



## Early-career anatomical networks: Lviv professor of anatomy Henryk Kadyi as a Habsburg case study

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### ABSTRACT

**Background:** This article addresses the formation of academic networks among anatomists in the Austro-Hungarian Empire in the late 19th century during the earliest part of their careers, their student years, at the capital's university (University of Vienna), based on the example of the Galician anatomist Henryk Kadyi.

**Material and methods:** This comparative inquiry is based on archive material from the Lviv Regional State Archive, the Central State Historical Archives of Ukraine in Lviv (both Ukraine), the Archive of the University of Vienna, the Austrian State Archive (both Austria) and the Archives of the Jagiellonian University (Poland).

**Results:** Archival sources show the variety of contacts a medical student could form within the anatomical community (both with teachers and student colleagues), which constituted the foundation for connections that lasted for an academic lifetime. The study demonstrates which knowledge, techniques, and methods were circulated within these newly formed anatomical networks. Kadyi was not a unique case but rather just one example of a broader dynamic among Galician students who came to Vienna.

**Conclusion:** Research on early-career networks is a promising approach for studying academic networks, especially their starting point, as the example of Henryk Kadyi proves. The importance of long-lasting contacts formed during an early academic career and their continued impact over the following years and decades cannot be overstated.

### 1. Introduction

Academic medical networks are a key factor in the scientific community and have played such a role already in the past. To gain a better understanding of the dynamics shaping (past) academic networks it is necessary to examine their formation. This study proceeds on the hypothesis that such dynamics can best be analyzed in an early-career network, in its starting period.

Regarding historical anatomical networks in particular, only research on singular cases and little structural analysis of such networks and their formation are available for the late 19th century, despite its significance as a formative phase of modern medicine. In 2011, Axel Hüntelmann published a biography about Paul Ehrlich, inventor of chemotherapy, which also dealt with his networks (Hüntelmann, 2011). In 2017, Daniel Schäfer wrote an article on pediatric networks in the

Third Reich (Schäfer, 2017). And in 2021, an anthology dedicated to Johann Franc was published, which also provided insights on his networks in Ulm (Winkelmann et al., 2021). Furthermore, in 2018, a theoretical approach to network analysis in the history of both science and medicine was provided by Heiner Fangerau and Klaus Hentschel. Therein they outline the strengths and weaknesses of network analysis, noting that reconstruction of networks can explain scientific transfer and “relations of recognition” (“Anerkennungsverhältnisse”). They highlight the continued necessity of future studies to focus on regional, European and international networks (Fangerau and Hentschel, 2018); while there are older (Warner, 1998), as well as recent (Moll et al., 2025) contributions available, some specifically focused on Vienna's role in international scientific networks and exchange (e.g., regarding the appeal the Viennese medical faculty held for US students and practitioners during the late 19th century, gradually replacing Paris: Moll et al., 2025 or

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Halling et al., 2025), there is still plenty of space for additional research.

For the Habsburg Empire in particular, a lack of research regarding medical networks is evident, as highlighted by Nemeč et al. in 2018: “Topics, which in this anthology could only be dealt with primordially and should get more attention in the future, are regional, European and international networks.”<sup>1</sup>; (Nemeč et al., 2018) Generally, the works of Jan Surman must be considered fundamental with regard to the Habsburg academic sphere (Sumillera and Surman, 2020; Surman, 2019). Still, studies focusing on Habsburg medical networks, especially for individual sub-disciplines of medicine like anatomy, are scarce.

This study aims to understand what affected the establishment of Habsburg anatomical networks for an early-stage scholar in the late 19th century. We hypothesize that early-career networks are decisive for the trajectory of a career. As a case study, our research examines the early medical education of Henryk Kadyi (1851–1912) – a Galicia-born anatomist, who later became rector of Lviv University, dean of its Medical Faculty, and head of its Anatomical Department.

Choosing a Galician case creates further research opportunities: Research on academics from non-German speaking parts of the Habsburg Empire has had to rely largely on secondary (German), often biased sources. Examples like Theodor Billroth’s antisemitic rhetoric, aimed at Jewish students from the eastern parts of the Empire (Seebacher, 2024), or Christian August Voigt’s commentary on the Polonisation<sup>2</sup> of the University of Kraków and the Magyarization of the University of Pest<sup>3</sup> come to mind. The dependence on indirect sources holds particularly true for scholars who did not continue their careers at German speaking universities but, like Kadyi, in other, non-German Habsburg territories. Consequently, many have been only scarcely, if at all, recognized, even in non-English scientific contributions.<sup>4</sup> Similarly successful academics, more renowned in the German speaking sphere, have received substantially more attention, with autobiographical evidence often more easily available as source material.<sup>5</sup>

Thus, the analysis of Kadyi presents an opportunity to gain novel insights into the history of science, especially anatomy, of Central and Eastern Europe of the fin de siècle. He was part of a general development, not limited to medicine, that led many students from other (non-German-speaking) parts of the Empire to Vienna, (Surman, 2012) giving his case greater analytic significance. By examining his case, we gain a broader insight into how anatomical networks formed, and what knowledge circulated in them.

At the same time, the case of Kadyi shows that this lack of scientific consideration is not indicative of non-Austro-German individuals’ academic activity or relevance: Over the course of his career, Kadyi authored forty scientific contributions, particularly on the anatomy of the cardiovascular system and endocrine glands, the perfusion of the spinal cord, and comparative anatomy. Furthermore, he worked intensely on the preparation of anatomical specimens, introducing new techniques and chemicals (e.g., he introduced the use of formaldehyde at Lviv’s

anatomical institute) (Kadyi, 1901a).

While making research trips to Prague and Leipzig, he was mostly trained and active at the universities of Kraków, Vienna, and Lviv, completing most of his medical education, including extensive anatomical training, in Vienna between 1870 and 1875. It was also in Vienna, where he worked closely with medical professors for the first time, in particular with the anatomist Carl Langer, as a demonstrator at the Institute of Anatomy. Considering that this position provided Kadyi his first insights into activities he would later pursue professionally, i.e., medical teaching, preparatory work and scientific research, we regard his experiences at the Viennese Institute of Anatomy formative.

Since every student has individual recollections of their student time, as well as personal preferences, it is natural that different subjects or teachers are remembered most fondly or as most impactful. Yet, there are other noteworthy examples of former students of Viennese anatomy professors who identify them as particularly formative influences. For example, Tatjana Buklijas names such examples regarding Joseph Hyrtl’s effect on his students, both during his time in Prague and in Vienna (Buklijas, 2005). Another case that illustrates the lasting impact of Viennese anatomists, or the time at the Viennese Institute of Anatomy, on young medical students – especially those that like Kadyi were employed with the institute – is that of Nobel laureate Konrad Lorenz who mentions Ferdinand Hochstetter as one of the most influential academics for his own career (Lorenz, 1974). It becomes evident that the anatomical education in Vienna often left a lasting impression on students, Kadyi being no exception.

Thus, anatomy can be considered highly impactful, both from an educational and from a networking point of view. It was selected as the focus of our study, not only because Kadyi as the case study’s subject pursued anatomy himself but, even more so, because professionals active in other areas of medicine and science have provided similar descriptions of how anatomy shaped their student experience in Vienna.

Regarding Henryk Kadyi in particular, only limited English-language literature is available on him: There is a brief biography of Kadyi in relation to the establishment of the anatomical collection in the Anatomical Department of Lviv University,<sup>6</sup> which he oversaw (Zimenkovsky et al., 2020). Wincewicz and Turek-Pietrzykowska give a more detailed account of his academic career, emphasizing his research’s focus (e.g., descriptive anatomy of the vascular system of the central nervous system) and also his non-academic merits (e.g., his commitment to women’s right to study medicine<sup>7</sup>) (Wincewicz and Turek-Pietrzykowska, 2017).

In Polish, he had already been the subject of a publication immediately after his death in 1912 (Kostanecki, 1912). Biographical information given in this obituary and elsewhere has largely already been made accessible to an English-speaking audience, e.g., via fore-mentioned recent contributions. Yet, more in depth research, either focusing on Kadyi’s impact on anatomy or analyzing him as a case study, has not been done yet.

Our research questions results are separated into three thematic sections:

- 1) What kind of medical training did Kadyi receive in Vienna and under which circumstances? Which anatomical content and practices did he encounter that could circulate as knowledge in his early-career network? (3.1)

<sup>1</sup> Note: In the original German editorial the quote reads: “Themen, die im Rahmen des Bandes nur in ersten Ansätzen behandelt werden konnten, jedoch in Zukunft eine eingehendere Betrachtung verdienen, sind unter anderem Fragen nach Netzwerken im regionalen, europäischen sowie internationalen Raum.” (Strukturen und Netzwerke), 22.

<sup>2</sup> In this context, referring to the introduction of Polish as primary teaching language; Magyarization, indicating the same for the Hungarian language.

<sup>3</sup> AT-UAW/ Akten d. med. Fak, ex 1861/62, Nr. 90, zit. nach (Habacher, 1967), 22.

<sup>4</sup> Kadyi himself, as is shown further down, has barely received any attention both in English and even in Polish or Ukrainian.

<sup>5</sup> See e.g., the autobiographical text by Konrad Lorenz, given for his Nobel Prize (Lorenz, 1974) who also speaks on his experiences as a medical student. Or, Arthur Schnitzler’s diary, in which he also gives insight into his experiences as a medical student, noting finishing his studies at May, 30, 1885 after having had one of his last exams under Billroth (entry from June, 5, 1885) Schnitzler (n.d.).

<sup>6</sup> Before the re-establishment of Lviv’s Medical Faculty, the local Jesuit College already held an anatomical collection.

<sup>7</sup> “Namely, Henryk Kadyi and Professor of Neurophysiology, Adolf Abraham Beck (1863–1942), made an successful, official appeal to the ministry in Vienna to authorize admission of women to medical studies and their subsequent employment in scientific departments of the Faculty of Medicine, in 1895.” (Wincewicz and Turek-Pietrzykowska, 2017).

- 2) How did an early-career anatomical network form in the late 19th century based on the example of Henryk Kadyi? Where did he make contact with professionals and peers? Who was part of his network? To what degree did his early network remain relevant in the long term? (3.2)
- 3) How representative was Kadyi as an example of a Galician medical student in Vienna at his time? (3.3)

## 2. Material and methods

The basis of this inquiry is robust archive research in the Lviv Regional State Archive<sup>8</sup> (DALO), the Central State Historical Archives of Ukraine in Lviv<sup>9</sup> (TsDIAL), the Archive of the University of Vienna<sup>10</sup> (AT-UAW), the Austrian State Archive<sup>11</sup> (AT-OeStA) in Vienna,<sup>12</sup> and the Archives of the Jagiellonian University (AUJ) in Kraków.<sup>13</sup> The results of this archival research were subjected to comparative analysis. When analyzed together, the various sources (“*Nationalen*”, correspondence, university index entries, school and university reports, etc.) complement one another.

There were some limitations to this research: The nature of this source material is largely normative. It offers very limited information about the quality of relations during his student time. The sources lack information on Kadyi’s extracurricular activities or his personal life as a student. Finally, details regarding contents and practical skills taught to Kadyi were scarce – mostly, only the names of courses are available.

## 3. Results

### 3.1. Henryk Kadyi’s medical education (1869–1875)

Henryk Kadyi was born in Przemysl in 1851 in the Austrian-ruled Kingdom of Galicia and Lodomeria with its capital of Lviv. He enrolled at the Jagiellonian University of Kraków in 1869, where he began his medical education (Wincewicz and Turek-Pietrzykowska, 2017). After just one year, Kadyi transferred to the Medical Faculty of the University of Vienna in the winter semester of 1870/71<sup>14</sup> where he basically repeated the contents of his previous university year before continuing his medical studies. The focus on his time in Vienna stems from Kadyi receiving his extensive anatomical training in Vienna. Given his career choice of becoming an anatomist himself, we hypothesize that both his anatomical education and his anatomical teachers in Vienna had a formative effect on him. It is worth noting that Kadyi might have already had contact with his future supervisor, anatomy professor Karol

Ludwik Teichmann, during his year in Kraków,<sup>15</sup> potentially influencing his later decision to continue his scientific career there after completing his studies in Vienna.

Kadyi’s relocation to Vienna was made possible by the study plan of 1848/49, with which the Imperial Austrian Ministry of Culture and Education allowed students from other Habsburg universities to transfer to the University of Vienna. In order to enroll, students needed a record of studies, which listed the subjects attended at the previous university and contained remarks on their behavior.<sup>16</sup>

In Vienna, Kadyi was trained by internationally renowned professors. He attended lectures by physiologist Ernst Brücke (1819–1892), pathologist Carl Rokitsansky (1804–1878), surgeon Ferdinand Dumreicher (1815–1880), dermatologist Carl Ferdinand Hebra (1816–1880), and surgeon Theodor Billroth (1829–1894). Arguably the most influential for Kadyi’s personal development were the lectures by anatomists: Joseph Hyrtl (1810–1894), Hyrtl’s assistant Anton Friedlowsky (1836–1909), Carl Langer (1819–1887), Carl Langer’s assistant and successor Carl Toldt (1840–1920), and Christian August Voigt (1808–1890).

With a view to anatomy, in his first semester of 1870/71 Kadyi learned from Hyrtl about topographic anatomy and attended the dissection course, where students were taught on human bones and preparations of human joints (Hyrtl, 1860). Furthermore, in this semester Kadyi attended lectures by Hyrtl together with Friedlowsky on descriptive anatomy, osteology, and splanchnology, with Friedlowsky teaching on muscles.<sup>17</sup> In the summer semester of 1871, the two of them again were his teachers together in a lecture on the anatomy of the brain, the nervous system, the sensory organs, and the anatomy of the vascular system. Additionally, he studied topographic anatomy under Hyrtl. In his third and fourth Viennese semester (winter 1871/72, summer 1872), he did not attend any lectures at the Institute of Anatomy.

In the winter semester of 1872/73, he trained his anatomical skills in a dissection course held by Langer (*Demonstrationen und Übungen im Secirsaale*) where he got to dissect entire human bodies for the first time. A new legal provision by the Ministry of Culture and Education allowed for an extension of dissection courses into the early weeks of the following summer semester if persistent cool weather allowed for it (a lack of artificial cooling prevented holding dissection courses during the summer heat).<sup>18</sup> Here, Langer took note of Kadyi’s skills as a dissector, leading to his employment as a demonstrator under Langer starting with the winter semester of 1873/74.<sup>19</sup>

In the summer semester of 1873, he attended two lectures by Voigt – one on human embryology (*Entwicklungsgeschichte der Menschen*); and the other on human genitals (*Über die Geschlechtsorgane des Menschen*), both optional lectures that show Kadyi’s growing interest in anatomy. In the same semester, Kadyi attended Toldt’s histological exercises. While this concluded his training by macroscopic anatomists at the University of Vienna, he was active as a student demonstrator at Langer’s Institute

<sup>8</sup> DALO, Fund 26, description 14, file 2319.

<sup>9</sup> TsDIAL, Fund 146, description 66, file 1230–1231.

<sup>10</sup> AT-UAW/ Med GZ 461 ex 1872/73, fol. 2, recto et verso; AT-UAW/ Med GZ 638 ex 1873/74, fol. 1, recto et verso; AT-UAW/ Med GZ 692 ex 1873/74, fol. 1, recto and AT-UAW/ Akten d. med. Fak, ex 1861/62, Nr. 90, zit. nach (Habacher, 1967), 22.

<sup>11</sup> AT-OeStA/AVA, Unterricht Allgemein (1848–1940), 4 G Med, Karton 845, Fasc. 808, Z. 18266–18988 (November 14th, 1878).

<sup>12</sup> Note: The exchange of archival sources was made possible through the WTZ grant No. UA 01/2023.

<sup>13</sup> Especially AUJ Syn. WL II 141.

<sup>14</sup> Kadyi’s individual motivations to transfer to the University of Vienna are unfortunately not clear based on the source material available to us. Yet, as we will show, Vienna was attractive for numerous students from various parts of the empire for a variety of reasons, some of all of which might have affected Kadyi’s decision to continue his education in Vienna instead of Kraków.

<sup>15</sup> Based on the information given by the Collegium Medicum of the Jagiellonian University on the History of the Medical Faculties of Poland, Teichmann was active as professor for descriptive anatomy in Kraków from 1868 onwards, after having already held other positions at the Jagiellonian University before, thus in time for Kadyi to have potentially received anatomical training from Teichmann as a first-year student. This information is available online in Polish: <https://kfm.cm-uj.krakow.pl/historia-wydzialow-lekarskich-w-polsce/> (last accessed: May 13th, 2025)

<sup>16</sup> (Ministerial-Erlass vom 10. März 1850 Z. 1585, Reichsgesetzblatt, Jahrgang 1850, Z. 117), 700.

<sup>17</sup> For more details concerning the lectures: see Moriz Haider script at the Josephinum, cited in (Buklijas, 2005).

<sup>18</sup> *Verordnungsblatt Für Den Dienstbereich Des Ministeriums Für Cultus Und Unterricht*. (1872), 250.

<sup>19</sup> AT-UAW/ Med GZ 461 ex 1872/73, fol. 2, recto et verso; AT-UAW/ Med GZ 638 ex 1873/74, fol. 1, recto et verso and AT-UAW/ Med GZ 692 ex 1873/74, fol. 1, recto.

of Anatomy until 1875.<sup>20</sup>

With respect to the environment in which Kadyi received his anatomical training, the lectures and dissection courses held by Hyrtl, Friedlowsky, Langer, Toltd, and Voigt took place in a former rifle factory (*k.k. Gewehrfabrik*), a building not equipped for anatomical education purposes (Buklijas, 2018; Buklijas, 2008; Buklijas, 2005),<sup>21</sup> and the Josephinum – originally a military academy where military doctors and surgeons had been trained (Lohff, 2019; Lohff, 2018). Both facilities were in close vicinity to each other.

The only source on the actual conditions of anatomical teaching that Kadyi and his fellow students likely experienced is a report from 1860 by Hyrtl: In the dissection course for beginners a group of four students had to dissect four upper and four lower extremities, two exenterated trunks for preparations on muscles and ligaments and two bodies of children for learning splanchnology (Hyrtl, 1860). In the dissection course for advanced semesters, up to four or five human bodies were shared amongst (ideally) four students. Students dissected upper and lower extremities again, heads, and two injected bodies of children (Hyrtl, 1860). Students were also introduced to microscopical preparations, for which microscopes were available in the dissection hall (Hyrtl, 1860). Kadyi certainly benefited from this extensive practice, refining his skills in working with various instruments relevant to his future professional tasks as an anatomist.

His practical education did not stop there, nor did his chance to meet people who shared his interest in anatomy. As demonstrator under Langer, Kadyi had ample opportunity to train his practical dissection skills. Kadyi stated this himself in an application letter he wrote to the Medical Faculty in Kraków in 1876.<sup>22</sup> He was originally requested as a demonstrator by Langer in 1873, which shows that Langer personally knew him, and his contract was renewed for the winter semester of 1874/5 proving Kadyi's aptitude and its appreciation by Langer. This position came with a salary of a total of 300 fl. (gilders) and the benefits of working at an internationally renowned academic institution.<sup>23</sup>

### 3.2. *Becoming a part of academia – building future networks*

These benefits included the contacts provided there. Kadyi regularly collaborated with student peers and professors. Kadyi was able to take a first glimpse behind the scenes of teaching anatomy: Firstly, he probably assisted Langer in creating anatomical specimens for the lectures. Secondly, he was among those responsible for the teaching and testing of younger students during the dissection courses. Kadyi had several immediate colleagues, whom he certainly had a lot of contact with because they, together with the assistants, had to supervise the students and prepare specimens as demonstrators: Moritz Holl, later professor of surgery in Innsbruck and Graz (“Holl, Moritz (1852–1920), *Anatom*,” 1959), Hans Chiari, later professor of pathology in Prague and Strassbourg (Tubbs and Cohen-Gadol, 2010), Josef Pollak, later professor of otology in Vienna (Mentzel, 2023), Anton Spedl, Max Weiß, and Leopold Riegler.<sup>24</sup> The last three did not yield any further research results.

Two of Kadyi's colleagues during his professorship in Lviv, who already studied together with him in Vienna, demonstrate that he was not the only successful Galician graduate from Vienna: Antoni Barański

(1850–1951), who graduated in medicine from the University of Vienna in 1874, later became Lviv's professor of animal physiology and products, obstetrics, forensic veterinary science, history and literature of veterinary science, and Emanuel Machek (1852–1915), who graduated in Vienna in 1877 (Skowrońska, 1972), professor of ophthalmology in Lviv.<sup>25</sup> It is probable that during his later time in Lviv, Kadyi had regular contact with both of them, even before the Medical Faculty was re-established in 1895. Yet, it remains unclear whether he had already engaged with both or either of them during their shared student time, even considering the limited number of Galician medical students in Vienna (Habacher, 1967).

Finally, Kadyi continued to stay in contact with the Institute of Anatomy in Vienna long after his student time there. This is showcased by at least two articles written and sent by him that were found at the Institute of Anatomy in Vienna during our research: “*Das Formaldehyd in anatomischen Institute der Lemberger Universität*” (Formaldehyde at the Anatomical Institute of the University of Lviv) (Kadyi, 1901a) and “*Ueber die Färbung der nervösen Centralorgane nach Beizung mit Salzen schwerer Metalle*” (On the Coloration of the Nervous Central Organs after Staining with Salts of Heavy Metals) (Kadyi, 1901b) which both were discovered in a collection of articles and manuscripts established by Ferdinand Hochstetter (1861–1954) bearing the note “*Ueberreicht vom Verfasser*” (handed over by the author). These remarks serve as evidence of continued contact between Kadyi and the anatomists at his alma mater. Furthermore, in 1879 Kadyi returned to Vienna for a research stay, “at the department of Professor Carl Friedrich Wilhelm Claus (1835–1899), eminent zoologist and professor of comparative anatomy.” (Winiewicz and Turek-Pietrzykowska, 2017).

### 3.3. *A typical example? Galician medical students in Vienna*

Between 1870 and 1875, Kadyi's student time in Vienna, the number of students from Galicia fluctuated, yet remained at a level around a median value of 9 % of all students enrolling at the medical faculty each year in the winter semester. These 9 % were a significant increase compared to the early 1860s (1861/2: 4,5 %) and a high point compared to the later 1870s (1878/9: 6,57 %). Kadyi himself arrived in Vienna as part of a somewhat stronger influx of Galician medical students that lasted roughly from 1867 until 1873. In absolute numbers, in the first semester that Kadyi spent in Vienna in 1870/71, the medical faculty of Vienna saw a total of 315 newly enrolled students, 26 of them from Galicia (8,25 %), Kadyi being one of them.<sup>26</sup>

Not only students with a Galician background were present in Vienna. Also, Christian August Voigt had a special connection to Galicia: After holding positions in the Galician cities of Lviv and Kraków he had returned to his alma mater in Vienna as professor in 1861 due to language issues.<sup>27</sup> His personal knowledge of the tense situation in Galicia led to a prediction in 1861/2 concerning the influx of Galician students which turned out to be correct: “The number of students at the Viennese University [...] will grow besides the erection of Medical Faculties in Graz and Innsbruck because Hungarian parents, who want their sons to receive a thorough medical education, will send their sons to the Universities of Vienna or Graz because of the Magyarization of the University of Pest. It is for the same reason that in Vienna the number of Galician medical students (because the University of Kraków becomes Polish) will grow instead of decrease. The same holds true for Silesians and Moravians, who, after the “Polonisation” [Kraków's university, in fact, was only “German” for a rather limited time, thus “re-polonisation”

<sup>20</sup> AT-UAW/ Matriken der Universität Wien, M17 (Winter Semester 1871/72), 310.

<sup>21</sup> This rifle factory was situated in the same spot where the current building of the Viennese Department of Anatomy is located.

<sup>22</sup> See AUJ (Archives of the Jagiellonian University) Syn. WL II 141.

<sup>23</sup> See AT-UAW/ Med GZ 461 ex 1872/73, fol. 2, recto et verso, AT-UAW/ Med GZ 638 ex 1873/74, fol. 1, recto et verso and AT-UAW/ Med GZ 692 ex 1873/74, fol. 1, recto.

<sup>24</sup> See AT-UAW/ Med GZ 461 ex 1872/73, fol. 2, recto et verso, AT-UAW/ Med GZ 638 ex 1873/74, fol. 1, recto et verso and AT-UAW/ Med GZ 692 ex 1873/74, fol. 1, recto.

<sup>25</sup> Save from oblivion: from the history of the higher veterinary school in Lviv. Primary materials. “Sprint-Service” LLC, Kyiv. 204 pages, 54, 66 and Kronika Uniwersytetu Lwowskiego. 1894/95–1897/98, 173.

<sup>26</sup> See Table 1.

<sup>27</sup> Note: Since February 4th 1861, at least at the Medical Faculty in Kraków, lectures were to be held in Polish. (Surman, 2012), 143, 449.

**Table 1**

Percentage of Galician students compared to the total number of newly inscribed students in the Winter semesters at the Medical Faculty in Vienna between 1861/62 and 1878/79. The numbers were taken from the matrices of the University of Vienna and are digitally available online: Österreichische Akademie der Wissenschaften, Institut für Mittelalterforschung (Hg.), *manuscripta.at*. *Mittelalterliche Handschriften in Österreich*; online: <https://manuscripta.at/lib.php?libcode=AT8965> (last accessed: 02.01.2025). We used the student numbers only for the winter semesters because most students enrolled in medical studies in the winter semesters (also, Kadyi's first semester started in October).

Winter semester	Newly inscribed students	Newly inscribed Galician students	Percentage of Galician students in comparison to the total number of newly inscribed students (%)
1861/62	200	9	4,5
1862/63	223	11	4,93
1863/64	258	23	8,92
1864/65	260	18	6,92
1865/66	287	22	7,67
1866/67	357	27	7,56
1867/68	432	57	13,19
1868/69	397	40	10,08
1869/70	395	39	9,87
1870/71	315	26	8,25
1871/72	326	29	8,89
1872/73	243	24	9,88
1873/74	176	11	6,25
1874/75	191	24	12,57
1875/76	176	14	7,95
1876/77	176	8	4,55
1877/78	176	7	3,89
1878/79	198	13	6,57

might be conceptually more precise; authors' note] of Kraków University, will come to Vienna."<sup>28</sup>

All this shows that Kadyi was not a singular case: He was part of language-driven intra-Habsburg student mobility. Experiences like his shaped numerous students from Galicia (and elsewhere). Yet, given Vienna's special standing among all Habsburg universities, other motives (e.g., academic excellence) were likely at play as well for students who decided to study there.

#### 4. Discussion

Kadyi's early career was foundational for the networks he later was part of. Following Surman's criticism of a disproportionate focus on full professors ("ordinarii") in university history of the 19th century, it is important to note that individuals from Kadyi's own generation (i.e., students) and from the generation of his university teachers (professors and assistants) were involved in forming these connections (Surman, 2018). The premise of this analysis followed Surman by focusing on the non- or pre-professorial members of academia.

The sources granted insight into the specific contexts in which Kadyi's Viennese contacts formed. Beyond any reasonable doubt, Kadyi had frequent contact with his peers through his work as a demonstrator. This refers to Moritz Holl, who became professor of surgery in Innsbruck

<sup>28</sup> AT-UAW/ Akten d. med. Fak, ex 1861/62, Nr. 90, zit. nach (Habacher, 1967), 22. German original quote: „Die Anzahl der Schüler wird an der Wiener Universität trotz der Einrichtung einer medizinischen Fakultät in Gratz und Inspruck [sic!] keine geringere werden, sondern höchst wahrscheinlich noch wachsen, denn diejenige Aeltern in Ungarn, welche werden haben wollen, daß ihre Söhne eine gründliche Bildung in der Medizin erlangen, werden durch die Magyarisierung der Pesther Universität genöthiget sein, ihre Söhne nach Wien oder Gratz zu schicken. Aus demselben Grunde die Anzahl an Galizianer (da die Krakauer Universität polnisch wird), welche in Wien ihre medizinische Ausbildung suchen, gewiß statt abzunehmen steigen wird. Ebenso sind die Schlesier und Mährer, welche derzeit in Krakau studieren konnten, durch die Polonisierung der Krakauer Universität nach Wien gewiesen.“

and Graz ("Holl, Moritz (1852–1920), *Anatom*," 1959); to Hans Chiari, later professor of pathology in Prague and Strassbourg (Tubbs and Cohen-Gadol, 2010); and to Josef Pollak, later professor of otology in Vienna (Mentzel, 2023). The same applies to those demonstrators who apparently did not follow a scientific career path: Anton Spedl, Max Weiß, and Leopold Riegler. The examples of Holl, Chiari, Pollak and Kadyi who went on to become professors strongly imply that, next to personal achievements, such a position as a student was beneficial for climbing the career ladder. Also, it aided in creating a network of professional contacts that could help in the future.

Concerning his anatomical teachers, Kadyi as a demonstrator most frequently and intensely had contact with Carl Langer who was his immediate supervisor and hand-picked him. The importance of their relation is emphasized by Kadyi himself in a letter he sent to the Medical Faculty in Kraków on the 7th of January of 1876 applying for a position. He states that working under Langer allowed him to gain profound anatomical knowledge. The general picture that Kadyi paints strongly suggests that Langer was crucial for shaping Kadyi as an anatomist and researcher.<sup>29</sup>

Kadyi used work under Langer's supervision as a reference to obtain a position at the Jagiellonian University. It is reasonable to regard his Viennese training and his relationship with Langer immediate prerequisites for his later academic achievements. Without his student time in Vienna, it is questionable whether he would have become professor, dean or rector as it was quite typical for professors at more peripheral Habsburg universities like Lviv to be appointed after having received training in Vienna (Surman, 2018).

The same holds true for his scientific findings which were naturally dependent on the resources and contacts that these positions made available to him: He published forty scientific contributions over the course of his academic career, both in human (e.g., "Über die Blutgefäße des menschlichen Rückenmarkes") ("On the Blood Vessels of the Human Spinal Cord") (Kadyi, 1889), and comparative anatomy (e.g., "O oku kreta pospolitego. (Talpa europaea) pod względem porównawczo-anatomicznym" ("About the eye of the mole.

(*Talpa europaea*) in comparative and anatomical terms") (Kadyi, 1878). Generally, he often put a focus on anatomy of the vascular system. He was involved in the development of new preparatory techniques – guided by Teichmann and, at least in part, thanks to the outstanding preparatory knowledge from Vienna – again especially for the vascular system (e.g., "Ueber die Färbung der nervösen Centralorgane nach Beizung mit Salzen schwerer Metalle" ("On Dyeing of the Central Nervous Organs after Staining with Salts of Heavy Metals")) (Kadyi, 1901b).<sup>30</sup>

Alongside this work – and thanks to the career launched by his Viennese education –, he was also involved in the process of the re-establishment of a Medical Faculty and an Anatomical Department at Lviv's University in the 1890s.<sup>31</sup> Kadyi was evidently highly interested in the structural organization and architectural design of anatomical buildings: He inspected modern facilities during the course of his travels through the Habsburg Empire (e.g., Prague) and beyond (e.g., Leipzig) (Winiewicz and Turek-Pietrzykowska, 2017). The fact that at the time of Kadyi's visit to Prague, his former Viennese anatomy teacher, Carl Toldt, was the head of its Anatomical Department and responsible for its final design (Toldt, 1922), can be considered as proof of the importance of student years for long-lasting contacts within academia.

As regards his other Viennese anatomy teachers, Christian August Voigt, Joseph Hyrtl and Anton Friedlowsky, it could only be shown that he met them regularly during lectures. Surman's description of the quality of relations between medical students and their professors as a

<sup>29</sup> See AUJ (Archives of the Jagiellonian University) Syn. WL II 141.

<sup>30</sup> Another article ("Henryk Kadyi's preparatory techniques – exploring anatomical traditions of Vienna, Krakow and Lviv.") is forthcoming.

<sup>31</sup> On this topic, another article is currently being worked on by the authors of this text.

“bond of community and respect for the teacher” (Surman, 2012) likely also applies in this case.

Still, it has to be borne in mind that being handpicked by a renowned professor did not necessarily guarantee a long-lasting or successful scientific career. This is illustrated by the case of Samuel Leopold Schenk who as a student, similarly to Kadyi, coming to Vienna from a different part of the empire, “was soon noticed by the highly respected professor of physiology Ernst Brücke, who offered him an assistantship” (Buklijas, 2020). While the details of Schenk’s misfortune are a topic of their own (Buklijas, 2020), it is worth noting that even after a promising start, failure to follow the established rules of academia could easily harm and in Schenk’s case completely end, an otherwise promising career.

While beneficial as a starting point, early connections did not suffice on their own to secure permanent success. This generally holds true also in a less dramatic way: Simply due to the limited number of professorships, not every gifted student could hope to advance to the highest levels of the academic hierarchy. This makes Kadyi a somewhat unusually successful but at the same time representative example of how early-career connections could act as a foundation for lifelong success.

Regarding his remaining potential contacts in Vienna, with his fellow Galician students who later became his colleagues as professors in Lviv, Antoni Barański and Emanuel Machek, all hints are most indirect. All of them studied medicine in Vienna at roughly the same time. While they must have known each other during their later careers in Lviv, there is no definitive proof for any acquaintances in Vienna. Still, the limited number of (Galician) medical students makes this a not so unlikely possibility.

There are no sources available that deal with Kadyi’s extracurricular activities in Vienna. Generally speaking, “Vienna University served as a strong magnet for nationalist student organizations from the late 1860s, with German, Polish [among which Galicians like Kadyi counted; authors’ note], Czech or Slovenian groups.” (Surman, 2012) Thus, there definitely existed ample opportunity for Kadyi to take part in organizations of this kind. The same obviously applies to Barański and Machek providing them with a space for connecting. Yet, the slim source basis does not allow for any concrete statements regarding Kadyi’s contacts with other (Galician) students in Vienna aside from those who he worked together with as demonstrators as there are no correspondences or memoirs available that might give us some more detailed insight.<sup>32</sup>

Kadyi’s anatomical training was state of the art. It covered topographic anatomy, descriptive anatomy, osteology and splanchnology, knowledge on muscles, anatomy of the brain and the overall nervous system, the sensory organs, and the anatomy of the vascular system. More specialized, it also included human embryology – maybe containing some early anthropological approach – human genitals, and histological exercises. Practical dissection and microscopy training operated as the basis of these more theoretical subjects (Bauer et al., 2023, 2024). All of this, aside from shaping Kadyi’s personal professional knowledge, was also what he later could export from Vienna to use and teach himself in Kraków and Lviv (Nadruga et al., 2018).

Given that analyzing Kadyi’s early years serves as a case study of how academic networks among anatomists were formed during his time and for his national background, this leads to the question whether he was an exceptional case or a typical example for broader, especially Galician student mobility (Surman, 2018; Buklijas, 2007). The results show that he was just one, albeit a very successful, example of Galician students who came to Vienna to receive the best medical education available in the Habsburg Empire. The numbers of newly enrolled students between 1861/62 and 1878/79 show,<sup>33</sup> that, when Kadyi enrolled at the University of Vienna, there was a peak of Galician medical students. Generally, there was a continuous Galician presence among medical

students both before and after Kadyi’s time in Vienna.

This comes as no surprise, as “the capital university was certainly more accepting of cultural and national diversity than other institutions in the monarchy [...]. [T]his university was nevertheless the first to which students would peregrinate – the [...] Medical Faculty [...] remained pivotal for ‘provincial’ young scholars even during the growing importance of national institutions.” (Surman, 2012). Buklijas further contextualizes that “[e]conomic growth and constitutional freedoms in the late 1860s attracted a wave of immigrants to Vienna [...]. As the city population increased, students not only grew in number but also diversified ethnically and socially.” (Buklijas, 2007) Language issues further affected the mobility of students and early-career scholars in the Habsburg Empire and across its borders (Surman, 2019; Surman, 2012).

While Kadyi stayed for the majority of his overall academic career in positions in Lviv (1881–1912) (Wincewicz and Turek-Pietrzykowska, 2017), and although nationalism and language related strife within various parts of the Habsburg Empire were on the rise, affecting academia (Surman, 2019; Rathkolb, 2013; Buklijas, 2007), he maintained contact with German speaking anatomists in Vienna throughout his life. Two of Kadyi’s articles found in the manuscript collection of Ferdinand Hochstetter are evidence for this.

Kadyi’s academic mobility fostered local and international connections and provided the young scholar with long-lived contacts (Surman, 2012). With this very positive perspective in mind, it has to be remembered that networks among academics could also play a more divisive: Surman, for some cases, states that “the autonomy of universities, or of linguistically defined networks of tertiary education (Czech Prague and Brno; Cracow and Lviv), brought intraprovincial schisms to the fore.” (Surman, 2019).

In sum, Kadyi’s case and career were made possible by the structural environment of the Habsburg Empire and its administrative bodies (on ministerial, regional, and university levels). The main player in these structures was the Ministry of Culture and Education with several regional offices serving as peripheral managing facilities for the Ministry. By promoting academics mostly to other Habsburg Universities rather than to the ones where they graduated, the Ministry of Education also facilitated an academic exchange between the Austro-Hungarian crown lands (Surman, 2018), for which Kadyi serves as an example. This form of governance encouraged the establishment of academic networks through intra-Habsburg academic mobility (Surman, 2018). As Surman notes, “the Viennese University structured the mobility of medical professionals, which had a far-reaching influence on their careers in Cisleithania [Austrian half of the Austro-Hungarian Empire; authors’ note]”. (Surman, 2018).

## 5. Conclusion

Henryk Kadyi’s early-career anatomical network consisted of professors, assistants, and students alike. It was formed in university lectures, dissection courses as well as work situations, and possibly extracurricular activities. During his time in Vienna, Kadyi was introduced to numerous individuals and subjects from the field of anatomy. His mobility as a student, specifically Kadyi’s transfer to Vienna, enabled the foundation of networks, which were impactful throughout his career. Both theoretical and practical knowledge transfer was enabled through these developing academic networks and the entry point into academia, which his Viennese education and references opened for Kadyi (e.g., via his work under Langer). As he received his extensive anatomical training in Vienna, it is likely that his decision to pursue anatomy himself was either entirely formed due to the impact his Viennese anatomy teachers had on him as a student or at least reinforced by his interest in this field which they nurtured. Thus, his later career path and numerous academic achievements, among them most importantly his research and teaching positions in Kraków and Lviv, were enabled, at least in part, by the connections and scientific interests he developed at the start of his career

<sup>32</sup> As stated in the introduction, a common issue for most research dealing with non-German speaking Habsburg academics of this era.

<sup>33</sup> See Table 1.

in Vienna.

Kadyi was no singular case: He was part of a broader movement among Galician students during his time. Beyond his immediate contemporaries, he is just one of numerous examples that highlight the influence of their experiences at the Viennese Institute of Anatomy for their entire medical or scientific careers. Thus, he serves as a suitable case study upon which future research endeavors can be based. For example, comparatively analyzing the impact of early career connections in the case of Kadyi and other (contemporary) medical scientists promise to be a rewarding avenue for additional research.

As regards our hypotheses, the results show that, firstly, research on early-career networks is fertile for studying academic networks, although there is still uncertainty regarding the quality of contacts; and secondly, Kadyi's time in Vienna equipped him with contacts that he relied on during his later career, which makes his early-career network decisive for his entire academic life.

Future research potential presents itself with comparable studies for other universities and medical sub-disciplines, both in- and outside of the Habsburg Empire. Regarding Kadyi himself, also for the sake of continuing to use him as a case study for academic networking in the late Habsburg Monarchy, additional inquiries need to be launched to gain a more complete understanding. His time as a post-graduate junior researcher in Kraków, as well as his scientific, teaching, and organizational impact as a professor in Lviv (before and after the re-foundation of Lviv's Medical Faculty in 1894) still remain largely untouched by historiographical scrutiny but are currently the subject of ongoing research.

#### CRedit authorship contribution statement

**Leo Schaukal:** Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Sophia Bauer:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Uliana Pidvalna:** Writing – review & editing, Project administration, Methodology, Investigation, Funding acquisition, Data curation, Conceptualization. **Ryszard Gryglewski:** Writing – review & editing, Project administration, Methodology, Investigation, Data curation, Conceptualization. **Lesya Matshuk-Vatseba:** Supervision, Funding acquisition, Conceptualization. **Wolfgang J. Weninger:** Supervision, Funding acquisition, Conceptualization.

#### Ethical Statement

Regarding: Early-Career Anatomical Networks: Lviv Professor of Anatomy Henryk Kadyi as a Habsburg Case Study  
This study did not require ethical approval.

#### Declaration of Competing Interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Uliana Pidvalna reports financial support was provided by Ministry of Education and Science of Ukraine. Uliana Pidvalna reports financial support was provided by Austrian Agency for International Cooperation in Education and Research. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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#### References

- Anon. 1872. *Verordnungsblatt für den Dienstbereich des Ministeriums für Cultus und Unterricht*. Verlag des K.K. Ministeriums für Cultus und Unterricht, Vienna.
- Anon. (1959). Holl, Moritz (1852-1920), Anatom. In *Österreichische Akademie der Wissenschaften* (Ed.), *Österreichisches Biographisches Lexikon (ÖBL) 1815-1950* (Vol. 2, p. 401), Vienna. <https://doi.org/10.1553/0x00281a96>.
- Bauer, S., Schaukal, L.M., Weninger, W.J., 2023. The influence of censorship laws on viennese anatomy textbooks from the outgoing 18th century until after the student revolution of 1848 in Austrian absolutism. *Ann. Anat.* 250, 152129. <https://doi.org/10.1016/j.aanat.2023.152129>.
- Bauer, S., Schaukal, L., Weninger, W.J., 2024. The viennese dissection course-A model for habsburg medical teaching (1787-1848). *Wien. Klin. Woche*. <https://doi.org/10.1007/s00508-024-02433-2>.
- Buklijas, T., 2005. *Dissection, discipline and urban transformation. Anatomy at the university of Vienna, 1845-1914* (Diss.). Clare Hall College, Cambridge.
- Buklijas, T., 2007. Surgery and national identity in late nineteenth-century Vienna. *Stud. Hist. Philos. Sci. Part C. Stud. Hist. Philos. Biol. Biomed. Sci.* 38 (4), 756–774. <https://doi.org/10.1016/j.shpsc.2007.09.003>.
- Buklijas, T., 2008. Cultures of death and politics of corpse supply: anatomy in Vienna, 1848-1914. *Bull. Hist. Med.* 82 (3), 570–607.
- Buklijas, T., 2018. Eine Kartierung anatomischer Sammlungen im Wien des 19. Jahrhunderts. In: Angetter, D., Nemeč, B., Posch, H., Druml, C., Weindling, P. (Eds.), *Strukturen und Netzwerke. Medizin und Wissenschaft in Wien 1848–1955 (=650 Jahre Universität Wien – Aufbruch ins neue Jahrhundert Vol. 5)*. V&R unipress, Göttingen, pp. 97–116. <https://doi.org/10.14220/9783737009164.97>.
- Buklijas, T., 2020. Publicity, politics and professoriate in fin-de-siècle Vienna: the misconduct of the embryologist samuel schenk. *Hist. Sci.* 58 (4), 458–484. <https://doi.org/10.1177/0073275320914140>.
- Fangerau, H., Hentschel, K., 2018. Netzwerkanalysen in der Medizin- und Wissenschaftsgeschichte – zur Einführung. *Sudhoffs Arch.* 102 (2), 133–145. <https://doi.org/10.25162/sudhoff-2018-0004>.
- Habacher, M., 1967. *Christian August Voigt (1808 - 1890)*. Holzwarth & Berger, Vienna.
- Halling, T., Hansson, N., Moll, F.H., 2025. Internationaler Wissenstransfer in der urologischen Forschung und Lehre: die Publikationen und Vorlesungen von Robert Ultzmann (1842-1889). In: Moll, F.H., Halling, T., Shariat, S.F. (Eds.), *Urologie in Österreich. Von Wien in die Welt*. Springer, Berlin, pp. 103–134. <https://doi.org/10.1007/978-3-662-70888-0>.
- Hüntelmann, A.C. (2011). *Paul Ehrlich: Leben, Forschung, Ökonomien, Netzwerke*. Wallstein, Göttingen.
- Hyrtyl, J. (1860). *Handbuch der praktischen Zergliederungskunst als Anleitung zu den Sectionsübungen und zur Ausarbeitung anatomischer Präparate*. Braumüller, Vienna.
- Kadyi, H., 1878. O oku kreta pospolitego. (Talpa europaea) Pod wzgledem porównawczo-anatomicznym. *pamiętnika wydziału matem.-przyrodn. Akad. Umiejtności* 4, 124–152.
- Kadyi, H., 1889. Über die Blutgefäße des menschlichen Rückenmarkes: nach einer im XV. Bande der math. Naturw. Classe der Akademie der Wissenschaften in Krakau erschienenen Monographie, aus dem Polnischen übers. Gubrynowicz & Schmidt, Lviv.
- Kadyi, H. (1901a). *Das Formaldehyd im anatomischen Institute der Lemberger Universität*. Separate print from „Polnisches Archiv für biologische und medizinische Wissenschaften. I. Band.“. N.p., Lviv.
- Kadyi, H. (1901b). *Ueber die Färbung der nervösen Centralorgane nach Beizung mit Salzen schwerer Metalle*. Separate print from „Polnisches Archiv für biologische und medizinische Wissenschaften. I. Band.“. N.p., Lviv.
- Kostanecki, K., 1912. Ś. p. Henryk kadyi. *Prz. Lek.* 51 (45), 631–634.
- Lohff, B., 2018. Das Josephinum als Ort der wissenschaftlichen Medizin in der zweiten Hälfte des 19. Jahrhunderts. In: Angetter, D., Nemeč, B., Posch, H., Druml, C., Weindling, P. (Eds.), *Strukturen und Netzwerke: Medizin und Wissenschaft in Wien 1848–1955 (=650 Jahre Universität Wien – Aufbruch ins neue Jahrhundert Vol. 5)*. V&R unipress, Göttingen, pp. 117–151. <https://doi.org/10.14220/9783737009164.117>.
- Lohff, B. (2019). *Die Josephs-Akademie im Wiener Josephinum. Die medizinisch-chirurgische Militärakademie im Spannungsfeld von Wissenschaft und Politik 1785-1874*. Böhlau, Vienna, Cologne, Weimar.
- Lorenz, K. (1974). Biographical. In *The Nobel Prize in Physiology for Medicine 1973; Konrad Lorenz – Biographical*, online: (<https://www.nobelprize.org/prizes/medicine/1973/lorenz/biographical/>) (last accessed: May, 9th, 2025), originally published as: Odelberg, W. (Ed.) (1974), *Les Prix Nobel en 1973*. The Nobel Foundation, Stockholm.
- Mentzel, W., 2023. Aus den Medizinhistorischen Beständen der UB MedUni Wien [232]: Alois Dalla Rosa - Anatom. VAN SWIETEN BLOG - Infos Und News. <https://ub.meduniwien.ac.at/blog/?p=41639> (last access December, 18, 2024).
- Moll, F.H., Halling, T., Fangerau, H., 2025. Spezialisierung der Urologie in Wien und Österreich. In: Moll, F.H., Halling, T., Shariat, S.F. (Eds.), *Urologie in Österreich. Von Wien in die Welt*. Springer, Berlin, pp. 3–24. <https://doi.org/10.1007/978-3-662-70888-0>.
- Nadruga, M., Zimenkovsky, B., Lucyk, O., Kalynjuk, T., 2018. Der Einfluss der Wiener Medizin auf die Entwicklung der Nationalen Medizinischen Danylo-Halyk'kyj-Universität in Lemberg (1784–1918). In: Angetter, D., Nemeč, B., Posch, H.,

- Druml, C., Weindling, P. (Eds.), *Strukturen und Netzwerke: Medizin und Wissenschaft in Wien 1848–1955 (=650 Jahre Universität Wien – Aufbruch ins neue Jahrhundert Vol. 5. V&R unipress, Göttingen, pp. 425–448.* <https://doi.org/10.14220/9783737009164.425>.
- Nemec, B., Posch, H., Druml, C., Weindling, P., Angetter, D. (Eds.), 2018. *Strukturen und Netzwerke: Medizin und Wissenschaft in Wien 1848–1955 (=650 Jahre Universität Wien – Aufbruch ins neue Jahrhundert Vol. 5).* V&R unipress, Göttingen.
- Rathkolb, O., 2013. Gewalt und Antisemitismus an der Universität Wien und die Badeni-Krise 1897. Davor und danach. In: Rathkolb, O. (Ed.), *Der lange Schatten des Antisemitismus. Kritische Auseinandersetzungen mit der Geschichte der Universität Wien im 19. und 20. Jahrhundert.* V&R unipress, Göttingen, pp. 69–92. <https://doi.org/10.14220/9783737001458.69>.
- Schäfer, D., 2017. Pädiatrische netzwerke im „Dritten reich: helmut seckel und seine kollegen aus der Universitätskinderklinik Köln. *Mon. Kinder* 165 (12), 1102–1108. <https://doi.org/10.1007/s00112-016-0195-7>.
- Schnitzler, A. (n.d.). *Tagebuch. Digitale Edition*, Freitag, 5. Juni 1885. ([https://schnitzler-tagebuch.acdh.oeaw.ac.at/entry\\_1885-06-05.html](https://schnitzler-tagebuch.acdh.oeaw.ac.at/entry_1885-06-05.html)) (Stand 25. 6. 2025), PID: (<http://hdl.handle.net/21.11115/0000-000B-DEC9-9>). (last accessed June, 27, 2025).
- Seebacher, F. (2024). Theodor Billroth, Prof. Dr. In 650 plus – Geschichte der Universität Wien. (<https://geschichte.univie.ac.at/de/personen/theodor-billroth>) (last accessed June, 27, 2025).
- Skowrońska, J. (1972). Machek, Emanuel (1852-1915), Ophthalmologe. In *ÖSTERREICHISCHE AKADEMIE der Wissenschaften* (Ed.), *Österreichisches Biographisches Lexikon (ÖBL) 1815-1950* (Vol. 5, p. 393), Vienna. <https://doi.org/10.1553/0x00282f15>.
- Sumillera, R.G., Surman, J. (Eds.), 2020. *Translation in knowledge, knowledge in translation.* John Benjamins, Amsterdam.
- Surman, J., 2012. *habsburg universities 1848 - 1918. biography of a space.* [Diss.]. University of Vienna, Vienna.
- Surman, J., 2018. »Peregrinatio Medica.« Mobilität von Medizinern in den Jahren 1848–1914 und die Konstruktion einer Hauptstadtuniversität. In: Angetter, D., Nemec, B., Posch, H., Druml, C., Weindling, P. (Eds.), *Strukturen und Netzwerke: Medizin und Wissenschaft in Wien 1848–1955 (=650 Jahre Universität Wien – Aufbruch ins neue Jahrhundert Vol. 5. V&R unipress, Göttingen, pp. 411–424.* <https://doi.org/10.14220/9783737009164.411>.
- Surman, J., 2019. *universities in imperial austria 1848-1918. a social history of an academic space.* Purdue University Press, West Lafayette.
- Toldt, C., 1922. Carl toldt: o.ö. Professor der Anatomie an der Universität in Wien; gestorben am 13. November 1920; Autobiografie. Urban & Schwarzenberg, Vienna.
- Tubbs, R.S., Cohen-Gadol, A.A., 2010. Hans chiari (1851–1916). *J. Neurol.* 257 (7), 1218–1220. <https://doi.org/10.1007/s00415-010-5529-0>.
- Warner, J.H., 1998. *Against the spirit of the system: the French impulse in Nineteenth-Century American Medicine.* Princeton University Press, Princeton, N. J.
- Wincewicz, A., Turek-Pietrzykowska, M., 2017. Scientific and organizational achievements of professor of anatomy henryk kadyi - rector vigilantissimus universitatis leopoliensis. *Rom. J. Morphol. Embryol.* 48 (4), 1623–1629.
- Die "Ephemeris" des Ulmer Arztes Johann Franc (1649-1725). In: Winkelmann, H.J., Litz, G., Jankrift, K.P., Fangerau, H. (Eds.), 2021. *Reichsstädtisch-territoriale Netzwerke in der frühneuzeitlichen Arztpraxis.* Franz Steiner, Stuttgart.
- Zimenkovsky, B., Matshuk-Vatseba, Pidvalna, U., Kordys, B., 2020. *The Anatomical Museum of Danylo Haltsky Lviv National Medical University.* Medycyna svitu, Lviv.