

# Medical Aspects of Bernini's Statue of Dr. Gabriele da Fonseca (1586? to 1668)

W. Randall Albury PhD<sup>1,2</sup> and George M. Weisz MD FRACS BA MA<sup>1,2</sup>

<sup>1</sup>School of Humanities and Languages, University of New South Wales, Sydney, NSW Australia

<sup>2</sup>School of Humanities, Arts and Social Sciences, University of New England, Armidale, NSW, Australia

## ABSTRACT

A dramatic portrait bust of the physician Dr. Gabriele da Fonseca (1586? to 1668) at prayer is considered by art historians to be one of the finest late works of Gian Lorenzo Bernini (1598–1680), the preeminent sculptor of 17th century Rome. This statue is of medical as well as artistic interest. First, Fonseca is shown wearing his physician's robe, thus celebrating his successful career as a leading medical figure in Rome, holding both Papal and university appointments at the highest level. In addition, the positioning of the statue in a special chapel designed by Bernini highlights Fonseca's role as an influential participant in the introduction of quinine into Europe as a cure for malaria. Last, an examination of the statue's hands identifies a number of pathologies and anatomical anomalies that raise interesting questions, regrettably unanswerable given the information presently available, concerning Fonseca's illnesses and cause of death.

*IMAJ* 2024; 26: 62–66

**KEY WORDS:** hand deformity, history, malaria therapy, medicine and arts, sculpture

Gian Lorenzo Bernini (1598–1680) was the preeminent sculptor of 17th century Rome. Rome's Baroque character is largely due to his enormous output of statues, portrait busts, tombs, fountains, and architectural decorations for that city [1]. During the second half of his career, Bernini was in such great demand that nearly all the commissions he accepted were for popes, cardinals and their relatives, or for foreign rulers [2].

A notable exception, however, and one of Bernini's great artistic triumphs in the last years of his life, was his statue of the physician Dr. Gabriele da Fonseca (1586? to 1668) at prayer [Figure 1A]. This dramatic representation, completed between 1668 and 1670, is the most striking feature of the chapel that Fonseca commissioned Bernini to design for his family in the Roman church of San Lorenzo in Lucina. Although the rest of the chap-

el was completed under Bernini's supervision by other artists, the bust of Fonseca was sculpted entirely by the master himself. In addition to this statue's renown as an outstanding piece of Baroque art, and as part of Fonseca's demonstration of his social standing in Rome, it is also an object of medical interest.

## GABRIELE DA FONSECA'S MEDICAL CAREER

The statue, showing Fonseca in his physician's robe, commemorates his career as a leading medical figure in mid-17th century Rome. Shortly after Fonseca's death one contemporary wrote that he was someone, "whose pre-eminence in medicine fills Rome with the celebrity of his name" [3]. This was a remarkable achievement for a Portuguese *New Christian*, a person whose Jewish ancestors in Portugal had been forced to convert to Christianity in 1497 and were then subjected to increasingly aggressive scrutiny, and in some cases outright persecution, by the Portuguese Inquisition after its establishment in 1536.

While some *New Christians* were fully assimilated, even becoming Catholic clergymen, the majority were treated as second-class citizens by the *Old Christians* in Portugal and in neighboring Spain, where similar forced conversions had earlier taken place in 1492. Many individuals convicted by the Spanish or Portuguese Inquisition of secretly retaining their Jewish faith were executed. Others emigrated to more receptive parts of Europe to escape this harassment and the artificial limitations placed on their careers, such as the 1604 royal decree in Portugal that prohibited anyone of Jewish ancestry from studying or practicing medicine [4].

Although the Papal States and the Medici territories in Tuscany subjected unconverted Jews to various restrictions, they were generally welcoming to *New Christians* and, except during the brutally repressive papacy of Paul IV, 1555–1559 [5], far less suspicious about the sincerity of their conversion. Gabriele's uncle, Rodrigo da

**Figure 1.** The statue of Fonseca: right hand viewed from its lateral aspect showing an exaggerated flexion of the last three fingers, i.e., loose metacarpophalangeal joints

Source: Wikimedia Commons, licensed under the Creative Commons Attribution 3.0 Unported license (<https://creativecommons.org/licenses/by/3.0/deed.en>)



Fonseca (1550? to 1623) relocated from Lisbon to Tuscany where he studied philosophy and medicine at the University of Pisa in the 1570s. After graduating he was appointed to a teaching position, which eventually led to a professorship. In 1615, he obtained an equivalent position at the University of Padua [4].

Gabriele emigrated from Portugal to Pisa to join his uncle in 1603, studying philosophy and medicine at the university under Rodrigo's guidance and began as a lecturer in 1609. He did not remain in Pisa, but moved to Rome in 1611, then to Naples, then back to Rome to become the personal physician of a Spanish Cardinal. This connection led to him serving as a physician at several papal conclaves and ultimately to becoming the chief physician (archiater) to Pope Innocent X and a member of the pope's private council. He also was appointed professor of medicine at the University of Rome, La Sapienza, serving in that capacity from 1646 until his death in 1668 [4,6].

Fonseca published a book of advice for beginning medical practitioners, *Medici Oeconomia*, in 1623 [7]. He must have been an inspiring teacher because he was followed from Pisa to Rome by one of his Italian students, Gavino Farina, who completed his medical doctorate there [8]. Farina later referred to Fonseca as "my most learned teacher ..., a man ever celebrated with ample worthy praises". He also stated that parts of his own book for medical beginners followed the principles "graphically and eruditely explained in full" in Fonseca's *Medici Oeconomia* [9].

Farina's description of Fonseca as a *most learned* man is shown by the contents of the library that Fonseca left behind at his death, which included at least 621 volumes [6]. In addition to medical texts, the collection also contained legal, historical, political, and philosophical works, most of them in Latin but some in Greek, Italian, French, or Spanish [10].

**Figure 2.** The statue of Fonseca: left hand showing osteoarthritic degenerative developments at the proximal interphalangeal joints and nodules on the back of the hand and exaggerated flexion of the left wrist, difficult in a normal joint, possibly a result of neurological damage (central or peripheral) (Source: unidentified photographer, fair dealing extract for educational purposes)



#### FIRST RECORDED CLINICAL TRIAL OF QUININE

While Fonseca's profession is symbolized by his physician's robe in Bernini's statue, a highlight of his medical career is represented by a large painting originally located on the chapel wall just above the statue. Bernini was responsible for all aspects of the chapel design, and his practice in such commissions was to use multiple art forms to reinforce one another. He applied architecture, sculpture, painting, and lighting effects for this purpose. The painting, showing the prophet Elisha pouring salt into the waters at Jericho, is a fundamental element in the overall artistic program of the chapel.

This scene, taken from the book of Kings in the Hebrew Bible, or Second Kings in the Christian Old Testament, occurred when the people of Jericho complained to Elisha about the impurity of their water supply. After Elisha cast salt into it, the waters were miraculously healed, *sanatae sunt* in the Latin of the Catholic Vulgate translation (II Kings 2:21-22). Such a healing miracle evidently alludes to Fonseca's vocation as a healer, but it also has been linked more particularly to his role in the introduction of Peruvian bark into Roman medical practice as a cure for malaria, or as it was called then, *fever* [11].

In the 17th century fever was regarded as a disease itself rather than a symptom of an underlying disease process. Different forms of fever were distinguished, usually based on their duration or periodicity. A continuous fever was one that was uninterrupted, while intermittent fevers went through cycles of alternating intensity and

remission. In tertian fevers, for example, the attacks of elevated temperature and shivering occurred on the first and third day of the cycle, with the third day then counting as the first day of a new cycle. In quartan fevers the attacks occurred on the first and fourth days, according to the same method of counting the last day of one cycle as the first day of the next. The tertian and quartan fevers are now identified by modern researchers as malarial.

Peruvian bark, from which the active ingredient quinine was isolated in 1820, was first sent to Europe by members of the Jesuit Order from their South American missions in the 1630s for possible use as a remedy against fever. In imitation of practices learned from the indigenous inhabitants of Peru, the bark was dried, finely powdered, and mixed with a liquid to be drunk by the patient. Apparently the first European trials of the powder were inconclusive, possibly because of uncertainty among the missionaries about the appropriate tree from which to obtain the bark, and the remedy was consequently discredited [12].

A further shipment of bark, this time collected with more accurate botanical knowledge, was sent to Rome by the Jesuit missionaries in 1645. The arrival of this shipment coincided with a major upsurge of malaria cases around the middle of the 17th century, a pandemic across Europe. By 1647 the pharmacy of the Jesuit Collegio Romano was supplying the powder internationally on a commercial basis, thus it became known as Jesuits' powder as well as Peruvian bark. The remedy was soon being distributed free of charge to poor people living in Rome by a high-ranking

member of the Order, Cardinal Juan de Lugo, who bought it with his own funds for this purpose [12].

Use of the powder, however, continued to be controversial because it was at odds with the principles of classical medical theory and was also denounced in some Protestant countries on religious grounds because of its association with the Jesuits. During a serious outbreak of malaria in Rome in 1653 Cardinal de Lugo asked Fonseca, as the Pope's archiater, to test the effectiveness of the powder. The report of this test is the first reference to a systematic trial of the remedy, and although records of the procedure followed by Fonseca do not exist, in a 1655 book that both de Lugo and Fonseca encouraged and approved for publication, it is stated that he found the powder to be not only harmless to fever patients but also very beneficial to their health (*non modo ... innoxium, sed etiam saluberrimum*) [13,14].

After this experience, Fonseca's confidence in the bark was such that in 1657, when Pope Alexander VII's nephew Cardinal Flavio Chigi was gravely ill with a tertian fever, Fonseca strongly advised treating him with the powder even though Alexander's archiater, Matthias Naldius was opposed to it [15]. Fonseca was allowed to proceed with the treatment and the outcome was successful, a high-profile cure that received considerable publicity.

Positive reports of Fonseca's trial of Peruvian bark for Cardinal de Lugo, and his use of it for the cure of Cardinal Chigi, were soon published not only in Rome (1655) but also in Delft (1659), Copenhagen (1661), and Genoa (1663) [13]. As a result, Fonseca gained an international reputation as an advocate for the new remedy and became an important influence in favor of its adoption across Europe.

#### ANATOMICAL DEFORMITIES IN FONSECA'S STATUE

The third medical element worth noting in connection with the statue of Fonseca is its portrayal of several anatomical anomalies in the elderly physician's hands.

The right hand, viewed from its lateral aspect [Figure 1], shows an exaggerated flexion of the last three fingers, excessive from the normal 100 degrees into a flexion of approximately 80 degrees at the metacarpophalangeal joints. This laxity of the metacarpophalangeal joints on the right hand is not associated with swelling or arthritic inflammatory signs. It is possibly not associated with any pathology in Fonseca's hand but might be an artistic exaggeration by Bernini to reinforce the intensity of Fonseca's grip and the sense of his religious fervor. The dramatic effect of this gesture is something that has impressed art historians such as Wittkower, who wrote that Fonseca's right hand, "clasps the rosary in a grip as desperately hopeful as that

of a drowning person holding on to a life-saving raft" [1].

The left hand, which is apparently clutching the lower chest or epigastrium with extended fingers, shows osteoarthritic degenerative developments at the proximal interphalangeal joints and nodules on the back of the hand [Figure 2].

Of even more interest, from the anatomical point of view, is the severe deformity at the wrist joint: an extensive flexion, not permitted in a normal hand, flexed radially [Figure 2], with a bulge at the medial side of the wrist and a depression at the lateral side [Figure 2], suggestive of a spastic deformity, either severely arthritic or a neurological paralysis.

It would be unusual for Bernini, a skilled artist, to deform a wrist joint in this extreme way unless Fonseca's left wrist was, in fact, pathological or Bernini at least wanted to portray it as such. We can be confident that this feature was not inadvertent because of the prominence of Fonseca's hands in the overall composition, this being an intentionally unconventional statue "in which the play of the hands assumes a heretofore unknown importance" [1].

Unfortunately, the surviving records do not tell us what illnesses Fonseca presented with in his old age or his cause of death. In his will, completed in March 1668, nine months before his death in December of that year, he declared that he was, "healthy, by the grace of God, in body, mind, senses, speech and intellect" [16]. It is difficult to accept that an octogenarian in the 17th century, even a physician who was very attentive to his health, would have had no physical impairments of any kind. Perhaps osteoarthritic knuckles and nodules on the dorsum of the hand, as shown in Figure 2, were considered at the time to be ordinary inconveniences of old age rather than the effects of ill-health. But the deformation of his wrist cannot be dismissed so easily.

In Fonseca's will, which was sworn by him before eminent witnesses and notaries, there are statements that express his pride in his medical achievements and his desire for them to be commemorated in his family chapel [16]. Therefore, it is unlikely that he would have claimed to be healthy in body if his left wrist had been seriously deformed at that time. A misstatement like this in a sworn legal document would have cast doubt on his medical competence and compromised his posthumous reputation.

It is possible, however, that he experienced a medical or traumatic event during the time between the completion of his will and his death nine months later. So, Bernini's portrait statue, which was sculpted by him after Fonseca's death, may have reflected an actual wrist deformity of recent origin. Alternatively, the statue's wrist may have been distorted

by Bernini in an uncharacteristically extreme way to heighten the emotional effect that his work would have on the viewer [17]. In either case, Bernini produced a significant anatomical deformity in his statue of Fonseca, irrespective of whether Fonseca actually presented with this condition.

## CONCLUSIONS

Bernini's statue of Gabriele Fonseca, primarily religious in purpose, is also of medical interest because of the features it displays and the context in which it is placed. Fonseca's successful career as a physician is commemorated both by the robe he is shown wearing and by the painting of a healing miracle, which originally hung on the wall just above his statue. In addition, the appearance of his hands reveals pathologies and anatomical anomalies that he may or may not have shown, but that were certainly depicted intentionally by Bernini. Inquiring into Bernini's possible reasons for showing this deformity is a matter for art historians, but in the absence of reliable information about Fonseca's illnesses and cause of death, there is little more that medical historians can offer.

## Correspondence

Dr. G.M. Weisz

School of Humanities and Languages, University of New South Wales, Sydney, NSW Australia

Email: gmweisz1@aol.com

## References

1. Wittkower R. Gian Lorenzo Bernini: The Sculptor of the Roman Baroque. London: Phaidon; 1966: 2, 26, 89.
2. Bacchi A, Hess C, Montagu J. Bernini and the Birth of Baroque Portrait Sculpture. Los Angeles: J. Paul Getty Museum; 2008: 37, 239.
3. Barry R. New documents on the decoration of Bernini's Fonseca Chapel. *Burlington Magazine* 2004; 146 [no. 1215]: 396-399, at 399, quoting Giovanni Antonio Bruzio (1642-1692).
4. Nelson Novoa JW. Medicine, learning and self-representation in seventeenth century Italy: Rodrigo and Gabriel da Fonseca. In: Andrade A, Torrão J, Costa Jorge, Costa Júlio, eds, *Humanesimo, diáspora e ciência (séculos XVI e XVII)*. Porto, Portugal: Universidade de Aveiro, Biblioteca Pública Municipal do Porto; 2013: 213-32.
5. Mateus SB, Nelson Novoa JW. A sixteenth century voyage of legitimacy. *Hispania Judaica Bulletin* 2013 [5773]; 9:169-192, at 178.
6. Fiorentini R, Nelson Novoa JW. Gabriel da Fonseca. Un medico portoghese nella Roma del Seicento. [Gabriel da Fonseca. A Portuguese doctor in seventeenth-century Rome]. *Archivio della Società romana di storia patria* 2020; 143: 277-311, at 277-282.
7. Fonseca G. Medici oeconomia: In qua omnia quae ad perfecti medici munus attinent breuibz explanantur. [The physician's stewardship: in which all things that pertain to the duties of the perfect physician are briefly explained]. Rome: Phaeum; 1623.
8. Pilo R. Scienza e politica negli scritti del medico di corte Gavino Farina. [Science and politics in the writings of the court doctor Gavino Farina]. *Estudis: Revista d'Història Moderna* 2010; 36: 175-187, at 177.
9. Farina G. Medicinale patrocinium ad tyrones sardiniae medicos. [Medical sponsorship for novice physicians in Sardinia]. Venice: Sarzina; 1651, 34.
10. Nelson Novoa JW. Libros y saberes en la biblioteca de un médico cristiano nuevo portugués en la Roma del Barroco. [Books and knowledge in the library of a Portuguese New Christian doctor in Baroque Rome]. In: Maillard Álvarez N, Fernández Chaves M, eds, *Bibliotecas de la monarquía hispánica en la primera globalización (siglos XVI-XVIII)*. Zaragoza, Spain: Prensas de la Universidad de Zaragoza; 2021: 63-91.
11. Dobias J. Gian Lorenzo Bernini's Fonseca Chapel in S. Lorenzo in Lucina, Rome. *Burlington Magazine* 1978; 120 [no. 899]: 65-71, at 70.
12. Canezza A. Il terzo centenario della corteccia di china in Roma (1632-1932). [The third centenary of cinchona bark in Rome (1632-1932)]. *Capitolium* 1932; 7: 591-598, at 593-595.
13. Jarcho S. Quinine's Predecessor: Francesco Torti and the Early History of Cinchona. Baltimore: Johns Hopkins University Press; 1993: 30, 283 (nn. 14, 21).
14. Conygius A. Pulvis peruvianus vindicatus de ventilatore. [Peruvian powder vindicated against the doubters]. Rome: Corbellietti, 1655: 7, 16.
15. Badus S. Anastasis corticis peruviae [The Revival of Peruvian bark]. Genoa: Calineant; 1663: 238.
16. Nelson Novoa JW. Gabriel da Fonseca. A new Christian doctor in Bernini's Rome. In: Andrade AML, Miguel Mora C de, Torrão JMN, eds, *Humanismo e ciência: antiguidade e renascimento*. Aveiro, Portugal: Universidade de Aveiro Editoria; 2015: 227-248, at 235.
17. Careri G. Bernini: Flights of Love, the Art of Devotion. Chicago: University of Chicago Press; 1995: 37.

## Capsule

### Microbiota never working alone

The microbiota plays an important part in host defense by excluding pathogenic species in a process called colonization resistance. This property is elusive and not endowed by one or two species alone. **Spragge** and co-authors discovered that colonization resistance is a higher order effect of a diverse community of bacteria underpinned by essential key species such as *Escherichia coli*. In vitro and in vivo experiments showed that given the right composition, a diverse

microbiota will collectively consume the nutrients that an incoming species requires to grow and establish in a host. Colonization resistance is predictable because if the symbiont community encodes many of the same (or similar) proteins as the pathogen, then it provides better colonization resistance and can potentially deliver health benefits to the host.

*Science* 2023; 382: 1259  
Eitan Israeli