Scientific results report PHARMATRANS.

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

www.pharmatrans.mnit.ro

Executive abstract (report 2023)

All objectives have been reached in 2023, the most important of which was the successful publication of the seven-volume catalog of the collection. The project has benefited from good management (coordination, meeting of team members and collaborators, online and in person, progress monitoring and results, report) and has been audited (activity 3.1). The project and its activities have been promoted on the project website, the website of the host institution, and social networks (more than the minimum 50 estimated) (activity 3.2). One conference presentation and three poster presentations have been prepared and delivered, during international and national events (activity 3.3) More than 3 articles have been written (activity 3.4). Though not planned for the final year of the project, the team leader has visited specialized museums (Valencia, Cluj-Napoca) and has maintained contacts with specialists abroad, especially the research team of a similar Polish project and members of the AROMAS international association that promotes the cultural route of historical pharmacies and medicinal gardens. The main objective of the project for 2023 has also been achieved: the seven volumes of the catalog have been completed, corrected, designed, and published (activity 3.6). They have been presented during a book launch event, on November 17th at the headquarters of the National Museum of Transylvanian History in Cluj, and have been sent abroad to 150 collaborators, specialists, and libraries, other 150 sets have been presented to authors, collaborators and institutions in Romania, while all volumes have been uploaded on the website of the project and promoted online (activity 3.5).

Executive abstract (project 2021-2023)

All of the initial objectives of the PHARMATRANS project have been met and the results exceed expectations. The initial estimate was to publish 6 volumes, but the final catalog comprises 7 volumes. More than 1000 artifacts have been inventoried between the redaction of the project

proposal and the spring of 2023 and the team has decided to include them in the catalog, despite the extra work with their processing. The first exhaustive catalog of the History of Pharmacy Collection in Cluj-Napoca has thus been published, launched during an even in November 2023, with 300 printed copies distributed in Romania and abroad and all volumes available open-access on the website of the project (www.pharmatrans.mnit.ro).

The first secondary objective was to provide team members the opportunity to travel to pharmacy museums and related institutions in Europe. A solid network of specialists has been created, both in Romania and abroad, through research visits, presentations during academic events, and inter-disciplinary advanced investigations performed through the project. The project leader has even become a member of an international association (Aromas Itinerarium Salutis) and has contributed to the proposal of the cultural route of historical pharmacies and medicinal gardens submitted in 2023.

The second intermediate objective was to clean, consolidate and restore circa 500 artifacts. About 200 were processed in 2021, 264 in 2022, and about 30 more conserved items, lacking inventory numbers, will be included in the collection subsequently and have thus not been included in the catalog. The exact number of processed items is difficult to calculate because some are elements of larger artifacts, shards, or they lack inventory numbers.

The third objective was to gain new knowledge by performing advanced investigations on selected cultural goods in the collection. The more than 50 complex analyses and investigations performed in Romania, Italy (a laboratory in Pisa) and Poland (Wrocław) have led to a wealth of information, so much in fact that the full interpretation has yet to be published, after the completion of the project. The results are briefly presented in the catalog, but at least 3 more in-depth research papers are still in various stages of preparation (one very close to submission).

The fourth objective was to transcribe, translate, and analyze all manuscripts in the collection. Considering the fact that more manuscripts have been inventoried and hundreds of pages added to the project in 2021, the team has decided to transcribe only the most important manuscripts, mainly those written by the privileged pharmacist of Cluj during the 18th century, a hand-written domestic medicine handbook and all prescriptions in Romanian. The other manuscripts have been processed and summarized for the catalog, such as the long lists of medicinal substances and drugs present in most of the manuscripts (inventories, *taxa pharmaceutica* etc.). All manuscripts are included in volume 5, but other paleographic work was

performed on hand-written components of other artifacts (invoices in sets, notations on labels and containers etc.), and thus features in other volumes.

The fifth objective was to deliver conference presentations and publish at least 3 articles in prestigious journals. This objective was surpassed by far. A total of 9 articles, including three project presentations, have been published in Erich Plus periodicals, 1 more has been submitted, and 2 are under redaction, one possibly transformed in the near future in a specialized e-book. The initial estimate was to deliver at least 6 conference presentations, while team members and project collaborators have delivered 9 oral and poster presentations.

The final objective was to promote the project and its results, and this has also been fully achieved. The website of the project, bilingual, has been periodically updated and is very rich. It includes all results, the 7 catalog volumes in open-access format and more than 120 blog posts describing the performed activities. The website has had more than 12500 visits in 2021-2023, more each year, and more to be expected after the launch of the online catalog. An excess of 150 posts have been created on social media platforms, generating consistent reactions, and the book launch event organized in November 2023 has enjoyed a considerable number of participants and some press coverage.

The true impact of the project will be visible in time, as the catalog will advance knowledge in the field, will become an example of collection publication and will spark new research and new international and interdisciplinary collaborations. Still, the intermediate impact is already considerable, foremost through the creation of an active and highly interested network of specialists. Team members have gained new skills, such as the definition of new terminology and methodology, but also the ability to work in mix teams of historians, art historians, numismatists, archaeologists, paleographers, conservators, restorers, and chemists. The History of Pharmacy Collection in Cluj-Napoca, now exhaustively published in English and available open access, will be widely available to specialists worldwide and will become a valuable source for future research.

The third and final year of the PHARMATRANS research project implemented through the National Museum of Transylvanian History has mainly focused on the completion and **publication of the exhaustive catalog** of the History of Pharmacy Collection in Cluj, the main objective of the research team. The thematic structuring of the volumes has led to six volumes that were very uneven in size (between 150 and over 800 pages), so the team has decided to restructure the material and obtained seven volumes that are more balanced in size. The photographs in the catalog have been taken by Alexandru Rădulescu and the authors. Ioana Cova has contributed to all volumes with assessments of the state of preservation of all artifacts. Magó Andrea Beatrix has contributed to volume 7 (and some instances in the other volumes) with brief data on the results of the investigations and analyses performed. The entire team was busy completing the volumes (text and photographs), correcting them several times, and discussing with the printing house the covers and the entire interior design.

The first volume of the catalog, dedicated to overviews and case studies, is edited by Ana-Maria Gruia. There has been a slight change in the structure of the volume, with a case study retracted (as more information became available and there was no time for Kovács Zsolt, PhD, to include it in the article) and another article transformed as to focus on the coin hoards recently discovered in the Hintz House (Csók Zsolt's study on the archaeological excavations performed inside the Hintz House became the introduction of Ágnes Găzdac-Alföldy's research into the money buried in the basement of the house towards the end of the 19th century). The final version thus has the following title and structure:

Ana-Maria Gruia ed., *PHARMATRANS. All Things Apothecary in 16th-20th-century Transylvania. The History of Pharmacy Collection in Cluj-Napoca*. Vol. 1. *Overviews and Case Studies*, Ed. Mega, Cluj-Napoca, 2023, 296 p., ISBN 978-606-020-625-5.

Contents

- Introduction
- Notes on contributors

Overviews

- Ana-Maria Gruia, "Project Presentation. PHARMATRANS. All Things Apothecary in 16th–20th-century Transylvania. The History of Pharmacy Collection in Cluj-Napoca"
- Ana-Maria Gruia, "The History of the Collection"

- Ana-Maria Gruia, "Overview of the Collection"
- Ioana Gruiță, "The Books in the Collection"
- Mária Pakucs, "The Manuscripts in the Collection"
- Ioana Cova, "Care of the Collection a Conservation Overview"
- Márta Guttmann, Andrea Beatrix Magó, "The Contribution of Scientific Analyses to a Better Understanding of the Collection"

Case studies

- Ana-Maria Gruia, "The Pharmacies of Cluj"
- Ágnes Găzdac-Alföldy, Zsolt Csók, "Crisis in the Time of Cholera. The Coin Hoard from the Hintz House"
- Robert Offner, "Tobias Mauksch, the Privileged Pharmacist of Cluj"
- Melinda Mitu, "Dr. György József Hintz (1840-1890), the First Pharmacist from Transylvania with Postgraduate Studies"
- Oana Habor, "Pharmaceutical Education in Cluj (1919-1934)"
 Appendices
- Place names index
- Pharmacy names index

The second volume contains the records of all wooden containers in the collection. It is authored by Ana-Maria Gruia, with conservation status data contributed by Ioana Cova. The volume includes only the wooden jars, as wooden boxes, spoons, pestles and other artifacts all feature in volume 7. The jars are structured into lots of between 2 and more than 70 items, followed by single artifacts. The volume concludes with four indexes, one of place names, the second of proper names (mostly donors), the third of pharmacies (with the original language name and the containers that were used in each), and the fourth of inventory numbers (listing the correspondence between catalog and inventory numbers).

Ana-Maria Gruia, *PHARMATRANS*. All Things Apothecary in 16th-20th-century Transylvania. The History of Pharmacy Collection in Cluj-Napoca. Vol. 2. Wooden Containers, Ed. Mega, Cluj-Napoca, 2023, 596 p., ISBN 978--606-020-656-9.

Contents

Introduction

- Catalog
- Place names index
- Proper names index
- Pharmacies index
- Inventory numbers index

The third volume combines containers made of pottery and metal, as they are fewer than those made of wood and glass. It is also authored by Ana-Maria Gruia, with conservation status data contributed by Ioana Cova. The jars are structured according to primary material and then into lots, followed by single artifacts. The indexes are identical to those in volume 2.

Ana-Maria Gruia, *PHARMATRANS*. All Things Apothecary in 16th-20th-century Transylvania. The History of Pharmacy Collection in Cluj-Napoca. Vol. 3. Pottery and Metal Containers, Ed. Mega, Cluj-Napoca, 2023, 424 p., ISBN 978-606-020-678-1.

Contents

- Introduction
- Catalog
- - pottery containers
- metal containers
- Place names index
- Proper names index
- Pharmacies index
- Inventory numbers index

The fourth volume is the largest, as it includes all containers made of glass, the material most often employed for the storage, display, and dispensing of medicines. It is also authored by Ana-Maria Gruia, with conservation status data contributed by Ioana Cova. The jars are structured according to lots, followed by single artifacts. The volume is completed by the same indexes as the previous two volumes.

Ana-Maria Gruia, *PHARMATRANS*. All Things Apothecary in 16th-20th-century Transylvania. The History of Pharmacy Collection in Cluj-Napoca. Vol. 4. Glass Containers, Ed. Mega, Cluj-Napoca, 2023, 706 p., ISBN 978-606-020-673-6.

Contents

- Introduction
- Catalog
- Place names index
- Proper names index
- Pharmacies index
- Inventory numbers index

The fifth volume is dedicated to the manuscripts in the collection, has been authored by Mária Pakucs, with contributions by Ana-Maria Gruia (most documents in Romanian) and Ioana Cova (the state of conservation of all artifacts). The catalog is structured according to the type of manuscripts (inventories, prescriptions, legal documents etc.). The volume includes consistent transcriptions of manuscripts, especially the oldest in the lot, but also a lot of prescriptions in Romanian.

Mária Pakucs, *PHARMATRANS. All Things Apothecary in 16th-20th-century Transylvania. The History of Pharmacy Collection in Cluj-Napoca.* Vol. 5. *Manuscripts*, Ed. Mega, Cluj-Napoca, 2023, 148 p., ISBN 978-606-020-667-5.

Contents

- Introduction
- Catalog
- Place names index
- Proper names index
- Inventory numbers index

The sixth volume focuses on the books in the collection, has been authored by Ioana Gruiță, with contributions by Ioana Cova regarding the state of conservation of all artifacts. As several of the books are bound together, the files present each publication, not each volume. The books are presented chronologically, except for the bound books, where the publication date of the first was taken into consideration. Two of the indexes are specific to the nature of the sub-lot, focusing on authors, donors and former owners, while the third is general, listing the correspondences between catalog and inventory numbers.

Ioana Gruiță, *PHARMATRANS. All Things Apothecary in 16th-20th-century Transylvania. The History of Pharmacy Collection in Cluj-Napoca.* Vol. 6. *Books*, Ed. Mega, Cluj-Napoca, 2023, 426 p., ISBN 978-606-020-661-3.

Contents

- Introduction
- Catalog
- Authors index
- Donors and former owners index
- Inventory numbers index

The final volume reunites all the artifacts in the collection that are neither jars nor books or manuscripts. It is structured typologically, into the following categories of pharmaceutical goods: sets, furniture, wooden boxes, *materia medica*, dentifrice boxes, Seidlitz cups, measuring tools, mineral water tests, mortars and pestles, crucibles, pans, spoons and ladles, various tools, laboratory glass, seals and stamps, art and decorations, ephemera, ampoules, memorabilia, financial and administrative documents, archaeological glass, medical instruments, off-topic, replicas and reproductions (some with sub-categories). For the same of brevity, the categories are not repeated below. The seventh volume is authored by Ana-Maria Gruia, with conservation status data contributed by Ioana Cova and abstracts of performed investigations by Andrea Beatrix Magó. The final volume of the catalog has an extra index, listing institutions and companies that used, donated or sold some of the items to the history museum in Cluj.

Ana-Maria Gruia, *PHARMATRANS*. *All Things Apothecary in 16th-20th-century Transylvania*. *The History of Pharmacy Collection in Cluj-Napoca*. Vol. 7. *Varia pharmaceutica*, Ed. Mega, Cluj-Napoca, 2023, 606 p., ISBN 978-606-020-681-1.

Contents

- Introduction
- Catalog
- Place names index
- Proper names index
- Pharmacies index
- Institutions and companies index

Inventory numbers index

The catalog has been published with the Mega Printing House, ranked A by the CNCSIS for history, in 300 copies. The catalog is an extensive research tool, in English, made accessible to a wide array of specialists and the wider international audience. All printed copies (sets) were offered to authors, members, collaborations and specialists that have become part of a growing network. 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 specialists and museums created through the project, while 150 more were distributed during the launch event. The digital variant of the catalog is available, in pdf format, on the dedicated website. The publication of the catalog has been promoted through posts on the website of the project and on social media platforms, as well as a book launch event organized on the 17th of November 2023. Though planned to take place at the Pharmacy Museum, the event was organized at the headquarters of the National Museum of Transylvanian History due to unforeseen delays in the reopening of the new display of the former. Nevertheless, it was a great success, with the participation of most authors and collaborators, the manager of the MNIT, the Mega Publishing House, local historians, pharmacists, students, the general public.

All catalog volumes are available open access on the website of the project in portable document format. The link has been widely promoted through visit cards distributed during the launch event and included in the packages with the printed version for further dissemination, as well as posts on social media platforms and press articles.

Another 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 articles** in prestigious periodicals (ISI/ErihPlus). Though the third year was dedicated to the completion of the catalog, the target of delivering two presentations during international academic events has been met. Project leader Ana-Maria Gruia has traveled to Valencia in May 2023, presenting at the conference entitled "The Hygeia Legacy. Pharmacy Museums and Collections in Europe. Heritage, Identity and Memory".

¹ <u>https://pharmatrans.mnit.ro/en/catalogue/</u>

 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.

On this occasion, the project leader has officially become a member of the Steering Committee of the International Association *Aromas Itinerarium Salutis*, working towards the submission of the European cultural route of pharmacies and medicinal gardens. At the conference in Valencia she has met curators of pharmacy museums from Florence, Lisbon, Rome, Pinyol, Llivia, Bern, Roccavaldina, Rijeka, and the Aboca Museum, thus enlarging the network created through the project.

Presenting the preliminary results of the chemical analyses of the samples of material medica, team members and collaborators from Pisa have prepared a poster presentation for the prestigious Technart conference:

• 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.

Two more poster presentations have been created through the project, presented in Suceava and still on display until the end of February 2024. The event entitled "Restrospective", 13th edition, Muzeul Național al Bucovinei and Asociația Conservatorilor și Restauratorilor din România, is held during the 27.11.2023-23.02.2024 period:

- Andrea Beatrix Magó, "Investigații pe obiecte din Colecția de Istorie a Farmaciei din Cluj-Napoca"
- Ioana Cova, "Materia medica în Colecția de Istoria Farmaciei a Muzeului Național de Istorie a Transilvaniei"

Three articles have been published in this volume of the Acta Musei Napocensis II Historica, besides the present project presentation, thus meeting the target of publications as well:

• 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"

- Ioana Gruiță, "Libro di me, Gio Batta Gussetti. The Tale of a Man Through the Story of a Book"
- Ioana Cova, "Handling Heritage Objects Moving the Entire Pharmaceutical Collection within the National Museum of Transylvanian History, Cluj-Napoca, Romania"
 The project leader has published as extensive activities report in the same periodical:
- Ana-Maria Gruia, "Project presentation: PHARMATRANS. All Things Apothecary in 16th-20th-century Transylvania. The History of Pharmacy Collection in Cluj-Napoca /2023"

An article developing the presentation at Technart, has just been submitted to a prestigious Elsiev journal:

• Federica Nardella, Jacopo La Nasa, Ilaria Degano, Francesca Modugno, Ana-Maria Gruia, Ioana Cova, Andrea Beatrix Magó, Márta Guttmann and Erika Ribechini, "Artistocratic drugs. A multi-analytical approach to disclose the composition of 18th century ointments from the "History of Pharmacy Collection" in Cluj" submitted to the Journal of Cultural Heritage (Elsevier, citation score 6.5, impact factor 3.1) 2023.

At least two more articles, integrating the interpretation and comparison of the results of the chemical analyses performed by our foreign collaborators from Italy (Department of Chemistry and Industrial Chemistry of the University in Pisa) and Poland (Department of Pharmacognosy and Herbal Medicines of the Wrocław Medical University), and detailed historical research, are being prepared, but will only be completed after the end of the PHARMATRANS project due to their complexity and high number of authors. One will be written together with the team from Poland, focusing on the results of their analyses of the *materia medica* samples, while the other article (possibly an open-access e-book) will detail the 18th-century medicine chest that contained most of the *materia medica*, analyzed in historical context.

The sixth objective was to **promote the project, its activities, and its results** through the book launch event (see above), the dedicated website, and a minimum of 50 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). The bilingual website of the project (www.pharmatrans.mnit.ro) was created in 2021 and has been updated with the latest results (articles, conference presentations, blog posts, as well as the structure, covers, and pdf volumes of the catalog). The blog is the richest section of the

website, with 32 posts in total (half in Romanian, half in English) in 2023. The posts are grouped according to the following categories: study visits, research, and conservation and restoration. In 2023 we have posted more than 50 times on social media platforms (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 website had more than 2300 unique visitors, with more expected after the promotion of the online catalog volumes. The book launch event has enjoyed some media coverage, a presentation by Doina Gecse-Borgovan for Radio România Cultural on November 16th 2023, following an interview with Ana-Maria Gruia, and a news video by TVR Cluj on November 17th (available at https://fb.watch/ottyHdzHMY/), with 2500 visualizations.

Two local museums have been visited and presented on the website in 2023, the Botanical Museum of the part of the "Alexandru Borza" Botanical Garden, under the administration of the Babeş-Bolyai University, and the newly opened Museum of the Medical School in Cluj, of the "Iuliu Haţieganu" University of Medicine and Pharmacy.

Similarly to the first two years of implementation, throughout the third year of the project the activities have been coordinated by project leader Ana-Maria Gruia and the audit was be performed by an external specialist. Team members and collaborators have frequently met in person, mainly those from Cluj-Napoca, but occasionally also with Maria Pakucs from Bucharest and Robert Offner from Regensburg. We have also maintained our regular meetings and communication online (emails, zoom meetings, by phone). Dr. Gruia has completed the scientific report and has been responsible for all management activities.

The successful implementation of the project shall likely have a significant **impact** on the advancement of knowledge in the relatively new and interdisciplinary field of pharmacy history in Romania, through the extensive publication of the second-largest such 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 of these analyses 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 catalog 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 in particular and of Central-Eastern Europe in general. The true impact of the project will be visible in time, as the catalog will advance knowledge in the field, will become an example of collection publication and will spark new research and new international and interdisciplinary collaborations. Still, the intermediate impact is already considerable, foremost through the creation of an active and highly interested network of specialists. Team members have gained new skills, such as the definition of new terminology and methodology, but also the ability to work in truly interdisciplinary teams.

Illustrations

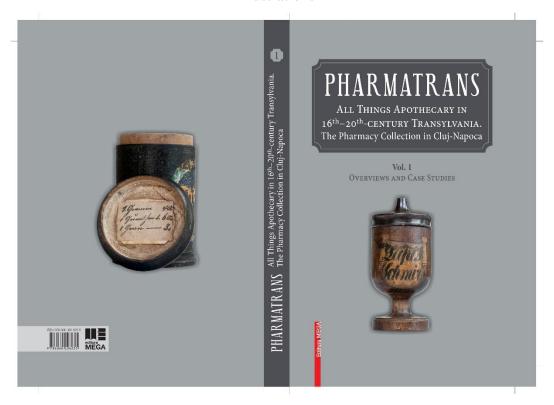


Fig. 1. Cover of the introductory volume of the catalog.

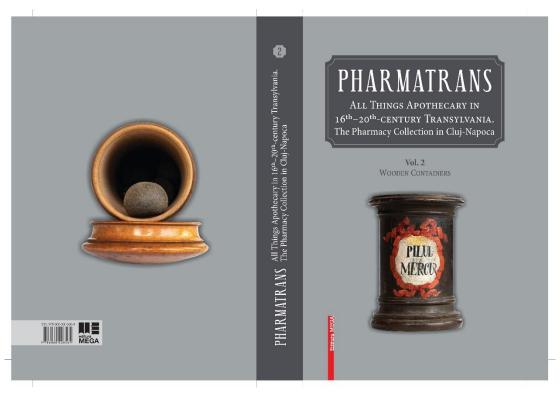


Fig. 2. Cover of the second volume of the catalog.

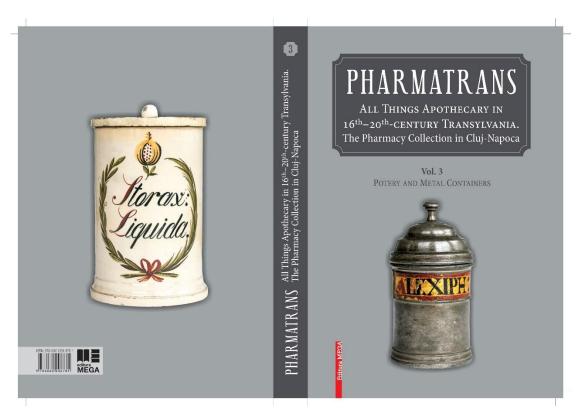


Fig. 3. Cover of the third volume of the catalog.

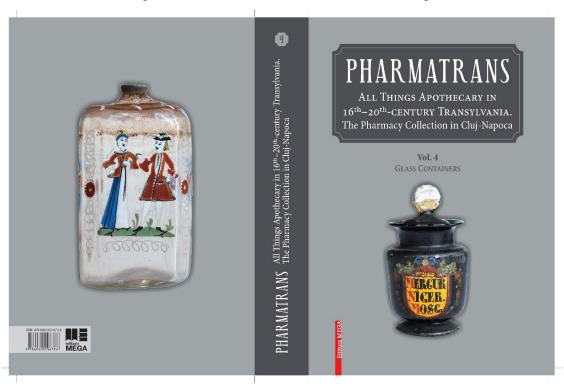


Fig. 4. Cover of the fourth volume of the catalog.

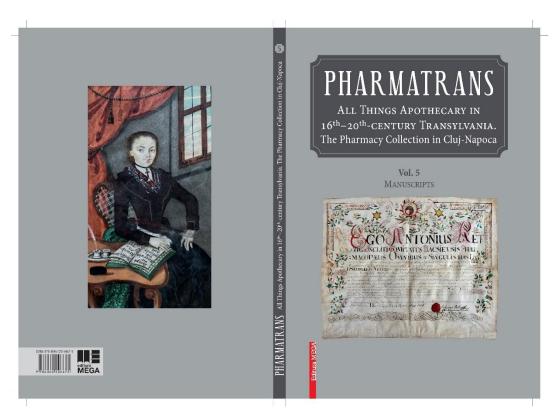


Fig. 5. Cover of the fifth volume of the catalog.



Fig. 6. Cover of the sixth volume of the catalog.

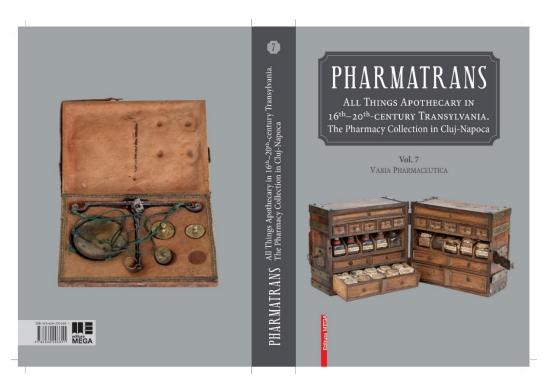
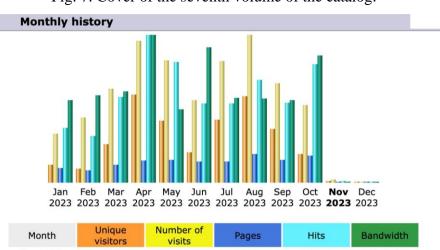


Fig. 7. Cover of the seventh volume of the catalog.



Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jan 2023	87	241	2,072	7,939	546.96 MB
Feb 2023	65	321	1,762	6,725	583.12 MB
Mar 2023	189	464	2,561	12,348	610.22 MB
Apr 2023	436	702	3,090	21,367	982.07 MB
May 2023	305	605	3,241	17,512	488.37 MB
Jun 2023	147	404	3,035	11,427	905.68 MB
Jul 2023	307	601	3,063	11,486	562.98 MB
Aug 2023	425	727	4,094	14,872	558.31 MB
Sep 2023	264	489	3,310	11,617	550.27 MB
Oct 2023	141	382	3,850	17,193	850.14 MB
Nov 2023	7	15	44	175	2.96 MB
Dec 2023	0	0	0	0	0
Total	2,373	4,951	30,122	132,661	6.49 GB

Fig. 8. Website visits (https://www.mnit.ro/pharmatrans/, data as of early November 2023).



Fig. 9. The launch of the catalog on November 17^{th} 2023.

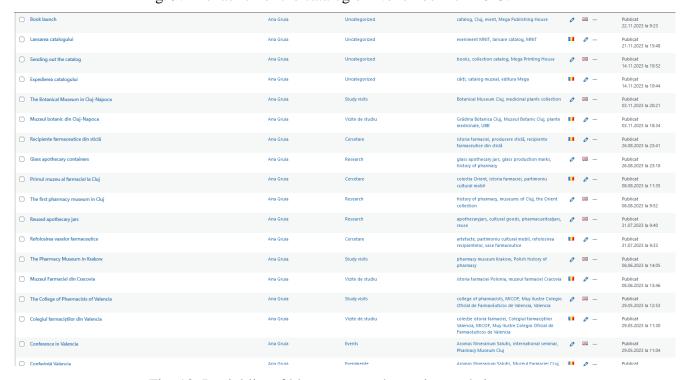


Fig. 10. Partial list of blog posts on the project website.