

Saint Januarius's Blood Liquefaction: Starting from 1389 to Today, the Miracle has Never Happened



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Abstract

With this writing, we want to show that even from the first liquefaction of the blood of Saint Januarius, as far as we know which took place in 1389, it could be understood that this event was not extraordinary. The transition from a solid to a liquid state and vice versa occurred without the action of the Almighty, as in all the liquefactions that followed the first one. In fact, the theology of Thomas Aquinas, Augustine of Hippo, and even scientific logic, confirm this statement. The Miracle, an action possible only for God, occurs in an instant (that is, in a time equal to zero), so that neither man nor science will ever be able to understand or replicate it. However, these considerations do not diminish the value of the Saint. He, in addition to his commitment as a Christian, gave to Jesus Christ the greatest thing a man can give: his life.

Keywords: Saint Januarius; Blood Liquefaction; Prodigy; Miracle; Instant Action

Introduction

The blood of Saint Januarius is one of the most important and beloved relics of Christianity. The number of faithful present around the world is enormous [1-4]. The relic has always been investigated, always discussed, loved by many but also dismissed as a supposed medieval forgery created by the Roman Catholic Church to deceive the faithful. Therefore, we consider it appropriate to continue investigating this relic. For this reason, recently, we have studied the blood of Saint Januarius with its many problems, always present, that often intertwine with each other and make the understanding of the "liquefaction" event difficult [5-9]. Who knows if the Ecclesiastical Authorities had noticed and understood, from the very first liquefaction, that such an event could not be a Miracle?

The experiments carried out, with the aim of verifying whether there is blood in the two ampoules and whether its liquefaction is an extraordinary (miraculous) event, are few [10-13]. This is also due to the difficulties posed by the Catholic Church. The first three, conducted between 1902 and 1991 [10-12], unlike the fourth, did not provide consistent results. These are uncertain results

that do not resolve doubts about the contents of the ampoules [5-9]. In any case, obtaining different results when investigating a relic is normal, as they are produced by researchers coming from or belonging to different backgrounds. In 2010, the fourth experiment [13], conducted by Prof. Geraci and his team from the Department of Molecular Biology at the University Federico II in Naples, was a flash of light in the darkness. It addressed the issue from a scientific perspective, ruling out the Miracle and showing, at the same time, that the contents of the ampoules are almost certainly blood. The only criticism that can be made of this study is the venue where it was published: a newspaper.

In any case, the lack of a clear and comprehensive answer over the centuries has created confusion among the faithful. In Rome, the liquefaction of Saint Januarius's blood is claimed to be a prodige, meaning a natural event with a transcendental tendency; the event remains a natural phenomenon that occurs, obviously without divine intervention, following the laws of nature. In Naples, too, the event is considered a prodige, but the behavior of all participants in the blood liquefaction phenomenon behave

as if they were witnessing an extraordinary event. Furthermore, no action is taken for the faithful who are en masse speaking of a miracle [9]. Even today there are priests who ignore the fact that, according to the Catholic Church, it is merely a prodige, while a minority, in good faith, believes that the liquefaction of Saint Januarius's blood is due to the intervention of the Almighty.

We ask ourselves: can what is written above be interpreted as a lack of communication between the Vatican and the Archdiocese of Naples? Certainly not! and we are convinced of that. Today, the faithful of Saint Januarius in Naples and in Campania number in the millions, which, when added to those scattered around the world, especially in major Metropolitan areas, become tens of millions. Could it be due to this? We are not in a position to provide a clear answer. In any case, we do have some doubts about the behavior of the Ecclesiastical Authorities when it comes to relics (especially medieval ones).

Analysis

Speaking of miracles, to seek clarification on such a complex topic, we turn to an authority who is both a Saint and a Doctor of the Catholic Church: Thomas Aquinas, a master in Philosophy and Theology, and a pillar of the Catholic Church [14,15]. We do this through his writings. He deduced that the actions of God, Immutable and Eternal, are instantaneous. The Miracle: "it is a sensitive effect produced by God that transcends all the forces of nature". His power over nature is absolute. Otherwise, the belief of many is that today science has the ability to explain everything. Where it cannot, it will do so at the appropriate time when continuously growing scientific knowledge allows it. We think differently! Assuming that the Almighty exists (and for us He does), what is within His capabilities cannot also be within those of humans and science. Otherwise, the hypothesis we proposed would be incorrect.

So, for it to be possible only for God, what characteristic must a Miracle have? The event must occur in an instant, that is, in a time equal to zero [14,15]. With this characteristic, humans and science will never be able to understand it. Let us consider, as a classic example of a Miracle, the healing of a human being, which can occur more or less quickly. The speed of healing, being inversely proportional to the time, will increase as the time taken for the healing becomes smaller and smaller. At the limit, when the time becomes zero, the speed of healing turns out to be infinite. In a Miracle, the healing (where all the chemical changes the body has undergone disappear and where every element, molecule, and structure returns to its place as it was before the illness struck) occurs with Infinite speed.

An infinite speed makes no sense in the world of science. For Physics, the maximum speed, a constant of the universe, is that of light ($c = 299,792,458 \text{ m/s}$), which only photons have because they are massless. All other particles, even those with almost zero mass (like neutrinos), cannot reach the speed of light. The Miracle,

reflecting on Saint Thomas, is an extraordinary event that will allow humans and science to say only that it has occurred. Nothing else. Even Augustine of Hippo, Saint, Doctor of the Catholic Church and a pillar in the defense of Christianity, a scholar of these issues, considers God to be Eternal. After all, God said to Moses, "I am who am", as it is written in Exodus, chapter 3, verse 14 [16]. God does not say I was or I will be, but "I am." He is beyond time, space, and change. Therefore, He has dominion over all points of the universe (even considering its expansion) at all times (for us, about 13.8 billion years) and consequently, being outside of space and time, His Action can only be instantaneous [17,18]. More simply, even if broadly speaking, we can say that God sees all of creation simultaneously in space and time. The next miracle that will occur, He has already performed because He is "I am."

Conclusion

Observing, step by step, the development of the liquefaction event of the blood of Saint Januarius, we can see what happens from the moment the Reliquary is taken to be shown to the faithful. The blood contained in the ampoules is in a solid state. The archbishop, under the watchful eye of the faithful, shakes the Reliquary with precise movements that are now codified by a very long, let's say secular, tradition. Until the liquid begins to dissolve, eventually reaching complete liquefaction before returning to a solid state. The Archbishop, the Monsignors and Priests, the devotees of the Saint, and members of the press have the attitude of those witnessing a Miracle. However, the event does not happen in an instant. Therefore, we can say that there is no Miracle; only a natural phenomenon.

It can happen that, even after several attempts by the Archbishop, the blood does not change state and remains solid. For the faithful and the people of Naples, the absence of liquefaction means that disasters or catastrophic events will eventually strike the city. For the Saint's devotees, now is the time for prayer, directed to Saint Januarius himself, so that the possible disasters foretold by the failure of liquefaction spare the city and the people of Naples. However, today we know that the blood in the ampoules can liquefy naturally [13]. Unfortunately, at the same time, science still cannot understand the circumstances that allow the blood in the ampoules to undergo these state changes: from solid to liquid and vice versa.

With this state of affairs, the problem of blood would still remain open. However, taking into account that:

- 1) the lengthy observations conducted, both on the large ampoule of the Reliquary in the Cathedral and the ampoule of the Camaldoles in Geraci's laboratory, showed the behavioral similarities of their contents. In both cases, the transitions from solid to liquid occurred spontaneously, just as with the emitted substance, which acted like a glue, depositing itself between the stopper and the neck of the ampoule, it nearly impossible to open,

2) the difficult opening, the withdrawal, and the analysis of the content of the Camaldoiese vial demonstrated that there was blood there,

It could be said that the large vial of the Reliquary contains blood, although to be 100% certain a microchemical analysis is necessary. Unfortunately, this is true, but verification is impossible because the Church does not allow the vials to be opened for the purpose of taking a tiny amount of blood, on the order of a nanogram, for analysis.

References

1. Boggio M, Lombardi Satriani LM (2014) San Gennaro. Viaggio nella identità napoletana. Armando Editore, Roma. (in Italian)
2. De Ceglia FP (2016) Il segreto di san Gennaro. Storia naturale di un miracolo napoletano. Einaudi Editore, Roma. (in Italian)
3. Paliotti V (1983) San Gennaro. Storia di un culto, di un mito, dell'anima di un popolo. Rusconi Editore, Milano. (in Italian)
4. Giannino P (2005) San Gennaro. Vita, miracoli, ritualità e culto. L'ancora del Mediterraneo, Napoli. (in Italian)
5. Fazio G (2024) About the Blood of Saint Januarius. Japan Journal of Research 5(12): 087.
6. Fazio G, Riotto F (2025) "Shroud of Turin" and "Blood of Saint Januarius": Two Relic compared. Japan Journal of research 6(3): 100.
7. Strangio BM, Riotto F, Fazio G (2025) It's Time to Entrust Saint Januarius's Blood to Microchemistry. Japan Journal of Research 6(3): 104.
8. Fazio G, Strangio FZ, Riotto F, Strangio BM (2025) The Blood of Saint Januarius: Is the Truth Written in a Daily Newspaper? Perhaps! Applied Sciences Research Periodical 3(3): 112-118.
9. Fazio G (2025) Catholic Church Uncertainties: Case of Saint Januarius's Blood. Annals Reviews and Research 14(3): 555886.
10. Sperandeo G, Januario R (1902) Il Miracolo di S. Gennaro e la Scienza. Napoli. (in Italian)
11. Baima Bollone PL (1989) S. Gennaro e la Scienza. Società Editoriale Internazionale, Torino. (in Italian)
12. Garlaschelli L, Ramaccini F, Della Sala S (1991) Working bloody miracles. Nature Communications 353: 507.
13. Geraci G (2010) Il sangue c'è e l'ho visto, il miracolo no. Corriere del Mezzogiorno, 5 Febbraio 2010. (in Italian)
14. Saint Thomas Aquinas (2014) The Summa Theologica: Complete Edition. Catholic Way Publishing Editor, London.
15. Saint Thomas Aquinas (1932) On the Power of God (Quaestiones Disputatae de Potentia Dei). Literally Translated by English Dominican Fathers. Burns Oates & Washbourne LTD, London. Reprinted in 1952 by The Newman Press. Kenny J. Editor Westminster, Maryland.
16. United States Conference of Catholic Bishop (2010) The New American Bible. Revised Edition (English Edition). Confraternity of Christian Doctrine Inc., Rome.
17. Sant' Agostino d'Ippona (2011) Le Confessioni (Edizione Integrale). Crescere Libreria Editrice Srl. Vedano Olona, Varese. (in Italian)
18. Sant'Agostino (1990) La Città di Dio. Pagine sulla Verità e sulla Giustizia. Testo Latino a fronte. Gribaudo Editore, Colognola ai Colli, Verona. (in Italian and Latin).



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