SAPIENZA
UNIVERSITÀ DI ROMA

E-ISSN 2531-7288
ISSN 0394/9001

MEDICINA NEI SECOLI
Journal of History of Medicine and Medical Humanities
37/3 (2025) 195-212

Received: 20.05.2025
Accepted: 30.07.2025
DOI: 10.13133/2531-7288/3199

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Giambattista Messedaglia (1810-1845): The History and Literary Legacy of a Petrifier

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Abstract

This study reconstructs the biography and restores the scientific and literary significance of Giambattista Messedaglia (1810-1845), an anatomist from Verona known for his ability to petrify human and animal tissues. Through the analysis of archival and literary sources, the article explores how Messedaglia, inspired by the work of Girolamo Segato, developed an innovative method for preserving tissues, which he presented to the scientific community of Verona. Despite partial recognition of his work, Messedaglia's technique did not achieve the desired success due to the lack of publicly available technical details and his untimely death. The article also examines Messedaglia's influence on contemporary literature, highlighting how poets and writers interpreted petrification as a triumph of human ingenuity over death. Finally, the study discusses the cultural significance of petrification within the context of the 19th century, emphasizing the different literary and scientific interpretations of this practice.

Keywords: Petrifiers - Medical literature - Anatomical preparations - Medical museology

Introduction

This study combines archival research and literary analysis to reconstruct the life and work of Giambattista Messedaglia[1] (1810-1845). Primary sources include unpublished letters preserved in the Archivio dell'Accademia di Agricoltura, Scienze e Lettere di Verona and documents from the Archives of the University of Padua, alongside Messedaglia's own communications. These were integrated with 19th-century literary texts, especially Luigi Pico's *Zooliturgia*, selected because they explicitly mention Messedaglia and interpret his work through poetic and symbolic registers. The choice of sources thus reflects a dual criterion: archival documentation that testifies to Messedaglia's activity and reception among scientific institutions, and coeval or slightly later literary testimonies that shaped the cultural image of the petrifier. This mixed approach allows us to explore both the scientific dimension of petrification (techniques, specimens, commissions) and its cultural-literary meaning, situating Messedaglia's work in a broader European debate about death, memory, and the preservation of the body.

Anatomical Specimen as a Literary Object

In 19th-century Italian literature, anatomists, petrifiers, and anatomical preparations -real or fictional- represent established *topoi*. While in the latter half of the century an artistic and literary movement known as *Scapigliatura*[2] produced texts where the theme of cadaver preservation is treated with macabre tones, earlier literary figures interpreted these creations as symbols of human ingenuity triumphing over nature.
Between the 1830s and the 1860s, numerous poetic and prose works were dedicated to the petrifier Girolamo Segato. In these literary works, the scientist's invention is presented as a breakthrough capable of alleviating the sorrow of losing loved ones. The poetic text elevates the petrifier's work with solemn tones, frequent Latinisms ("gemino," "preclari," "fia"), and the choice of the term "lari," which links the mortuary theme to ancient religiosity. Muzzi's text *Epigraphs and poems in praise of Girolamo Segato* from 1835 is exhaustive in this field:

Quegli inanimi avanzi a noi sì cari,
Dove albergò la sospirata sposa
O il gemino parente o la gioiosa
Prole d'amore o spiriti preclari,

son tratti appena fuor da'nostri lari
che n'è lor vista eternamente ascosa,
e il segno ingannator del Qui riposa
risuscita l'affanno e i pianti amari.

O care salme, più non fia che assorte
dalla verminea fame or vi condanni
l'antico diritto a rimaner di Morte.

Lapidefatte e trïonfati i danni
Italo Genio, di costei più forte,
Quai foste in vita vi consegna agli anni[3].

[Those inanimate remains, so dear to us,
Where once resided the beloved spouse,
The twin parent, the joyful progeny of love,
Or illustrious spirits,

Are barely taken from our homes,
Their sight forever concealed from us,
And the deceitful mark of "Here lies"
Revives grief and bitter tears.

Oh dear remains, never again shall the verminous hunger
Condemn you to the ancient right of Death.
Stone-like, the Italian Genius triumphs over her,

As you were in life, he consigns you to eternity.]

The petrifiers operated in a cultural context that associated the preservation of human remains not only with the production of educational specimens (such as those housed in the anatomical museums of various Italian universities) but also with the creation of monuments to the memory of the deceased. These two purposes of cadaver preservation are reflected respectively in the Scapigliatura movement and in the literature dedicated to petrifiers. While the Scapigliatura viewed the work of anatomists as reducing individuals to objects and depriving the deceased of their identity, the praises of petrifiers portrayed their work as a way to preserve the individuality of the deceased after death.
In general, the anatomical preparation, regardless of the different meanings attributed to it, is a challenging element to categorize, given its unique status at the boundary of scientific interest, relic, and artwork.

Zooliturgia

Giambattista Messedaglia is the protagonist of the poetic fragment *Zooliturgia* by Luigi Pico[4]. The title of the fragment is a neologism: the term "zooliturgia" appears exclusively in Pico's work and in a letter by Messedaglia himself, in which the scholar signs off as "Zoolitologist"[5]. The term's etymology derives from the combination of two Greek words, ζῷον (zôon, animal) and λίθος (lithos, stone), evidently referencing Messedaglia's ability to petrify living beings.
In his poetic work, Pico presents Messedaglia as a hero who defies death and as a privileged interlocutor of Nature, capable of interpreting and bending its laws to his will. In the first quatrain, the poet enumerates examples of natural and artificial cadaver preservation: the references to Sicily and Egypt allude respectively to the numerous sites on

the island where embalmed bodies can still be found[6] and to the mummification techniques of ancient Egypt studied by Girolamo Segato while fhe Friulian town of Venzone is mentioned for its naturally mummified bodies discovered in the 17th century. The verse "L'irte ghiacciaje e i pelaghi d'arena" (The jagged glaciers and the sand-covered seas) refers to the preservation of corpses by ice and the intense heat of deserts. This multitude of preserved corpses is contrasted in the poem with the art of the petrifier, capable of transforming bodies into "spiranti marmi" (breathing marble statues).

E Sicilia e l'Egitto e il mio Venzone,
L'irte ghiacciaje e i pelaghi d'arena
Han di cadavri immobile legione
Non doma mai dalla putredo oscena;

Ma son mummie, carcami, e di persone
Umane scorgi le vestigia appena;
Sol del rigido sofo la ragione
L'irrequieta dubitanza affrena.

Maggior dell'arte antica e di natura,
Dall'uomo al fior la tua possente mano
Le natie forme e il fral tessuto indura.

I morti tuoi saran spiranti marmi
Quasi educati da scalpel sovrano;
Nè sarai degno d'onoranze e carmi?[7]

[Sicily and Egypt and my Venzone,
The jagged glaciers and the sand-covered seas
Host an immobile legion of cadavers,
Never conquered by foul decay;

But these are mummies, carcasses, and of human
Forms, only traces barely discernible remain.
Only the reasoning of the stern sage
Can tame restless doubt.

Greater than the ancient art and Nature,
From man to flower, your mighty hand
Hardens their native forms and frail tissue.

Your dead shall become breathing marble,
As if shaped by a sovereign chisel;
Are you not deserving of honors and praise?]

The Petrifiers

In this article, the term "petrification" is used in three distinct but interrelated senses: in the technical-scientific sense, it indicates the artificial process of hardening tis-

sues to a stone-like consistency, a technique pioneered by Segato and pursued by Messedaglia. The second sense is more artistic-literary and it became a metaphor for defying death and eternalizing memory. Lastly, in the cultural sense, it was imagined as an alternative to traditional funerary monuments, offering a new form of posthumous representation. This clarification helps distinguish the many meanings the word carried in the 19th century, avoiding conceptual ambiguities.

The attempt to preserve corpses or organs[8] has been imbued, throughout history, with various meanings and values in religious, scientific, and political-propagandistic contexts[9].

The evocative term "petrification" describes a set of techniques developed by some Italian scholars between the 1830s and the early decades of the 20th century to give stone-like hardness and durability to entire human bodies or, more commonly, to anatomical specimens.

The term "petrifiers" refers to some scholars, such as Girolamo Segato (1792-1836), Giovan Battista Rini (1795-1856), Giambattista Messedaglia (1810–1845), Paolo Gorini (1813-1881), Efisio Marini (1835-1900), and Francesco Spirito (1885-1962). These scientists developed techniques to preserve organic substances indefinitely. Although they never formed a group or school, their biographies share certain features, such as their choice to keep their procedures secret.

Messedaglia's work took shape in a century fascinated by the preservation of the human body. Alongside Italian petrifiers, French embalmers developed increasingly refined injections of arsenical and mercury-based fluids; in England, early experiments in "tanatoprassi" circulated in medical schools; and in Germany, anatomical collections were produced by drying or wax modeling, practices that could be seen as ante litteram plastination. Petrification represented an original Italian alternative: a hybrid of scientific rigor and aesthetic ambition, aiming to create specimens that were both durable and "authentic."

Like Segato, Messedaglia guarded his formula jealously. Secrecy was not merely personal; it reflected a broader 19th-century epistemology. In an era before scientific patents, "segreto" often meant both intellectual property and prestige. Similar attitudes were shared by Paolo Gorini and Efisio Marini, whose methods remained partially mysterious for decades. This opacity contributed to fascination, but also to the difficulty of evaluating and disseminating the innovation.

Recent bibliographic studies have identified some of the chemical substances employed by petrifiers to preserve organs and tissues. Research has particularly focused on Rini's work[10], while Gorini's technique has been partially reconstructed thanks to a document written by physician Luigi Rovida, to whom the scientist revealed his secret on his deathbed[11].

The first creator of dry preparations to be identified as a petrifier was Girolamo Segato from Belluno. Segato, whose interests spanned archaeology, cartography, and chem-

istry, began studying the preservation of human and animal organic matter during an expedition to Egypt. In the following years, the scientist produced numerous preparations, most of which are now housed in the *Museo del Dipartimento di Anatomia, Istologia e Medicina Legale dell'Università degli Studi di Firenze*. The premature death of the scholar, caused the loss of his preservation method.
The secrecy surrounding Segato's technique, believed to have been discovered during his explorations of the Abu Sir necropolis, captivated his contemporaries, becoming a recurring literary motif. It appears in the epitaph on his tomb, in a song by Giambattista Cisotti[12], and in a tragedy by Gaetano Corsi, where the scholar burns the notebook containing his secrect shortly before his death[13].
The aura of mystery surrounding Girolamo Segato inspired not only poets and writers but also scientists like Messedaglia, who sought to replicate the petrifier's achievements. The story of Messedaglia, reconstructed here through archival sources, exemplifies the actual conditions in which these scholars worked, the environments in which they operated, how they promoted their work and the results they achieved.

Giambattista Messedaglia

Giambattista Messedaglia was born in Verona in 1810 to a family of notables. He spent his early years in Legnago and moved to Padua in 1831 to study Medicine. He obtained the qualification of *Chirurgo provinciale* (Provincial Surgeon) in 1835 and began his studies on the preservation of animal tissues around 1837[14]. Documents from this year first attest to the scholar's intent to publicize the initial results of the method he had developed.
A pivotal source for reconstructing Messedaglia's activity is a 1934 memoir titled *La "pietrificazione" dei tessuti animali ed un emulo veronese di Girolamo Se*gato [*The "Petrification" of Animal Tissues and a Veronese Follower of Girolamo Segato*], published in *Atti e memorie dell'Accademia di Agricoltura Scienze e Lettere di Verona*[15]. This essay was written by Luigi Messedaglia, a distant relative of the petrifier and president (from 1923 to 1927 and then from 1932 to 1947)[16] of the Veronese Academy to which his ancestor had appealed to promote his work.
In addition to Luigi Messedaglia's report, the main sources used to reconstruct the scientist's biography include documents found in Archives of the Faculty of Medicine at the University of Padua and letters exchanged between the scholar and the Veronese Academy.

Messedaglia's Story Through Archival Sources

A letter from Messedaglia[17] dated May 30, 1837, addressed to "Rappresentanza municipale di Verona", [Municipal Delegation of Verona] documents the petrifier's first attempt to introduce the result of his studies and associate it with the already renowned works by Girolamo Segato.

[…]
In seguito di moltiplici (sic) studi, e ripetute applicazioni, pervenni a discoprire il mezzo della petrificazione artificiale degli esseri carnosi intorno a che tanto le scienze e le arti deploravano la perdita del Bellunese Girolamo Segato, morto col suo segreto, di cui alcuni saggi esistono anche nel Gabinetto di Storia Naturale dell'I.R. Università di Padova e nuovamente vinsi natura nel principale de' suoi diritti, quale è la distruzione degli esseri colla putrefazione. […] a dovere mi ascrivo il tributare alla Patria […] i primi passi miei nel nuovo genere d'instituzione (sic). Questi consistono in
a_ Due pezzi d'aorta, parte intera, e parte segata presa da animal bovino
[…]
k_ Mezzo tumore steatomatoso, così sezionato dal Prof. medesimo, dopo l'operazione fatta il 7 marzo 1837 nella Clinica dell'Università medesima, ridotto a puntapetto, e che nella tessitura, trasparenza e pulitura somiglia l'agata più ricercata […]
Tutti questi pezzi […] servono a provare l'effetto di quel processo che studiai e ottenni, per avvicinarmi a raggiungere lo scopo di bandire le fragili cere e le mostruose essicate (sic) naturali preparazioni, dagli attuali gabinetti anatomici, patologici, e naturali sempre sussidiarie, deperibili, e per natura loro imperfette […].
Offrendo questo mio sistema il mezzo alle scienze di avere gli esemplari in natura, e tali da poter servire a pubblica istruzione alle virtù di conservare identici gli ornamenti in luogo di busti o statue marmoree supplenti sempre della natura; alla gratitudine ed alle passioni di possedere perpetuamente gli oggetti che le danno causa
[…].

[…] Through extensive studies and repeated applications, I succeeded in discovering the means of artificial petrification of fleshy beings, which science and the arts lamented losing with the death of the Bellunese Girolamo Segato, who died with his secret. Some samples of his work are preserved in the Cabinet of Natural History of the I.R. University of Padua. Once again, I overcame nature in one of her primary rights, which is the destruction of beings through decay. […] I attribute to myself the duty of offering to my homeland […] the first steps of my new type of innovation. These consist of:

a_ Two pieces of the aorta, one intact and one cut, taken from bovine animals.
[…]
k_ Half a steatomatous tumor, dissected by the Professor himself after the surgery performed on March 7, 1837, at the University Clinic, reduced to a brooch, and resembling in texture, transparency, and polish the most sought-after agate.

All these pieces […] serve to demonstrate the effects of the process I studied and achieved, aiming to replace the fragile waxes and monstrous dried natural preparations currently in anatomical, pathological, and natural cabinets—always subsidiary, perishable, and inherently imperfect. […]

Offering this system to science provides the means to have specimens in their natural state, useful for public instruction. It also preserves the ornaments, substituting busts or marble statues, perpetuating the objects of gratitude and passion.

In the letter, the 27-year-old Messedaglia presents himself as a continuator of Girolamo Segato's studies and offers his preparations as a gift to the city of Verona, requesting they be evaluated by a competent commission.

The petrifier emphasizes both the scientific and moral value of his discovery: he claims that, through the petrification of human tissues, it is possible to create anatomical preparations more faithful to reality and thus more useful for educational purposes than wax models or dried preparations. He also assigns a civic and social value to his invention, suggesting that preserving the bodies of the deceased could replace less authentic representations like statues[18].

In response to the scholar's request, the Municipal Representation of Verona delegated the evaluation of his preparations to the city's Academy of Agriculture, Sciences, and Arts. The institution formed a commission comprising two physicians and a chemist, who, along with the Academy's perpetual secretary, the petrifier, and two municipal assessors, convened on June 29, 1837. However, the commission refrained from issuing a judgment at this meeting, limiting itself to drafting a brief description of the presented items.

To assess Messedaglia's technique, the academics reserved the right to question the young scientist and commissioned him to create two additional preparations[19]. The creation of these anatomical specimens can be reconstructed from documents preserved in the Archive of the University of Padua[20]. In a letter dated July 6, 1837, the Academy of Agriculture commissioned Messedaglia to produce two petrifications[21], specifying the required characteristics:

> *[...]*
> *1° Il preparato anatomico d'una mano compresa l'articolazione, fatto in modo, che il dorso rimanga coperto dei comuni tegumenti, colle ugne e la palma sia scoperta, e manifesti i due sistemi suoi proprj, muscolare, e tendinoso.*
> *2° La metà d'un cuore umano verticalmente tagliato sicché possa vedersi così il suo interno che i vasi.*
> *[...]*
>
> *[...]*
> *1° The anatomical preparation of a hand, including the joint, made in such a way that the back remains covered with its usual tissues, along with the nails, while the palm is exposed, showing its muscular and tendinous systems.*
> *2° Half of a human heart, cut vertically so that both its interior and vessels are visible.*
> *[...]*

These commissioned pieces were completed promptly. In a letter dated August 16, 1837, Messedaglia informed the Faculty of Medicine in Padua that he had sent the requested preparations with a request to forward them to the Accademia di Agricoltura[22]. The hand (Fig. 1) and the heart (Fig. 2), prepared by Messedaglia and marked with the seals of the University of Padua[23], were presented to the same commission that had examined the scholar's initial experiments in June of that year.

The Veronese academics convened on August 21, 1837 to evaluate Messedaglia's work and they defined it as equivalent to that of Segato. The commission offered the following observations:

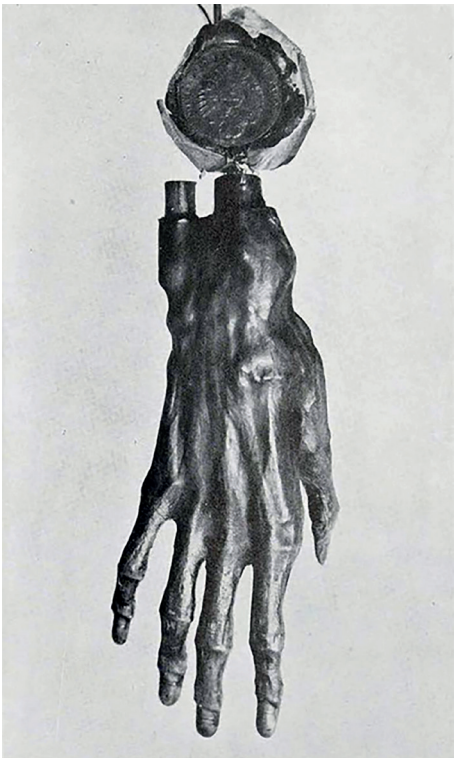

Fig. 1. The hand petrified by Messedaglia, photographed in 1934.

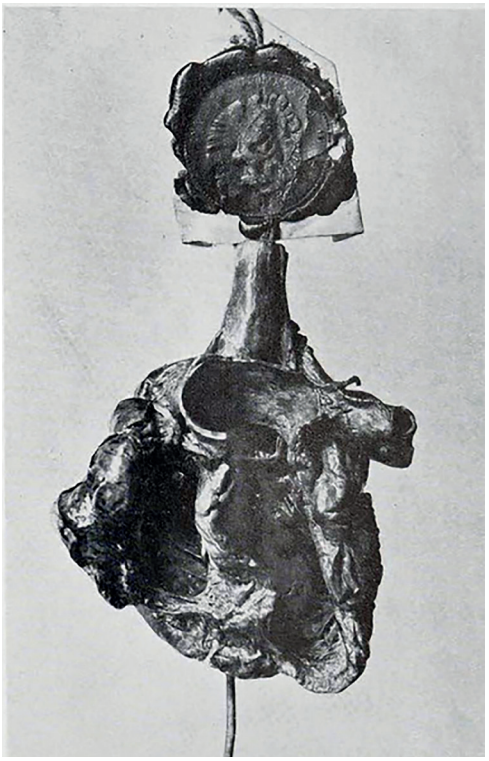

Fig. 2. The heart petrified by Messedaglia, photographed in 1934.

a_ I pezzi in discorso offrono una durezza che può dirsi cornea, tale manifestandosi all'opera del coltello
b_ Mostrano un'evidente e sensibile diminuzione, tanto nel volume che nel peso dallo stato supposto preesistente
c_ I caratteri fisici esterni della superficie, quanto al cuore e alla palma della mano non possono bene determinarsi, per essere stati coperti di vernice; il colore per altro è in ambidue i pezzi è smarrito […].
d_ In questi due pezzi si rimarcano conservate ed apparenti le parti tutte sezionate e messe a scoperto, rappresentanti il loro stato anatomico naturale.
e_ Quanto alla durabilità dei pezzi, siccome devesi esperimentare l'azione prolungata degli agenti esterni, aria, luce, calorico, umidità etc così atteso il breve periodo che li abbiamo in nostro potere non possiamo esporre un definitivo giudizio […].
Adunque la Commissione […] conchiude, che il metodo del Messedaglia può equivalere a quello del Segato.

a_ The pieces in question exhibit a hardness that can be described as horn-like, evident when subjected to the knife.
b_ They show a noticeable and significant reduction in both volume and weight compared to their presumed original state.
c_ The external physical characteristics of the surface, particularly for the heart and the palm of the hand, cannot be precisely determined due to their coating with varnish. However, the color of both pieces is faded.

d_ In these two specimens, all dissected and exposed parts are preserved and visible, representing their natural anatomical state.
e_ Regarding the durability of the specimens, since the prolonged effects of external agents such as air, light, heat, and humidity need to be tested, a definitive judgment cannot yet be provided.
Thus, the Commission concluded that Messedaglia's method could be considered equivalent to Segato's.

Messedaglia's specimens generated cautious enthusiasm. The commission refrained from expressing a definitive judgment due to the inability to test their durability and noted certain defects, such as their loss of weight, color, and volume. By Messedaglia's request, the artifacts were donated to the Academy of Agriculture's Museum.
Luigi Messedaglia's 1934 account[24], informs that the petrifications had been transferred to the Verona Civic Museum of Natural History, where they are currently preserved. Although not on public display, the heart and hand appear to be in good condition (Figs. 3-4). Both are marked with the Habsburg seal of the University of Padua (Fig. 5) and seem unchanged over time.
In 1838, Messedaglia competed for the Industry Prize organized by the *Imperiale Regio Istituto lombardo-veneto di Scienze, Lettere e Arti* [Imperial Royal Lombard-Venetian Institute of Sciences, Letters, and Arts], receiving an honorable mention[25].
In 1842, he participated in a competition organized by the Academy of Sciences, Letters, and Arts of Verona for residents of the province who believed they had invented or improved a mechanism useful to the arts and crafts[26]. Messedaglia exhibited nine pieces made from human and animal bodies[27]. Once again, his discovery did not achieve the desired recognition. The commission's report[28], dated August 9, 1842, states the impossibility of forming an opinion regarding the preparations:

[…] non essendo a loro cognizione il processo da esso tenuto, ed i mezzi adoperati per giungere ai risultati apparenti dai nove *pezzi presentati, non possono decidere se essenzialmente differisca, o di assai si allontani dai metodi seguiti dagli altri molti preparatori […]. La considerazione della niuna differenza de' preparati del Messedaglia da quelli ottenuti con altro de' soliti processi, porta di necessità a conchiudere non esservi […] alcun merito di utilità superiore. Potrebbe esso tuttavia consistere nella facilità dell'applicazione, nell'economia dei mezzi, e di tempo, per raggiungere lo scopo prefisso: ma a constatare queste proprietà, e tali supponibili mezzi, si esige ad ogni modo la perfetta conoscenza della via tenuta dal preparatore Sig.r Messedaglia, e dei varj procedimenti che a quella conducono. […] Ad ogni modo il Sig.r Messedaglia merita ogni sorta di elogio pella costanza colla quale segue i suoi utili studj, e per parere degli scriventi questa E. Accademia dovrebbe animarlo coi più benigni incoraggiamenti, stimolarlo a proseguire questa nobile carriera, accertandolo che come concittadino essa si terrebbe, e si terrà onorata di poterlo quando che sia premiare per prima come vero inventore di un nuovo metodo di anatomiche preparazioni, invitandolo però per tale scopo a seguire l'esempio nobilissimo del cav. dr. Tranchina e del chimico Zanon, pubblicando il suo segreto (o confidandolo alla lealtà di qualche corpo scientifico) come unico mezzo per rilevarne la reale novità, o almeno, con adattati esperimenti, la positiva superiorità, a confronto degli altri conosciuti.*

Fig. 3. The hand petrified by Messedaglia, photographed in 2024 (back and palm views).

Fig. 4. The heart petrified by Messedaglia, photographed in 2024.

Fig. 5. Detail of the Habsburg seal of the University of Padua.

[…] Not being aware of the process used by him or the means employed to achieve the apparent results from the nine presented pieces, they cannot determine whether his method fundamentally differs from or significantly departs from those used by many other preparators. […] The lack of any clear distinction between Messedaglia's preparations and those obtained through other conventional methods leads to the inevitable conclusion that there is no particular merit of superior utility. It could, however, consist of ease of application, economic means, and time efficiency in achieving the intended goal. To verify these attributes and such presumable methods, complete knowledge of the approach taken by Mr. Messedaglia and the various procedures leading to it is essential. […] Nonetheless, Mr. Messedaglia deserves all forms of praise for his perseverance in pursuing his valuable studies, and in the writers' opinion, this Esteemed Academy should encourage him warmly, urging him to continue this noble career. It should also assure him that, as a fellow citizen, it would be honored to reward him as the true inventor of a new method for anatomical preparations, encouraging him to follow the noble example of Cav. Dr. Tranchina and Chemist Zanon by publishing his secret (or entrusting it to the loyalty of a scientific body), as the only means to ascertain its true novelty or, at least, its definitive superiority compared to other known methods.

The Academy thus denied Messedaglia the coveted recognition, judging that his method did not represent an improvement over existing ones. The institution also requested that the scholar disclose his technique. However, Messedaglia, likely hoping to profit from his invention once it gained wider acclaim, chose to maintain secrecy.
Biographical information about Messedaglia after 1842 is relatively scarce. The scientist, who had married in 1834 and fathered two children, sought opportunities in France. He spent some time in Paris[29] where he died in 1845, leaving his widow a manuscript containing the explanation of his secret technique.
In 1891-1892, during the Palermo National Exhibition, the scientist's descendants attempted to generate public interest in Messedaglia's work by exhibiting a preparation created by their grandfather. They hoped to sell the document detailing his technique. However, this effort also failed to attract the desired attention. Subsequently, the manuscript was entrusted to an intermediary for its sale, but this individual stole the document, resulting in the definitive loss of the petrifier's secret.
Although Messedaglia's premature death and his insistence on secrecy limited the spread of his invention, his work did leave traces. The hand and heart petrified for the Academy of Agriculture are still preserved at the Verona Civic Museum of Natural History, attesting to the technical quality of his specimens. In 1934, Luigi Messedaglia revived the memory of his ancestor with a commemorative essay, framing him as the "Veronese Segato." Yet his legacy is ambivalent: in the scientific historiography of anatomical preparation, Messedaglia is often seen as a "minor" figure, overshadowed by Segato and Gorini. In literature, however, he inspired Luigi Pico and other poets, embodying the romantic image of the man who bends nature's laws to wrest a fragment of eternity.
Petrification also resonates with other European traditions: in France, Honoré Fragonard's 18th-century "écorchés" and 19th-century embalming experiments created hybrid objects of science and art; in Germany, anatomical museums in Berlin

and Jena explored tissue preservation; and, more distantly, the plastination techniques developed by Gunther von Hagens in the late 20th century can be seen as heirs to this Italian lineage.

Conclusions

The various types of preparations created (or merely theorized) by Messedaglia allow to assess the meaning of petrification within the cultural context in which it was developed. This technique falls between medical practice, scientific curiosity, and artistic form. Messedaglia did not only produced didactical specimens for the Anatomical Cabinet of the University of Padua[30], but also created peculiar objects such as a brooch adorned with a petrified steatomatous tumor. Among the possible uses of his invention, he proposed the preservation of the bodies of the deceased to replace busts or marble statues. This particular application of petrification, which Messedaglia never actually implemented, was the one that most captured the imagination of the poet Luigi Pico. In one of his sonnets, Pico envisions his own petrified body and imagines the consolatory effect this simulacrum would have on his family.

Convitato di pietra, all'allegria,
Al dolor io sarò ne'patrii ostelli;
E per pietosa illusïon saria
Men dolente mia madre e i miei fratelli31.

A stone guest, at joy and grief,
I shall remain in my ancestral home;
And through compassionate illusion,
My mother and brothers would grieve less.

The literary exaltation of petrification and the idea that the technique could be employed to transform the remains of the deceased into monuments to their memory illustrate how attitude toward death and corpse exposure has evolved from the early 19th century to today. As Philippe Ariès's study *Western Attitudes Toward Death From The Middle Ages to The Present* points out, starting in the 17th century, increased life expectancy turned death from a normal element of everyday life into a disruptive event. This cultural shift made it increasingly difficult to accept the loss of loved ones. According to Ariès, the desire to maintain a connection with the deceased, combined with the progressive secularization of society, gave rise to the cemetery cult, which maintained relationships with the deceased through visits to burial sites. It also spurred practices such as burying loved ones in private homes or preserving their bodies for display[32].
The literary celebration of the petrifier as someone capable of eternalizing the virtues of the deceased finally illustrates how the meaning of embalming has changed over a relatively short period. In the 19th century, the body was to be preserved as a monument to the memory of the deceased. Less than 150 years later, studies by Ariès and

Geoffrey Gorer highlight the prevalence of an attitude of denial toward death, with embalming used to present the corpse as "an almost living one"[33].
Without wishing to uncritically adopt the perspective expressed by Ariès and Gorer -which in recent decades has been questioned by several thanatologists for its interpretative rigidity[34]- we would like to emphasize that the spread of cadaver preservation in the 19th century does not merely represent an attempt to deny death, but rather reflects a complex cultural landscape. Within it, aesthetic impulses toward the monumentalization of the body, the pursuit of scientific progress (encouraged by the increased availability of bodies), and cultural influences that assign a civilizing function to the cult of the dead (and thus also to the preservation of their remains) are all interwoven.

Acknowledgements
We would like to thank Prof. Linda Bisello for her support.

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NAL (Nuovo Archivio Legnaro), Facoltà Medico chirurgico-farmaceutica: Carteggio 1818-1847, busta 109.

1. We have chosen to adopt the spelling "Giambattista Messedaglia" in this article, also used by Luigi Messedaglia in his work *La "pietrificazione" dei tessuti animali e un emulo veronese di Girolamo Segato*, published in Atti e memorie dell'Accademia di Agricoltura Scienze e Lettere di Verona, 111, 1934, pp. 1-33. However, in archival sources, the scholar's name is sometimes listed as "Gio' Batta"
2. The Scapigliatura was a literary and artistic movement that developed in Milan between the 1860s and 1880s. This literary current is characterized by an anti-bourgeois sentiment that often led to the choice of macabre and unsettling themes, including autopsies, descriptions of corpses, and anatomical preparations. Among the possible examples of Scapigliatura works where the anatomical preparation plays a central role we recall the short story *Storia di una gamba* by Iginio Ugo Tarchetti, the novella *Un corpo* by Camillo Boito, and the poem *A un feto* by Emilio Praga.
3. Muzzi L, Epigrafi e poesie in lode di Girolamo Segato. Firenze: Batelli e figli; 1835. p. 3.

4. Luigi Pico da Interneppo (1819-1851) was a Friulan poet who died by suicide. In addition to *Zooliturgia*, Pico dealt with medical and anatomical themes in his youthful poems *Il cholera morbus* and *Il notomico ed il cadavero*. Pico L, Cenni medico-filosofici intorno agli estremi confini della vita e tetralogia con note scientifiche, Puntata 1: Il cholera. Padova: Tipografia del Seminario; 1847. Id., Il notomico e il cadavero, Zooliturgia e la sequenza de' morti. Padova: Tipografia della Minerva; 1844. The dedication in *Zooliturgia* explicitly establishes a connection between the work of Segato and Messedaglia; the value Pico attributed to the petrifiers' technique of corpse preservation is declared in the final epigraph, where he urges Messedaglia to reveal the petrification technique to prevent it from being lost once again: "PER TE - JERONIMO SEGATO BELLUNESE- […] E PER TE PURE - JOANNI BATTISTA MESSEDAGLIA - DA LEGNAGO - CHE PIÙ POSSENTE DI SEGATO UN'ALTRA VOLTA STRAPPASTI DI BOCCA - A QUELLA TERRIBIL DEA - QUESTA ADAMITICA ARGILLA, -POCHI CARMI- MERAVIGLIANDO PENSAI. - O AMICO MESSEDAGLIA - PRIA CHE IL SONNO ETERNO TI COLGA- SPIEGA ALL'ITALIA E AL MONDO - IL SUBLIME ENIGMA - PERCHÈ AL TERZO INTERROGATORE - POTREBBE NON RISPONDERE PIÙ MAI - INDISPETTITA, QUASI DISSI - LA NATURA" [FOR YOU - JERONIMO SEGATO OF BELLUNO - […] AND FOR YOU TOO - JOANNI BATTISTA MESSEDAGLIA - OF LEGNAGO - WHO, MIGHTIER THAN SEGATO, ONCE AGAIN WRESTED FROM THE MOUTH OF THAT TERRIBLE GODDESS - THIS ADAMIC CLAY, - FEW SONGS - I WROTE IN AWE. - O FRIEND MESSEDAGLIA - BEFORE ETERNAL SLEEP CLAIMS YOU - REVEAL TO ITALY AND THE WORLD - THE SUBLIME ENIGMA - BECAUSE TO THE THIRD QUESTIONER - SHE MAY NEVER AGAIN RESPOND - VEXED, I ALMOST SAID - NATURE]. Id., Zooliturgia, p. 45.
5. Messadaglia L, La "pietrificazione" dei tessuti animali ed un emulo veronese di Girolamo Segato. In: Atti e memorie dell'Accademia di Agricoltura Scienze e Lettere di Verona. Accademia di Agricoltura Scienze e Lettere di Verona 1934;111:29.
6. The Capuchin Order played a significant role in the spread of mummification in Sicily. Examples of mummification can be seen in numerous churches of the Order, including those in Comiso, Savoca, Gangi, Burgio, and Palermo.
7. Ibid.
8. In addition to the medical practice of preserving normal or pathological organs, the conservation of parts of a body imbued with particular symbolism is also a practice found in the political realm. Consider, for example, the case of preserving the heart of Louis XVII, the Dauphin of France, as documented in: Cappelletti L, La leggenda di Luigi XVII. Livorno: Stabilimento tipografico S. Belforte e C.; 1895. pp. 81-88.
9. An example of cadaver preservation for political and propagandistic purposes is the attempt to petrify the body of the patriot Giuseppe Mazzini by Paolo Gorini, documented in the work Gorini P, La conservazione della salma di Giuseppe Mazzini. Genova: Tipografia del Regio Istituto Sordo-muti; 1873. Another incident that illustrates the importance of creating secular relics during the period in question is documented in a letter dated January 29, 1863, from Giuseppe Garibaldi's correspondence. In the letter, the revolutionary thanks the Cagliari-based petrifier Efisio Marini for the gift of a medal made from the blood of the wound he received during the clashes at Aspromonte. Additionally, Garibaldi authorizes Marini to donate another medal made from his petrified blood to the municipality of Cagliari. Garibaldi G, Edizione nazionale degli scritti di Giuseppe Garibaldi: Epistolario. VIII (1834-1871). Cappelli L, (ed.) 1991. p. 26.

10. Piombino - Mascali D, Giovan Battista Rini e Paolo Gorini: due personaggi a confronto. AMHA 2018;16(1):145-156. According to Piombino-Mascali, the main substances used by Rini were mercury and arsenic, two elements commonly employed for cadaver preservation in the 19th century.
11. The work in question was first published in the Monographic study by Carli A, I manoscritti di Luigi Rovida e le formule segrete di Paolo Gorini in Storia di uno scienziato. Bergamo: Bolis Edizioni; 2005.
12. Cisotti G, G. Segato. Canzone. Treviso: Tipografia dell'Istituto giovani abbandonati; 1866. p. 8.
13. The epitaph of Girolamo Segato, composed by the epigraphist Luigi Muzzi and engraved on the petrifier's funerary monument located in the Great Cloister of Santa Croce, reads: "Qui giace disfatto Girolamo Segato, / che vedrebbesi intero pietrificato, / se l'arte sua non periva con lui. / Fu gloria insolita dell'umana sapienza, esempio d'infelicità non insolito".
14. The dating of Messedaglia's experiments to 1837 is not a neutral detail but suggests a possible connection between the start of the Veronese scholar's studies and the wave of interest sparked by Girolamo Segato's death in 1836.
15. Messadaglia L, Ref. 5. pp. 1-34.
16. Bonuzzi L, "Luigi Messedaglia". In: Enciclopedia Treccani. [https://www.treccani.it/enciclopedia/luigi-messedaglia_%28Dizionario-Biografico%29/], [17 july 2024].
17. AASLV, june 1837.
18. In Paolo Gorini's booklet dedicated to the embalming of Giuseppe Mazzini's body, arguments are presented that closely resemble those in Messedaglia's letter. Consider, for example, the following excerpt: "D'altronde se è indubitabile, come eloquentemente disse il Cantor dei Sepolcri che: *a egregie cose i forti ànimi accèndono / l'urne dei forti* …. Quanto più grande entusiasmo non susciterà la vista di loro stessi conservati perpetuamente e resi più incorruttibili, che se l'anima tuttavia continuasse ad agitarli!!" ["Moreover, if it is undeniable, as the Singer of *Sepolcri* eloquently said: To noble deeds great spirits are inspired / By the urns of the great.. How much greater enthusiasm will be sparked by the sight of their very selves, preserved perpetually and made even more incorruptible, as if their soul still continued to move them!"] Gorini P, Ref. 9. p. 7.
19. AASLV, busta 184, 665.
20. Archivio di Stato di Padova; NAL, Facoltà Medico chirurgico-farmaceutica. Carteggio 1818-1847. busta 109.
21. *Ivi*, doc. n. 665.
22. *Ivi*, doc. n. 1047.
23. AASLV, busta 184, 697.
24. Messadaglia L, Ref. 5., pp. 31-33.
25. *Ivi*, pp. 10-11.
26. *Ivi*, p. 11.
27. The complete list of specimens is contained in a letter Messedaglia addressed to the Veronese Academy and includes: a completely de-skinned hand, an astragalus from the same syphilitic individual whose hand had been preserved, a piece of liver already presented to the Academy in 1837, part of a rooster's liver, the chest and part of the neck of a woodpecker, the skeleton and viscera of a dog, the entrails of a starling, petrified human blood, and three fish. *Ivi*, pp. 26-29.
28. *Ivi*, pp. 32-33.

29. Luigi Messedaglia states that in France the petrifier received recognition for his work and commissions for new preparations. (Ivi, p. 14).
30. *Ivi,* p. 17, note 4.
31. Pico L, Il notomico e il cadavero. Zooliturgia e la sequenza de' morti. Padova: Tipografia della Minerva; 1844; p. 54.
32. Ariès P, Western Attitudes Toward Death From The Middle Ages to The Present. Ranum PM (translated by), London: Marion Boyars Book; 1975. pp. 55-82.
33. Ariès P, Ref. 32. p. 102.
34. See, for instance Sozzi M, Reinventare la morte. Introduzione alla tanatologia. Roma – Bari: Laterza; 2009.

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