

An 18th-century scholar and doctor – Justus János Torkos

ALINKA AJKAY

Abstract

János Torkos was the chief physician of the city of Bratislava and one of the most distinguished and knowledgeable physicians of the 18th century. He was a prominent member of the Lutheran intelligentsia in Upper Hungary, a group that produced many eminent scholars. János Torkos authored several noteworthy medical records and letters of medical advice. He is also credited with publishing the first Hungarian bilingual book on the pricing of medicines. His scientific description of the Gófitz twins stands as a remarkable reflection of the medical achievements and understanding of his era. The story of these first scientifically described Siamese twins gained widespread attention across Europe, featured in numerous medical books, and became one of the great sensations of the time. According to Dr. Torkos, the cause of the twins' conjoined condition was attributed to *imaginatio materna*, i. e. maternal imagination.

Keywords: medical history; János Torkos; Taxa Pharmaceutica; Siamese twins; Gófitz girls; *imaginatio materna*

Subject-Affiliation in New CEEOL: Social Sciences – Education – History of Education

DOI: 10.36007/eruedu.2025.1.092-099

Justus János Torkos was one of the most renowned and respected physicians of his time. He belonged to the upper-Hungarian Evangelical scholarly-literary class, which, from the 17th century onwards, became increasingly active in the scientific public sphere. The influence of this literary society extended well into the mid-19th century. Members of this group were typically Evangelical, multilingual, and graduates of foreign universities.

János Torkos was born on December 17, 1699, in Győr. From 1711, he was a pupil of the polymath Mátyás Bél at the grammar school in Banská Bystrica. The most notable private medical schools in Upper Hungary were located in Késmárk and Besztercebánya, where Károly Ottó Moller, long-time camp physician to Ferenc Rákóczi, taught. Moller not only educated his students but also provided scholarships for their studies abroad. Some of these students, including Justus János Torkos, gained knowledge in chemistry and pharmacy before continuing their education overseas.

Torkos studied in Bratislava and later at the University of Halle, where he earned his Doctoris Medici (Doctor of Medicine) degree on June 1, 1724. Upon his return to Hungary, he practiced medicine in Bratislava and Győr. In 1726, he was appoint-

ed county doctor of Komárom, and in the following year, he assumed the same role in Esztergom County. By 1731, Count Miklós Pálffy, the Elector of Bratislava, selected him as his personal physician. From 1740 until his death, Torkos served as the chief medical officer of the free royal city of Bratislava for 30 years.

In 1751, he was admitted to the Florentine Botanical Society, and a year later, he was honored as an honorary member of the Royal Society of London. János Torkos passed away on April 7, 1770.

Torkos was a pioneer in analyzing and describing Hungary's medicinal waters and compiled the first pharmacist's standard in Hungary. This document delineated the roles, duties, and rights of physicians, surgeons, pharmacists, midwives, and bath attendants. He also became the first Hungarian regulator of midwifery, establishing guidelines for the remuneration of obstetric procedures and surgeries. His writings primarily focused on domestic medicinal resources, though he also published fascinating medical case studies (*Rövid értekezés a pöstyéni fürdőről*, Pozsony, 1745; *Bonctani és orvosi megfigyelések az 1701. október 26-án Magyarországon, a Komáromon alul levő Szőny pusztán, a hajdani Brigetióban született és az 1723. február 13-án a pozsonyi orsolyita kolostorban elhalt és ugyanott eltemetett kéttestű lányszörnyszülőtről*, Pozsony, 1764; *Az édesvízfürdő, azaz a dunai fürdő hasznos voltáról és használatáról*, Pozsony, 1765.).

In his later years, Baron László Amade (1704–1764) came into closer contact with János Torkos, one of the most renowned physicians of his time. Amade had been suffering from chronic health issues since the 1750s, including gout and stomach problems. He sought relief from numerous remedies and consulted many doctors, some of whom offered misguided treatments, before turning to Torkos. The Amade family papers, preserved in the Hungarian National Archives, include fifteen letters written by János Torkos to the poet. These letters are of significant medical interest. In them, Torkos recommends treatments such as pills for constipation and a herbal tea with milk to alleviate morning thirst, described as being „more like beer.” One of the most frequently suggested remedies is oat water, which Torkos details should be prepared using Danube water or wine. For insomnia, Torkos advises Amade to sleep during the day if he cannot sleep at night. Before meals, he suggests taking rhubarb powder to „lighten the chair,” complemented by the use of oregano for health benefits. These letters date from the poet's final year, with the first written on May 16, 1763, and the last on September 29, 1764. Unfortunately, the treatments prescribed by Torkos were insufficient to reverse the damage caused by previous mistreatment and Amade's weakened condition. László Amade passed away three months later, on December 22, 1764. (AjKay 2008).

The First Price Regulation for Medicines in Hungary

János Torkos's *Taxa Pharmaceutica Posoniensis*, published in 1745, was the first binding pharmaceutical price regulation in Hungary. It primarily followed the Vienna Pharmacopoeia of 1729. The book lists medicines in four languages—Latin, Hungarian, German, and Slovak—providing a comprehensive overview of the 18th-cen-

tury pharmacopoeia. This pharmacopoeia consisted of plant, animal, and mineral substances, as well as their preparations and compound medicines.

The mineral substances listed included natural minerals, purified or processed materials, and artificial products such as metallurgical byproducts. These were used both directly and through chemical processes to create various compounds and preparations. The extensive range of chemical products manufactured in pharmacies highlights the fact that 18th-century pharmacies functioned as significant chemical laboratories.

During this period, medical care was not exclusively provided by trained physicians. Various practitioners, including „witch doctors,” midwives, olejkars (folk healers using oils), and barbers, also offered treatments. This chaotic state of medicine is reflected in incidents such as the witch trial in Fejér County on November 9, 1746, where a midwife, Erzsébet Tóth (Jánosné Lutor), was accused of curing a man's illness „too quickly” (Schneider, 1934).

In the mid-18th century, Maria Theresa's health reform program sought to bring order to this disorganized state of medicine. The coexistence of scientific and folk medicine during this time is evident in the dual terminology: Latin terms were used by scientific doctors, while vernacular names persisted in folk medicine (e.g., *scarlatina*—scientific term for scarlet fever—was commonly referred to by descriptive names based on its symptoms).

János Torkos was a highly qualified doctor who practiced modern medicine grounded in exact, naturalistic, and experimental methods. By this time, the principles of modern medicine were heavily influenced by Paracelsus, replacing the older Hippocratic-Galenic humoral pathology. The latter emphasized the balance of bodily fluids (e.g., blood, yellow bile, black bile, and phlegm), while Paracelsus introduced a new paradigm.

Paracelsus: A Revolutionary in Medicine

Paracelsus, a 16th-century pioneer, viewed disease not as an imbalance of bodily fluids but as a localized chemical disorder requiring chemical treatments. He emphasized the healing power of nature and explored the properties of substances using his „three chemical archetypes”—salt (solidity), mercury (moisture), and sulfur (combustibility). According to Paracelsus, the human body was a site of chemical metabolism and detoxification, governed by its „internal alchemist.” He described how toxins were eliminated: arsenic through the ears, sulfur compounds through the nasal passages, and mercury through the skin.

Paracelsus's contributions to medicine were vast. He was a practical scientist who made his own medicines and is regarded as the father of toxicology. Alchemy played a central role in his medical practices, as he used it to prepare remedies, which often consisted of herbs and metals. He introduced the use of chemical and mineral elements (iatrochemistry) for internal treatments, a groundbreaking approach at the time. For instance, while earlier practitioners primarily applied chemicals externally, Paracelsus used substances such as mercury, sulfur, and

iron compounds internally to treat illnesses.

These innovative principles of Paracelsus laid the foundation for modern pharmacology, influencing physicians like János Torkos, who integrated these methods into their practice.

All these principles are evident in the medical practice of Justus János Torkos. His studies in balneology—an area also highly valued by Paracelsus—further reflect these influences. Torkos's *Taxa Pharmaceutica Posoniensis* contains not only herbal and animal-derived raw materials but also many minerals that are no longer used in modern pharmacy. However, the terminology can often be misleading due to the numerous synonyms for these substances, with the same name sometimes referring to multiple items.

In addition to minerals, the *Taxa* includes products obtained through physical or chemical processes, such as alumina, silver leaf, gold leaf, and Venetian tin, as well as purified sealing earths (sigillates) made from clay. Precious stones also feature prominently, continuing a tradition that favored gemstones over metals or other minerals from antiquity onward. Among these were corals and real pearls, which were highly prized.

Paracelsus was well-versed in lithotherapy, a therapeutic approach where each stone was believed to possess a corresponding power (virtus). Gemstones were used in two ways: first, as objects with inherent healing properties according to esoteric lithotherapy, and second, powdered and mixed into medicines (mixtum compositum). By the Age of Enlightenment (late 18th to early 19th century), gemstones were largely omitted from pharmacopoeias, though esoteric lithotherapy has regained popularity in recent times.

The *Taxa* is unique in its era for being written in four languages: Latin, Hungarian, German, and Slovak. This multilingual presentation ensured that the Latin names of remedies could be understood by a wide audience across Hungary. In his Latin introduction, János Torkos admitted that his greatest challenge was with the Hungarian names. Nevertheless, he made a concerted effort to address this, striving to contribute to the prestige of the Hungarian language.

To support his work, Torkos consulted several earlier lexicons and herbaria, but he often created new terms from his own manuscripts and notes. Alongside the names of plant, animal, and mineral ingredients, the *Taxa* also includes terms for diseases and body parts, reflecting its comprehensive scope.

The First Hungarian Siamese Twins

János Torkos's scientific approach is evident in his Latin description of the first known Hungarian Siamese twins, Ilona and Judit Gófitz, born on October 26, 1701, in Ószőny near Komárom (Torkos, 1757). In his account, Torkos begins by attributing this unique case of conjoined twins to the miraculous power of *imaginatio materna* (maternal imagination). This theory was one of the most widely accepted explanations for birth abnormalities from the 16th to the 18th centuries, spanning the Renaissance and Enlightenment periods.

The theory of *imaginatio materna* posited that during pregnancy, a mother's imagination could significantly influence the physical appearance of her unborn child. This idea was particularly applied in cases of deformities or abnormal births. It stemmed from the belief that women's bodies were highly sensitive to powerful external events or stimuli during pregnancy. Many surviving accounts describe instances where pregnant women, exposed to traumatic or emotionally intense situations, allegedly projected these experiences onto the developing fetus. Consequently, any birth defect was often attributed to the mother's actions or emotional state.

Torkos recounts that in the early weeks or months of her pregnancy, the twins' mother had frequently observed mating dogs huddled closely together, with their heads turned in her direction. She would often recall these images, which, according to the theory of *imaginatio materna*, led to the birth of her conjoined children („*Mater enim hujus bicorporis, primis graviditatis suae mensibus vel potius hebdomadis, attentius contemplabatur canes coeuntes, arctius cohaerentes, et capitibus erga se invicem quodammodo conversos, eosque sibi crebrius praefigurabat.*” Torkos, 1757, 311).

Between 1706 and 1709, Ilona and Judit Gófitz were taken on a European tour by János Csúzi Cseh, a Reformed pastor and doctor of the village of Szőny, known for his skill in treating gout. According to István Weszprémi's 1774 work on the history of medicine, Csúzi essentially „purchased” the children from their parents and traveled with them throughout Western Europe, visiting countries such as Germany, England, France, Italy, Poland, the Netherlands, Austria, and the Czech Republic, earning significant sums by exhibiting them (Weszprémi, 1960).

During this time, when the twins were between the ages of 5 and 8, Csúzi commissioned an etching of the girls, accompanied by a dystich poem he composed. The twins became widely known across Europe, with medical descriptions of them published in German and English. These accounts noted that the girls were multilingual, speaking German and French in addition to Hungarian. Eventually, their situation changed when Prince Ágost Keresztély of Saxony, who was also the Archbishop of Esztergom, intervened. He „redeemed” the girls from their exploitative tours to prevent further corruption by Csúzi or others. The prince placed the twins in the convent of the Ursulines in Bratislava, where they lived until their deaths on February 23, 1723.

Returning to János Torkos's description of their birth, he writes that Ilona's body appeared first, up to her navel, and then, three hours later, her legs were born, along with Judit's body, which was attached to her. Ilona's body was larger and stood more upright, while Judit's was smaller and leaned at an angle. Although their bodies were joined from behind, below their abdomens, their faces and torsos turned toward each other, allowing them to sit, walk, and move backward with ease.

The twins shared a single abdominal opening located between their two buttocks, as well as Ilona's right thigh and Judit's left. They had one vaginal opening, hidden between their four legs, making it invisible when they stood. Although they had two separate pathways for excreting waste, it was observed that when one

defecated, the other felt pressure as if experiencing the same process. Similarly, when either twin urinated—though not always simultaneously—both felt the urge. As a result, if one twin needed to urinate, the other could not deny the sensation.

Despite their shared condition, the twins had a complex relationship. In their youth, they cared for each other tenderly, often embracing. However, they also quarreled frequently. In such instances, one twin would sometimes carry the other on her back or drag her in the desired direction („In partu, primum prodiit umbilicotenus Helenae corpus; post tres demum horas editi sunt ejus pedes, cum adnexo corpore altero Judithae. Helena corporis statura erat altior et rector, Judithae brevior et obliquior; et quamvis infra lumbos, a tergo, in unum corpus concretae fuissent, attamen vultu et corporibus, semilateraliter, erga se fuerant conversae, ut commode sedere, lentoque gradu procedere et recedere potuerint. Unus communis ipsis erat alvi exitus, intra duas nates, seu Helenae dextrum et Judithae sinistrum femur, situatus. Unam quoque habebant vulvam, intra quatuor pedes reconditam, ut dum erectis starent corporibus, ne vestigium ejus conspicuum esset. Quoad duos istos excretionum meatus, observatum est, quod, una excretionem alvi moliente, altera quoque nisum egerendi senserit; in reddenda vero urina, quaelibet, diverso tempore, stimulos habuerit: quamobrem altera ad urinae missionem sollicitata, altera subinde recessum negavit. Unde in juventute, utut alias semper semet tenerrime amarent et amplexarentur, saepius altercationes inter ipsas exortae, et alterutra aliam vel dorso injectam abripuit, vel colluctando eo, quo vellet, protraxit.” Torkos, 1757, 311–312).

When Judit was six years old, she experienced paralysis on the entire left side of her body. This illness left her weaker, slower, and less intellectually capable throughout her life. Ilona, by contrast, was more agile, studious, and physically attractive. Just as their bodies differed, so too did their mental and physical functions, whether they were healthy or ill.

Although they often experienced illnesses simultaneously, the nature of their illnesses differed. Judit was more prone to sickness, whereas Ilona rarely fell ill or showed signs of weakness. When they suffered from different ailments, they were treated with separate medications. For instance, Ilona might suffer from pleurisy while Judit only experienced a slight fever. Similarly, one could have symptoms like sneezing, a cold, or colic, while the other remained healthy.

In cases where one twin was in better condition, medical interventions were performed on the healthier twin. For example, an incision would be made on the twin in a more stable state.

The twins began menstruating at the age of 16 and continued to do so for the rest of their lives. However, their cycles were not synchronized and differed in timing, intensity, and accompanying discomfort. One twin often experienced more difficulty than the other. Judit, in particular, frequently suffered from illnesses and experienced various hysterical and emotional issues. Her health challenges further distinguished her from Ilona („Anno aetatis sexto, Judithae paralysis totius partis sinistrae; obtigit ex qua affectione, utut convalesceret, per totam vitam suam debilior, tardior, et stupidior perstitit; e contra Helena semper agilior, docilior, et formosior fuit. Prout diversa erant corpora, ita functionum vitalium, animalium, et naturalium,

magna in utroque corpore, tam in sano quam aegroto statu, observata est differentia. Et quamvis variolas et morbillos uno eodemque tempore habuissent, reliqui tamen morbi eis non erant communes. Cum Judith saepius convelleretur, Helena nec alterata nec debilitata fuit. Helena erat pleuritica. Judith benigniore febre laboravit: altera tussi, catarrho, colica afflicta, altera sana exstitit. Hinc etiam quaelibet, pro suo diverso statu, diversis medicamentis tractabatur: phlebotomia autem semper in saniore et vegetiore celebrabatur. Anno aetatis decimo sexto, menstrua comparuerunt, quae deinde per totam vitam, non tamen aequali tempore, modo, et quantitate succedere. Subinde alterutra majores hinc sensit molestias; Judith vero crebrius convellebatur, variisque hystericis et pectoris affectionibus obnoxia fuit." Torkos, 1757, 312).

At the age of 22, on February 8, Judit fell seriously ill and subsequently lapsed into a coma, remaining in that state until her death at dawn on February 23. During this time, Ilona suffered from a mild fever and frequent fainting spells, which left her extremely weakened. Although her mind and speech remained perfectly clear, she suddenly began to show signs of agony just three minutes before Judit's passing. Remarkably, the twins died almost simultaneously („Anno aetatis vicesimo secundo, seu A.C. 1723, the 8 Febr. Judith fortiter convulsa est, postea comatosa, usque ad mortem, quae die 23 Febr. mane contigit, perstitit. Intra hos dies Helena febricula laboravit, eique accesserunt crebriores lipothymiae, quibus tandem ita debilitata est, ut integra quamvis mente et loquela, subito, tribusque horae minutis prius quam Judith, in agonem inciderit: postea vero ambae, post brevem agonem, uno ferme momento expiraverint." Torkos, 1757, 313). Afterwards, the twins' bodies were dissected. Each had their own separate organs. In Ilona's body, everything was found to be healthy, but in Judit's body, the heart was abnormally large, the pericardium was enlarged, and the right lobe of the lung was decayed. Apart from these abnormalities, both twins had healthy internal organs, including livers, spleens, pancreases, kidneys, and so forth. Their shared uterus, ovaries, bladder, and vaginal structures extended from both bodies and terminated in a common vaginal canal („Corporibus post mortem dissectis, reperta sunt in quolibet corpore viscera singula: In Helenae omnia sana; in Judithae thorace vero cor nimis magnum, fortissimo pericardio velatum, et pulmonum dexter lobus putridus: [...] In abdomine utrinque viscera omnia sana et integra. Quodlibet corpus suum habuit hepar, splenem, pancreas, renes, vesicam, uterum cum ovariis, tubis Fallopianis, et portione vaginae, quae utrinque concurrentes unam communem vaginam efformarunt. Partes genitalium externorum, praeter commune orificium vaginae, cuilibet erant propriae [...]. Ventriculus cum intestinis, in utraque, naturaliter erant situata; intestina recta autem utrinque ad os sacrum reflexa et coalita, unum satis amplum et communem canalem confituerunt." Torkos 1757, 313). Externally, their genital organs were separate, except for the shared vaginal opening. Internally, their abdomens and organs were naturally arranged, but Judit's right ovary was inclined toward the sacrum and fused, forming a common duct. Consequently, their sacrum was also shared.

János Torkos was able to publish such a detailed account of the twins in 1757 in the *Philosophical Transactions of the Royal Society* in London. This was possi-

ble because he had access to the records of his father-in-law, Károly Rayger, who served as the local physician until 1731. Rayger had also been the personal doctor of Prince Pálffy. After Rayger's death, Pálffy appointed János Torkos as his family physician.

Summary

From all of this, it becomes evident that Justus János Torkos was an eminent and highly respected physician of his era. He was a member of several foreign scientific societies and an advocate of progressive medicine. However, he was not yet fully free of the intellectual constraints of earlier theories, such as *imaginatio materna*, which still influenced his thinking.

Literature

Ajkay Alinka (2008): „Ezen új esztendőnek minden részit, hogy szerentsésen tölthesse jobb egészséggel, szívesen kívánom.” (Torkos János doktor levelei Amade Lászlónak). In *„Ember lenni mindég, minden körülményben.” Tanulmányok Kíczenko Judit születésnapja alkalmából*, ed. by Emil Hargittay, Anikó Radvánszky, 7–23. Piliscsaba: PPKE BTK.

Báthory Orsolya (2022): „Archeusok, robbanékony részecskék, koralltinktúra. Textusok és új kontextusok a 17. századi magyar vonatkozású irodalomban”. In *Betegség és gyógyulás a kor újkori irodalomban (1450–1760)*, ed. by Eszter Draskóczy and Mihály Etlinger, 497–515. Budapest: reciti.

Schneider Miklós (1934): *Fejérmegyei boszorkányperek*. Székesfehérvár: Vörösmarty Nyomda.

Torkos Justus János (1757): *Observationes Anatomico-Medicae, de Monstro bicorpeo Virgineo A. 1701. die 26 Oct. in Pannonia, infra Comaromium, in Possessione Szony, quondam Quiritum Bregetione, in lucem edito, atque A. 1723. die 23 Feb. Posonii in Coenobio Monialium S. Ursulae morte functo ibidemque sepulto. Authore Justo Johanne Torkos, M. D. Soc. Regialis Socio. XXXIX. Observations anatomico-medicæ, de monstro bicorporeo virgineo a. 1701. 26 Oct. In Pannonia, infra comaromium, in possessione szony, quondam quiritum bregetione, in lucem edito, atque A. 1723. 23 Feb. Posonii in Cœnobio Monialium S. Ursulæ morte functo ibidemque sepulto. Authore Justo Johanne Torkos, M. D. Soc. Regalis Socio.*

Wesprémi István (1960): *Succincta Medicorum Hungariae et Transylvaniae Biographia centuria prima, Lipsiae, MDCCCLXXIV./ Magyarország és Erdély orvosainak rövid életrajza, első száz*, transl. Aladár Kővári, 53–61. Budapest: Medicina Könyvkiadó.