in Pisa. The same 14 samples were sent for liquid chromatographic–mass spectrometry analyses to the Department of Pharmacognosy and Herbal Medicines of the Wroclaw Medical University. The latter analyses have been performed free of charge, based on an ad-hoc scientific cooperation with team members of the Polish research project mentioned above, that we have met while taking part in the history of pharmacy congress in Milan. Márta Guttmann and Andrea Beatrix Magó have collected the samples and are involved in the interpretation of the results that are currently processed for two collective studies still under preparation for submission to ISI periodicals.

The fourth objective of the project was to **transcribe, translate, and analyze all manuscripts in the collection**. Still, as more manuscripts were (re) discovered in the old collection and newly added to the inventory and as

[19] Analysis bulletin 115/18.08.2022 (7 samples from medicine chest IF 1903), 116/22.08.2022 (3 samples from IF 1919), 117/22.08.2022 (1 sample from IF 1919), 118/22.08.2022 (2 samples from IF 2405), 119/22.08.2022 (1 sample from IF 2409), 120/22.08.2022 (1 sample from IF 1919) by Andrea Beatrix Magó.

[20] Analysis bulletin 136/12.12.2022 (1 sample from IF 2348), 137/13.12.2022 (2 samples from I 899), 138/14.12.2022 (2 samples from IF 1590), 64/18.05.2023 by Andrea Beatrix Magó.

Mária Pakucs, PhD, has started reading the sources, it became clear that the objective was too ambitious. Team members have thus decided to transcribe and translate only the documents and text fragments with special significance, and skip the long lists of pharmaceutical goods and products in the preserved inventories, pharmaceutical taxes, hospital records of medicine released for patient treatment, prescriptions, and financial documents. Mária Pakucs has completed the record files of all manuscripts in the collection,[21] Ioana Gruiță has fully transcribed, translated, recorded for the catalogue, and analyzed in an article the household medicine book of a 19th-century Romanian school teacher in Transylvania, while Ana-Maria Gruia has processed and published a lot of 20th-century documents (prescriptions, correspondence, study documents, inventories and financial texts) from the Engel pharmacy in Iași and a lot of prescriptions written by a Romanian doctor working for the București-Giurgiu railways in the second half of the 19th century.[22]

The fifth objective of the PHARMATRANS project was to research and present the most relevant new discoveries made regarding the history of pharmacy during 18th-century Transylvania as reflected by the collection under discussion during international **conferences and at least three articles** in prestigious periodicals (ISI/ErihPlus). This objective has been clearly reached and surpassed. Team members have delivered the following presentations during national and international conferences:

• Ana-Maria Gruia, "From bezoar and cantharidis to deer antler. Medicines of animal origin in the History of Pharmacy Collection in Cluj-Napoca", during the international conference entitled "Health, disease and healing in old Cluj (The history of healthcare until the end of the 19th century)", organized online by the Erdélyi Múzeum-Egyesület, October 1–2, 2021.

• Ioana Cova, "Cum devin obiectele arheologice bunuri culturale muzeale: cazul unei colecții de sticlă arheologică farmaceutică" (How Archaeological Objects turn into Museological Goods: the Case of a Pharmaceutical Collection of Archaeological Glass), during the international conference of the graduate students in history, 16th edition, entitled "Vechi și nou în cercetarea istorică: surse, metode, interpretări" (Old and New in Historical Research: Sources, Methods, Approaches), organized online by The Doctoral School "History. Civilization. Culture", UBB Cluj, November 12–13, 2021.

• Ana-Maria Gruia, "Pharmatrans – a Transylvanian exploratory research project" at the 45th International Congress for the History of Pharmacy

[21] See her overview in the present volume.

[22] All in the fifth volume of the catalogue.

organized in Milan by the International Society for the History of Pharmacy, 7–10 September 2022.

• Ioana Cova, "Aspecte privind conservarea Colecției de Istorie a Farmaciei din Cluj" (Aspects pertaining to the preventive conservation of the History of Pharmacy Collection in Cluj) during the works of the Bucovina – File de Istorie Symposium (the XXIVth edition), in the conservation and restoration panel. The symposium was organized by Muzeul Național al Bucovinei in Suceava, in partnership with Universitatea "Ștefan cel Mare" – Facultatea de Istorie și Geografie, November 24–25, 2022.

• Ana-Maria Gruia, "Museum Reconstructions of Pharmacy Interiors" during the scientific workshop entitled 'Historical reconstruction as a research tool', organized by the Institute of History of the Wrocław University, 10–11 December 2022.

• Federica Nardella, Jacopo La Nasa, Ilaria Degano, Francesca Modugno, Ana-Maria Gruia, Ioana Cova, Andrea Beatrix Magó, Márta Guttmann and Erika Ribechini, "A multi-analytical approach to disclose the composition of 18th century ointments from the "History of Pharmacy Collection" in Cluj" during the international conference on analytical techniques in art and cultural heritage Technart, organized in Lisbon between the 7th and 12th of May 2023.

• Ana-Maria Gruia, "Museums and pharmaceutical heritage between the Carpathians and Transylvania, Romania" during the international conference "The Hygeia Legacy. Pharmacy Museums and Collections in Europe. Heritage, Identity and Memory" organized by the University of Valencia, May 22–23, 2023.

• Ioana Cova will also prepare a presentation related to the challenges of handling historical pharmaceutical artifacts for the Bucovina – File de Istorie Symposium (the XXVth edition), in the conservation and restoration panel, organized by Muzeul Național al Bucovinei in Suceava, in partnership with Universitatea „Stefan cel Mare" – Facultatea de Istorie și Geografie, in 2023.

The following articles have been published through the project:

• Ana-Maria Gruia, "Engel Pharmacy "La Coróna", near the gate of the royal court, Jassy" ("Farmacia Engel "La Coróna", lângă poarta curții domnești, Jassy"), in Studia UBB – Historia, Volume 66, 2, December 2021, p. 45–76 (doi:10.24193/subbhist.2021.2.03) (ErihPlus).

• Ioana Gruiță, "Handbook for Medicine by Iosif Țiucra, a Teacher. A nineteenth-century Manuscript in the History of Pharmacy Collection (MNIT)" in Acta Musei Napocensis 59/2022, p. 147–166 (doi: 10.54145/ActaMN.59.05) (ErihPlus).

• Mária Pakucs, "'They Steal It from the Sultan's Pharmacy.' Transylvanian imports of drugs and chemicals from the Ottoman Empire in the early modern period", accepted for publication in Acta Musei Napocensis 60/2023 (ErihPlus).

• Ioana Gruiță, "Libro di me, Gio Batta Gussetti", accepted for publication in Acta Musei Napocensis 60/2023 (ErihPlus).

• Ioana Cova, "Handling Heritage Objects – Moving the Entire Pharmaceutical Collection within the National Museum of Transylvanian History, Cluj-Napoca, Romania", accepted for publication in Acta Musei Napocensis 60/2023 (ErihPlus).

Ana-Maria Gruia has also contributed with a study to a collective volume, reuniting the proceeding of the conference mentioned above:

• Ana-Maria Gruia, "A bezoárkőtől a kőrisbogáron át a szarvasagancsig. Állati eredetű gyógyszerek a kolozsvári Gyógyszerészettörténeti Gyűjtemény állományában" in Zs. Bogdándi, E. Gálfi, (eds), *Egészség, betegség és gyógyítás a régi Kolozsváron és Erdélyben*, Kolozsvár 2022, 263–280. She has also published two presentations of the yearly activities of the projects, and in the end of 2023 will also publish the third in Acta Musei Napocensis II Historica (58/2021, 333–342, 59/2022, 253–263, and 60/2023, under print).

At least two more articles, integrating the interpretation and comparison of the results of the chemical analyses performed by our foreign collaborators from Italy and Poland, and detailed historical research, are being prepared for ISI/Scopus periodicals, but will probably only be completed after the end of the PHARMATRANS project due to their complexity and high number of authors. More advanced is the article entitled "The composition of 18th-century ointments from the "History of Pharmacy Collection" in Cluj" prepared by Federica Nardella, Jacopo La Nasa, Ilaria Degano, Francesca Modugno, Ana-Maria Gruia, Ioana Cova, Andrea Beatrix Magó, Márta Guttmann and Erika Ribechini (from the Department of Chemistry and Industrial Chemistry, University of Pisa, Italy, the National Museum of Transylvanian History, Cluj-Napoca, Romania, and the "Lucian Blaga" University of Sibiu, Romania. It will be submitted to the Journal of Cultural Heritage that has accepted to publish a special issue with works based on presentations delivered during the Technart 2023 conference.

The sixth objective was to **promote the project, its activities, and its results** through a dedicated website, a minimum of 150 posts on social media platforms (the Facebook page and blog of the History of Pharmacy Collection, the website, Facebook page, and Instagram account of the National Museum of Transylvanian History, as well as personal social

platform channels of team members and professional channels such as LinkedIn and Brainmap); and a book launch event in the autumn of 2023 (in the newly reopened Pharmacy Museum in the Mauksch-Hintz House).

The website (www.pharmatrans.mnit.ro) was created in 2021, with Romanian and English versions and the following page structure: home page (general information, institutions involved, financial data, time frame), team (short presentation of team members and collaborators), results (articles, conference presentations, activity reports), catalogue (table of contents and pdf volumes, open access), blog, and contact. The blog is the richest section of the website, with 122 posts in total so far (half in Romanian, half in English), detailing some of the performed activities: 48 blog posts in 2021, 44 in 2022, and 30 planned for 2023. The posts are grouped according to the following categories: study visits, research, and conservation and restoration.

On social media platforms we have posted more than 150 times (marked with hashtags such as #pharmatrans #mnit #uefiscdi and #cncs), mostly on the Facebook page of the History of Pharmacy Collection (https://www.facebook.com/colectiefarmacluj), shared on the fan page of the collection and several Facebook groups (museographers, conservators, inhabitants of Cluj, history students, pharmacists, and an international group of pharmacy historians). The results of the project have also been included in the newsletters of the National Museum of Transylvanian History (available at www.mnit.ro).

We hope the successful implementation of the project shall have a significant **impact** on the knowledge in the relatively new and interdisciplinary field of the history of pharmacy in Romania, through the extensive publication of the second-largest specialized collection in Transylvania (a consistent part of which has not been published before) and through top-of-the field chemical analyses of pharmaceutical formulations (the results shall also contribute to the expansion of the markers databases in Pisa and Wrocław, aiding future investigations, and answer the growing interest in archaeometry and historical reconstructions). We think the catalogue will become a useful tool for future researches in Romania and abroad, providing the basic data for study and comparative material for other collections. The project has also contributed to the conservation, restoration, and promotion of the cultural (and technical) heritage of Transylvania/Romania.

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Fig. 1. Home page of the project website, available in Romanian and English at https://pharmatrans.mnit.ro.

Fig. 2. Facebook page cover for Pharmatrans employed during the project https://www.facebook.com/colectiefarmacluj.

Fig. 3. Project logo.

The history of the collection

Ana-Maria GRUIA

Abstract: The paper traces the history of the artifacts in the pharmacy collection in Cluj after they lost their functional role, discussing the main lots, collectors, and administering institutions in charge of it over time: Gyula (Iuliu) Orient's personal collection, donations made to the National Transylvanian Museum in answer to Gyula Orient's public call, the first history of pharmacy public exhibition in 1917–1918, the artifacts of the Faculty of Medicine collection, the items obtained from pharmacies nationalized in 1949, and the pharmacy museum opened in the Mauksch-Hintz house in 1954.

Keywords: museum collection, history of pharmacy, Cluj, pharmacy museum, Transylvania.

The pharmacy collection of the National Museum of Transylvanian History (henceforth MNIT) has a rather tumultuous past. Most museum collections have changed administrators and locations in their time, but the history of this small pharmaceutical collection seems more troubled than most. At the same time, it is one of the oldest of this kind in Central and Eastern Europe, already on display as a thematic exhibition in 1917–1918. It started as a private collection in the 1890s, was enriched with donations answering a public call, was exhibited in Cluj at the Erdélyi Nemzeti Múzeum (National Transylvanian Museum), was subsequently transferred to the Medical Faculty who organized a new pharmacy exhibition with an added lot of artifacts from nationalized pharmacies, and the larger collection was eventually returned to the History Museum (today, the MNIT). It consists of several distinct lots, such as the Orient collection, goods donated by pharmacists from historical Hungary in answer to Gyula Orient's call, some items from the teaching collection and library of The Institute for the History of Medicine, Pharmacy, and Medical Folklore of the Medical Faculty, and artifacts from Transylvanian pharmacies nationalized

in 1949. The pharmacy-related goods detailed in the present catalogue have thus changed hands several times, but no extensive documentation exists regarding the original structure of these sub-collections and their official change of ownership. The nationalization of pharmacies was (possibly intentionally) poorly documented, while the two transfers between the museum and the faculty have equally left no traces. According to Oana Habor, PhD, curator of the History of Medicine Museum of the Medicine and Pharmacy University in Cluj-Napoca, none of the documents attesting the acquisition of goods from the nationalized pharmacies and the transfer of goods from the History Museum to the History of Medicine Institute (and back) have apparently been preserved in their archive, but most of it was lost in a fire during the 1960s. One can only turn to the pharmaceutical goods published by Gyula Orient, his correspondence and donation acts to the Transylvanian Museum, a few handwritten notes and correspondence from the nationalization period, the contracts of several subsequent donations, the inventory ledgers of the present-day history museum (the official analytical documentation of the collection) and the ledgers of its precursor institution, the National Transylvanian Museum. The Hintz family, owner of the nationalized Hintz pharmacy, on the premises of which the History of Pharmacy Collection is on display since 1954, owns a copy of the inventory noted in 1949 when the Communist Regime took over the pharmacy and all objects within. Presumably most of these objects have ended up in the collection, but they are insufficiently detailed in the inventory for a positive identification.[1]

Still, even the preserved sources include errors, inconsistencies, and even discrepancies. Easiest to compare are the current inventory ledgers and those of the National Transylvanian Museum,[2] written in Hungarian, with old inventory numbers. Not all pharmaceutical goods mentioned in these original ledgers have become part of the current collection, and the whereabouts of these stray artifacts remain unknown. One must also mention the existence of inherent human errors in record keeping and the occasional dissociation between artifacts and their data.[3] The reconstruction of the original use and history of all items currently included in the History of Pharmacy Collection in Cluj-Napoca is thus very difficult, almost impossible, and future research might shed new light on such matters. In the present

[1] See Gruia, *The Pharmacies of Cluj*, in the present volume (appendix 2).

[2] The Erdélyi Nemzeti Múzeum became the History Museum after 1918, when Transylvania broke from Hungary and united with Romania, and is currently the National Museum of Transylvanian History.

[3] See Gruia, *Overview of the Collection*, in the present volume.

catalogue, missing data on the original context of use of the objects is indicated as such, uncertain data is accompanied by a question mark, while the contradictions between the two sets of ledgers are recorded as such.

The Orient collection

The first history of pharmacy exhibition opened in Cluj in 1917 and was on display for the general public until 1918. The more than 1000 artifacts had been gathered by Dr. Iuliu (Gyula) Orient (1869–1940), professor of toxicology at the Hungarian and subsequently Romanian university of Cluj. Dr. Orient was also a surgeon, a pharmacist, and a passionate collector of old apothecary goods.[4] At the end of the 19th century he started collecting such artifacts and after discussing the idea with Béla Pósta, the director of the National Transylvanian Museum, he launched a public call for donations that would allow for the foundation of a pharmacy museum.[5] Between 1902 and 1918, Iuliu Orient donated his own collection and various artifacts offered by other pharmacists in answer to the public call to the museum. Numerous donation documents and much of the correspondence between Iuliu Orient and Béla Pósta have been preserved in the "History of the Museum Collection" of the present-day National Museum of Transylvanian History.

Iuliu Orient was directly involved in organizing this initial history of pharmacy display in two of the ground floor rooms of the history museum.[6] Dr. Orient published several studies describing his collecting efforts, sometimes his disappointment with the process, and the structure of the exhibition – with the various historical pharmaceutical artifacts on display in/on original pharmaceutical furniture (Fig. 1).[7] Today, these rooms house the library of the National Museum of Transylvanian History, on C. Daicoviciu st. 2, Cluj-Napoca.

Based on Dr. Orient's publications and the documentation of the old history museum, the objects had been originally used all over Hungary (in present-day Transylvania, Slovakia, and Hungary). Some of the more consistent lots were donated by pharmacists from Recaș (Timiș County, Romania), Vinga and Arad (Arad County, Romania), Brașov (Brașov County, Romania), Turda (Cluj County, Romania), Modra and Bratislava

[4] Filipescu 1970.

[5] Orient 1918, 217–303; Vince 2014, 248–249.

[6] Vince 2014, 280. Photographs published in: Orient 1918, fig. 1, 2; Orient 1926, 238.

[7] Orient 1918, 217–303.

(Bratislava Region, Slovakia), and Miskolc (Borsod-Abaúj-Zemplén County, Hungary).[8] There are also artifacts from the pharmacy in Štítnik (Rožňava District, Slovakia) that Dr. Orient bought and ran between 1892 and 1898, before moving to Cluj.[9]

After Transylvania became part of Romania, the pharmacy exhibition was closed, and all (most?) of the patrimony goods were subsequently given to *The Institute for the History of Medicine, Pharmacy, and Medical Folklore* founded in Cluj in 1921. The transfer took place sometime between 1932 and 1954 (and remains undocumented),[10] and eventually the goods were returned to the History Museum in 1963. As previously mentioned, due to the frequent change of administrators, human error, and possibly personal interests, some of the objects gathered and published by Orient have been lost and are no longer recorded in the inventory ledgers of the History of Pharmacy Collection today.[11]

The pharmacy museum in the Hintz House opened in 1954, inside the former rooms of the Hintz pharmacy that had been nationalized in 1949 by the Communist Regime. The History of Medicine Institute (*Institutul de Istoria Medicinii*) in Cluj, part of the Medical and Pharmaceutical Institute (*Institutul Medico-Farmaceutic Cluj*) of the Faculty of Medicine, used three sources in order to create the new museum: the Orient collection mentioned above, significant objects obtained from nationalized pharmacies, mostly from Transylvania, and its own collection (with the core set up by Prof. Guiart).

The collection of the History of Medicine Institute

The History of Medicine Institute, originally entitled *Institutul de Istoria Medicinei, Farmaciei și de Folklor Medical* (The Institute for the History of Medicine, Pharmacy, and Medical Folklore), had been founded in 1921

[8] Briefly enumerated in Vince 2014, 249 and Orient 1918, 223.

[9] Filipescu 1970, 109.

[10] Between Bologa's description of the institute and the opening of the pharmacy museum in the Hintz House the situation is further complicated by the return of the Hungarian administration between 1940 and 1945.

[11] We know of items such as Tobias Mauksch's valuable *Instructio* manuscript of the 18th-century, that Orient fortunately translated into Hungarian (Orient, 1918, 244–300), a wooden box inscribed *Mumia* (Orient 1918, 222, fig. 4), a manuscript recipe for theriaca (Orient 1926, 92) and others. The identification is further hindered by the fact that some of the artifacts once part of the Erdélyi Nemzeti Múzeum no longer preserve the old inventory numbers.

under the leadership of the French Professor Jules Guiart. He managed to gather about 300 artifacts in order to illustrate his lectures on the history of medicine and numerous books for study (Fig. 2).[12] Before arriving to Cluj, upon invitation, to teach at the new Romanian university, Guiart had been a professor of parasitology and natural history in Lyon, as well as the curator of the recently established history of pharmacy museum of the university there.[13] In 1930, when Guiart left the institute, the library included some 8000 volumes, especially old publications, 2000 photographic plates and slides regarding medicine in Romania (taken during field trips), an archive of doctors from Romania, and a collection of artifacts (including those obtained by a special service aimed at searching for medicine-related objects in museums and collections from Romania).[14]

This collection was enriched by Guiart's assistant and then successor, Professor Valeriu Bologa. During his time, the institute acquired materials on historical medicine from Dacia and local folk medicine. In 1932 Prof. Bologa published a consistent description of the institute's library (that now included more than 10.000 books, almost half of them old and precious) and a small museum of 305 items (that he intended to grow and eventually call the Guiart Museum).[15] These artifacts were mostly collected during research travels by institute members (consisting of icons, cures gathered in herbaria or recorded in lists, engravings, anti-cholera prayer books, tools such as tooth-pulling thongs or fracture-fixing shingles), but there was also an acquisition of medicine-related Egyptian and Graeco-Roman artifacts from a collector from Cluj. The institute was focused on the Romanian tradition of healing and also started a biographical archive regarding the Romanian doctors. Set up in the council meeting room of the Faculty of Medicine, the institute was only able to exhibit some of its collection, in four showcases labeled: 1. Folk medicine. Medicine in Dacia 2. The History of Medicine in Transylvania, 3. The History of Pharmacy, and 4. The History of Romanian Medicine (Fig. 3).

It remains unclear which, if any of these patrimony goods have ended up the current collection of the MNIT. The old inventory numbers preserved

[12] Photographs of the classroom, the physical and chemical laboratory, and the biology and toxicology laboratory in Orient 1926, 233–234.

[13] Bologa 1930, 1–3.

[14] Bologa 1930, 29–30. Some of the artifacts have been found again during the opening of the History of Medicine Museum and will be part of the new exhibition (planned to open in 2023).

[15] Bologa, 1932, 217–221. I thank Sorin Mărgărit for sending me this article.

on some of the artifacts are those of the old history museum. Still, a couple of paper labels preserved together with a lot of apothecary labels indicate the museum and the library of the institute (IF 2242), a number of administrative documents and the records of Romanian doctors have been found with the collection, so some transfer of objects, at least books and part of the archive, was made.

Artifacts from nationalized pharmacies

Under the leadership of Prof. Valeriu Bologa, the institute was delegated the task of collecting valuable artifacts from the nationalized pharmacies and subsequently organizing two pharmacy museums, one in Sibiu (opened in 1952) and the other in Cluj (1954). Bologa and his assistant, Samuel Izsák, PhD, ended up visiting these pharmacies themselves as the employees of the Centrofarm (the main supervising body of the pharmaceutical industry in Romania, editing its own newsletter) and of the Sanitary Services had "neither the zeal, nor the knowledge to allow them to select the valuable material and save it from destruction and oblivion."[16] The preserved documents of the institute indicate that crates upon crates of old pharmaceutical artifacts were collected in Cluj (and subsequently divided between the specialized museums in Sibiu and Cluj), but no clear evidence exists, so it is not always easy to identify the origin of the items. Part of the archive of the institute, that has been preserved at the MNIT, includes numerous documents such as printed legislation, machine-typed correspondence, mobility reports, handwritten notes and lists, administrative documents related to the renovations and display furniture for the two museums. One can reconstruct a tentative list of nationalized pharmacies visited by Prof. Bologa and his team or, occasionally, items sent to their institute by the post-nationalization administrators of the pharmacies. The pharmacies in question were mostly from Transylvania: Cluj, Turda, Sibiu, Braşov, Târgu Mureş, Aiud, Sighişoara, Baia Mare, Oradea, Gherla.

The pharmacy museum in the Hintz House ran by the institute

Valeriu Bologa and Samuel Izsák were in charge with organizing the museum in Cluj, from the technical aspects required by the new function of

[16] According to a document preserved in the archive of the History of Pharmacy Collection of the National Museum of Transylvanian History in Cluj, not yet inventoried. Two boxes of documents and blueprints have been recently identified, after the collection was moved out of the Hintz House for renovation, and the small archive is still being processed.

the rooms (repairs, renovations, new facilities) to all requirements of museum display (Fig. 4). At this stage, the museum included the ground floor rooms of the Hintz pharmacy: the new *officina*, with a door and two display windows to Unirii Square and three openings towards the inside of the house: to the office, i.e. the Baroque *officina*, with a window opening towards the Lutheran church; to the laboratory; and to a storage room (Fig. 5).

The museum, opened on the 20th of August 1954, was entitled *Colecția Muzeală de Istorie a Farmaciei a Institutului Medico Farmaceutic Cluj*, under the authority of the Ministry of Health. The display included not only pharmaceutical containers in original pharmaceutical furniture, but also ground display cases, with tilted tops, framed reproductions of old pharmacy interiors, and a table for the guestbook (Fig. 6). Samuel Izsák published a description of the museum in 1958,[17] stressing its originality and value, the beauty of its location, with preserved wall paintings, and enumerating some of the lots – books and other printed materials, jars, instruments, documents, homeopathic sets, folk cures and exotic *materia medica*.

The museum was closed in 1959–1964 and transformed during the subsequent period. Town planning required the elimination of the corner room of the house due to traffic pressure in the area. The Hintz house thus lost half of the new *officina* (and the corresponding basement room that was filled-in and walled up on that occasion) and the corner was turned into a pedestrian passage. Prof. Bologa was actively involved in handing over the collection to Eva Crișan, museographer at the History Museum in Cluj, led at the time by Constantin Daicoviciu. The transfer took place during a few intense months in 1963, in the dusty rooms of the museum that had been closed for 4 years.[18]

The pharmacy museum in the Hintz House ran by the history museum

After the 1963 transfer the museum reopened, in 1964, in the Hintz House in four rooms on the ground floor: the entrance room, half of the Hintz pharmacy's *officina*; the old *officina* with the Baroque wall painting, subsequently the office of the Hintz pharmacy; the laboratory; and the *camera materialis* (the storage room). Eva Crișan was the museographer in charge of the collection between 1963 and 1996/7 when she retired, but continued to work there part-time until 2001. She has a background in medical

[17] Izsák 1958.

[18] Information kindly provided by Mrs. Eva Crișan.

studies and practice, with a dissertation in the history of medicine with Prof. Bologa.[19] Thus, after a short period of medical practice she was employed by the History Museum and took over the collection. In 1972 she remade the display (Fig. 7) and opened the extension of the museum in the basement, with a reconstruction of an apothecary laboratory in three rooms. Believing in the educative value of such reconstructions and general atmosphere renderings in pharmacy museums,[20] she had the basement made accessible through a new flight of asymmetrical steps from the laboratory of the Hintz pharmacy, and organized the reconstruction with both original items and replicas (Fig. 8).[21]

Eva Crișan was also interested in including the museum in the European network of specialists. Thus, fighting the tight politics of the communist regime that was suspicious of contacts with the Western world, she managed to take part in important international history of medicine conferences, but also to include the collection in the European Association of Museums of the History of Medical Sciences in 1984.[22] After the 1989 Romanian Revolution, the ties with Western specialists became much closer and in 1996 the international congress of the association was held in Cluj, with the participation of personalities such as Pierre Julien from the Musée d'Histoire de la medicine in Paris and Christa Habrich from the Deutsches Medizinhistorisches Museum in Ingolstadt (Fig. 11). The studies were published in the annual of the history museum during the subsequent year.[23] Eva Crișan also published the first catalogue of the collection, in French,[24] and a series of scientific articles focusing on the most valuable manuscripts and artifacts.[25]

Under the care of the History Museum, the collection was enriched through numerous donations and acquisitions, as well as, more recently,

[19] We thank her for the detailed and kindly offered information on the history of the collection.

[20] Especially the museum in Heidelberg. Details, and an interesting glimpse of the zeitgeist, in Crișan 1977.

[21] The display in the ground floor rooms was also adapted, with certain elements moved between the old *officina* and the *camera materialis* (Fig. 9, 10) and the main entrance now set in the pedestrian passage on the corner. The display inside the old *officina* is published for example in Daicoviciu 1967, fig. 81. The 1972–2018 display is reproduced in Crișan 1996, Fig. 1–20 and Crișan 2011. The remake of the pharmacy museum took place in a favorable context, as the History Museum itself was remade during the same period.

[22] That seems to have, unfortunately, ceased functioning around 2016. Basic data available at https://uia.org/s/or/en/1100048595 (accessed 09.04.2023).

[23] *Acta Musei Napocensis* 34 II / 1997–1998.

[24] Crișan 1996.

[25] Crișan 1966, Crișan 1969, Crișan 1973, Crișan 1974, Crișan 1975.

through artifacts discovered during archaeological excavations performed in Cluj-Napoca. Some of the more consistent lots are a number of books acquired from Prof. Valeriu Bologa,[26] a lot of almost 1200 financial documents and artifacts acquired from the Engel pharmacy in Iași in 1982,[27] and more than 120 druggist glass containers discovered in 2020 in Cluj-Napoca, in a water well on Iuliu Maniu St. 16, dated to the end of the 19th century and the beginning of the 20th century.[28] A significant number of artifacts missing new inventory numbers were also identified when the collection was evacuated from the Hintz House before the renovation (some from the Orient collection). More are discussed in my overview of the collection in the present volume.

Through the support of the Cluj-Napoca city hall, at the time owner of the entire nationalized building, the museum acquired an extra room in 1997, which was not part of the historical pharmacy (Fig. 12). This room, parallel to King Ferdinand Street, housed a complementary collection of medical equipment donated by Dr. Pompiliu Manea, professor at the University of Medicine in Cluj and owner of the TEMCO company that specializes in selling such items. Dr. Manea had collected around 500 old pieces of medical equipment, mostly from hospitals in Cluj that gave up their antiquated pieces of technology.[29] He donated to the museum 200 of them, the oldest and most valuable ones, while the others are still kept in the storage rooms of the company from Cluj. This history of medical technology collection, enriched since then with several other individual donations, is still exhibited together with the pharmaceutical collection in the Hintz House (but falls outside the scope of the present catalogue). In 2023 the medical equipment collection was moved to the basement and the extra room on the ground floor is no longer part of the museum.

The list of museographers in charge with the collection continues with Camelia Ciortea (1996/7–2000), who worked together with Eva Crișan, PhD, followed by Radu Crișan, PhD (2001–2014). The latter has completed his studies in botany at the Faculty of Biology in Cluj 1972 and obtained a doctorate in biology in 1999. Under his supervision and due to his enthusiastic promotion of the museum through guided tours to all visitors (Fig. 13),

[26] Discussed in more details by Ioana Gruiță in the present volume.

[27] Gruia 2021.

[28] Incompletely processed, most of the entirely preserved items have been recorded under inventory numbers IF 2452 and IF 2476. Archaeological excavations coordinated by Viorica Rusu Bolindeț, PhD.

[29] Manea 2004.

presentations in magazines, publication of brochures and postcards, and collaborations with various entities, the museum became widely known both locally and among foreign tourists (mostly due to its inclusion in the Lonely Planet guides). He published a popular and richly illustrated bilingual brochure presenting the collection (in Romanian and English).[30] Under his care, several lots of artifacts have been restored by specialists of the MNIT.[31]

I have been the curator of the collection and the museographer in charge of the museum since 2014. Though a specialist in medieval material culture and iconography, I have become acquainted with the history of pharmacy and have organized several temporary exhibitions,[32] published two new popularizing catalogues,[33] and several articles on the topic of healthcare and pharmacies in Cluj and Transylvania.[34] Small changes were made to the display, with interactive areas and new lit display cases (Fig 14, 15).

The new Pharmacy Museum

The nationalized Hintz House, historical monument code LMI CJ-II-m-B-07495, was returned to the heirs of its original owners in 2013, and several solutions were attempted for preserving the collection in the historical rooms of the old pharmacy. At the end of a lengthy and complicated legal process, Dr. Georg Hintz has become the sole owner and decided to invest in the renovation of the building. The collection was evacuated in 2018 and remained in temporary storage at the headquarters of the MNIT until 2023.

Between 2020 and 2023 architect Xenia Furu and I have contributed to the restructuring of the display during this major renovation, in collaboration with the owner and the specialists in charge with the overall project.[35] The collection currently occupies four rooms on the ground floor and the entire basement, thus losing the larger room on the ground floor and acquiring in return new rooms for the display of the medical collection, museum education activities, and a multimedia room presenting the evolution of the house and of the old pharmacy. The extensive renovation has revealed

[30] Crişan 2011, reprinted 2013.
[31] Pop 2007, Mândrea 2008–2009.
[32] *Despre pipe și fumat în Transilvania* 2014–2015, *Istoria afrodiziacelor* 2015, *Istoria îngrijirii dinților* 2015, *Aparatură medicală clujeană* 2015, *Harry Potter și adevărata istorie a farmaciei* 2015–2016, *Istoria otrăvurilor* 2016, *Farmacie și alchimie* 2017, *Animale vindecătoare* 2017.
[33] Gruia 2015, Gruia 2016a.
[34] Gruia 2018a, 2018b, 2016b, 2016c.
[35] Planwerk Arhitectura & Urbanism SRL, constructor Weberbau SRL.

new, precious data on the history of the historical monument (still under research).[36] Dr. Georg Hintz has invested in the renovation of the Baroque wall painting in the old *officina*, the preservation of previously unknown wall paintings discovered in the laboratory of the Hintz pharmacy, as well as the publication (in Romanian and Hungarian) of a volume that includes novel photographs of the house and pharmacy, taken by Ella Hintz in the first half of the 20th century.[37]

A new stage thus begins in the history of this collection, marked by the reopening of the pharmacy museum, the novel collaboration between historians and the heirs of the Hintz family, and new impetus in the fundamental research of the artifacts through attracted funding.

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[36] See the main stages in the evolution of the Hintz House in Ványolós 2022.

[37] Blos-Jáni 2022.

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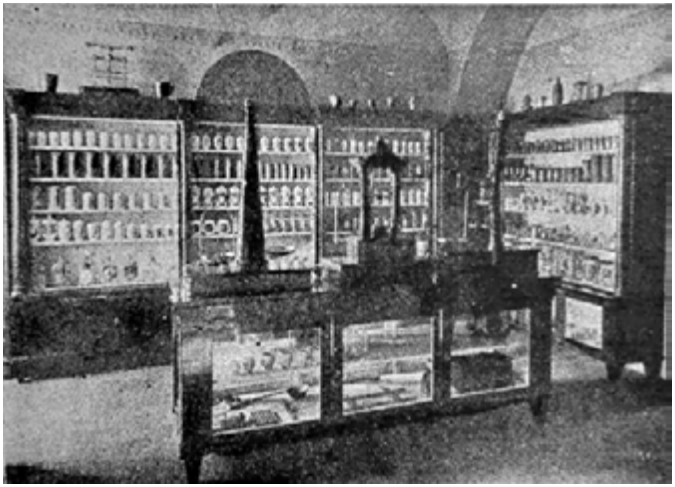

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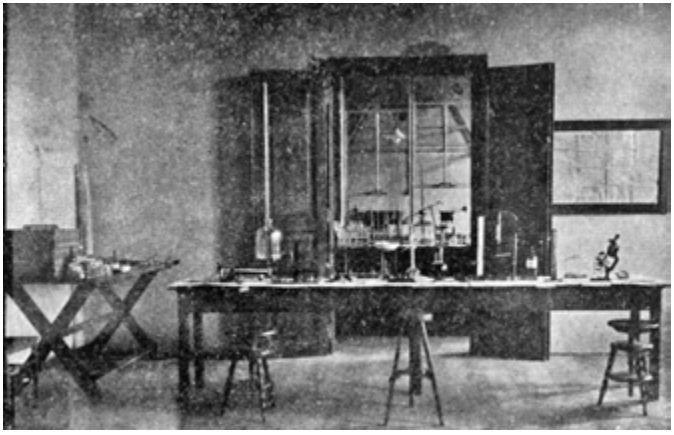

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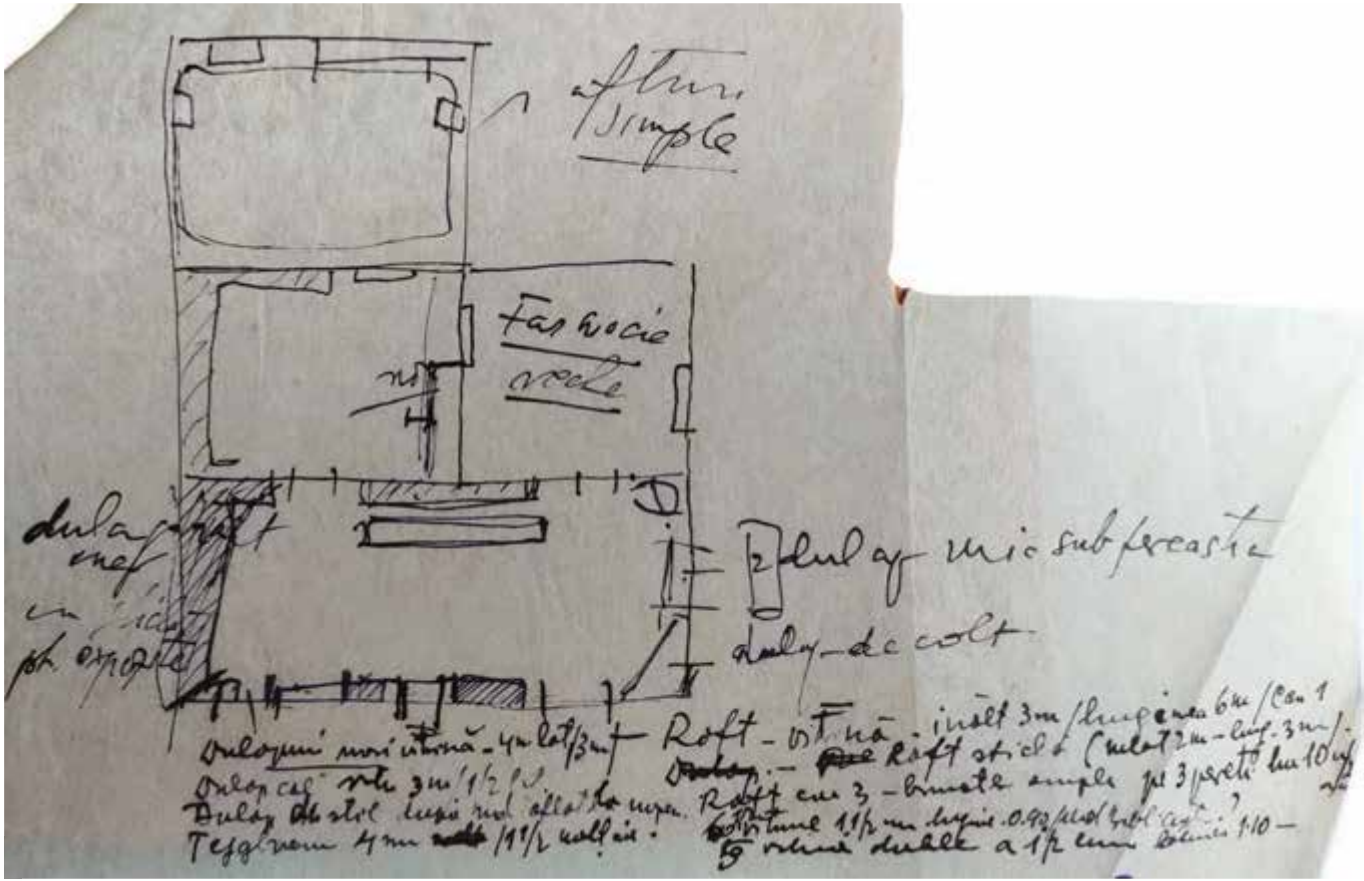

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Overview of the collection

Ana-Maria GRUIA

Abstract: This paper presents the 3819 artifacts recorded under 2491 inventory numbers in the History of Pharmacy Collection of the National Museum of Transylvanian History in Cluj from several perspectives, such as categories of items, chronology, places of production, contexts of use, and inscriptions. The author also discusses the problems faced and choices made in the context of such a general approach, as well as lots of artifacts that have not yet been inventoried and added to the collection, but will be processed and added soon.

Keywords: material culture, history of pharmacy, museum collection, apothecary goods, typology, research.

Collections are a result of both intentional gathering and chance, with the history of artifacts extending from their production place, to their place(s) of use, followed by adventures in the hands of different collectors, museographers, institutions, political regimes, display, decay, trends in restoration etc.[1]

Even small collections of artifacts can be difficult to manage, especially if they come from different contexts and have circulated repeatedly, as in the case of this pharmaceutical lot. The difficulties arise from the rather frequent, but natural dissociation between objects and data, due foremost to the fading of their inventory numbers.[2] Even preserved numbers sometimes

[1] For a sense of the history of the collection, see my article in the present volume.

[2] Preventive conservation pays special attention to the risk associated to dissociation, envisaged as resulting from the natural tendency for ordered systems to fall apart over time in the absence of continuous maintenance processes and other barriers to change. In our case, dissociation includes transcription errors and fading of inventory numbers written on the artifacts. See for more details: https://www.canada.ca/en/conservation-institute/services/agents-deterioration/dissociation.html (accessed 27.04.2023).

lead to incomplete data (errors in the equivalation of new and old inventory numbers) or are entirely useless (a few cases of extra artifacts bear numbers from an unidentified system, possibly from previous collections they were once part of). In fact, object data are scattered in a variety of places: two new inventory ledgers (the official list of artifacts in the collection, in Romanian) of the National Museum of Transylvanian History in Cluj (henceforth MNIT), six old inventory ledgers (in Hungarian, with the old inventory numbers that were subsequently, and partially, equivalated in pencil with new numbers), published works,[3] donation documents (partially consulted for the present catalogue, as they are kept in physical form only and disorganized), old correspondence (Orient's letters in Hungarian, inventoried in the Contemporary History Collection of the MNIT), an unstructured archive of documents from the 1950s and 1960s, recently recovered when the collection was relocated for renovation in 2018 (still under research) and the current database of the MNIT, the DocPat.

Most overviews of museum collections are in fact relative, depending on how different museographers actually proceeded to inventorying goods: how they dealt with sets (a case with one hundred homeopathic bottles, for example, might receive 1, 100 or 101 inventory numbers), how they recorded artifacts with accessories (like, for example, prescriptions or letters in envelopes), and how they decided to interpret fragmentarily preserved goods (a gilded frame broken into 30 pieces, some missing, some pieces reattached during restoration, can feature under 1, 30, or any number of inventory numbers in between).

The pharmacy collection currently includes 3819 artifacts, recorded in the new ledgers under 2491 inventory numbers. The difference resides in the existence of sets placed under the same inventory number and of objects with accessories or sub-components. The inventory numbers start with IF 1 and end with IF 2550, but some have been skipped, mostly through human error (artifacts inventoried twice, with one number subsequently deleted, inventory numbers erroneously omitted, and several items reported missing over time or even stolen). IF stands for Istoria Farmaciei (History of Pharmacy in Romanian).

The 1069 artifacts between IF 2413 and IF 2550 have been inventoried in 2020–2023, representing almost 30% of all goods in the collection. The new additions are items that have been recently donated, items that have been recovered during recent archaeological investigations in Cluj-Napoca by our

[3] Mainly Iuliu Orient's 1918 and 1926 publications and Eva Crișan's 1996 catalogue.

colleagues from the MNIT, while yet others are artifacts lacking inventory numbers that were identified after the relocation of the collection from the Hintz House where it has been exhibited since 1954. As the Hintz House entered a stage of major renovation in 2018, the entire collection was packed and relocated at the headquarters of the MNIT. This considerable undertaking has led to the identification of "lost" artifacts in previously blocked drawers and areas of the museum, while work for the present catalogue has allowed us to rediscover patrimony goods only mentioned in the old inventory ledgers. There are also about 110 extra artifacts that still lack data. Some (especially mortars and metal pans, a wooden clock etc.) are among artifacts on loan from the Medieval Collection of the MNIT (they lack new inventory numbers and must be therefore identified in the old ledgers), some must be, based on their general chronology, part of lots bought in bulk (such as the lot from the La Coroana pharmacy in Iași, acquired in 1982) or part of nationalized lots (the inventory of the Hintz pharmacy, recently made available by the family, does not allow for the identification of thousands of goods due to their sketchily mention in the lists drawn up in 1949).[4] A few might still be from the old Orient collection, but they lack both new and old inventory numbers, but might be sorted out in the near future. Some lots remain un-inventoried due to objective constrains (time and lack of human resources in the conservation and restoration department), but they will also be processed as soon as possible. There are thousands of 20th-century financial and accounting documents from the Hintz pharmacy, that have only been partially cleaned and conserved, several dozen fragmentarily preserved glass druggist containers from a large lot excavated on Iuliu Maniu street no. 16, partially inventoried under IF 2452-IF 2476, and hundreds of mixed domestic and apothecary goods very recently discovered archaeologically in the yard of the Hintz House.

Categories of artifacts

The collection is heterogenous in its structure, as pharmacists employ a wide array of material culture goods. The inclusion of artifacts in a single category is sometimes problematic. I decided, for example, to include two painted wooden pharmacy signs used as door shutters among the items of furniture and not among the decorations, though they fit both categories. There are more such instances, such as manuscripts and printed forms

[4] Detailed in my study in the present volume, *The Pharmacies of Cluj*.

with handwritten completions that could be attributed to either the manuscripts category or to the group of financial and administrative documents. Likewise, I have taken into consideration the more important role of an item when I have included a photograph of participants to a pharmaceutical congress in the memorabilia and not the art & decorations category. As expected, most of the artifacts are apothecary containers (jars and bottles), presented here according to the material they are made of – wooden containers in volume 2, pottery and metal containers in volume 3, and glass containers in volume 4. The fifth volume is dedicated to the manuscripts in the collection, not so numerous but requiring specialized skills in their analysis, while the sixth volume focuses on the books in the collection. The seventh volume reunites all other categories: sets (including herbal cabinets, homeopathy sets, and the very special 18th-century medicine chest that has been the focus of the advanced chemical analyses performed through the PHARMATRANS project.[5] I must note that sets are published together, but for the overview the containers and manuscripts, if bearing individual inventory numbers, are counted with their own categories); furniture; wooden boxes; *materia medica*; dentifrice boxes; Siedlitz salts cups; various measuring tools (measuring cups and bottles, scales and weights, microscopes etc.); mineral water test tubes; several categories of objects used in the production of medicines such as mortars and pestles, crucibles, pans, spoons and ladles, pots, presses, laboratory glass (with the sub-categories: Wulf jars, flasks, tubes, cylinders, cups); seals and stamps; artistic and decorative artifacts (statuettes, busts, sculptures, paintings, drawings, reproductions, pharmacy signs, engraving plates for labels); pharmaceutical ephemera (commercials, labels, envelopes, different printed materials); ampoules; memorabilia; financial and administrative documents (both manuscript and handwritten); archaeological glass items; a few medical instruments and supplies; another couple of objects (probably) not related to the fields of pharmacy or medicine; and reproductions and numerous replicas. Among the latter category one should mention 159 replicas of laboratory glass items created in the 1970s for the reconstruction of a pharmaceutical laboratory, that were misleadingly inventoried without mention of the fact that they were not originals. The proportions, relative to all 3819 artifacts, are presented in **graph 1**. The numbers are slightly inaccurate, as they cannot take into consideration some of the uneven inventorying choices. Bound-with volumes inevitably feature as a single artifact each, though they might

[5] See Gruia, *Project Presentation*, in the present volume.

contain up to five books.[6] A set of 55 cut-out letters for stencil inscriptions will feature as 55 items, while a large painted pharmacy sign, in the same art & deco category, will feature as a single object. Still, for the sake of the general overview, one can note the following relative importance of the categories: containers (excluding boxes and ampoule boxes, treated separately as they are very distinct in shape and function from the group of apothecary jars and bottles) represent almost half of all artifacts in the collection (47%, with 1806 items). They will be detailed below, according to their primary material. The second largest category is that of financial and administrative documents, mainly due to an extensive lot of invoices and bills from the Crown pharmacy in Iași (IF 2427). Taking into consideration every single paper in this lot, the group of financial and administrative documents represents almost 20% of all items in the collection. Some of the manuscripts are also financial and accounting in nature, so the proportion might be in fact considered even higher. Manuscripts represent 10% and are detailed in Mária Pakucs' introduction in this volume. Next are the various production tools (187 items) and measuring and analysis tools (178 items), representing 5% each. Books take up 4% of the collection, but actually the number of titles is not 167, as taken into consideration here based to the number of objects criterion, but 189, considering bound together texts. 4% of the collection consists of replicas and reproductions, mainly due to the considerable lot of laboratory glass copies mentioned above, created in the 1970s. 2% of the artifacts can be included in the category of goods with a main artistic and decorative function (77 artifacts). A single percentage of the collection consists of each of these three categories: ephemera, *materia medica*, and medical items, while seven other categories have between 4 and 10 items and represent, each of them, less than one percent (and are thus depicted in the diagram as 0%).

Materia medica deserves special consideration. Except for the 34 cases of independent healing substances mentioned above, a couple hundred containers (but also a pan, a crucible, a spoon, and some other artifacts) preserve their original content. The presence of *materia medica*, sometimes as old as the eighteenth century, poses not only risks, but also opportunities for research. Wanting to have evidence of all possible samples of *materia medica* in the collection, we have thus recorded these instances (excluding the faint traces that could not provide samples, but the presence of which is nevertheless mentioned in each catalogue entry). All in all, there are thus 294 possible samples of substances used for healing.

[6] Cases detailed in Ioana Gruiță's overview in the present volume.

When inscriptions and labels are preserved, the working hypothesis is that the medicines were intended for human consumption, but there is also one veterinary medicine box preserved inside jar IF 1759.

For easier management, the containers have been structured according to material and further grouped according to lots. Based on the first criterion (detailed in **graph II**), glass containers are the most numerous of all containers (1806 items, representing 54%), followed by wooden ones (25%), those made of pottery (18%), and a few made of metal (3%). It might seem surprising that despite their fragility, glass pharmaceutical containers have been preserved in the greatest numbers, but this reflects their predominant use due to the material's property in containing medicines, especially liquid formulations.

In the catalogue, I have grouped the containers into lots, rather imprecisely formed based on outlook (especially the style of the cartouche or label), material and size, sometimes ignoring the context of use. This latter criterion can be misleading, first due to the problems in data preservation, but also due to the fact that apothecary jars were sometimes reused in other pharmacies. I have thus identified 120 lots of between 2 and several dozens containers.

Materials

One of the specificities and challenged of the artifacts in the pharmacy collection is the mix of materials they are made of. The great majority of the artifacts under discussion include several materials – wooden and glass containers most often have painted inscriptions and decorative cartouches or paper labels, microscopes sometimes have glass and metal accessories and wood and glass display cases, etc. One of the most complex is the 18th-century medicine chests that consists of a wooden chest with metal rivets, reinforcements and closing system, with drawers that have paper labels with inscriptions. The chest contains a series of glass bottles with metal screw caps and others with paper covers tied with thread. There is also a manuscript on paper and part of another manuscript, torn and used as paper package. Furthermore, most of the containers still preserve the original *materia medica*. One could say, in fact, that the great majority of artifacts in the collection are made of mix materials. Still, for the sake of the present overview, I have calculated the proportions of materials taking into consideration the main one (for example the jar, not its decoration, cover/stopper or content). The result is presented in **graph III.** Thus, most items are made of paper (including categories such as books, manuscripts, financial and

administrative documents, and ephemera) (34%), a consistent lot are made of glass (32%), some of wood (14%), others of pottery (9%) and metal (9%). Smaller percentages are those representing the truly mix materials (3%) and organic substances (1%, mainly the *materia medica* samples without containers). Artifacts made mainly of gypsum, stone, textile, bone, parchment and leather represent less than 1% each.

Chronology

Dating material culture artifacts can be difficult in the absence of clear indicators such as production marks or mentions of pharmacy names, owners, sometimes addresses and phone numbers on printed labels. Written sources tend to be better dated, with publication dates printed (on books and labels) and handwritten chronological references for manuscripts (diplomas, correspondence, prescriptions etc.). They are also better preserved and the oldest items in the collection understandably fall in this category. There are three 16th-century books, the oldest printed in 1584 (IF 2238/III)[7] (all data in **graph IV**). The oldest manuscript is a 1644 document on parchment (IF 799).[8] There are also two books printed in the 17th century (IF 2237, IF 2239) and two items from the Black Eagle pharmacy in Sibiu (a mortar, IF 2068, and a piece of painted furniture, IF 2069). Seven items are dated to the 17th–18th century, spanning two centuries either because of their unclear dating (a lot of wooden jars with diagonal inscriptions from the Crown of Hungary pharmacy in Sibiu, IF 1104–1108, IF1117), or, in case of a book (IF 2322), because it contains a 17th-century and an 18th-century book bound together. 303 artifacts are dated to the 18th century, representing 8% of the total number of goods, and further 114 to the 18th–19th century, amounting to 3%. As expected, the largest percentages are those of items dated to the 19th century (39%), with 9% to the 19th–20th century, and 41% to the 20th century alone. The most recent artifacts fall in the category of memorabilia – a number of plaquettes, medals and a glass with the logo of Oficiul Farmaceutic Cluj (IF 2425), all from the 1980s.

Places of production

The place where certain objects were made, where books were printed or where certain documents were written has, in most cases, a higher degree of

[7] See Gruiță in the present volume.
[8] See Pakucs in the present volume.

certainty than their context of use as it represents data recorded on the artifact and not in the associated data. I have also included, in a few cases, the place of production through analogy, in the case of identical lots of jars with only some bearing producer stamp. Thus, the place of production (in a few cases only the country of production) is known with certainty in the case of about 15% of the artifacts in the collection. The cases of double production places are taken from books with publishers active in more than one location or artifacts made by companies with more than one production unit. In one case, a vaccine box produced in Budapest includes one mismatched ampoule (without an individual inventory number) produced in Cluj (the latter piece of information could not be included in the graph, but it is mentioned in the item entry, IF 2536). The overview detailed in **graph V**, though provisional in the sense that future analyses of materials and production details might lead, in the future, to the identification of more places of production of artifacts in the collection, is nevertheless indicative of a few aspects. First, pharmacy was a highly specialized field of activity and the objects and books used by its practitioners were historically obtained from various production places, in the case of our collection all from Europe (mainly Central and Eastern). Second, most of the 569 artifacts in the collection with known production place originate in present-day Budapest (in the table Pest, Buda, and Budapest) and Vienna, the largest centers in the area to which pharmacy in Transylvania was connected. The table also includes pottery manufactures in the area, such as Stupava, Iglo (today Spišská Nová Ves), Batiz and Holič that sometimes marked their products. A few items reveal the start of local pharmaceutical production in the 20th century (IF 1203, IF 1885, IF 2137, IF 2225, IF 2232, IF 2537).

Contexts of use

Though data on the original context(s) of use of the artifacts in the collection is not always available, I have struggled to reconstruct (and clarify) such information from all available sources: markings on the objects themselves, notations in the new and old ledgers (with their different types of errors and contradictions, some perpetuated in the DocPat files), the few existing publications on the topic, and various documents preserved in the museum (old correspondence, donation and acquisition acts, administrative documents). All data are included in the details of each catalogue entry, including the errors and contradictions that might still contain backup data in case of future reevaluations and discoveries. Such details, though not very useful to

external readers, might still spare future specialists dealing with the collection in Cluj further efforts and mistakes.

One must discuss one of the main specific features of historical pharmaceutical collections, namely the fact that such artifacts were precious and thus tended to be preserved as much as possible. Inscriptions were repainted for consolidation, erased or painted over marking changes in content, notations of use were made over time recording mainly the quantities dispensed from each container, while labels were added with new data on content, pharmacy name or address. Special cases reveal the sell and reuse of apothecary items in other pharmacies, sometimes in different cities (the issue is detailed below).

Books, especially old ones, were also precious and changed hands repeatedly, as ownership marks indicate.[9] They are also extremely mobile, so much so that discussing their original context of use becomes irrelevant, even if part of lots of donated artifacts that include jars and other items used in a certain pharmacy. Some manuscripts, on the other hand, do have a clear context of use, especially inventories and financial ledgers of pharmacies, or prescriptions dispensed in a certain apothecary shop and bearing its stamp.

The overview of data concerning the contexts of use is presented in **graph V.** When recording the contexts of use I have collected data on the name of the pharmacy, the city, and the present-day country. Though arbitrary, the latter choice is the only valid one considering the changing frontiers of the area between the 16th and the 20th century.[10] I have not discussed the place of production or context of use of the lot of replicas and reproduction, as I deemed it irrelevant. Such details are unavailable for some items, but most of the lab glass replicas were produced in Turda for the new display in the basement of the pharmacy museum in the 1970s. I have also excluded from the overview of the contexts of use artifacts such as the mobile medicine chests and homeopathy sets that were not used din one place, and the ephemera. Thus, graph VI refers to a total of 3463 artifacts the context(s) of use of which is (would be) relevant. The diagram shows the original context of use, but I will discuss below cases of reuse.

One item, an exception, was used in the Kreis Apotheke of Korneuburg (preserved inside container IF 1148). This single artifact from present-day Austria is in fact the only one for veterinary use in the collection. One medicine box was used in present-day Ukraine (IF 2543), 35 items (1%) were

[9] See Gruiță in the present volume.

[10] For placename variants in the different languages of the area see Appendix 1 in the end of this volume.

used in pharmacies from present-day Hungary, 103 (3%) in pharmacies from Slovakia and 2938 certainly (or very likely) from present-day Romania (representing 85%). The context of use of 385 patrimony goods remains unknown (11%), mostly because they were obtained through nationalization and the process was not very well documented.

As for the city of use, such information is known for 3040 artifacts (detailed in **graph VII**). The more one goes into detail the less certain the data becomes. Available sources of information regarding the artifacts in our collection often provide incomplete, contradictory or outright erroneous data regarding the institution, usually pharmacy, where the objects were used. For the aim of the present catalogue, I have listed all available data, with the most likely source in case of contradiction. Still, future research into the archive of the MNIT (old donations, Iuliu Orient's correspondence) might correct and complete this overview. Thus, as far as we know now, most of the artifacts were originally used in the Crown pharmacy in Iași (1183), followed by those from Cluj (from several pharmacies and institutions: the Hintz, Unicorn, Trinity, Matthias Corvinus, Apostle and Ritter pharmacies, the Pharmaceutical Office, and the Medical-Surgical Institute, in total 763 items), and those from Baia Mare (the Crown of Hungary pharmacy, 333). Smaller lots were originally used in Oradea (the Misericordian Pharmacy, the Misericordian Hospital, the Golden Crown / Golden Cross? / Golden Eagle pharmacies), Brașov (the Crown / Golden Lion / Lion / Sarrazin pharmacies), Recaș (the Lion? / Golden Lion pharmacy), Sibiu (the Crown of Hungary / Crown / Black Eagle / Imperial Eagle / Adler / Victor Pop pharmacies), Turda (the Golden Stag / Manta / Velits / Black Eagle / Minerva / Guardian Angel pharmacies), Vinga (the Mary of Perpetual Succour pharmacy), Arad (the Holy Trinity / Savior pharmacies), Modra, Bratislava (The Red Crayfish pharmacy), Carei (the Hungarian King / King / Crown / Holy Trinity pharmacies) etc. As previously mentioned, the proportions might change in the light of future research. A newly discovered inventory of the Hintz pharmacy compiled during the 1949 nationalization[11] lists thousands of artifacts confiscated from this pharmacy. Though recorded in haste, without inscriptions that might aid in their identification, many of the jars and other types of artifacts that lack labels mentioning the context of use could presumably be part of the Hintz pharmacy. As mentioned above, there are also cases of reuse. When pharmacies changed name or owner, new labels were added, sometimes on top of the old ones. Two jars bear the label of

[11] See my article, *The Pharmacies of Cluj*, in the present volume.

the Manta pharmacy in Turda on top of Mike Márton's Guardian Angel pharmacy in the same city (IF 534, IF 1770 – Fig. 3). Pottery jars IF 408 and possibly also IF 409, recorded as originally used in the Hintz pharmacy of Cluj, also bear paper labels with the printed form of the Szendy pharmacy (in Baia Mare?) and the partial date 194_, indicating the possible reuse of the jars from the first to the latter (as all private pharmacies were nationalized in 1949). A footed jar made of milky glass, part of a lot published as used in the Crown of Hungary pharmacy in Baia Mare, also has a secondary paper label with the printed form of the Pomegranate pharmacy in Oradea and the partial date 194_ (IF 304). IF 390, published as obtained through nationalization from the Hintz pharmacy in Cluj, has a paper label with data of the Bíró János pharmacy in the same city. Some of these cases of double use might be due to the erroneous publication of the original context (considering the data on the artifact more likely than the one in the ledgers or published works that mention no other source of authority). Still, until further light is shed on the matter through the research of connections between these pharmacies or the exact sources of artifacts obtained through nationalization, I have recorded both sets of data in the catalogue for fear of loss of information.

Though the place of use of the pharmaceutical artifacts is the most important one for historical analysis, the artifacts travelled in other ways as well: from their places of production to their contexts of use (and I have shown before how many of the items used by pharmacists in Transylvania were imported), from one pharmacy to another, or from one collector/collecting institution to another. This movement of artifacts, both before and after they have lost their main, functional use, must be taken into consideration for the complex history of material culture artifacts.

Inscriptions

As expected, many of the containers in the collection preserve one (or several) inscriptions marking their content. In the great majority of cases, the inscriptions are in Latin, though some of the more recent ones have Hungarian, German, and Romanian inscriptions. Another direction in the analysis of inscriptions is the introduction of proprietary medicines in Transylvania. There are, for example, jars containing: Dower's powder (IF 1255), one of the most popular opium-based medications, that bears the name of the British physician Thomas Dover who developed it in 1732; Sennert's bezoar powder (IF 1916), after German physician Daniel Sennert

(1572–1637) who combined bezoar with various other expensive ingredients (such as pearls, red coral, rubies, emeralds, crabs' eyes, deer heart etc.) in a cordial–type powder with various uses (against poison, plague, abortion, pox) that was also an ingredient of other mixed drugs. Four inscriptions include the name of German physician and chemist Friedrich Hoffmann (1660 – 1742). Three of them indicate Hoffmann's Balsam of Life (IF 273, IF 1853, IF 1870), a tincture composed of essential oils and ambergris, employed internally and externally as a stimulant. Another mentions Hoffmann's drops (IF 2392), a medicine against nausea, fainting and dizzy spells. Other medicines are connected to personalities such as Christoph Wilhelm Hufeland (1762 – 1836), a German physician, naturopath and writer who invented a powder for infants (IF 924 – *Pulvis Infantium Huffelandi*); Robert Whytt (1714–1766), a Scottish physician (IF 1868 – *Tinctura Roberti Vhyti*); Samuel Hahnemann, (1755 –1843), German physician, founder of homeopathy (IF 2347 – *Mercurius niger Hahnemani*), and even a local, as yet unidentified doctor or pharmacist called Sipos, who associated his name with a dentifrice powder (IF 58).

One can also note the existence of errors on inscriptions, suggesting the inexperience / lack of erudition in Latin of jar painters or even of pharmacists. Here are some of them:

IF 568 Ol. Terebinthina for Oleum Terebenthinae
IF 561 SYR RUBI. JDAE for Syrupus Rubi Idaei
IF 569 Storax Liquida for Styrax Liquidus
IF 676 SPIR: COCHLERIAE for Spir. Cochleariae
IF 835 ANTIMON: DIAPHOR: ABL: for Antimon Diaphor. Alb
IF 837 EXTR: CHELIDO. MAJOR. for Extractum Chelidonium Majus
IF 867 SYR: VAPAV:RE: for Syrupus Papaveirs Rhoeadis
IF 868 EXT: CORD: BENED: for Extractum Cardui Benedicti

Problems

As mentioned above, pharmaceutical artifacts were specialized and valuable goods, thus prone to reuse. The analysis of the artifacts themselves (erased inscriptions, two inscriptions on the same jar, overlapping paper labels, various notations) shows that 253 items were reused once, 27 were reused twice, while one was reused three times. One encounters different inscriptions on the bottom, inside the lid, or on the body of jars, inscriptions painted over, corrections on paper inscriptions (IF 40). Overlapping labels indicating the sale of pharmacies (see the example above, with the two pharmacies in Turda,

IF 1770, IF 534). There are also repainted inscriptions, though it is sometimes unclear if the repaint is the result of beautification during their period of use or the result of restoration by collectors or museums.

A problem that I have, for now, chosen to ignore, is that of mismatched covers. Analyzing their shape, color or (old) inventory numbers, one can note that numerous covers are no longer those originally used together with the jars they seal today. It is often impossible to decide if they were mismatched in their original contexts of use or as part of the museum collection. Most often, they are mixed up in the case of similar lots, as some covers lack inventory numbers. After the reopening of the Pharmacy Museum and the careful repositioning of all artifacts, the issue of mismatched covers will be addressed.

The most severe problems though arise from the dissociation between artifacts and data (through the fading of inventory numbers and problems in the equivalation of old and new inventory numbers in the ledgers), especially considering the complicated history of most objects after their period of functional use (thus part of collections). The best example of the difficulties one faces in identifying artifacts from the old collections is a number of very similar apothecary weights from two lots: one from Gyula Orient's Urszinyi pharmacy in Štítnik, the other obtained through Gyula Orient from the pharmacy in Vinga (Arad County). The first lot, consisting of 20 weights and a case, was recorded in the old Hungarian ledger as such, in one entry, under the heading I 4861- I 4882 (Fig. 1). Only 11 of them have been equivalated with new inventory numbers (the others were probably lost during the subsequent moves and inter-institutional travels of the artifacts), as tiny notes in pencil indicate, and even this equivalation includes errors. I 4863 for example has been equivalated twice, thus corresponding to both IF 1062 and IF 1575. Also, the new inventory ledger erroneously features IF 1053 twice, once equivalated with I 4872, once with I 56_2. And some of the IFs in this lot have been lost subsequently and no longer feature in the collection (recorded as "subtracted" in the new inventory ledger: IF 1052, IF 1053). The second lot, from the pharmacy in Vinga, consisting of 17 weights and a case, is recorded in the old ledger under heading I 5682–5699 (Fig. 2). Only 17 have been equivalated with new inventory numbers, one of which has been given a number from the medieval collection (F 3806). One has been marked as "subtracted" in the new ledger: IF 1051. The case was subsequently identified, only the lower part preserved, covered in blue paper on the inside, but still displaying the old inventory number, I 5682 (in the old ledger erroneously equivalated with a weight, IF 1045).

Very few of these weights preserve both the old and the new inventory numbers (even writing two numbers on such small artifacts is a challenge), so this dissociation has eventually caused loss of data regarding their origin. Previous museographers have further complicated the matter, as the only weight that preserves both the new and old inventory numbers indicate. This weight is marked both I 5683 and IF 1055, but the pencil notations indicate that it should have been IF 1046.

In this case I have decided to maintain the new inventory numbers and, except for the artifact that clearly displays the old inventory number and the apparently correctly equivalated numbers, mark their origin as either from the pharmacy in Vinga or the one in Štítnik. The base of the wooden weight case of the lot from Štítnik (lower part preserved), still displaying the old number (I 4861) had been used in the exhibition to display weights mixed from both lots, so it was inventoried in the new ledger under IF 2526. The base of the case of the lot in Vinga was also recently identified in the collection, still displaying the old number, but that had been erroneously equivalated with a weight, so I have inventoried it in the new ledger under IF 2527.

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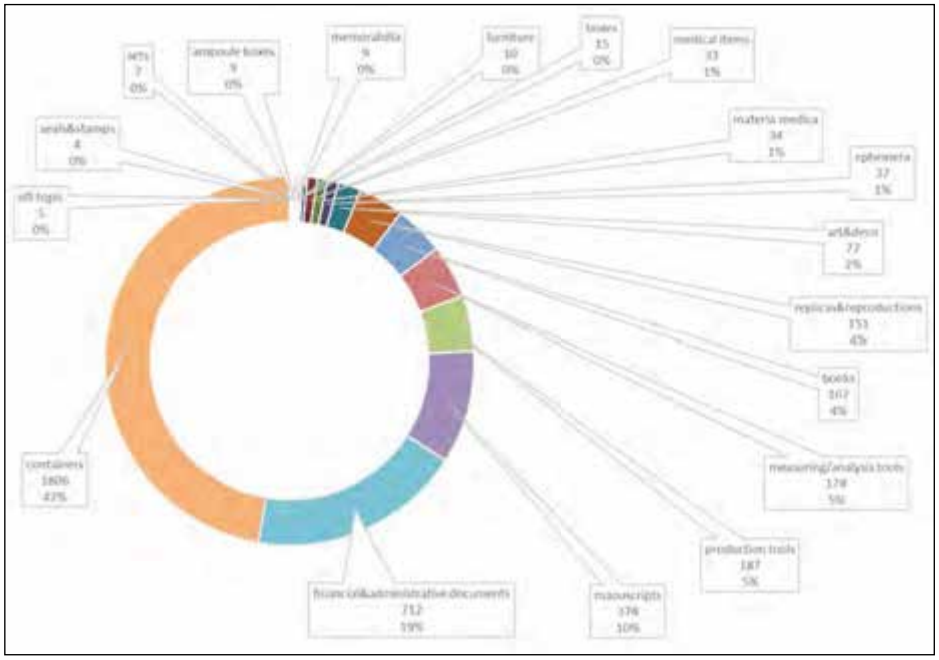
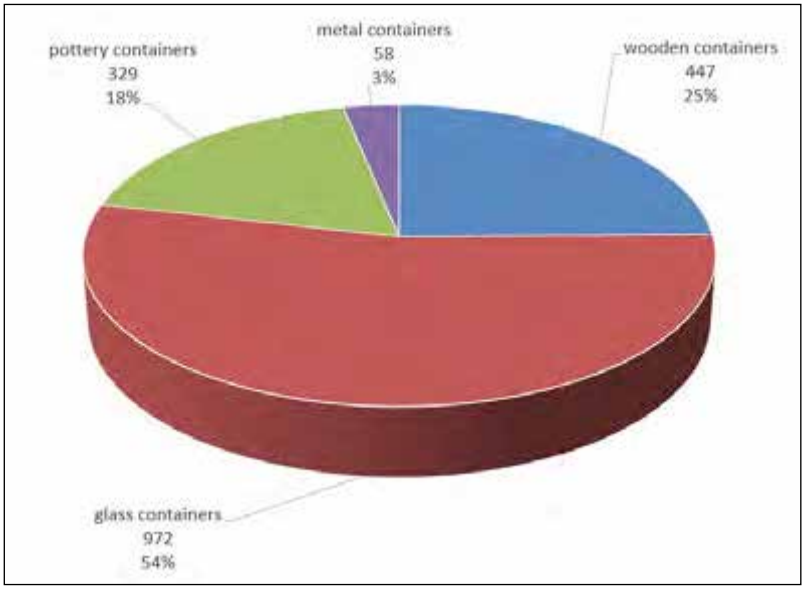
Orient 1926 — Dr. Gyula Orient, *Az erdélyi és bánáti gyógyszerészet története*, Kolozsvár 1926.

List of illustrations

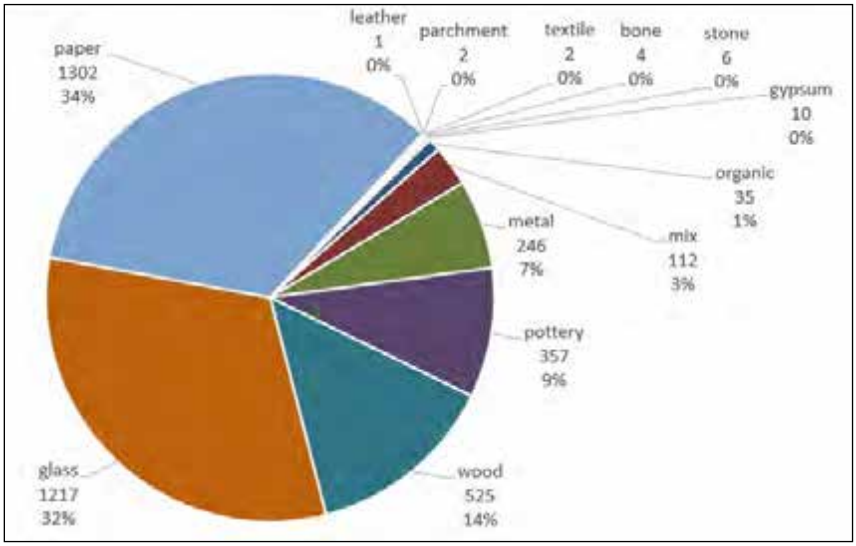
Fig. 1. Photography by Ana-Maria Gruia, 2023.
Fig. 2. Photography by Ana-Maria Gruia, 2023.
Fig. 3. Photography by Alexandru Rădulescu, 2022.



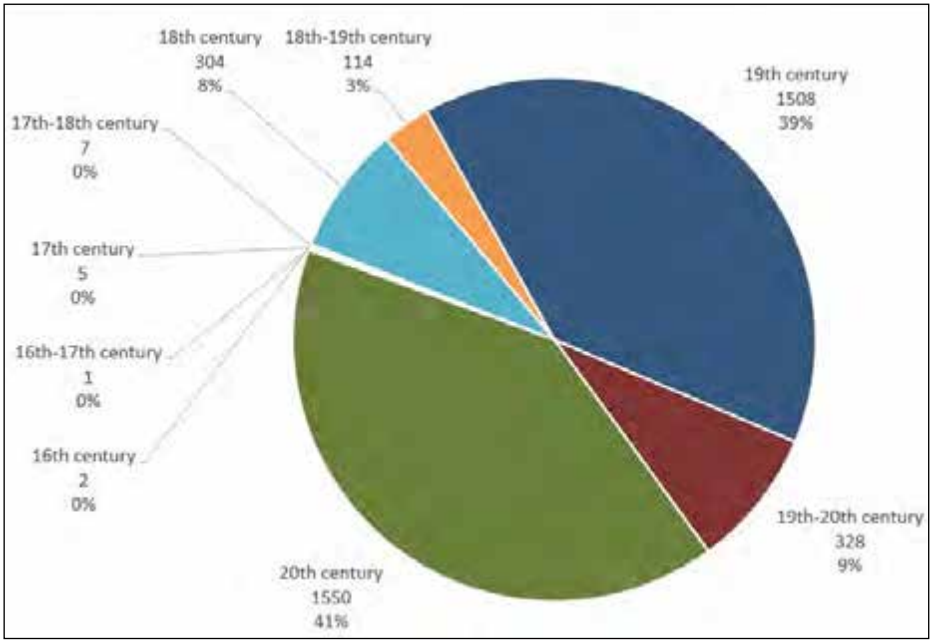
Graph I. Categories of artifacts in the collection (out of the total of 3819 artifacts). The containers are further detailed below.



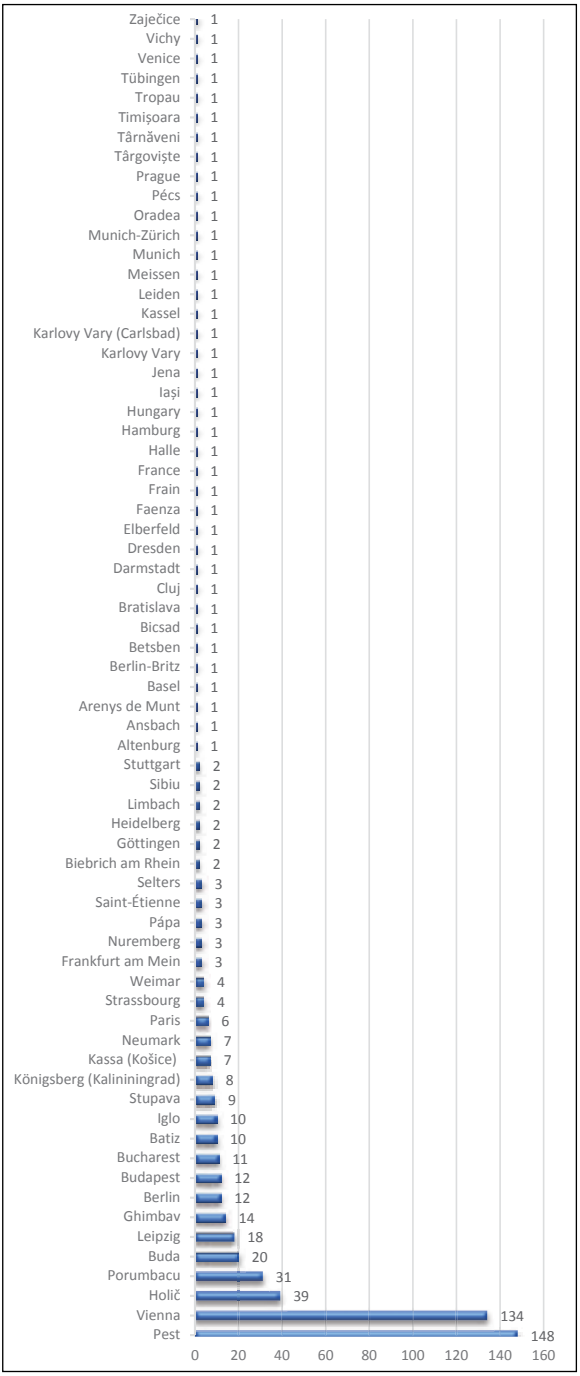
Graph II. Types of containers according to their (main) material (out of all 1806 containers).



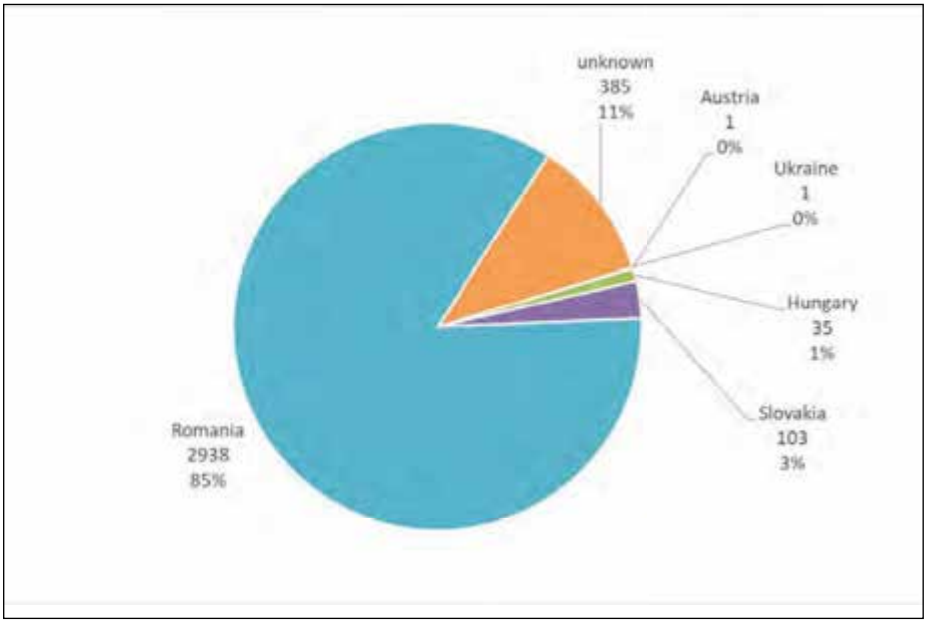
Graph III. Structure of the collection according to the (main) primary material (as to the total of 3819 artifacts).



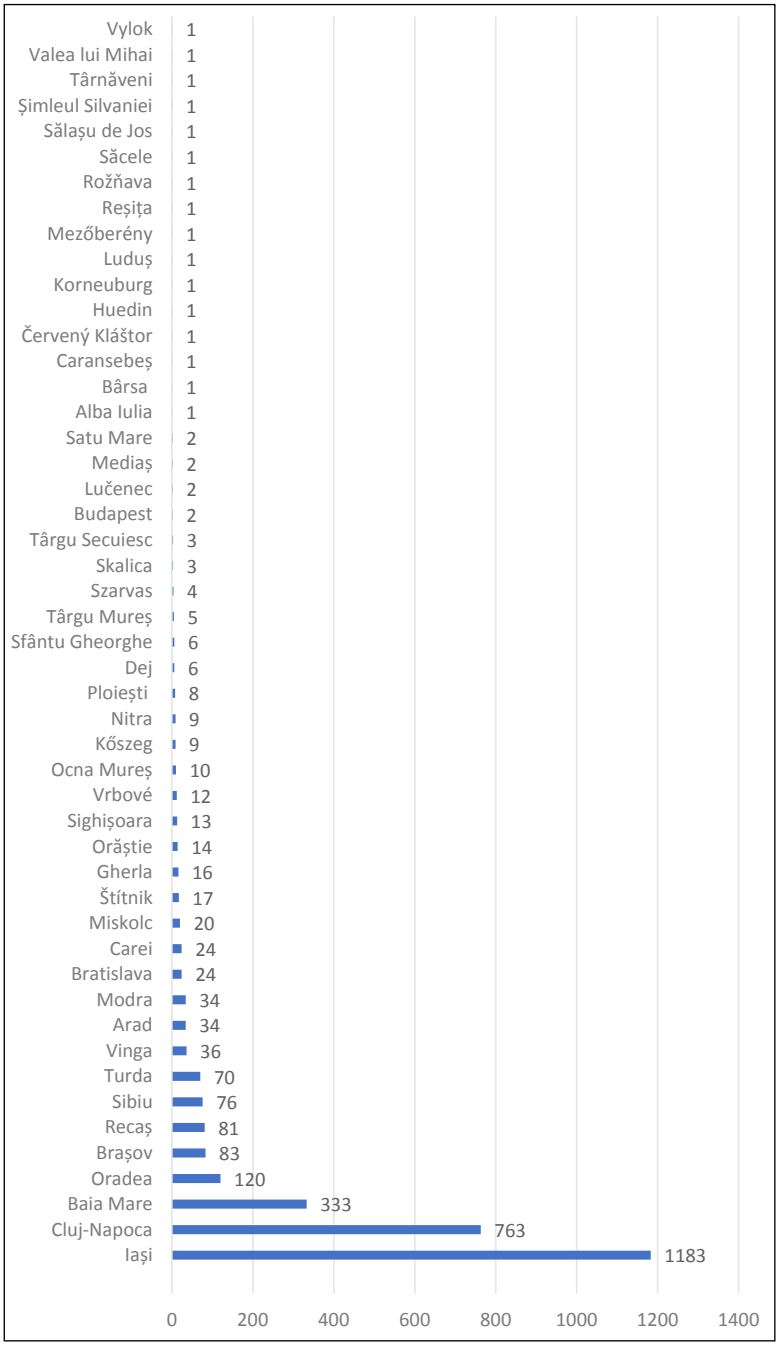
Graph IV. Chronological distribution of the artifacts in the collection (as to the total of 3819 items).



Graph V. Places of production (of the 569 artifacts with such data available).



Graph VI. Original context of use (present-day country) of 3463 artifacts (for which such data is relevant).



Graph VII. Original context of use (present-day city) of 3040 artifacts (for which such data is known).

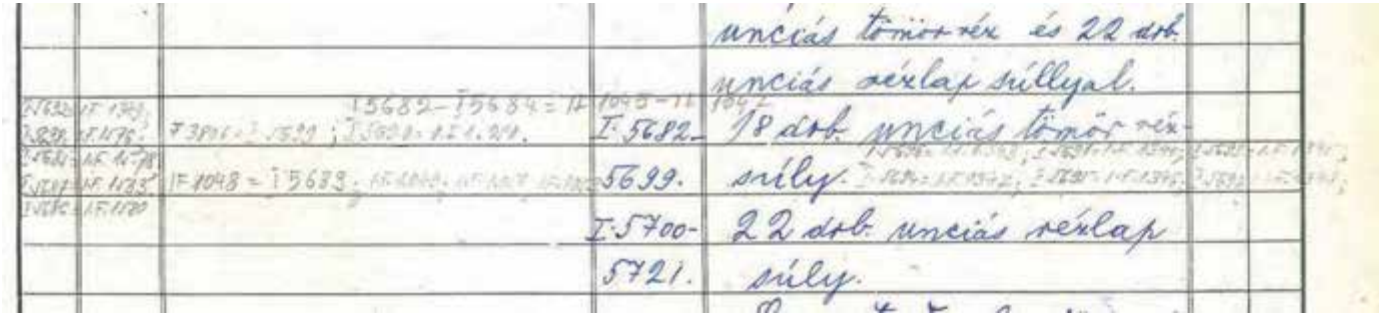


Fig. 1. Entry in the old inventory ledger recording a lot of apothecary weights (and their case) from Gyula Orient's Urszinyi pharmacy in Štítnik.

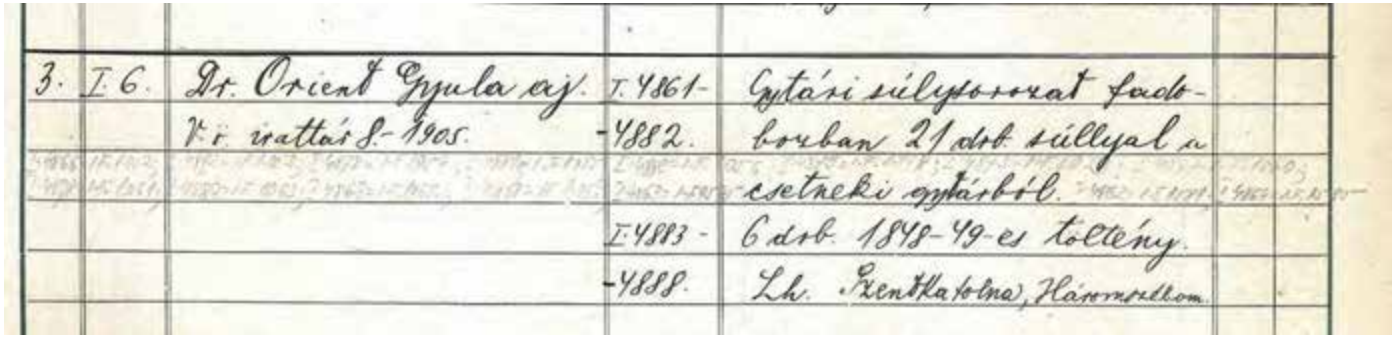


Fig. 2. Entry in the old inventory ledger recording a lot of apothecary weights (and their case) from the pharmacy in Vinga.

Fig. 3. Superposed labels of the Manta and Mike Márton's Guardian Angel pharmacies in Turda.

THE BOOKS IN THE COLLECTION

Ioana Savu GRUIȚĂ

Abstract: The paper presents the 189 books in the collection, recorded under 167 inventory numbers, discussing their provenance, general chronology, types, subjects, places of publication, and language. The author goes into details discussing the previous owners of these pharmacy and medicine-related publications, who usually donated or sold them in lots.

Keywords: old books, pharmaceutical books, collectors, pharmacy, Transylvania.

This article focuses on the books of the History of Pharmacy Collection, which holds a unique position among the National Museum of Transylvanian History's (MNIT) collections. The collection's special status is attributed to its location, which is distinct from MNIT's main headquarters, and its specificity, as it is thematically centered on the history of pharmacy. The History of Pharmacy Collection comprises a total of 3819 heritage items, with the book collection comprising 189 volumes (under 167 inventory numbers). These books were collected from the late 19th century to the late 20th century and, with a few exceptions, adhere to the collection's thematic criterion (as shown in Table 2).

The history of the book collection is correlated to the history of the entire pharmaceutical collection.[1] Part of the collection is based on the generous donations that Prof. Dr. Iuliu Orient made starting with 1902. The objects come from his private collection, yet the Professor had received donations from throughout historical Hungary (present-day Hungary, Slovakia, and Transylvania), most donors being physicians or pharmacists of Miskolc, Polgárdi, Bratislava, Gherla, Recaș-Timiș or Vinga. Another important book lot entered the museum's collection from the property of Prof. Valeriu

[1] See Gruia, *History of the Collection*, in this volume.

Bologa, during 1968–1970. Other significant collections are those of pharmacist Edgar Müller, owner of the 'La Salvator' ["At the Saviour"] pharmacy in Caransebeș, and of Dr. Radu Rațiu, which became part of the museum's heritage in 1984. Other items come from the 'La Coroana' ["At the Crown"] Pharmacy in Iași, owned by the Engel family, the 'Vulturul de Aur' ["Golden Eagle"] Pharmacy in Craiova, yet also from donations made by various private persons: Klari Müller (1968), Eugen Chețan (1967), Olimpia I. Barna (1969), D. Biharu (1969), Olga Floarea (1978), Frankovits Sándor (1981), Ioan Neagu (1983), and Moga Dumitru (1986).

Thematically, the collection includes a significant number of pharmacopoeias, general medicine and anatomy treatises, books addressing various medical fields (gynecology, surgery, dermatology, pathology), pharmacology, pharmaceutical technology, toxicology, homeopathy, medical practice, botany textbooks, pharmaceutical taxes, health related rules and regulations and practical guidelines on hygiene (Table 2). The book collection is rich and representative for the history of pharmacy, pharmaceutical chemistry and medicine and contains numerous relevant volumes for the Transylvanian area, Romania, yet also for the East-European area in general. These date from the 16th century until the 20th century, most published in the 18th and 19th centuries in Germany, Austria, Hungary, Romania, yet also France or Italy.

When the PHARMATRANS project[2] began, approximately 85% of the cultural goods in the book collection were inventoried in the new ledgers. In 2018, while the collection was being moved prior to the consolidation and restoration works of the building that housed the Museum of Pharmacy (the Hintz House), 31 books unrecorded in the new inventory ledgers were discovered. Amongst them, a number of 22 books lacked the old inventory number as well, and, for most, neither the provenance nor the date when they were donated or acquired by the museum are known. Nine books had old inventory numbers, however were not listed in the new ledgers of the collection. On the basis of already known circumstances in the case of other cultural goods in the collection of the Erdély Múzeum [Transylvanian Museum], I turned to the old Hungarian ledgers in order to discover the donor's/seller's name and year when the books entered the museum's collection. Over the course of the project, these cultural goods were inventoried and entered in the analytical (new) evidence ledgers, were given new inventory numbers and were photographed, and are now listed in the collection's

[2] In 2021 – see Gruia, *Project Presentation*, in the present volume.

catalogue. Subsequent to the analysis of the entire lot, the provenance of 27 cultural goods remains unknown.

Within the PHARMATRANS project, all books were photographed, nonetheless, not in their entirety. The team took quality images of covers, spine, title pages, *ex libris* and any other property marks, as well as of the pages that contain marginal notes, the free end papers, particularly if filigreed, as well as illustrations or plates, if noteworthy. In the catalogue I chose to illustrate each volume through distinctive elements, therefore, in most cases, the images render the cover and title page, in some cases the spine (if lavishly ornate) or the property marks (Fig. 1).

From the conservation point of view, these objects have been periodically subjected to curative conservation treatments (dedusting, cleaning with conservation sponges, and dry cleaning). The analysis of the cultural goods in the collection evidenced no active biological attacks, nevertheless, rolling, straining and folding are visible. Consolidation interventions have been performed on some of the more decayed volumes. Currently, likely approximately 50% of the volumes require curative conservation interventions and some, even consolidation and restoration treatments.[3]

A small part of the pharmaceutical book collection has been previously published. The first mentions feature in the study of Prof. Dr. Gyula (Iuliu) Orient dedicated to the Pharmaceutical Collection of the Transylvanian Museum, published in the *Dolgozatok* journal in 1918.[4] In 1996, Eva Crișan, curator of the History of Pharmacy Collection, published the first catalogue of the collection, entitled *Materia Medica de Transylvanie: contributions à l'histoire de la thérapie en Roumanie: catalogue de la collection d'histoire de la pharmacie*. The volume includes a chapter which discusses the diplomas, manuscripts and pharmaceutical books, focusing especially on the old books collection, and recording 21 books, which the author considered to be the most interesting and valuable.[5] In the same volume, the author also mentions why she chose to exhibit certain books in the permanent exhibition. She paid special attention to the first Romanian Pharmacopoeia, published in 1862, to the most ancient Austrian Pharmacopoeia in the collection, printed in Vienna in 1729, also used in Transylvania, and to a volume of pharmaceutical taxes, published in Vienna in 1744.

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[3] See Cova, in this volume.

[4] Orient 1918, 235–237.

[5] Crișan 1996, 258–262.

The provenance of the cultural goods in the book collection

With respect to the provenance of the cultural goods, one knows that they mostly entered the museum's heritage by donations or acquisitions that started in 1902, with the donation of Prof. Gyula Orient, and continued until 1986. After a lengthy pause in the enrichment of the book collection, the subsequent items were inventoried in 2022 and 2023 (the books newly identified in the old collection).

Upon examining the evidence ledgers, it is evident that individual books were rarely donated. Rather, professionals in the field, their families, or occasional collectors typically donated or sold private book collections or systematically compiled private collections to the museum (see Table 1 for the relative distribution of volumes according to provenance).

In the following sections, I will provide a brief overview of the most significant milestones in the history of the pharmaceutical book collection.

The Collection in the time of Prof. Dr. Gyula (Iuliu) Orient

The beginnings of the pharmaceutical book collection overlap those of the History of Pharmacy Collection and are connected to Prof. Dr. Gyula (Iuliu) Orient (1869–1940), toxicology Professor with the Hungarian, and subsequently Romanian University of Cluj, a specialist in pharmacy, chemistry, medicine and the history of science.[6] He attended the University of Budapest and was awarded the doctorate with the University of Cluj. Professor Orient was the one who in 1917 introduced toxicology as subject matter at the Faculty of Medicine, published numerous studies related to this subject, yet who had also concerns with the history of pharmacy.[7] As early as his study years, he started an impressive collection of pharmaceutical objects, which he completed with manuscripts and books concerning the history of pharmacy from Hungary, respectively Transylvania and Slovakia, which became the core of the History of Pharmacy Collection.[8] It represents the oldest part of the collection, with items representative for the field of pharmacy, some considerably old. Professor Orient donated books between 1902 and 1907, included in the pharmaceutical collection and the exhibition of the Erdély Múzeum-Egyesület [Transylvanian Museum Association].[9]

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[6] Bârsu, Bârsu, Petrescu 2016, 95.

[7] Bârsu, Bârsu, Petrescu 2016, 93.

[8] Orient 1918; Vincze 2014, 248–249; Bârsu, Bârsu, Petrescu 2016, 93–96.

[9] See Gruia, *History of the Collection*, here.

Orient established the book collection systematically, choosing the most relevant artifacts. He travelled through Hungary and implicitly Transylvania, receiving donations from physicians and pharmacists, their names recorded in the inventory ledgers of the former Transylvanian Museum.[10] It is important to highlight that when it comes to these donations, there are certain inconsistencies between the old and the new inventory ledgers. Part of the volumes recorded in the new ledgers as part of Professor Orient's donation are listed in the old ledgers as the donations of a number of pharmacists, without the mention of Orient's name, while in other cases the records mention that the items reached the museum heritage from donors via Professor Orient. In the present catalogue I have preserved both pieces of information, mentioning the likelihood that Dr. Orient had intermediated the donations. Additionally, there are also oversights regarding the specific year in which these donations were made. For instance, some books emerge in the new inventory ledger as donated by Professor Gyula Orient in 1904, although in the old inventory ledger they feature as having been donated in 1905 or 1906. Furthermore, the new inventory ledger most often makes no mention of the names of pharmacists or physicians who had donated the books to Professor Gyula Orient. Where differences exist, I have entered both versions in the collection catalogue.

In conducting the statistical analysis, I gave weight to the donation date indicated in the old inventory ledgers, as it appears to contain reliable information that is more likely to be accurate. It is also possible that in most of these cases Professor Orient had played the role of an intermediary. This is the case of books donated by Jenő Bálint in 1904 and Károly Bonóni (Bonóni) in 1905, yet also of the Resofski or Kuzmányi donations. Indeed, Orient mentioned in his study published in Dolgozatok that he had achieved unprecedented success in gathering objects related to the history of pharmacy. By the publication date in 1918, the collection had surpassed 1000 objects.[11] He also thanked the numerous donors, among whom one finds some who also donated objects to the pharmaceutical book collection. Amongst these one can mention Dr. Emil Resofszki/ Resofzsky of Miskolc, Hungary – 1 volume, Gyula Polgár, owner of the 'Arany Korona' ["Golden Crown"] Pharmacy of Bratislava – 4 volumes, Gyula Kuzmányi, pharmacist in Polgárdi, likely the owner of the 'Fehérgalamb' ["White Pigeon"] pharmacy[12] – 3 bound together volumes, one volume from Lajos Kudar of Vinga (Timiș County, Romania),

[10] Vincze 2014, 249.
[11] Orient 1918, 223.
[12] Bakos 1992, 119–120.

from 'Segítő Máriához' ["Mary of Perpetual Succor"] Pharmacy, as well as a volume originating from the 'Szentháromság' ["Holy Trinity"] Pharmacy of Gherla, also called the Nits Pharmacy. Other generous donors were Jenő Bálint, who donated twelve volumes and Károly Bonomi of Temes-Rékás [Recaș, Timiș county], with 4 volumes (Fig. 2).[13]

The fact that some of the books, part of this collection, had belonged to field specialists and practitioners is also confirmed by the *ex-libris* property marks preserved inside the books, where the former owners signed as pharmacists or physicians, as well as by the numerous marginal notes, which prove that the volumes were extensively studied.

Furthermore, the books accumulated by Orient accurately reflect the academic and educational interests of the Professor. In the document that outlines the scientific department of the Association of Transylvanian and Banat Pharmacists in 1925, he detailed the subjects included in a study plan. These disciplines encompassed practical pharmacy, pharmaceutical chemistry, pharmacognosy, pharmacodynamics and antidotes, pharmaceutical specialties, pharmaceutical taxation, the draft of pharmacopoeia, training for aspiring pharmacists, the history of pharmacy, and publications from foreign literature.[14]

Among the volumes donated by or via Professor Orient one can mention Alfonso Morescotto's book, *Compendium Totivs Medicinae*, published in Frankfurt in 1584 (Fig. 3), the oldest book in the collection; the book of Jean Prévost, *Medicina Pauperum Ac Ejusdem de Venenis ac eorundem Alexipharmacis opusculum*, printed in 1641, also in Frankfurt; the book of Cardilucio Johanne Hiskia, *Ehren-Krone der Artzney: Oder Der Neuen Stadt-und Land-Apothecken dritter und fürnemster Tomus*, published in Nürnberg and dated 1674, pharmaceutical-chemical lexicons, like the two volumes of the *Dispensatorium Universale ad Tempora Nostra Accommodatum* by Christian Friedrich Reuss, dated to 1791 and published in Strasbourg, *Pharmacopoea Vindobonae*, printed in Vienna in 1754, *Nova pharmacopoeorum Taxa seu ordo ac pretium omnium medicamentorum…*, published in Vienna in 1771, or textbooks for pharmacists like the volume entitled *Lehrbuchder Apothekerkunst* by Karl Gottfried von Hagen, published in Königsberg in 1808.

[13] Péter 2002, 424.

[14] Bârsu, Bârsu, Petrescu 2016, 95.

The Collection in the time of Prof. Dr. Valeriu Bologa

Another important stage in the evolution of the History of Pharmacy Collection begins in 1949 with the enactment of Law decree no. 134 of April 2, 1949 which mandated the nationalization of health units, like urban pharmacies from county and non-county capitals, important proletarian centers, chemical-pharmaceutical laboratories, medical drugstores and medical tests laboratories.[15] This moment in the collection's history is closely connected to the name of Dr. Valeriu Bologa (1892–1971), Professor with the Institute of Medicine, Pharmacy and Medical Folklore founded in 1921 by Professor Jules Guiart.[16]

Among the pieces in the book collection, only one is listed as originating from a nationalized pharmacy, without the mention of its name, respectively the volume by Tabernaemontanus Jacobus Theodorus (Jakob Dietrich, Jacob Ditter / Diether, or Jacob Theodor), *Neu Vollkommen Kraeuter Buch…*, published in Basel in 1687, with decorative borders and numerous botanical illustrations which entered the museum collection in 1963 (Fig. 4).

An impressive number of volumes, respectively 50, come from Professor Valeriu Bologa's private collection and entered the museum's pharmaceutical book collection during 1967–1970. Dr. Valeriu Bologa was also the one to oversee the establishment of the Pharmacy Museum in Cluj. The largest lot, consisting of 29 volumes, was acquired on 16th December 1968 following a sale-purchase contract, preserved in the museum's archive. The books which Bologa collected cover topics related to pharmacology, pharmacognosy, botany, medicine, toxicology, pharmaceutical chemistry, and homeopathy. The majority of the volumes were published in Austria and Germany and date to the period between 1780 and the mid-20th century. Among the oldest one can mention the three volumes of Maximilian Stoll, *Radionis Medendi in nosocomio practico Vindobonensi*, published in Vienna, dated to 1780 and respectively 1789, Frank Joseph's volume, *Handbuch der Toxicologie oder der Lehre von Giften und Gegengiften*, published in Vienna in 1803, Karl Friedrich Burdach's book, *System der Arzneimittellehre*, in four volumes, printed in Leipzig between 1817 and 1819, as well as Caspari's volume (Carl. W. Caspari), *Homöopatisches Dispensatorium für Aerzte und Apotheker*, published in 1864 also in Leipzig.

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[15] https://legislatie.just.ro/public/detaliidocument/21851, accessed on 09.08.2022.

[16] For more information on Valeriu Bologa's activity and his connection with the Museum of Pharmacy see Gruia, *History of the Collection*, in the present volume.

The Müller Collection

Another important acquisition for the book collection, which sums up a number of 20 books, comes from the private collection of the Müller family, the owners of the `La Salvator` ["At the Saviour"] Pharmacy in Caransebeș. These books were acquired in 1968 and 1969. Edgar Müller was a pharmacist, educated at Vienna, who inherited the pharmacy from his father, Philipp Jacob Müller.[17] The Müller family also purchased the `Vulturul Negru` ["Black Eagle"] Pharmacy, the oldest pharmacy of Caransebeș. The Müller book lot consists of Austrian pharmacopoeias, also used in Transylvania, books on pharmaceutical practice and technologies, therapeutic practices, chemistry and medicine (gynecology and dermatology). The volumes were printed in Austria and Germany and date from the mid-19th century to the early 20th century. The oldest book in this donation is a volume dated 1846, written by Karl Christian Anton, *Vollständiges Taschenbuch der bewährtesten Heilformeln nach den Krankheiten geordnet. Mit den nöthigen Einleitungen und Bemerkungen über die specielle Andwendung der Recepte Für praktische Aerzte*, published in Leipzig in 1846.

The Rațiu Collection

Seventeen books come from the collection of Dr. Radu Rațiu, former physician in the city of Turda. The lot entered the museum collection in 1984 through a donation made by Eugenia Rațiu. The books cover various fields such as pharmaceutical chemistry, pharmaceutical taxation, alchemy, medicine, and pharmacology. One of the oldest books in the collection is written by the French alchemist Bernardo G. Penoto à Portu S. Mariae Aquitano (Bernard Georges Penot), entitled *Tractatus varii de vera praeparatione et usu medicamentorum chymicorum nunc primum editi*, printed in Frankfurt in 1594 (Fig. 5). The together bound volumes by Johann Rudolph Glauber, *Dess Teutschlandts Wolfahrt*, printed in 1704 in Prague, and *Tractatus de signatura salium, metallorum et planetarum*, dated to 1703, are part of the same collection.

[17] https://procaransebes.blogspot.com/2017/01/philipphof-philliphof-in-mai–2010.html, accessed on 18.12.2022.

Other sources

Five books come from the Engel family, owner of the `La Corona` ["At the Crown"] Pharmacy of Iași and entered the museum collection in 1982. All date from the late 19th century and the early 20th century. The Engel collection serves as the primary and most significant source of Romanian pharmaceutical literature in our collection. The oldest volume in this collection is Alfons L. Brociner's *Introducere la chimia analitică cualitativă*, published in Romanian in 1888. The same lot includes *Legea Sanitară, Promulgată la 3 aprilie 1885* printed in Bucharest in 1893.

According to an annotation, Klari Müller, likely a graduate of pharmaceutical studies, donated to the museum *Pharmacopoeia meadiana celeberrimi auctoris monitis et praeceptis medicis adaptata*, bound together with *Pharmacopoeia colegii regalis Medicorum Londinensis. Una cum Meadiana*, both printed in 1761. Eugen Chețan from Sighișoara is another donor, and his contribution includes the volume titled *Nova Pharmacopoeorum Taxa, seu Ordo ac Pretium Oomnium Medicamentorum* dating back to 1744. This valuable volume was acquired by the museum in 1967. Olimpia I. Barna generously donated the volumes *Avertimenti nelle compositioni de medicamenti, per uso della spetiaria* by Giorgio Melichio Augustano and *Della Theriaca, et sue mirabili virtù* by Horatio Guarganti da Soncino. These volumes, published in Venice in 1596, are among the oldest books in the collection. In 1969, D. Biharua donated the volume entitled *Ueber Die Religion – Ihre Geschichte Wahl, und Bestätigung,* by Less Godfried, published in 1785. Olga Floarea donated to the museum the volume *Hippocratis aphorismi. Variorum Auctorum Maxime Hippocratis & Celsi, Locis Parallelis Illustrati*, published in Strasbourg, in 1756; Frankovits Sándor donated the single volume printed in Cluj in this collection, entitled *Közegészségtan és a fertőző betegségek. Orvosok, gyógyszerészek, építészek és közigazgatási tisztviselők számára*, in 1910. Plenk Joseph Jakob, *Bromatologie oder Lehre von den Speisen und Getränken*, published in Vienna in 1875, was donated in 1989 by Moga Dumitru.

As previously mentioned, over the course of this project the collection of pharmaceutical books was enriched by inventorying 22 cultural goods without inventory number in the current evidence register. Nine nevertheless displayed an old inventory number. In order to recover information regarding their origin, I initiated research in the museum's archive in order to identify possible donation or acquisition documents. Notably, at careful examination, some of these books preserved property marks. Likely resulting from the nationalization of the Hintz pharmacy, although unidentified as such

and counting among those of uncertain provenance, there are four volumes, of which two are bound together, mentioning the owner's name: *Dr. Hintz G. Gyógyszertára, Kolozsvártt.* The books in question are H. Hager volume, *Pharmacopoeae recentiores Anglica, Gallica, Germaniae, Helvetica, Russiae*…, printed in 1859 (Fig. 6), bound together with *Supplementum Manualis pharmaceutici Hageri*, printed in 1866; another volume by H. Hager, *Manuale pharmaceuticum seu Promptuarium*…, issued in 1866 and *Codex Medicamentarius Sive Pharmacopoea Gallica*, published in 1819.

I conducted a thorough investigation into the cultural goods listed under old inventory numbers by examining the museum's archive and old Hungarian records. This helped me gather additional information on their origin, the date when they were acquired by the Transylvanian Museum, and any potential previous owners. The catalogue entries contain all of this information, and during the project, the books were assigned new inventory numbers between IF 2491 and IF 2524.

Classes and types of cultural goods

These donated volumes encompass a wide range of medical specialties: pharmacopoeia, general medicine and anatomy treatises, books that approach various medical specialties (gynecology, surgery, dermatology, pathology), pharmacology, pharmaceutical technology, pharmaceutical chemistry, toxicology, homeopathy, medical practice and botany textbooks, pharmaceutical taxes, health rules and regulations and practical guidelines on hygiene (Table 2).

Chronologically, the collection covers the period between the 16th and the 20th centuries, with most books printed in the 19th century, i.e., 87 volumes (Table 3).

Related to their place of publication, most volumes were published abroad, especially in Germany and Austria, while other volumes were printed in the present-day Czech Republic, Hungary, France, Slovakia or Italy. In what the publication language is concerned, the German language dominates in the collection by 60%, followed by Latin with 21%, Hungarian with 8%, and then, in a much smaller proportion, Italian and French. Notably, one of the volumes is bilingual, being published in both Latin and Greek (Table 4 and 5). Concerning volumes printed in Romanian, the collection is not very rich, counting 15 such volumes, which represent 8% of the entire collection, the majority published in Bucharest, but some also in Târgoviște, Ploiești, or Timișoara.

Pharmaceutical books in foreign languages

The pharmaceutical book collection consists of 174 books in foreign languages dated from the 16th century until the 19th century (Table 5). Among the authors one must mention Giorgio Melichio (the 16th century), chemist and researcher of the history of pharmacy and medicine, who ran the Ostrich Pharmacy of Venice, likely from 1560 until his passing in 1585; Karl Friedrich Burdach (1776–1847), an anatomy Professor at Leipzig, Carl Damian Schroff (1802–1887), believed to be one of the pivotal representatives of the Medical School of Vienna during the 19th century; Jakob Dietrich Tabernaemontanus (1522–1590), physician and botanist; Johann Rudolf Glauber (1604–1670), alchemist, chemist and pharmacist, known for having discovered the salt named after him in 1625; Gerard van Swieten (1700–1772), the personal physician of empress Maria Theresa and reformist of the Austrian medical system in the 18th century; Christian Ludwig Gottlieb (1709–1773), physician and botanist; or Joseph Jacob Plenck (1738–1807) a Viennese surgeon and dermatology pioneer.

The oldest cultural goods in the collection are three books dating from the 16th century. The oldest is written by Alfonso Morescotto, *Compendium Totivs Medicinae in qvo de complexionum arcanis indicijs, morborum praecipuorum causis, prognosticis & signis, dess Fabrica Receptorum breuiter tractatur...*, printed in Frankfurt in 1584, a medical compendium on diseases and their causes, bound together with two other volumes published in Frankfurt, dated 1641, written by Jean Prévost, *Medicina Pauperum Ac Ejusdem de Venenis ac eorundem Alexipharmacis opusculum*, and *Anexio Census Venenorum Eorundemque Alexipharmacorum*, tackling poisons and antidotes.

Among the oldest books in the collection, one should also note *Tractatus varii de vera praeparatione et usu medicamentorum chymicorum nunc primum editi*, by Bernardo G. Penoto à Portu S. Marie Aquitano, issued in Frankfurt in 1594. One of the most interesting books in the collection is the volume of Melichio Augustano Giorgio, *Avertimenti nelle compositioni de medicamenti, per uso della spetiaria. Utilissimi à Medici à Spetiali, & ad'ogni famiglia. Con una diligente esaminatione di molti Simplici, tratta da più degni Auttori, Antichi, & Moderni. Con Tavole Utilissime per più chiara intelligenza di tutti l'opera di Giorgio Melichio Augustano Spetiale allo Struzzo in Venetia. Di nuovo aggiontoui un belissimo Trattato delle mirabili virtù della Theriaca. Del Eccelentissimo sig. Oratio. Guarganti da Soncina Medico et Filosofo con*

privilegio, published in Venice in 1596. Within the volume, one can find comprehensive guidelines intended for physicians, pharmacists, and families. These guidelines include drug recommendations alongside a treatise on *theriaca veneta*, which was widely regarded as a panacea for an extensive period of time. This book has an *ex-libris* indicating Giovanni Battista Gussetti as owner, an Italian trader, likely active in Vienna, as well as marginal notes (Fig. 7).

The collection includes books on various medical specialties (gynecology, surgery, dermatology, pathology), medical practice and botany. In the field of pharmacy, it contains studies in pharmacology, pharmaceutical technology, pharmaceutical chemistry, toxicology and homeopathy textbooks, pharmaceutical taxes, health rules and regulations and practical guidelines on hygiene. These date from the 16th century until the 19th century, with the most numerous books published in the 18th and 19th century and printed in Germany, Austria, Hungary, yet also in France or Italy. The collection also includes a few anatomy and medicine books, among which one can mention *Adversaria Medico Practica,* published in Leipzig, in 1772-1773, with folded anatomical representations plates in the end of each part, Johann Baptista Morgagni, *Von dem Sitze und den Ursachen der Krankheiten, welche durch die Anatomie sind erforscht worden*, issued in Altenburg, in 1776, or the volume of Joseph Jacob Plenck, *Primae Lineae Anatomes in Usum Praelectionum*, published in Vienna in 1780. The collection is representative for the pharmacopoeias circulating in the Transylvanian area[18] during the 18th – 19th century, especially the Viennese that were mandatorily used in Transylvanian pharmacies. Pharmacopoeia are textbooks used in pharmaceutical practice, with data on drug substances and excipients that entered the composition of the drugs, preparation and preservation formulas, as well as guidelines for the use, quality control and drug purity. The word derives from Ancient Greek φαρμακοποιΐα (pharmakopoiia), meaning "preparation of drugs" or "drug-making". The collection preserves no less than 33 such volumes, of which one can mention: *Pharmacopoeia meadiana celeberrimi auctoris monitis et praeceptis medicis adaptata*, dated 1761, published in Frankfurt, then in the same year and place *Pharmacopoeia colegii regalis Medicorum Londinensis. Una cum Meadiana*. There is also the volume *Oesterreichische Provincial-Pharmacopöe*, published in the Austrian capital in 1795, *Erläuterungen der neuen Österreichischen Militär – Pharmakopöe zum Gebrauche der Österreichischen Feldäezte*, printed in 1800, *Pharmacopoea Borussica,*

[18] I refer to present-day Transylvania.

published in Leipzig, in 1834, as well as *Pharmacopoea Austriaca*, issued in 1936. One must also mention the universal pharmacopoeias: *Pharmacopoea universalis oder Übersicht der Pharmacopöen von Amsterdam*, Antwerp, Dublin, Ferrara, etc., printed in 1829 and *Pharmacopoea universalis, oder übersichtliche Zusammenstellung der Pharmacopöen von Amsterdam...*, published in Weimar, in 1832.

Furthermore, the collection includes additional books focused on chemistry and pharmaceutical chemistry, originating from the first half of the 19th century. These books were published in either the German or Austrian regions. Notably, the collection also contains bound volumes by Johann Rudolph Glauber, printed in 1661, 1657, 1702, 1703, and 1704.

Among the most interesting and old botany books one should note the volume of Tabernaemontanus Jacobus Theodorus, *Neu Vollkommen Kraeuter Buch Mit schönen und künstlichen Figuren / aller Gewächs der Bäumen / Stauden und Kräutern / so in Teutschen und Welschen Landen / auch in Hispanien / Ost- und West-Indien / oder in der Neuen Welt wachsen*, published in 1687 in Basel, with special illustrations.

Pharmaceutical books in Romanian

There are 15 books published in Romanian in the museum collection. One of the most valuable is the first edition of the *Farmacopeea Română*, published in Bucharest in 1862. Another relevant volume for the collection's topic is that by Nicolae Antonescu, *Farmacopeea medicamentelor compuse și specialităților farmaceutice străine, autorizate de Direcțiunea Serviciului Sanitar, a fi importate în România. Colectate și aranjate în mod alfabetic*, published at Târgoviște, in 1913.

Other Romanian titles are *Elemente de pharmacologie. Pharmacia și arta de a formula*, dated to 1870 and *Elemente de terapeutică și materie medicală*, dated to 1884, both written by Z. Petrescu and published in Bucharest. Notable is Nicolae S. Minovici's study, *Studiu asupra spînzurării*, published in 1904, unique in the field of the Romanian medicine of the time, which also bears the author's signature (Fig. 8).

In the field of health rules and regulations, the collection includes *Legea Sanitară* ["Law on Health"] passed on the 3rd of April, 1885, with the changes introduced by the law sanctioned by the Royal Decree no. 2435 of the 14th of June 1893, published in the Official Gazette No. 62 of 18th of June 1893, the Ministry of the Interior, General Directorate of the Health Department, published by the State Printing House of Bucharest in 1893.

Instead of conclusions

The recent global health crisis has sparked a renewed interest in the history of medicine and pharmaceuticals, making our collection of pharmaceutical books all the more relevant. Health and medicine became more interesting themes for those willing to learn about the history of drugs, vaccines, remedies and pharmaceutical preparations. Our collection is most interesting for specialists, nonetheless, in the light of the recent events, the pharmaceutical books collection may become a point of interest for the wide audience as well. The book collection is remarkable through both its profile and rareness and the age of its pieces. It is a thematic, coherent collection established systematically, that may be also of interest to specialists and students in the respective fields of research: pharmacy, medicine, but also history, library studies, even art history, who may add value to their studies through the research of this book collection.

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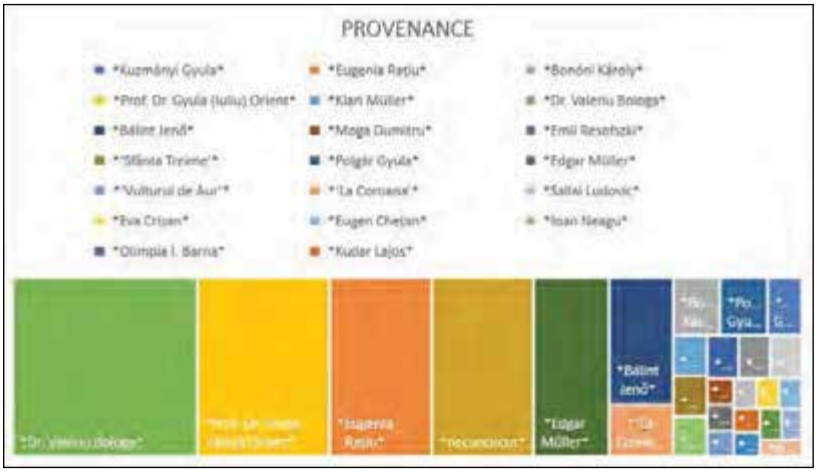

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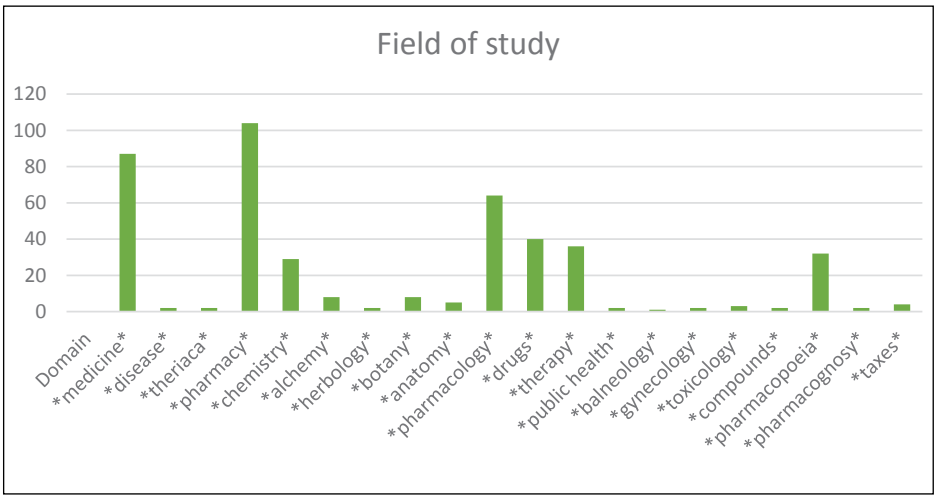

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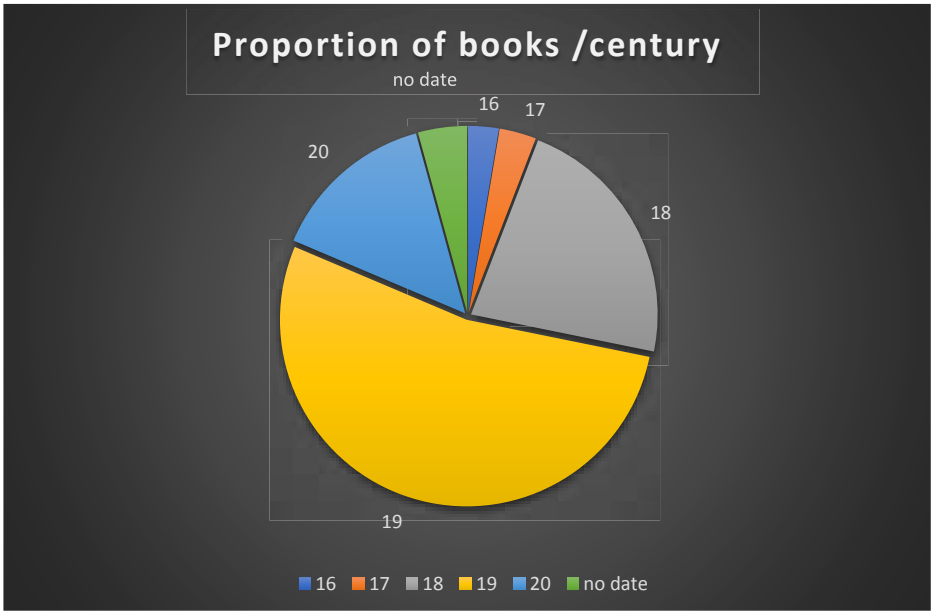

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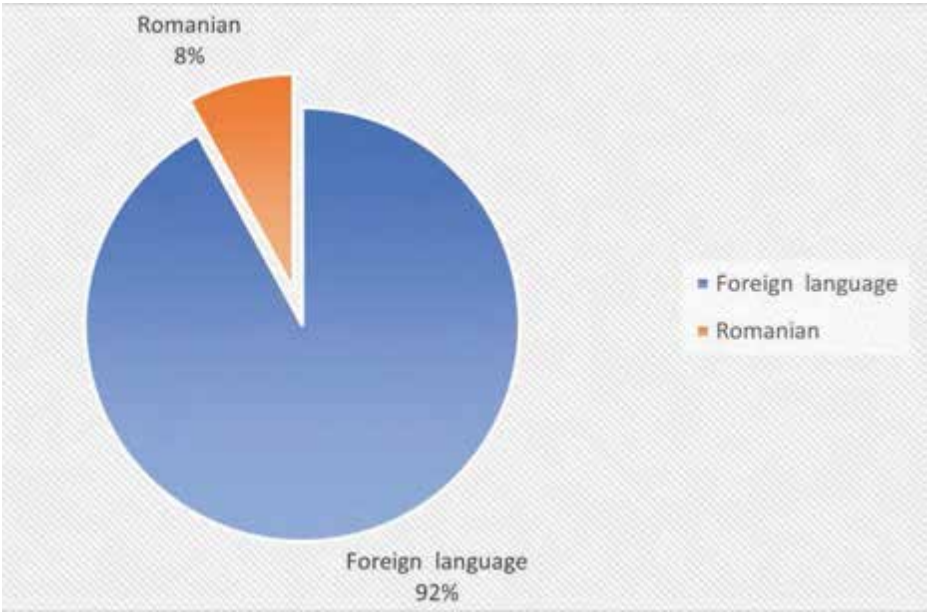

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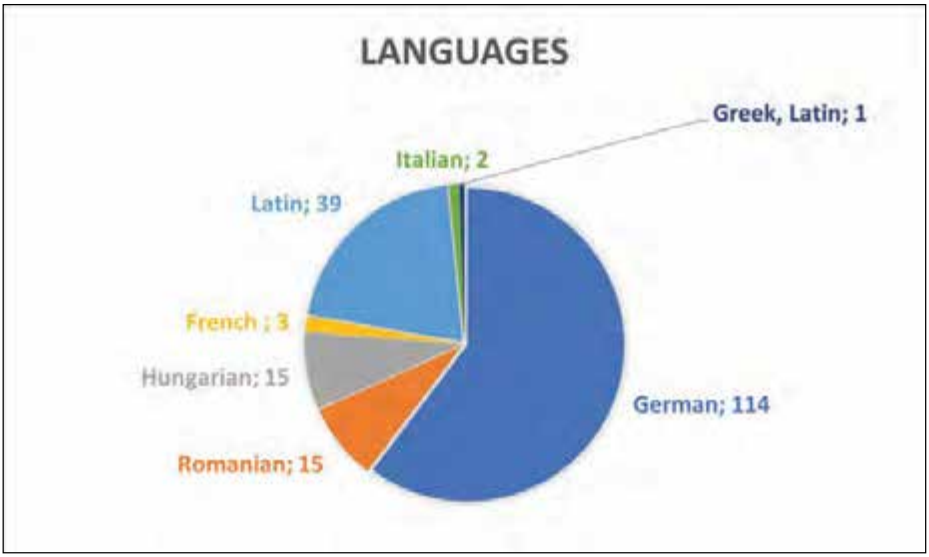

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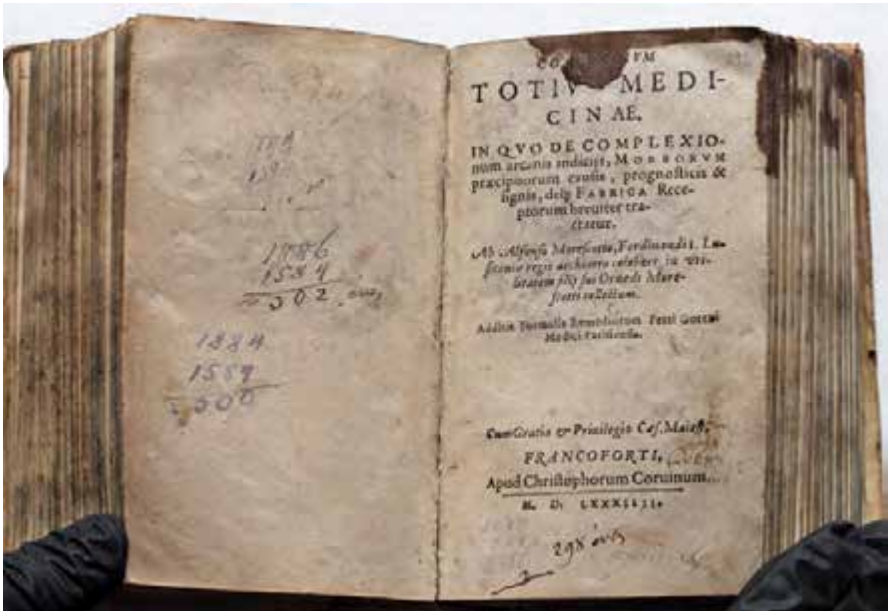

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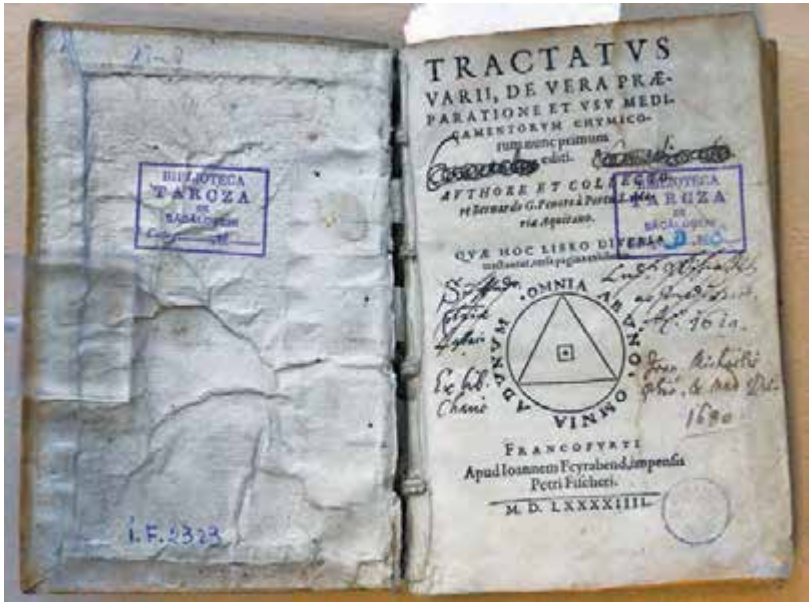

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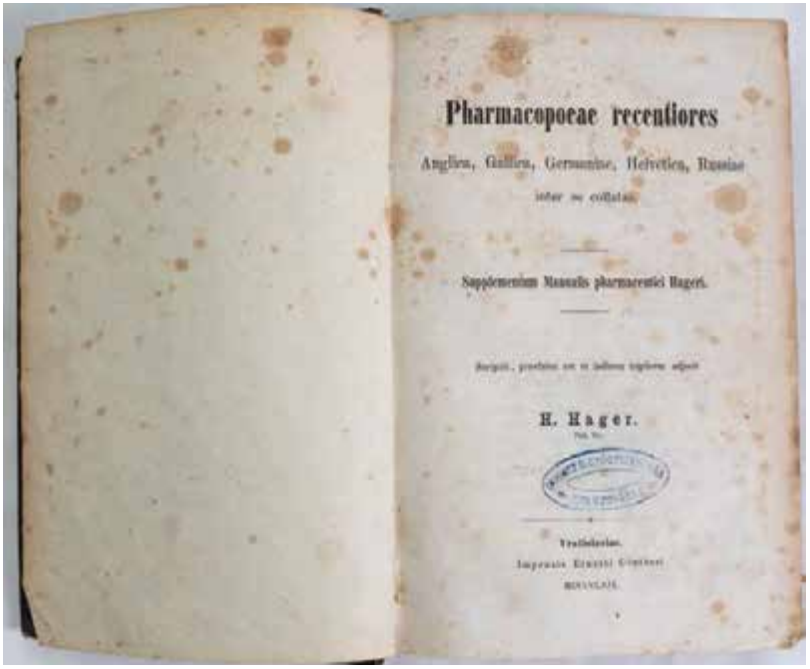

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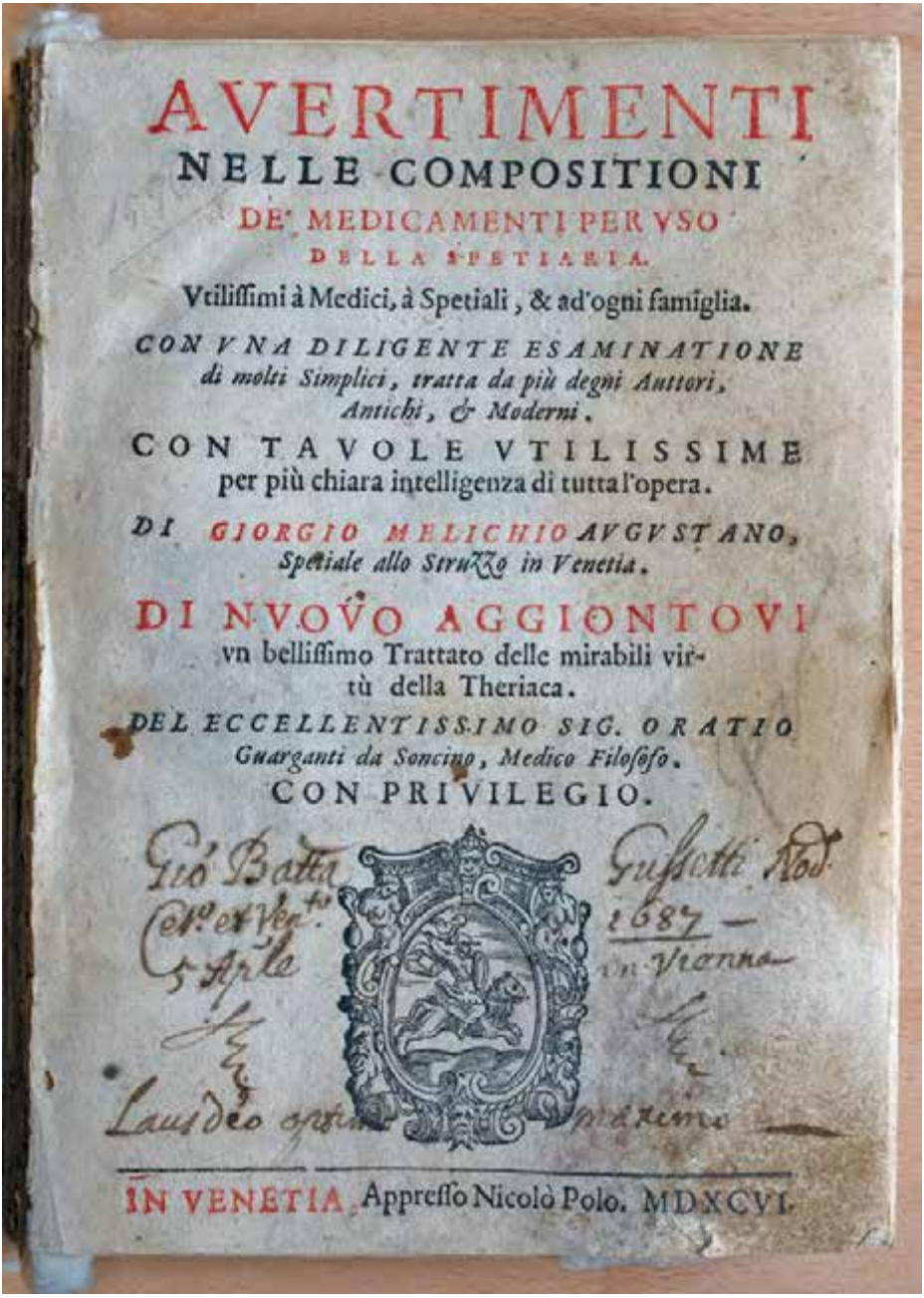
AVERTIMENTI
NELLE COMPOSITIONI
DE' MEDICAMENTI PER VSO
DELLA SPETIARIA.
Vtiliſſimi à Medici, à Spetiali, & ad'ogni famiglia.
CON VNA DILIGENTE ESAMINATIONE
di molti Simplici, tratta da più degni Auttori,
Antichi, & Moderni.
CON TAVOLE VTILISSIME
per più chiara intelligenza di tutta l'opera.
DI GIORGIO MELICHIO AVGVSTANO,
Speciale allo Struzzo in Venetia.
DI NVOVO AGGIONTOVI
vn belliſſimo Trattato delle mirabili virtù della Theriaca.
DEL ECCELLENTISSIMO SIG. ORATIO
Guarganti da Soncino, Medico Filoſofo.
CON PRIVILEGIO.
IN VENETIA, Appreſſo Nicolò Polo. MDXCVI.

Fig. 7. Title page of Giorgio Melichio, *Avertimenti nelle compositioni de medicamenti, per uso della spetiaria...*, 1596, with propriety inscription, IF 798.

THE MANUSCRIPTS IN THE COLLECTION

Mária PAKUCS

Abstract: This is an overview of the 378 manuscripts in the collection, recorded under 75 inventory numbers, with special emphasis on those in the 27 handwritten sources in the early group (1644–1918). The items are presented according to their chronology, type, language, and provenance.

Keywords: manuscripts, history of pharmacy, Tobias Mauksch, pharmacy registers, formulation books.

The pharmaceutical manuscript collection in Cluj-Napoca consists of a variety of documents from the 17th to the 20th century, all of them having in common the fact that they are written by hand. All in all, there are 378 manuscripts inventoried under 75 inventory numbers, representing 10% of the entire collection (of 3819 artifacts).[1] The manuscript collection has a wide range of miscellaneous documents, such as: diplomas, certificates, recipe books, inventories, dispensary registers, sale contracts, or permits for establishing pharmacies. They are all detailed in the fifth volume of the present catalogue. Moreover, numerous and various objects in the National Museum of Transylvanian History contain handwritten signs as well, such as: marginal notes on books, notations on containers, and handwritten labels, which are introduced in other parts of the catalogue. Among them one handwritten receipt is noteworthy and shall be discussed in more detail in the seventh volume: it is the bill sent to countess Theresa Kemény in 1787 from the pharmacy in Şimleul Silvaniei to her residence in Nuşfalău (IF 2446). The pharmacy bill was found in a drawer of a pharmacy chest, and it was the one historical evidence that corroborated the dating of the portable

[1] See Gruia, *Overview of the Collection*, in the present volume.

apothecary to the end of the 18th century.[2] While my main task was the study of the manuscripts, I have collaborated with the team in deciphering old handwritings on a variety of apothecary objects: jar labels and lids, labels on drawers, and notations on books.

The early group of manuscripts (1644–1918)

The core of the manuscript collection comprises the documents gathered by Gyula Orient in the early 20th century. The documents from this lot are nevertheless varied in their typology, their support material, their language, their origin or destination. In this earliest group of manuscript materials we have catalogued 27 items, distributed typologically as follows:

Type	No.
pharmacy registers (dispensaries)	6
medicine formulation books and loose pages	7
contracts	3
certificates of apprenticeship	4
pharmacy inventories	3
ennoblement charter	1
taxa pharmaceutica (list of prices)	1
pharmacist diploma	1
baptism certificate	1
Total	**27**

Table 1: Types of manuscripts in the early mss. group, 1644–1918.

As for the chronological distribution of the early manuscripts, most date to the 19th century (19), 9 to the 18th century, 3 to the 20th century and just one to the 17th (Fig. 1).

In all the manuscripts that contain inventories or formulations of medicine and pharmaceuticals, the identification of substances and composites is always given with their Latin names. Therefore, Latin is present in most of the documents, albeit together with the native or working language of the pharmacist (Fig. 2).

Owing to Dr. Orient's indefatigable efforts to open a museum of pharmacy in Cluj-Napoca in 1917, such a diverse collection of texts related to the history of the pharmaceutical profession was born. In his study on the

[2] Péter 2002, 10.

Transylvanian pharmacy museum, Gyula Orient described how he brought items from the pharmacy he used to own in Štítnik (Csetnek – today in Slovakia), including a register of the medication dispensed in that pharmacy between 1845 and 1892 (IF 722, Fig. 3 and Fig. 4).[3]

The correspondence of Dr. Orient, preserved at the National Museum of Transylvanian History (henceforth MNIT), shows how actively he was involved in organizing the pharmacy museum and in the continuous search for objects throughout the region. After the Society for the Transylvanian Museum took the pharmacy collection under its aegis, Dr. Orient had filed numerous requests for financial support, for the acquisition and transportation of items of interest to Cluj-Napoca. With the exception of the pharmaceutical register from Štítnik, all other manuscript items with a known origin come from places and regions that are now in Romania.

The first published list of the manuscripts in the collections of the MNIT was compiled by Eva-Maria Crișan in 1996, where she included only the oldest items of the entire holdings (8).[4] It is thus evident that an exhaustive and extensive catalogue of the preserved manuscripts in the holdings of the MNIT was long overdue.

The oldest document in the collection is a letter patent from 1644 (IF 799), wherein the prince of Transylvania George Rákóczi I (1630–1648) granted nobility to Blasius Galambos, called "Barbely" (i.e. barber), who had come from Cotnari, in Moldavia, and had settled in Turda. The nobility patent letter is written on parchment and provides the usual description of the coat of arms chosen by the grantee; the depiction of it, which should have been added to the privilege letter, is missing (Fig. 5).

While the provenance of many of the manuscripts is uncertain, the 1776 diploma offered to Samuel Velits by Antonius Rettig, pharmacist in Baja, Hungary, attesting to the completion of apprenticeship (Fig. 6), was a donation to Gyula Orient by Károly Velits from Turda. This certificate was gifted by the descendants of the Velits pharmacists, together with other apothecary goods from the Golden Stag pharmacy in Turda.[5]

For all its miscellaneous character, the manuscript collection of the MNIT has nevertheless several clusters of related items, which I will discuss in chronological order. The first group of documents includes the register books of pharmacist Tobias Maucksch,[6] the eminent personality of the Transylvanian

[3] Orient 1918, 224.
[4] Crișan 1996, 257–258.
[5] Orient 1918, 237; Crișan 1996, 257; Péter 2002, 487.
[6] Crișan 1973, 255–269; Offner 1991, 192–198.

pharmaceutical history.[7] At the present date there are three extant register books from the Maucksch pharmacies in Cluj and Târgu Mureș, namely a list of pharmaceutical prices from 1750 (*Taxa Pharmaceutica,* IF 2241),[8] and two inventories of the Târgu Mureș pharmacy from 1790 (IF 2326) and 1799 (IF 2327), respectively. Previous authors, especially Eva-Maria Crișan, the editor of the 1750 price list, have highlighted the significance of this document, as Tobias Maucksch had devised this "instrument" for the use of pharmacists in "the kingdom of Hungary and the principality of Transylvania" before the authorities in Vienna finally issued regulations of prices and weights that were applicable throughout the Habsburg Empire.[9] Maucksch's valuations of medical substances (*simplicia*) and formulations (*composita*), as well as of other materials needed for the daily running of a pharmacy (for instance, various types of paper) were offered as guidelines "for the occasion of selling or buying of a pharmacy, as they are usually used in inventories"[10] (Fig. 7 and Fig. 8).

The registers written by Tobias Maucksch in 1790 and 1799 are full inventories of the Golden Stag (*zum Guldenen Hirschen*) pharmacy he owned in Târgu Mureș, which functioned in the house rented from the Toldalagi family (today the Toldalagi palace, the seat of the Ethnographic Museum). The first ledger is dated to 11 May 1790; according the Maucksch's own words, it was compiled upon the purchase of the pharmacy. The register of 1799 was a renewed inventory of the same pharmacy, drawn up by Tobias Maucksch when Samuel Maurer took over its administration (Fig. 9). Together with the thorough lists of all the items from the pharmacy: substances, compounds, recipients, objects, furniture, and books, Tobias Maucksch provides advice and guidance for his employees and his underage son as to how to run the pharmacy efficiently and economically, and how to calculate the prices of medicaments (Fig. 10). These two inventory ledgers contain thoughts and advice that Tobias Maucksch had written out in full length in his "Instructions" of 1793, a manuscript that was lost since Gyula Orient had published a Hungarian translation of it in 1918.[11] The Maucksch inventories with their detailed notes offer insight into the ethics of a disciplined pharmacist at the end of the 18th century, who saw himself as a role model for his patients and for the community.

[7] See Offner, in the present volume.
[8] Crișan 1973, 255–269; 1974, 219–224; 1975, 265–282.
[9] Kletter 2010, 397–410.
[10] Crișan 1973, 259.
[11] Orient 1918, 249–300; Offner, Tuka 2014, 51–108; Tuka 2012, 156–195.

A second group of documents related to the activity of a pharmacist include the certificates, diplomas and formulations notebook (*Manuale)* of Paulus (Pál) Hrobony (also spelled Hrobonyi), a pharmacist active in Tășnad and Gherla. Born in 1819 in Mezőberény (Hungary), according to the copy of his birth certificate issued in 1857, we know from his *Manuale* and from his certificates that in 1838 he was in Tășnad, where he did his apprenticeship in the pharmacy of Andreas (Endre) Koritsánszky. [12] In 1842, Koritsánszky wrote a further letter of recommendation, attesting that Hrobony had worked for two years in his Tășnad pharmacy as a *provisor* (Fig. 11).

The *Manuale,* that the young Hrobony had started in 1838, bears witness to its continuous use, as the first recipes are in alphabetical order, whereas later additions do not follow the same pattern (IF 975, Fig. 12). Some recipes have corrections and inserts written in different ink or in pencil. Mentions of dates are rare: a recipe for "Fiakerpulver" (a mixture for breathing complaints) has the date of 1876, November 1, written on the page, further confirming the conjecture that this recipe notebook was in use for a long time (Fig. 13).

After completing his formative years with Endre Koritsánszky, we know that Pál Hrobony had settled in Gherla, where he started out as an administrator of the pharmacy of Dávid Placsintár and where he became an esteemed member of the community, contributing financially to urban projects.[13] His portrait, painted in 1877 by Endre Kőváry, is one of the prized possessions of the MNIT (IF 236, Fig. 14).

The professional connection between Pál Hrobony and the Placsintár family in Gherla could explain how the register of the first pharmacy opened in this town in 1788 has reached the collections of the MNIT, probably together with all the other Hrobony material. The *Prothocollum* (IF 2486) is an account book of all the formulations prepared in the pharmacy of Gherla between 1788 and 1794 (Fig. 15). Sadly, there are no mentions of ownership or authorship in the ledger. Initially, in 1788, the town fathers of Gherla had offered the right to open the pharmacy to Gratian Karácsony,[14] therefore we can assume that the register was conducted under his supervision. Karácsony's widow had given up the pharmacy and offered it back to the town; it is known that in the 19th century the pharmacy belonged to the Placsintár family.[15]

[12] Crișan 1996, 258.
[13] Péter 2002, 448.
[14] Szongott 1911, 212.
[15] Péter 2002, 424.

The registers of the Order of the Brothers Hospitallers of Saint John of God from Oradea are another group of manuscripts in the MNIT collection with a shared origin. Built in 1761, the hospital opened by the Brothers Hospitallers (*Ordo Fratrum Misericordiae*) in Oradea had funds to care for four in-patients, who received their medication free of charge.[16] The adjacent pharmacy of the hospital was later known in town as the Pomegranate Pharmacy.[17] Three documents produced in the hospital's pharmacy are extant in the collections of the MNIT. The first register begins in 1774 and has daily entries with the medication dispensed from the pharmacy of the hospital until 1776 (IF 2488, Fig. 16). No patient names are mentioned.

From 1826, a manual with recipes and formulations has survived (IF 2484); different handwritings and inks as well as the rare dating (such as 1873) testify to the continuous use and additions to the stock of formulations. Finally, the MNIT holds a register from the same institution of the Brothers Hospitallers in Oradea, dated in 1881 and containing accounts and an inventory of the pharmacy (IF 2489). By this time, the pharmacy was producing income from the sale of medication, and the names of the buyers/patients are written down. The full inventory of the pharmacy provides a list of the pharmaceuticals, in alphabetical order, and the lists of objects in every room.

The manuscript collection holds other documents from Oradea, such as the 1761 obligation letter written by pharmacist János Stacho to the town council, promising that he would pay a deposit 100 Rhenanian florins deposit for renting a bee garden, and that he would not build or keep live stock on it (IF 2477). Stacho was a prominent figure in the mid-18th century Oradea; having married the widow of an established pharmacist, he succeeded in building a flourishing practice with his Golden Cross (*Aranykereszt*) pharmacy and, eventually, in obtaining a nobility title from Empress Maria Theresia.[18] In his contract, Stacho was committing himself to keep the garden with its original purpose. In Tobias Maucksch's instruction of 1793, there are lenghty pieces of advice about the knowledge of medicinal plants, about their harvesting from trusted gardens. It is very likely the János Stacho was keen to grow plants for use in his own practice.

Another contract from the manuscript collection was agreed in 1860 between the Austrian military authorities and pharmacist Anton Weber from Caransebeș, who thus obtained permission to provide medicaments for the

[16] Chifor 2006, 114–118.
[17] Emődi 2010, 175.
[18] Emődi 2010, 164–165.

border guard units and their families with a 10% added cost, and to open a pharmacy in Băile Herculane during the summer period (IF 2490, Fig. 17).[19] The main pharmacy in Caransebeș was called "Zum schwarzen Adler", and was renamed "Salvator" when Anton Weber became its proprietor.[20] On 8 June 1872, the widow of Anton Weber, Charlotte Weber, declared that she had transferred the pharmacy of Caransebeș to Philipp Müller, who in turn accepted all the conditions in Anton Weber's original contract.

Pharmacy registers from the late 19th century and from the 20th century are included in this collection. One of them, a recipe notebook (IF 2485, Fig. 18) cannot be attributed neither by ownership nor by location and can be dated sometime to the middle of the 19th century on account of the handwriting and the contents. Another register book contains the dispensed medicine to patients, including their name, the name of the prescribing physician, the means of payment (cash or credit). The entries run from November 1918 to 1921, and a note with a modern handwriting states that the register used to belong to János Wachter, pharmacist in Carei, in the "Hungarian King" pharmacy (IF 727). We can ascertain that J. Wachter was a native of Carei, received his diploma in 1927, and became a prominent figure of his town in the 1940s.[21]

Finally, the core collection of handwritten text of the MNIT holds a few items that are loose leaves from manuals and recipe books from the 18th and 19th centuries. They cannot be put into any context of provenance or use. A more detailed presentation of all the items in the manuscript collection in volume V of the Catalogue will offer more insights to researchers, students and history enthusiasts about the core of the holdings that was assembled owing to the efforts of Gyula Orient in the 1910s and 1920s. Apart from the Maucksch legacy, which survived in the Hintz pharmacy on the corner of the main square of Cluj-Napoca, there are only a few registers and items, namely those from Oradea and Gherla, that have a connected history.

The Crown ("La Coroana") pharmacy in Iași

A lot of mixed artifacts from the La Coroana pharmacy in Iași, dated to the 19th–20th centuries, was acquired in 1982. It includes, among the written documents, financial documents, correspondence, product catalogues and price lists, inventories and ledgers, certificates, prescriptions etc. There

[19] Gămănescu 1979, 345–346.
[20] Popa, Ruja 1975, 288.
[21] Péter 2002, 242–243.

are 306 items handwritten or with completions by hand of printed forms, and thus can be included among the manuscripts. The earliest is a pharmaceutical certificate from 1857 and the latest are prescriptions from 1942. The manuscripts were written by/for Ioan (Johann) Engel, the owner of the pharmacy between 1857 and 1915, his son Alexandru, owner between 1915 and (possibly) 1949, and Andreas Jassinsky, the first owner. Except for Jassinsky's study diploma of 1857, which is in Latin, all other manuscripts from this lot are in Romanian. Those of the late 19th century are written in the unstandardized spelling of the language. . Some of the documents are copies or working variants. One can mention the following categories: correspondence on various matters (IF 2243a, IF 2243b, IF 2432, IF 2434, IF 2432), study certificates and diplomas (IF 2243, IF 2244, IF 2245, IF 2246, IF 2247), official documents (enrollment document IF 2428, power of attorney IF 2430), prescriptions and recipe notes (288 prescriptions, recipes, goods received notes, inventoried in two lots IF 2254, IF 2255), inventories and accounting books or loose pages from such documents (IF 2426, printed ledger filled in by hand IF 2429, IF 2441, IF 2442, IF 2443).[22]

Iosif Țiucra's handbook

The most significant manuscript written in Romanian from our collection is a handbook with practical medical advice, written by Iosif Țiucra between 1876 and 1901: *Carte de mână pentru nedoctori pentru a ajuta celoru cadinte în multe feluri de morburi pana la sosirea Medicului (Doctorului)* (IF 2355).[23] Iosif Țiucra was a schoolteacher in Bârsa (Berza) village, Arad County, who gathered popular remedies from human and veterinarian medicine.

The Ritter pharmacy prescriptions

A lot of fifteen prescriptions are bound together with string and were issued in 1837 and 1838 in the Ritter pharmacy in Cluj-Napoca (IF 2448). They are all handwritten, and contain the prescription, the date, and the illegible signature of the prescribing physician. The cures were written out to a certain István Asztalos. To date, there is only scarce data regarding the Ritter pharmacy: we could ascertain from an advertisement from 1858 that the pharmacy was located in the Belső Monostori utca (today Moților st.)

[22] Gruia 2021, 45–76.
[23] Gruiță 2022, 147–166.

and the pharmacist's name had been Traugott Ritter.[24] In 1858 his widow was in charge of the business.[25]

The C. Velluda donation

Another group of recent documents in the collection of manuscripts is a lot of 28 prescriptions (IF 1920–1947) issued by Dr. Nichita Andrieţeanu of the Medical Service of the Bucharest-Giurgiu Railway in the years 1871 and 1872. The lot was acquired in 1975 from Prof. Dr. Constantin Velluda, former lecturer at the Faculty of Pharmacy in Cluj-Napoca. The prescriptions are testimonies to the medical care offered to employees of the first railway line in the Romanian kingdom, Bucharest-Giurgiu, inaugurated in 1869.[26] Some of the prescriptions are handwritten and authenticated by the doctor's signature, others are printed forms filled out by the same doctor. Each prescription offers the name of the employee, the injury, the medication and its administration, and the price.

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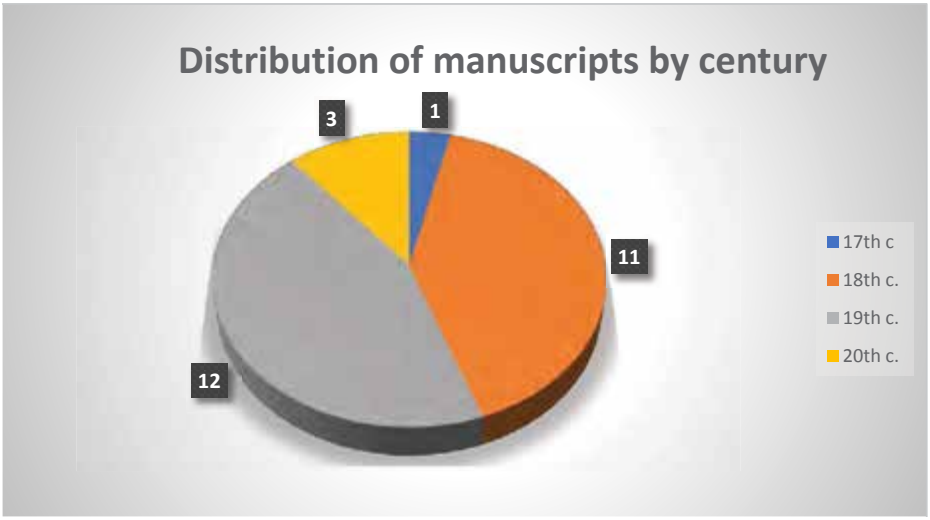

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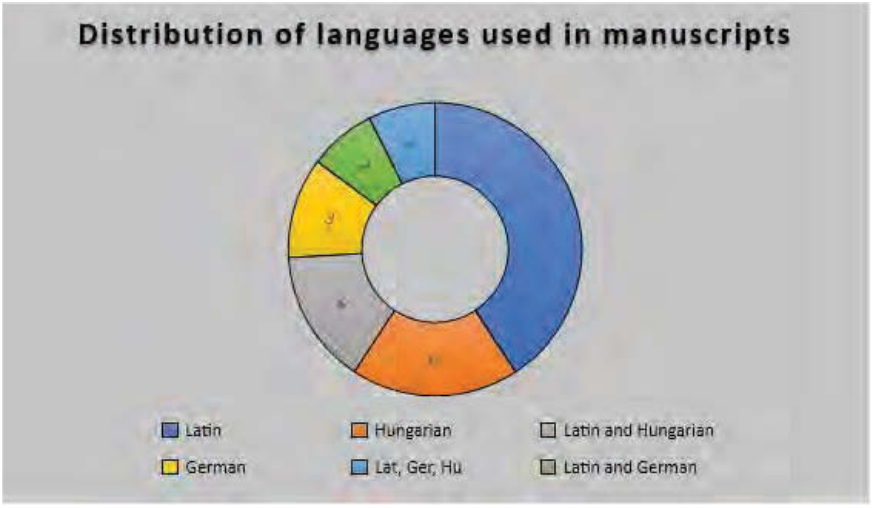

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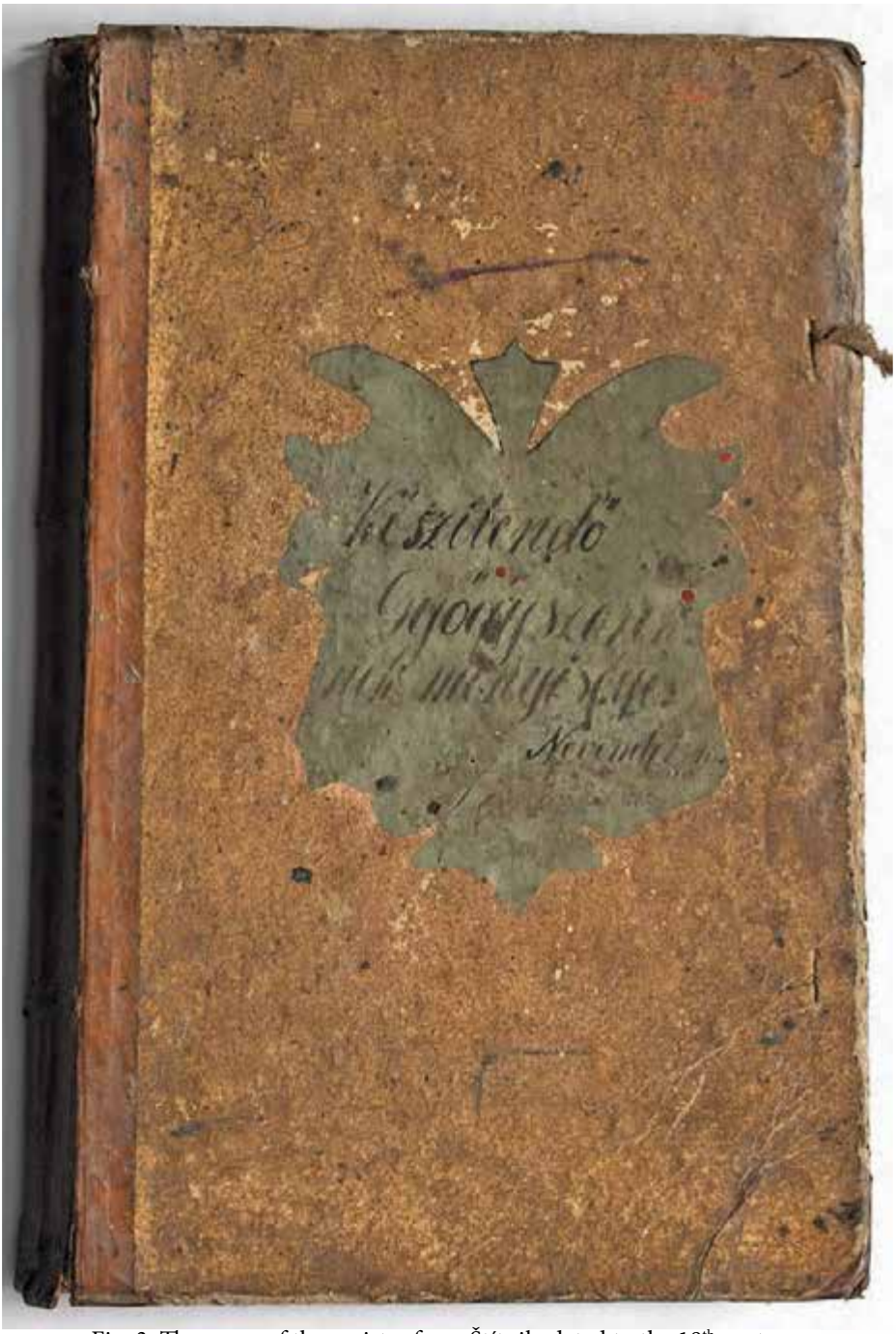

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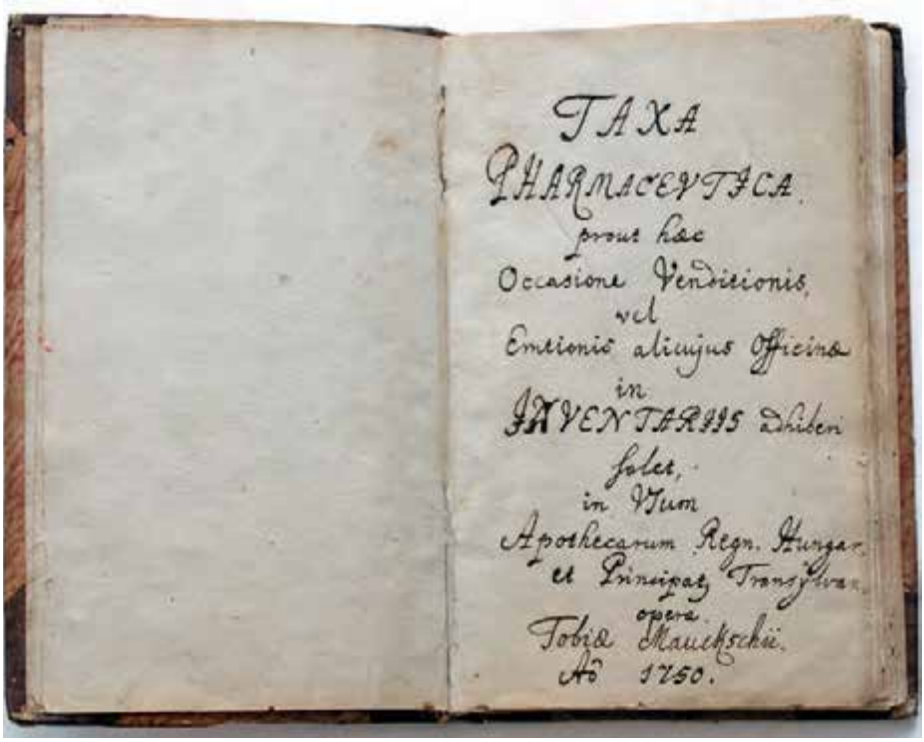
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Apothecarum Regn. Hungar.
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opera
Tobiæ Mauckschii.
Aº 1750.

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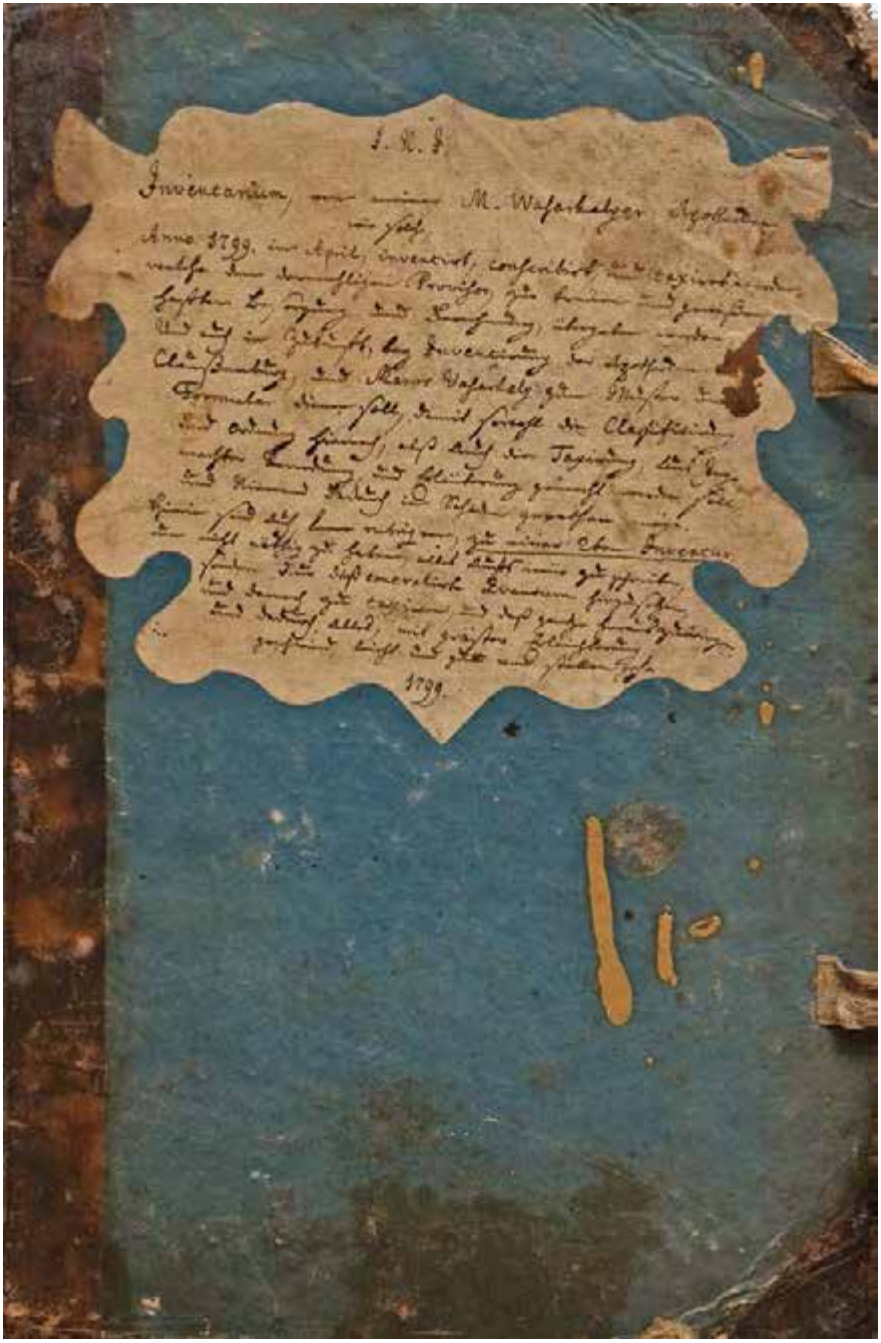

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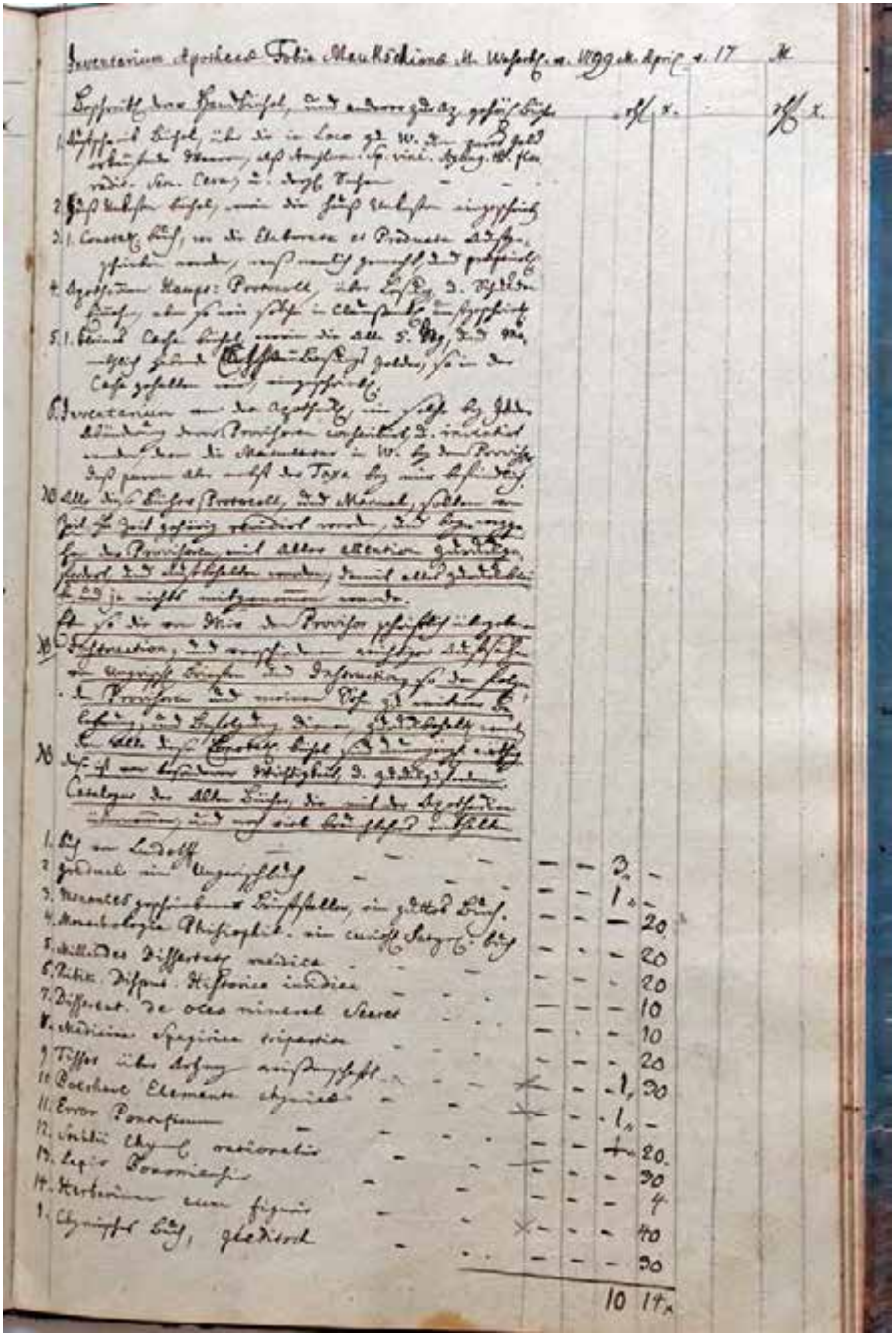

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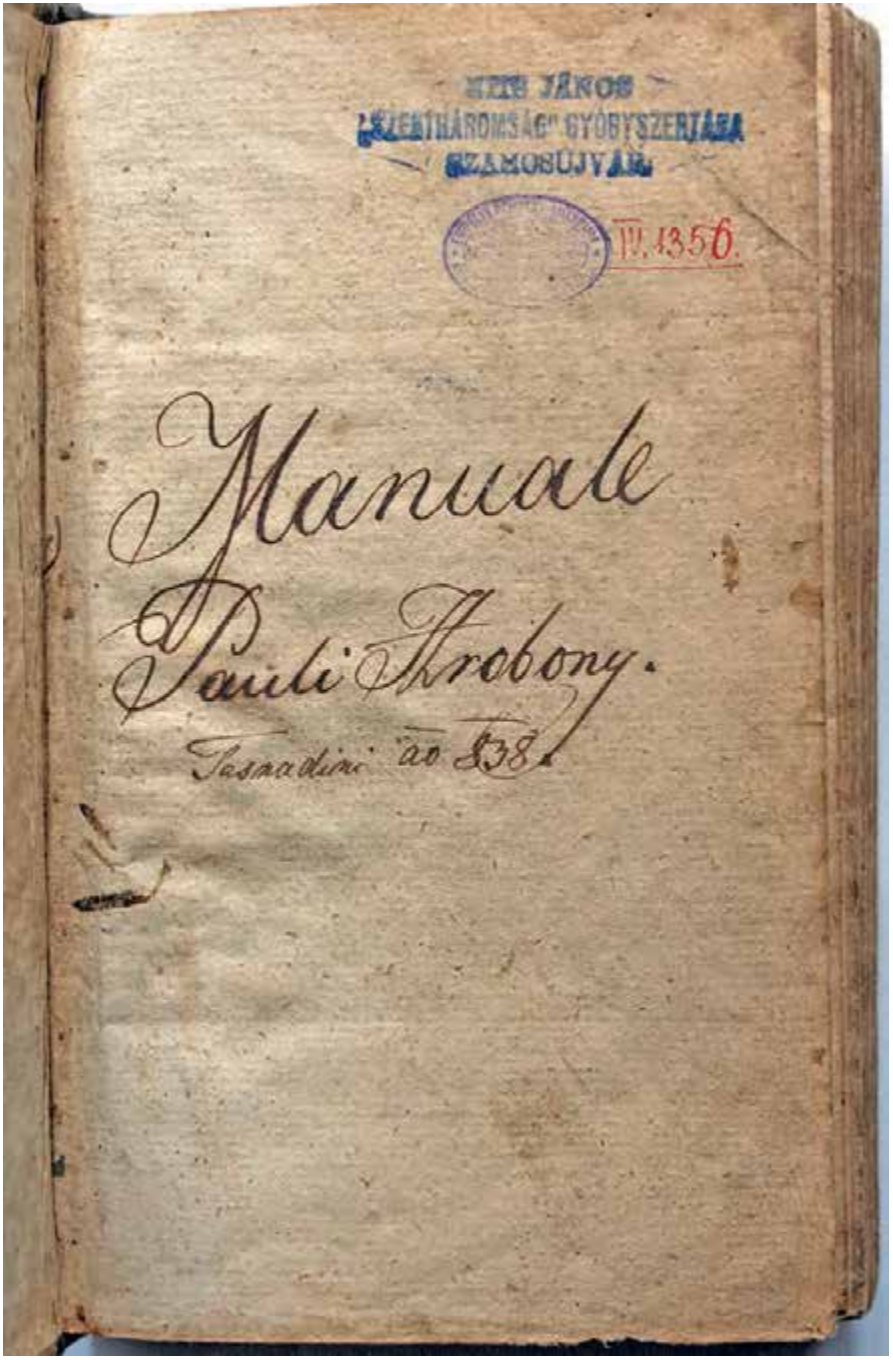

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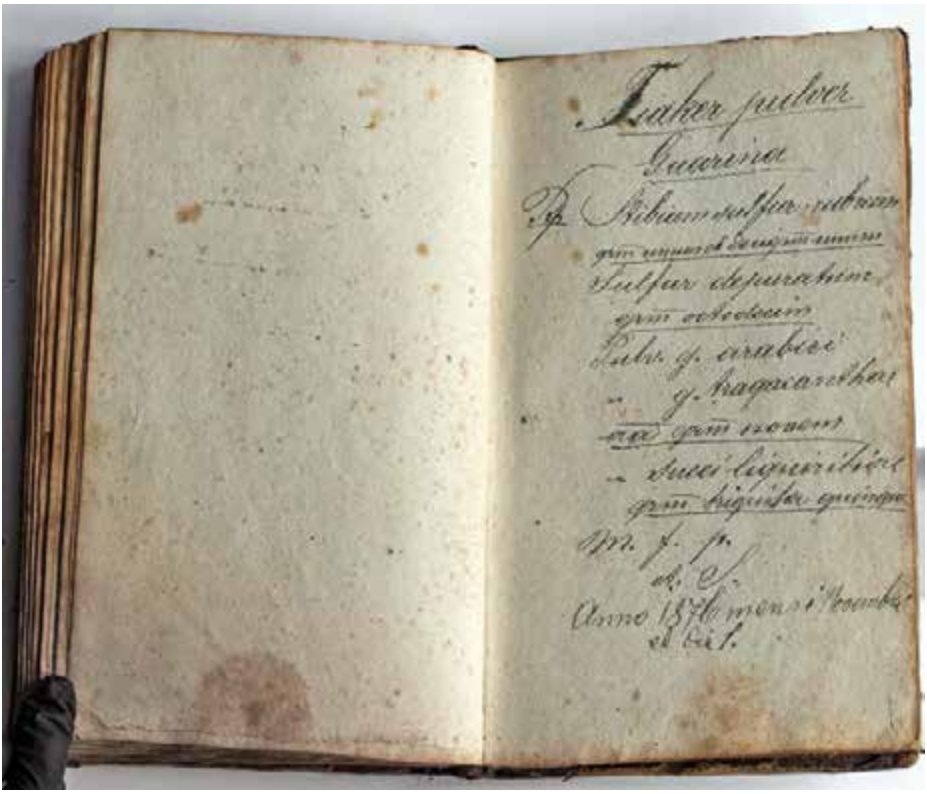

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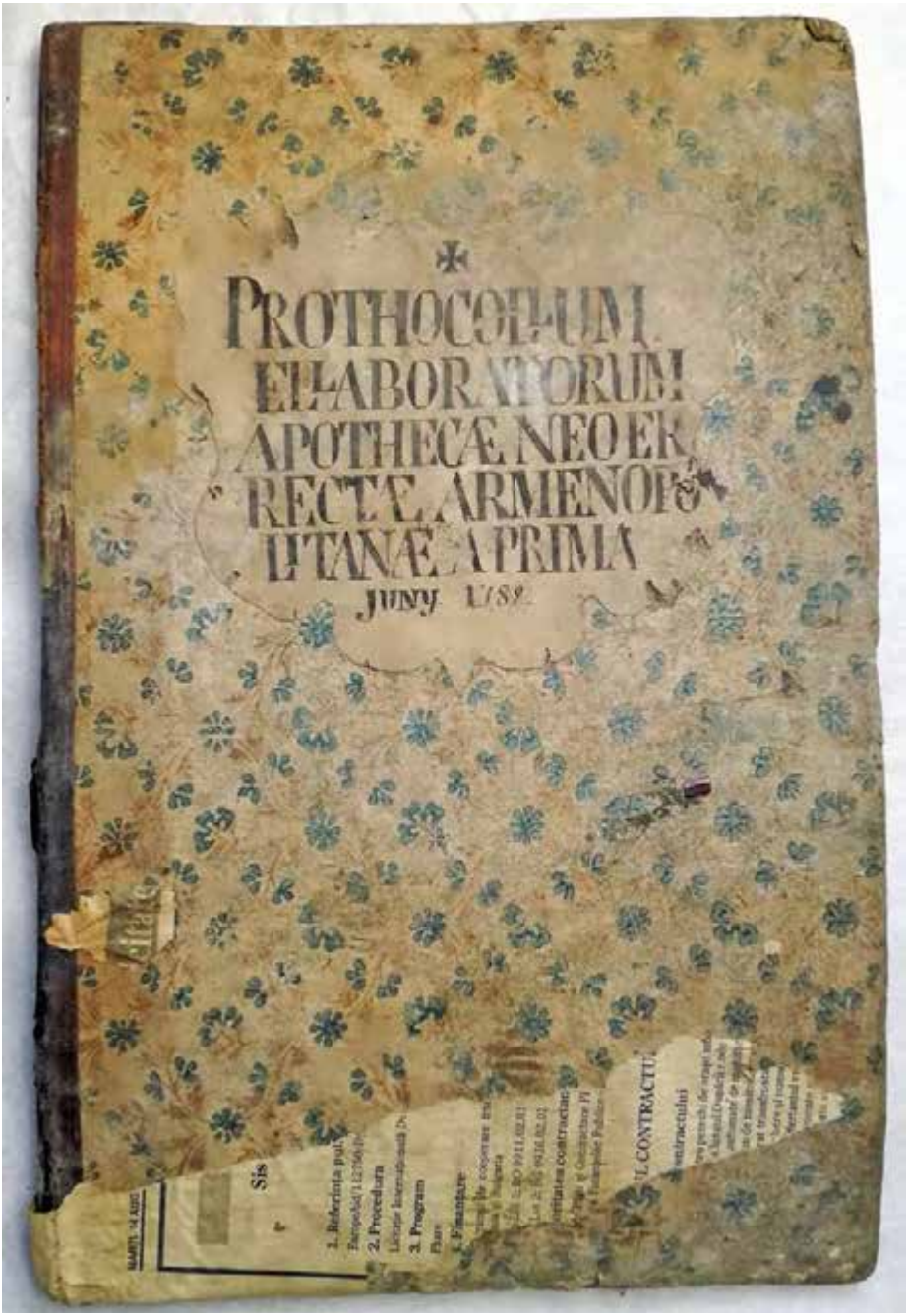

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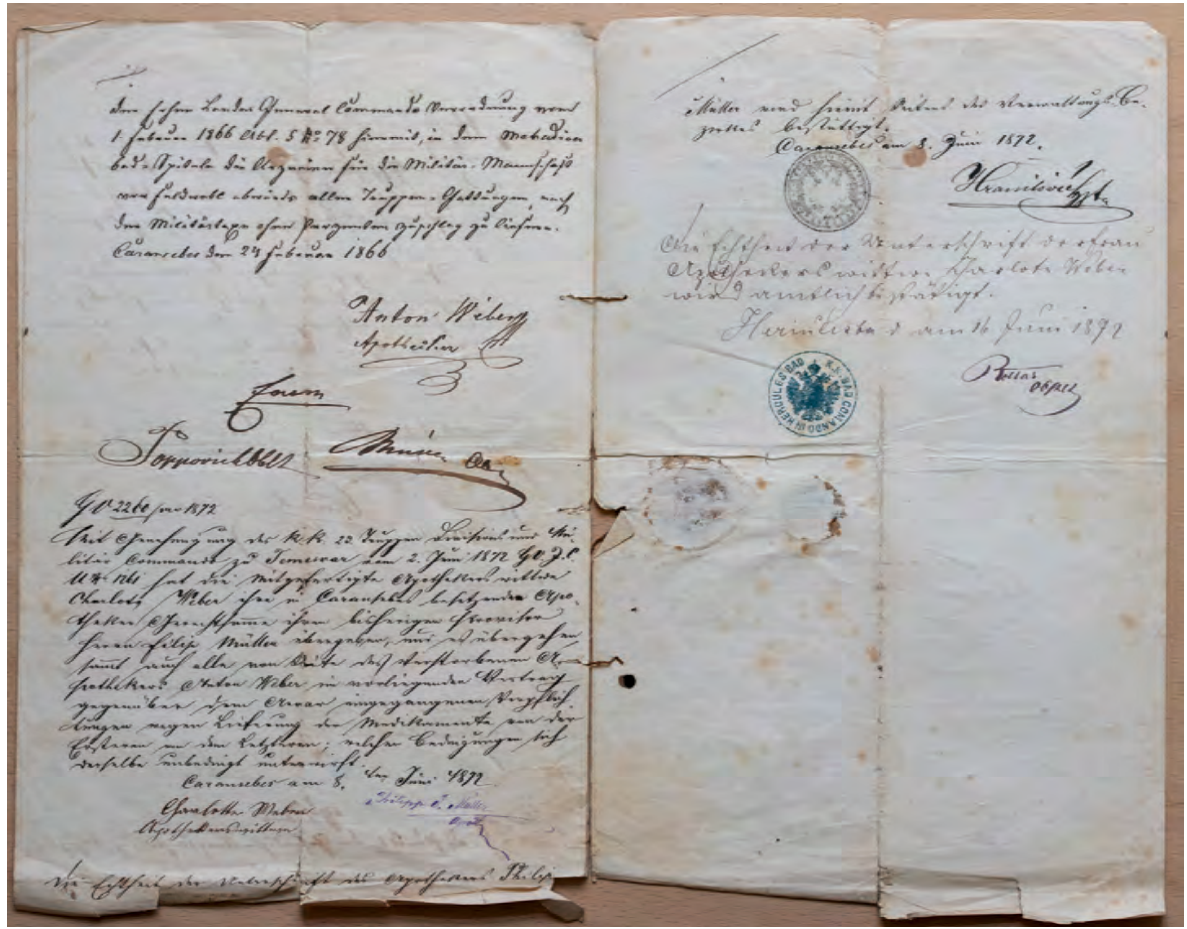

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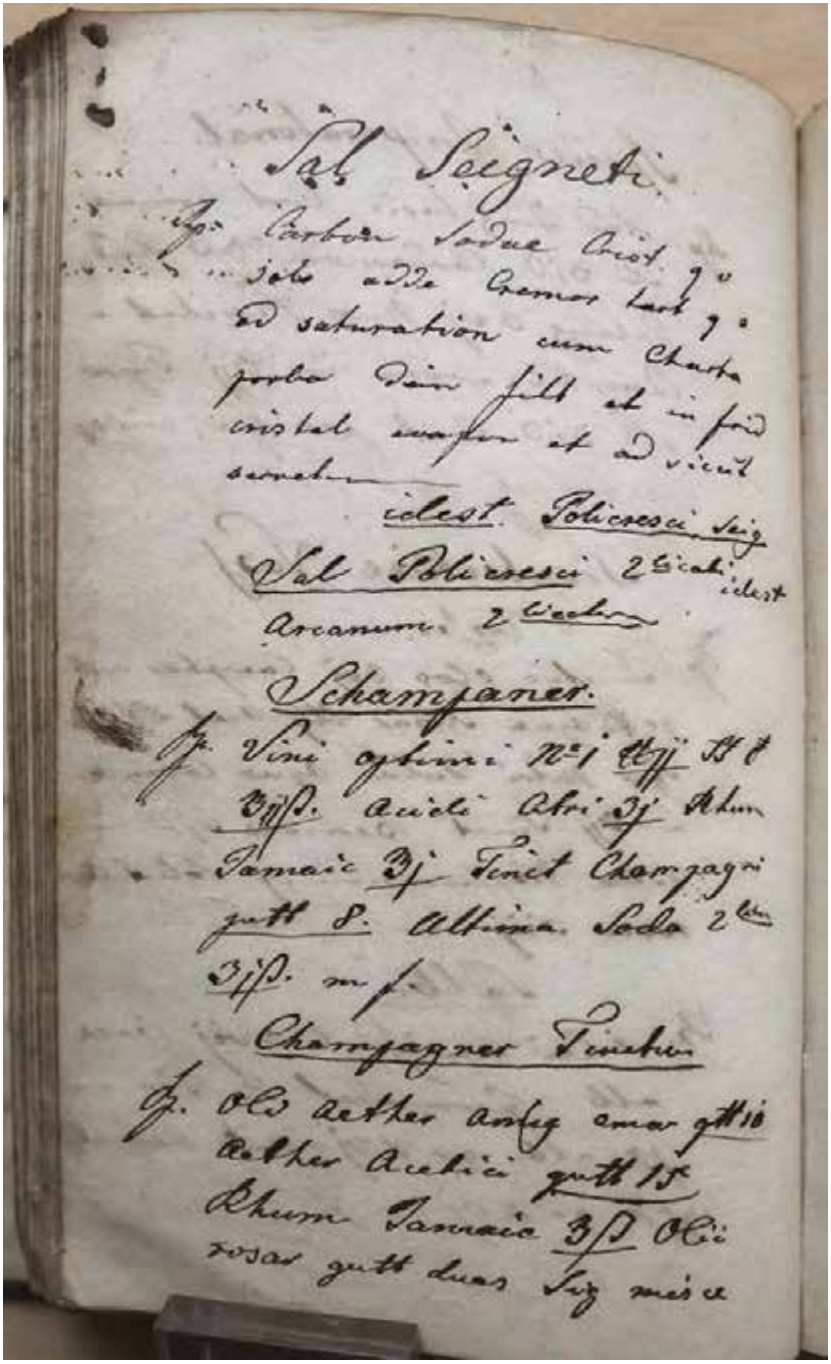

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Care of the Collection – A Conservation Overview

Ioana COVA

Abstract: The paper presents the state of conservation of the collection and the conservation measures taken in the context of goods on display for a long time, packed and relocated for the recent renovation of the Mauksch-Hintz House, moved again as part of a novel display, manipulated for photography, measurements, and sample collection.

Keywords: conservation, collection care, artifact handling, artifact storage, preventive conservation.

Introduction

In 2018 the building previously housing the History of Pharmacy Collection (a privately owned building) underwent massive restoration and the collection was packed and moved to the headquarters of the National Museum of Transylvanian History, in storage, where it remained until 2023 when it was moved again to the Hintz House in a renewed permanent exhibition. Since most of the collection was almost continually displayed,[1] its temporary relocation in storage at the museum's headquarters created an opportune time for a thorough research and complete condition assessment. For many of the objects the opportunity meant that they would undergo curative conservation and restoration treatments, as well as benefit from preservation measures aimed at groups of objects, aspects which were paramount in the PHARMATRANS project.

[1] See Gruia, *The History of the Collection*, in the present volume.

Collection care

The logistics of assessing and re-assessing the condition state of an entire collection, apart from its exhaustive research, was a complex one, particularly since the objects were in keeping in different storage facilities within the museum,[2] as the collection was not designated a permanent storing area in the museum's main building.

The collection contains a wide variety of pharmaceutically-related objects, mainly pharmaceutical containers[3] made of different types of materials, pharmaceutical books and equipment (Figs. 1.a, 1.b, 1.c). Part of the collection consists of published books and manuscripts[4] as well as photographs, pharmaceutical diplomas, labels, advertising materials (Fig. 1.d), prescriptions, on paper and/or cardboard, particularly from late 19th – early 20th century.

The complete re-assessment of the collection began once PHARMATRANS project started, as one of its main objectives was producing a full report of the current condition state of the entire collection to be published in the catalogue. The documentation of the collection's condition was conducted by collection conservator Ioana Cova through a period of approximately two years. The purpose of the condition survey was to provide an up-to-date, object-oriented account of the degrees of degradations,[5] marking the necessity for restoration interventions and preservation/display particularities. The information was then gathered in a spreadsheet-like type system, archived within the museum's electronic records. Aspects of the collection's condition state are included in the present catalogue, in a dedicated section of each entry.

The collection conservator categorized the objects, based on their condition state, in four main types: 1. very good condition (Fig. 2), when the objects are in a pristine state, 2. good condition, when the objects are structurally and aesthetically intact (Figs. 3.a and 3.b), 3. bad condition, when dealing with moderate degradations (Figs. 4.a and 4.b) and 4. very bad condition, when the objects show significant degradations or losses (Figs. 5.a and 5.b). Most objects, i.e. approximately half of the collection, would fall into the second category while the other half would have objects from the other three categories. Of the second half, approximately 25% of objects required

[2] Thorp 1994.
[3] See Gruia, *An Overview of the Collection*, in the present volume.
[4] See Gruiță and Pakucs in the present volume.
[5] Michalski 2004.

minimum and rather simple conservation interventions, performed by the collection conservator, such as removal of dust, reattaching a misplaced inventory number or removing improper ones (Figs. 6.a and 6.b).

The complete understanding of the condition state of the objects also helped prioritize their urgency for curative conservation and restoration interventions, together with restoration experts. Thus, the collection conservator has determined that approximately 150 glass, porcelain and ceramic containers were in need of restoration treatments. The objects in question were taken to the museum's Restoration Laboratory, in the care of specialists: Cornelia Rotariu and Tudor Tomescu, experts in glass, porcelain and ceramic restoration, Radu Cordoș – expert in metal restoration and Adriana Bulbuc – expert in paper restoration.[6] Curative conservation and/or restoration interventions were then undertaken, based on the objects' specific degradations, ranging from basic treatments, such as surface, mechanical and wet cleaning to more complex restorations,[7] such as addressing stains, dents, chippings and cracks, removing old, improper repairs or restoring the object's structure and physical integrity by filling in gaps and reattaching detached fragments (Figs. 7.a and 7.b), using conservation-grade materials. As the collection contains a wide variety of pharmaceutically-related objects, made for the purpose of being used in the pharmaceutical profession, particularly apothecary containers, boxes and equipment/tools, it is inevitable that some items would have mechanical degradations and would be characterized by wear, tear and breakage (Fig. 8). Additionally, the type of materials from which objects were made dictate what kind of deterioration might occur, as each material reacts differently to external agents of deterioration.

In terms of types of degradations, most common were surface dust deposits, a general damaging agent for all objects. As dust and dirt tend to deteriorate the object if not removed, the team of restoration experts mentioned earlier, together with the collection conservator, proceeded to clean approximately 200 objects, mostly apothecary containers and equipment, over a period of three years, from 2021 to 2023. The cleaning procedure, a subsequent activity in the overall conservation and restoration process, was done using conservation-grade materials and instruments, strictly applying principles and methods approved within the field (Fig. 9.a and 9.b).

In addition to the above-mentioned objects, 163 glass containers and dozens more fragments, found during an archaeological excavation by

[6] The documentation recording the restoration interventions is kept in the National Museum of Transylvanian History's Restoration Laboratory archive.

[7] Caple 2000.

Viorica Rusu-Bolindeț, PhD, that subsequently entered the collection, were conserved by expert restorers Cornelia Rotariu and Tudor Tomescu.[8] The two experts undertook the sorting, mechanical and wet cleaning, and reattaching of loose fragments of the artefacts, and addressed the proper conditions for storage and display, together with the collection' conservator Ioana Cova. Special attention was given during the wet cleaning process, as some jars were likely to still preserve traces of their paper or painted labeling (Figs. 10.a and 10.b), an important aspect in the further identification of the bottle's contents, producer, etc.

Overall, more than 500 objects were conserved and/or restored in a period of more than two years, specifically 254 objects in 2021, 264 in 2022, and a couple dozen in 2023.

Less complex but equally important were conservation activities carried out on paper objects which were recently uncovered in storage in the Hintz House. The recently uncovered collection of objects includes documents, invoices, recipes, but also pictorial objects, like advertisements, ranging from 1930 to 1944 in particular, but also from 1890 as was the case of magazine cuts. Although this large collection is not included in the catalogue, it can aid in the reconstruction of the history of both the Hintz pharmacy and family and was, therefore, integrated in the overall conservation plan (Figs. 11.a and 11.b).

Additional preventive conservation measures aimed at the 167 books and 378 manuscripts within the collection were taken.[9] The objects were, first of all, assessed by the conservator and categorized as described above. Most objects would fall into the middle categories, with only few items being either in very good or very bad conservation state. As they were meant to be handled, most books within the collection, published or manuscript, inevitably show multiple deteriorations, particularly wear, tears, stains and foxing (Figs. 12.a and 12.b). Next to improper handling, the environmental conditions to which the books were exposed during their lifetime, before and even after they entered the museum's collection, mainly incorrect temperature, humidity, light and pollutants, added to the occurrence of degradations. The different materials from which books are traditionally made, i.e. paper and textile fibers, as well as cardboard, wood and metals for bindings and covers, inks and adhesives (generally a composite of different materials), also contributed to the objects'

[8] The documentation recording the restoration interventions is kept in the National Museum of Transylvanian History's Restoration Laboratory archive.

[9] See Gruiță and Pakucs in the present volume.

deteriorations. However, during the PHARMATRANS project the deteriorated books did not receive curative conservation or restoration treatments but mostly preventive measures were applied.[10] Books within the collection were placed anew in museum-standards covers and acid-free, often custom-made, boxes (Fig. 13) which would ensure better storage and display, by supporting their structure and thus reducing risks of multiple handling and effects of agents of deterioration.[11] While considering their storage, the books were placed according to their various sizes and shapes, but also to the materials used to make them. Some would be stored upright, in protective enclosures, if need be, and some were laid flat, in custom-made boxes; preservation measures would be considered also for their display, in terms of techniques and materials.[12] Further restoration treatments will be performed at a later time given that their assessment by the collection's conservator noted that none of the objects had degradations which would immediately[13] require interventions.

Protective enclosures, such as folders, mats or envelops made form acid-free paper and/or cardboard (with a neutral pH) were also used to place and keep other paper objects, not all of them benefitting so far for proper, optimum enclosing materials (Fig. 14). Paper-based objects were placed in supportive protective enclosures in order to be properly placed in museum-standards storage modules, as careful handling, storage and display methods would minimize the risk of further degradations.[14]

Particular care in handling, storing, photographing, researching and, ultimately, conserving, was given to the approximately 7% of the containers that still retain traces of *materia medica*,[15] both for the objects but also for personnel safety reasons. When handling, packing, storing, researching and photographing various[16] containers safety measures were applied: the collection conservator and/or other trained museum personnel, such as collection curator, restorer, photographer, used protective equipment (Fig. 15) such as disposable latex gloves, lab coats and FFP3-type masks, while working in ventilated, large rooms. Some containers would still preserve different

[10] Getty Conservation Institute 1994.

[11] https://www.canada.ca/en/conservation-institute/services/care-objects/paper-books/basic-care-books.html

[12] Powell 2016.

[13] Caple 2000.

[14] Powell 2016.

[15] See Gruia, *Overview of the Collection*, in the present volume.

[16] Ogilvie, Carter, Evershed 2000.

amounts or traces of toxic, flammable or corrosive substances, poisonous seeds and roots or even unidentified materials (Figs. 16.a and 16.b).

Conclusions

The up-to-date reassessment of the entire Pharmaceutical Collection at the National Museum of Transylvanian History was a crucial objective in the PHARMATRANS project as it determined what the condition state was for each object and enable the collection's curator and conservator to identify items in need of restoration, choose the optimum solution for handling for research purposes and, consequently, for future storage, display and accessibility.

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Electronic resources

https://www.canada.ca/en/conservation-institute/services/care-objects/paper-books/basic-care-books.html accessed on the 5th of December 2022

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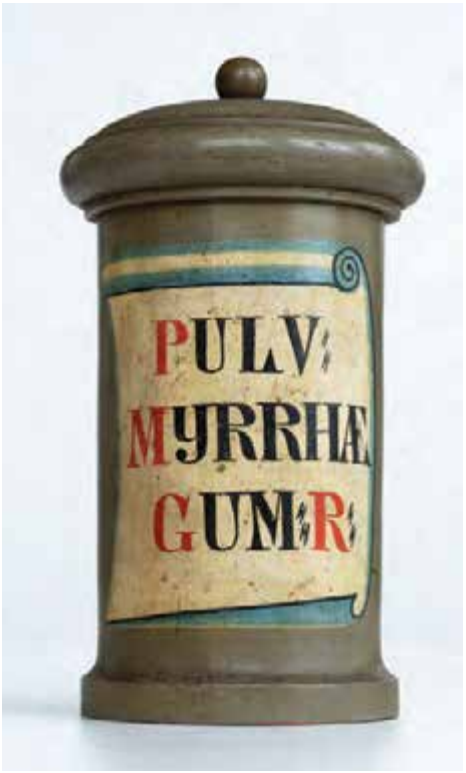

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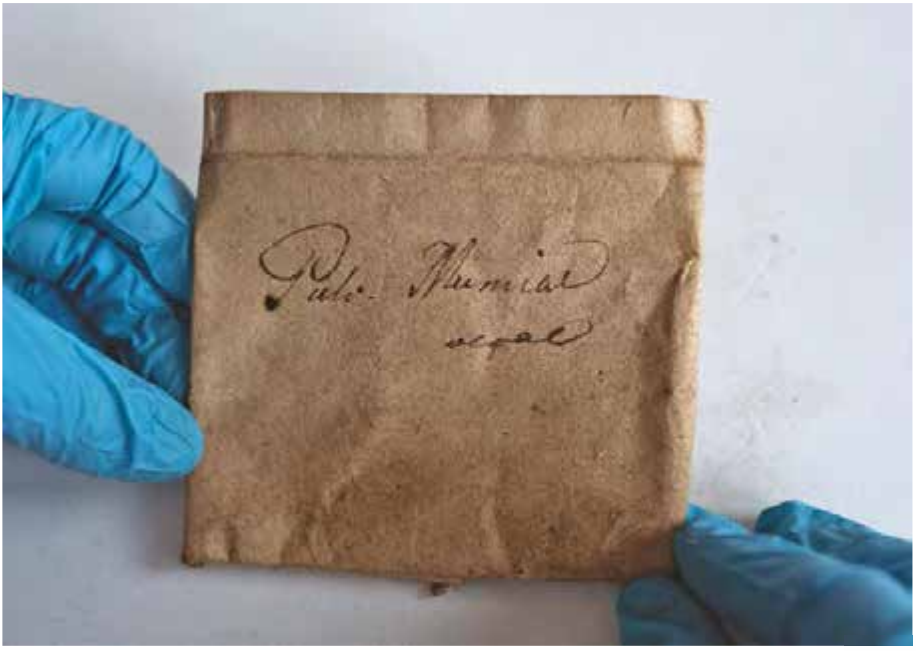
Fig. 4.a. Pharmaceutical container, inventory number IF 320 – types of deteriorations.



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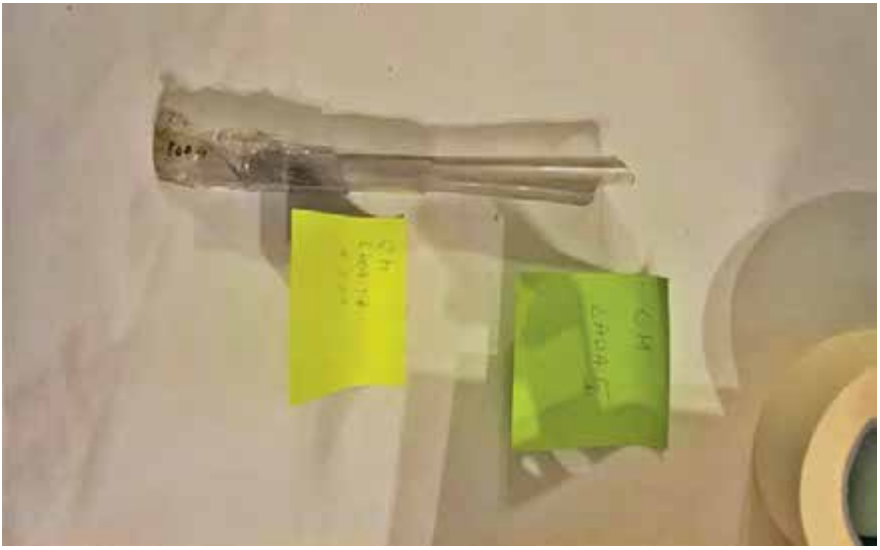

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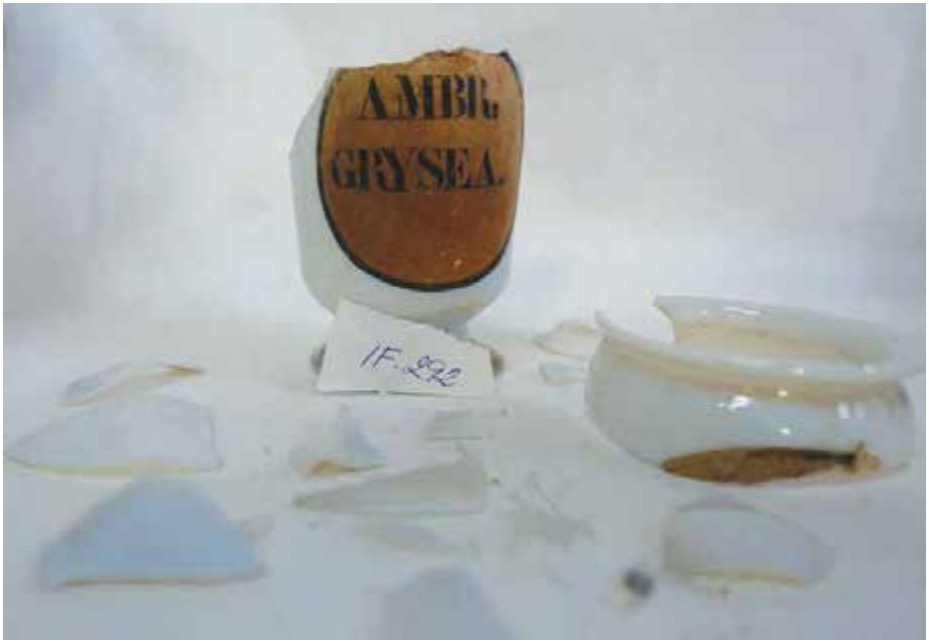
Fig. 6.a. Pharmaceutical container, inventory number IF 59 – types of deteriorations.

Fig. 6.b. Pharmaceutical container, inventory number IF 266 – types of deteriorations.



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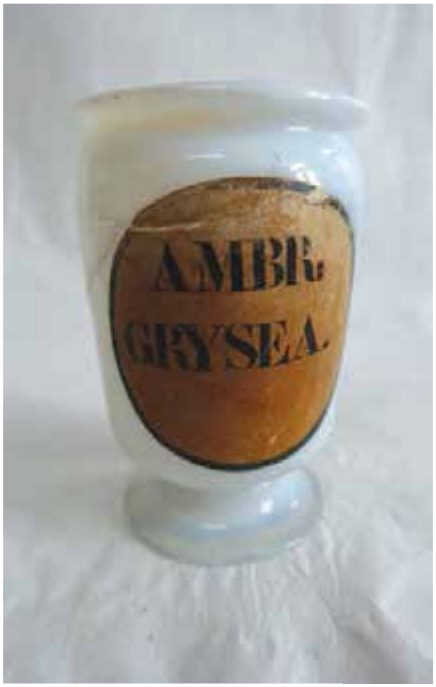

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Fig. 9.a. Paper object, no inventory number – detail of surface mechanical cleaning.

Fig. 9.b. Paper object – detail of surface mechanical cleaning.

Fig. 10.a. Glass bottles, inventory number IF 2471 – after conservation/restoration.

Fig. 10.b. Glass bottle, inventory number IF 2462 – after conservation/restoration.

Fig. 11.a. Paper objects, no inventory number – types of degradations.

Fig. 11.b. Financial documents – types of degradations.

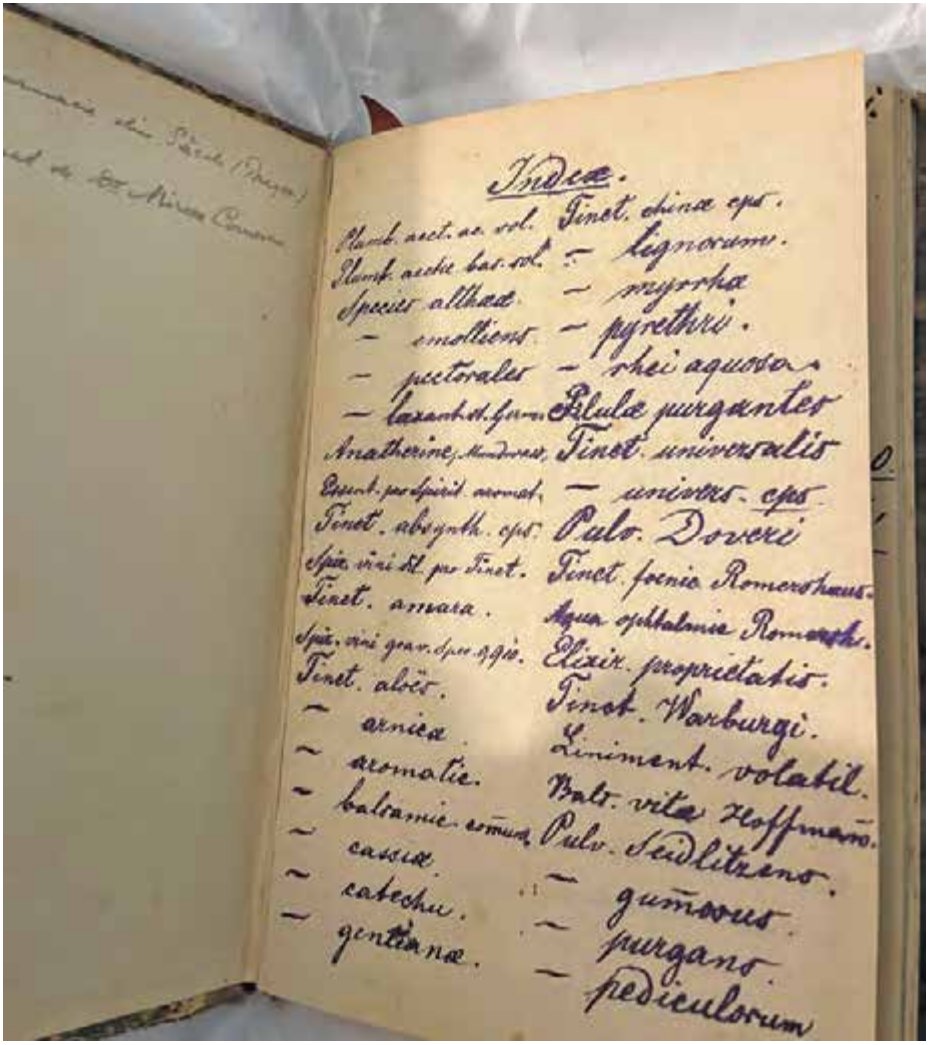
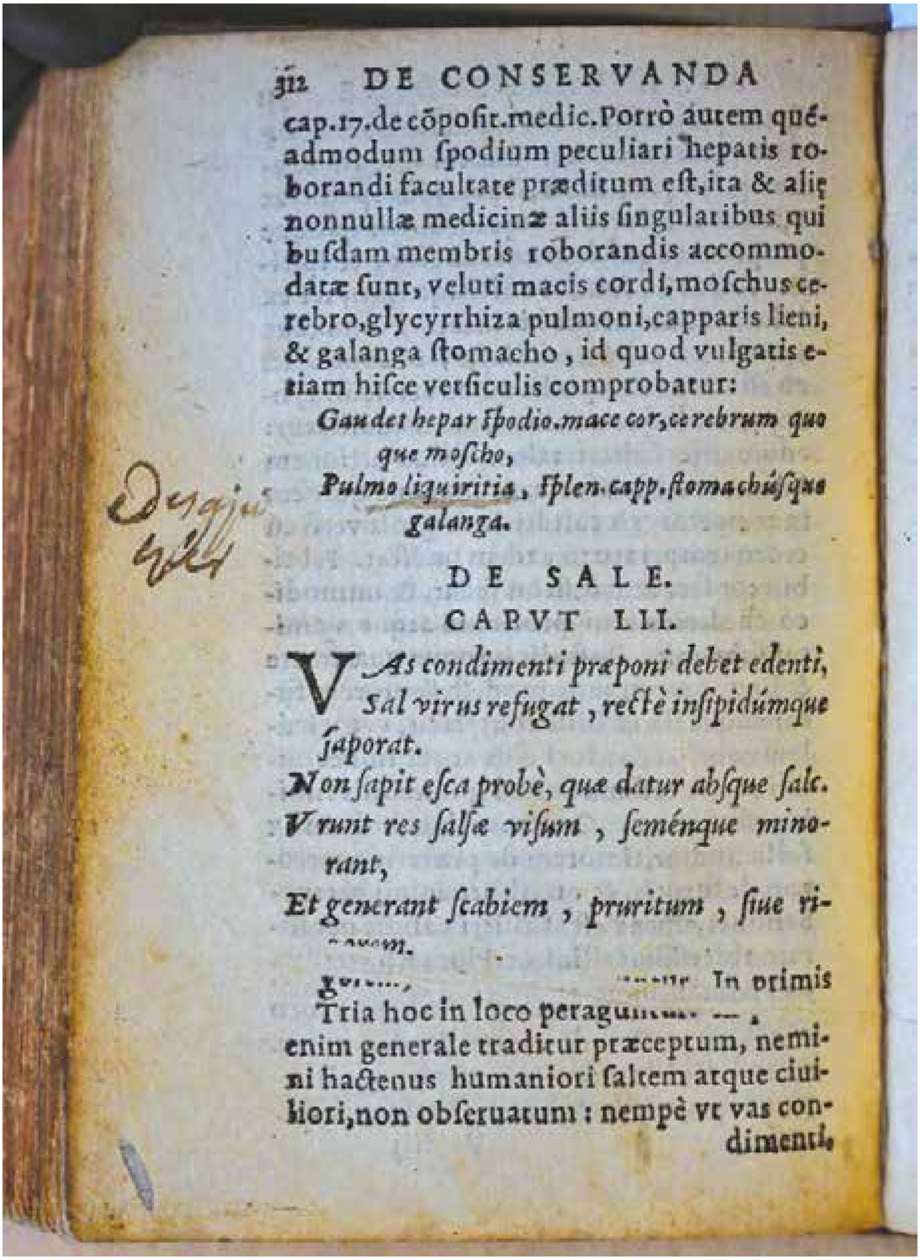


Fig. 12.a. Book – types of degradations.



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& galanga ſtomacho, id quod vulgatis e-
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que moſcho,
Pulmo liquiritia, ſplen capp. ſtomachúſque
galanga.

DE SALE.
CAPVT LII.

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rant,
Et generant ſcabiem, pruritum, ſiue ri-
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Fig. 12.b. Book – types of degradations.

Fig. 13. Book – preventive conservation measure.

Fig. 14. Paper object, inventory number IF 1275 – preventive conservation measure.

Fig. 15. Paper object, inventory number IF 2407 – detail of handling the objects.

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THE CONTRIBUTION OF SCIENTIFIC ANALYSES TO A BETTER UNDERSTANDING OF THE COLLECTION

Márta GUTTMANN, Andrea Beatrix MAGÓ

Abstract: The article briefly presents the main analytical methods used within the PHARMATRANS project for the physical and chemical study of some of the objects belonging to the History of Pharmacy Collection of the National Museum of Transylvanian History in Cluj-Napoca and the content of some items. It discusses the aim of the performed analyses and the ethical aspects of the sampling. The individual results concerning each analyzed object will be presented in the detailed description of the collection items.

Keywords: *materia medica*, chemical and physical analyses, sampling, microscopy, XRF, FTIR, GC-MS, HPLC.

Introduction

Microscopical and analytical – chemical and physical – studies of the items belonging to the History of Pharmacy Collection of the National Museum of Transylvanian History in Cluj-Napoca were also part of the PHARMATRANS project,[1] aiming to contribute to the knowledge of the collection with objective, scientific data-based information regarding the material composition of the objects and their contents. It was not possible to analyze the whole collection, items selected for study were on one hand the objects considered the most valuable in the collections, on the other hand those objects where it was assumed that the results of the analyses could add

[1] See Gruia, *Project Presentation*, in the present volume.

significant information to the knowledge on the object or on their content, the materials used for healing purposes in the previous centuries.[2]

One of most studied items was the portable apothecary chest of noblewoman Tereza Kemény (inventory number IF 1903, Fig. 1), dating from the 18th century, belonging to Iuliu Orient's old collection, donated to the museum in 1905, considered to be one of the most valuable items of the collection.[3] The aim of its study was a better understanding of the materials used for the chest and the content of the jars. Supplementary, some 18th- and 19th-century jars containing organic or unidentified *materia medica* were considered for content analyses. The material of some metal, glass, textile, paper, and parchment objects was also studied.

Materials of heritage items are usually quite specific, historic materials, that underwent complex decay processes in time. Therefore, to have reliable results, analyses of heritage objects and historic mixtures must be performed by specialized scientists (called conservation or heritage scientists), or by chemists or physicists working in close collaboration with conservation scientists in museums and with art historians, curators, archaeologists, conservators having basic knowledge in sciences and materials of heritage objects. An effective interdisciplinary collaboration is essential in obtaining new, valuable information. Results can usually be considered valid only if supported by more than one analytical data.[4]

In the following, the main analytical methods used will be presented, while individual results will follow in the detailed description of the collection items.

Studies performed within the PHARMATRANS project

Measurements were carried out, as far as possible, with non-invasive techniques, partly at the National Museum of Transylvanian History in Cluj-Napoca, partly in collaboration with other laboratories from the country and Europe, with strong expertise in the study of heritage materials, specifically historic pharmaceutical mixtures.

Sometimes, questions concerning the materials of the objects could be answered only using analytical methods that needed a small amount of material. Sampling was performed only if strictly necessary, sample size was kept at a minimum; samples were mostly barely visible, weighting only some micrograms.

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[2] Izzo *et al*, 2021.

[3] See Gruia, *Overview of the Collection*, in the present volume.

[4] Ribechini *et al.* 2011.

Ideally, samples are not affected during the measurements and can be used for more than one analysis. Not every analytical method is non-destructive, though some of them need a chemical preparation of the sample prior to the measurement, that leads to the complete destruction, loss of the sample. Still, if the information obtained contributes to a better understanding of the object and therewith of its message, the sampling has a solid, acceptable reason.

Sampling

Samples used for microscopy were extracted using scissors, scalpels, and tweezers (Fig. 2). The main challenge was to obtain samples from the closed jars containing organic mixtures. Some of these jars were closed with a cork stopper topped with corroded metallic screw cap, sealed with red wax. Removing the cap for reaching the content would have meant irreversible damage for the aspect of the jars, severely compromising their expositional value. It was an attempt to reach the content of some glass jars by drilling a hole in their bottom, that could be sealed with an acrylic resin after removing the sample. Finally, after several tests, it was decided that this intrusive sampling method should be used just in case of a single jar.

Analyses of the wood type used for the medicine chest would involve the removal of a larger wood sample from the object. In this case, it was decided to give up sampling. The wood species used for the manufacturing of the chest was predictable from the macroscopic aspect of the object, the additional information gathered from the microscopic analyses did not justify the destructive sampling.

One further problem of the sampling process was the eventual contamination of the samples. Some of the foreseen analytical methods being extremely sensitive, even the grease of an unprotected hand touching the sample could alter the analytical results, so sampling was performed using nitril gloves, and tools and collecting containers of analytical cleanness.

Microscopic analyses

The first analyses performed were targeting the characterization of the paper and the thread used to close some of the jars of the portable apothecary chest. The study was performed within the scientific laboratory of the museum.

Microscopic studies were performed on small paper and textile thread samples, using an OLYMPUS CX33 stereomicroscope and a Nikon Optiphot2-Pol upright polarization microscope.

The observation of the paper samples collected from the brownish paper used for closing the top of more jars led to the conclusion that a handmade paper was used, containing reused vegetable fibers (rag fibers) and probably no, or little binder, anyway, in a decayed condition (Fig. 3). The yarn used to tie the paper onto the top of the jars proved to be at a microscopical observation made of cellulosic fibers, probably hemp[5] (Fig. 4). The diameter of the yarns varies from 0.5 to 1.8 mm.

The content of two of the jars, IF 1910 and IF 1917, labeled as *Mustár* (mustard, in Hungarian), was observed microscopically to determine if the content is consistent with the indication on the label. Comparing the microscopic image of the fragmented seeds from the jars to the aspect of some mustard seeds, based on the obvious similarity, it can be stated that the jars really contain mustard seed fragments (Fig. 5).

The hide species used for some parchment objects in the collection was also determined by comparing the microscopic aspect of the objects' material with the microscopic aspect of reference hide samples.[6]

X Ray Fluorescence Spectroscopy measurements

In the attempt to characterize the inorganic materials of the apothecary chest, like glass or metal elements, or some inorganic powdery contents, portable X Ray Fluorescence Spectroscopy (pXRF) measurements were performed. X rays are high energy electromagnetic radiations that interact with the electrons of the chemical elements within the materials, which consequently emit electromagnetic waves with lower energy, that are characteristic for each chemical element. pXRF is a non-invasive, qualitative, and semi-quantitative method that can reveal several chemical elements (in case of the devices used in the project, from natrium to uranium) in the composition of the analyzed material. Being fast and non-invasive, it has an extended use in heritage analysis. It is a very suitable method for the study of metal alloys, but also for inorganic compounds and higher atomic number elements in some organic materials. The device used for the *in-situ* measurements was an Elva X Prospector3 MAX with SDD type X-ray detector, operating at 50 kV, detection area of 10 mm^2, 60 sec acquisition time.[7]

All metallic elements of the portable apothecary chest were analyzed, iron and cupper alloys were ascertained (Fig. 6). The screw cap of the bottles proved to be a lead-containing alloy (pewter).

[5] Suomela *et al.* 2018.

[6] Leather type identification was performed by Lucreția Miu, PhD.

[7] The equipment was made available by SC Union SRL, Cluj-Napoca.

The method was also used to determine the composition of the inorganic content of some objects in the collection. For the analyses performed on samples a Bruker Elio pXRF device was used, with Rh-target microfocus–X-ray tube, SDD type detector, operating at U = 40 kV, I = 20 μA, 40 sec acquisition time.[8]

Infrared spectroscopy

Fourier transformed infrared spectroscopy (FTIR) is also an analytical method often applied to the study of cultural heritage materials. Infrared radiations are lower energy electromagnetic rays that can interact with electrons in covalent chemical bonds, thus can be used to identify different compounds. Resulting spectra are mainly interpreted in comparison to an international dedicated database.[9] The device used to analyze some apothecary jar contents was an Alpha Bruker Optics Spectroscope equipped with a Platinum Attenuated Total Reflectance (ATR) diamond accessory, working in the 4000 – 400 cm^{-1} spectral range, with a resolution of 4 cm^{-1} and 32 scans. OPUS 7.0 software was used to process and evaluate the spectra.[10]

Analyses based on chromatographic methods

The most difficult analytical issue to be addressed was the content of jars with *materia medica* consisting of organic mixtures. Most of these jars had labels indicating the historic name of the content. Historic pharmacopoeia studied by Ana-Maria Gruia provided some (not always easy to understand) information on the composition of the mixtures marketed under this trade name some centuries ago. Analyses were meant to aid in the better understanding of these mixtures.

Natural organic materials – such as resins, waxes, plant extracts or others – are usually complex organic mixtures containing more chemical components, with a variable composition, depending not only on the biological source (trees, plants, insects etc.), but also on their growth conditions (soil, weather, nourishment etc.). Furthermore, during the centuries these mixtures

[8] Measurements were performed at the Advanced Research Group for Cultural Heritage (ARCH Lab) of the Leather and Footwear Research Institute in Bucharest, on samples provided by the authors.

[9] Infrared and Raman Users Group, irug.org (accessed on the 5th of March 2023).

[10] Measurements were performed at the National Centre for Physical-Chemical and Biological Research and Investigation within the National Museum of Romanian History in Bucharest, on samples provided by the authors.

were kept in unknown, mostly unsuitable conditions, that induced severe chemical decay processes affecting the composition of the components in an unpredictable way. Adding to this the very small size of the sample available for analyses, very few labs have expertise to give valid results on the composition of historic ointments. Luckily, within the project the collaboration with two such specialized lab became possible. One of them is the Laboratory of Analytical Chemistry for the Conservation of Cultural Heritage, within the University of Pisa, Department of Chemistry and Industrial Chemistry, represented by Federica Nardella, PhD, Jacopo La Nasa, PhD, Prof. Erika Ribechini, Prof. Ilaria Degano, and Prof. Francesca Modugno.

The analytical method used by this team was gas chromatography coupled with mass spectrometry (GC-MS). Prior to the analyses the samples underwent chemical and physical treatment processes optimized for the identification of lipidic and resinous organic material in archaeological samples.[11] First, the large organic macromolecules were chemically decomposed in a mixture of smaller molecules. These mixtures underwent cleaning and chemically modifying processes which made them suitable for the GC-MS measurement. 2 µl-s were injected in the GC device, that first separated the components of the mixture (each component arrives to the end of a long chromatographic column at a different time; retention time in the column can be an indicator for the chemical composition of the components). Then, the separated molecules enter successively in the MS device that identifies the composition of each molecule, based on some resulting mass fragments with a certain electrical charge. Specific databases enable the identification. The assumed composition of the original organic mixture is deduced based on the identified resulting fragments.

Analyses were performed using a GS-MS system (supplier Agilent Technologies, Palo Alto, CA) consisting of a 6890N gas chromatograph system coupled with a 5975 mass selective detector single-quadrupole mass spectrometer equipped with PTV injector. The mass spectrometer was operated in the EI positive mode (70 eV) analyzing mass in the range m/z 50–700. For the chromatographic separation, an HP–5MS fused silica capillary column (30 m × 0.25 mm i.d., 0.25 µm film thickness) with a deactivated silica precolumn (2m × 0.32 mm i.d.) was used. The analyses provided valuable information on the composition of the pharmaceutical mixtures.

The other specialized laboratory involved in the analyses of organic mixtures was the lab of the Department of Pharmacognosy and Herbal Medicines

[11] Colombini *et al.* 2005.

at Wroclaw Medical University in Poland, represented by research fellows Danuta Raj, PhD and Dr. Maciej Włodarczyk. This team uses for analyses a different chromatographic method: liquid chromatography coupled with mass spectrometry (LC-MS). This method is focused more on the non-volatile components in the samples, serving as complementary source of information. Moreover, for compound identification this laboratory refers not only to databases, but also to the raw materials from their own collection, which broadens the results of the analyses.

Samples gathered from the same 14 mixtures were sent to both laboratories.

Conclusions

Analytical results added new, data-based knowledge and thus important value to the History of Pharmacy Collection. The international collaboration established within the project will continue and will probably bring further benefits in the study of this specific, outstanding collection.

Acknowledgments

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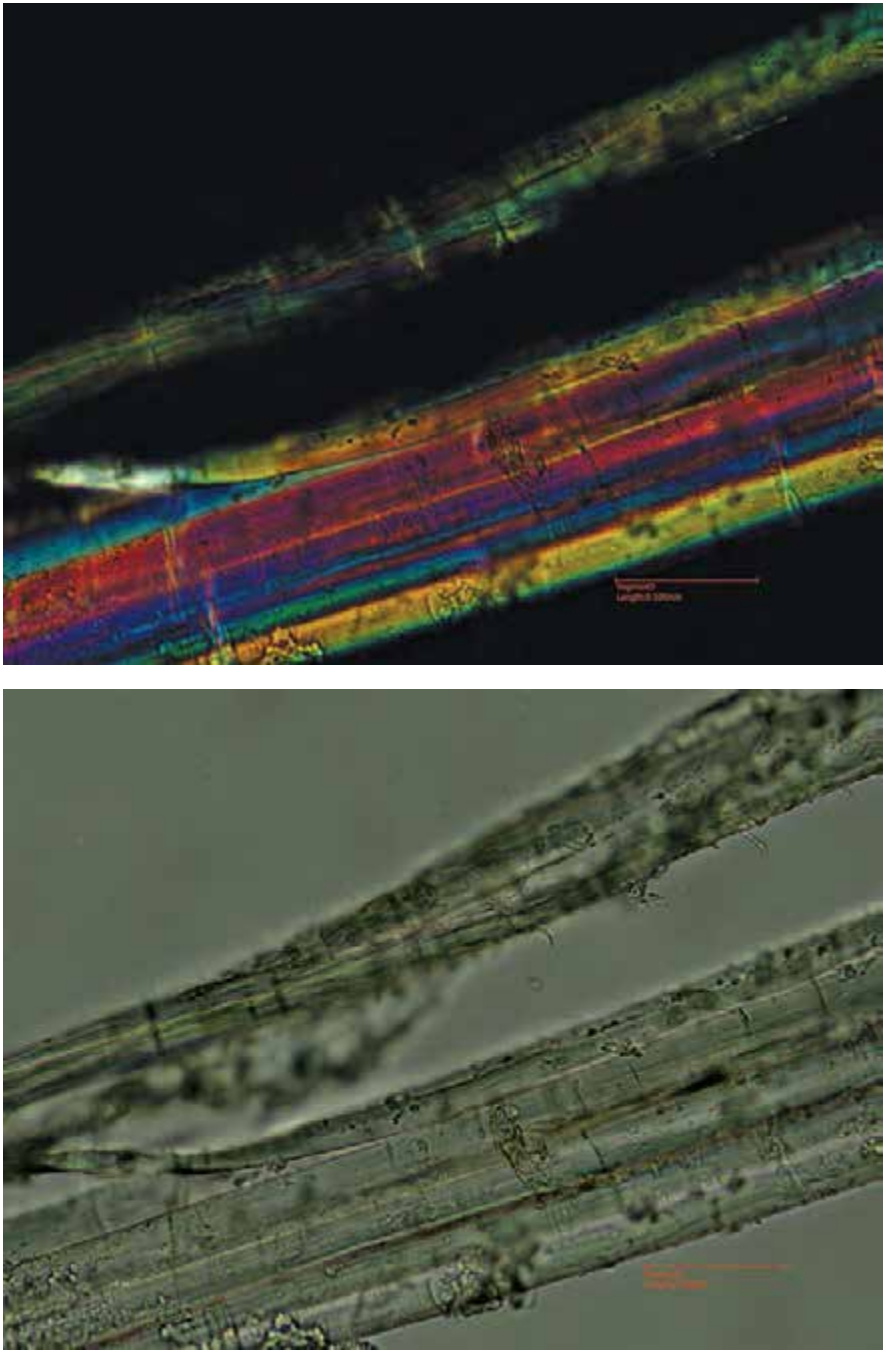

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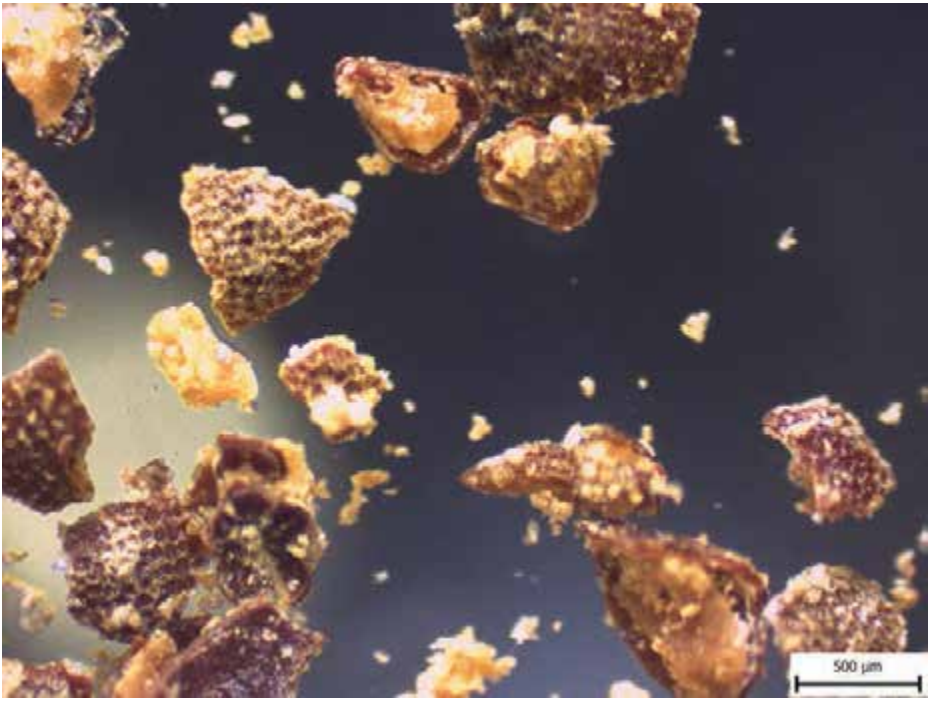

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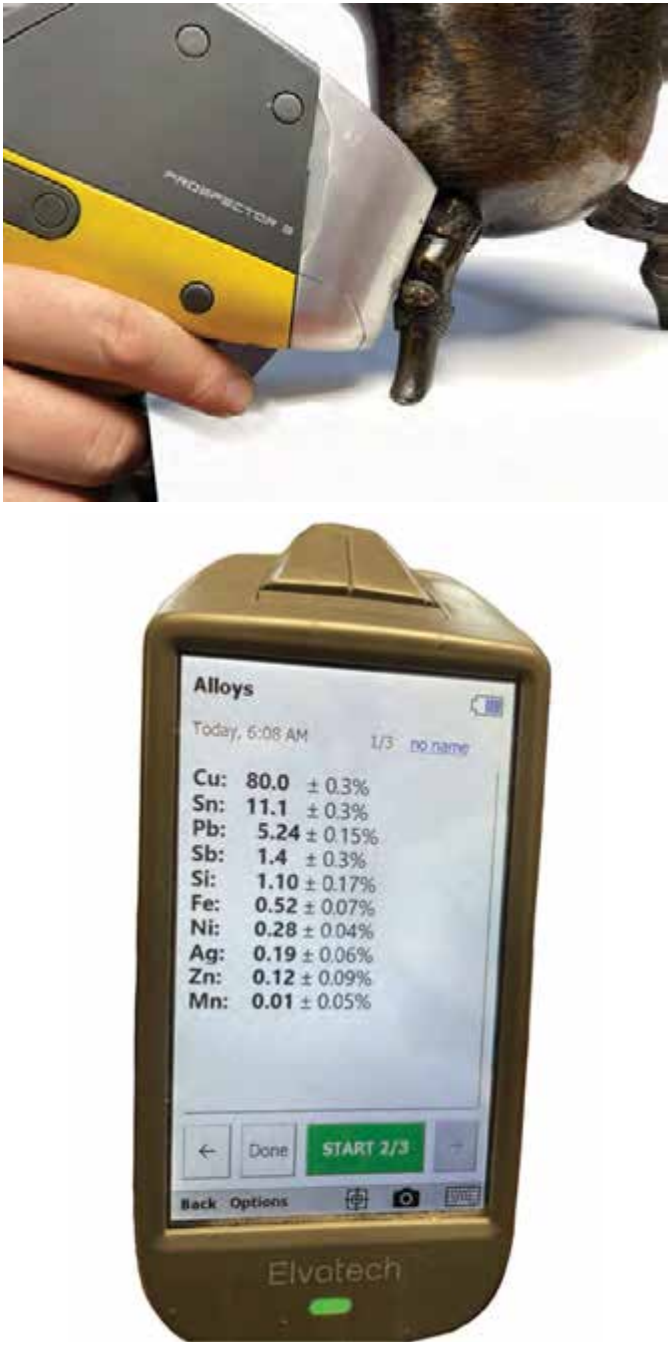

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CASE STUDIES

THE PHARMACIES OF CLUJ

Ana-Maria GRUIA

Abstract: The paper aims at providing a brief chronological development of pharmacies in Cluj-Napoca since the 16th century and to reveal the main characteristics of the trade during each century. Apothecary shops, public or private, often changed owners, names, and locations, thus the reconstruction of their history in early modern to contemporary Cluj is as yet tentative and depending on existing sources and published case studies. Still, this working overview provides the needed context to the understanding of the History of Pharmacy Collection in Cluj that includes numerous artifacts from the city's historical pharmacies.

Keywords: pharmacy history, Cluj, apothecary shops, Hintz pharmacy.

Introduction

People have always sought to alleviate their suffering, experimenting with substances and materials they could use as cures. The history of pharmacy can be envisaged as starting with the first natural (vegetal, animal/human, and mineral) medicines and steadily continuing until the industrial production of drugs. The production of cures is particularly difficult to trace in the older periods, as most of the main ingredients were also used for cooking, as dyes, cosmetics etc.[1] Though the pharmaceutical profession did become individualized during the Early Modern Period from the other healthcare providers (barbers, surgeons, doctors, bath attendants, travelling merchants etc.),[2] it included, and sometimes still does, general healthcare practices (consulting the sick and prescribing medicines, or at least recommending drugs), the production and selling of hygiene products and cosmetics, as well as sanitary education, both to the general public and, sometimes, on an academic level.

[1] For Cluj in the 16th–18th centuries, see Gruia 2018b.

[2] For Cluj, see Gruia 2018a.

The present paper only aims to provide an introductory study into the history of pharmacies in Cluj. This part of the city's history is neither linear, nor clear and fully documented. Pharmacies could function intermittently (with periods in which they were closed, or even deserted), they could be run by tenants or by owners such as the state, the city, religious orders, institutions, or individuals. Pharmacies changed owners, names, and locations, sometimes reusing the furniture, the specific containers, or tools and pieces of equipment. There could be more than one pharmacy with the same commercial name in one city or pharmacies owned by people with the same name. And there are also, naturally, lacunae and contradictions in the existing documentation and publication errors along the way.

In the city of Cluj, most specialists start discussing the history of pharmacies in the 16th century, with the first mention of pharmacists, though it remains unclear if they also plied their trade here. The history of pharmacies proper starts sometime around the middle of that century, with the establishment of a public pharmacy, located in the central square, in one of the buildings around St. Michael's parish church. It was sold, thus privatized, about two centuries later. Tobias Mauksch subsequently bought it, moved it to a corner of the main square, and obtained an imperial privilege, henceforth dominating the pharmaceutical field in the city in the second half of the 18th century. The Jesuit order managed to open the second pharmacy in town in the 18th century and compensated the privileged pharmacist when they opened a door to the street and started selling to all, not only their own. The order was disbanded and their "Unicorn" pharmacy sold, unsurprisingly to the same Tobias Mauksch, who moved it to the location of the initial public pharmacy. Several other private pharmacies opened in the beginning of the 19th century, while the Mauksch pharmacy continued to operate under its Hintz heirs. The private "Unicorn" pharmacy, for a while run by the heirs of Mauksch's son in law, was demolished in the 1880s and likely moved nearby, to Unirii Square no. 10. Twenty pharmacies functioned in the city in the beginning of the 20th century, with competition from druggists and sometimes their support as sellers of bulk products. The first half of the 20th century was marked by the general political situation of the city and the world – after 1918 the Romanian administration set in, with new laws, a new language, and the first Romanian owners; in 1940–1945, with the temporary return of the Hungarian administration, some of the pharmacists left their properties, taking refuge in Romania, and returning after the war, while Jewish pharmacists and pharmacy owners were discriminated; in 1949 all private urban pharmacies were nationalized by the Communist Romanian

State. The nationalization decree of April 1949 lists 45 privately owned pharmacies in Cluj. Some of them were closed, most continued to function under state administration, and one was turned into a pharmacy museum. Until this fated moment, urban pharmacies were significant landmarks and places for socialization, while pharmacists were important, wealthy, and respected citizens. The rebirth of private pharmacies took place in the city after 1995, while data available in 2018 indicate that 170 such businesses operated in the city (15 public, 155 private).[3] The beginning of the 21st century has witnessed specific developments such as the growing importance of pharmacy networks, an increasingly standardized and regulated industry, and the drastic reduction of medicine compounding inside pharmacies. Recent years have proven that pharmacies are still important in the life of the city, playing a significant role in the official strategy adopted during the Covid–19 epidemic (selling protective equipment and medicines, selling and even performing SARS-COV–2 tests, etc.).

The present paper aims to reconstruct, in its main points, the general chronology of the pharmacies in Cluj, as well as the general characteristics of each period between the 16th and the 20th century, where such data is available. I will focus on the number and types of pharmacies, the origin of pharmacists, their status, existing competition and success strategies, as well as the main means of transmission of the trade.

The 16th and 17th centuries. The first public pharmacy

The founding date of the first pharmacy in Cluj remains unclear, but based on available circumstantial pieces of information it should be placed during the 1560s or 1570s. This was a public pharmacy, like elsewhere in Transylvania, and apparently Cluj was the fourth city in the province to enjoy the benefits of such an establishment. The list of tenants is incompletely known and there were also periods of abandon/disrepair during its almost two centuries of existence.[4] The apothecary shop was located in one of the buildings that in 1561 the council decided to build around the parish church of Saint Michael. The pharmacy is first mentioned in the records preserved for 1581–1593 (interestingly, one of the other "shops" was a "medical

[3] In 1995 there were 23 public pharmacies and none private, in 2000 the city had 15 public and 76 private pharmacies, while in 2010 the proportion shifted even more, with 16 public and 112 private pharmacies. Data kindly provided by the Institute of Statistics in Cluj-Napoca.

[4] See Offner in this volume and Gaal 2022.

cabinet").[5] One can conclude that the public pharmacy started functioning sometime between 1561 and 1581. It was located in the south-eastern corner of the main square and was certainly renovated in 1612.[6] Until the beginning of the 18th century this apothecary shop was owned by the city that paid the salary of tenants (*provisors*), bought the medicines, and maintained the premises. Following the general trend in the Habsburg Empire in which Transylvania was included at the time, the pharmacy was sold and thus became private in the very beginning of the 18th century.[7] A new context for public pharmacies only appeared two and a half centuries later, during the Communist Period.

During this early period there was no specific legislation enforced on the practice of pharmacy, no formal education required of its practitioners, and no price limits, but there was also no competition, with a single pharmacy in function. Still, the import of medicines, the use of local medicinal plants and the continued overlapping of healthcare professions[8] diminished the central role of the pharmacy (though, topographically, it certainly did occupy a central position). Most of the *provisors* of the urban pharmacy in Cluj are only known by name and mentioned by existing sources in passing, so their origin and capabilities can only be guessed. Based on their name, some arrived to Cluj from the German-speaking areas of Europe (Leipzig, Duisburg), others from Buda or Poland. Some sources do include mentions of a single, miserable pharmacy, with expensive products (1651), though there is one contradicting note of another pharmacy in the main square (or a house owned by the pharmacist), with a garden and a water well near the Someș (1655).[9]

The 18th century. The first three private pharmacies

The Mauksch pharmacy

The urban pharmacy was sold in 1710 to Jakab Fojt, from Prešov, who is its first known private owner. After his death in 1727 and a period of discontinuity, in 1735–1749 it was taken over by Samuel Schwartz, another pharmacist from Spiš. In 1749 or 1750, though still owned by Schwartz's widow, the pharmacy started to be run by his former apprentice, Tobias Mauksch, also from Spiš. Owner of the sole pharmacy in the city a few years later, at

[5] Rüsz-Fogarasi 2023, 222.
[6] See Offner in this volume.
[7] Gruia 2018c, 512.
[8] Gruia 2018a.
[9] See the mention in Offner's article in this volume.

the age of 25, Tobias Mauksch ended up becoming one of the most remarkable figures in the history of pharmacy in Cluj and Transylvania.[10] In 1760 he managed to obtain an imperial exclusive privilege, becoming the only one entitled to sell medicines in Cluj.[11] His enhanced status (and wealth) is reflected by him buying a house on the corner of the main square (today Unirii 28) and moving the pharmacy there. The rooms were renovated in 1766, adding Baroque painted decorations and, in the *officina*, an inscription boasting the owner's privileged status (Figs. 1, 2, and 3).[12] In 1774 Tobias Mauksch also bought the Jesuit pharmacy in Cluj (see below) that was put out for sale after the order was disbanded, while in 1790 he acquired a third pharmacy, in Târgu Mureș. The Mauksch pharmacy in the corner of the main square was run by Tobias's sons between 1802 and 1817, then by tenants until 1863 when it was inherited by his great-grandson, the only son of Mathilda, the daughter of Tobias' youngest son, Johann Martin.[13] The pharmacy was subsequently known as the Hintz pharmacy, maintaining location. This was the best-known and most long-lived pharmacy in the history of the city, and since 1954 it hosts the pharmacy museum.[14]

The Jesuit pharmacy

Though facing strong local opposition in Cluj, as elsewhere in the Habsburg Empire,[15] the Jesuits managed to open a pharmacy in 1732 near the typography of the Jesuit complex. This pharmacy was called the Unicorn from the beginning,[16] as this was one of the names preferred for the

[10] See all the details in Dr. Offner's article in this volume.

[11] In a previous article I have erroneously indicated the privilege was obtained in 1752 instead of 1760, as in fact in 1752 he bought the pharmacy from Schwartz's widow (Gruia 2018c, 512).

[12] Detailed in Gruia, 2018a.

[13] See Offner, in the present volume.

[14] See Gruia, *The History of the Collection*, in the present volume.

[15] Due to their intercontinental connections, the Jesuits were able to acquire rare, exotic *materia medica*, gaining the upper hand in the commercial competition with other pharmacists (Boumediene 2020). Conflicts on the matter were so strong that the state intervened, deciding that the Jesuits had to pay taxes to the cities where their pharmacies also provided medicine to the general population or where even forbidden to do so in cities that owned public pharmacies. See Tuka 2012a.

[16] Péter 2002, 11. The existence of three Unicorn pharmacies in Cluj between 1732 and 1949 has created some confusion. The erroneous foundation of the Unicorn pharmacy in 1685 is recorded in several of the Hungarian Pharmacist Yearbooks between 1900 and the 1940s (such as the *Gyógyszerészek évkönyve zsebnaptár* 1900, 191). The date was thus adopted and published by László Tuka and subsequently myself (Gruia 2018c, 513) – email discussion with László Tuka and Robert Offner.

pharmacies of the order throughout Europe.[17] The Jesuit pharmacy was initially for the internal use of the order, but also sold cheap or dispensed free medicine for the poor. It subsequently acquired a door to the street, after compensating the owner of the exclusive privilege, Tobias Mauksch. The list of Jesuit pharmacists is known until 1773 when the order was disbanded and their properties in the city sold.[18]

The first private Unicorn pharmacy

In 1774 the Jesuit apothecary shop was bought by Tobias Mauksch and during the subsequent year moved to the main square, in the location of the urban pharmacy, thus becoming the first private Unicorn pharmacy. Both pharmacies of Cluj were thus owned, for several years, by the same person, and were located in close proximity, in the central square. In 1780 Tobias Mauksch gave the Unicorn pharmacy to his son-in-law, Michael Streicher, and then it was owned by the latter's heirs.[19]

The 18th century marks the creation of the first private pharmacies in Cluj. The urban pharmacy was sold in 1710, but it seems not to have been a very successful endeavor in the beginning, as it remained without a pharmacist for almost eight years after the death of its first private owner. It was in this period of discontinuity that the Jesuits obtained the right to open their own, religious pharmacy, though in the beginning, nominally for the sole benefit of the order. The history of pharmacies in Cluj is marked by the figure of Tobias Mauksch in the second half of the century. He bought the private pharmacy and moved it to a new location, obtained an exclusive imperial privilege to sell medicines in Cluj, and thus asked the Jesuits for consistent compensations when they wished to have their pharmacy open to the street. Even better, when the order was dissolved, Tobias Mauksch bought their pharmacy and brought all competition to an end by owning two pharmacies in the center of Cluj. In 1780 Tobias Mauksch gave this latter pharmacy to his son-in-law and in ten years' time expanded the family business to Târgu Mureș, acquiring an apothecary shop there as well. Tobias Mauksch was a hardworking, diligent, and successful pharmacist, with a special appetite for

[17] Narwal horns, believed to belong to unicorns, were endowed with spectacular healing properties in the pharmaceutical lore, and several pharmacies adopted the name (At the) Unicorn and, if able, displayed tusks/horns or unicorn heads as shop signs. Fischer, Fischer 2011. On the Jesuit preference for naming their pharmacies "The Unicorn", see Péter 2002, 52.

[18] Péter 2002, 11–12, Gruia 2018c, 513.

[19] See Offner, in the present volume.

writing – he left several inventories and a famous book of instructions on how his pharmacies should be run by his sons and son-in-law.[20]

Starting with 1770, the first official regulations regarding the education of pharmacists (who had to pass formal exams in order to obtain the right to practice), the formulation of medicine (using the *Pharmacopoea Austriaco-Provincialis* and the Viennese system of apothecary weights), the selling of medicine (according to the approved taxa, i.e. price limits), and regular inspections of pharmacies were imposed on the entire Habsburg Empire, including Cluj.[21] Though it remains uncertain just how much of these regulations were actually followed, it becomes apparent that there was growing concern in increasing the quality of the services provided by pharmacists and thus the welfare of the population. In the final decades of the 18th century the pharmacists of Cluj became professionals, obtaining their degrees abroad.

Pharmacy became a profitable business in Cluj during the Baroque period, generating substantial income. Tobias Mauksch bought three pharmacies (two in Cluj, one in another Transylvanian city), one house (historical monument still standing, today known as the Mauksch-Hintz house), and held important public offices. He believed his pharmacies were "real treasures" and he sold not only medicines, but also sugar, spices, foreign wines, wax, ink, and candles.[22] The Jesuit pharmacy was also profitable, supporting the acquisition of instruments and tools for the mathematics and astronomy faculties of the Jesuit college.[23]

As for the origin of the pharmacists active in Cluj, during this period one notes that many of them arrived from several towns in Spiš (present-day Slovakia), a region similar to Transylvania through the medieval colonization of population from the German-speaking areas of Europe. The owners of the private pharmacy were thus laymen from Spiš, while the Jesuit pharmacy was run by both laymen and members of the order (2 lay brothers and 6 Jesuits), many of them from Austria.[24]

[20] The *Instructio* has been unfortunately lost (see the discussion in Offner, in the present volume). See also an overview by Mária Pakucs in the present volume.

[21] Sechel 2008; Kletter 2010.

[22] See the discussion in Gruia 2018c, 514.

[23] Tribel 1994, 93–94.

[24] See Offner in the present volume.

The 19th century. Old and new pharmacies

The Mauksch/Hintz pharmacy

After the death of Tobias Mauksch, in 1802, the pharmacy was run by his two sons: first by Tobias Samuel Mauksch (in 1802–1805), then by Johann Martin Mauksch (in 1805–1817), but they both died relatively young. The inspection of 1807 found the pharmacy in good order, praising its good location, the fact that it was well-stocked, well-kept and well-manned (with the owner and 5 employees), with accurate scales and measures. Johann was described as an honest, hardworking man who cared a lot for cleanliness. The drawbacks were the dark laboratory, with insufficient room for ovens and not very safe in case of fire, some containers with faded inscriptions, some spoiled foreign essential oils etc.[25]

The pharmacy was run by tenants for a while (Daniel Slaby), ending up in the possession of Mathilde Augusta, the daughter of Johann Martin.[26] A preserved photograph from 1859 shows the entrance covered by a simple arched marquee,[27] flanked by rectangular windows (Fig. 4, Fig. 5). Mathilde's son, Georg Joseph (György József) Hintz (Fig. 23), took over the family's pharmacy in 1863 and henceforth it was known as the Hintz pharmacy. Georg Hintz I had the shop renovated, lowering the level in the rooms facing the square and the side street and adding a massive wooden shop display on the main façade, containing the main entrance to the pharmacy flanked by two large shop fronts, all with rectangular openings.[28] The name of the pharmacy was written in large letters across all three openings (Fig. 6). In 1863 the owner obtained his doctoral degree, becoming the first Transylvanian pharmacist with such a title.[29] The shop appropriately bears the name "Dr. Hintz gyógyszertára," promoting this accomplishment. After the premature death of György Hintz I in 1890 due to complications of appendicitis,[30] the pharmacy was run by an administrator (Lajos Palóczy)[31] until taken over by

[25] Péter 2022, 89–90. The description of the pharmacy, though providing certain details such as the fact the stair to the cellar was in the *Camera Materialis* and the laboratory was somewhere easily accessible, right near the porch (?), still fails to clarify the location and function of each room. Another apparent contradiction is describing the owner as an optimistic person, when existing sources tell of his depression and eventual suicide.

[26] Details in Offner's article in the present volume.

[27] This might be the porch mentioned in 1807, meaning the laboratory was in the very beginning of the century parallel to the square.

[28] Ványolós 2002.

[29] See Melinda Mitu's study in the present volume.

[30] Data kindly provided by Dr. Georg Hintz and Mrs. Edit Hintz, his mother.

[31] Gaal 2022, 18.

György Hintz II, in 1898. The latter renovated the pharmacy twice. The first renovation was marked by a new inscription in the old *officina* (continuing the tradition of Tobias Mauksch): "acceding at the head of the pharmacy, Dr. Georgius Hintz had the cherished monument renovated through Andreas Koleszár, in the year of the lord 1898" (Fig. 7). Preserved photographs also show a change in the front to the main square, that acquired semicircular endings and shutters to the three openings, with accolade moldings across. Fig. 8 shows György Hintz II posing in front of the pharmacy in the very beginning of the twentieth century, in a photograph taken by his wife, Mrs. Ella Hintz (born Boros).[32]

The Unicorn pharmacy

The private Unicorn pharmacy also continued functioning in the main square, in one of the buildings around St. Michael's church (in the south-eastern corner of the built precinct). It was rather referred to as the Streicher pharmacy,[33] as it was run by Michael Streicher and then by his son Samuel Gottlieb and grandson Michael Joseph.[34] In 1807 protomedicus Ferenc Nyulas inspected the 42 pharmacies in Transylvania, including the ones in Cluj, and his report records that he found the Streicher pharmacy to have an adequate, suitable office, laboratory, and materials chamber, and that the owner, Michael Streicher, was a kind, affable man, who took care of fresh plants.[35] Still, the laboratory was dark, the cellar unventilated and not very orderly, while toxic substances were scattered about.[36] The succession of pharmacists is not entirely known. In the middle of the 19th century it was run by Joseph Khuda, subsequently (1863) by tenants József Engel and Ignatz Sperlagh, and owner Ember Bogdán.[37] The 1859 photograph mentioned above depicts the Unicorn pharmacy in the corner of the large stone building by St. Michael's church, with two pairs of wooden shutters flanking the two entrances, decorated with depictions of ancient-style busts (Fig. 4). A bit more details are visible in Veress Ferenc's photography taken a couple of years later (Fig. 6). The two entrances are surmounted by rectangular

[32] The two white statuettes in the display windows are still preserved in the collection (see the art and decorations section of vol. 7 of the present catalogue). More on Ella Hintz as photographer in Blos-Jáni 2022.

[33] Gáll, Gergely, Szabolcs 2022, 88, fig. 3/B.

[34] Offner, in this volume.

[35] Péter 2008, 215.

[36] Péter 2022, 87–88.

[37] Offner 2022, 67.

signs written in large capital letters with the word "Pharmacy" in Hungarian, while the shutters bear more detailed writings below the busts (unfortunately not legible on the reproduction).

New pharmacies

Several new pharmacies opened during this period and their chronology becomes uncertain (with different foundation dates in existing literature). The third pharmacy in Cluj opened in 1814. In 1812 the privilege of Tobias Mauksch had expired, thus the urban council would allow for the establishment of another apothecary shop in the city.[38] The precondition was for the new pharmacist to choose the coat of arms of the city as a symbol, to pay a tax, keep drugs fresh and in abundance, and dispense them according to the latest Viennese taxa.[39] Adam Michael Schmidt won the competition to the right to open the new pharmacy and it became functional in 1814, possibly on the spot of the future Széky Palace, and bearing the name of the king born in Cluj, **Matthias Hunyadi**.[40] In 1840 he sold it to the brothers Gábor Wolff (1811-1892) and János Wolff (1815-1899), originating from Rupea. The latter ran the pharmacy until 1899, after which his son-in-law, Dr. Hugó Issekutz (1855-1915), took over the management.[41]

Next opened the **Holy Trinity** pharmacy, in 1845.[42] A little-researched pharmacy opened probably in 1846/47 on present-day Moților Street. It bore the name of its founder, Traugott Ritter (1819-1855). Prescriptions dated 1837-1838 are preserved in the collection (IF 2448).[43] Traugott Ritter (1819-1855) was a Transylvanian Saxon born in Filitelnic, near Sighișoara. It remains unknown where he studied pharmacy, but in 1845 he took his exam as a pharmacist in Pest.[44] In 1849 he married Louisa Winkler in Cluj, with whom they had two boys, but both children died young.[45] In 1850 he is listed among the newly admitted members of the Siebenbürgischen Vereins für

[38] Orient 1926, 200.

[39] Orient 1926, 201.

[40] Offner, in the present volume. Offner 2022, 69, mentions that the pharmacy was called King Matthias and was located in Central Square 4–5.

[41] Offner, in the present volume.

[42] Péter 2002, 44, 54. Foundation date also recorded in 1925 (*Almanachul Farmaciștilor din România* 1925, 154).

[43] See Pakucs in the present volume.

[44] Szabó 2005, 149.

[45] I thank Dr. Offner for sharing with me data on this pharmacy from his unpublished research results and indicating the related bibliography.

Naturwissenschaften zu Hermannstadt association from Sibiu.[46] Traugott Ritter´s name and status (pharmacy owner) feature on an ornate column at the edge of the Lutheran part of the Házsongárd cemetery of Cluj.[47] In 1874 the city opened the competition for a new pharmacy. The winner was Miklós Széky, a former assistant at the Wolff pharmacy and a wealthy entrepreneur (who also owned a cognac factory). This pharmacy bore the name **King Matthias** and functioned in present-day Mihai Viteazul Square 2.[48] In 1893 Miklós Széky moved the shop to the ground floor of the palace he had built, endowing it with custom-made Neo-Gothic furnishings. This original *officina* furniture, probably created by local wood worker B. Bak Lajos,[49] is still preserved inside the present-day Richter pharmacy (Fig. 9). It has inscribed openings towards the *Officium*, the *Receptura* and the *Laboratorium*. The laboratory preserves the wooden gallery for the *Herbarium*, accessed by inner stairs (Fig. 10).[50] Miklós Széky owned and ran the business until 1912.

Three other pharmacies opened in the city in the end of the century: **The Guardian Angel** and the **Divine Providence** in 1885 and the **Hope** pharmacy in 1894.[51]

The 19th century witnesses the continuing activity of the traditional pharmacies of Cluj, as well as the opening of several new ones after the expiry of Tobias Mauksch's privilege. As the pharmacies were privately-own and profitable, the natural tendency was to keep them within the same family. Tobias Mauksch established the first such "dynasty" of pharmacists, with both his sons running the family's pharmacies (in Cluj and Târgu Mureş). His son-in-law, Michael Streicher, also managed to transmit the Unicorn pharmacy to his heirs.

There was an increase in the number of pharmacies (nine, seven new and two old), proportional to the growth of the city and the number of its inhabitants. One also seems to note more mobility on the part of pharmacy owners, as some were dealing in other lines of business as well (see Miklós Széky's brandy factory). The topographic location of the new pharmacies marks the territorial expansion of the city. Some of the new pharmacies were

[46] *Verhandlungen und Mittheilungen des Siebenbürgischen Vereins für Naturwissenschaften zu Hermannstadt* 4/1850, 50.

[47] Gaal 2009, 135.

[48] Cosma 2022, 219–221, Offner 2022, 70.

[49] http://www.enciclopediavirtuala.ro/monument.php?id=392

[50] Neamţu 1980, 42–43.

[51] Péter 2002, 57, 133. *Almanachul Farmaciştilor din România* 1925.

located in close proximity of the center, but beyond the city walls (that were demolished in the 1880s and 1890s). The existence of two pharmacies with names connected to Matthias Corvinus, of the Hunyadi family, show the growing local cult of the king born in Cluj and prove to be a rather specific pharmacy name.

The 19th century also saw the publication of more numerous instructions for pharmacists and an increased regulation and control in the trade (see Nyulas – *Instructio pro apothecariis*), with supplements (1809 and 1820, both published in Cluj),[52] the mandatory use of Austrian pharmacopoeias and taxas (later for Transylvania specifically), then Hungarian ordinances limiting the substances (especially toxic ones) and quantities sold by materialists (peddlers).[53]

Cluj also became an important center of pharmaceutical education. After the creation of Austro-Hungary in 1867, the education of pharmacists was regulated and unified, but still not very strict (no bachelor's degree required, accent on apprenticeship).[54] Internships were extended and exams gradually added, until pharmacy started to be taught in 1872 at the Faculty of Medicine of first the Hungarian, then continued from 1919 at the Romanian university in the city.[55] Pharmacists from Cluj were part of professional societies and associations from Budapest and Vienna, and subscribed to specialized publications published outside Transylvania. Cluj was the center of a pharmaceutical district in the second half of the century.[56]

The 20th century. The proliferation of pharmacies

The Hintz pharmacy

The Hintz pharmacy remained one of the best-known in Cluj, boasting the erudition of its owners ("Dr. Hintz") and its antiquity ("founded 1573"). In 1900–1949 the pharmacy was owned by György Hintz II, PhD, and, for just one year, his son, György Hintz III[57] (Fig. 23). György Hintz II also acquired a doctorate in pharmacology, so the name of the pharmacy was his,

[52] He also performed an interesting questionnaire, noting that out of the 35 pharmacists active in Transylvania in 1807, all spoke German, 30 also spoke Romanian, and 26 also Latin (he did not mention this, but presumably all were fluent in Hungarian). Péter 2022, 85.

[53] Izsák 1979, 296–301.

[54] Gaal 2022, 17.

[55] See Oana Habor's study in the present volume.

[56] Izsák 1979, 301.

[57] The document of transfer, dated 1948, is preserved by the family.

as much as his father's. In 1907–1911 it was also called The Red Cross.[58] The pharmacy is sometimes also referred to as "St. George" and there was certainly a tradition of naming the first-born sons after this military saint, but it remains unclear when the pharmacy acquired and used this name.

The interior of the *officina* is documented for the first time in the early 20th century, in photographs dated 1903 and 1926.[59] The room ran along the entire ground floor, behind the main façade, with a semicircular high window towards the secondary façade. It is dominated by the special wooden furniture, with closets across the back and side walls, displaying apothecary jars in the middle, inscribed drawers in the lower part, and a decorative upper part with statuettes and an elaborate crown with a clock. In the corners and on the right wall the closets include special storage for poisonous drugs (*venena*) in cabinets with opaque white glass wings with large crosses. There are also the expected tables/tills for the cash register and the balance scales, as well as ample seating for the clients while they waited for their prescriptions to be fulfilled or for the officinal preparations to be dispensed. Two openings are visible on the back wall, leading to the laboratory (on the left) and the office (on the right), both a few steps higher than the *officina* (Fig. 11, Fig. 12). These photographs are precious sources for the structure of the room, as most of it was lost in 1959 through a brutal town planning intervention that created a pedestrian passage through the corner of the Hintz house. Some of the photographs record details of the pharmacy display windows, with white statuettes (Fig. 8) and foreign specialties (Scott's Emulsion) (Fig. 13).

The other preserved photos of the *officina*, dated 1926, show that the room went through at least one major transformation during the century, with new furniture, lighting elements, and an increased display area for ready-made medicines, sold in paper boxes, and more printed commercials (Fig. 14).

The old *officina*, with its Baroque wall paintings and inscriptions, was used as office during this century. It included portraits of György Hintz I and his wife, shelves with books, the desk of the pharmacist running the business, desks for the apprentice sons, a recessed seating by the window to the side street, and a pendulum[60] (Fig. 15).

Another renovation took place in the 1930s, leading to the creation of a modern, simple façade. The large wooden front was removed and the

[58] It is named so in the pharmacists' almanac published between 1907 and 1911 (*Gyógyszerész zsebnaptár*). Fig. 8, dated 1905 in the Hintz family album, possibly also dates to this period, as the name of the pharmacy is flanked by two large crosses.

[59] Owned by Mrs. Edit Hintz, processed and kindly provided by Melinda Blos-Jáni.

[60] Info kindly provided by Dr. Georg Hintz.

simple rectangular openings were surmounted by writing: "Farmacia Dr. Hintz" above the entrance, and Hungarian and German variants above and the sides of the display windows: "gyógyszertár fondata alapitva 1573", "apotheke gerunded 1573" (Fig. 16). This is the only period when the sign was trilingual, while maintaining the stress on authority (the doctoral degree of the owners) and tradition (mentioning the otherwise unattested foundation year of the first public pharmacy).

The Unicorn pharmacy

After the demolition of the buildings around St. Michael's church, in the 1880s–1890s, the Unicorn II pharmacy probably moved to Unirii Square 10. Between 1924 and the nationalization of 1949 it functioned in Unirii 10 and was run by Dr. Gyula Kohn (Appendix 1, listed at no. 16), though a contradicting piece of information records Dr. Orion as owner in 1946.[61] In 1933 the address is recorded as Unirii 9, reflecting the restructuring of house numbering in the square.

The Széky pharmacy

Miklós Széky continued running his pharmacy until his death, in 1912, and the business was subsequently continued by his son, Tibor Széky. In 1920 the latter sold it to Ferenc Lukács,[62] who separated from his brother in their joint ownership of the Holy Trinity pharmacy (see below). Ferenc Lukács bought the Matthias Hunyadi apothecary shop and renamed it The Apostle. At the Angel[63] (Fig. 18 shows the front of the shop, with its trilingual sign). In the 20th century it apparently bore other names as well: Snake and Minerva (during the first half of the 1940s).[64] In the nationalization law of 1949 Ferenc Lukács is listed owning a pharmacy on Dózsa St. 37 (see appendix 1, no. 39). The premises of the Széky pharmacy retain their original function and furniture, currently under the administration of the Richter group.

The Holy Trinity pharmacy

This pharmacy also continued functioning into the 20th century. In 1913 it was bought by brothers Dénes and Ferenc Lukács together, but in 1922 Ferenc withdrew from the partnership. According to preserved data

[61] *Cluj-Kolozsvári Kalauz és Címtár* 1946, 46.
[62] 1920 in Cosma 2022, 221, 1922 in Péter 2002, 107.
[63] Péter 2002, 107.
[64] http://www.enciclopediavirtuala.ro/monument.php?id=392

it functioned on Memorandumului (Unió) St. 2[65] and was still active in the same location in 1946.[66]

New pharmacies

The foundation of new pharmacies continued at rapid pace in Cluj in the beginning of the 20th century: in 1906 the Salvator, in 1916 St. Anthony of Padova, in 1919 the pharmacy owned by Mihály Şomlea, and in 1920 the pharmacies owned by Kornel Demeter, Emil Şotropa, and the shop called The Black Bear.[67] The 1925 almanac lists 14 pharmacies, while the 1933 tourist guide promotes 19.[68] 23 more were established in 1949,[69] so that 45 pharmacies are listed in the nationalization decree of 1949 (see Appendix 1).

A special case is that of **The Hospitals Pharmacy**, a typical university institution that was inaugurated in 1904, part of the Faculty of Medicine of the Hungarian University in Cluj. Practical works of pharmaceutical technique and medicine composition analyses were performed here, serving teaching purposes, but it also supplied university hospitals with medicines, controlled consumables designed for these institutions, and hosted research into antiseptics and officinal plants. Though it remained almost abandoned after the incorporation of Transylvania into Romania, it was refurbished and continued to function part of the Romanian University. During the 1920s the Hospitals Pharmacy was equipped to the highest contemporary standards and had its own workshops where specialized instruments were produced or repaired.[70] It is still part of the Faculty of Pharmacy today.

One of the first pharmacies with a Romanian owner opened in 1926 in Unirii Square 33. Teodor Goina, pharmacist and university professor in Cluj, owned not only the **Fortuna**, a large and modern apothecary shop in the center of Cluj (Fig. 17), but also a pharmacy in Bucharest. In 1940 he left Cluj, taking refuge across the Carpathians, and until 1944 his pharmacy was run by an appointed administrator, László Bodor.[71] In 1946 a printed commercial boasted the owner's university position and the fact that in 1926 and

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[65] Péter 2002, 106. *Cluj-Kolozsvári Kalauz és Címtár* 1933, 88.

[66] *Cluj-Kolozsvári Kalauz és Címtár* 1946, 47.

[67] *Almanachul farmacistilor din România*, 1925, 154.

[68] *Almanachul farmacistilor din România*, 1925, 154, *Cluj-Kolozsvári Kalauz és Címtár* 1933, 88.

[69] Tuka 2012b, 39. The author publishes several useful tables of pharmacies, their owners/administrators and addresses, though the data, gathered from pharmaceutical yearbooks, is sometimes inexact.

[70] See Habor, in the present volume.

[71] Cosma 2022, 223–225.

1942 the shop had won the contest of pharmacies.[72] At that time the address had changed to Libertății 34 (due to the change in name of the main square and the restructuring of house numbers).

The same year marks the construction of a "shopping center" on the spot of the former water mill, near the building of the central post. It included the pharmacy **The Black Bear** (unclear if it continued the one founded in 1920), subsequently **Minerva**, run by Ioan Popa[73] (Fig. 18), with a commercial printed in 1946 (address recorded as György Dózsa St. 35).[74] The center was torn down around 1948–1950.

Another well-known pharmacy was **Dr. Biró**'s. In 1904 Geza Biró, with a doctorate in pharmacy obtained in Budapest in 1900,[75] bought the Matthias Hunyadi pharmacy from the Wolff brothers.[76] Located in Unirii Square no. 4,[77] the pharmacy also profited from the unveiling of the statue of Matthias Corvinus across it, in the main square, in 1902. A depiction of the statue became the pharmacy's logo, thus indicating not only the name, but also the location (Figs. 20, 21). Biró Geza was also one of the specialists in pharmaceutical history as he provided useful information to Gyula (Iuliu) Orient.[78]

One of the pharmacies located outside the old center of Cluj, opened in 1885 (the **Guardian Angel**), was very modern in 1933. Ran by Dr. Pál Halász, it was located in the proximity of the Perry automobile shop, part of the Chamber of Commerce and a nearby building (Fig. 22).

The nationalization of 1949

The Communist Regime nationalized all urban pharmacies in 1949 (through decree no. 134) and rural ones in 1950 (through decree 418), besides all other private pharmaceutical establishments (pharmaceutical production units, druggists, cosmetic and medical analyses laboratories, drug warehouses). The decree of 1949 was completed by a comprehensive list of units to be nationalized "even if partially or incorrectly named, and even if they have changed name or address". From the city of Cluj it lists 45

[72] *Cluj-Kolozsvári Kalauz és Címtár* 1946.
[73] Tuka 2012b, 37.
[74] *Cluj-Kolozsvári Kalauz és Címtár* 1946, 47.
[75] Péter 2013, 263.
[76] *Gyógyszerész naptár* 1907, 181. This source points to its foundation date as 1812, when in fact Adam Schmidt started his business in 1814.
[77] *Cluj-Kolozsvári Kalauz és Címtár* 1933, *Cluj-Kolozsvári Kalauz és Címtár* 1946 (at that time Libertății Square).
[78] Orient 1926, 200.

pharmacies (see Appendix 1), though the data is indeed imprecise (mentioning just the owner's name, including incorrect addresses, references to old street names etc.). One notes clusters of pharmacies in the old part of the city, but further research in the history of street name changes in Cluj is needed. The file of the nationalization of the Hintz pharmacy (see Appendix 2), that comprises 55 pages, lists thousands of pieces of furniture, laboratory equipment, containers, books, down to ashtrays, flower pots, and pencil holders that were seized on that occasion. They also record details of the procedure, in the presence of the owner and seven others (representing the Ministry of Health, the Police, the syndicate, and three pharmacists).

After 1949 some of the nationalized pharmacies were closed (and subsequently repurposed, such as the Hintz pharmacy that became a pharmacy museum in 1954), others continued to operate as state property (14). Former owner pharmacists were forbidden from running any of the state-own apothecary shops, thus some worked there as simple pharmacists. Those that continued functioning were dissociated from their past through renaming. Starting from the center, in Unirii Square, pharmacies were given numbers, thus annulling any association with their past owners or former names (most had religious names).[79] The entire pharmaceutical sector was reorganized, with the city becoming a significant regional center in this field. Pharmaceutical education continued (with an interruption in 1934–1948)[80] and the first classes in the history of pharmacy and folk medicine started in 1922 (Guiart, Bologa).[81] Local production of pharmaceuticals started with companies such as Terapia and UFAROM and the foundation, in 1904, of an experimental station of medicinal plants.[82] Several specialized periodicals, pharmacopoeia and almanacs were printed in the city, associations functioned, and congresses were held in Cluj (such as the congress in 1921),[83] and the Pharmaceutical Office centralized medicine distribution to pharmacies throughout the county.[84]

20 pharmacies functioned in Cluj in the early 20th century, facing competition from druggists and other types of shops, but sometimes buying main ingredients from them.[85] The creation of numerous professional associa-

[79] The Fortuna became Pharmacy no. 1, the Apostle Pharmacy no. 2 etc. (see Tuka 2012b, 40–41, table 5). The author only lists 44 pharmacies.

[80] Izsák 1979, 343.

[81] See Gruia, *The History of the Collection*, in the present volume.

[82] Izsák 1979, 343.

[83] Izsák 1979, 345.

[84] Izsák 1979, 358.

[85] The preserved accounting records of the Hintz pharmacy, dated to the 1930s and 1940s,

tions reveals the division in the field: there were associations of owner and non-owner pharmacists, associations of druggists, and associations of perfume-sellers. Competition was mainly active in the profitable trade of importing medical specialties (patent medicine?) and para-pharmaceutical goods (cosmetics, hygiene products, etc.). New marketing strategies flourished, such as printed commercials in newspapers and other printed materials (almanacs, local trade guides), in languages reflecting the political events of the century: Hungarian in 1900–1918 and 1940–1945, Hungarian and Romanian after 1918, sometimes trilingual (Romanian, Hungarian, German) during the Inter-War Period. As the number of pharmacies increased significantly, each turned to stressing positive factors such as the antiquity of their establishment (the Hintz pharmacy), the authority of their owners ("Dr. Hintz", "Dr. Biró", Teodor Goina as professor), or awards received (the Fortuna winning pharmacy contests). Those unable or unwilling to boast such feats continued to feature storefronts with depictions of antique healing deities and emblematic figures (The Minerva pharmacy, the Unicorn II pharmacy) and colorful commercials, especially for imported medicines. Some strategies, such as rebranding, did not work and were abandoned. In the beginning of the century the Hintz pharmacy added the name "The Red Cross" for a couple of years, but then reverted to the "Dr. Hintz / Saint George" traditional title.

The 20th century was marked by the general political situation of the city and the world – the troubled period of the First World War, after 1918 the Romanian administration set in, with new laws and regulations, a new language of trade (bilingual shop signs and advertisements), and the first Romanian pharmacists and owners; in 1940–45, with the temporary return of the Hungarian administration, some of the pharmacists left their properties, taking refuge in Romania, and returning after the war (such as Dr. Goina), while Jewish pharmacists were discriminated. There was 1 Jewish pharmacist in Cluj in 1919[86] and 12 in 1942[87]. In 1933 Jewish pharmacy students in Cluj were beaten by their colleagues because they had written a letter to the Association of Jewish pharmacists in Transylvania asking for support in continuing their studies.[88] In the 1930s, most Jewish students in Cluj attended the Medicine and Pharmacy faculty.[89] Jewish-own pharmacies had their licenses revoked

include numerous invoices from the Royal Drugstore, for example. The lot is being processed at the National Museum of Transylvanian History.

[86] Gidó 2014, 76.

[87] Gidó 2014, 95.

[88] Gidó 2014, 148.

[89] Gidó 2014, 232.

in May 1944, such as Hope and the Guardian Angel.[90] Pharmacists of Jewish origin or with Jewish spouses were let go (such as Viola Tuka in 1938).[91]

In 1954 the pharmacy museum opened in the Hintz house, including artifacts from older collections, but also valuable artifacts from nationalized pharmacies in Transylvania, many from Cluj (at least the Mauksch/ Hintz pharmacy, Unicorn III, Hunyadi Matthias, Dr. Biró, The Holy Trinity – detailed in the present catalogue).

New pharmacopoeias were printed with increased frequency, reflecting the pace of novelties and progress in the field. The main development was that of pharmaceutical industry, based mainly on organic synthesis.[92] The beginning of the century also saw the creation of several professional associations and periodicals, some centered in Cluj (such as the pharmaceutical almanacs printed in the city starting with the Inter-War Period).[93] One also notes the implementation of the Romanian legislation and pharmacopoeias[94] and of international conventions, such as the ones regulating the sell and dispensing of toxic medicines and drugs.

Conclusions

The history of pharmacies in Cluj is a complicated and under-researched history, but it is not that different from the history of pharmacies in general and those in the same region in particular. It follows the same general developments and trends, one sees the same types of pharmacies (public, religious, private), and the same irregularities (pharmacies often changed owners, names, and address). In Cluj for example there were three Unicorn pharmacies, two pharmacies were named after Matthias Corvinus (Hunyadi Matthias and King Matthias), and there might have been two Minerva pharmacies as well. The history of the more long-lived pharmacies is clearer, but it reflects changes in town planning, street naming and house numbering (discussed here in more details in the case of the Hintz pharmacy). In its regional context, Cluj emerges as a center for pharmacy, pharmaceutical studies, and subsequently production in the 19th and 20th centuries. Its pharmacy shops adopt both names common in Hungary in general and local names, such as those connected to the name of the king born in Cluj.

[90] Szmodits, Dobson 2014, 109.
[91] Cosma 2022, 224.
[92] Stanciu et alii 2014, 5.
[93] Izsák 1979, 336–337.
[94] Izsák 1979, 350–352.

The history of pharmacies can also be analyzed in connection to the development of the city and the general political events. The legislation governing the domain and the names and languages displayed by the pharmacies of Cluj changed along the political regimes, with a peak of multiculturalism (but also the start of discrimination) during the Inter-War Period. The ethnicity of the pharmacists, especially pharmacy owners, can also be discussed, with foreign specialists arriving mainly from the area of Spiš during the 18th century, followed by Transylvanian Saxons, Hungarians, Jews and Romanians with studies abroad, and finally by local pharmacists of all ethnic backgrounds, educated locally. Available sources might also be analyzed in detail in the context of local economy and commerce (following the financial records of pharmacies, their suppliers, collaborators, and clients). Another direction of research, that I have tentatively approached for the 18th century,[95] is the role of pharmacies in the forefront of marketing strategies and even design (one could study for example the rapid change of pharmacy signs and logos during the 20th century). Tobias Mauksch's 18th-century strategies to success changed during the subsequent periods, with new ones such as appeal to the owner's professional status, the antiquity of the business, distinctions obtained by the pharmacies; commercials in newsletters and periodicals; the competition to sell the newest and most popular foreign specialties in the first half of the 19th century etc. Future studies might also shed more light on the presence of women pharmacists in Cluj, for example.

Several issues remain as yet unsolved even in the lines of this simple chronology. What happened to the premises of the first public pharmacy after Tobias Mauksch moved shop to the corner of the square? How was the Mauksch pharmacy in Cluj called? When was the Hintz pharmacy called Saint George? Where were the other pharmacies located and when/how did they change owners? What was the connection between pharmacies and other types of shops selling some of the same goods – druggist shops, perfume shops, medical supplies stores? What were the strategies of pharmacies located in close proximity (such as the Minerva and the Apostle, for example, that were almost door to door).

In-depth studies of the various types of sources available for the history of pharmacy in Cluj will certainly refine (even correct) this sketched overview and will contribute to knowledge in the field, especially if they manage to connect findings from different fields of study, as the history of pharmacy is truly fitted for an entangled history perspective.

[95] Gruia 2018c.

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Appendix 1
The pharmacies of Cluj nationalized in 1949

Decree 134/April 2, 1949 listed 45 private pharmacies to be nationalized, besides 9 private pharmaceutical laboratories, 3 central medical stores, 1 cosmetic central store, and 4 drugstores in Cluj. Listed with their owner's names, not their commercial name, some with no or incomplete address. (reproduced here accordingly).

1. Sebessy Bella, Dosza Gyorgy St.
2. Creţu Vasile, General Poetas St. 22.
3. Elekes Elisabeta, Calea Motilor St. 110.
4. Ioan Langer with Handelsman Ladislau, Gh. Dosza St. 36.
5. Joel Schaffer and Schaffer Rebeca, M.Viteazu Square 22 – 23.
6. Ana Rugea Burla.
7. Margareta Mathe Szabo, M. Viteazu Square 20.
8. Iuliu Codarcea, Regina Maria St. 9.
9. Eugen Czavassy, Victor Babes St. 18.
10. Maximilian Weissbrod, Calea Horia St. 50.
11. Zoltan Kovacs, Universităţii Square.
12. Gh. Gh. Hintz, Libertăţii Square 28.
13. Teodor Goina, Libertăţii Square 34.
14. Most., Ştefan Mircea, Calea Horia 13.
15. Dr. Iuliu Cseresznyes, Malinovschi Square 13.
16. Dr. Iuliu Kohn, Libertăţii Square 10.
17. Simon Maria and Barany Valentin, Horia St. 6.
18. Zoltan Sebestyen, Budai Nagy Antal St. 55.
19. Most. Weinrich Edmund, former Regele Ferdinand St. 55.
20. Most. Garda Clara, Libertăţii Square 29.
21. Gall Alexandru and Dr. V. Ciocanelea, former M. Viteazu St. 32.
22. Balasz Gheorghe, Joky St. 2.
23. Antal Sabin, former Regina Maria St. 10.
24. Suranyi Zoltan, Baritiu St. 16.
25. Kovats Iolanda, former Regele Ferdinand St. 2.
26. Karacsony Adalbert, former M. Viteazu Square 1.
27. Berger Teodor, Malinovschi Square 1.
28. Edith Laszlo Emiras, Danto St. 1.
29. Sara Dr. Orient, Dr. Tiberiu Orient and Kiraly Ludovic, Mărăşeşti St. 17.
30. Brief Charlotte, Horia St. 4.

31. Solomon Atlasz Aurora, Dosza St. 19.
32. Szortaey Gall Margareta, former Regele Mihai St. 11.
33. Panczel Geza with Paradi Francisc, Mărăşti St. 14.
34. David Ladislau, former Regina Maria St. 29.
35. Risca Emil, former Regina Maria St. 16.
36. Gorog Vasile, former Regina Maria St. 2.
37. Markovits Adalbert Bella, Cluj, Calea Armatei Roşii 13.
38. Virgil Sotropa, Ştefan cel Mare Square 1.
39. Francisc Lukacs, Dosza Gh. St. 37.
40. Ladislaul Martonfi, N. Iorga St. 27.
41. Tab Tiberiu, Calea Deportatilor 60.
42. Keresztessy Iosif, Teofil Cipariu St. 13 – 15.
43. Vass Paul, Horia St. 1.
44. Holicska Andrei, Moţilor St. 42.
45. Schapira Bojum Cecilia, Mihai Viteazul Square 40.

Appendix 2
The nationalization of the Hintz pharmacy

The Hintz family has preserved the documents drafted when their pharmacy in Cluj was nationalized in April 1949. The previously unknown documents have been made available, in photocopy, for study, through the kind cooperation of Dr. Georg Hintz. The lot includes the main report and 13 annexes, some within typed forms with handwritten completions, others entirely by hand. My translation from Romanian.

1. Report, April 7, 1949, completed at the Hintz Pharmacy, Libertății Square 28, record no. 575/45 with the Sanitary Service of Cluj County, on the occasion of the Ministry of Health taking it over in accordance with Nationalization Law, in the presence of Hintz Gheorghe, on the one hand, and seven officials, on the other: Pharmacist Zissu, representing the ministry; Sabo (signed Szabó) Zoltan, representing the syndicate, in the presence of Băcu Constantin; Meseșan Alexandru representing the Police; Breazu Corina, Ernst Richard, Simiti Ion (pharmacy student) [4 pages].
2. Annex I.1. April 3rd 1949. 200 lei in cash, from the cash register [1 page].
3. Annex I. 2, 3, 4, 5, 6. April 3rd 1949. No other cash sums, no properties, no sanitary stocks found [1 page].
4. Annex II.1. April 6th 1949. List of containers, tools, utensils etc., 140 entries, thousands of items: white, brown, and blue bottles for liquids and powders, porcelain jars with burnt enamel labels for unguents, white porcelain jars, blue square jars with metal lids, wooden jars, white bottles with polished stoppers, bottles for acid, demijohns, thousands of wooden boxes for merchandize shipping, thousands of both clean and dirty and worn bottles for merchandize shipping, large cardboard boxes for herbs, hundreds of porcelain jars for drug preparation, paper bags, packing paper, lamps, balancing scales, five ashtrays, measuring cups, porcelain infuser, strainers, crucibles, Siedlitz cup, pill-making tool, suppository and globules-making tool made of wood, glass rods, test tubes and stand, various types of scales, including one for people, cork press, porcelain mortars and pestles, spatula, spoons, Bunsen burners, RIV cash register, cauldrons, aerometers, densimeters, thermometers, urodensimeters, retorts, envelope counter, retorts and various other lab glass items, infusers, sterilizers, six alembics, funnels, percolator, thousands of weights made of iron and copper, one microscope [6 pages, 5 blank pages lines by hand and added to the printed form].

5. Annex II.2. April 3rd 1949. Medicines 1. Pharmaceutical specialties – 278 entries, name, unit, quantity, price 2. Substances and drugs – 380 entries 3. Galenicals – 9 entries – various unguents, aromatic waters, various oils, extracts, syrups, 5 kg tooth powder [26 pages].
6. Annex II.3. April 3rd 1949. No other mobile or immobile goods found [1 page].
7. Annex II.4. April 4, 1949. Sanitary materials – pacifiers, various dressings, baby bottles [1 page].
8. Annex II.5. April 4, 1949. Drugstore goods, perfumes, packaging. Included in annex II.1 [1 page].
9. Annex III. 1, 2, 3. April 3rd 1949. Goods outside the precinct. Nothing found [1 page].
10. Annex IV.1. April 6 1949. Furniture – 57 (? Incomplete copy) entries – 12 chairs (3 lab chairs mentioned twice), closets, stands, display cases, closets, tables, benches, clock in the furniture, wooden wall panels, mirrors, trash bins, pencil holders, Philips lamps, display cases, baskets, boxes, Wertheim cash register, desks [5 pages].
11. Annex IV. 2, 3, 4, 5, 6, 7, 8. April 7, 1949. Vehicles, installations, tools, annexes, buildings, land, other means of transportation. Nothing was found [1 page].
12. Annex V. 1–9. April 7, 1949. Ledgers, documents, written materials. Found in the drawers of the oficina and the room used as office. No insurance policies or CEC notebooks were found [1 page].
13. Annex VI. 1–3. April 6 1949. Rent contracts, orders, other documents. Found in the drawers of the oficina and the room used as office – in a file [1 page].
14. Annex VII. 1, 2. April 6, 1949. Various items – 6 entries – 69 books, 20 periodicals and notebooks, 2 flower pots, 1 decorative pot, 7 office paintings [1 page].

Fig. 1. The Baroque painting in Tobias Mauksch's *officina*, restored in 2021–2023 by expert Kiss Lóránd.

Fig. 2. Detail of Tobias Mauksch's inscription in the *officina*.

Fig. 3. Painted vegetal decoration in Tobias Mauksch's pharmacy, recently uncovered and restored.

Fig. 4. Photo of the main square in Cluj by Ferenc Veress, 1859, showing the Unicorn II pharmacy on the left, in the foreground, and the Hintz pharmacy in the center, in the background.

Fig. 5. Photo of the Hintz pharmacy before 1863.

Fig. 6. Photo of the main square in Cluj during market day, by Ferenc Veress, ca. 1863 – 1869, showing the Unicorn II pharmacy on the left, in the foreground, and the Hintz pharmacy in the center, in the background.

Fig. 7. Inscription in the old *officina* of the Hintz house, marking the 1898 renovation.

Fig. 8. The entrance to the Hintz House in 1905, detail of a photograph by Ella Hintz.

Fig. 9. The Neo-Gothic furniture of the Széky pharmacy, created in 1893.

Fig. 10. The *herbarium* of the Széky pharmacy, end of the 19th century.

Fig. 11. The *officina* of the Hintz pharmacy in 1903.

Fig. 12. The *officina* of the Hintz pharmacy in 1903.

Fig. 13. Detail of one of the display windows of the Hintz pharmacy during the Inter-War Period (dating based on the Romanian-Hungarian name of the pharmacy).

Fig. 14. The *officina* of the Hintz pharmacy in 1926.

Fig. 15. Géza Hintz and György II (Gyurka) Hintz in the office of the Hintz House (the old *officina*), in 1903.

Fig. 16. The façade of the Hintz pharmacy in 1930.

Fig. 17. Inside Teodor Goina's Fortuna pharmacy.

Fig. 18. The Apostle pharmacy.

Fig. 19. The Minerva pharmacy.

Fig. 20. The Dr. Biró pharmacy across the statue of Matthias Corvinus, 1940.

Fig. 21. Medicine metal box from the Dr. Biró pharmacy.

Fig. 22. The Dr. Halász pharmacy.

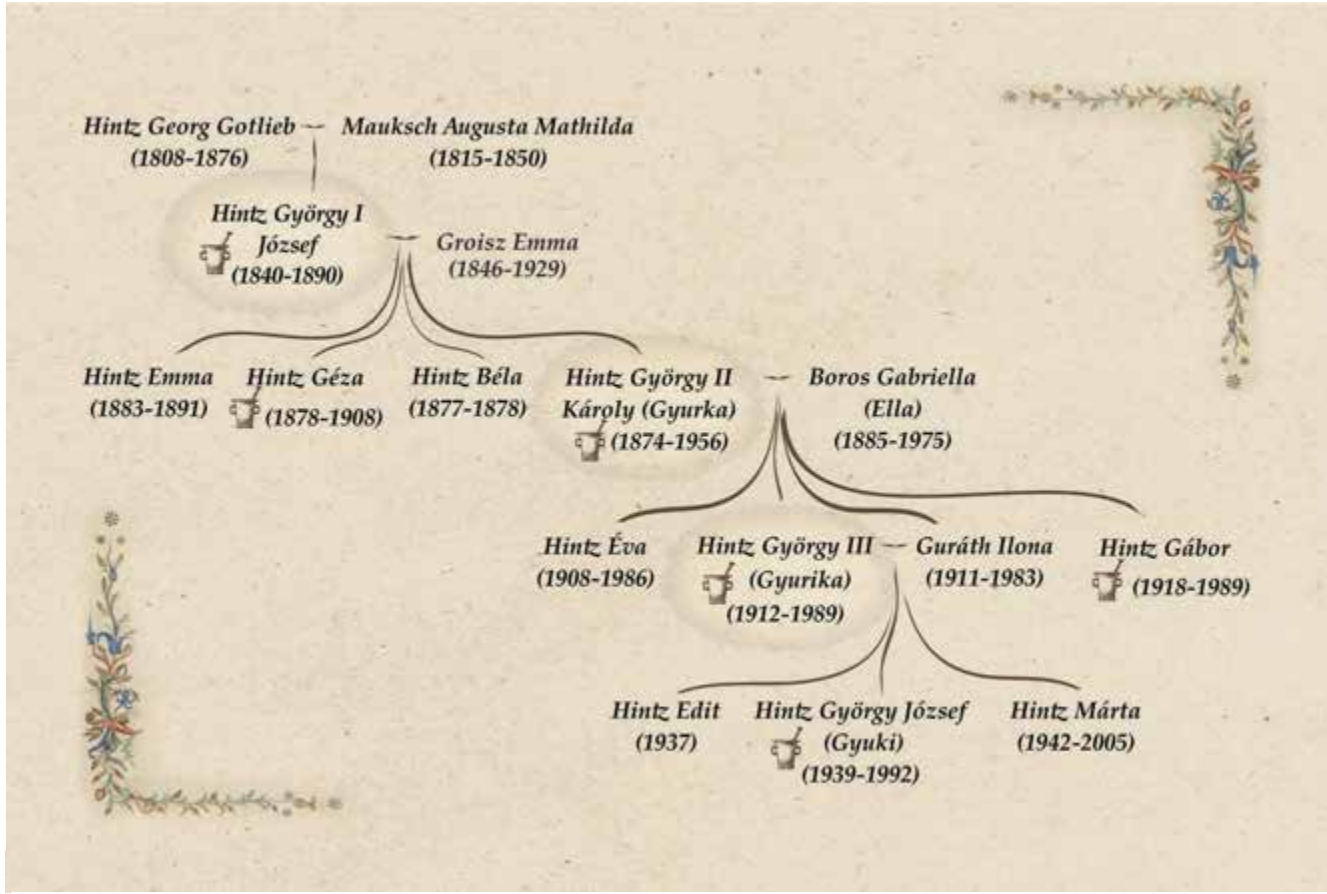

Fig. 23. The genealogy of the Hintz family.

Crisis in the Time of Cholera. The Coin Hoard from the Hintz House

Ágnes GĂZDAC-ALFÖLDY, Zsolt CSÓK

Abstract: The present paper is an interdisciplinary study of history which combines forensic numismatics with archaeology and sociology. The hoard discovered in 2020 during rescue archeological excavations in the basement of the former Hintz Pharmacy gave the opportunity to reveal aspects of history of Cluj in the second part of the 19th century. The hoard consisting of 972 coins had been deposited in two ceramic mineral water bottles. The bulk of the hoard is made up of silver denominations of 20 kreuzer minted between 1868–1872, but contains also 17 thalers from the 18th and 19th century and 5 gold coins (florins) from the middle of the 19th century. The dating of the latest coins (1872) indicate that the moment of hiding must be close to this year, possibly in 1873, which coincides with a storming period in the history of modern Cluj.

The collapse of the Vienna Stock Exchange on 9 May 1873 had dire consequences for the Austro-Hungarian Monarchy's financial system and left a negative imprint on Transylvania socio-economic system for many years. The economic troubles were doubled by two other negative circumstances in the year of 1873: a disaster in the agriculture due to drought and the outbreak of the last cholera epidemic in Cluj. One can rightly assume that the hoard in the Hintz House was hidden in that unfortunate historical context and its nonrecovery could be related with the cholera epidemic which decimated the population of the Cluj in the summer of 1873.

Comparing the value of the hoard with prices and salaries of that time we can conclude that the coins, converted to about 237 florins, did not hold particular high value, but it could cover the expenses for a couple months of a not particularly demanding person. Therefore, it is very unlikely that the owners of the pharmacy which belonged to the cream of Cluj society had anything to do with the hiding of the two bottles with coins. Therefore the "perpetrator" is probably a middleclass person from the entourage of the family, possibly

an employee of the pharmacy or even a servant who had permanent access to the basement of the Hintz House.

Keywords: coin hoard, mineral water bottles, Hintz pharmacy, financial crisis, cholera epidemic.

Discovery

Luck in archaeology is as unpredictable as in any other field. Fortune sometimes smiles on the young and inexperienced, as in the case of the two monetary hoards discovered during the restoration of the Hintz Pharmacy building. In 2020 an archaeology student, Katalin Vágó, had the chance to participate in the preventive archaeological excavations carried out in the Pharmacy Museum building and discovered a monetary hoard in the cellar of the house.[1]

The archaeological research carried out in the basement aimed to establish the structure of the building in time and space. A semicircular stone structure was outlined in room C1-S1,[2] located in the basement of the building, below the current level of the cellar (Pl. 4).[3] The construction can be dated to a period prior to the building of the present-day cellar, as attested by the overlap of the east wall of the cellar (15th–16th century) over the semicircular structure. One should note that the present cellar floor was levelled with a layer of soil in which archaeologists discovered rectangular shaped stones, a ceramic cup-lid, a 19th-century tobacco pipe fragment, as well as other ceramic fragments, iron nails, etc.[4]

On June 3rd 2020, two ceramic bottles filled with coins were discovered in room C1-S1 in the basement, inside the semicircular building. The stoneware bottles were hidden in the ground just below the aforementioned east wall, at a depth of about 20 cm. It seems that the cellar where the hoard was discovered was built in the Baroque period, probably for the purpose of storing goods and firewood. Research has shown that the structure of the

[1] We would like to thank Dr. Georg Hintz, the current owner of the building, for his interest in the research and for the valuable information he has kindly provided on the family history.

[2] Ványolós 2022, 216, fig. 1.

[3] We express here our gratitude to Endre Ványolós for providing the digital version of the Hintz House plan.

[4] We would like to thank Katalin Vágó (archaeology student at the Babeș-Bolyai University) and Szilárd Szenyes (construction engineer, collaborator of the architecture company Planwerk) for information related to the research performed in the basement area of the building, room C1-S1.

building underwent a number of alterations during the second half of the 19th century in particular, after the pharmacy came into the possession of the Hintz family in 1851. On the west side of the courtyard a simple annex with a ground floor and flat roof was built, and on the north side of this annex access to the basement was created. As a result, the last structural changes in this area took place in the second half of the 19th century.[5]

Recovery and restoration

It appears that the stoneware bottles were intentionally broken to store the coins. In the case of the smaller bottle, in which 374 coins were stored (Hoard No. 1), part of the neck is missing and the shoulder is broken vertically, so that the larger coins[6] could easily be inserted into the hole (Pl.1). The taller bottle (Hoard no. 2), containing a larger number of coins (598 pieces) but of standard size (21 mm), has a broken handle, and a roughly circular hole has been drilled on the shoulder, where the handle had been attached.

In the smaller jar (Hoard No. 1) the coins were covered with a piece of cloth, which was destroyed when the coins were recovered (Pl. 2.2). The taller bottle (Hoard No. 2) was sealed more tightly, the holes covered with cork, which over time dried out and fell inside the bottle. The coins were thus preserved in a very good condition, as the earth did not get inside the containers.[7] Through painstaking work it was possible to recover the coins one by one, from the mouth of the bottles to the bottom. This method made it possible to trace the deposition of the coins in reverse chronology, in order to establish whether there was any rule regarding the dating of the coins and their placement in the containers. The hypothesis that older coins are placed lower and newer coins above older coins has not been proven. In both cases the most recent coins, dated 1872, were found both at the bottom of the bottle and towards the neck. In the case of Hoard No. 1 one could note that the older coins (18th – early 19th-century thalers) were placed near the gold coins (19th-century ducats) and all are grouped approximately in the middle of the bottle, mixed with more recent coins dated between 1868 and 1872.

These observations about the chronology of the coins are particularly important because they show that it is not a question of slow deposition,

[5] Ványolós 2022, 220–221.

[6] The largest coins, the thalers, are between 39 and 42 mm.

[7] In both cases the recovery and restoration processes were performed by Radu Cordoș, metal restorer at the National Museum of Transylvanian History, whom we thank for his collaboration.

nor of the use of the vessels as piggy banks over a long period of time. The random mixing of older coins with newer ones shows that the flasks were quickly transformed into storage vessels and the coins were deposited in a very short time. Mineral water bottles were ideal for storing and hiding coins, as curative mineral water was even sold in pharmacies. The bottles were within easy reach of those who lived or worked in the pharmacy building.[8] The mineral water bottles were most likely no longer in use at the time the hoards were hidden, a hypothesis supported by the bottle from Carlsbad bearing a stamp dated before 1857 (Pl. 2.1).[9]

Mineral water bottles were much more durable than ordinary clay pots, as they were made using a special method to preserve the qualities of the water.[10] The owner of the hoard chose mineral water bottles for pragmatic reasons. The containers had to be durable and suitable in size for storing the **972 coins** of various sizes. The owner of the money thus chose two different sized mineral water bottles and prepared them in a practical way. He broke the necks and handles of the bottles, calculated the pieces and divided them into two according to the volume of the prepared containers. He then deposited the coins one by one into the cylinders. Thus, he placed the larger and more valuable coins (thalers and ducats) exclusively into the short bottle with the larger hole, and the larger quantity of coins, all of them denomination of 20 kreuzer and uniform in size, deposited one by one into the taller bottle through a small, roughly round hole. In this cylinder, containing 598 coins, only one coin of 20 kreuzer dates to the 18th century and was struck by Emperor Joseph II in 1787. The rest of the coins are 19th-century issues, and the vast majority of them (592 coins, 99% of the total) were struck in the period between 1868 and 1872.

[8] In 1873, the pharmacy operated on the ground floor and the owners lived upstairs. The Hintz family consisted of pharmacist György József Hintz (1808–1876) and his wife Emma Groisz (1846–1929), their three children were not yet born. The pharmacist's father, Lutheran pastor Georg Gottlieb Hintz (1808–1876), also lived in the house with the youngsters. The pastor's wife, Augusta Matilda Mauksch (1815–1850) died when György József Hintz was only 10 years old. Hopefully future research will be able to determine exactly who the pharmacy employees were and who else lived in the building at that time.

[9] In 1857 H. Mattoni and F. Knoll took over the mineral water business in Carlsbad and switched to stamping bottles with their own names (see below).

[10] In German, the term *Steinzeugflasche* is used, meaning stoneware bottles, which refers to the hardness and strength of the material.

The stoneware bottles

Both cylindrical containers come from the historical region of Bohemia (today the Czech Republic) which in the 19th century was part of the Austrian Empire, respectively Austro-Hungary after 1867. Both ceramic vessels were used as bottles for curative mineral water and imported as such to Cluj. The stamps on the body of the vessels allowed us to identify their exact place of origin.

The smaller vessel (19.5 cm, IF 2546) was produced in the north-western part of the Czech Republic and bottled in Zaječice (Bečov, today Czech Republic), a settlement famous for the Seidlitz bitter water ("Seidlitzer Bitterwasser") springs. The water there was rich in magnesium sulphate (conventionally named after the English town of Epsom as Epsom salt). In the first half of the 19th century, the Zaječice region became Europe's main supplier of bitter water for medicinal purposes, and the bitter water from Zaječice gained a reputation as the purest source of bitter salt.

The identification of the bottle in which Hoard No. 1 was discovered was made possible by the stamp on the shoulder of the bottle. The circular inscription indicates the provenance FURSTLICH LOKBOWITZ SAIDSCHITZER and the text in the center of the stamp, below the princely crown, records the contents of the bottle, BITTER WASSER.

The taller vessel (26 cm, IF 2545) comes from present-day Karlovy Vary (Carlsbad), a famous spa town in the historic *Egerland* (Chebsko, Czech Republic) in the north-western part of Bohemia. The identification of the place of origin was made possible by the stamp on the shoulder of the bottle. In the middle of the circular inscription that reads KARLSBADER MINERALWASSER one notes the coat of arms of Carlsbad: the crowned lion of Bohemia to the left rises above three transverse waters (Pl. 2.1).[11] Industrial bottling of Carlsbad mineral water began in 1843,[12] but mass marketing started after 1857, when Friedrich Knoll and Heinrich Mattoni took over the lease of the business.

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[11] Dr. Josef von Löschner, a physician and professor at the University of Prague who published a book on the beneficial effects of curative mineral water, describes the Carlsbad bottle stamp in detail in the 1857 edition of his book: „Bei jedem Thonkruge, sowie jeder Glasflasche erscheint der Name der enthaltenen Quelle in der Verkapslung eingeprägt, ferner ist bei dem Thonkruge im runden Schilde das Stadtwapen mit der Umschrift: Karlsbader Mineralwasser vertieft eingegebrannt, bei den Glasflaschen hingegen das Wapen erhöht ersichtlich." Löschner 1857, *apud* Brinkmann 1992, 97.

[12] The business soon experienced spectacular growth. In 1844, 91720 stoneware bottles of Carlsbad mineral water were shipped, and by 1867 bottling grew to 500000 stoneware bottles. Brinkmann 1992, 95–96.

At first, mineral water was shipped in stoneware bottles. Thanks to H. Mattoni's popularizing travels, Carlsbad mineral water soon became known throughout Europe. In the 1870s H. Mattoni gradually replaced the stoneware bottles with glass bottles, which quickly became widespread and coincided with an increase in production to over 1,000,000 bottles in 1876, and by 1901 to over 2,000,000 bottles a year.[13] Based on this information, bottle No. 2 can be dated before 1857, the year Friedrich Knoll and Heinrich Mattoni took over the Carlsbad mineral water business and began adding their names to the stamps on the bottles shipped out.

Curative mineral water was certainly sold in the Hintz Pharmacy on a regular basis. This is proven by the four bottles of mineral water preserved in the collection of the Pharmacy Museum (IF 1846–1850). The four bottles are stamped and indicate their origin in Selters (Hessen region, Germany), a town famous for its alkaline, sodium-rich mineral springs.[14] The preservation of the bottles in the collection of the Pharmacy Museum attests the sale of curative mineral waters in the pharmacy of St. George (Hintz).

The structure of the hoard

The hoard discovered in the cellar of the Hintz House contains a total of 972 coins and consists of two parts. Hoard No. 1, stored in the shorter bottle, contains 374 coins, while Hoard No. 2, hidden in the taller bottle, contains 598 coins. It can be easily observed that there is a significant difference between the two parts of the hoards not only because the different number of the deposited pieces, but also from the point of view of the issuing date and the minting authorities. While Hoard No. 2 consists of coins struck only by Austria and Hungary (99% are 20 kreuzer-coins from 1868–1872), in the Hoard No. 1 the presence of the older coins is more significant and there are some issues from other authorities too (Bavaria and Saxony) (see the comparative graphs, Figs. 5–6, Figs. 7–8).

Distribution of coins by issuing year, authority, and denomination (Tab.1)

The graph of the distribution of coins shows the presence of 7 different denominations in the structure of the hoard. Thalers, guldens, 1 and 2 florins, kreuzers of 5 and 10 value are very scarcely represented in the hoard

[13] Brinkmann 1992, 99.
[14] Gruia 2016, 60–64.

(Fig. 4). The bulk of the hoard is made up of 20 kreuzer-coins (938 pieces), which represent no less than 96.5% of the total coins! The majority of the 20 kreuzer-coins are issues struck by Franz Joseph between 1868 and 1872 with a standard weight of about 2.666 grams (Pl. 3. No. 9–10.). These represent the new issues of the Austro-Hungarian Monarchy and are the most circulated denominations in the period when the hoard had been buried. Among the 20 kreuzer value coins only 17 items are older issues, the latest item being a coin struck by Maria Theresa in 1773, weighing 6.26 grams.

As pointed out above, the taller vessel (Hoard No. 2), with a larger number of pieces, contained exclusively the denomination of 20 kreuzer. This cannot be accidental and we believe it is due to a deliberate selection of pieces in order to calculate the value of the coins more easily and separate them in two parts. The smaller vessel (Hoard No. 1) is much more varied in terms of deposited denominations. This bottle contained not only 340 coins of 20 kreuzer, but also silver items and even 5 gold ones!

From the point of view of monetary circulation, the most interesting is the presence of old thalers (1766–1832) in the hoard (Pl. 3. No. 13–16.). Of the 17 examples 3 are issues of Saxony struck by Frederick August, one of Hungary struck by Joseph II, and the rest are Austrian issues of Francis I. The earliest piece is a Saxon thaler struck by Frederick August in 1766. The presence of these old coins in the hoard suggests that thalers, made of good silver and thus retaining their intrinsic value could be exchanged. It is possible that the old coins were kept in the family, and in time of crisis were hidden with other high-value coins (gold ducats). It remains unclear to what extent these old coins were accepted in everyday transactions in the second half of the 19th-century.

The gold coins (denomination of 1 ducat) are issues of Francis I from 1830 – one item, Ferdinand I (V) – two coins from 1848 and Franz Joseph – two items, one issued in 1856 and the other in 1865 (Pl. 3. No. 1–5.). Of the 5 gold coins only one belongs to Hungary, a gold ducat of Ferdinand V minted during the 1848 revolution. On the obverse it features the figure of the King wearing the crown of St. Stephen, standing to the right, and on the reverse the classical iconography of medieval Hungarian coins: the Virgin Mary, unveiled, seated in heaven with Child Jesus in her arms (Pl. 3. No. 3). The rest of the gold coins were minted by the Austrian Monarchy. All gold coins were part of the Austrian and later the Austro-Hungarian monetary system (1 ducat was equivalent to 450 kreuzers) and were accepted in circulation in the second half of the 19th-century.

Distribution of coins by issuing authority (Figs. 7–8)

Concerning the minting authority of the coins one can note that almost all of them are Hungarian and Austrian issues. Only 4 coins come from other German regions and are older items: 3 thalers of Saxony minted by Frederick August and a 20 kreuzer-coin issued in Bavaria by Maximilian III.

Among the contemporary issues (1868–1872), the Hungarian minted coins (772 coins) are much more numerous than the Austrian ones (155 coins). The ratio is 83% Hungary and 17% Austria (Fig. 3). These data are remarkable from the point of view of coin circulation in Transylvania during the 1870s. It seems that after the establishment of the dualist regime Hungary started minting its own currency (1868), the Hungarian crown issues arrived massively in the area of Cluj and were probably predominant throughout Transylvania.

The hoard's dating

The issuing period of the coins is precise, 1766–1872, the earliest piece being a thaler struck by Saxony in 1766. The most recent coins are 20-kreuzer value coins minted in 1872 by Franz Joseph. Thus, the year 1872 can be considered as a *terminus post quem* for the hoarding. Of the 972 coins, 69 were issued in 1872 and none subsequently.

Coins struck in the 18th-century are very few in the hoard, they represent only 1% of the total. The issues from the 19th-century dated before 1868 are also scarce (4%) (Fig. 1). The bulk of the hoard consists of coins struck between 1868 and 1872, a period that coincides with the new issues introduced by the Austro-Hungarian dualist regime established in 1867. The 927 coins represent no less than 95% of all the coins found in the two vessels! This large number of coins indicates the period of concealment, which must have been close to 1872, the year of issue of the latest coins. This hypothesis is also confirmed by the distribution of the 927 coins issued in the chronological interval 1868–1872 (Fig. 2): 17% of the coins from this period were issued in 1868, most in 1869 (39%), a similar number in 1870 (37%) and only 7% in 1872. Issues from 1871 are conspicuously missing from the hoard, as in this year no coins of 20 kreuzer value were minted and it seems that the hoard owner had a clear preference for this denomination. The fact that the 1872 issues represent only 7% of the coins issued in the period 1868–1872 and that there are no coins dated after this date, shows that the time of the cachet has to be placed close, probably during 1873.

The hoard's value

It is noteworthy that the coins in the two hoards, although different in number and monetary type, are very similar in weight, each lot weighing around 1.5 kg.[15] This suggests that the person who divided the coins into two parts ensured that the two vessels contained coins of approximately the same weight and value.

Face value

It is difficult to determine the real value of the hoard in the time of its hiding for several reasons. In the 1870s, the monetary situation in Austria-Hungary (ratio of gold coins – silver coins – banknotes) was extremely disordered.[16] On the other hand Hoard No. 1 contains silver thalers that were over 100 years old[17] whose parity is difficult to establish in the currency of the 1870s. However, an approximate value can be calculated for Hoard No. 1 and a fairly accurate value for Hoard No. 2.

The currency of the time in the Empire was the Austro-Hungarian gulden,[18] and the subdivision of calculation was the kreuzer. Thus, in the gulden-based monetary system the ratio between gold and silver denominations was as follows:

1 ducat = 4.5 florins = 450 kreuzer
1 florin = 100 kreuzer[19]

In order to be able to set out the value of the hoards we have chosen to convert all the large denominations into kreuzer. It is difficult to calculate the value of old thalers in monetary circulation around 1872–1873 as they

[15] During the inventory process of the pieces at the MNIT all pieces will be accurately weighed and measured.

[16] Fluctuations in the gold-silver ratio had a negative influence on the development of the Austrian currency in the last third of the 19th century. From the middle of the century there was a gradual decline of silver relative to gold. By the late 1870s almost all European countries and the USA had switched to gold currency. Following international trends, Austria-Hungary abandoned the previous silver-based monetary system and on 2 August 1892 introduced the gold-based korona. Thus, the gulden (1 florin) was equivalent to 2 korona, and 1 korona was divided into 100 hellers. Oest. Geld. 2020, 70–74.

[17] The oldest coin is a Saxon thaler minted in 1766, see above.

[18] The gulden (florin in Latin and forint in Hungarian) was the currency of the Austrian Empire and from 1867 of the Austro-Hungarian Empire. The gulden-based monetary system was introduced in 1858 by the Vienna Monetary Treaty and replaced the thaler-based system (*Konventionsthaler* of 1754). Unlike the thaler, the gulden was a decimal monetary system and the thaler was equivalent to 2 florins.

[19] Before 1858, when Austria switched to the decimal system, 1 florin was equivalent to 60 kreuzer.

are part of different monetary systems. However, we can take into account the conventional conversion of 1 thaler = 2 gulden (florins), accepted in the period between 1792 and 1835.[20] Thus, in the second half of the 19th century, 1 thaler could be converted into 200 Austro-Hungarian kreuzer.

Based on this approximate parity between thaler and kreuzer, it was possible to calculate the value of the two hoards from the Hintz Pharmacy. To our surprise the two values are very close, similar to the weight of the hoards (see above). Hoard no. 1 is worth 11755 kreuzers and hoard no. 2 is worth 11960 kreuzer, and their combined value is of approximately 23715 kreuzer, equivalent to 237.15 Austro-Hungarian florins.

In order to determine the true value of the Hintz Pharmacy hoards we need to establish the purchasing power of money in close relation to wages and prices at the time. Fortunately, various written sources are available, aiding the understanding of the financial realities of the population of Cluj in the second half of the 19th century. The prices of commodities and wages in various fields (agriculture, mining and metallurgy, the food and textile industries, etc.) were regularly recorded in the Monarchy's statistics, as well as by the local authorities.[21] Another extremely valuable source is the local press that published advertisements for various products and services, often indicating their prices.

Salaries

As far as average wages are concerned, considerable differences can be observed between the different provinces of the Austro-Hungarian Empire. Imperial statistical records show that a forestry worker in Bukovina in the 1873–1886 period earned 63 kreuzers per day, while in Lower Austria the daily wage was 106 kreuzers.[22] In 1874 a metalworker in Bukovina could earn 76 kreuzer per day, while the same work was paid 113 kreuzers per day in the Salzburg area.[23] Wages in Transylvania were lower than in the Budapest area or in the more heavily industrialized western Hungary. A miner in Rimetea (Alba County) was paid about 25 kreuzers for 1 ton of mined ore. Since a worker could mine around 2 tons in a day, his daily wage was around 50 kreuzers.[24] For Transylvania, one can obtain exact data from

[20] Ártörténet – Pénz és ártörténeti szakportál, https://artortenet.hu/i-ferenc-penzrendszere-es-atvaltasok/

[21] Cvrcek 2013, 5–7, 15.

[22] Cvrcek 2013, 19, tab. 4.

[23] Cvrcek 2013, 21, tab. 5.

[24] Arcanum Digitális Tudománytár. Arcanum/ Magyar néprajz/ VIII. Társadalom/ Munkabér és rétegződés. https://www.arcanum.com/hu/online-kiadvanyok/MagyarNeprajz-magyar-neprajz-2/

local newspapers. For example, an article in the weekly magazine of the Transylvanian Economic Society (*Erdélyi Gazda Egylet*) records the cost of harvesting wheat in the summer of 1873. Thus, a day laborer was paid for field work with 60 kreuzer plus 6 kreuzer-worth of palinka.[25] Taking this data into account, the monetary hoard in the Hintz Pharmacy, about 23715 kreuzer, represents the wages of a day laborer in agriculture for no less than 395 days, i.e. the income for about one year and one month.

The middle class, the bourgeoisie (merchants, shop owners) and public servants of the state (notaries, teachers, doctors, etc.) had higher incomes. For example, the salary of a notary's assistant working for the county was 600 florins a year,[26] i.e. 50 florins a month, the equivalent of 5000 kreuzer. Thus, the hoard in the Hintz House represented a notary's income for almost 5 months. Even if not a fabulous fortune, the hoard in the Hintz Pharmacy was not a negligible sum, especially in the context of the economic and monetary crisis that broke out in the Empire after the collapse of the Vienna Stock Exchange on 9 May 1873 (see below).[27]

Prices

To get an idea of the buying power of the two coin hoards hidden in the basement of the Hintz Pharmacy, we have to look at the prices of the products in Cluj. Fortunately, the local newspapers provide precise information. For commodities (wheat, meat) the *Magyar Polgár* newspaper regularly published the prices at the weekly fair in Cluj, which were reported to the Statistical Institute in Vienna. Newspapers are inexhaustible sources for taking the pulse of the city at that time. This is where advertisements of companies and products were published. The table below includes the prices of two basic products (wheat, meat) and two products necessary for everyday life (soap and sugar), as well as a product for everyday consumption (beer) and a luxury product (coffee from Cuba). When we look at these prices, we can see that the 23715 kreuzers calculated for the two coin hoards was a quite significant sum, which ensured a decent living for a family from Cluj for a few months.

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viii-tarsadalom-CA13/bevezetes-es-tarsadalmi-retegek-CA34/az-ipari-munkassag-CE12/a-munka-vilaga-CE74/munkaber-es-retegzodes-CE75/

[25] *Erdélyi Gazda*, 1873, August 22, 261. Correspondence of Ébner Sándor from Cetatea de Baltă (Küküllővár), Alba county. Wages look slightly different according to Jobst, Stix 2016, 114, tab. 1. Thus 6 florins = 600 kreuzers per month was the average earning of the population in the Empire during the period of the gulden-based monetary system (1840–1880).

[26] Gyáni, Kövér 2003, 96.

[27] On this topic see below.

Product	Year	Month	Quantity	Measure	Price in kreuzers	Source
wheat	1873	June	62 litres	2 bushels	800–820	*Magyar Polgár*
beef	1873	June	0.56 kg	funt	25	*Magyar Polgár*
beer from Schwechat	1873	August	?	glass	9	*Magyar Polgár*
table wine	1873	August	0.42 l	Hungarian unit "meszely"	12	*Magyar Polgár*
sugar	1873	August	0.56 kg	funt	30	*Magyar Polgár*
coffee from Cuba	1873	August	0.56 kg	funt	92	*Magyar Polgár*
soap	1873	August	?	1 bar	44	*Magyar Polgár*

The hiding of the coin hoard

The most interesting questions are related to the context of the hiding of the hoard: when, for what reason was it buried and who could have been the owner? Another question, perhaps the most difficult to answer, is related to why it remained hidden for a century and a half, why did the owner or the owners fail to recover it? Questions worthy of a detective investigation, right?

In order to answer these questions, we need to look at the historical period in which it was buried. The starting point is the date of the last monetary issues, *terminus post quem* 1872. As mentioned above, it is very likely that the hoard was buried at a later but close date, possibly sometime in 1873.

Historical context

In the history of the Austro-Hungarian Monarchy 1873 was a year of great achievements but also of great problems. The year saw the World Exhibition held in Vienna open with great pomp and also marked the beginning of an economic decline in the Empire. The period between 1867 and 1873 is known in the history of the Monarchy as the founding era – the 'Gründerzeit'. Economically and financially, Austro-Hungary experienced spectacular growth, supported primarily by private capital. Hundreds of joint-stock companies were founded, freight transport was developed by extending the railway line into the provinces, and splendid buildings along the Ringstrasse were erected in Vienna. In the spirit of liberalism, the emphasis was on unbridled profit growth combined with a great euphoria about progress. During this period, numerous banks were set up to meet the growing need for capital to support newly founded companies. Joint-stock

companies boomed and uncontrolled investment created a huge financial bubble based on scam and monkey business.

At the 1873 World Exhibition, Austria-Hungary wanted to present itself as a progressive country with a strong economy. It invested huge sums to achieve this goal. Overly positive press reports fueled the prevailing optimism in society. Immediately before the exhibition opened, property and share prices soared to astronomical heights. Under these conditions many people, hoping for quick speculative gains, invested in the stock market.[28]

The speculative bubble burst a week after the opening of the World Exhibition. On 9 May 1873 there was a 'Black Friday' on the Vienna Stock Exchange, when 120 bankruptcies were recorded in a single day. The collapse of the Vienna Stock Exchange had dire consequences for Austria's financial economy and soon spread to Budapest. Its effects left a negative imprint on Hungary's economy for many years ahead. The acute crisis manifested itself in the bankruptcy of numerous banks and financial companies both in Budapest and in the provinces. The general financial insecurity was followed by the sudden emergence and disappearance of various banking companies. In 1873, 28 banks were established in Hungary, but no less than 22 were subsequently closed![29]

Cluj in 1873

The collapse of the Vienna Stock Exchange and the economic crisis were also felt in Transylvania. A few days after the "Black Friday" in the capital, the opposition's daily newspaper, *Magyar Polgár*, the main voice of the progressive bourgeoisie in Cluj, dedicated a substantial article to it on the front page of the newspaper. The title is suggestive: "The first result of speculation". The article was highly critical of the speculative stock market deals that had spread "like mushrooms" in the provincial towns. The author expresses his concern about the possible spread of the crisis to Pest, but also to Transylvania, because "if there is trouble in Vienna, we suffer too".[30]

One of the adverse effects of the financial crisis has been the sudden disappearance of liquidity, which can be seen in the articles published in Cluj newspapers. Sándor Ébner, a correspondent from Cetatea de Baltă (today in Alba county) of the *Erdélyi Gazda* magazine complained on 10 August 1873 that drought had destroyed the pastures and meadows, cattle had

[28] Oest. Geld. 2020, 72; Kövér 1982, 49.
[29] Kövér 1982, 50.
[30] *Magyar Polgár* 1873, 13 May.

nothing to eat, the price of meat had fallen drastically but no one was buying because "it seems that the most important economic force – money – is lacking everywhere".[31] The widespread financial crisis was also mentioned in a glossary sent by János Bartók (Béla Bartók 's grandfather) from Sânnicolau Mare (Torontál county, today in Timiș county).[32] These observations are also significant from the perspective of the coin hoards from the Hintz House.

In the 1870s, the range of the increase rate between the bank deposits and the loans raised to 4–6%. This situation led towards the decrease of bank deposits, provoking a shortage of the cash flow.[33] In the economic crisis after 1873, moneylending flourished more and more, and those in difficulty were forced to pay an exaggerated fee, which could even reach over 60%.[34]

The chain of bankruptcies, lack of money in investments, and the disappearance of liquidity has created an atmosphere of general financial uncertainty throughout Transylvania. Anguish was heightened by two other unfortunate circumstances that arose in mid-1873: the destruction of agricultural crops and the outbreak of cholera. These two aspects will be discussed below. The year 1873, because of spring frosts, the spread of a plant disease and, above all, extreme drought in the growing months, was disastrous. Researchers estimate ¾ of the wheat crop was destroyed in 1873.[35]

In the summer of 1873, the outbreak of cholera deeply affected the natural course of life in the "treasure town" – as Cluj was called throughout many centuries. From 18 June onwards, for about three months, the city was gripped by panic. The disease spread very quickly and was helped by the lack of running water and sewage, an acute problem for the municipality, that would not be solved for two more decades.[36] The peak of the cholera epidemic was in July, a month in which dozens of illnesses were recorded every day.[37] School classes were interrupted, university admissions, fairs and meetings cancelled. The panic of the population was heightened by the continuous ringing of church bells in the city. Newspapers published daily statistics of new illnesses, deaths and cures. We can easily imagine how panicked people were in the summer months, when the newspapers announced more and

[31] *Erdélyi Gazda* 1873, 22 Aug, 260.
[32] Kövér 1986, 128–129.
[33] Kövér 1982, 51–52.
[34] *Erdélyi Gazda* 1874, 10 Feb, 61; Kövér 1986, 129.
[35] Kövér 1986, 128.
[36] Fazekas 2021, 126.
[37] On 18 July, 48 illnesses were recorded in a single day! A very high number for a town of 26382 inhabitants. *Magyar Polgár* 1873, 20 July.

more illnesses every day and the bells rang incessantly to announce deaths. Under these circumstances, the authorities, in order to calm down the population, decreed a temporary ban on the ringing of bells in town![38]

Considering the natural and financial disasters outlined above, it is understandable that the mayor of Cluj, Simon Elek, published a report on his activities in 1876, where he characterized the period after the establishment of the dualist regime (1967–1873) as the "seven lean years" in Cluj's history, an obvious reference to the seven lean years in the Old Testament.[39]

So, the anxiety caused by the financial crisis in Vienna gradually spread to the inhabitants of Cluj. The disaster in agriculture was more and more evident in the harvest months, death was lurking in the city and threatened the livelihood of every inhabitant. We can rightly assume that the hoard in the Hintz House was hidden in these historically dire circumstances.

Conclusions

At first glance it seemed obvious that the coin hoard from the cellar was hidden there by a member of the Hintz family. However, in the course of the research, it became increasingly clear that this hypothesis was the least likely. Why? Several arguments can be put forward, and the value of the hoard is one of them. As shown above, the amount of 237.15 florins was approximately 5.5 months' salary for public employee and 1.5 years' income for a worker. The owner of the pharmacy, however, was part of the cream of Cluj society in the 19th century and was undoubtedly well off financially. Thus, for the Hintz family the sum of 237.15 florins was not a fortune they would have had to hide in the cellar. The owner of the pharmacy, György József Hintz, a specialist with a doctorate from Vienna, already had a brilliant career at the age of 33. In addition to owning the town's most imposing pharmacy, György József Hintz was very active in the town's public life.[40] One of the positions he held in 1873 was treasurer of the Transylvanian Economic Society. In this capacity he collected the annual dues of the members of the society, which could be paid right in the Hintz House.[41] We can rightly assume that the income of the pharmacy as well as the funds of the Transylvanian Economic Society were kept in a safe place somewhere in the house, possibly even in

[38] Gál 2018.
[39] Egyed 1997, 92.
[40] See the article of Melinda Mitu in the present volume.
[41] Gaal 2002, 17–18.

a safe[42] and later deposited at the bank. In 1873 György József Hintz had already been married to Emma Groisz for 10 years. From a prestigious bourgeois family in Cluj, Emma's father was an advisor to the Court of Auditors and her uncle was a former mayor of the city and vice-president of the *gubernium*. Their first child to survive to adulthood, Károly György, was born only in 1874.[43] Although the Hintz family may have been somewhat affected by the financial crisis that began in 1873, they certainly had considerable reserves that they kept in a safe place.

At this point, based on the data gathered, we can sketch the following scenario. The hoard with the two bottles full of coins was hidden in a moment of existential threat (financial and physical), which most probably can be placed in the summer of 1873, a period of multiple calamities in the history of Cluj. The individual, whose identity remains unknown for the time being, certainly had close ties with the pharmacy of Saint George and the Hintz family. It is quite possible that he worked or even lived in the house. Thus, we can suspect one of the pharmacy employees or a servant. The value of the hoard indicates that the amount provided a few months' subsistence for an individual of average social status, but by no means was it a large fortune or the savings of a family of high social status. For this reason, it is highly unlikely that the hoard was buried by one of the Hintz family members. For now, until all the archival sources have been checked, this theory remains a working hypothesis.[44]

Hiding the hoard can be seen as a rational act of rescue in a moment of collective panic. As we have shown above, the sum of 237.15 florins was probably an individual's personal savings. The fact that the money was kept mostly in contemporary small denominations (20 kreuzer) suggests that it may have represented savings accumulated over a relatively short period of time (1–3 years). It is very likely that after the danger had passed, the well-hidden money was intended to provide financial support for an individual or family for several months. The amount was mostly composed of contemporary small denominations in Austro-Hungarian currency. The old coins, the 18th–19th-century thalers, which were probably no longer in circulation in 1873, still, had an intrinsic value and were possibly kept/inherited in the family. The bottles were turned into containers right before they were hidden

[42] Edit Hintz, born in 1937, remembers that her grandfather György Károly Hintz ("Gyurka", 1874–1956), also a pharmacist, had a metal safe in the house where he kept his money. We thank Mrs. Hintz for the verbal information she gave us through her son, Dr. Georg Hintz.

[43] Gaal 2002, 18.

[44] The hoard will be published in a monographic study by the authors of this article.

and there is no evidence that they were used for a longer period as money piggy banks. This hypothesis is supported by the fact that no chronological rule could be observed in the deposition of coins inside the bottles. Another argument for this would be that all the money was counted together and carefully divided into two parts almost equal in value and weight, and old coins as well as gold coins were deposited in only one of the vessels, mixed with contemporary coins. The choice of hiding location, preparation of the bottles, the care taken to protect the money (the holes were covered) and the split of the amount into equal parts suggest a rational and calculated mind. It seems that despite the difficult times, the owner was in no hurry and took care to keep the coins in good condition.

The cellar of the Hintz House, used as a storage room, was an ideal place to hide money at a time when banks didn't seem to be safe. The owner of the hoard did not choose the location by chance. He considered the cellar of the Hintz House, with its direct entrance from the courtyard, to be the most secure and accessible place. In this respect, the hypothesis that the "perpetrator" worked permanently in the Hintz Pharmacy house is the most plausible. The owner was absolutely certain that he could always get down into the cellar to dig up the money. The most difficult question to answer in the case of hoards from all historical times is related to the non-recovery of the money. So far, we have no clear clues as to what happened to the owner, why he couldn't recover the hidden money or for what reason he was unwilling/unable to share the secret with someone close to him. Perhaps he was a man without family, who trusted no one? In any case, it is very likely that the cholera epidemic in the summer of 1873 is responsible for the non-recovery of the money. A human tragedy, namely the illness and death of the owner, seems to be the most credible hypothesis in the case of the Hintz Pharmacy hoards.

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Hoard No. 1 + Hoard No. 2 Distribution of coins by issuing year and authority					
Year	**Total**	**Austrian Empire**	**Hungary**	**Saxony**	**Bavaria**
1766	1			1	
1768	1			1	
1773	1	1			
1776	1				1
1780	2	2			
1782	1		1		
1787	2	2			
1808	1			1	
1809	1	1			
1818	1	1			
1819	2	2			
1823	3	3			
1824	1	1			
1825	1	1			
1826	1	1			
1829	1	1			
1830	2	2			
1832	2	2			
1844	1		1		
1845	1		1		
1846	1	1			
1847	1	1			
1848	4	3	1		
1852	3	3			
1854	1	1			
1856	1	1			
1857	1	1			
1858	3	3			
1859	1	1			
1865	2	2			
1868	158	72	86		
1869	359	40	319		
1870	341	43	298		
1872	69		69		
TOTAL	**972**	**192**	**776**	**3**	**1**

Tab. 1. Hoard No. 1 + No. 2. Distribution of coins by issuing year and authority.

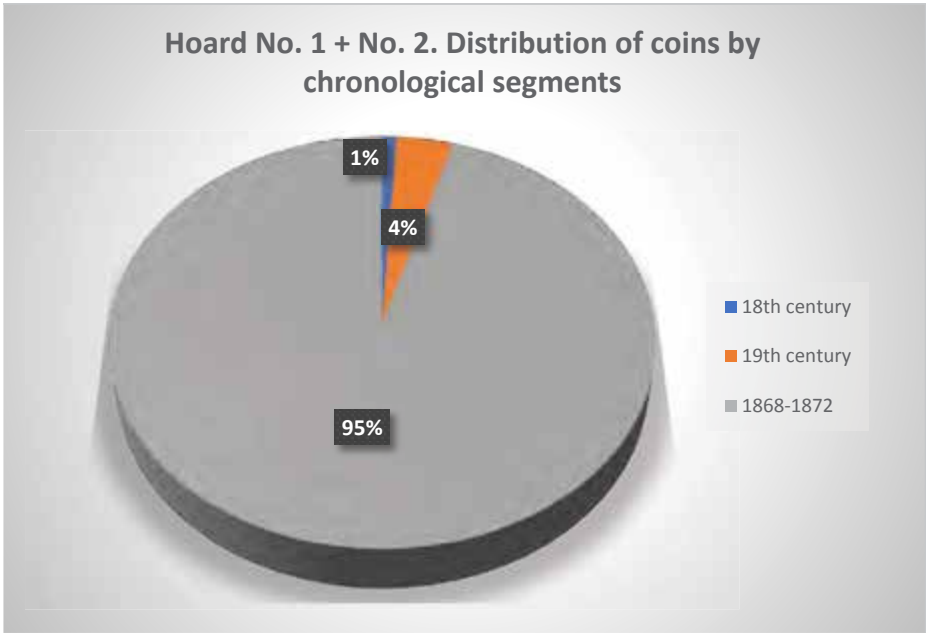
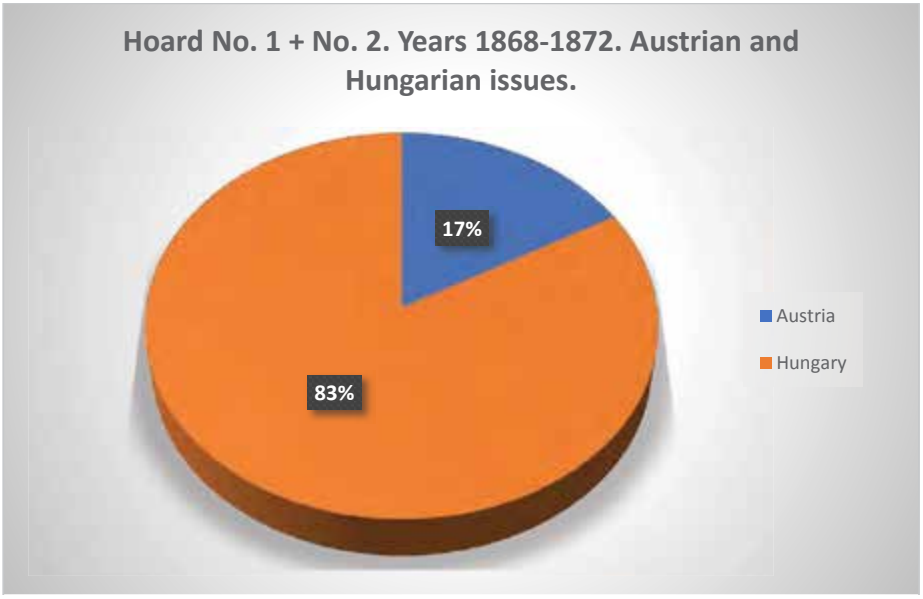


Fig. 1. Hoard No. 1 + No. 2. Distribution of coins by chronological segments.



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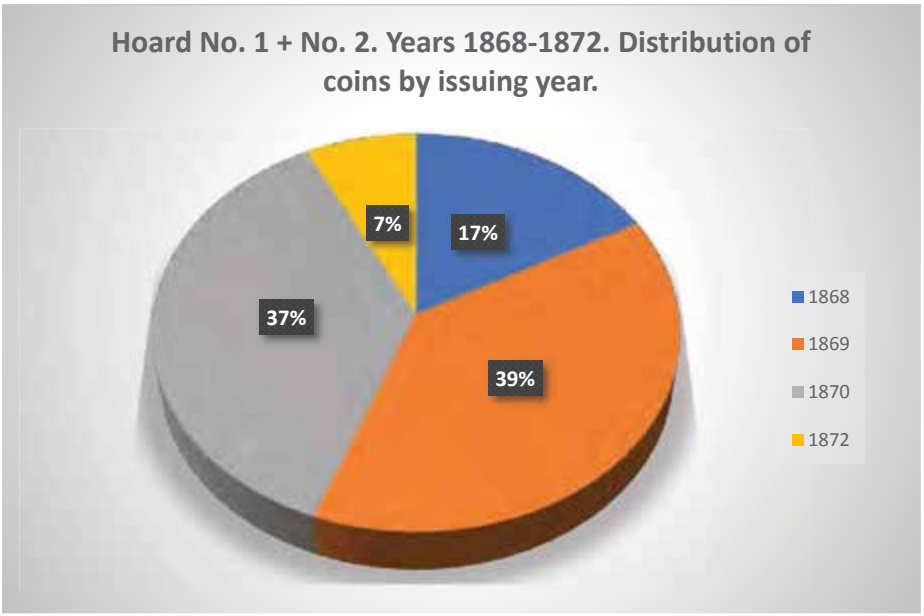

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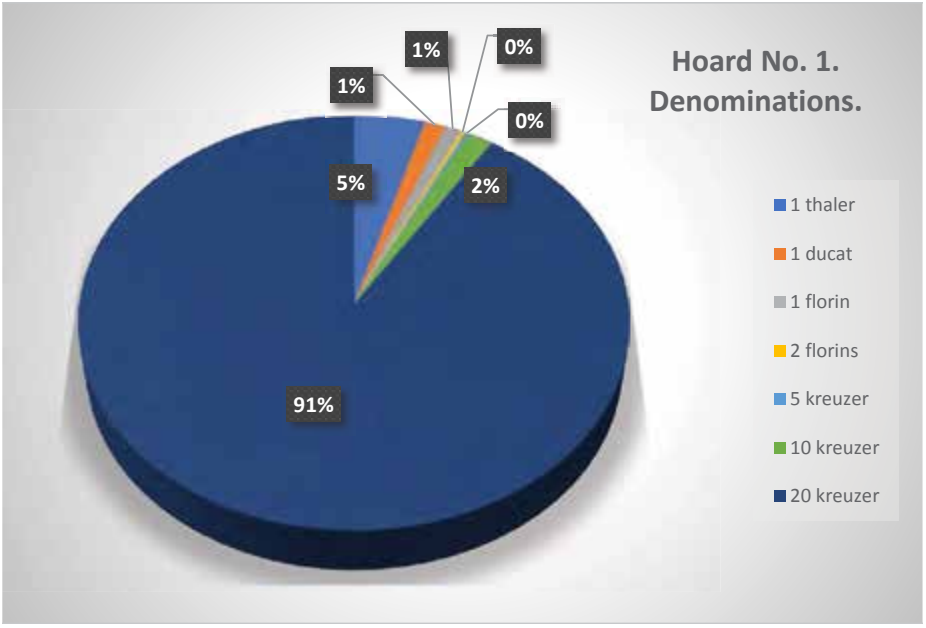


Fig. 4. Hoard No. 1. Denominations.

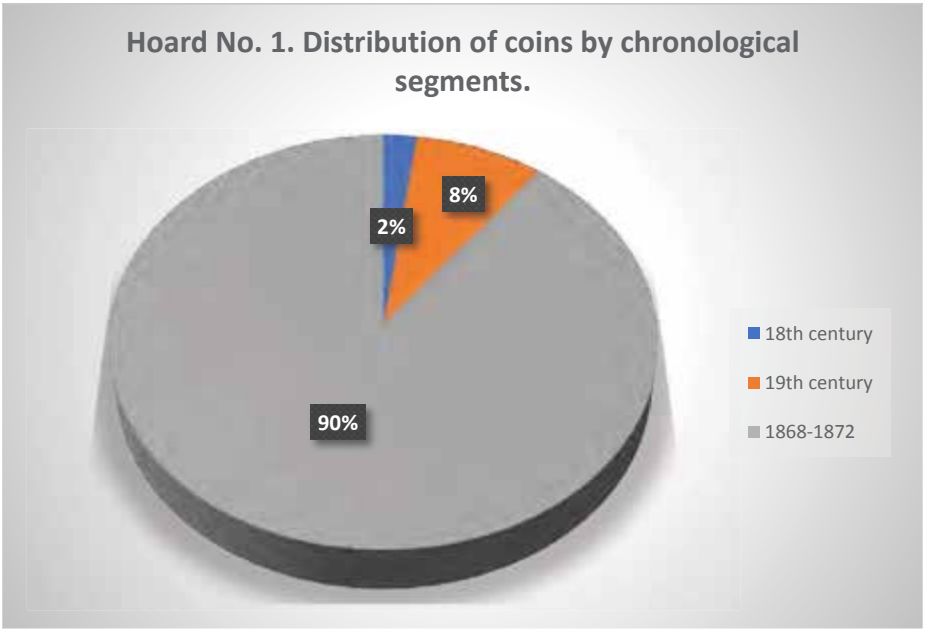
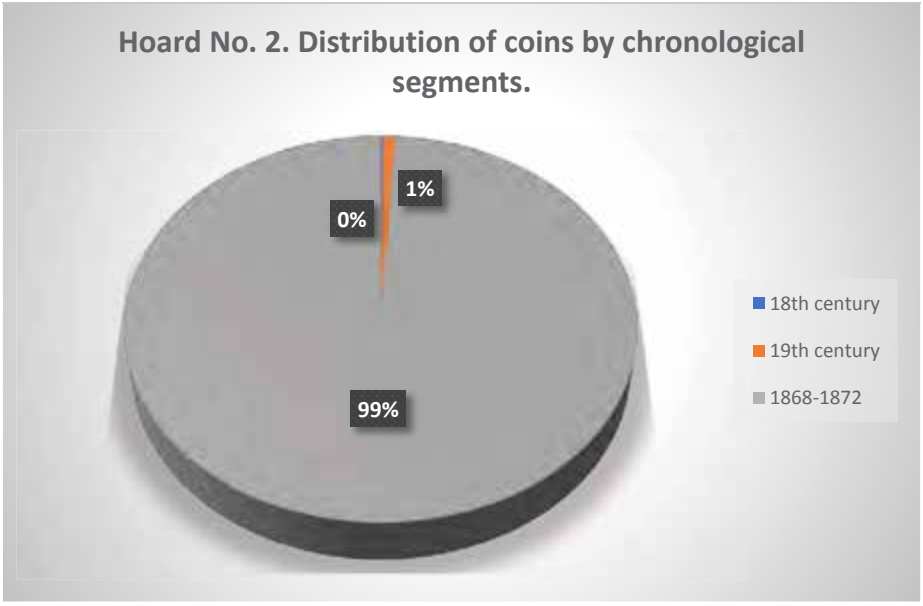


Fig. 5. Hoard No. 1. Distribution of coins by chronological segments.



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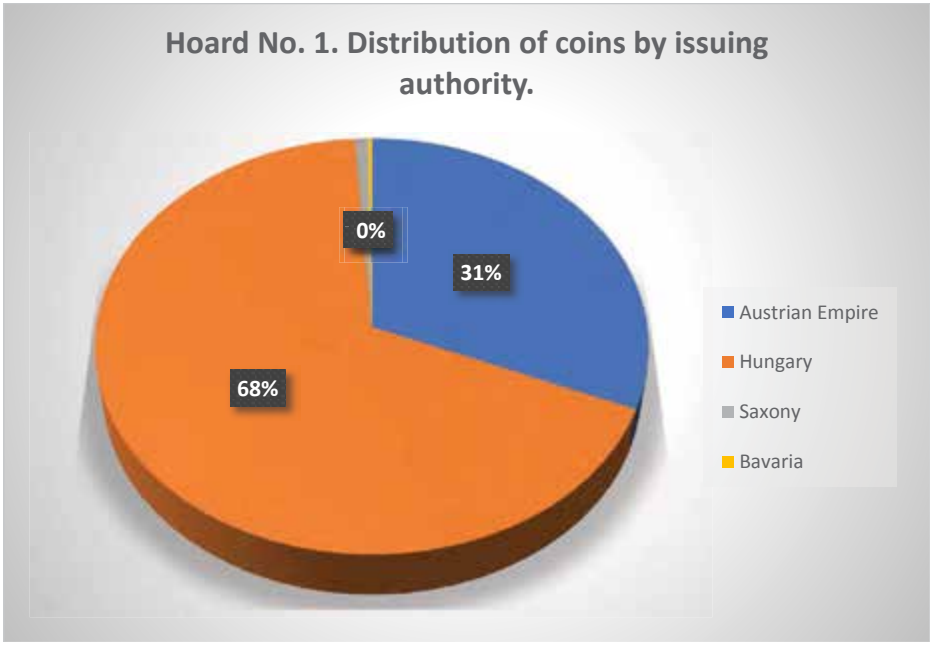
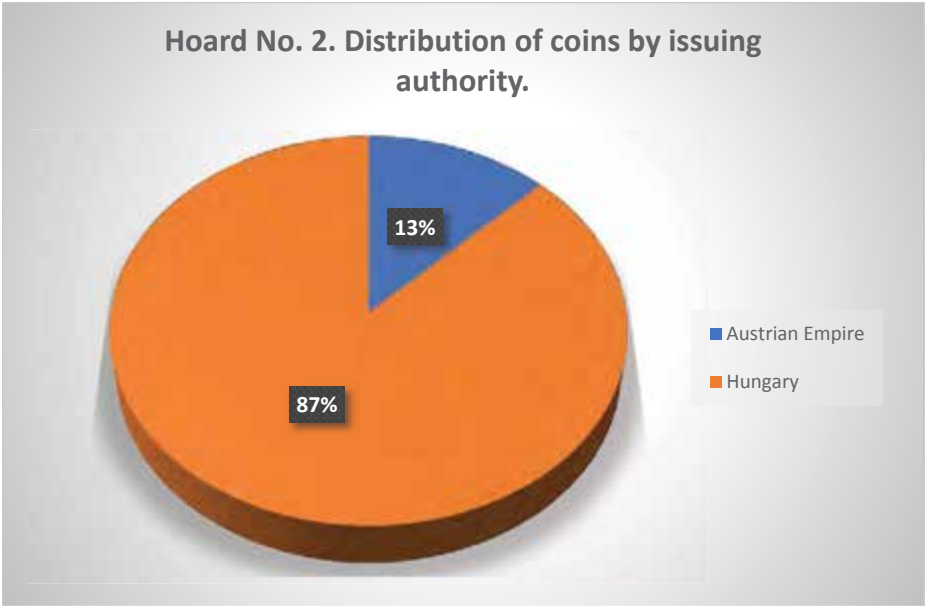


Fig. 7. Hoard No. 1. Distribution of coins by issuing authority.



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2.1

2.2

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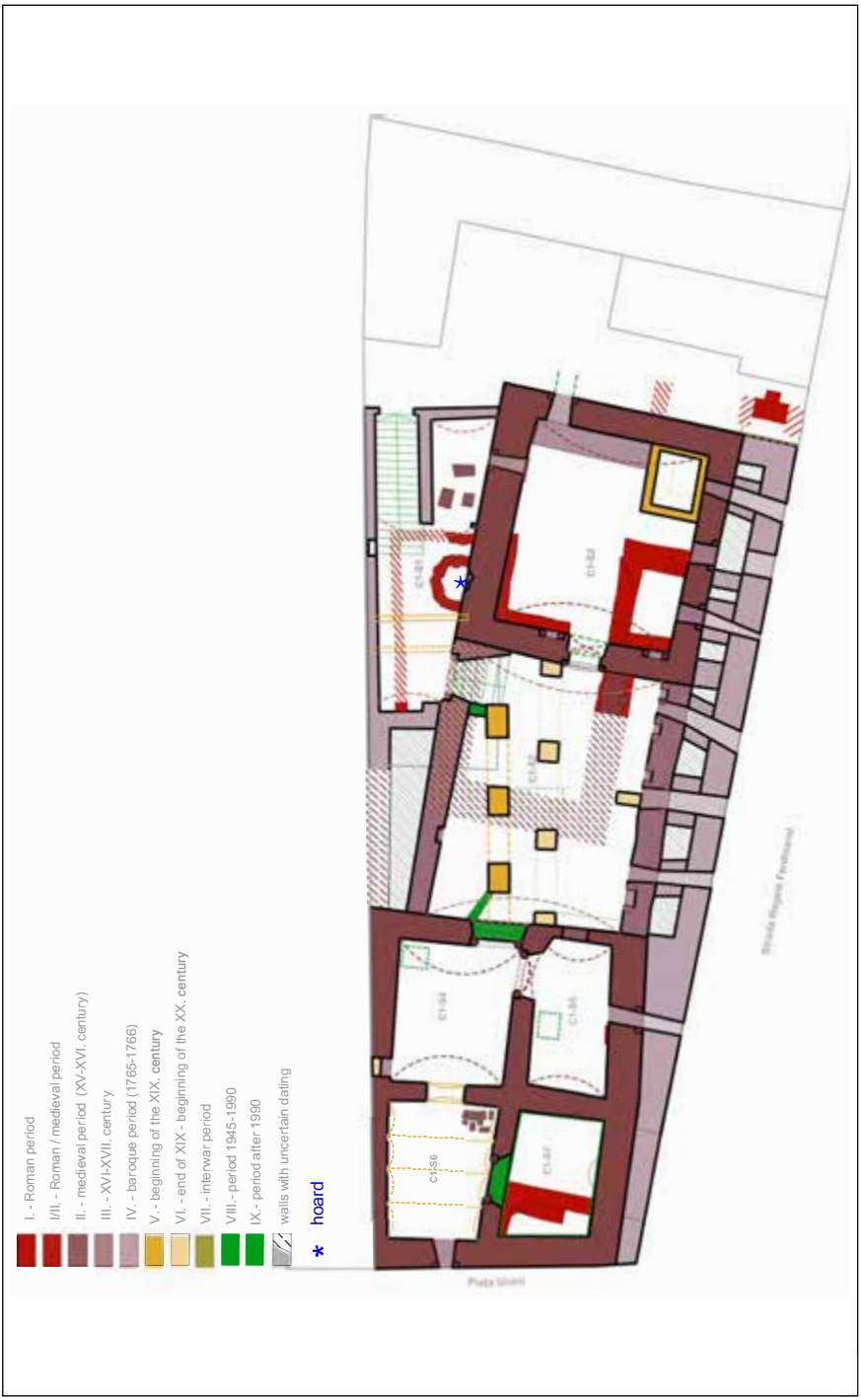

Pl. 4. The basement of the Hintz House.

TOBIAS MAUKSCH, THE PRIVILEGED PHARMACIST OF CLUJ

ROBERT OFFNER

Abstract: The article presents the biography of Tobias Mauksch, with a consistent introduction into the early history of pharmacy in the city of Cluj and Transylvania in general. It details the genealogy and education of the pharmacists in Cluj until the beginning of the 19th century and those of other pharmacists called Mauksch in Transylvania.

Keywords: pharmacists, 18th century, Mauksch dynasty, Cluj, Transylvania, urban history.

Among the oldest known public pharmacies in Transylvania, built by the city magistrates and operated by tenants employed by the city council, are those in the largest cities such as Sibiu in 1494, Brașov in 1512, and Bistriţa in 1516.[1]

The date of foundation of the first public pharmacy of the free royal city of Cluj (today Cluj-Napoca) has not yet been proven by contemporary documents.[2] But its existence before the Reformation is suggested by the fact that in 1543, Wolfgang Theke, a pharmacist from Buda, moved to Brașov, Sibiu and finally Cluj.[3] In 1567, the town council of Bistriţa asked the magistrate of Cluj to send a pharmacist, which indirectly indicates the existence of at least one such specialist in the latter city.[4] A subsequent mention is dated April 8, 1591, in a council minute.[5] It states that the existing pharmacy should not remain without a tenant, so it should be leased with all its equipment to Adam

[1] Orient 1926, 49; Crișan 1996, 19–20; Huttmann 2000a, 379; Pataki 2004, 345–348; Péter 2013, 25.

[2] Gruia 2018, 511.

[3] Crișan 1996, 19, 202.

[4] Huttmann 2000a, 379; Péter 2008, 212–213.

[5] Orient 1926, 49.

Schaecht "in Lipsen".[6] This information, originally published by Elek Jakab, is not congruent with the data promoted by the owners of the pharmacy during the 19th and 20th centuries, according to which the apothecary shop was founded in 1573. This year was also adopted in pharmacy history works.[7] One can presume that Adam Schaecht did not work there for a long time, because János Herepei found in the city's accounting books data on the fact that the magistrate had hired a new pharmacist in 1600.[8] There are at the time no other data about Johannes Balck as "apothecarius Dißburgensis", whose name appears in 1599 in the naturalization register of the city.[9] György Gaal wrote: "[…] in 1612, the 'construction' of the city's pharmacy was arranged: it was certainly going to be renovated or expanded. Its place was in the market square, among the buildings around the church."[10] It remains unknown since when the pharmacy bears the name Saint George.[11]

The city's accounting books show that in 1640 the Swiss doctor Nicolaus Gatti and Gaspar Patikarius came from Košice to Cluj, but no details are available regarding their stay.[12] More than ten years later, the following news comes from a 1651 report by Jesuit Father János Milley of Cluj, who writes: "I run to the pharmacy, which is also miserable, but besides that, there is only one. […] Even the smallest particles of the slightest value are expensively counted by an Arian pharmacist who denies the Catholic faith."[13] According to him, there "[…] he had to complain against two physicians, but especially against a healer who had converted to the Protestant faith, but whose ulterior motive, as he later pointed out, was a pharmacy to be set up by the monastic order, which they later received."[14] Also, a diary note dated 1651 mentions the wife of pharmacist Thimoteus.[15] In a letter dated 1655, the otherwise unknown doctor Balthasar Honettel, originating from Zwickau (Saxony), wrote Ferenc Kornis the following lines: "In the area (main square), how-

[6] "In Lipsen" could refer to the city of Leipzig (Lat. Lipsia).
[7] Jakab 1870, 344.
[8] Herepei 1988, 472–475.
[9] "*Joannes Balck Germanus Die 24 May [1599] Circumspectores Joannes Balck Apothecarius Dißburgi (…) germanus nationem.*" ANRC-POCN 1630–1760, vol. III/II, 92: He could have been a relative of Wilhelm Balck, a pharmacist (since 1580) in Sibiu also originating from Duisburg. Orient 1926, 69–73; Péter 2013, 273; Crişan 1996, 26–27.
[10] Gaal 2009b, 131–132.
[11] Pataki 2004, 345; Huttmann 2000a, 379; Péter 2013, S. 25.
[12] Kovács 2018, 95.
[13] Orient 1926, 86–87.
[14] Orient 1926, 84–85.
[15] Bálint, Pataki 1990, 191.

ever, there is another one owned by our pharmacy vendor, which has the best amenities, such as a good two cellars, a large laboratory, a good baking house, an arched room, a nice garden and a well near the waters of the River Szamos."[16] In 1659, Christianus Haruo (?), a pharmacist and his wife, are mentioned as godparents.[17] Pharmacist György Sopronyi practiced his profession between about 1664 and 1678.[18] The source material on the history of pharmacies in Cluj before the 18th century is very restricted and incomplete, and only a few further pharmacists are known by name: Mihály Szőcs, János Patekárius, and Ede (Edward) Stano.[19] The latter, a Unitarian pharmacist of Polish descent, may have been the last tenant or leaseholder in 1690.[20]

The predecessors of pharmacist Tobias Mauksch in the 18th century

The well-known pharmacy historian Prof. Gyula Orient believed that the magistrate of Cluj privatised the city pharmacy probably "in the early 1700s".[21] According to Mária H. Péter, the town pharmacy was sold by the magistrate in 1710 and from then on bore the name "Szent György".[22] The first known private owner of the pharmacy was Jakab Fojt (also Foit or Foith), whose grave stone in the Central Cemetery (Házsongárd) contains his most important life data. Therefore, he was born in 1679 in Prešov, in Upper Hungary, and died in 1723 at the age of 44, after twelve years of marriage with Sara, the daughter of the Calvinist pastor Paul Hocz (Hooz, Holtz) and the widow of Johann Phleps (Fleps), also a Calvinist pastor. The inscription on the tombstone (Fig. 1) records the fact that they had nine children, but not all of them reached adulthood, and that his son Mihály Fojt chose not to follow his father's career.[23]

[16] Orient 1926, 85.

[17] Bálint, Pataki 1990, 192.

[18] Gaal 2009 (last accessed: 30.12.2021).

[19] Peter 2013, 54.

[20] Orient 1926, 187. Ede Stano's widow, Elisabeth (1633–1712), also from a Polish immigrant family, married the town doctor András Pétsi (1622–1689) in her second marriage. Kereszturi 1712, 20.

[21] Orient 1926, 187.

[22] Péter 2013, I, 54.

[23] Orient 1926, 187, Offner 2014, 13; Herepei 1988, 473–475. This source also mentions the children of Jakob and Sara Fojt: Mihály Fojt married Rebeka, the daughter of clerk (*gubernialis cancellista*) Christian Filtsch, Sara married the merchant Adam Hermann, Zsuzsánna married the merchant Michael Hartmann, Erzsébet married the Lutheran pastor of Cluj, Johann Binder, but there are no data about Judit.

After Jakab Foit's death, the authorities had a hard time finding a new tenant or owner for the deserted pharmacy. One can assume that Sára Fojt's pharmacy was temporarily operated by tenants. It was only six years later that a successor arrived in Cluj, in the person of Samuel Schvartz (Schwartz) came as a successor, also a Spiš Saxon from Kežmarok in Upper Hungary.[24] His life story is known from his detailed Baroque obituary[25] (Fig. 2). According to the church register of the Lutheran parish of Kežmarok, Samuel Schvartz was born on January 4, 1701, as the third child in a family of Lutheran faith.[26] His father, Michael Schvartz, was a wealthy merchant, and his mother a "respectable, wealthy mistress", Juditha Boltschuyn (the obituary writes Holzscher), was the daughter of Martin Boltschuyn, a commissioner and supreme trustee of the Polish nobleman Theodor Lubomirski, holder of the "13 towns in Spiš".[27] After his schooling in the local school, Samuel went to Bratislava where he attended the Lutheran gymnasium and became a student of the famous polymath Matthias Bél and then enrolled in the Calvinist College in Sárospatak.[28] Thereafter, he began training to be a pharmacist in Sopron in Johann Adam Gensel Jr.'s pharmacy "Zum schwarzen Elefanten" and continued in Regensburg in Georg Sigmund Stoll's pharmacy "Zum Engel".[29] After passing the exam at the Medical College in Augsburg, he was on the road to other parts of the Holy Roman Empire of the German Nation and the Dutch Republic.[30] According to the obituary, he studied at the University of Leiden "[…] to quench his great thirst for knowledge and hunger for knowledge with the 'ambrosian feast[31] of science' here. And though he would have had the talent for any science, he was driven by a peculiar passion for the medical

[24] Orient 1926, 187; Gaal 2009b, 131–132; Offner 2017, 38–52. Spiš is a historical region in north-eastern Slovakia today, with a small area in south-eastern Poland. The Germans there where named *Zipser Sachsen*.

[25] Offner, Magyar 2014a, 36.

[26] He is registered as Samuel Schwartz in the register of the Lutheran parish in Kežmarok (SCSB 1592–1910, 387), but he used the name Schvartz. See: Pápai Páriz 1711–1726, 323. His name appears as Schvartz also in his obituary. Offner, Magyar 2014a.

[27] The children of Michael Schwartz and Juditha Bolzschuyn (Holzschuher?) are known: Juditha (1696-?), Johannes (1698-?), Michael (1702-?) and Samuel (04.01.1701). SCSB 1592–1910, 360, 372, 387 and 395.

[28] Offner, Magyar 2014a, 36.

[29] Pápai Páriz 1711–1726, 323: *November 17, 1725: Samuel Schvartz Pharmacop(ola) Studios(us) in Officina D. Sigismundi Stohl, Ratisbonae*. Source: http://ppf.mtak.hu/en/073a.htm (last accessed: 10.09.2022)

[30] Offner, Magyar 2014a, 36.

[31] Even though it was called by a different name, the Ambrosian Rite originally had a feast which was the equivalent of the Byzantine Mid-Pentecost.

profession." Schvartz only went to Cluj in 1729, as a result of repeated invitations of the savant physician Sámuel Köleséri de Kereséer, the physician of the Transylvanian government (*Gubernium*), which was located in Cluj between 1717 and 1727.[32] In 1729, the ambitious pharmacist took over the pharmacy and in 1735 married Sara Fojt, the widow of his predecessor.[33] Schvartz won not only the trust of his co-inhabitants, but also their recognition and respect, enjoying the great prestige. His Latin obituary that is preserved in the Academic Library of Cluj-Napoca provides excellent evidence of this.[34] Since he died 20 years later (in 1749) without heirs, his widow Sara ordered – in the spirit of his testament – the return of his pharmacy journeyman Tobias Mauksch, who deepened at the time his professional education abroad.[35]

Tobias Mauksch (Maugsch, Maucksch), a Spiš Saxon (*Zipser Sachse*) who also originated from Royal Hungary, was the son of Martin Mauksch, a tanner in Kežmarok. Tobias was baptised on August 8, 1727.[36] As he became an orphan at an early age, his mother Juditha (born Lani) "[…] in 1740 gave him for training to become a pharmacist to her cousin Samuel Schvartz, a pharmacist in Cluj in Transylvania."[37] Schvartz supported Tobias as a guardian and trained the hard-working and goal-oriented half-orphan as an apprentice. In 1748, he sent Tobias to Ludwigsburg and Stuttgart (Württemberg) to deepen his knowledge and gather professional experience.[38] The young pharmacist used the opportunity to visit the famous savant doctor, botanist, and man of letters Christoph Jakob Trew in Nuremberg (1750).[39]

Returning to Cluj, he took over the management of the pharmacy, as a tenant, entirely in accord with the will of Samuel Schvartz.[40] On December 20, 1752, the *juven apothecarius* acquired the citizenship of Cluj and – thanks to the financial support of the town's well-known physician Sámuel I. Pataki (1692–1766) – bought the pharmacy from Schvartz's widow.[41] At the time

[32] Offner, Magyar 2014a, 36.
[33] Gaal 2009b, 131–135.
[34] Offner, Magyar 2014a, 36.
[35] Offner, Magyar 2014a, 38–44.
[36] Melzer 1833, 264; Genersich 1804, 135–136, Pataki 2004, 345-348, Orient 1926, 166–169; Binder 1984, 101-110; Fabritius 1989, 27-36; Péter 2013, 232–235; Orient 1931, 3–23; Orient 1933, 368–370; Offner 1991, 192–198; Péter 2013, 73–76, 153–158, 232; Offner, Tuka 2014b, 53-57.
[37] Melzer 1833, 264.
[38] Offner 1991, 192–193.
[39] Offner 2017, 38–52.
[40] Melzer 1833, 264; Offner 2017, 38–52.
[41] Pataki 2004, 346.

of purchase, he compiled an accurate written inventory of the pharmacy. This 45-page manuscript with the title *Taxa Pharmaceutica* – in German and Latin – contains over 2,000 medicines and their prices. This inventory covers the entire stock of the pharmacy at the time and it is considered one of the few documents of this kind from that period in Transylvania.[42] It is reasonable to assume that the author was guided by Württemberg models, with which he had gained experience.

In 1756, Tobias Mauksch started a family and married a merchant's daughter, Susanna Sartorius (ca. 1736–1773) from Košice. The couple had nine children, but only one of them was a boy, a possible pharmacist successor. After the early death of his wife, the widower remarried in 1773. His second wife was Catharina Susanna Habermeyer (?–1782) from Győr,[43] who bore him nine more children. Because of the high infant mortality rate of the time, only one son and two daughters from the first marriage and one son and six daughters from the second marriage reached adulthood. The daughters married in the circle of the urban elite (doctors, teachers, pastors, pharmacists, merchants e.g.), thereby Tobias Mauksch became related to several prominent Transylvanian families: Pataki, Barra, Fried, Engel, Streicher, Liedemann, Decani, Schaller von Löwenthal, and Brandecker.[44] His two sons, Tobias Samuel and Johann Martin, became pharmacists in the paternal office[45] (Fig. 7 and 8).

Both economically and socially, Tobias Mauksch quickly rose to become a successful and highly respected man in the capital city of Transylvania. His biographer Joseph Melzer writes about him: "In 1760, he received on the recommendation of the Cluj city magistrate and the honorable *Gubernium*, from the glorious Empress Queen Maria Theresa a *privilegium exclusive*, to ensure his security against any competency [comment of the author: probably competition]."[46] During his time, the pharmacy moved from the build-

[42] See Crişan 1973, Crişan 1974, and Crişan 1975.

[43] ANRC-MD 1756–1846, 71/4/61, 8.

[44] Offner, Magyar 2014b, 53; Daughters: Judit (1761-?), Esther (1765-?), Justina Elisabeth (1777_?), Maria Theresia (1777-?), Sophia Christina (17779-?), Maria Catharina (1781-?), Anna Carolina (1785-?), Susanna Catharina (1785–1835). Wagner 1992, 191.

[45] In the Habsburg Empire, pharmacist training was not regulated by the state until 1770, but the *Generale Normativum in Re Sanitatis* modernized medical and surgical training (1774), making it mandatory for pharmacists to attend a one-year course and take an exam at one of the imperial universities (Vienna, Tyrnau/Trnava, Buda/Pest).

[46] Orient 1926, 191. The acquisition of the privilege may have been related to the fact that Johann Mauksch (1736–1777), a young apothecary also born in Kežmarok, who was trained by Tobias Mauksch in Cluj, intended to open here his own pharmacy.

ings around Saint Michael church to the 16th-century building (also known as the Mauksch-Hintz house) on the corner of the Market Square and Híd-Street. Its premises were modified by the owner in 1766 and the *officina* was decorated in the Baroque style. New murals were added in 1898[47] (Fig. 4).

A 1772 report of the town council to the government records the fact that the city of Cluj had three civilian doctors, Dr. Sámuel II. Pataki, Dr. Ferencz Barra, József Fejérvári, and a military physician (Jakob Pentelenz), as well as six barber-surgeons.[48] In 1774, Mauksch acquired the former Unicorn pharmacy of the Jesuit Order, which was closed in 1773, and seven years later (1780) he left it to his son-in-law Michael Streicher, a Transylvanian Saxon pharmacist, originating from Sibiu and husband of Judith.[49] Mauksch purchased another pharmacy in 1790, naming it the Golden Stag, in Târgu Mureș from the widow of Adam Wladár, a pharmacist who also originated from Upper Hungary.[50] He intended to bequeath this pharmacy to his younger son, Johann Martin. The 93-page inventory of the pharmacy from 1790/1792 (*Inventarium von der Maros-Wasarhelyer Apotheke*) has also been preserved and serves as a source for the history of pharmacy[51] (Fig. 5).

Because of his advanced age (63), the caring father wrote two detailed professional guides for both of his sons in their native German language. The manuscript concerning the pharmacy in Cluj is to our knowledge lost, but the *Instructio* for the pharmacy in Târgu Mureș, dated 1793 and supplemented several times, has been preserved. The latter was written for his ten-year-old son Johann Martin as an accurate guide for the future pharmacy owner.[52] The original manuscript was lost, but its Hungarian translation was published by Gyula Orient in 1918.[53]

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[47] Orient 1926, 168. His pharmacy seems to have been housed in the corner house at Market Square and Híd Street, because in 1758 he received an exemption from the duty of billeting soldiers. Note from historian András Kiss.

[48] Orient 1926, 163.

[49] Orient 1926, 164–165; Judith Mauksch (1761-), Szabó 2005, 126; Péter 2013, 232–235. Regarding his death see the Register of Deaths of the Lutheran Church to Cluj – ANRC-MD 1756–1846, 154.

[50] Péter 2013, I, 456. The pharmacy was run by tenants: Samuel Maurer, Samuel Roll, Johannes Hönsch, István Eördögh. See also: Spielmann et alii 1969; Spielmann et alii 1972; Spielmann et alii 1973; Spielmann et alii 1976.

[51] Crișan 1996, 257–258. MNIT, inv. no. IF 2226. Another inventory dates from 1799: MNIT inv. no. IF 2327.

[52] Offner, Tuka 2014b.

[53] Orient 1918. See the Romanian and English translations by Tuka 2012a.

The guide named *Instructio* (1793–1801) is a rarity in the history of pharmacy. The author put in writing everything worth knowing about the running of a pharmacy in Târgu Mureş.[54] The text provides a comprehensive insight into the management of pharmacies at that time due to the large wealth of practice-related information (construction, personnel, procurement of raw materials, production of medicines, sales, accounting, payment, official inspections, etc.), but also because of the time-typical and interesting ethical-moral attitude as well as the educational content (e.g.: rules of conduct towards customers, employees, doctors, surgeons, inspectors). Tobias Mauksch makes recommendations regarding the training of pharmacists, but also advice on how to start a lucky family and how to lead a religiously influenced civic life. "He rightly deserves the glory […] that he breathed spirit and life into the entire pharmacist system in Transylvania, that he had put the same thing in order and that he had given him, for the benefit of the public, the most appropriate orientation/alignment."[55]

Mauksch takes great care of his son's professional training, so he outlines the goals of his apprenticeship (Vienna, Bratislava, Košice, or Pest) and his experience-gaining journey:

> From Vienna through Brno, Moravia to Prague, then through Saxony, Dresden, and Leipzig, via Halle to Berlin and Potsdam, visit Frankfurt am Mayn (sic!), from there to Stuttgardt (sic!) via Ulm and Augsburg to Nuremberg (...), Regensburg (...) and across the Danube via Linz to Wien and from there to Bratislava, from Budapest to Debrecen or Košice (...). In Erfurth (sic!), you should visit the excellent pharmacist and teacher Trommsdorff. (...) In Leipzig, Halle or Berlin, apply to a skilled pharmacist who will teach him theoretical and practical knowledge of chemistry and botany. (…) Finish your studies in Pest, because this is where you have the opportunity to learn what a pharmacist needs because the study there is as good as abroad.[56]

As an expert in his profession and a successful businessman, Tobias Mauksch enjoyed the trust of his customers, patients, and fellow citizens, especially the recognition and esteem of the city magistrate and many high statesmen. Thus, on the recommendation of Count Ádám Teleki, he was

[54] Orient 1926, 168–186.

[55] Melzer 1833, 265; Offner, Tuka 2015, 126–131.

[56] Offner, Tuka 2015, 128. Interestingly, Johann Bartholomäus Trommsdorff (1770–1837), a famous Erfurt pharmacist, was an associate professor at the Medical Faculty in Erfurt from 1795, but his fame soon spread to Cluj.

granted the dignified office of police director and captain (*Polizeydirektor und Stadthauptmann*) in 1788.[57] Mauksch also held other public offices at times, such as royal commissioner, senator, and even member of the state parliament of the city of Cluj (1790–1794). Prominent guests liked to stay in the hospitable home of the Mauksch family, such as the governor Samuel von Brukenthal (Sibiu), Johann Friedrich von Straußenburg (Bistriţa), Michael von Heydendorff (Mediaș) and many others.[58]

When the scholar József Benkő worked on his multilingual botany compendium *Nomina vegetabilium* (Bratislava 1783), he often used Mauksch as a reliable botanist consultant. Not only as a pharmacist, botanist, and senator, but also as a pious family man and zealous curator of the Lutheran parish, Tobias Mauksch enjoyed an excellent reputation throughout the whole country. He died at the age of 75, on January 5, 1802. The inscription of his classicist grave monument in the Lutheran Garden of the Central Cemetery in Cluj bears witness to his high renown (Fig. 7).[59] It reads:

> **Memoriae / Tobiae Mauksch / Civis pharmacopolae Senatoris / Eccl[esiae] evangel[icae] curatoris**
> **/ De salute civium / Institut. Pharmacopoliis / De ecclesia / Aucto eiusdem aerario / De suis**
> **/ Tenerrimo amore / De omnibus / Humanitate / Optime meriti / Vidua, filii, filiae generi**
> **/ Grati moestique / Posuerunt / Vixit annos lxxv / Obiit xxxi ian.Anno mdcccii**

Descendants of pharmacist Tobias Mauksch in the first half of the 19th century

Following his death, by tradition and his expressed wish, his older son took over the management of the pharmacy. Tobias Samuel Mauksch (1769–1805) learned his profession from his father and passed the pharmacy exam at the University of Pest (1789), but he also studied medicine (1791) in Göttingen[60] (Fig. 8). Since 1793 he worked in his father's Golden Stag pharmacy in Târgu-Mureș and then in Cluj. In 1794 the young man married Eva Rosina (?), the daughter of Samuel Habermeyer, a merchant from Győr, and

[57] Melzer 1833, 266;
[58] Offner 1991, 195.
[59] Offner, Magyar 2014b, 57–59; Melzer 1833, 264; Herepei 1988, 472–475; Gaal 2009, 131–132.
[60] Szabó 2005, 126; Szabó, Tonk 1998, 185, 314.

had two children: Josepha Caroline (1794–1871) and Carl Samuel (1796–1798).[61] Tobias Samuel was soon appointed a "sworn citizen" (*centumpater*) of the town council of Cluj and held the office of church trustee (*curator*). However, he died just three years later, without a male successor.[62]

Johann Martin Mauksch (1783–1817), the second son of Tobias Mauksch, also learned his profession from his father and passed the pharmacist's exam in Pest in 1804[63] (Fig. 9). Thereafter, as his father intended, he took over the "Arany szarvashoz" from Târgu Mureş, but after a short time, due to the early death of his half-brother Tobias Samuel (1805), he had to replace him as the head of the family´s pharmacy in Cluj.

In December 1807, in his report of the official visit to the Mauksch pharmacy in Cluj, Ferencz Nyulas, the chief physician (*protomedicus*) of The Grand Dutchy of Transylvania, praised it and its owner and recorded the condition and the equipment.[64] "Following in his father's footsteps, he knows antiphlogistic chemistry, pharmacy, botany. He is an honest, hard-working young man with good hopes, and cares very much about cleanliness. He tries to maintain the trust of the public both by himself and with his excellent colleague." wrote Nyulas about his visit on November 30,1807.[65] Johann Martin Mauksch married Catharina Eleonore Lassgallner (1786–1850), born in Spišská Nová Ves, in Royal Hungary, and had five children with her. His only son, Tobias Karl Wolfgang (1816–1819), died at the age of three.[66] The young pharmacist was probably suffering from major depression because, after repeated attempts, he ended his own life in 1817.[67] So, he had no son to succeed him. It is noteworthy that in 1819 Johann Martin Mauksch's pharmacy in Târgu Mureş, also run by tenants, entered the pos-

[61] Josepha Caroline Mauksch (1794–1871) married Karl Paul Bogner (1791–1817) a merchant from Reghin and later the town physician István Barra de Homoródalmás (1770–1724). Wagner 1992, 191; ANRC-MD 1756–1846, 71/4/61, 65, 146, 208.

[62] ANRC-MD 1756–1846, 71/4, 146.

[63] Szabó, Tonk 1998, 314; Peter 2013, 232–235. Contradictory information is available about the identity of the person depicted. It cannot be determined with absolute certainty whether this painting depicts Tobias Samuel Maucksch (see Orient 1933) or Tobias Mauksch. The painter is unknown.

[64] Nyulas 1807/1808; Szőkefalvi-Nagy et alii 1971, 295–315; Offner 1991, 196; Szabó 2005, 126; Péter 2008, 212–217, 232–235.

[65] Péter 2022, 89–90.

[66] The children of the couple were: Louise Emilie (1808-?), Sophia Wilhelmine (1811–1812), Luise Amanda (1812–1828) and Mathilde Augusta (1815–1850). ANRC-MD 1756–1846, 71/4/154, 214.

[67] See also data concerning the suicide of Johann Martin Mauksch in ANRC-MD 1756–1846, II, 154.

session of his sister, Anna Carolina Mauksch (1785–1830) and her husband, pharmacist Simon Brandecker (1790–1854).[68]

Following Johann Martin's tragic death, his widow Eleonore entrusted with the management of the pharmacy to the Bratislava-born pharmacist Daniel Slaby (1783–1835), her husband's former fellow student in Pest and a colleague of work from Cluj[69] (Fig. 10). Eleonore married Daniel Slaby in 1822. The couple had four children who died during childhood and a son, Alexander Slaby (1827–1843), who died at the age of 16.[70]

After Daniel Slaby died in 1735, the ownership of the pharmacy turned back to his widow Eleonore and her daughter Mathilde Augusta Mauksch (1815–1863). Thus, the pharmacy remained in the possession of the old Mauksch family.[71] One learns about Daniel Slaby from his German-Hungarian bilingual obituary preserved in the holdings of the Academic Library in Cluj-Napoca.[72] Slaby was a respected member of the city's external council, "a judge of division" (*osztatóbíró*), and curator of the Lutheran parish.[73] After his death, the Saint George pharmacy was led for three decades by numerous tenants that remain unknown. In 1835 Mathilde Augusta Mauksch married Georg Gottlieb Hintz (1808–1876), the Lutheran pastor of Cluj, a Transylvanian Saxon who originated from Sighișoara.[74] From this wedlock emerged, among others, the later owner of the old family pharmacy: Georg Joseph Hintz or later György József Hintz (1840–1890).[75] In 1863, a great-grandchild of Tobias Mauksch, took over the pharmacy and thus started a new chapter in the history of the Saint George pharmacy[76] (Fig. 11).

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[68] Simon Brandecker (1790–1854) was born in Zombor, Vojvodina/Serbia, and passed the pharmaceutical exam in Pest in 1813/14. Péter 2013, 76–77. At the marriage on August 23, 1815, the groomsmen were pharmacists Johann Martin Mauksch and Michael Streicher, therefore it is conceivable that Simon Brandecker was apprenticed in Cluj too. ANRC-MB 1808–1824, 162.

[69] Hintz 1835; Herepei 1835, 10–11.

[70] ANRC-MB 1837–1869, 235.

[71] Orient 1926, 187–188; Binder 1984, 106–107; Offner 1991, 196. According to a decision dated Nov. 10, 1824, all medicinal institutions that existed before 1775 were considered of real right of inheritance.

[72] Hintz 1835; Herepei 1835, 10–11.

[73] Hintz 1835; Herepei 1835, 12.

[74] Trausch et alii 1983, 159–160. The couple Mathilde Augusta and Georg Gottlieb Hintz had 8 children: Georg Joseph Hintz (1840–1890), Maria Szász (1842–1888), Eleonora (1842–1845), Mathilde Wolff (1845-?), Eugenia Kovács (1847-?), Rosa (1849–1895): Gaal 2021.

[75] Hintz 1835; Trausch et alii 1983, 159-160; Péter 2013, 130, 162, 165, 201, 204, 262, 280–285; Pataki, 2004, 348.

[76] Gaal 2021, 13–32.

Tobias Mauksch and his relationships with other pharmacies

As already mentioned, the Jesuit Order of Cluj sought to operate its own (non-public) pharmacy, which succeeded in 1732 thanks to the efforts of Ferenc Csernovics, the rector of the Jesuit College.[77] The Austrian monks Michael Guetta, Joseph Reiser, Georgius Balasovics, Joseph Neussel, and Anton Schmadlpauer, who once worked in this pharmacy, as well as secular pharmacists such as Joseph Durly and Christof Reiter, are known by name.[78] What was special about this pharmacy was that its annual income (100–600 forints) was used to expand the astronomical-mathematical collections of the Jesuit College. The pharmacy later received – with the consent of the privileged pharmacist Tobias Mauksch – the right to open a door on the street side and henceforth bore the name Unicorn. However, it was closed after the dissolution of the Jesuit Order in 1773. A year later, Tobias Mauksch acquired it at the public licensing and in 1775 he had it moved to the west side of the main market square, into the old location of the urban pharmacy.[79]

On the pharmacy inspection, *protomedicus* Ferencz Nyulas described the pharmacist as follows: "The owner, Michael Streicher himself, is also a member of the town council of Cluj, and in 1775 he was awarded the degree of master pharmacist in Vienna. He is a humane, talkative man who sits in the pharmacy less often in the morning and mostly in the afternoon; otherwise, as a follower of old chemistry, he doesn't care much for novelties but reasonably pursues pharmacy. He takes care of the collection of plants and, if not the best cleanliness, but at least the level that we can expect at a higher degree of cultivation. He is a serene man who tries his best to serve the public and always has good assistants."[80]

The successor, his son Samuel Gottlieb Streicher (1783–1817), was examined in Pest in 1806 and continued to run the Unicorn pharmacy until his

[77] Offner 1991, 194. Tuka, Farkas 2012, 36–37. László Tuka's claim that the pharmacy "*Egyszarvú*" (Unicornis) was founded as early as 1685 cannot be verified in other historical sources and is due to a misprint in a yearbook by Schédy, Varságh 1900, 193. Another yearbook for pharmacists in the same year correctly indicated 1775 as the founding year for this pharmacy. Karlovszky 1900, 191. There is no reason to doubt the accuracy of this version (1775).

[78] Orient 1926, 164; Péter 2013, 18–19.

[79] Orient 1926, 164; Péter 2013, 18–19.

[80] MNLOL-GT 1807, 2266/1807.

early death.[81] From the next generation one can mention Michael Joseph Streicher (1817–1871), the owner of the pharmacy who trained to be a pharmacist at his father's side and studied in Vienna (1840).[82] When he married Eleonore Slaby, their wedding godparents were Dr. Dániel Pataki, *protomedicus* of Transylvania, and Dr. József Szőts, professor of medicine, so he enjoyed high social recognition.[83] He continued the family tradition, but few pieces of information are available on his life and merits. One only knows that in 1865 the pharmacy was still located in the main marketplace, near the church of St. Michael, and it was the property of the widow of Joseph Khuda. In the 1880s all of the buildings around the church were demolished.[84] The further history of the pharmacy and of the Streicher family has not yet been thoroughly explored.

Although at that time, Johann Martin Mauksch and his legal successors as well as Samuel Gottlieb Streicher each operated a pharmacy, the town council cancelled the imperial privilege granted to Tobias Mauksch in 1760 and on August 17, 1814, granted its conditional approval to the establishment of the third pharmacy in Cluj, as Gyula Orient reports based on the city's legal donation document. According to the council decision, the new pharmacist was obliged to "[…] put the coat of arms of the city as a symbol of his pharmacy" and to "pay 100 Rhenish guldens a year to the allodial cassa of the city […]," however, he could make it free of charge for prisoners and other urban poor people by giving out medicine free of cost at that value if they were prescribed by the physicians (medical officer) and surgeons of the city.[85] Adam Michael Schmidt (1784–1850), the son of the former Lutheran priest of Cluj and clerical dean of the district of Mediaș, Johann Benjamin Schmidt (1734–1821), received in 1814 the permission of the municipal authorities to open the third pharmacy in Cluj, named Matthias Hunyadi.[86] It was located, according to our present knowledge, on Híd-Street, on the right bank of river Someș, on the spot where the Széki Palace was subsequently built (todays Piața Unirii 4–5). Adam Michael Schmidt was the

[81] Szabó 2005, 159. His wife was Josepha Wallner (1793–1869). The children of the couple were: Franz (1814–1815), Adolph Eduard (1815–1815) and Samuel (1816–1816). ANRC-MD 1756–1846, 155.

[82] Szabó, Szögi 1998, 438; Péter 2013, II, 450; Orient 1926, 183; ANRC-MD 1756–1846, 174 and vol. V, 8.49.

[83] His wife was Eugenie Szentes and their sons Achatius Eugenius (1848-?) and Ludwig (1851-?) were confirmed in 1864 and 1865, respectively. ANRC-MB 1837–1869, 56–57, 69.

[84] Offner 2022, 67.

[85] Orient 1926, 200–202.

[86] Orient 1926, 200–202; Offner 2014, 13.

head of this pharmacy between 1814 and 1840. He was born and educated in Mediaş, and after passing the tyrocinal exam he completed his apprenticeship in Kőszeg and Trnava. He then studied surgery and pharmacy in Pest and passed the exam in 1807.[87] Adam Michael Schmidt subsequently worked as a military pharmacist (1809) and then as an urban pharmacist in Braşov at the Golden Pelican pharmacy of Daniel Matheides von Revisnya, who originated from Prešov in Royal Hungary, whose daughter he also married.[88] In 1812, he bought his father-in-law's pharmacy, but already in 1816 he sold it to his brother-in-law Daniel Matheides Jr. Then he opened his pharmacy in Cluj between 1814 and 1816.[89] There is little data on this pharmacy (which later bore the name The Hungarian King), so it is only known that Schmidt sold his pharmacy to the brothers Gábor and János Wolff in 1840 and retired to Sibiu.[90]

Other Mauksch pharmacies and pharmacists in Transylvania

The pharmaceutical history of the Grand Duchy of Transylvania knows not only the name Tobias Mauksch as that of a remarkable pharmacist in the 18th and 19th centuries, but the name Mauksch was also recorded several times in different cities of this time.[91] The reason for this is that there were several Mauksch pharmacist dynasties during this period. It is noteworthy that all originated from Kežmarok, where this name was quite common at the time. In addition to Cluj, pharmacists in other towns of Transylvania were called Mauksch in the second half of the 18th century.

In 1773 in **Bistriţa**, another Tobias Mauksch (1745–1816), likewise born in Kežmarok, acquired the pharmacy Minerva from Daniel Langsfelder.[92] This Tobias Mauksch was the brother of the well-known naturalist, botanist, Lutheran pastor, and wine merchant Thomas Mauksch (1749–1832), but no family connection to Tobias Mauksch from Cluj can be proven so far. Still, the two families were friendly.[93] A mortar with the inscription *Tob.[ias] Maucksch Apoth[eker]. Bistr.[itz] An: 1803* is preserved in the

[87] Fabritius 1986, 262; Szabó 2005, 153; Szabó, Szögi1998, 403–404.
[88] Fabritius 1986, 262.
[89] Orient 1926), 200–202; Tuka 2012, 36.
[90] Orient 1926, 200–201. He studied surgery and pharmacy (Pest, 1807). Szabó 2005, 153. Szabó, Szögi 1998, 403–404.
[91] Fabritius 1986 and Fabritius 1989.
[92] Wagner 1992, 190; Fabritius 1986, 359. The author confuses the two Tobias Mauksch.
[93] See ANRC-MD 1756–1846.

Transylvanian Museum from Gundelsheim am Neckar (Germany) and was once part of the inventory of the Minerva pharmacy from Bistrița[94] (Fig. 12). Tobias Mauksch's successor as a pharmacist was his only son Gustav Adolph Mauksch (1798–1848), and after his death, the daughter Emilie Petrizzevich (born Mauksch) owned and leased the pharmacy to Gregor Arnold Scholtes (1841–1879).[95]

In **Târgu-Mureș**, in 1760, Johann Mauksch (1736–1777), also a native of Kežmarok, a former apprentice of Tobias Mauksch in Cluj, obtained the right to open a second pharmacy (The Crown of Hungary) in that town. In 1761 he married Sophia Honigberger from Cluj.[96] The couple had three daughters and three sons, all of whom learned to be pharmacists. Gottlieb Mauksch (1763-?) became a pharmacist in Eger and later in Košice, while Johann Mauksch (1765–1825) led their father's pharmacy.[97] In 1797 Martin Adam Mauksch (1768–1818) founded the first pharmacy in **Sebeș**, that he called At the Angel and in 1801 married Regina Andreae.[98] Two of his sons also became pharmacists. The first son, Joseph Friedrich Mauksch (1802–1847), worked in **Sibiu** at the pharmacy called At the Black Bear and in 1835 married Caroline, the daughter of pharmacist Johann Georg Kaiser.[99] His brother Johann Samuel Mauksch (1805–1836) was disappointed that his father's pharmacy in Sebeș passed to pharmacist Georg Friedrich Binder (1775–1843), the second husband of Regina Mauksch, and therefore left the country, travelled to Egypt and Syria, and never returned from India.[100] Carl Simon Mauksch (1807–1894), the son of Martin Adam, became a pastor and

[94] Photo and data courtesy of the "Siebenbürgisches Museum" in Gundelsheim am Neckar, Germany.

[95] Fabritius 1986, 360; Wagner 1992, 190.

[96] Orient 1926, 189–193; Offner 1991, 194; Péter 2013, 74; ANRC-MD 1756–1846, 71/4/200. The couple had six children: Gottlieb, Johann, Martin Adam, Sophia, Elisabeth, and Esther. ANRTM-FPO 1785–1787, Mapa 316. See for more details: Spielmann et alii 1969; Spielmann et alii 1972; Spielmann et alii 1973; Spielmann et alii 1976.

[97] Binder 1984, 107–108; Offner 1991, 194; Offner, Tuka 2014b, 53. ANRTM-FPO 1785–1787, Mapa 316.

[98] Acker 1970, S. 271–281; Binder 1984, 103–104.

[99] Fabritius 1986, 83–84; Binder 1984, 104–105; ANRS-TM 1806–1836, 58, 541; ANRS-TM 1847–1855, 27.

[100] Fabritius 1986, 122–124, Rother, Wollmann 2011, 277–283. Three of Georg Friedrich Binder's sons were also pharmacists. Carl Franz Binder (1824–1875), who had trained as a pharmacist, became a world traveller and well-known ethnographer, Josef Eduard was a pharmacist in Vienna, and Samuel Friedrich Binder continued to run the "Zum Engel" pharmacy in Sebeș until 1875, after which it became the property of pharmacist Carl J. Reinhardt (?–1891).

teacher, and his son Friedrich Mauksch became an ophthalmologist and was the only one to bear the name Mauksch in Transylvania in the 20th century.[101]

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[101] Binder 1984, 104–105.

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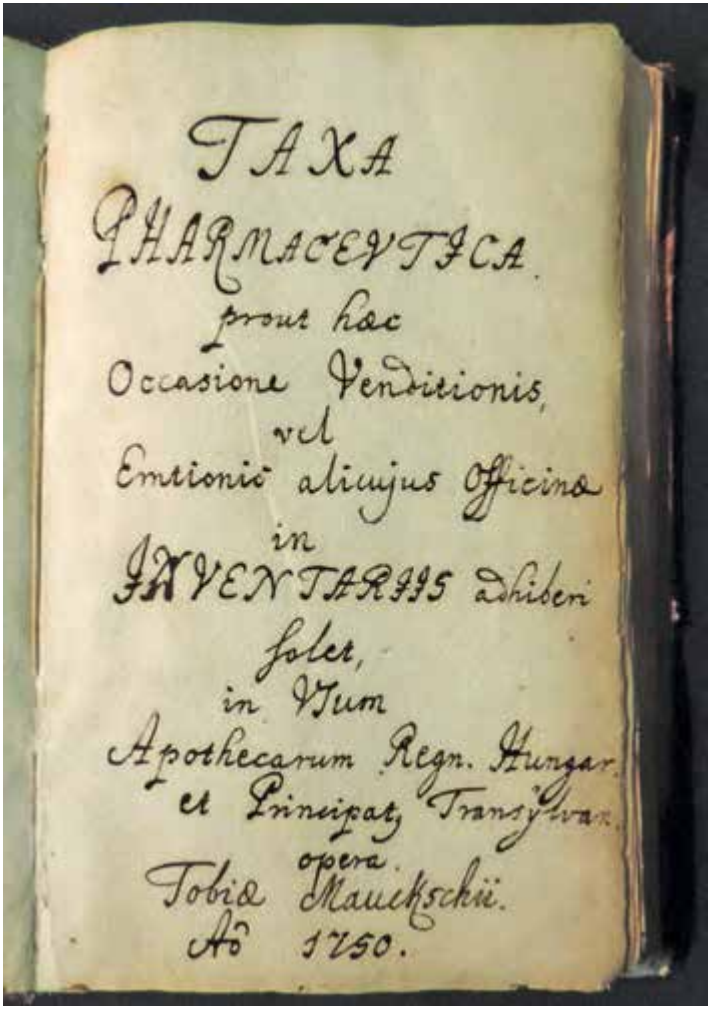
Fig. 1. The tombstone of pharmacist Jakab Foit (1684–1727) in the Central cemetery (Hu. Házsongárd) of Cluj-Napoca.


PANACEA MORTALITATIS
SALUS IN CHRISTO JESU AETERNA
Qui jam in Caelis perfruitur
SPECTABILIS ATQUE GENEROSUS DOMINUS
SAMUEL SCHVARTZ:
IN LIBERA REGIAQ. CIVITATE CLAUDIOPOLITANA a multis retro Annis
APOTHECARIUS PERCELEBRIS, VIR BONO PUBLICO NATUS.

Fig. 2. Upper part of the obituary of Samuel Schvartz, dated 1749. Arhivele Naţionale ale României, Cluj-Napoca.



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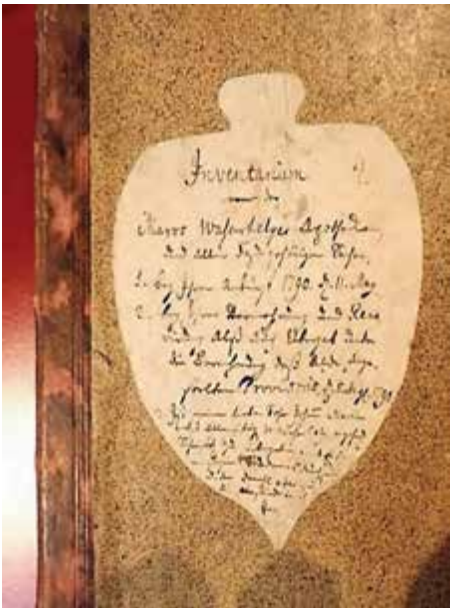

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Dr. György József Hintz (1840–1890), the first pharmacist from Transylvania with postgraduate studies

Melinda MITU

Abstract: This paper presents a few notes on the life and work of Dr. György József Hintz (1840–1890), one of the most important representatives of the Hintz family of Cluj, in which four generations of pharmacists were born. The Hintz family members were distinguished and respected citizens of the city by the Someş River. Their name has also blended with the history of the University of Cluj, while their former pharmacy houses today the Pharmacy Museum in Cluj.

Dr. György József Hintz obtained the pharmacist diploma from the University of Vienna in 1862 and the diploma of doctor in pharmacy in 1863, becoming the first pharmacist from Transylvania with postgraduate studies. After the establishment of the Royal Hungarian University of Sciences in Cluj (1872), he became the first pharmacy professor at the Faculty of Medicine. In 1884, he became authorized private professor, hence the first pharmacist in the Austro-Hungarian Monarchy to teach pharmaceutical technology courses and a practical course of preparing pharmaceutical recipes. His courses are deemed pioneering in the field of pharmaceutical science in the former Austro-Hungarian Monarchy. Dr. György József Hintz taught for six years at the Pharmaceutical Institute run by Árpád Bókay, in the so-called "Formulation Laboratory" of the Institute.

Keywords: Hintz, pharmacist, Cluj, Franz Joseph Royal Hungarian University of Sciences.

Four generations of pharmacists were born to the Hintz family of Cluj,[1] the members of which were distinguished and respected citi-

[1] Hintz, Zalai 2002, 150–151; Péter 2013, 144–149.

zens of the city by the banks of the Someş. Their name blended with the history of the University of Cluj, while their former pharmacy houses today the Pharmacy Museum.

One of the most important representatives of this family of Saxon origin was Dr. György József Hintz, born in Cluj in 1840 and deceased in the same city in 1890.[2] He was son to Georg Gottlieb Hintz (1808[3]–1876), born in Sighişoara, a graduate of theological studies in Vienna, subsequently a Lutheran priest in Cluj.[4] As for the identity of György József Hintz's mother, older bibliographical sources reference Polixénia Engel,[5] while more recent sources identify her with Augusta Mathilde Mauksch,[6] grand-daughter of the renowned pharmacist Tobias Mauksch.[7] Inheriting on maternal line his great-grand-father's famous pharmacy from Cluj, György József Hintz chose pharmacy as his career.

Having concluded his gymnasium studies with the Unitarian College of Cluj, György Hintz attended a few internship years in Sibiu, at the *Black Eagle* pharmacy of Karl Müller Senior, another famous pharmacy of the period. Upon the completion of his internship, György Hintz started to work for a short while as assistant pharmacist in Miskolc (Hungary) and later – between 1860 and 1863 – completed his university studies in Vienna. In 1862 he obtained his pharmacist diploma and in 1863 the diploma of doctor in pharmacy,[8] becoming the first pharmacist in Transylvania with postgraduate studies.[9]

During the same year, György József Hintz returned to Cluj to take over

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[2] On the life and activity of György József Hintz see: Szinnyei 1896_2, sub voce *Hintz György ifjabb*; Zalai 1977; Gaal 2001; Hintz, Zalai 2002, 150; Gaal 2003, 93; Péter 1997, 737–738; Péter 2013, 144–149 and 233–234; Péter 2019, 20, 28, 49, 55; Gaal 2022_1, 17–18; Gaal 2022_2, 58; Cosma 2022, 216–218.

[3] Szinnyei 1896_1, sub voce *Hintz György idősb* mentions the year 1805.

[4] See for instance Szinnyei 1896_2 and Szinnyei 1896_1; Zalai 1977; Hintz, Zalai 2002, 150; Gaal 2003, 93, 96; Gaal 2022_1, 16; Cosma 2022, 216.

[5] See for instance Szinnyei 1896_2. In fact, Polixéna Engel was the second spouse of Georg Gottlieb Hintz, the stepmother of György József Hintz. See Gaal 2022_1, 16.

[6] See for instance Gaal 2003, 96; Péter 2013, 144, 233–234; Gaal 2022_1, 16; Cosma 2022, 216. Augusta Mathilde (1815–1850) was the daughter of Johann Martin Mauksch, the youngest son of Tobias Mauksch.

[7] See Offner, in the present volume. See also Zalai 1977, 146; Hintz, Zalai 2002, 150; Gaal 2003, 96; Gaal 2022_1, 14–15;

[8] In fact, according to the academic titles of the period, "doctor chemiae" (doctor in chemistry). See Péter 2013, 144.

[9] On all these biographical data see Zalai 1977, 145–146; Hintz, Zalai 2002, 150; Péter 1997, 737–738; Péter 2013, 144; Tuka 2012; Gaal 2022_1, 17.

his family's pharmacy. While studying abroad, the pharmacy had been run by other pharmacists (provisors), employed by his parents.[10]

In 1866, György Hintz married Emma Groisz (1846–1929). They had four children, three boys – György Károly (1874–1956), Béla (1877–1878) and Géza (1878–1908) – and a girl, Emma (1883–1891).[11]

After the Royal Hungarian University of Sciences (since 1881 entitled the Franz Joseph Royal Hungarian University of Sciences) was founded in Cluj, György Hintz became the first pharmacy professor[12] of the Faculty of Medicine. In 1884, he became authorized private professor, hence the first pharmacist in the Austro-Hungarian Monarchy to teach pharmaceutical technology[13] courses to both medicine and pharmacy students, for two hours a week. He also taught a practical course of preparing pharmaceutical recipes,[14] for one hour a week. His courses are deemed pioneering in the field of pharmaceutical science[15] in the former Austro-Hungarian Monarchy. Dr. György József Hintz taught for six years at the Pharmaceutical Institute run by Árpád Bókay, in the so-called "Formulation Laboratory" of the Institute.[16] His teaching material contains 261 manuscript pages: the first 219 pages are his lectures on pharmaceutical technique and pharmaceutical prescriptions, followed by two distinct parts containing his comments on the *Magyar Gyógyszerkönyv. Pharmacopoea Hungarica*, second edition, published in Budapest in 1888, and pharmaceutical business management.[17]

In preparing his courses, Hintz drew inspiration from the most recent specialist books in his field of research. Such were, for example, *Technik der pharmaceutischen Receptur* (fourth edition, Berlin, 1884) by the German pharmacist and chemist Hermann Hager, the *Königs Warenlexicon* (eighth

[10] See, for instance, Péter 2013, 144, 233.

[11] See for instance Hintz, Zalai 2002, 150–151; Péter 2013, 144. See also the genealogical tree of the Hintz family in Blos-Jáni 2022, 28–29.

[12] According to Tuka 2012, Hintz was hired as "előadó tanár", which in today's terminology means university reader. Also, see Zalai 1977, 145; Péter 1997, 737; Hintz, Zalai 2002, 150; Péter 2013, 144; Péter 2019, 28.

[13] A branch of pharmaceutical sciences dealing with methods of preparation, storage, dispensing and biopharmaceutical evaluation of all pharmaceutical forms, more specifically, medicines. Popovici, Lupuleasa 2017, 38.

[14] Zalai 1977, 145; Péter 1997, 737; Péter 2013, 144; Tuka 2012; Péter 2019, 28; Gaal 2022_1, 17.

[15] In other universities of the monarchy – even in the case of those in Vienna or Budapest – the teaching of these subjects began only in the first decades of the 20th century. See Zalai 1977; Hintz, Zalai 2002, 150.

[16] Zalai 1977, 145, 146; Péter 2013, 144; see also Tuka 2012; Gaal 2022_1, 17.

[17] For a detailed presentation of the above manuscript see Zalai 1977, 146–149.

edition), or *Gyógyszertan* [Pharmacology] by Dr. Kálmán Balogh, published in Pest, in 1866.[18]

Unfortunately, Dr. Hintz's untimely death at only 50 years of age prevented the publication of these courses. After his death, the respective disciplines were discontinued and resumed only three years later by another illustrious professor-pharmacist, Hugó Issekutz.[19]

Among Dr. Hintz's professional assignments with the University, one can also mention his membership in examination panels set up for the evaluation of pharmacy students and practitioners.[20] He also played an active role in supporting the "Pharmacy Students' Aid and Self-Education Society" (*Gyógyszerészettan-hallgatók Segély- és Önképző Egylete)*. In 1887–1888, the said Society counted 45 members, who suggested that a "pharmacology museum" be set up in Cluj. Their initiative was embraced by the most important pharmacists in the city, such as Hintz and Miklós Széki.[21]

As a pharmaceutical specialist, Dr. Hintz addressed various original research topics and published a number of 49 works in prestigious journals of the field, such as *Gyógyszerészi Hetilap* (the official gazette of the College of Pharmacists in Budapest), *Gyógyszerészi Közlöny* and *Vegytani Lapok*[22] or *Kertész Gazda* of Cluj.[23]

The Cluj-based pharmacist's great knowledge allowed him to approach research topics different from his main activity field. Thus, Dr. Hintz made a presentation on the history of the Music Conservatory of Cluj during 1819–1889, published in the Cluj gazette *Erdélyi Hiradó*,[24] where he expressed his admiration for the efforts that the representatives of the Cluj musical life made over the course of time and his dissatisfaction with the state's lack of involvement in support of this cultural area of the city.

Dr. Hintz's professional value was recognized by various distinguished scientific associations of the Austro-Hungarian Monarchy. He was a member

[18] Zalai 1977, 146.

[19] Zalai 1977, 146; Péter 1997, 737; Hintz, Zalai 2002, 150; Péter 2013, 144–145.

[20] See Szinnyei 1896_2; Zalai 1977, 146; Péter 2013, 144; Péter 2019, 28; Gaal 2022_1, 17.

[21] Péter 2019, 49.

[22] Zalai 1977, 146; Peter 2013, 145.

[23] For Dr. Hintz's studies see also Szinnyei 1896_2. Apart from pharmaceutical technique studies, Dr. Hintz authored articles discussing for instance, morphine poisoning or the study of perfumed plants and perfumes.

[24] *A kolozsvári Zene-Conservatorium története 1819–1889* is the title of a speech that Dr. György Hintz delivered during the public meeting of the Music Conservatory of Cluj on March 3rd, 1889, taken over by *Erdélyi Hiradó* and published in three parts, in the gazette's 56–58 issues of 4th, 5th and 6th of March 1889.

and subsequently president of the Cluj district of the Hungarian Pharmacist Association (*Magyarországi Gyógyszerész Egyesület*), member of the Society of Pharmaceutical Sciences in Vienna, member of the Society of Medical and Natural Sciences from Cluj (*Kolozsvári Orvos-Természettudományi Társulat*), and member of the Transylvanian Museum Society (*Erdélyi Múzeum-Egyesület*).[25]

Apart from his teaching and research activities, Dr. Hintz also held a series of official posts in the public, social, and cultural life of Cluj. He was member of the Municipal Council, the Committee of Public Administration and the public health commission. He was also chairman of the Music Conservatory of Cluj, general trustee of the Evangelical Church, treasurer of the Cluj subsidiary of the Hungarian Cultural Society of Transylvania (EMKE), chief treasurer of the Transylvanian Economic Association and counselor of the Austro-Hungarian Bank Director and the Commercial Bank of Cluj.[26]

György József Hintz passed away on February 20th, 1890. He was buried in the Central Cemetery of Cluj (*Házsongárd*) near the mausoleum of his great-grand-father, Tobias Mauksch.[27] The news of his demise was met with great sadness. All professional magazines in Budapest published articles about the life and work of the pharmacist from Cluj, highlighting his achievements in the field of education and scientific research, as well as his accomplishments within the Hungarian Pharmacists Association.[28] In 1982, the Hungarian Pharmaceutical Science Society (*Magyar Gyógyszerésztudományi Társaság*) also instituted a commemorative medal in memory of pharmacist György Hintz. This is a medal of merit awarded by the Department of Pharmaceutical Technology to pharmacists with outstanding results in this field of science. György Hintz's grandson, who bore the same name, was offered the medal in 1985.[29]

Dr. György József Hintz's activity was continued by his son, György Károly Hintz (1874–1956),[30] his grand-children, György (1912–1989) and Gábor (1918–1989),[31] as well as his great-grandson György József Hintz

[25] Péter 2013, 145; Tuka 2012; Péter 2019, 28; Cosma 2022, 217.

[26] For these issues, see Szinnyei 1896_2; Péter 2013, 144; Tuka 2012; Péter 2019, 28, 55; Gaal 2022_1, 17–18.

[27] Gaal 2003, 96; Péter 2013, 144; Gaal 2022_1, 15; Cosma 2022, 218.

[28] Péter 2013, 145.

[29] Péter 2013, 145.

[30] About György Károly Hintz see Hintz, Zalai 2002, 150; Péter 2013, 145–146; Gaal 2022_1, 14, 18, 23.

[31] About György Károly Hintz' grandsons see Hintz, Zalai 2002, 150; Péter 2013, 146–147; Gaal 2022_1, 14, 18, 23, 24.

(1939–1992). György Hintz (1912–1989)[32] was the last in line to work in the family's old pharmacy, as the business was nationalized in 1949 and since 1954 the building became the seat of the Pharmacy Museum in Cluj. For almost seven decades, the old history of pharmacy collections of the Transylvanian Museum Society (compiled especially owing to physician Gyula Orient's efforts) as well as the more recent collections assembled by physician Valeriu Bologa have been exhibited there.[33]

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[32] About György Károly Hintz' great-grandson see Hintz, Zalai 2002, 150–151; Péter 2013, 146.

[33] See Gruia, *The History of the Collection*, in the present volume.

www.gyogyszeresztortenet.hu/wp-content/uploads/2013/09/A-gy%C3%B3gyszer%C3%A9szk%C3%A9pz%C3%A9s-neves-tan%C3%A1rai-a–125-%C3%A9ve-alakult-kolozsv%C3%A1ri-Ferencz-J%C3%B3zsef-Tudom%C3%A1nyegyetemen.pdf (accessed 25.08.2022)

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Fig. 1. Dr. György József Hintz – reproduction after a glass negative made by the Cluj-based photographer, Veress Ferenc, in 1883. The photograph was taken in Veress' studio located on Sétatér utca 15 (nowadays Emil Isac). The negative is preserved at the National Museum of Transylvanian History, inventory no. M 10940.

PHARMACEUTICAL EDUCATION IN CLUJ (1919–1934)

Oana HABOR

Abstract: Founded in 1919, the Romanian University of Cluj opened its gates with four faculties: Sciences, Law, Letters and Philosophy, respectively Medicine. The Faculty of Medicine included the pharmaceutical education in its architecture. The institutional nucleus was represented by the Institute of Pharmacy and the Hospitals Pharmacy. The specialized training for practicing the profession of pharmacist ended in Cluj in 1934, when pharmaceutical education was concentrated in Bucharest. This research work aims to highlight the 1919–1934 period, marked by the effort to organize and develop the educational and scientific process. The obtained results, from works published in specialized journals, doctoral theses, textbooks, patents, to original products which came out of the laboratories of the Institute of Pharmacy and the Hospitals Pharmacy, remained models and landmarks for the teaching and research activity. Pharmaceutical education was re-established in Cluj in 1946. Two years later, in the context of 1948 education reform, the Faculty of Pharmacy was founded with the Institute of Medicine and Pharmacy. The fruition of the pharmaceutical education, which had developed in the city by the banks of the Someș between the years 1919–1934, became manifest again. After the Second World War, along with other professors and researchers, the Cluj-based pharmacy school emerged and consolidated over time, with specialists trained during the interwar years.

Keywords: Cluj, King Ferdinand I University, pharmaceutical education, the Institute of Pharmacy, the Hospitals Pharmacy.

In Transylvania, obtaining a university diploma in order to practice the pharmacist profession became mandatory during the last decades of the 18th century. During that period, in the Habsburg Monarchy, to which Transylvania belonged, the vast empire-wide reform also concerned the

sanitary system. But the reforms could not be implemented without qualified staff. The *General Normative Act for the Regulation of Sanitary Matters* (*Generale normativum in re sanitas*) of 1770, which remained in force with few changes until 1848, contained decisions regarding the sanitary administration network, prevention of epidemics, respectively the assignments of physicians, surgeons, midwives and pharmacists.[1] With reference to the pharmaceutical profession, the *Generale normativum* stipulated that it could only be practiced by persons who held a university diploma.[2] For instance, in the University of Trnava (moved to Buda, in 1777), so that pharmacists could qualify, the University Regulations of 1774 set out examinations in botany, pharmacology and pharmaceutical chemistry. Also, a practical test of preparing medicines was included. The next step consisted in taking an oath before the dean of the Faculty of Medicine.[3]

Numerous laws regarding internship in pharmacy were adopted throughout the 19th century. The mandatory gymnasium studies were increased to six years, while internship was established at two years.[4] Starting with 1888, by the end of the internship period, subsequent to a summer course (July-September), an examination was taken (*tirocinal examination*).[5] The Board was composed of professors (who taught physics or chemistry, pharmacy or botany*)* and two pharmacists.[6] Those who succeeded to pass this examination, were either hired as assistant pharmacists (*assistants without diploma*) or enrolled for university courses.[7]

With the establishment at Cluj, in 1872, of the Royal Hungarian University (since 1881, the Franz Joseph University), persons interested in the pharmacist career had the opportunity to train in this field. In the first year, the students attended the courses of the Faculty of Mathematics and Natural Sciences and by its end, preliminary examinations were held. In the second year, theoretical and practical courses were carried out in the Faculty of Medicine. In order to run their own pharmacy, starting with 1912, by the completion of university studies,

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[1] Sechel 2008, 100–101.

[2] Kapronczay 1995, 21; issued in Vienna in January 1770, the "Generale normativum in re sanitas" was adapted and enacted in the Kingdom of Hungary in September 1770. See its Hungarian translation in Balázs 2007, 109–160.

[3] Orient 1926, 214–217.

[4] Spielmann, Baciu 1994, 115.

[5] Ghibu 1929, 45.

[6] Péter 2022, 254.

[7] Budaházy 2012, 16.

the pharmacists worked in a pharmacy for two years. Then, they could apply for the diploma examination in pharmacy.[8]

The University of Cluj also awarded the title of doctor, 67 titles of doctor being obtained between 1872–19185.[9] The candidates attended two years of practical works and chemistry courses with the Faculty of Mathematics and Natural Sciences. The title of *Doctor chemiae* was obtained after having passed examinations and the draw up of the doctoral thesis. From 1892, apart from chemistry, research themes in the field of pharmacology or public health could be chosen, while the acquired title was *Doctor Pharmaciae*.[10] The chairman of the Board was the dean of the Faculty of Medicine.[11]

The Hospitals Pharmacy was inaugurated in 1904. Practical works of pharmaceutical technique and medicine composition analyses were carried out in this institution. Also, the Pharmacy's role was to supply university hospitals with medicines.[12]

As for the proportion of students, compared to the total number of students enrolled in the four faculties of the University, it varied between 2% (1872/1873) and 12% (1891/1892).[13]

By the end of the First World War, in the context created by the Great Union, by Royal decree no. 4090 signed by King Ferdinand I, the Franz Joseph Hungarian University became a Romanian University. It opened its gates with four faculties: Law, Sciences, Letters and Philosophy and respectively Medicine. The Faculty of Medicine included the pharmaceutical education in its architecture.[14]

The core of the pharmaceutical education in the University of Cluj (since 1927, King Ferdinand I University) was represented by the Institute of Pharmacy and the Hospitals Pharmacy run by Gheorghe Pamfil. Professor Gh. Pamfil came to Cluj with a rich experience. He was a graduate of the University of Bucharest and had pharmaceutical training. In 1910, he had obtained the Ph.D degree with the University of Geneva, being appointed assistant in the Laboratory of physical chemistry. Upon his return to the country, he filled the position of assistant in the Laboratory of Mineralogy

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[8] Péter 2019, 16–17.
[9] Grecu, Săndulescu 2014, 23.
[10] Grecu, Săndulescu 2014, 22.
[11] Péter 2019, 14.
[12] Spielmann, Baciu 1994, 116.
[13] Péter 2022, 267.
[14] During 1923–1934, The Faculty of Medicine of the Romanian University of Cluj was called the Faculty of Medicine and Pharmacy.

and Petrography of Bucharest. During the First World War, he led the Subsistence Laboratory of the army. After demobilization, he served as pharmacist inspector with the Civilian Hospitals Ephory of Bucharest and chief chemist in the Institute of Geology.[15]

In the autumn of 1919, Gh. Pamfil took the task of organizing the pharmaceutical education in Transylvania. In the first year of existence of the Romanian University of Cluj, it worked according to temporary regulations. The pharmaceutical education lasted for two years, while enrolment was based on passing the pharmacy internship examination.[16] The students attended in the first year the courses of the Faculty of Sciences (physics, zoology, mineralogy and geology, experimental chemistry – general and organic chemistry, inorganic chemistry and botany) and in the second year, the courses of the Faculty of Medicine (analytical chemistry, pharmacognosy, hygiene, pharmacology, pharmaceutical chemistry).[17]

By the end of the two years, trainees took practical examinations (analytical chemistry and pharmaceutical chemistry, pharmacognosy) and theoretical examinations (experimental and pharmaceutical chemistry, pharmacognosy, hygiene). If passed, the student obtained the diploma of "magister in pharmacy", which opened the path for free practice in pharmacy.[18] The free practice examination consisted in a practical test (analysis of galenic medicines according to the Hungarian or Romanian Pharmacopoeia) and a theoretical test (laws concerning pharmacies, practical guidance from the Pharmacopoeia). The chairman of the examination board was the dean of the Faculty of Medicine and the examiners were the pharmacology professor and one pharmacist (pharmacy owner). A government representative also attended the examination. As this was a transition regulation, the free practice examination could be attended also by pharmacists qualified based on regulations operating prior to 1918.[19]

Starting with the academic year 1920/1921, the duration of the pharmacy studies increased to three years. In the first year, the studied subjects included some from the curriculum of the Faculty of Sciences, the departments of

[15] Radu 1933, 8.

[16] Regulations of Pharmaceutical University Education 1919, I. Enrollment in University, art. 1–2, 3.

[17] Regulations of Pharmaceutical University Education 1919, II. Subjects of pharmaceutical curricula, art. 6, 4–5.

[18] Regulations of Pharmaceutical University Education 1919, III. Pro-exams and probative exams, art. 24–31, 9–12.

[19] Regulations of Pharmaceutical University Education 1919, IV. Approval to open and run a pharmacy, art. 32–37, 12–13.

natural sciences and physico-chemical sciences. In the first department, taught professors Ioan Grințescu (general botany), Alexandru Borza (systematic and pharmaceutical botany) and Ioan Scriban (zoology, parasitology). The courses from the physico-chemical sciences department were taught by professors Adrian Ostrogovich (general and medical chemistry), Gheorghe Spacu (analytical chemistry) and Gheorghe Dima (physics).[20]

In the second year, students attended courses of pharmacognosy, galenic pharmacy, analytical chemistry, and pharmaceutical chemistry. The curriculum of the third year set out the following subjects: pharmaceutical chemistry and comments of Romanian pharmacopoeia, and food chemistry. Also, in the last two years of study, courses of hygiene and bacteriology, respectively toxicological analyses were included.[21] Therefore, starting with the second year, courses were held by the professors of the Faculty of Medicine. For instance, pharmacognosy courses were taught by Gh. Martinescu and the senior medical lecturer Teodor Goina. The demonstrative course was aimed at "describing the mother plant, the growth place and culture of the plant, the description of pharmaceutical drugs, methods for harvesting and conservation, macroscopic and microscopic characters of the drug", while practical works were designed for "making sections of various drugs".[22]

By the end of each academic year, students were tested in each subject. After having passed the examinations, they were declared graduates. Then followed the probative examinations (in three subjects). Thus, they could obtain the pharmacist diploma.[23]

In 1926 new regulations were implemented. They stipulated that the pharmaceutical education formed an integral part of the Faculty of Medicine and Pharmacy, with courses taught by the professors of the Faculty of Medicine and Pharmacy and those of the Faculty of Sciences.[24] The courses were public, however the practical works, demonstrations and excursions, could be attended only the enrolled students.[25]

If until that time only applicants who had completed their pharmacy internship were admitted in the pharmaceutical course, the new regulations

[20] Yearbook of the University of Cluj 1921/1922, Courses and works performed in various departments of the University during 1921–1922, 29–154.
[21] Yearbook of the University Cluj 1922/1923, 96.
[22] Yearbook of the University of Cluj 1923/1924, 94.
[23] Ghibu 1929, 45.
[24] Regulations of pharmaceutical education 1926, I. Special Provisions, art. 1, 4.
[25] Regulations of pharmaceutical education 1926, V. Duties of students regarding attendance, art. 29, 10.

allowed for two possibilities: either attend the two-year internship prior the university studies; or a one-year internship upon the completion of the university studies and prior applying for the bachelor's degree examination. The students admitted at the University, without internship, were enrolled based on the high school graduation diploma.[26] Internship mandatorily occurred in a privately-held, authorized pharmacy, the Hospitals Pharmacy with the Institute of Pharmacy of the Cluj University or in the pharmacies of the Bucharest Hospitals Ephory, respectively Saint Spiridon Guardianship of Iași.[27] In the event that the internship preceded the university internship, the student had the obligation to hold knowledge of general botany and systematic botany, basic physics, general basic chemistry, be familiar with most used pharmaceutical substances in pharmacy, and know medicine formulas, doses and prescription. Also, a minimum 50-species herbarium had to be compiled.[28] The internship ended with an examination with the board composed of professors who taught chemical and galenic pharmacy, general chemistry, pharmacognosy, physics, and botany.[29]

In 1927, given the inconveniences of internship subsequent to the completion of the university studies,[30] the Ministry of Instruction approved the amendment of the 1926 Regulation. Thus, students could commence internship after having obtained the high school graduation diploma. By the end of the two-year internship, in August and September, followed the preliminary courses for the internship examination (chemistry, physics, botany, pharmacognosy and pharmacy).[31]

The minimum mark for passing the examinations was 6. Students who failed to obtain this mark, had to go through a second examination in the autumn session, and if they failed again, they had to repeat.[32] After having promoted the third-year examinations and having obtained the certificate of internship (in the event internship had not been completed prior the university studies), the students could apply for the examination in order to obtain the bachelor's degree in pharmacy. It consisted of practical and oral tests in analytical chemistry, pharmacognosy, pharmaceutical chemistry, and galenic pharmacy.[33] The

[26] Regulations of pharmaceutical education 1926, IV. Internship in pharmacy, art. 14, 7.
[27] Regulations of pharmaceutical education 1926, II. Duration of studies, art. 3, 4.
[28] Regulations of pharmaceutical education 1926, IV. Internship in pharmacy, art. 18, 7–8.
[29] Regulations of pharmaceutical education 1926, IV. Internship in pharmacy, art. 24, 9.
[30] Ghibu 1929, 46.
[31] Ghibu 1929, 46.
[32] Ghibu 1929, 46.
[33] Regulations of pharmaceutical education 1926, Chapter VII. Bachelor's degree examinations in pharmacy, art. 48–51, 13.

general admission mark for a bachelor's degree was 6, while after promotion, the applicants were awarded the title of Licentiate.[34]

Students who were licentiates in pharmacy had the opportunity to obtain the title of doctor in pharmacy (Faculty of Medicine and Pharmacy) or doctor in sciences (Faculty of Sciences, the departments of chemistry or natural sciences). As for doctoral studies in pharmacy, after having obtained the rank of licentiate, the candidates had to work for two years in the university laboratories for preparing an original work. Its topic was chosen from fields such as pharmaceutical and galenic chemistry, chemistry (inorganic, organic and analytical), botany, pharmacognosy, hygiene (bacteriology or parasitology). Before defending their doctoral thesis, doctoral students had to take an oral examination and pass practical works in two pharmaceutical education specialties that were not included in the topic of their thesis.[35]

One of the first Ph.D theses in pharmacy was *Extract de glandă lacrimală și acțiunea lui farmacodinamică* (*Extract of lacrimal gland and its pharmacodynamic action)*, defended by Victor Ciocănelea in 1929.[36] In accordance with the Institute of Pharmacy's programme preoccupations and following the study of various natural indigenous products with medical and pharmaceutical uses, Irina Moga Belba defended the thesis titled *Studiul chimico-farmaceutic asupra plantei Adonis Vernalis recoltată de pe dealurile din jud. Cluj și Turda (Chemical-pharmaceutical study of plant Adonis Vernalis collected from the hills of Cluj county and Turda).*[37] Other doctoral theses focused on topic in the field of industrial-pharmaceutical inorganic chemistry[38] or toxicology.[39]

Pharmaceutical education was gradually separated from the Faculty of Sciences. Taking into account the pharmacists' social and sanitary role, it was intended to "add adequate courses for completing the modern pharmacists' culture".[40] Human physiology was introduced for the second year and works in the laboratory of medical physics for the first year. Also, Professor P. Thomas, tenured professor of the biological chemistry department, was in charge of a food chemistry course (third year), in which he

[34] Ghibu 1929, 46.
[35] Regulations of pharmaceutical education 1926, Chapter VIII. Doctoral studies, art. 54–58, 14–16.
[36] Yearbook of King Ferdinand I University of Cluj 1928/1929, 49.
[37] Yearbook of King Ferdinand I University of Cluj 1930/31, 154.
[38] E.g. Mártonfi 1931.
[39] E.g. Beroniade Belba 1931.
[40] Ghibu 1929, 46.

emphasized themes such as natural food, indispensable food, protein substances, vitamin generalities, etc.[41]

Starting with the academic year 1928/1929, the courses of pharmaceutical education were taught only by the teaching staff of the Faculty of Medicine. For instance, with the Institute of Pathological Anatomy, pharmacist students attended the parasitology course. It addressed the main groups of pathogenic parasites in humans, with an emphasis on those frequently found in our country.[42] The hygiene and bacteriology course, taught by Professor M. Zolog, aimed at teaching the students the basic notions of social and schooling hygiene and procedures for sterilizing, preparing and administering serums and vaccines.[43] Other subjects set out in the curriculum were: pharmacognosy (Gh. Martinescu), pharmaceutical botany (Mircea Prișcu), notions of human physiology (I. Nițescu), general and experimental pathology (M. Botez), biological chemistry (P. Thomas), general and medical physics (N. Bărbulescu), and qualitative analytical chemistry (Ștefan Secăreanu).[44]

The course of pharmaceutical chemistry taught to second and third-year students by Professor Gh. Pamfil was believed fundamental to pharmaceutical practice. The Professor underlined "methods for making or preparing different inorganic, organic or organometallic chemicals and methods for extracting various chemically defined substances from adequate natural drugs".[45] The comments of Romanian pharmacopoeia entailed the mastering of scientific principles on which pharmaceutical operations and official control methods of galenic and chemical medicines rely.[46] Believing chemistry was a rational science, which "must not only torture the student's memory, but on the contrary, logically aid the student to acquire the principal professional knowledge",[47] Professor Pamfil introduced a general chemistry course adjusted to the training of medicine and pharmacy students.[48] The general medical chemistry course was taught for free, being included in analytical syllabus, however not in the budget.[49]

As for the toxicology department, a rich scientific activity was carried out by Iuliu Orient. Licentiate in pharmacy of the University of Budapest (1891),

41 Yearbook of King Ferdinand I University of Cluj 1931/1932, 143.
42 Yearbook of King Ferdinand I University of Cluj 1929–1930, 119.
43 Yearbook of King Ferdinand I University of Cluj 1930–1931, 132–133.
44 Yearbook of King Ferdinand I University of Cluj 1930–1931, 107–130.
45 Yearbook of King Ferdinand I University of Cluj 1932–1933, 134.
46 Yearbook of the University of Cluj 1923–24, 113–115.
47 Pamfil, 1928, V.
48 Yearbook of King Ferdinand I University of Cluj 1928–1929, 99.
49 Pamfil 1929, 6.

doctor in Pharmacy (1900), respectively doctor in Medicine (1906) of the University of Cluj, Orient specialized in experimental medical chemistry and toxicology, with pharmaceutical chemistry as secondary specialty.[50] Prior to the First World War, since 1898, he carried out his activity in the Department of Analytical and Pharmaceutical Medical Chemistry with the Franz Joseph University (he filled by competition, in turn, the positions of practitioner chemist, permanent assistant, senior lecturer, permanent deputy). In 1918 he obtained the title of docent (medical-pharmaceutical chemistry).[51] Iuliu Orient continued to work in the Romanian University of Cluj. In 1921 he was appointed senior lecturer with the Institute of Pharmacognosy, then substitute reader and permanent reader with the Department of Toxicology (1925). Between 1898/1924 he led the training course for the final examinations of pharmacy internship. He authored teaching and scientific books (e.g. *Pharmacognosy*, Budapest, 1891; *Pharmaceutical Technique*, Cluj, 1902/1907) and wrote studies in the field of medical and biological chemistry, pharmaceutical and galenic chemistry and bacteriology.[52]

An important pillar in the medical education of Cluj was represented by the Hospitals Pharmacy. It was meant to supply medicines to university hospitals, respectively control consumables designed for these. Also, research about antiseptics, deemed important for water sterilization and care of war injuries and wounds were carried within its framework, and western officinal plants not included in the Romanian pharmacopoeia were also studied.[53] Opotherapy products were investigated in cooperation with the Neurology Clinic.[54] One must mention that the Hospitals Pharmacy was equipped with various installations, instruments and devices: coal and gas ovens, nichrome heating wire electric oven, motor metal pumps, automatic mercury pumps, automatic mercury nozzles; dosage devices and devices for electrolytic syntheses, quartz mercury lamp, microscopes, ultra-microscope, cathetometer,

[50] Orient 1931, 1.

[51] Orient 1931, 2.

[52] Orient 1931, 3–12; in parallel with his teaching and scientific activity, Iuliu Orient was also a passionate historian of pharmacy history. "History of Pharmacy in Transylvania and Banat" published in Hungarian in Cluj in 1926, and "History of Pharmacy from Transylvania" (1927) remain reference works even today. Iuliu Orient also compiled a precious pharmaceutical-historical collection with the Transylvanian Museum, enriched across the years and which included pharmaceutical vessels made of glass and faience, pharmacy furniture, medicines used in various periods, old instruments etc. See Gruia, *The History of the Collection*, in the present volume.

[53] Yearbook of King Ferdinand I University of Cluj 1929–1930, 153.

[54] Yearbook of King Ferdinand I University of Cluj 1932–1933, 177.

special precision scales, and special air thermostats. In the pharmacy's workshops, certain devices and instruments were made by its own employees, while old devices were repaired.[55] Among those at the head of the Hospitals Pharmacy during 1920–1934 one can mention Niculiţă Manta, Ioan Buda, Maximilian Wonnesh, and Victor Ciocănelea.

After 15 years of activity with the Faculty of Medicine in Cluj, Romanian pharmaceutical education was reconfigured. Focus was to be placed on Bucharest. In the preceding years of the 1934 Law, debates were held in the Parliament and academic milieus. Views differed. Some politicians supported the bill and argued that by joining forces in only one faculty, that of Bucharest, the education could keep up with the advances of that time in pharmaceutical sciences.[56] A memoir of the University of Bucharest's Professors pleaded for a single faculty of medicine and argued that pharmaceutical education needed many completions, departments, staff and teaching material in order to achieve its purpose, while the state budget did not afford such facilities for each of the three faculties.[57] On the other hand, in a meeting held in the autumn of 1930, the University Senate of Cluj rejected the letter of dissolution of the pharmaceutical education and its amassment in Bucharest.[58] The professors of the University of Iaşi proceeded likewise. They believed that pharmaceutical education could not develop independently from medical education, some mixed courses of the two educational branches being compulsory for.[59] Debates were held also about the decrease in number of students enrolled with the Faculty of Pharmacy students in the capital city and the reduction of the teaching staff of this faculty through transfer or retirement.[60]

Ultimately, the law for the amassment of the university pharmaceutical education, enacted in July 1934, amended Article 90 of the 1932 Law on the organization of university education. The latter established the functioning of pharmaceutical education in Cluj and Iaşi with the Faculties of Medicine from those university centres.[61] Therefore, the two departments of chemical pharmacy and galenic pharmacy from the University of Iaşi and Cluj, together with their tenured professors and whole staff set out in the respec-

[55] Yearbook of the University of Cluj 1922–1923, 97–98.
[56] Bogdan 1934, 4.
[57] Şomlea 1934, 43–44.
[58] Pamfil 1932, 40.
[59] Şomlea 1934, 44.
[60] Popescu 2009, 214.
[61] Bunescu 2004, 276.

tive budget for pharmaceutical education of these two universities[62] were transferred to the Faculty of Pharmacy from Bucharest. The Faculty would operate with seven departments: General and Pharmaceutical Botany, Pharmacognosy and Pharmacodynamics, Pharmaceutical Chemistry, General Chemistry, Analytical Chemistry, Biological and Food Chemistry, and Experimental Physics applied in pharmacy.[63] In August 1934, a new Regulation of the Faculty of Pharmacy was issued, the duration of studies being increased to four years.[64]

Regardless of the reasons which led to the adoption of the 1934 Law, one thing is certain: for one decade and a half, as long as it existed in Cluj, pharmaceutical education was rather fruitful. First of all, so that the teaching process and scientific activity could be conducted favorably, the institutes and clinics of the Faculty of Medicine were equipped with modern equipment and furniture. In the aftermath of World War II, the building where the Hospitals Pharmacy functioned prior to 1919 remained with "almost empty halls, except one or two small niches and worktables, nothing else could be found; no devices, no cabinets, no shelves or even bottles for reagents."[65] Thanks to the efforts of Professor Pamfil, the building's 50 rooms were equipped with large tables for experiments and demonstrations and installations and devices for practical works.[66] Because the pharmacist "is not merely a pure scientist, as his profession is also an art,"[67] the Institute of Pharmacy and the Hospitals Pharmacy were endowed with various laboratories: pharmaceutical chemistry, galenic pharmacy, toxicological and biological analyses, laboratory for special works and physical-chemical constants determination, a galenic laboratory and a technical laboratory. The drug preparation room was equipped with three large tables with two scales each. Also, a mechanical workshop was commissioned.[68]

Benefiting from modern equipment, in the Institute of Pharmacy laboratories could be used for studies in order to improve and adjust the necessary devices and installations for obtaining various medicines. Plants from which medicines were made (*papaver somniferum, berberis vulgaris, digitalis*

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[62] Official Gazette of Romania, 1934, unique article – art. 90, 468.
[63] Official Gazette of Romania, 1934, unique article – art. 90, 468.
[64] Regulations of the Faculty of Pharmacy of Bucharest 1934. Chapter II. Subjects of study. Schooling. Expelling, art. 11, 10.
[65] Pamfil 1929, 8.
[66] Pamfil, 1924, 2–6.
[67] Bologa 1932, 17.
[68] Pamfil 1924, 2–6.

purpurea) were also paid attention.[69] "In order not to be importers of very expensive foreign specialties and prove that Romanian specialists are able to apply modern sciences and techniques,[70] Professor Pamfil studied the effects of certain products such as Ozonogen Iacobovici-Pamfil and Bismuth (Bismjochin), the latter being used in the Cluj hospitals and in other hospitals from the country.[71] By the early 1930s, the Filauron drug for the treatment of tuberculosis was in experimental stage.[72]

Research results materialized in patents awarded for obtaining procedures aimed at manufacturing carbon black and hydrochloric acid from methane gas and chlorine gas, of the means for economic use of gypsum, sodium chloride (salt), dolomite or magnesite and calcite, or the manufacture of inorganic products such a sodium salts, calcium salts, magnesium and sulphur salts.[73]

Also, studies conducted by members of the Institute of Pharmacy took the form of original works in the field of chemistry, pharmacognosy, toxicology, and pharmaceutical technique.[74]

Another achievement was the editing of textbooks in Romanian. Totalling about 1000 pages, over 600 charts drawn by Ernest Both and Martonfi Ladislau, the chemistry course edited by Gh. Pamfil lay emphasis on the laws regarding the constitution of matter, existing elements, bonds and decomposition of bonds, main substances with therapeutic effect. Also, the textbook contained a part of organic analysis (made by Ştefan Secăreanu) and inorganic analysis.[75] The Guidelines for analysis of organic and inorganic chemical drugs drawn up by Gh. Pamfil and Ion Manta had a practical purpose, designed for students in the last years of pharmaceutical education and pharmacists for control and dosage of chemical medicinal substances. They selected the easiest methods to apply.[76]

Further evidence that the pharmaceutical education was successful is represented by the students. During 1919–1926, the number of enrolled students varied between 50–100. After 1926, the average was of 150 applicants, most being Romanians, Hungarians, and Germans. In the first decade

[69] Pamfil 1929, 9.
[70] Yearbook of the University of Cluj 1924–1925, 88.
[71] Yearbook of the University of Cluj 1924–1925, 88.
[72] Yearbook of King Ferdinand I University of Cluj 1932–1933, 177.
[73] Pamfil 1929, 11–12.
[74] Bologa 1932, 18.
[75] Pamfil 1928, V–VI.
[76] Pamfil, Manta 1934, 3.

of existence of the Cluj Romanian University, a number of 180 students obtained the license of pharmacist.[77]

Some of the young students who trained in the pharmacy field stood out as early as their university education years. Teodor Goina (1896–1985) obtained his pharmacist diploma in 1921 and was originally hired as lecturer in the Hospitals' Pharmacy.[78] Professor Pamfil recommended him in order to organize the pharmacognosy discipline.[79] In 1929, he defended his Ph.D thesis titled *Studiul farmacognostic al plantei Berberis vulgaris (Pharmacognostic study of plant Berberis vulgaris)*.[80] Graduate of the University of Iași, doctor of the University of Nancy, Ion Manta (1900–1909) was proposed by Gh. Pamfil for the position of senior lecturer with the Institute of Pharmacy.[81] After having obtained the pharmacist diploma in 1933,[82] upon the departure of Professor Pierre Thomas, he took over the position of director the Institute of Biological Chemistry.[83] Licentiate in pharmacy in 1922/1923,[84] doctor of the University of Cluj (1929),[85] Victor Ciocănelea (1901–1993) carried out his activity in the Hospitals' Pharmacy.[86] Elisabeta Elekes was hired in the position of instructor with the Hospitals' Pharmacy.[87]

For 15 years the professors of the Faculty of Medicine and Pharmacy of Cluj, valuable figures of the Romanian medical science, have beneficially influenced the advances in pharmaceutical education. The works published in specialized journals, in both Romania and abroad, the doctoral theses, textbooks, patents, and the original products of the Institute of Pharmacy and Hospitals' Pharmacy laboratories remain models and landmarks for teaching and research activities. After the enactment of the 1934 Law, the activity of the members of the Institute of Pharmacy continued in Bucharest. Professor Pamfil became dean of the Faculty of Pharmacy from the capital city (1938–1941). He continued his research, authoring the first textbook of *Pharmaceutical Chemistry* (1937/1938). The pharmaceutical chemistry textbook was drawn up by professor Pamfil to give the students the opportunity

[77] Bologa 1932, 18.
[78] Yearbook of the University of Cluj 1921–1922, 209.
[79] Yearbook of the University of Cluj 1923–1924, 64.
[80] Yearbook of the University King Ferdinand I of Cluj, 1928–1929, 49.
[81] Yearbook of the University King Ferdinand I of Cluj 1929–1930, 73.
[82] Yearbook of the University King Ferdinand I of Cluj 1933–1934, 92.
[83] Yearbook of the University King Ferdinand I of Cluj 1936–1937, 223.
[84] Yearbook of the University of Cluj 1922–1923, 49.
[85] Yearbook of the University King Ferdinand I of Cluj 1928–1929, 49.
[86] Yearbook of the University of Cluj 1921–1922, 209.
[87] Yearbook of the University King Ferdinand I of Cluj 1933–1934,149.

to master the "chemistry alphabet, which would allow them to read the great book of nature and understand as much as possible the chapter on the composition of matter and its continuous transformations".[88] Gh. Pamfil conceived also an original study regarding *Sistemul periodic al elementelor* (*The Periodic Table of Elements)* (1941/1942) and contributed to the volume entitled *Index médico-pharmaceutique* (Paris, 1937).[89]

Pharmaceutical education was re-established at Cluj in 1946. Two years later, in the context of the 1948 education reform, the Faculty of Pharmacy was founded with the Institute of Medicine and Pharmacy. The fruits of the pharmaceutical education that had developed in the city by the banks of Someş River between 1919–1934, showed again. After World War II, along with other professors and researchers, the Cluj pharmacy school got underway and solidified over time, with specialists trained during the interwar years: Teodor Goina (Pharmacognosy), Ion Manta (Biochemistry), Victor Ciocănelea (Industrial Technology of Medicines/Pharmaceutical Technique), and Elisabeta Elekes (Inorganic Pharmaceutical Chemistry and Pharmaceutical Merceology).

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[88] Pamfil 1937, XVIII.

[89] Popescu 2009, 191.

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Carei – Germ. Großkarol, Hu. Nagykároly
Cluj-Napoca – Germ. Klausenburg, Hu. Kolozsvár
Gherla – Germ. Neuschloss, Armenierstadt, Armenerstadt, Hu. Szamosújvár
Mediaş – Germ. Mediasch, Hu. Medgyes
Nuşfalău – Hu. Szilágynagyfalu or Nagyfalu
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Unicorn – Lat. Unicornis, Hu. Egyszarvú, Ro. Unicorn
White Pigeon – Hu. Fehérgalamb

[1] In Romanian, Hungarian, German, most with "at the" preposition. E.g. "At the Unicorn", translated into English as "Unicorn".

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MUZEUL NAȚIONAL DE ISTORIE A TRANSILVANIEI