

**Concerning the question of the identity of the man of the Shroud:  
Could this man be an **anonymous crucified person other than Jesus?****

**An article by Yannick Clément**

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In my first article concerning the authenticity of the Shroud of Turin<sup>1</sup>, I used mainly the facts and observations coming from the blood and serum stains that are present on the cloth in order to show that, beyond any reasonable doubt, this Shroud is not some kind of artistic forgery but, on the contrary, it is a real burial cloth of a man who was severely tortured before his death by crucifixion, in the same manner than what the Gospels told us concerning Jesus of Nazareth, and consequently, that it is an authentic archaeological artefact.

**Here's the two important conclusions I reached in my previous article regarding the question of the authenticity of the Shroud of Turin:**

- 1- The Shroud is not an artwork of any kind, simply because the bloodstains clearly indicate that it is a real burial shroud that enveloped for less than 72 hours<sup>2</sup>, a real man who was tortured, scourged, crowned with thorns and died by crucifixion<sup>3</sup>.
- 2- The body image on the Shroud must absolutely have been caused by some form of interaction between the cloth and this tortured and crucified body<sup>4</sup>.

As I said in my first paper about the Shroud's authenticity referenced above, there is no good reason to seriously doubt these two scientific conclusions that has been confirmed by the STURP team at the end of the direct investigation they did on the Shroud at the end of the 1970s and at the beginning of the 1980s<sup>5</sup>. However, it's important to emphasize the fact that these conclusions are not enough to make an absolute statement on the identity of the Shroud man. In fact, they gave us only a clear answer to the first part the question of the authenticity of the Shroud (i.e. whether or not this is an authentic burial cloth of a real crucified person), while leaving open the second part of that question, which concern the identity of the man who was buried in that cloth.

So, at the beginning of this article, we're forced to ask ourselves the same questions I asked at the end of my first paper about the Shroud's authenticity<sup>6</sup>: **Is the Shroud of Turin really the burial shroud of Jesus of Nazareth or not?**

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<sup>1</sup> Yannick Clément, Concerning the question of the authenticity of the Shroud of Turin: please, don't forget the evidence of the bloodstains!!!, *Shroud Newsletter*, British Society for the Turin Shroud, Issue #76, December 2012 (<http://shroud.com/pdfs/n76part5.pdf>).

<sup>2</sup> Raymond N. Rogers, *A Chemist's Perspective on the Shroud of Turin*, Barrie Schwartz Editor and Publisher, July 2008. Note: in his book, Rogers cites a study by Arpad A. Vass et al., indicating that the appearance of the first liquids of putrefaction usually comes between 36 to 72 hours after death, depending on many factors.

<sup>3</sup> This first conclusion can be easily confirmed by the conjuncture of all the results obtained by numerous independent researchers that have analyzed the Shroud over the years, particularly when we consider that it has been independently confirmed that the bloodstains on the cloth are really made of human blood coming from exudates of blood clots, instead of complete blood in a liquid form. Also, the high level of bilirubin found in the blood is another important fact that can confirm even more this particular conclusion.

<sup>4</sup> This conclusion can be confirmed by the conjuncture of at least four important facts: 1- The body image was caused by a dehydration and/or an oxidation process on the surface of the cloth and not by any kind of pigments or dyes; 2- There's a close correlation between the body image intensity and the 3D structure of a real human form; 3- The blood on the cloth is real human blood that comes from exudates of blood clots and is surrounded almost each time by a halo of serum; 4- There's no body image under the blood and serum stains, meaning that these biological substances went on the cloth first and, only after that, the body image was formed.

<sup>5</sup> For a good summary of STURP conclusions, see: <http://www.shroud.com/78conclu.htm>.

<sup>6</sup> See note #1 for the complete reference of that paper.

Right from the start, we can already declare that even if this cloth shows all the stigmata of the Passion of Jesus, science will most probably never be able to state categorically (beyond any reasonable doubt) that this Shroud is really the authentic burial cloth of Jesus of Nazareth<sup>7</sup>. In fact, when we avoid doing any speculations whatsoever and, on the contrary, if we base our reflection uniquely on generally accepted scientific facts concerning the blood and serum stains (and also on some important facts concerning the body image), we're still stuck with the four scenarios that can rationally explain the Shroud and that were described in my previous article on the subject. Concerning the question of the identity of the Shroud man, half of these scenarios pretend that this man was really Jesus of Nazareth and the other half pretend that he was an anonymous man who suffered the same tortures than Jesus, as reported in the Gospels<sup>8</sup>.

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<sup>7</sup> As we saw in the introduction of this article, the first part of the question concerning the authenticity of the Shroud can be answered without any serious doubt (i.e. the Shroud is a real burial cloth of a real man who died of crucifixion). Unfortunately, the last part (i.e. who was this man?) cannot be answered as easily. In the present state of our knowledge, all we can do is to evaluate correctly the level of probability that it is the authentic Shroud of Jesus of Nazareth or not, based on a logical analysis of all the pertinent facts and data available. It's crucial to understand that whatever this probability will be, it will always remain a probability and never a certainty. This reality has been confirmed by Alan D. Adler, a member of STURP, who wrote this in an article entitled *Conservation and Preservation of the Shroud of Turin* that was published in 1991 in *Shroud Spectrum International*: "There exists no scientifically acceptable experiment that can establish the identity of the man whose image appears on the Shroud of Turin... Hence all the scientific experimentation that one can devise can only support the consistency of a historical identification or authentication of the cloth as Christ's burial shroud, but not "prove" it." In fact, the only sure answer science could give us one day concerning that question would be a negative one. Adler continues by saying: "However, a single experiment can be seen to be capable of disauthenticating such a identification. The radiocarbon dating would appear to be such an experiment, despite the large body of data favoring authenticity." In sum, the possible advent of some new solid facts like an unquestionable dating of the cloth (with the C14 method or another process) done properly with the use of multiple samples taken in various area of the cloth, which wouldn't give a 1<sup>st</sup> Century age for the cloth would enable science to conclude beyond any serious doubt that the Shroud cannot be the authentic burial cloth of Jesus." Here, it's important to note that, in the light of all the data we know now about the Shroud, science is far from being able to do so. Among other things, the single sample used for the dating has been scientifically proven (and independently confirmed) to be not representative of the main body of the cloth. Also, we must underline the fact that, since only one tiny portion of the cloth has been dated, another dating test that would be done on at least one new sample coming from a different area of the cloth is still necessary to confirm or not the validity of the first dating. Such a comparative test remains to be done. In 2010, A. J. Timothy Jull and Rachel A. Freer-Waters of the radiocarbon dating labs of the University of Arizona published a paper in *Radiocarbon* entitled *Investigating a dated piece of the Shroud of Turin*, in which they recognized this in those terms: "We assume that there will be future studies of the Shroud of Turin. Any such future sampling should include another sample of the Shroud away from the previous area sampled. In our opinion, such a study would be useful to confirm the previous results and should include both textile analysis and C14 measurements." Also, in a recent interview, Christopher Ramsey, the new director of the Oxford radiocarbon laboratory, said this: "There is a lot of other evidence that suggests to many that the Shroud is older than the radiocarbon dates allow and so further research is certainly needed. It is important that we continue to test the accuracy of the original radiocarbon tests as we are already doing. It is equally important that experts assess and reinterpret some of the other evidence. Only by doing this will people be able to arrive at a coherent history of the Shroud which takes into account and explains all the available scientific and historical information." (<http://c14.arch.ox.ac.uk/embed.php?File=shroud.html>). That kind of recognition from two of the three C14 labs involved in the dating of the single Shroud's sample taken in 1988 is important since it clearly shows that the 1988 dating results of the labs are still waiting for a proper scientific confirmation and that more researches are really needed before a definitive conclusion can be reached concerning the true age of the cloth. In sum, because of the highly questionable dating results of 1988, the question concerning the identity of the man of the Shroud still remains as open today as it was prior to this radiocarbon dating of the cloth. Effectively, there is still much convincing evidence which supports the idea of a genuine burial cloth that would have enveloped for a short period of time the dead body of Jesus of Nazareth, while at the same time, there is no indisputable fact that can be considered as a solid scientific proof that it is not.

<sup>8</sup> The fact that science has already proved that the Shroud cannot be an artistic forgery of some sort and that half of the possible remaining scenarios to explain it do not involve Jesus of Nazareth clearly show the fallacy of the popular idea that has been even promoted by the historian John Walsh. Here's what he wrote in his book entitled *The Shroud*: "It (the Shroud) is either the most awesome and instructive relic of Christ in existence or it is one of the most ingenious, most unbelievably clever products of the human mind and hand on record. It is either one or the other, there is no middle ground." It's important to emphasize the fact that such an idea is completely false. In order to remain scientifically sound, Walsh should have said this instead: "The Shroud is either a real burial cloth of an anonymous man who was crucified like the Jesus of the Gospels or it is really his authentic burial Shroud. It is either one or the other, there is no middle ground." Saying this would have been much more accurate in regard of all the facts and data available concerning this authentic archaeological artifact that once contained for a short period of time the tortured and crucified body of a real man. In an article he wrote in 1983 about the Shroud's authenticity, William Meacham, after having quoted this particular comment from Walsh, put it also seriously in perspective by saying: "However, as in almost every complex issue, there is indeed a middle ground (albeit rather weak) in this case..." The middle ground that Meacham is referring to concerns the possibility that the Shroud man can be a different crucified man than Jesus of Nazareth, whether he was crucified during a legal Roman crucifixion or during a particularly realist imitation of Christ's Passion or simply in order to produce "naturally" a false relic of the Passion of the Christ. Nevertheless, because Meacham analyzed also in his book the possibility that the Shroud could have been the product of an artistic forgery of some kind, he simply complemented the Walsh statement instead of completely rejecting it. But like I've demonstrated in my first paper about the Shroud's authenticity (see note #1 for the complete reference), science has been able since to completely and definitively reject any possibility

**Here's a brief description of the four scenarios<sup>9</sup> that can still pretend to explain the Shroud rationally in the light of the two important conclusions that were described in page 1<sup>10</sup>:**

1- It is a real burial shroud of someone other than Jesus of Nazareth who suffered the same tortures as he with a forged image done by someone without using any art technique. In this case, a forger "naturally" produced the image while using a real tortured and crucified body<sup>11</sup>. And whether or not the forger knew that he would obtain a body image on the cloth, along with the bloodstains, is not completely clear. In fact, the formation of an image like that could have well been just an accident.

**2- It is real burial shroud of someone other than Jesus of Nazareth who suffered the same tortures as he with a naturally occurring image. In this case, the body image on the cloth was produced accidentally by some undetermined natural phenomenon(s). In other words, this is not a forgery but instead, an accidental resemblance with the Jesus of the Gospels, including that this anonymous victim was also crowned with thorns (a very unusual procedure) and didn't have his legs broken (a standard Roman practice called *crurifragium* that was done to hasten death). In sum, this scenario can be described like a real burial shroud of an anonymous crucified man, which has bloodstains and a body image on it that shows a great accidental resemblance with the Jesus of the Gospels.**

3 - It is the authentic burial shroud of Jesus of Nazareth with a naturally occurring image. In this case, the body image on the cloth was produced by some undetermined natural phenomenon. The fact that the body left the Shroud before it

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for the Shroud to be the result of an artistic forgery. **That's the scientific reality concerning the Shroud and its body image.** Finally, here's the reference for Walsh's book: John Walsh, *The Shroud*, New York: Random House, 1963. And here's the reference for Meacham's paper: William Meacham, The Authentication of the Turin Shroud: An Issue in Archaeological Epistemology, *Current Anthropology*, 24:3, 1983 (<http://shroud.com/meacham2.htm>).

<sup>9</sup> For a more complete description of each one of these four scenarios, see: Yannick Clément, Concerning the question of the authenticity of the Shroud of Turin: please, don't forget the evidence of the bloodstains!!!, *Shroud Newsletter*, British Society for the Turin Shroud, Issue #76, December 2012 (<http://shroud.com/pdfs/n76part5.pdf>).

<sup>10</sup> The second scenario is bolded because this is the one that will be analyzed in depth in this article.

<sup>11</sup> In the paper he wrote about the authenticity of the Shroud in 1983 (see note #9 for the reference), William Meacham described another possible scenario that he called "Imitation of Christ". This alternative scenario can be associated with one of the first two possible scenarios that are described in my first paper about the Shroud's authenticity and that are summarized here. This alternative scenario can be briefly described like this: A Christian would have been so fanatic about Christ that he would have wanted to relive his Passion, death and entombment, as described in the Gospels. Meacham mentioned that such a person would have found some collaborators that would have inflicted to him all the wounds of Christ. It's possible to think that one of the collaborators of this imitator of Christ would have taken advantage of the situation by using the corpse of this anonymous and volunteer martyr in order to produce a false relic of Christ full of bloodstains corresponding to all the stigmata of his Passion. In such a scenario, it seems evident that the formation of the body image on the cloth's surface wouldn't have been planned by the forger (or forgers) but would have appeared instead by accident. In sum, this particular scenario could be considered as an alternative version of the first possible scenario I've described in my first paper about the Shroud's authenticity and that is summarized here. In this case, it would imply the use of a willing martyr's corpse by the forger (or forgers) in order to produce a false relic of Christ instead of the use of a crucified victim's body other than Jesus who would have been executed by the forger (or forgers) or by some civil or religious authorities. It's important to note that such an alternative scenario would give us a rational explanation concerning the question of why such a bloodstained burial shroud like that would have been kept and preserved with great care to this day. On the other hand, the burial shroud of this anonymous martyr could also have been preserved by some persons who would have helped him in the realisation of his project, not with the purpose of producing a false relic of Christ, but instead with the purpose of preserving the burial shroud of someone they considered a saint. And here too, it seems obvious that the apparition of the body image on the cloth would have been accidental and not planned. In the end, after some time, the identity of this martyr would have been forgotten and his burial cloth would have ended up being considered falsely like the authentic Shroud of Jesus Christ because of the striking similarity of the bloodstains with the stigmata of Christ and also because of the "mysterious" nature of the body image on the cloth. This particular scenario could be considered as an alternative version of the second possible scenario I've described in my first paper about the Shroud's authenticity and that is also summarized here. In this case, it would imply an intentional resemblance with the Jesus of the Gospels (for the bloodstains at least) instead of a pure accidental resemblance with him and could give us a rational explanation concerning the question of why such a bloodstained burial shroud would have been preserved, even though this particular reason must be considered as being somewhat unlikely because of the natural (and often legal, like for example, in Judaism) repulsion that most people from antiquity, Byzantine and medieval time had concerning this kind of bloody burial cloth (just like any other object that would have been in contact with a dead).

started to corrupt can be related with his resurrection, but that's not certain. In other words, a scenario like that doesn't absolutely need to call for the resurrection in order to explain the bloodstains and the body image we see on the cloth. In sum, this scenario can be described like the authentic burial shroud of Jesus of Nazareth, which has bloodstains and a body image on it that was produced by some unknown natural phenomena which were probably of chemical nature.

4- It is the authentic burial shroud of Jesus Christ with a supernaturally occurring image<sup>12</sup>. In this case, the body image on the cloth was produced by some undetermined supernatural phenomenon directly linked to his resurrection. In sum, this scenario can be described as the authentic burial shroud of Jesus of Nazareth, which has bloodstains and a body image on it that was caused, directly (a miraculous image made by God) or indirectly (a by-product), by his resurrection.

The main goal of this present article is to evaluate the level of probability that the Shroud of Turin could be the burial cloth of a crucified man other than Jesus of Nazareth that would have suffered the same tortures than him, as reported in the Gospels and which would eventually have been wrongly considered as the authentic burial cloth of Jesus by some Christians<sup>13</sup>. I have chosen to evaluate this particular hypothesis<sup>14</sup> first because it has been put forward by many scientists over the years in an effort to explain the Shroud rationally and also by many skeptics in an effort to discredit the idea that the Shroud could really be the authentic burial cloth of Jesus Christ.

In a future article, I will try to do the same kind of exhaustive analysis for the first possible scenario in the previous list, which involve a "natural" forgery done with a real crucified body. There's no doubt that after these first two possible scenarios will have been analyzed in depth, we will have a very good idea of the most probable identity of the Shroud man. For example, if the analysis of these two scenarios would reach the conclusion that both are highly unlikely, we wouldn't have no other choice than to conclude that the Shroud of Turin is probably the genuine burial cloth of Jesus of Nazareth. But if one of the first two scenarios would get a good score on a probabilistic scale, then we could conclude that the man of the Shroud was most probably an anonymous victim of a Roman crucifixion or an anonymous victim of an unknown forger.

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<sup>12</sup> This 4<sup>th</sup> scenario might shock some because it is based on a dogma of faith (the Resurrection of Christ) and, by definition, it goes beyond pure scientific rationality. But, since the Shroud of Turin is considered by Christian tradition as being the authentic burial cloth of Jesus Christ, it seems justified to keep open that possibility, even if, in face of all the known and confirmed data, such a scenario is not necessarily the most probable. For a very detailed analysis of that possibility, see: Raymond N. Rogers, A Chemist's Perspective on the Shroud of Turin, Barrie Schwartz Editor and Publisher, July 2008.

<sup>13</sup> In order to evaluate this hypothesis properly (which is in fact the second scenario we just described in the previous list), I will try to use constantly the Occam's razor principle as a basis for this analysis. In fact, for this kind of probabilistic analysis, this is without any doubt the best scientific principle that exists. For a good description of the Occam's razor principle, see [http://en.wikipedia.org/wiki/Occam's\\_razor](http://en.wikipedia.org/wiki/Occam's_razor). This principle can be summarized like this: The hypothesis that includes the smallest number of special assumptions is most probably the closest to the truth.

<sup>14</sup> In a future article, I will try to do the same kind of exhaustive analysis for the first possible scenario that we found in the previous list, which involves a "natural" forgery done with a real crucified body. There's no doubt that after these two analyses, we will have a very good idea of the probable identity of the Shroud man. For example, if this analysis of these two scenarios would reach the conclusion that both are highly unlikely, we would have no other choice than to conclude that the Shroud of Turin is probably the genuine burial cloth of Jesus of Nazareth, because we know for a fact that the Shroud cannot be the work of a forger who would have used some kind of artistic technique to create the image on the cloth. But if one of the first two scenarios would appear to have a good probabilistic level, then we could conclude that the man of the Shroud is most probably an anonymous man who was crucified in the same manner than Jesus Christ, as reported in the Gospels. In sum, in the present state of our knowledge about the Shroud, the most rational and sure way we can get a solid conclusion about the most probable identity of the Shroud man is by using a process of elimination.

## **Analysis of the scenario involving an anonymous criminal that would have been legally scourged and crucified by the Romans<sup>15</sup> in a very similar manner than Jesus of Nazareth, as reported by the Gospels**

At first sight, we must admit that such a scenario appears truly rational<sup>16</sup>. Effectively, since science is clear about the fact that the Shroud is the real burial cloth of a real crucified man<sup>17</sup> and because it is a proven fact that the Romans have crucified many people during Antiquity<sup>18</sup>, it seems logical to think that this cloth could be the genuine shroud of a real crucified man who is not Jesus of Nazareth and that after some time, it would have been wrongly considered as the true Shroud of Christ by the Church and his faithful, because of the high level of similarities that exist between the bloodstains and the image we see on the cloth and the Gospel accounts of Christ's Passion.

In the paper about the authenticity of the Shroud<sup>19</sup>, the archaeologist William Meacham talks specifically about this particular hypothesis regarding the identity of the Shroud man. Here's what he wrote about that: "...a number of commentators, including the STURP team, have suggested that the Shroud could be the grave cloth of a person who

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<sup>15</sup> Because there is much data coming from the Shroud that clearly indicates that this man was scourged and crucified with the known normal procedure used by the Romans during antiquity (with the exception of a few particular features, like a intense severity of the scourging and the wearing of a cap of thorns, that appear to be non standard), we have to assume that if the Shroud man is someone else than Jesus of Nazareth who would have been crucified like him, he was most probably a criminal executed by the Romans before they abolished this form of death penalty between 315 and 337 A.D. And if the man of the Shroud was really a Jew and if he was crucified in the Jerusalem area, like some data from the Shroud that we'll describe later seems to indicate, then it is very likely that his execution happened no later than 135 A.D. or so. Effectively, that year, the Roman army, lead by their best general of the time, Sextus Julius Severus, crushed an important Jewish revolt that had started in Judea in 132 A.D. And to make sure there was not another one that would follow, the Roman Emperor Hadrian decided to completely destroy the city and expel all the Jews and Arabs that were there, along with a prohibition to come back. This expulsion and prohibition of return was in fact effective for the entire province of Judea. In place of the Jewish city that he had destroyed, Hadrian build a new Roman styled city, which he called *Aelia Capitolina* and that kept this name until the conversion of Constantine during the first half of the 4<sup>th</sup> Century.

<sup>16</sup> The fact is that many scientists over the years have considered this particular hypothesis as an alternative scenario that could potentially explain the Shroud in a rational way.

<sup>17</sup> See the two main scientific conclusions about the Shroud that you can find in the first page of the present article.

<sup>18</sup> If this particular scenario is correct, that would mean there are still some chances that man of the Shroud could have been crucified after the abolition of this form of death penalty by Constantine somewhere between 315 and 337 A.D., but because of the very few historical references to crucifixion during this "post-Constantine" era, we have to assume that it was rare and when it happened, it is highly unlikely that it was done with the same particular procedure normally practiced by the Roman executioners before 337. In fact, it is much more probable that these sporadic executions done after 337 were more like an ad hoc kind of thing, instead of the fine tuned legal procedure normally used by the Romans when they were using crucifixion regularly to execute criminals. This conclusion has been confirmed to me recently by Joe Zias, the well-known Jewish anthropologist who was the former curator of Archaeology and Anthropology for the prestigious Israel Antiquities Authority, in a personal communication via email. In his opinion, most of the sporadic crucifixions that could have occurred after the abolition of this form of capital punishment by the Romans were probably done rapidly, without an elaborate procedure. Because of this very probable context and also because there are numerous and clear signs on the Shroud that this man was crucified following mostly the standard Roman procedure, we must assume that if the present scenario is correct, the probability that it happened before 315-337 A.D. is very high. And if the Shroud man was really a Jew executed in the Jerusalem area like some interesting datum seem to suggest, we must assume that his crucifixion was most probably done no later than the middle of the 2<sup>nd</sup> Century A.D. (see also note #16). The conclusion that the Shroud man was most probably executed and buried in that Shroud before the Romans banished crucifixion has been backed-up by a wide spectrum of data coming from the cloth itself that seems to indicate that this burial Shroud is an antique linen cloth that has been woven with the known ancient method of manufacturing linen. On this subject, it's important to note that in 2005, at the end of his life, Raymond N. Rogers, the head chemist of the STURP team, proposed an interesting alternative dating of the cloth based on the lack of vanillin in the linen fibers from the main body of the cloth. The result of his dating, even though criticized by some scientists, gave a probable date range for the cloth between 1000 B.C. and 700 A.D., which can be seen as a scientific confirmation of his antique manufacturing. This particular data is important because it is a very strong indicator that the Shroud man was most probably crucified during the era when the Romans were still using this form of death penalty regularly. In a future article that will do an in-depth analysis of the first scenario summarized in the previous list (i.e. the one involving a "natural" forgery), we will describe all the data (including the alternative dating of Raymond N. Rogers) in a more detailed manner. For the moment, the most important thing to note is the fact that this sum of data really seems to indicate that the Shroud is most probably a burial cloth that has been manufactured during antiquity, which is a very good clue to think that the man of the Shroud was most probably executed by the Romans before they abolished crucifixion between 315 and 337 A.D.

<sup>19</sup> See note #9 for the reference for that paper.

suffered injuries in the same manner as Christ. We shall examine here the possibility of such an occurrence without obvious intent to imitate the experience of Christ. This hypothesis thus hinges on the degree to which features now interpreted as “clearly representing Jesus Christ” should be considered unique.”

With this comment, Meacham indicates the right path to follow in order to analyse the present scenario properly. Effectively, this article will focus on the analysis of many characteristics of the Shroud that really seem to be linked with the Passion of Jesus of Nazareth in order to estimate correctly the level of probability that each one of them could be related to another crucified person<sup>20</sup>. There’s no doubt that at the end of this process, we’ll have a very good view of the real situation that will allow us to conclude whether or not it is rational to think that the Shroud man could have been a crucified man who suffered the same kinds of tortures than Jesus of Nazareth, as reported in the Gospels.

But before entering into the heart of this analysis, it’s important to make an exhaustive description of all the data that strongly suggest that the man of the Shroud was probably a Jew and that his execution probably occurred in the region of Jerusalem. This probable conclusion will be very helpful for the analysis of some particular features visible on the Shroud.

**Here’s a list of the principal data that seems to indicate that the man of the Shroud was possibly a Jew, along with a proper description for each one of them:**

1- The man of the Shroud was most probably not a Greco-Roman citizen and his physiognomy, along with some particular anthropometric characteristics, indicate that he probably had a Middle Eastern origin.

This conclusion comes from the general opinion expressed by some specialists who have studied the body image on the Shroud and who have concluded that the man of the Shroud was probably Semitic in appearance (or at least, that he had a Middle Eastern origin). Let’s read what Meacham wrote about that in his paper about the Shroud’s authenticity<sup>21</sup>: “Carleton Coon<sup>22</sup> (quoted in Wilcox 1977:133) describes the man as “of a physical type found in modern times among Sephardic Jews and noble Arabs”. Curto<sup>23</sup> (quoted in Sox 1981:70, 131), however, describes the physiognomy as more Iranian than Semitic.” Elsewhere in the same paper, Meacham adds: “Coon’s description, noted above, of the Shroud face as Semitic in appearance is supported by Stewart<sup>24</sup> (cited in Stevenson and Habermas 1981:35), who pointed out other features which suggest a Middle Eastern origin.” Finally, there was an anthropometric study published in 1999 by Giulio Fanti, Emanuela Marinelli and Alessandro Cagnazzo<sup>25</sup>, which also conclude that the man of the Shroud was probably Semitic.

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<sup>20</sup> Every single feature that we’ll analyze here is totally consistent with what happened to Jesus of Nazareth during his Passion and after his death on the cross, as reported in the four Gospels. For this reason, we have to do an in-deep analysis for each one in order to evaluate the chances that it could be related to an anonymous victim of a Roman crucifixion instead of Jesus. And in the end, if we can’t find at least one rational way to explain one or more of these particularities in the case the Shroud man would be a crucified victim other than Jesus or if the general portrait depicted by all these features appear to be very inconsistent with such a scenario, we will have no other choice than to reject the idea that the Shroud can really be the burial cloth of an anonymous victim of a Roman crucifixion. On the contrary, if most of these features can be easily and rationally explained, we will have to conclude that this particular hypothesis can really offer a good alternative to explain the Shroud. **Finally, please note that in annex 1 at the end of this paper, you’ll find a complete list of all the particular features we’ll analyzed in this study, along with a proper list of Gospel references for each one in order for you to understand that all these characteristics are totally consistent with the Jesus of the Gospels (except for two of them that are only consistent with Jesus through Christian tradition).**

<sup>21</sup> See note #9 for the reference of that paper.

<sup>22</sup> Carleton Coon, a physical anthropologist and an archaeologist who worked for the universities of Harvard and Pennsylvania State in the U.S.

<sup>23</sup> Silvio Curto, an Egyptologist from the University of Turin in Italy.

<sup>24</sup> T. Dale Stewart, a physical anthropologist of the Smithsonian Institution in the U.S.

<sup>25</sup> Giulio Fanti, Emanuela Marinelli and Alessandro Cagnazzo, Computerized anthropometric analysis of the Man of the Turin Shroud, *Proceedings of the Shroud of Turin International Research Conference*, Richmond, Virginia, USA, June 18 to June 20, 1999 (<http://www.shroud.com/pdfs/marinelli.pdf>).



However, it is important to note that all these conclusions must to be considered with great caution for three main reasons:

- A) There's a part of subjectivity that cannot be excluded from the professional opinion we just read.
- B) There are important physiognomic data (like the color of the skin, the color of the hair, the color of the eyes, etc.) that cannot be extracted from the monochrome body image we see on the Shroud<sup>26</sup>.
- C) The judgement of these specialists is mainly based on the known physiognomic or anthropometric characteristics of modern races and because of the general evolution of any human race and also because of the racial mixing that certainly occurred since antiquity, it is truly possible that some of these modern characteristics were not exactly the same at the time of the crucifixion of the Shroud man.

For all these reasons, it seems much more prudent to avoid making any definitive conclusion regarding the racial status of the man of the Shroud that would be based solely on his physiognomy and some particular anthropometric characteristics. Concerning this particular point, let's simply conclude that on the base of many physiognomic and anthropometric characteristics coming from the Shroud man, the probability appears to be very high that he was not a Greco-Roman citizen, but that he had instead a Middle Eastern origin. For this reason, the idea that the Shroud man was really a Jew cannot certainly be excluded.

## 2- The Shroud is a linen cloth that was probably woven by a Jewish artisan.

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<sup>26</sup> Along with the data that certainly cannot be extracted from the image on the Shroud, there are also some features that are difficult to interpret correctly. A very good example of this is directly related with the question of whether the Shroud man was Jewish or not and it concerns the image on the dorsal part of the Shroud of what appears to be a ponytail (also called "pigtail" sometimes) that the man was possibly wearing (see the image of the back of the head in page 15), which some scholars have described as an authentic Jewish feature during antiquity. Here's what Meacham wrote about this particular feature in his paper about the authenticity of the Shroud (see note #9 for the reference): "The beard, hair parted in the middle and falling to the shoulders and pigtail indicate that the man was not Greek or Roman. The unbound pigtail has been described as "perhaps the most striking Jewish feature" of the Shroud (Wilson 1978:54)." Nevertheless, it's important to note that some Shroud experts didn't share this particular point of view, like Samuel F. Pellicori of STURP who thought that this so-called "pigtail is most probably an artifact resulting from the nonuniform image-resulting chemistry..." (cited in Meacham's paper). This non-homogeneous phenomenon has been described by Shroud experts as a "banding effect" present on the cloth and it affects both the frontal and the dorsal image on the Shroud. Here, we must clearly state that this particular hypothesis described by Pellicori is truly possible because it is a known fact that the banding effect has greatly affected the body image formation in some particular places. For example, many experts through the years have thought that the images of both sides of the face were totally missing, while it has been proven through enhancing imaging techniques that they are really present on the surface of the cloth but only in a very pale way (so much that both images are invisible to the naked eye). If this hypothesis of Pellicori is correct, then the man of the Shroud would most probably have wears his hair completely loose during all the time of his execution, which is exactly what the frontal image suggest. Also it's truly possible that what we see there is really a lock of hair which would have been artificially formed by the matting of the long hair caused by the intense sweating and bleeding in that region while the man was still on the cross instead of a real ponytail that would have been worn by the Shroud man before his crucifixion. Finally, we must mention the complementary hypothesis of César Barta, a Spanish researcher, who suggested that this artificial ponytail would have been caused by the particular positioning and sewing of the Sudarium on the back of Shroud man's head while he was still on the cross after his death (note: this relic is presently kept in Oviedo, Spain). Here's the conclusion he wrote about that in a recent paper: "We conclude that the hair was pulled back and sewn to the Sudarium on the back of the head. When the Sudarium was removed, the ponytail shape would remain, as the hair was not washed. This explanation was unexpectedly confirmed while overlaying the stains on the back of the neck of the two cloths (note: the Shroud and the Sudarium)." Barta's interesting hypothesis is based principally on the presence of some needle holes on the Sudarium in the same region of the cloth where a series of bloodstains are showing a very good level of correspondence with the bloodstains that are located at the nape of the neck of the Shroud man, which strongly suggest that after his death on the cross, the Sudarium had been sewn with a needle to the matted hair that was located there and this manual operation would have turned the loose hair into an artificial ponytail. This sewing operation would have certainly been done to avoid that this small cloth could move or fall while the Shroud man was dead on the cross with his head bent forward and downward. Here's the reference for Barta's paper: César Barta, The Sudarium of Oviedo and the Man of the Shroud's ponytail, *British Society for the Turin Shroud Newsletter*, Issue #66, December 2007 (<http://www.shroud.com/pdfs/n66part2.pdf>). This example of the so-called ponytail is great to show how much we should be careful when it's time to analyze some particular features visible on the Shroud in order to avoid making bad interpretations that could be based on some preconceived or subjective notions. In this particular case, until new direct chemical and spectroscopic studies of the Shroud could confirm if this so-called ponytail is really an image of the hair or if it is not simply an artifact of the body image caused by the banding effect of the cloth, it's better to simply conclude that the man of the Shroud had long hair, period.

There are three major data that leads to this conclusion. Here's a description of each one:

A) There are absolutely no traces of wool that has been found on the Shroud, which is consistent with the ancient Jewish law that we found in Leviticus 19:19<sup>27</sup> which prohibited the mixing of the kinds of fibers in a same cloth like, for example, mixing vegetable fibers (like linen) and animal fibers (linen wool) in a same woven cloth. On the contrary, if the Shroud would have been woven by a non-Jewish weaver, it's almost sure that some contamination of wool fibers would have easily been found in the linen cloth because it is a well-established historical fact that most ancient non-Jewish weaving loom were used to weave both linen and wool cloths.

B) In 2002, Mechthild Flury-Lemberg was the textile expert in charge of the restoration of the Shroud and during this work she examined carefully the very particular stitching that was done to attach the two distinct pieces of cloth (i.e. the main body of the Shroud and a much smaller lateral band of linen often called "the side strip"). Mrs. Flury-Lemberg indicate that throughout her long career as an ancient textile restorer, she saw this same kind of stitching only once on some fragments of fabric found in the ancient Jewish fortress of Masada in Palestine, which were dated from 70 A.D. Here, we must remain prudent because Mrs. Flury-Lemberg never published this conclusion in any peer-reviewed scientific journal, nor did she show any photographs of the fragments of fabric from Masada in order to back-up her claim. Because of this, we should consider her conclusion on this topic as waiting to be properly confirmed by another textile expert.

C) Some scientists, like John Jackson from STURP, have indicated that the dimension of the Shroud (which is roughly 440 X 110 cm when we include the "side strip"<sup>28</sup>), corresponds exactly to 8 X 2 Jewish cubits. But even if this data seem to confirm even more the hypothesis of a Jewish styled cloth, we must remain prudent here because this "fact" has been criticized by other scholars who said that the exact length of this ancient measure could vary during antiquity. We must also say that the actual dimension of the Shroud is not necessarily the same as it originally was. Nevertheless, this feature can be seen as circumstantial evidence that seems to confirm the hypothesis that the Shroud has been woven by a Jewish artisan.

3- The burial posture of the man of the Shroud is compatible with a known ancient Jewish custom of burying their dead.

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<sup>27</sup> Here's the exact quote from that part of Leviticus: "Keep my decrees. Do not mate different kinds of animals. Do not plant your field with two kinds of seed. Do not wear clothing woven of two kinds of material."

<sup>28</sup> A comparative study of this lateral band of linen versus the main body of the Shroud done by the STURP team with different kinds of imageries has revealed that the two pieces of cloth were originally part of the same wide piece of cloth but at some point and for an unknown reason, the lateral band was separated from the main body of the cloth and was later sewn back to it. In the paper *Physics and chemistry of the Shroud of Turin*, which they wrote for STURP in 1982, here's what Raymond N. Rogers and Larry A. Schwalbe wrote about that: "Alternating high and low density bands... are continuous through the seam and suggest that the so-called side strip either is or was at one time an integral part of the main section of the Shroud." This conclusion suggests that the original cloth probably was roughly of the same dimension as the two parts of the cloth we can see today. Also, the very high level of concordance that exists between the bands visible on both sides of the seam strongly suggests that the sewing was most probably done with great care very shortly after the cutting was done. This evidence, along with the use of a very distinct sewing to attach the lateral band to the main body of the cloth (which really seems to be of an antique Jewish style), suggest that the cutting and the sewing of this "side strip" was probably done by the same artisan (probably Jewish) who originally manufactured the cloth. This is by far the most rational hypothesis that exists. The only question that such a scenario cannot clearly answer is for what reason this cutting and sewing was done? The fact that the two pieces of cloth give together a total dimension of 8 X 2 Jewish cubits could be seen at first sight as the main reason that motivated the artisan to sewn back this lateral band to the main body of the Shroud in order to obtain such a precise dimension, but nevertheless, it seems quite odd to think that he would not have simply chosen to cut directly the original wide cloth to this wanted dimension. If this possible scenario is correct, then we have to assume that the dimension of 8 X 2 cubits was not part of the original plan of this Jewish artisan and only came to be after he had done the first cutting of the wide cloth he had just woven. It's possible to think that this could have been caused by a special and/or a late request of his client. Finally, here's the reference for the paper written by Schwalbe and Rogers: Larry A. Schwalbe and Raymond N. Rogers, *Physics and Chemistry of the Shroud of Turin, a Summary of the 1978 Investigation*, *Analytica Chimica Acta*, 135, 1982.



In his paper about the Shroud's authenticity<sup>29</sup>, William Meacham mentions an important archaeological finding that confirms this fact: "...the burial posture of the Shroud figure is seen in a number of skeletons excavated at the ca. 200 B.C.-A.D. 70 cemetery of the Essene sect at Qumran (Wilson 1955:60), which were laid flat, facing upwards, elbows bent and hands crossed over the chest or pelvis." In his book *Sindone 101 domande e risposte* (101 questions on the Holy Shroud)<sup>30</sup>, Pierluigi Baima Bollone mentions also this archaeological piece of evidence in those terms (personal translation): "In fact, the knowledge we have concerning these (burial) customs are limited. The excavation done in the principal cemetery of Qumran, with more or less 1000 individual tombs, and in the two smaller cemeteries, with more or less 200 tombs, lead to the opening of 54 sepulchers, most of the time of male persons aged between 25 and 35 years old. Their skeletons was laid flat on the back, without clothing<sup>31</sup>, and enveloped in a linen cloth which stayed some fragments. From this point of view, the concordance with the Holy Shroud is total."

Taking note of what Baima Bollone said at the beginning of his comment (that our knowledge about ancient Jewish burial custom is limited), it is prudent to conclude that the burial position of the Shroud man is compatible with one known ancient Jewish burial custom. But because it is truly possible that there was other burial posture that could have been used by the Jews of the 1<sup>st</sup> Century A.D. and/or that this kind of burial posture (including the absence of clothing) was used by some Jewish and/or Christian communities for a long time after the 1<sup>st</sup> Century A.D., we cannot use this single fact to say categorically that the man of the Shroud was really Jesus of Nazareth or another Jew from the same era. We can only say for sure that this particular burial posture of the man of the Shroud is compatible with a known burial custom used by a known Jewish community of the 1<sup>st</sup> Century A.D. Nevertheless, this is important because this particular feature cannot be taken as some kind of proof that the man in question wasn't a Jew and/or that he could not have been buried during the 1<sup>st</sup> Century A.D. And finally, the compatibility of the burial posture of the Shroud man with a known Jewish custom can be seen as one more piece of evidence that also suggest that this cloth really was manufactured by a Jewish artisan.

**And now, here's a list of the principal data that seem to indicate that the man of the Shroud was probably crucified in the Jerusalem area, along with a proper description for each one of them:**

1- A very good chemical match was found between the aragonite dirt coming from the Shroud and the aragonite that his present inside a 1<sup>st</sup> Century tomb in Jerusalem<sup>32</sup>.

In 1986, Joseph A. Kohlbeck (an optical cristallographer) and Eugenia L. Nitowski (an archaeologist) published an article in the *Biblical Archaeology Review*<sup>33</sup> in which they describe a comparative analysis done by Kohlbeck<sup>34</sup> with

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<sup>29</sup> See note #9 for the complete reference of that paper.

<sup>30</sup> Pierluigi Baima Bollone, *Sindone 101 domande e risposte* (101 questions on the Holy Shroud), Edizioni San Paolo s.r.l., Milano, Italy, 2000.

<sup>31</sup> The fact that it seems to have been common for some non-crucified Jews of the 1<sup>st</sup> Century A.D. to be buried totally naked in their burial cloth is the reason why the complete nudity of the man of the Shroud will not be retained in the actual list of particular features that really seems to be related with the burial of Jesus of Nazareth. In fact, it is probable that the normal procedure concerning Jews who died on the cross was to put their naked body into a cheap burial cloth and place it into a common grave for one year or so. Note that later on in the present study, the normal burial procedure for crucified victims in Palestine will be analyzed more in depth. For the moment, let's just say that in the probable Jewish context of the first few centuries A.D., the nudity of the Shroud man should not be seen as something very strange, especially when we consider the fact that he died on the cross.

<sup>32</sup> For a very interesting analysis of this very good chemical match, see the paper written by César Barta (with a contribution by Giorgio Bracaglia) that was published online at this adress: <http://holyshroudguild.org/ceacutesar-barta.html>.

<sup>33</sup> Joseph A. Kohlbeck and Eugenia L. Nitowski, New evidence may explain image on Shroud of Turin, *Biblical Archaeology Review*, 12:4, July-August 1986 (<http://members.bib-arch.org/publication.asp?PubID=BSBA&Volume=12&Issue=4&ArticleID=1>). It's important to note that this publication is not a peer-reviewed scientific journal, but nevertheless, the fact that the main result of their study was later confirmed by the well-respected scientist Riccardo Levi-Setti can be seen as a very good sign that their work was rigourously done. You can also read a book written by Nitowski concerning the scientific expedition she did in Jerusalem with other researchers to study the environmental conditions of a 1<sup>st</sup> Century A.D. rock tomb in which the Shroud and the man it covered could possibly have been submitted. In this book, she also described the comparative study she did with Kohlbeck concerning some limestone samples that were taken from the Shroud and from many different sites in Israel. Here's the reference of this book: Eugenia L. Nitowski, *The Field and Laboratory Report on The Environmental Study of the Shroud in Jerusalem*, Carmelite Monastery, Salt Lake City, Utah, 1986.

some travertine aragonite (limestone) dirt found in a sticky tape sample taken by the STURP team in 1978 in the region of one of the heel, in the dorsal part of the Shroud, and samples of aragonite dirt taken by Nitowski on the bench of an ancient rock tomb of the 1<sup>st</sup> Century A.D. located near the Damascus Gate, in the “École Biblique” tomb complex in Jerusalem<sup>35</sup>. In both cases, the samples contained great quantities of calcium and small quantities of iron and strontium but no lead.

Here, there are two important things to note:

A) Kohlbeck also analyzed eight more samples of limestone dirt taken in different site in Israel by Nitowski<sup>36</sup> and found that none of them was presenting the same good match as the one coming from Jerusalem<sup>37</sup>. In fact, from as close as 30 miles from Jerusalem, the limestone chemical composition changes and does not match either the Jerusalem or Shroud samples.

B) Kohlbeck took his different samples and gave them to Riccardo Levi-Setti of the University of Chicago’s Enrico Fermi Institute. M. Levi-Setti used a scanning ion microprobe in order to compare the wavelength signatures of the sample from the Shroud and the sample that was taken in the Jerusalem tomb by Nitowski<sup>38</sup>. He was able to independently confirm the result obtained by Kohlbeck (we should note here the spectral results obtained by Levi-Setti were published by Kohlbeck in his 1986 paper and never by himself) and found out that there was a very close chemical match, with the exception of a slight organic variation that was attributed by him to minute pieces of flax embedded in the Shroud’s limestone. The Levi-Setti spectras that are showed in the paper published by Kohlbeck and Nitowski are quite impressive and show how much the chemical match was good concerning the Shroud and the Jerusalem sample.

It is also important to note that this whole study started in 1982 when Raymond N. Rogers from STURP provided them the sample he took himself from the Shroud with a sticky tape during the STURP investigation of 1978. This is an important fact because it gives us pretty good assurance that the Shroud sample was totally valid at the moment of the study. Effectively, the chain of custody is very simple and easy to reconstruct and there is no good reason to assume that the four year old sample was not correctly preserved by Rogers, who was a professional and meticulous scientist. The same can also be said about the validity of the samples taken by Nitowski herself shortly prior to the beginning of Kohlbeck’s study. In fact, this archaeologist originally took them for a scientific study of ancient rock tombs in Palestine and there’s no good reason to think that these samples were inadequately taken and/or preserved before being analyzed by Kohlbeck and by Levi-Setti later on. The other thing that gives us some assurance is the fact that there were eight other samples of limestone that were analyzed by Kohlbeck along with the sample coming from Jerusalem. This is quite important because these other samples can be considered as good control samples that could offer a good guarantee that there was no “false positive” results in the comparative study that he did with the Jerusalem and Shroud samples.

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<sup>34</sup> Kohlbeck mainly used microscopic analysis to distinguish the aragonite versus the common calcite and he also used an X-Ray fluorescence method in order to detect traces of iron and strontium. Also, with this same analytical method, he was not able to find lead in his Jerusalem and Shroud samples.

<sup>35</sup> This site is located within the same rock shelf as the Holy Sepulchre, which is the traditional site of the tomb of Jesus Christ and of the Golgotha, and also the Garden tomb, which is another site in Jerusalem that has been proposed by some modern scholars as being the authentic site of the tomb of Jesus.

<sup>36</sup> These sites were located in Emmaus, Jericho, Qumran, Beth Shan, Sepphoris, Mt Carmel and Beth She’arim (two samples were taken in two different places of this town).

<sup>37</sup> In the paper he wrote on the subject, César Barta confirmed this by saying: “Dr. Nitowski obtained Energy-dispersive X-ray spectra from the nine sites of Israel. She found differences between the Jerusalem tomb and the others.” The paper written Barta with a contribution by Giorgio Bracaglia is available at this address: <http://holyshroudguild.org/ceacutesar-barta.html>.

<sup>38</sup> For some reason, Levi-Setti never was able to do the same for the eight other samples taken elsewhere in Palestine. This lack of a counter-verification on the part of Levi-Setti possibly had something to do with the fact that the real owner of these samples was the Israel Antiquities Authority and not Nitowski who originally took them. In any case, this is truly unfortunate because if such a counter-expertise would have been performed, this would have enhanced the uniqueness of the very good chemical match that was found between the Jerusalem and the Shroud samples.

However, since Levi-Setti never analyzed these other samples, we have to consider the results of Kohlbeck's analysis concerning them as interesting but still waiting to be independently confirmed by another expert. That doesn't mean Kohlbeck results are no good but means we should be more prudent regarding this part of the Kohlbeck study. Because of that and also because no analysis have been done by Kohlbeck and Levi-Setti with aragonite samples taken in other countries, it's impossible to be absolutely sure that there is no other places on the planet (or even elsewhere in Palestine) where the same type of aragonite dirt could be found. So, the best way to summarize these results would be to say that the chemical match is excellent between the Shroud and the Jerusalem area, but it's still possible to think that there could be other places on the planet that could offer the same kind of match. In that context, we should consider this chemical match like very good circumstantial evidence more than a definitive and unquestionable fact concerning the geographical origin of the Shroud. Even Kohlbeck himself acknowledged this by saying that there might be other places in the world where travertine aragonite has the identical trace chemical composition but nevertheless, it's very important to note that, to this day, no other aragonite dirt with a similar chemical composition has been found and, statistically, it is doubtful that any will ever will. On the contrary to Kohlbeck's prudent comment, it's interesting to note that Nitowski had a more definitive opinion concerning the results of their comparative study. Here's what she wrote in her book entitled *The Field and Laboratory Report on The Environmental Study of the Shroud in Jerusalem*<sup>39</sup>: "The match between Jerusalem and Shroud samples is valid and I firmly believe that any other site tested would be different. **The Shroud was indeed in Jerusalem at one time in its history.**" Never mind the firm tone of this statement, we must note that she didn't categorically concluded that the Shroud is indeed the burial cloth of Jesus of Nazareth, but simply that it must have been present in Jerusalem during the course of his long history and was probably used as a burial shroud to bury someone in that city.

It is also interesting to note that beside the important aragonite contamination that was found in the area of one heel on the Shroud<sup>40</sup>, there was other smaller deposits of the same aragonite dirt that was found by Kohlbeck in other sticky tapes samples taken from the Shroud (in a quantity more important in the dorsal body image area of the Shroud than in the frontal image area). This leads Kohlbeck and Nitowski to conclude that besides some obvious dirt contamination of the cloth that comes probably from a staining of the Shroud man's body while he was still alive (like the dirt stain present in the region of one heel, which suggest that the man was walking barefoot during his way of the cross), there was also a lighter contamination scattered in many areas of the internal part of the Shroud (i.e. the side where we can see a body image and where the corpse was in direct contact with the cloth), which probably happened when the stained (unwashed) and naked body of the Shroud man came in direct contact with many parts of the cloth during his burial. In sum, a major part (if not all) of the dirt contamination of the Shroud's internal part was most probably caused by the dirty corpse of the Shroud man. And the fact that they detected a little bit more contamination of that nature in the dorsal image area than in the frontal image area must be seen as totally consistent with the natural way in which a corpse is normally placed inside a burial cloth (i.e. facing upward and lying horizontally on his back, which is exactly what the body image and bloodstains on the Shroud suggest). There's no doubt that this kind of natural burial posture would create wider and stronger zones of direct contact with the half part of the cloth that is present on the underside of the body, thus causing more dirt deposits in these areas of the Shroud, which is exactly what Kohlbeck and Nitowski have reported having found in the sticky tape samples collected by the STURP team.

Finally, we should also take good note of what scientist Giovanni Riggi di Numana reported concerning many pollen grains he found in the dust samples he had vacuummed on the reverse side of the Shroud in 1978, at the same moment than the STURP team investigation of the cloth. Effectively, this Italian researcher reported that almost 50% of these pollens were coated with a mineral substance that was rich in calcium, which can be seen as a probable contamination of the reverse side of the Shroud (especially the half part of this reverse side that was in direct contact with the stone of the tomb) by the aragonite dirt present inside that tomb (probably the same kind of aragonite collected by Nitowski in a 1<sup>st</sup> Century A.D. tomb in Jerusalem)<sup>41</sup>. However, it should be noted that this finding reported by Riggi di Numana was

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<sup>39</sup> See note #34 for the reference of this book.

<sup>40</sup> This is by far where the highest concentration of aragonite dirt has been found on the Shroud.

<sup>41</sup> It's interesting to note that very few if any pollen grains taken by Max Frei-Sulzer from the internal part of the Shroud in 1973 and 1978 are mineral coated. This important discrepancy between the Frei-Sulzer's pollen samples and the Riggi di Numana's pollen samples (taken from the reverse side of the Shroud) reinforced the hypothesis that most of Riggi di Numana's pollens (including all the mineral coated ones) were deposited on the cloth when the enshrouded corpse was laid on the floor and/or on a stone bench inside the tomb. A good description of the mineral coated pollen grains discovered by

never published in an independent peer-reviewed scientific journal and was never submitted to a proper comparative analysis with the samples collected by Nitowski in different sites in Israel and with the dirt samples collected by the STURP team on the Shroud. Such comparative analysis would be necessary to see if the calcium-rich coating supposedly found by Riggi di Numana around 50% of his pollen grains samples is really of the same nature (i.e. travertine aragonite) and if it could give the same close chemical match with the Jerusalem and Shroud samples analyzed by Kohlbeck and Levi-Setti.

Because of that, we should remain prudent against the possible implication of such a claim. But nevertheless, since this particular finding really appears to be in good agreement with the results of Kohlbeck and Levi-Setti's analyses, and more importantly, since it has never been properly dismissed by credible experts in microscopy or chemistry<sup>42</sup>, it would be an error to throw it aside and consider it as totally invalid or unfounded. And if one day there would be a counter-verification that would show a good chemical match between the mineral substance that his coating around 50% of the pollens found on the reverse side of the Shroud by Riggi di Numana and the aragonite dirt samples analyzed by Kohlbeck and Levi-Setti that were taken from the Shroud and from a 1<sup>st</sup> Century tomb A.D. in Jerusalem, then we would have more important data suggesting that the Shroud had really been used one day to buried a crucified body in the Jerusalem area. Presently, it's much cleverer to consider Riggi di Numana's interesting discovery as being in good agreement with the study of Kohlbeck, Nitowski and Levi-Setti suggesting that the Shroud man was probably executed in the region of Jerusalem and was buried in an ancient rock tomb typical of those that were found in that region and only waits to receive a proper scientific confirmation.

2- Some pollen grains lifted from the Shroud with standard sticky tapes by the criminologist Max Frei-Sulzer seems to come from plants that grows in the region of Jerusalem.

On November 21, 1973 and on November 6, 1978, Max Frei-Sulzer took samples from the Shroud with standard sticky tapes in order to analyze the pollen grains that were stuck there while trying to determine their original geographical location. He did this by making a comparative study with pollen grains he obtained from living specimens in Israel, Turkey, Cyprus, France and Italy. Frei-Sulzer's study was never completed and his results were never published in a peer-reviewed journal before he suddenly died on January 4, 1983. However, before his death, he gave some of his preliminary results to the press (this action opened the door to many critics). He said that he was able to find a total of 58 different species of pollens in the different samples he took with standard sticky tapes. Among these 58 species, he said that only 17 (less than a third) came from European plants and 38 (exactly two thirds) came from plants growing in the mountains of Judea, between the Mediterranean and the Dead Sea. The principal critic (among many) that was formulated against this claim from Frei-Sulzer comes from the fact that it is highly improbable that he was able to differentiate the species (which could give a precise geographical location) and the gender of the grains of pollens (which is far less precise versus the possible geographical location).

More recently, some specialists of pollens like Orville Dahl, Avinoam Danin and Uri Baruk have all taken over the work of Frei-Sulzer to see if they could confirm or not his results by analysing his old samples. Dahl has been able to identify many identical types of pollens located in one particular sample and claimed that they came from *Cistus Creticus* L., which is a little native shrub of the Jerusalem region. This was a confirmation of one of the results obtained by Frei-Sulzer who also had identified this type of species. But as Danin and Baruk wrote in a paper published in 1998

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Riggi di Numana can be found in the book *The Blood and the Shroud: New Evidence that the World's Most Sacred Relic is Real* that was written by Ian Wilson and published in 1998 by Simon and Schuster editors, New York, NY. For a very good summary of this part of Wilson's book, along with some other relevant information concerning the aragonite dirt found on the Shroud, see: <http://creationevolutiondesign.blogspot.ca/2007/06/bogus-shroud-of-turin-7-dirt-on-feet-of.html>.

<sup>42</sup> This includes all the microscopists and chemists of the STURP team who, unfortunately, didn't collect any samples from the reverse part of the Shroud during their 1978 investigation of the cloth and who also never had the chance later on to do any counter-verification of Riggi di Numana's results by analyzing the real chemical composition of his dust samples, particularly the mineral coating he reported having found around 50% of the pollen grains present in the dust, and compare the results with the chemical composition of the different aragonite samples analyzed by Kohlbeck, Nitowski and Levi-Setti, especially the one coming from the Shroud's internal surface and the one coming from a 1<sup>st</sup> Century A.D. tomb in Jerusalem. It's only then that we could learn for sure if there really was some form of contamination of the external part of the Shroud coming directly from a direct contact of the cloth with the dirt present in the tomb.

and entitled *Floristic Indicators for the Origin of the Shroud of Turin*<sup>43</sup>: "...we cannot approve or disapprove this determination (note: the one made by Dahl) until pollen of the suspected Cistaceae are removed from the sticky tape and determined under a microscope with higher resolution." It's important to understand that this is also true for all the rest of Frei-Sulzer's results and it has never been done to this day because of the bad state of Frei-Sulzer's sticky tapes samples in which the pollen grains are all glued. In the conclusion of their 1998 paper, Danin and Baruk wrote this about the real problem of making a clear distinction between a specific species of plant and its more general gender: "It seems that M. Frei was not aware of the possibility that many of his determinations at the specific level (note: the species level) could not be accepted by palynologists today. At present, with the great increase in our knowledge of the Middle Eastern palynology, palynologists familiar with the local flora will be highly reluctant to determine a Chenopodiaceae pollen grain as *Anabasis aphylla*. This is because generally Chenopodiaceae pollen grains can not be determined to a specific level." This was just one example given by the authors but the same situation is also true for all the other pollen grains still stuck today in the sticky tape samples taken by Frei-Sulzer. Never mind this high reservation, the two authors were confident enough to finish their paper with this statement: "Frei was correct, however, in his determination of *Gundelia tournefortii*, which became one of our leading indicators." This independent confirmation of another result obtain by Frei-Sulzer is interesting because this type of thorn plant grows only in the Near East<sup>44</sup> but in the end, this particular conclusion has also been criticized by other experts.

That means one thing: more precise and specific research is needed concerning the pollen evidence<sup>45</sup> and this could only be achieved with a new sampling done directly on the cloth itself and much more properly than what was done by Max Frei-Sulzer in 1973 and 1978. However, it's important to note that there is still a risk that the 2002 restoration of the relic has disturbed the pollens so much that were still present on the Shroud at the time that a new valid study of them could be impossible in the future. But for the moment, it's better to remain prudent concerning a possible dramatic impact that this restoration could have on the pollens. In reality, the claims made by many researchers that the restoration had such a bad impact on the pollens is impossible to determine presently and it's only when scientists will get new direct access to the cloth that it will be possible to confirm or reject such a catastrophic scenario.

But even if a new and proper study may never be possible to operate and even if the numerous studies already done on pollen samples collected by Frei-Sulzer can't determined the exact species beyond reasonable doubt, there's one important result concerning these pollens studies that seem to be solid enough to be consider as authentic data coming from the Shroud that was scientifically confirmed. This concerns many types of halophytes that were found by Frei-Sulzer. This finding was confirmed by Paul Maloney (an archaeologist who studied the Frei-Sulzer's samples with Orville Dahl) in an interview with Russ Breault<sup>46</sup>. This is an important finding because these types of plants are only present in semi-desert and desert regions and nowhere else. So, even if it's still impossible to be sure if there really is pollen from plants growing specifically in the region of Jerusalem (including these halophytes), at least we can say without too much doubt that the Shroud was once present in a desert region during his history. And because we are certain that the Shroud has always been kept in Europe (France and Italy) throughout his official history that starts in

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<sup>43</sup> Avinoam Danin and Uri Baruk, *Floristic Indicators for the Origin of the Shroud of Turin*, *Proceedings of the 3<sup>rd</sup> International Congress of Studies on the Shroud*, Turin, Italy, June 5 to June 7, 1998 (<http://www.shroud.com/pdf/daninx.pdf>).

<sup>44</sup> We even found this type of plant in the immediate region of Jerusalem.

<sup>45</sup> Because of the constant evolution of science, maybe some new technologies will be available in the future that will permit to make a proper pollen analysis that could determine the specific species and their probable geographic location. One possible interesting avenue of research concerning pollens still present on the Shroud could well be the rapid development of DNA analysis. This is possible to think that one day, a proper and precise comparative DNA study could be performed on new pollen grains taken from the Shroud and pollens taken from various geographical locations in Europe and the Middle East, particularly in Palestine and Anatolia, which are two possible places where some pollens on the Shroud could come from (if Frei-Sulzer's conclusion is correct). Along with the comparative spectroscopic analysis done by Kohlbeck and Levi-Setti in the 1980s for a dust sample taken from the Shroud and dust samples taken in a tomb in Jerusalem, there is some hope that this potential comparative DNA analysis between pollens from the Shroud and pollens from the Jerusalem area could finally give us a scientific confirmation that this cloth was really present in that region at one point in its history and that the man of the Shroud was most probably crucified and buried in that city. There is no doubt that if this happened, the probability that this cloth really wrapped the dead body of Jesus of Nazareth after his crucifixion would rise dramatically. But we're not there yet.

<sup>46</sup> <http://shrouduniversity.com/videos/Maloney.wide.wmv>



Lirey, France, ca. 1357<sup>47</sup>, the confirmed presence of these pollen grains of halophytes on the Shroud are a very good indicator that the Shroud is certainly older than what we officially know about its history and at the very least, this gives more credence to the hypothesis that place the Shroud in Constantinople prior to the sack of the city by the Latin crusaders in 1204 (where it probably was stolen and brought to Europe by the crusaders)<sup>48</sup>. In addition, such a finding does not contradict at all the hypothesis that the Shroud was once present in the Jerusalem region.

In conclusion, because it really seems impossible to get a definitive confirmation concerning the particular species of these pollen grains taken from the Shroud in the 1970s, it seems more prudent to consider the results of the different pollens studies that were done since only as “interesting clues” that still need to be independently confirmed with a scientific method more precise and probably with new pollen samples taken from the Shroud again (if the 2002 restoration has not disturbed the pollens too much that were still present on the cloth). On the other hand, when we put these interesting clues coming from the results of these pollen studies alongside the more solid evidence (even if it’s not absolute evidence) that comes from the results of Kohlbeck and Levi-Setti concerning the good match between the Shroud and the Jerusalem samples of aragonite, science can say that there is a pretty good set of evidence coming from

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<sup>47</sup> This is the date most often accepted by the historians (especially in France) for the first public showing of the Shroud in this little town of Lirey, in the region of Champagne, France, mainly because of the conjuncture of two documents: 1- A document dated from May 28, 1356 in which we read that the local Bishop of the time, Henry de Poitiers (the Bishop of Troyes who was supposedly against any public showing of the Shroud), approved the divine cult in the church of Lirey but without mentioning the Shroud. 2- A document written in 1357 in which we read that twelve Bishops from the Papal court granted indulgences to the pilgrims who were visiting the Church and relics. Nevertheless, since these relics are not described precisely, we can’t be sure if the Shroud was among them. It’s also important to note that other historians prefer the dates 1353 (which is the date of the foundation of the Church of Lirey where the Shroud was first exposed in France), 1355 or 1356. If the date 1357 is correct, that would mean that it’s still possible to think that Geoffroy I de Charny never was officially in possession of this relic (because he died in September 1356 in a battle against the English army). If this is true, that means it’s most probably his wife Jeanne de Vergy (a distant relatives of Othon de la Roche who participated in the sack of Constantinople in 1204) who would have been the true owner of the Shroud at that time. However, the possibility that Geoffroy I de Charny truly became the owner of the Shroud some time before he died while keeping this information secret (even for the clergy) seems to be more probable and rational. This would explain why the first public showing of the Shroud most probably came after his death, while at the same time, there are two different attestations of ownership concerning Geoffroy I. The first one comes from a later testimony of his son, Geoffroy II de Charny, who said his father received it as a gift and the second one comes from Marguerite de Charny, the granddaughter of Geoffroy I, who said that his grandfather had “conquered” it. These two testimonies suggest that the Shroud could have been part of the wedding dowry given by Jeanne de Vergy’s family to his husband Geoffroy I when they got married. In sum, because Geoffroy I himself never claimed that he was in possession of a Shroud of Christ, it is much more prudent to assume that it is his widow, Jeanne de Vergy who would have permitted or organized this first public showing of the relic shortly after the death of her husband, probably in 1357. In the present state of the historical research, this is the most prudent conclusion to draw concerning the first public appearance of the Shroud in Lirey. After all, if the hypothesis concerning the wedding dowry is correct, she would have been the true owner of the Shroud when she married Geoffroy II! For a good summary of the known history of the Shroud of Turin, see the section *Une histoire certaine* in: Sébastien Cataldo, Thibault Heimburger and Thierry Castex, *Le Linceul de Turin: Complément d’enquête* (The Shroud of Turin: Further Investigation), Éditions Docteur angélique, 2010. See also: Emmanuel Pouille, *Les sources de l’histoire du Linceul de Turin, Histoire Ecclésiastique*, Vol. 104:3-4, 2009 and Pierluigi Baima Bollone, *Sindone 101 domande e risposte* (101 Questions on the Holy Shroud), Edizioni San Paolo s.r.l., Milano, Italy, 2000. You can also read a much more complete history of the Shroud after his first showing in Lirey, here: <http://www.shroud.com/history.htm>.

<sup>48</sup> The presence of the Shroud in Constantinople at least during the second half of the 11<sup>th</sup> Century up until the sack of the city by the Latin crusaders in 1204 is a hypothesis accepted by many scholars and mainly come from the conjecture of many different documents: 1- Some illuminated drawings of Christ’s Passion and burial and of the discovery of the empty tomb found in the Pray codex (dated between 1192 and 1195), which shows some striking similarities with many characteristics found on the Shroud of Turin. 2- The testimony of Nicolas Mesarites (dated from 1200 or 1201), who was the guardian of the relics kept in the Pharos chapel, which was located inside the imperial palace in Constantinople and who makes an odd reference to the nudity of Christ while talking about the relic of his Shroud that was kept in that chapel. 3- The testimony of Robert de Clari (dated from 1204), who was a French knight who participated in the sack of Constantinople and who states that in 1203, he saw a Shroud of Christ with a body image on it being showed publicly in the Blachernae chapel, which was located inside the Blachernae palace (another imperial palace of Constantinople). Robert de Clari also declared that this public showing of the Shroud was done every Friday. Finally, there are also numerous lists of relics written by pilgrims, kings, emperors or members of the clergy between 958 and 1200, which all mention the presence of a Shroud of Christ (or burial cloths in the plural) in Constantinople (but without mentioning the presence of bloodstains or a body image on the cloth), which can be seen as good historical clues that suggest that the relic was possibly present in that city from at least the middle of the 10<sup>th</sup> Century but was never (or extremely rarely) put on public display and must have been essentially kept hidden inside a richly decorated reliquary, which was pretty common for the time. For much more information about the historical references to the presence of a Shroud of Christ in Constantinople, see: Emmanuel Pouille, *Les sources de l’histoire du Linceul de Turin, Histoire Ecclésiastique*, Vol. 104:3-4, 2009.

the Shroud which strongly suggests that this cloth has been probably present in the Near East at some point in his history and could even have been used to envelop a crucified body in the immediate region of Jerusalem.

It's important however to state categorically that these good clues don't constitute an absolute proof and even if they could be independently and properly confirmed in the future, we have to assume that they will only point to a probable geographical location (for example, Jerusalem) and not to a probable era<sup>49</sup>. Nevertheless, when we consider all the data we just described as a whole, the probability that the Shroud man was a Jew who was crucified in the immediate region of Jerusalem seems quite strong<sup>50</sup>.

While always keeping this particular conclusion in mind, we can now start the main analysis of the most striking features that we can see on the Shroud.

**Here's a complete list of these features, along with a proper analysis for each one of them:**

**1- There are numerous puncture wounds all over the head area (front and back) that appeared to have been caused by the wearing of a cap of thorns.**

On next page, you'll see two negative pictures of the Shroud (frontal and dorsal) showing these numerous punctures wounds that covered the head of the man completely (including the top of the head).

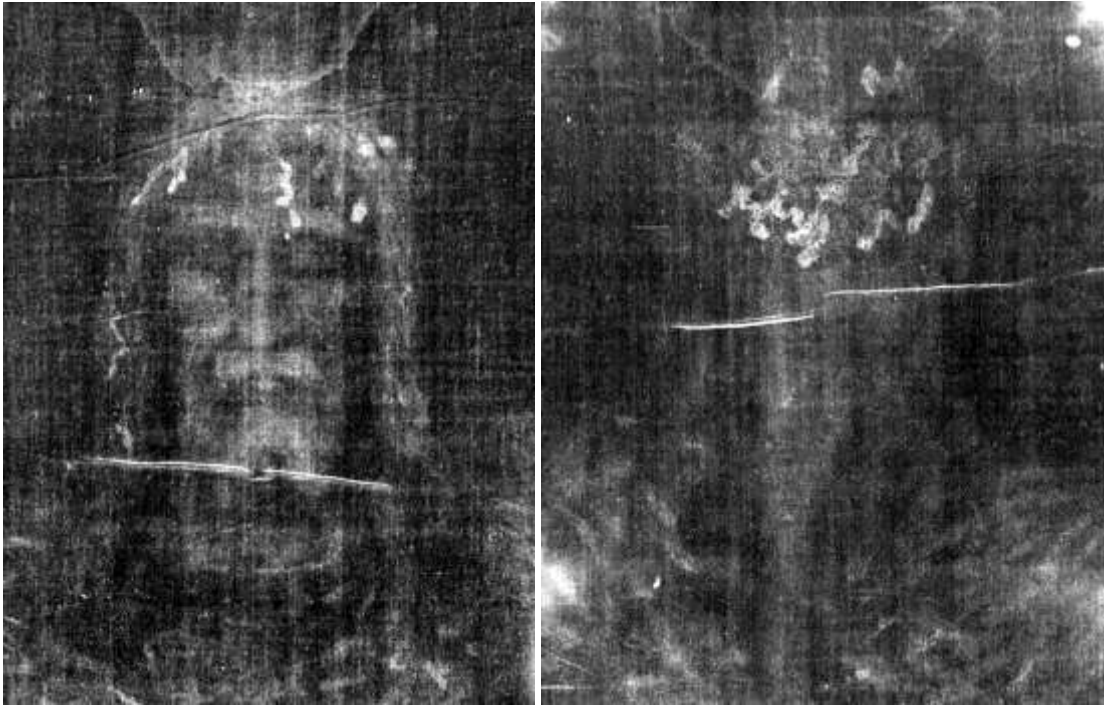
On the frontal image, note the swollen right cheek and the injury located in the cartilaginous part of the nose, which are clear indications that this man had been also severely beaten on the face. Medical experts like Pierre Barbet have also detected signs of injuries to the left cheek, to both eyebrows and to the lower lip:

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<sup>49</sup> But who knows what will come in the future? Maybe genetic science will be advanced enough to be able to determine precisely the age and a precise location of some particular pollen (or even some linen fibers or some human DNA) found on the Shroud? Looking at the fast development of genetic science, this idea is far from being ridiculous.

<sup>50</sup> When we consider all this data together, the probability that the Shroud man was really a Jew seems quite good. Because of this, we can conclude that this man was most likely a Jew and even if he wasn't, we can conclude with a very high level of certainty that he was at the very least someone with a Middle Eastern origin. Also, even though we must leave the door open (though not very wide) for other possible locations, the probability that this man was really executed in the region of Jerusalem appears to be strong, mainly because of the very good chemical match that was found between a dirt sample from the Shroud and a dirt sample from a tomb in Jerusalem. In sum, once we agree that there really is a very good probability that the Shroud man was a Jew, the hypothesis that he was probably crucified in the Jerusalem area appears to be very rational and even probable and there is absolutely nothing in the different pollen studies that were done since the 1970s to contradict such a probabilistic conclusion.





**Analysis of point #1:** These particular bloodstains are one of the most striking features of the Shroud that seem to refer directly to the person of Jesus of Nazareth. Also, the fact that there was most probably a cap covering the totality of the head of the Shroud man (like a mitre if you will) instead of a simple circlet of thorns (like standard medieval crowns) is another very interesting feature that is very consistent with Jesus' Passion. Effectively, during the time of Christ, most Oriental kings were wearing this kind of mitre that was covering the totality of the head instead of a circlet crown that was used by most medieval kings (and also used by the vast majority of Christian artists through history to represent Jesus during his Passion). Now, we have to estimate the probability that another crucified man in history could have been also forced to wear this kind of cap of thorns during his execution.

On this particular question, it is good to read the opinion William Meacham has expressed in his paper about the authenticity of the Shroud<sup>51</sup>: "The crowning with thorns is described in John's Gospel as a spontaneous and capricious invention of the guards in response to absurd claims of kingship associated with their prisoner. Ricci (1977:67) and others contend that this trait is a singular and identifying mark of Christ; among the recorded tortures of the condemned prior to crucifixion, there is no such crowning or spiking of the scalp. It must be allowed, however, that similar injuries might have been sustained by other crucified men, perhaps palace intriguers or leaders of rebellion. An instance is recorded by Philo of a mock crowning in ca. A.D. 40 during a visit of the Jewish King Agrippa to Alexandria; a mock processing was staged with an idiot dressed in ragged royal purple and crowned with the base of a basket... Therefore, while the parallel between the head wounds of the Shroud man and those of Christ is striking, it is not sufficient of itself to establish the identification."

In the footnote #15 of my first paper about the Shroud's authenticity<sup>52</sup>, I offer the same prudent opinion and I think it's better to leave the door open for the possibility of other crowning with thorns that could have been done from time to time to other crucified men because historically, we know that some acts of torture and/or humiliation have been done

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<sup>51</sup> See note #9 for the reference of that paper.

<sup>52</sup> See note #1 for the reference of that paper.

by the Roman soldiers before the crucifixion itself<sup>53</sup>. That's why we cannot completely reject this possibility, especially when we think that this form of capital punishment was often applied to rebel leaders and political revolutionaries, which could have given a favourable context for this particular act of derision<sup>54</sup>. Nevertheless, it's very important to emphasize the fact that a crowning with thorns was certainly not part of the standard Roman procedure for crucifixion but instead, it was more like a spontaneous act of derision made by the executioners in relation to someone like Jesus of Nazareth who had been accused of kingship. In that context, we can think that there were certainly some other persons, especially in Palestine, who could have been accused and condemned for pretty much the same subversive motive than Jesus (like, for example, the leader of some rebellious movement against Rome or a self-proclaimed Messiah), making a suitable context for another crowning with thorns.

Nevertheless, it's important to emphasize the fact that this kind of derision torture was not part of the common procedure used by the Romans during a normal crucifixion, even for those types of criminal<sup>55</sup>. Finally, we have to note that there were many other kinds of criminals who were crucified by the Romans and in these numerous cases<sup>56</sup>, the context was certainly not favorable at all for a crowning with thorns.

Because of that and the lack of any precise reference to another crowning with thorns that would have been done to another crucified victim other than Jesus of Nazareth, we have to assume that there were certainly not many cases where this particular act of torture was inflicted on a criminal prior to his crucifixion. That's why we can conclude this point by saying that, in the context of a crucifixion, the probability that the executioners could have inflicted these kind of puncture wounds to the head of another condemned man than Jesus of Nazareth is very weak.

## 2- There is a side wound in the chest area that appeared to be a direct hit to the heart that was done post-mortem.

In the next page, you'll see a negative picture of the side wound in the chest area (i.e. the grey oval shape over the numerous blood flows).

Note that the particular shape of these blood flows clearly indicates that this injury happened while the corpse was still in a vertical position of crucifixion<sup>57</sup>. The black triangular shape right next to these blood flows is a patch of cloth that was sewn to the Shroud in 1534 after it was damaged by fire in 1532, while it was kept in Chambery, France<sup>58</sup>:

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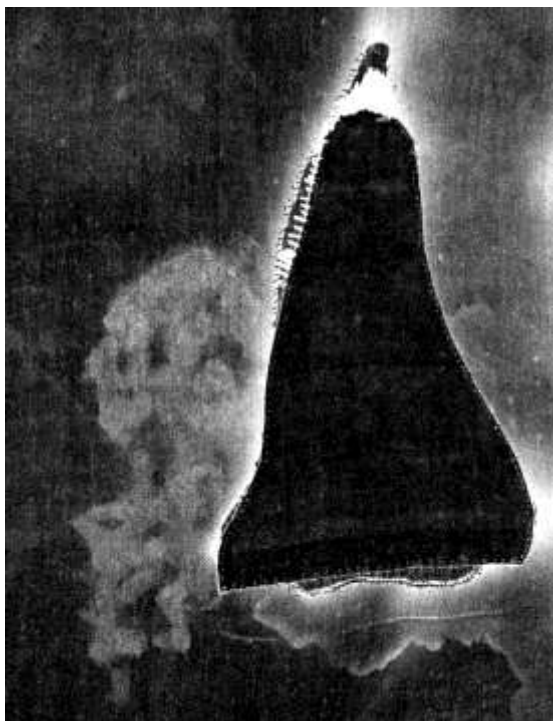
<sup>53</sup> To learn more about the standard Roman procedure for crucifixion, see: Francois P. Retief and Louise Cilliers, Christ's Crucifixion as a Medico-Historical Event, *Acta Theologica Supplementum*, 7, 2005 (<http://www.ajol.info/index.php/actat/article/viewFile/52582/41188>). In this article, the two authors quote Heinz-Wolfgang Kuhn, a German scholar who studied Roman crucifixion and who described some acts of derision that could be done by the soldiers after the scourging of the condemned person: "After flagellation, the victim would be subjected to derision and to further pain, often including mutilation such as blinding or the excision of the tongue or other parts of the body (Kuhn 1983:756)." In his paper about the authenticity of the Shroud (see note #9 for the reference), William Meacham cited another German scholar, Martin Hengel, who made an exhaustive study of Roman crucifixion and who said roughly the same thing as Kuhn: "Prior to crucifixion, a wide range of tortures might be inflicted: gouging of the eyes, mutilations, burning of the hair, etc. (Hengel 1977)." Meacham goes on and wrote: "The choice of torments apparently depended on the inclinations of the execution party and was bounded only by a concern to avoid the premature death of the condemned."

<sup>54</sup> This is particularly true for the Roman occupied Palestine of the first two centuries A.D. in which two major revolts occurred (between 66 and 73 A.D. and between 132 and 135 A.D.), along with probably some sporadic acts of rebellion done by some revolutionary groups like the Zealots or by some self-proclaimed Messiahs, like Simon of Peraea (ca. 4 B.C.).

<sup>55</sup> We have a very good confirmation of this in the Gospel accounts of the Passion. Effectively, it's evident that in Jesus' case, his crowning with thorns was a spontaneous act of derision that was not planned by the Roman soldiers. Also, we just have to read again the comment of Kuhn that we find in note #53 to understand that many different acts of derision, other than a crowning with thorns, were done from time to time in order to humiliate a criminal condemned to the cross.

<sup>56</sup> We can assume that these other type of criminals represented probably the majority of the crucifixion cases during antiquity. A good confirmation of this comes directly from the Gospel accounts, which report that there were two thieves who were crucified with Jesus.

<sup>57</sup> In his book *La Passion de Jésus Christ selon le chirurgien* (A Doctor at Calvary), Pierre Barbet described a very interesting experiment done by Antoine Legrand which proved beyond any serious doubt that the side wound had been caused by a post-mortem stabbing inflicted when the Shroud man was still



**Analysis of point #2:** Again, concerning this very particular feature that we see on the Shroud, let's read what William Meacham wrote about that<sup>59</sup>: "The post mortem nature of the side wound also exactly parallels the biblical account, and again there is no historical mention of a practice of this or any method of coup de grace during crucifixion, other than the *crurifragium* in Palestine. Bulst (1957:121) interprets an ambiguous phrase in Quintilian<sup>60</sup> (1<sup>st</sup> Century A.D.) as suggesting that piercing the corpse may have preceded its release for burial. However, an exhaustive search by Vignon (1939) and Wuenschel (1953) turned up only one slightly dubious reference to such a practice: the martyrs Marcellus and Marcellinus were dispatched with a spear during their crucifixion ca. 290 because their constant praising of God annoyed the sentries. In this instance, as in that of Christ, the spearing appears as a spontaneous act by the guards. One might conclude that similar transfixions may have occurred occasionally, were it not for the universal attitude in the

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on the cross with his arms raised over his shoulders. Here's the summary of Barbet (personal translation): "My friend Antoine Legrand got the genial idea ... to paint the side wound and the clot (note: Barbet is meaning the blood flows under the wound)... on the muscular chest of a man of the same height than Christ (note: Barbet is referring to the height of the Shroud man). The painting was done, evidently, in the burial posture with the hands crossed over the pubis. After that, he asked him to take a crucifixion position with the arms at 65 degrees (note: this is Barbet's estimation for the probable angle of the arms of the Shroud man while he was on the cross based on the directionality of the blood flows we can see on both forearms). In this position, he immediately saw protrude the middle ribs and on each one of these, he also saw the anterior end of the serratus anterior muscle fingering." In sum, what Barbet tell us is if the wound would have been formed while the man's arm would have been in a natural position, the resulting blood flows would have dropped in an almost perfect vertical direction, while on the Shroud, each blood flow is showing many undulations that could only have been formed by a raising of the ribs when the arms of the man were raised above his shoulders. This experiment made by Legrand proved that the very particular shape of these blood flows is totally consistent with someone who gets stabbed to the chest while he's in a standard position of crucifixion. Finally, here's the reference for Barbet's book: Pierre Barbet, *La Passion de Jésus Christ selon le chirurgien* (A Doctor at Calvary), Éditions Dillen et Cie, 1950.

<sup>58</sup> The patches, along with the Holland backing cloth, have been removed in 2002 during a secret restoration of the Shroud. While the holes of the 1532 fire were left open, a new and whiter backing cloth was sewn to the Shroud.

<sup>59</sup> See note #9 for the reference of that paper.

<sup>60</sup> In his book *La Passion de Jésus Christ selon le chirurgien* (A Doctor at Calvary – see note #57 for the complete reference), Pierre Barbet reported the statement of Quintilian. Here's the quote from Quintilian: "The executioner doesn't prevent that we buried those who have been hit (percussos)." On the contrary to Meacham, Barbet take this quote from Quintilian as a textual evidence that post-mortem spearing was commonly done by the Romans as a coup de grace when the family asked permission to receive the corpse of the criminal that was executed.

early church toward the issuance of blood and water from Christ's side. Christian apologists of the 2<sup>nd</sup> and 3<sup>rd</sup> centuries – a period of frequent crucifixions – believed the flow to be a miracle, Origen, who had witnessed crucifixion, could write: "I know well that neither blood nor water flows from a corpse, but in the case of Jesus it was miraculous." Certainly, such a belief could not have prevailed if piercing the corpse sub alas had been other than a very rare happening indeed."

In the same part of his article, Meacham used a quote found in the book of Barbet to comfort his point of view. This particular quote originally comes from the Roman jurist Ulpian who lived around 200 A.D. and who, according to a 6<sup>th</sup> Century digest of Roman laws called *Digesta* (meaning Digest), wrote that "the bodies of rebels and subversives were not normally released to their families for burial." Nevertheless, if the laws described in the *Digesta* were applied in Palestine (and not just in Rome) between the 1<sup>st</sup> Century A.D. and ca. 200 A.D.<sup>61</sup>, then it is possible to think that this kind of post-mortem piercing of the body before releasing it for burial could have been more common than Meacham might think. Effectively, this manuscript clearly indicates that beside rebels and subversives, the release of crucified bodies to the families who wanted to give them a proper burial should not be refused.

On the other hand, it should be note that for David Daube, a Jewish scholar from Oxford University, this is not the kind of procedure that was in place during Antiquity in Palestine and the corpses of criminals were not given back to the family right after the crucifixion but were thrown into a common grave<sup>62</sup>. However, even if Daube is correct, that doesn't mean the soldiers never speared any Jewish men condemned to die on the cross. Effectively, we can presume that in some cases, the soldiers could have used this type of hit as a kind of coup de grace to hasten death (instead of the standard method of breaking the legs of the crucified man called *crurifragium*) or when they wanted to be certain that the condemned man was really dead before taking his corpse down from the cross and throwing it into a common grave. However, it should also be note that there is not enough textual evidence to conclude that this type of blow to the chest was a common practice in Palestine during Antiquity<sup>63</sup>.

Before we can conclude this point, we have to take into account the fact that the Shroud man has been crowned with thorns, which strongly suggest that his executioners considered him as a rebellious leader or a Messianic figure who had some kingship claim. In that context, if the laws contained in the *Digesta* were applied in Palestine during the first two centuries A.D., it seems quite evident that the body of this kind of subversive criminal should not normally have been given back to his family for burial after his death on the cross. We also have to take into account the very good possibility that the Shroud man has been executed in Palestine<sup>64</sup> and consider this data in the light of the description of Daube concerning the standard procedure of burial for the Jewish crucified victims during Antiquity, which does not include the immediate released of the body to the family for burial after his execution, but a rapid burial in a common grave instead and a permission for the family to collect the bones of the victim only one year after the execution.

In sum, even if, as we've seen previously, we cannot completely exclude the possibility that some Jewish men could have been speared in the chest area after their death on the cross, we have to conclude that if the Shroud man really was an anonymous man other than Jesus of Nazareth, the probability is very weak that he could have received such a post-mortem wound to his chest before his body was removed from the cross, especially if he really was crucified in Palestine (like some data strongly suggests) and if he was considered as a subversive criminal (like his crowning with

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<sup>61</sup> In fact, it's impossible to know for sure if this procedure of releasing the body of crucified men to the families who ask for it was followed in every regions of the Roman Empire during all the antiquity or only in some particular regions, which could have excluded Palestine. It's also impossible to know if there were some times when such a procedure could have been abandoned.

<sup>62</sup> David Daube, *The New Testament and Rabinnic Judaism*, University of London, Athlone Press, 1956.

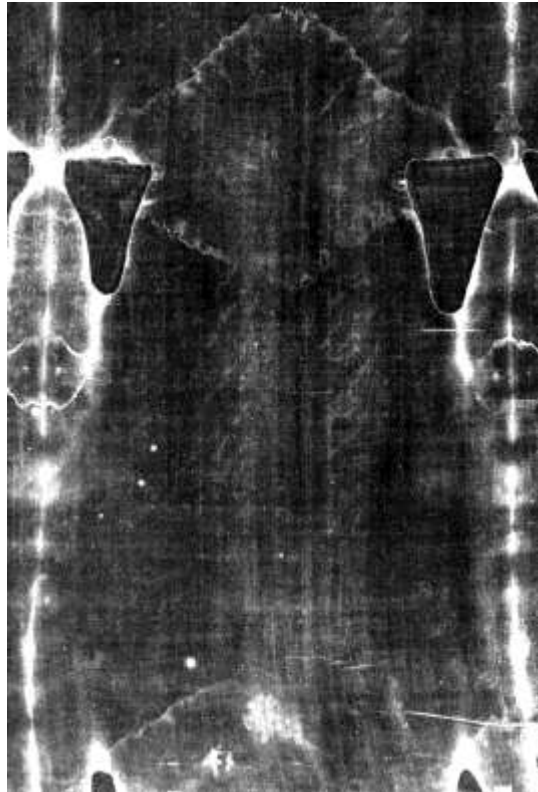
<sup>63</sup> As Meacham indicates, the reference of Quintilian is the only known reference that seems to indicate (this is not completely clear) that this was a common procedure used by the Romans at the end of a standard crucifixion. But we have to note that Quintilian was a Roman citizen living in Hispania (Spain). In this regard, who knows if the procedure he described was the same in every other part the Roman Empire? If there were other ancient references about that from other places (like Palestine, for example) that would have been written around the same time, we would get a more precise answer, but right now, it's hard to be definitive about this.

<sup>64</sup> See the description of the data that strongly suggest that the Shroud has been executed in the Jerusalem area in pages 9 to 15.

thorns strongly suggests). In fact, in this particular case, the only rational reason we can find to explain such a post-mortem wound to the chest would be to assume that the guards were not completely sure that he was dead at the time they wanted to remove his body from the cross and they decided to spear him to the chest to be 100% certain. But because this assumption has to be considered as improbable, this cannot contribute to elevate substantially the level of probability of the present conclusion, which remains very weak.

**3- There is no sign indicating that the legs of the Shroud man have been broken<sup>65</sup>.**

Here's a negative picture of the legs from the frontal image. Note the absence of any sign of bone fractures:



**Analysis of point #3:** This particular fact concerning the man of the Shroud has to be considered along with all the existing data that we have described at the beginning of the present study and which suggest that this man was probably a Jew and his execution probably occurred in the region of Jerusalem.

This probabilistic conclusion is very important concerning the present point of this analysis because it is a well established fact that the practice of *crurifragium* (breaking of the legs) was commonly performed by the Romans in Palestine<sup>66</sup> in order to respect the Jewish prescription concerning the corpse of criminals that we find in the book of Deuteronomy<sup>67</sup>. A confirmation of the use of this procedure in Palestine can be found in John's Gospel account of the

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<sup>65</sup> In the case of Jesus, we know that his legs were not broken during his crucifixion because of this passage of the Gospel of John: "The soldiers therefore came and broke the legs of the first man who had been crucified with Jesus, and then those of the other. But when they came to Jesus and found that he was already dead, they did not break his legs." (John 19:32-33).

<sup>66</sup> Historically, it is far from being sure that such a particular practice was regularly done elsewhere in the Roman Empire because normally, the Romans wanted their victim to die slowly on the cross for a good public example. This fact is confirmed by many references that were made by ancient Latin authors who specified that this form of execution was designed by the Romans to last a very long time (which could exceed one full day in some cases).

<sup>67</sup> Here's the specific prescription: "The dead body of an executed criminal shall not remain hanging on the tree over night." (Deuteronomy 21:23).

Passion of Jesus, which is possibly the only Gospel of the four to have been written by an eye witness of these events. Effectively, John reports that the Roman soldiers broke the legs of the other two criminals who were crucified with Jesus because they were still alive late in the afternoon<sup>68</sup>.

So at first sight, the fact that the Shroud man didn't have his legs broken despite the good probability that he was probably a Jew executed in the Jerusalem area could be seen as quite exceptional. But as Francois P. Retief and Louise Cilliers point out in their article entitled *Christ's Crucifixion as a Medico-Historical Event*<sup>69</sup>, on the contrary to the general perception in the public, it was not necessarily so exceptional to see a crucified victim dying on the cross after only a few hours like the Gospel reports about Jesus: "He (Jesus) was probably crucified on a short Tau-cross, and died within 6 hours (probably even 3 hours). This is not an exceptionally short period of time, and there is no reason to postulate unusual causes for his death."<sup>70</sup> From this comment, we have to assume that it is truly possible that other Jewish men could have died as fast as Jesus on the cross and because of that, could have avoided having their legs broken by the soldiers. However, because crucifixion was a form of execution normally intended to lengthen the suffering before death occurred and because there are some historical references of victims remaining alive on the cross for more than 24 hours, we have to assume that if the prescription found in Deuteronomy was regularly applied in

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<sup>68</sup> The reason given by John to explain why the soldiers performed this *crurifragium* on the other two criminals seems, at first sight, to indicate that during the time of Jesus, the prescription found in the book of Deuteronomy was possibly followed only when the crucifixion was done the day before the Sabbath. Here's what St John wrote: "Since it was the day of Preparation, in order to prevent the bodies from remaining on the cross on the Sabbath (for that Sabbath was a high day), the Jews asked Pilate that their legs might be broken, and that they might be taken away." (John 19:31). Even more, this comment of St John can even be interpreted as if *crurifragium* was truly an exceptional act in Palestine that was uniquely asked by the Jewish leaders on the eve of special events like the Passover (and probably all the other Jewish feasts). The fact that he choose to specify that the Jews had to ask permission to Pilate to have this *crurifragium* done by his soldiers in order to remove the body before Passover begins (at sundown) can really be interpreted that way. Nevertheless, this is not at all the opinion of most experts on this question who indicate that the prescription found in Deuteronomy was probably applied by the Romans during that era and consequently, the practice of *crurifragium* must have been very common in Palestine.

<sup>69</sup> Francois P. Retief and Louise Cilliers, *Christ's Crucifixion as a Medico-Historical Event*, *Acta Theologica Supplementum*, 7, 2005 (<http://www.ajol.info/index.php/actat/article/viewFile/52582/41188>).

<sup>70</sup> Despite the fact that many scholars have interpreted the surprise of Pilate concerning the rapid death of Jesus after 3 to 6 hours on the cross as a clear sign that this time range was abnormal in the context of a Roman crucifixion, Retief and Cilliers think otherwise mainly because death on the cross was multifactorial in its causes (this particular conclusion is accepted by the vast majority of the medical experts who have studied the subject). For these two authors, if one or more of the preliminary factors leading to a death on the cross was more serious than normal for one particular victim (for example, if this victim suffered a more violent scourging than normal), this could lead to a rapid death like in the case of Jesus. A bad physical condition of the victim and/or a state of exhaustion and/or some injuries or health problems that he suffered prior to his execution are also important factors that could contribute to hasten his death on the cross. Finally, the use of one or two nails to fix the feet to the cross, the exact position of the victim on the cross, the use or not of a support for the feet and the use or not of a *sedile* (which could be whether a small wooden seat or a horn or pitchfork that was fixed on the cross in order to give a better support for the victim) were four other major factors that could probably determine if the agony on the cross would be shorter or longer. Effectively, most experts think that the more support for the body weight, the longer the victim would live longer on the cross. In the end, Pilate's surprise concerning the rapidity of Jesus death could well be interpreted as a particular reaction that he had regarding Jesus case alone and not necessarily in regard of any standard case. Effectively, it is truly possible that Pilate expected to see Jesus live a long time on the cross because of his strong constitution and/or because he misjudged his level of exhaustion after his severe scourging (or some other misinterpretations like that). It's also possible that Pilate wasn't aware of some particularities of Jesus crucifixion that would have contributed greatly to hasten his death, like a possible use of only one nail for the two feet and/or a particular uncomfortable position of Jesus on the cross and/or an absence of a support for the feet and/or an absence of a *sedile*. Finally, it's also possible that he wasn't aware that a more violent than normal scourging (like Jesus probably endured) could severely injure some vital organs like the lungs, kidneys and/or liver of the victim and could seriously hastened death on the cross. In fact, it's truly possible that in the particular case of Jesus, the violent scourging he most probably suffered could have cause some internal injuries like that, along with a higher degree of exhaustion, which are two factors that could have played a crucial role in his fast death. In the end, the most probable high level of exhaustion of Jesus prior to his crucifixion could have been the most important factor for his rapid death because we can easily assume that this kind of bad physical state had a huge impact on the capacity of his legs to support adequately his weight on the cross. And if his legs couldn't play this natural role of support, we can presume that the terrible cramps to the arms, shoulders and chest described by Barbet and others medical experts would have come much faster than normal, leading to a much rapid suffocation state leading to death. In Jesus case, the fact that the soldiers had to requisition Simon of Cyrene to carry his crossbeam (called *Patibulum* in Latin and which could have weighed between 20 and 40 kg or more. Barbet in his book talks about 50 kg or so) on his way to the cross is a clear sign that his exhaustion state was huge just prior to his crucifixion. So, if Pilate really misjudge this state of exhaustion for Jesus after his scourging, it's not hard to understand his surprise when he heard that he was already dead in the middle of the afternoon, while the other two criminals crucified with him were still alive.

Palestine, the majority of Jewish criminals that were crucified by the Romans had effectively their legs broken to make sure they died and their body could be taken off the cross before sundown.

But because of the precision we found in the Gospel of John about the permission the Jewish leaders had to ask for the use of *crurifragium* during the Passion of Jesus, we have to remain prudent concerning the frequency of use of this particular method by the Romans, even in Palestine. This uncertainty forces us to estimate the level of probability that another Jewish man than Jesus of Nazareth could not have had his legs broken before dying on the cross somewhere between relatively weak and average<sup>71</sup>.

4- There are between 100 and 120 scourge marks all over the body of the Shroud man, which indicates that he endured a very violent scourging prior to his crucifixion.

On the next page, you'll see a negative picture of all the scourge marks located in the region of the back and buttocks<sup>72</sup> on the Shroud.

Note the very particular shape of these wounds that look like small dumbbells, which is a clear indication that the man was scourged with a Roman instrument called *flagrum*<sup>73</sup>. Also, the fact that there are numerous wounds in the buttocks area clearly shows that the man had been scourged while he was totally naked:

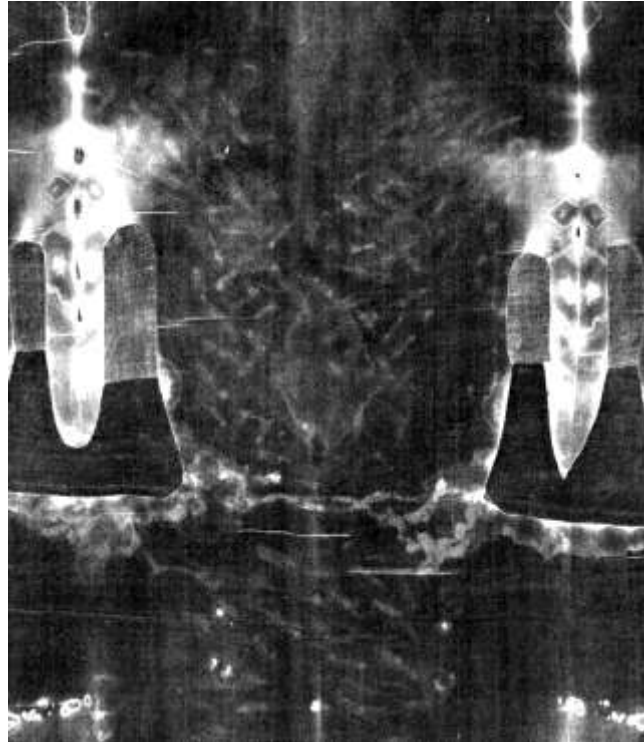
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<sup>71</sup> If the man of the Shroud was executed outside Palestine, the fact that he didn't have his legs broken at the end of his crucifixion would not be strange at all because the procedure of *crurifragium* was most probably not used that often in other parts of the Roman Empire (see note #68). However, as we saw at the beginning of our study, this idea seems very unlikely, principally because of the very good chemical match that exists between some Shroud samples of aragonite dirt and another sample taken in a 1<sup>st</sup> Century A.D. tomb in Jerusalem.

<sup>72</sup> The two series of three white spots that form a mirror image of each other in the buttocks area and the other white spot in-between the two buttocks are most probably weak scorches. This conclusion comes from Vern D. Miller and Samuel F. Pellicori of STURP who published an article about the ultraviolet fluorescence photographs of the Shroud they took in Turin in 1978. Here's the reference for this paper: Vernon D. Miller et Samuel F. Pellicori, Ultraviolet fluorescence photography of the Shroud of Turin, *Journal of Biological Photography*, July 1981. We must note that throughout his long history, the Shroud suffered at least 2 important pyrolysis incidents: one that could have been due to a drop of an acidic substance or hot wax or incense and that has provoked a series of L-shaped burn holes in four different places, which indicates that the cloth was folded in four equal parts when it happened (the date of this incident is unknown but researchers have found clear evidences indicating that it predates the other important fire damage) and another one that happened in 1532, while the Shroud was kept folded in a silver casket in the chapel of Chambery, in France, that has come pretty close to completely destroying the relic. It's truly possible that the other numerous weak scorches that are present in many places on the cloth (like these ones that we can see in the picture, pg 20) could have happened during one or more other pyrolysis incidents that would have been undocumented.

<sup>73</sup> In the *Dictionary of Roman and Greek Antiquities* that was first published in the 19<sup>th</sup> Century, we can find a precise definition for this particular instrument of torture that was commonly used during antiquity by the Roman before a crucifixion: *Flagrum*: An instrument employed chiefly for the punishment of slaves consisting of several chains with knobs of metal at their extremities, appended to a short handle, in the same manner as a whip; but which dealt out heavy blows rather than lashes (note: this may explain the lack of heavy blood flows under the scourge wounds on the Shroud and could possibly have caused important internal injuries to some of his vital organs like the lungs, the kidneys and/or the liver, which could have been the primary cause of a rapid death); consequently, the effects produced by it are described by words expressive of thumping, pounding, and breaking, and not cutting or lashing, which are characteristic of the *flagellum*, which was an instrument made with a great number of knotted and twisted tails, like the numerous feelers of the polypus. We must note that both the *flagrum* and the *flagellum* were two very typical Roman instruments that were not normally used by other people. For example, the Jews (and probably the majority of the Middle Eastern non-Roman world) were using common whips to scourge a criminal.





**Analysis of point #4:** It should be noted that medical experts have calculated a total of scourged marks on the body of the Shroud man that goes between 100 and 120, making this particular scourging a very violent one that has been inflicted by two soldiers<sup>74</sup>. Here, we should understand that a standard Roman *flagrum* had always multiple leather strips (some experts say two, others say three). So, if the *flagrum* used had three strips, each hit would give three different marks on the body and if there really was a total of 39 or 40 strokes (making 117-120 marks), then the number of marks found by the experts on the Shroud is truly coherent with the maximum number of hits allowed by the Jewish law<sup>75</sup>. On the other hand, it's very important to note that there are some missing parts in the body image of the Shroud, especially the shoulder region in the dorsal image and the upper arms in the frontal image that could have originally showed some scourge marks. And we must also note that there's a high probability that some scourge hits did not cause any bleeding that could later stain the cloth and it's also probable that some scourge marks never became humid enough on their surface to leave a noticeable mirror imprint on the cloth after the body was placed in the Shroud. For

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<sup>74</sup> Experts like Pierre Barbet have found, thanks to the directionality and the particular locations of the wounds caused by the leather strips, that the scourging of the Shroud man was probably done by two soldiers of different stature who were positioned on each side of the victim.

<sup>75</sup> This prescription comes from the book of Deuteronomy. Here's the exact quote: "If the guilty person deserves to be beaten, the judge shall make them lie down and have them flogged in his presence with the number of lashes the crime deserves, but the judge must not impose more than forty lashes. If the guilty party is flogged more than that, your fellow Israelite will be degraded in your eyes." (Deuteronomy 25:2-3). This limitation in the number of hits was probably imposed to avoid the risk of killing the punished person. In the book he wrote in 2004 entitled *La Passion de Jésus : De Gethsémani au Sépulcre* (The Passion of Jesus: From Gethsemane to the Sepulchre), Doctor Jean-Maurice Clercq gave a very interesting precision concerning the standard procedure used by the Jews for the scourging of a criminal (personal translation): "This imposed limitation (Deuteronomy 25) limited at 40 the number of whip hits. The execution, done with a common whip, was limited to 39 to make sure that the number wouldn't be exceeded, with 13 hits on the chest (note: it's probable that Clercq was meaning here the back of the chest) and 13 hits on each shoulders." From this description, it's easy to understand that this is not the method that was used on the Shroud man because in his case, the hits were done on the front side of his body as well as his backside and they were not limited to the upper part of the body. Because we can assume that many people of antiquity were using a similar method that was used by the Jews to scourge a criminal, we can say that the numerous wounds located all over the body of the Shroud man is another very good indicator that he was scourged by Roman soldiers before his crucifixion. Also, the fact that the Shroud man was scourged totally naked is another very good indicator that the scourging wasn't done by the Jews because it wasn't part of their culture to show someone totally naked in public, not even a criminal. Finally, here's the reference for Doctor Clercq's book: Jean-Maurice Clercq, *La Passion de Jésus : De Gethsémani au Sépulcre* (The Passion of Jesus: From Gethsemane to the Sepulchre), Éd. François-Xavier de Guibert, Paris, 2004.

all these reasons and also because it's truly possible that at least one of the two *flagrum* that were used possessed only two strips (instead of three), it's very easy to assume that in reality, there have been more scourge hits (probably much more) done to the man of the Shroud than what was prescribed by the Jewish law<sup>76</sup>.

In this context, we have to ask ourselves the question if a very intense scourging like that was common prior to a Roman crucifixion. It is far from being sure because in the context of a crucifixion, this form of torture was not inflicted to kill the person but simply to weaken him, so that he could not oppose any resistance on his way to the place of crucifixion. As Barbet wrote in his book about the Shroud<sup>77</sup> (personal translation): "For the Romans, the law didn't indicate any other limitation than the necessity to avoid killing the victim under the hits; it had to be able to carry his patibulum and to die on the cross, regularly."<sup>78</sup> Because of this prescription to avoid killing the victim before he could reach the place of crucifixion<sup>79</sup>, we have to assume that it wasn't common to see the soldiers inflict such a heavy scourging like the one endured by the man of the Shroud, because of the high risk of killing the person before his crucifixion<sup>80</sup>. In the case of Jesus of Nazareth, we can easily deduce that he probably suffered a scourging more intense than what was normally done to a crucifixion victim because of the fact he died much faster than the two other criminals

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<sup>76</sup> Unlike the Jews, the Romans were not restricted by their own law to a well-defined maximum of hits for a legal scourging. In the case of the Shroud man, the 100 to 120 visible scourge marks indicates that this man received a minimum of 33 to 40 strokes from the two soldiers if the *flagra* used were composed of three leather tongues, between 40 and 48 strokes if one *flagrum* was composed of two tongues and the other was composed of three tongues and finally, between 50 to 60 strokes if both had only two leather tongues. We have to remember that this is only a minimum number of hits and for all the reasons we just described, it's highly probable that the Shroud man received in fact more strokes than that, which is another clear indication that his scourging wasn't done under Jewish ruling.

<sup>77</sup> See note #57 for the complete reference of this book.

<sup>78</sup> In note #53, we cited William Meacham who confirmed Barbet's opinion by saying: "The choice of torments (note: before the crucifixion) apparently depended on the inclinations of the execution party and was bounded only by a concern to avoid the premature death of the condemned." In the case of the Shroud man, the very high number of hits he received seem to be much more consistent with the Roman method of scourging that was used as an independent form of punishment and which could potentially be life-threatening sometimes for the criminal instead of the standard scourging that normally was preceding a crucifixion and which was most probably applied less severely to avoid killing the person before he could be placed on the cross.

<sup>79</sup> A very good sign that this particular prescription was important for the Romans can be seen in the scene of the Synoptic Gospels involving Simon of Cyrene. Effectively, the fact that the soldiers decided to requisition someone from the crowd to help Jesus carrying his crossbeam to the place of execution clearly show that they were afraid that he could die before his crucifixion. This particular episode leaves no doubt about the fact that everything was done by the Romans to avoid that the condemned person could die before being crucified. In that context, a very violent scourging like the one done to the Shroud man was certainly exceptional when this was done only as a prelude to a legal Roman crucifixion.

<sup>80</sup> Because it is a very well-known fact that the Romans had no limit concerning the number of hits they could do during a scourging, many persons have concluded that it was common for them to inflict a very violent scourging prior to the crucifixion of a criminal but this presumption is far from being proven or even rational in the context of the soldiers who wanted to make sure that the victim would not die on his way to the cross. During the analysis of the point #1 concerning the wearing of a cap of thorns, we have seen that it was pretty usual for the Roman to also inflict different acts of derision and/or pain after the scourging, which was another supplementary torture inflicted before the crucifixion. It's easy to estimate that these other forms of torture would weaken the victim even more with the direct consequence to elevate the danger that he could die prior to his crucifixion. In this context, it is highly improbable that it was common for the Romans to inflict a very violent scourging to a person condemned to die on the cross. In the particular case of the Shroud man, medical experts have all concluded that this person was most probably in very bad shape after the scourging and it is also very probable that some of his internal organs (like the lungs, the kidneys and/or the liver) were damaged by this violent scourging that was done in such a way that there were direct hits (in great numbers) not only on his back (from the upper back all the way to the ankles) but also on his front (particularly on the chest area, the legs and even some possible hits on the forearms). Some medical experts (like French Doctor Jacques Jaume) have even concluded their study of the scourge wounds by saying that this man would probably not have survived this violent form of torture, even if he would not have been crucified afterwards. From this medical opinion, we can easily assume that the intensity of the scourging that was done to the Shroud man was surely not common in the context of a standard Roman crucifixion, because normally, scourging was only intend to remove the strength of the criminals before they carried their crossbeam to the place of execution; not to kill them before their crucifixion. Here's the reference for the Doctor Jaume study: Jacques Jaume, L'Homme du Linceul était-il consentant ?- Étude médicale (Did the man of the Shroud consent? – Medical Study), *Proceedings of the Shroud of Turin Forum*, "Montre-nous ton visage" Association, Paris, France, February 6, 2010.

who had been crucified with him<sup>81</sup> and also because in the case of Jesus, this form of torment was probably a totally independent torture that had been inflicted to him before he ended up being condemned to die on the cross<sup>82</sup>.

In fact, we have to assume that these two separate sentences (a scourging sentence followed by a crucifixion) pronounced the same day against the same criminal was a very rare event in the context of a Roman trial. It is very probable that this didn't happen often during antiquity. In fact, because we don't have another written reference of a criminal that would have been condemned two different times by the Romans on the very same day (the last time being a sentence to die on the cross), it is even possible to think that the very particular case of Jesus of Nazareth was totally unique in Roman judicial history. We can conclude this point by saying that the probability that someone other than Jesus of Nazareth could have suffered this kind of very violent scourging prior to his crucifixion is very weak.

5- There are some physiognomic and anthropometric characteristics of the body image that indicate that the Shroud man certainly originated from the Middle East and that he was most likely a Jew<sup>83</sup>, despite the fact that he had long hair<sup>84</sup>, which was not common for the average Jewish man living during Antiquity.

**Analysis of point #5:** Before starting this analysis of many features from the Shroud, we've seen that there is some fairly solid data and facts that seem to indicate that the man of the Shroud was probably a Jew who was scourged and crucified in the Jerusalem area. Nevertheless, even if the place where he was executed by the Romans is really Jerusalem, like some interesting data from the Shroud seem to indicate, because some experts were not as categorical as others in their conclusions concerning the most probable ethnic origin of the Shroud man<sup>85</sup>, there's still a possibility

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<sup>81</sup> The fact that the two criminals crucified with Jesus were still alive after Jesus died can be seen as a good indication that they probably endured a less severe scourging, which could be easily explained if they received the standard scourging that was normally done prior to a standard Roman crucifixion. Of course, there's no way to be sure about that, but because it's almost certain that the intensity of the scourging played a crucial role in the length of the agony on the cross, it is enough to understand that this was probably the case. Effectively, we can easily assume that the more violent the scourging was, the higher were the chances that the victim could suffer some important internal injuries and/or could be much more exhausted before his crucifixion, which are two very important factors that could have lead, without any doubt, to a much faster death on the cross.

<sup>82</sup> This conclusion comes directly from the account we found at the end of chapter 18 and the beginning of chapter 19 in John's Gospel. In this part of the book, the author indicates that the Jews chose to liberate Barabbas instead of Jesus but right after that, there is no mention that Pilate has condemned Jesus to die on the cross. Instead, St John indicates that Pilate ordered his soldiers to scourge Jesus, which in the literary context of his Gospel, really seems to have been a legal condemnation in itself that was completely independent of the later sentence to death, which suggests that at this moment, the Roman Prefect was not ready yet to condemn Jesus to be crucified. This particular context could really have opened the door to a much more intense scourging on the part of the soldiers than what he would have suffered if he would have been already condemned to die on the cross. In fact, St John mentions that right after his scourging, Jesus was mocked by the soldiers who put a crown of thorns on his head, dressed him with a purple mantle and saluted him as if he was a king, while hitting him at the same time. This violent and bloody mockery is a good indicator that the soldiers were most probably very rough with him during his scourging. In sum, when we consider the probable fact that this scourging was a legal sentence in itself that was done by men who did not know that Jesus would eventually end up being crucified, it's not hard to believe that the level of severity of this particular scourging was much higher than the standard scourging that always preceded a Roman crucifixion, which was only done in this case to remove the strength of the victim, not to beat him to death. On the contrary, because there was no limit of strikes in Roman law for a legal sentence of scourging, it's easy to assume that this form of torture was sometimes potentially life-threatening for the victim when it was applied as an independent punishment.

<sup>83</sup> See the description of point #1, which start in page 6 of the present paper.

<sup>84</sup> On the contrary to the great length of his hair, the fact that the Shroud man was wearing a pretty long beard is totally consistent with what was the common fashion for ancient Jewish men of the time of Jesus and well after. This fashion came directly from the Jewish law and was considered a sign of masculinity. Here's the exact prescription: "You shall not round off the side-growth of your heads nor harm the edges of your beard." (Leviticus 19:27). Most scholars agree that there is little doubt that most adult Jewish males in antiquity wore a full beard in compliance with that particular prescription from the book of Leviticus. And there is little doubt that Jesus and his disciples, as Jewish men from their time, also wore a full beard.

<sup>85</sup> A good example of that can be found in the paper written by William Meacham about the Shroud's authenticity (see note #9 for the reference). In it, Meacham quotes Silvio Curto who said that, in his opinion, the physiognomy of the Shroud man is more Iranian than Semitic, while Carleton Coon described the man as "of a physical type found in modern times among Sephardic Jews and noble Arabs". From these expert points of views, we can conclude that the race of the Shroud man could well be Semitic but it's also possible to think that his ethnical origin was more Arab or Persian.

that he was from another region of the Middle East<sup>86</sup>. And the fact that, during the first few centuries A.D., it was common to see men wearing long hair and beards in other Middle Eastern regions from where the Shroud man could have come<sup>87</sup> just reinforced that possibility.

But let's assume that the Shroud man was really a Jew and that he was really executed in Jerusalem before the middle of the 2<sup>nd</sup> Century A.D.<sup>88</sup>, which is the most probable hypothesis in light of all the pertinent data coming from the Shroud. The first thing to note is the important fact that it wasn't common for the vast majority of the Jewish men who lived during that era to let their hair grow very long like those of the Shroud man<sup>89</sup>. In reality, in Palestine during that time, the only Jewish men for which it was normal to let their hair grow long were the Nazarites, who allowed it to grow uncut for religious reasons<sup>90</sup>. Because of this, the hypothesis that the Shroud man was a Jew who was under a Nazarite vow appears to be the most probable<sup>91</sup>. We cannot exclude however that some Jews who pretended to be the Messiah<sup>92</sup>, or some other Jews who were rebellious leaders could have kept their hair long in order to identify themselves with some great figures of the Old Testament like the prophets Moses, Samuel or Elijah, or some rebellious

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<sup>86</sup> We can think of an immigrant who was living in Palestine for some time but who never adopted the local custom to keep his hair short. We can even think that this particular stranger could have become a sort of rebel leader in Palestine, which would explain the fact that he had to wear a cap of thorns before his crucifixion as a probable sign of derision. And since Israel was not a close country, it's also possible to think that he was just a visiting stranger or a merchant who was in Jerusalem for business and who did a criminal act liable of crucifixion while he was there. However, the fact that he had to wear a cap of thorns doesn't fit very well with this last hypothesis.

<sup>87</sup> Effectively, during that era, it wasn't rare to see Arabs, Persians, Assyrians and other men from the Mesopotamian region wearing long hair and beards. It's important to note that for Curto and Coon, there's a true possibility that the Shroud man really came from this region of the Middle East.

<sup>88</sup> See note #16 concerning the expulsion of the Jews from Jerusalem by the emperor Hadrian in 135 A.D.

<sup>89</sup> The most probable reason for Jewish men to not let grow their hair too long was a will to clearly distinguish them from the Jewish women who normally let their hair grow long as a sign of femininity.

<sup>90</sup> The Old Testament describes the Nazarite vow in these terms: "All the days of the vow of his separation there shall no razor come upon his head: until the days be fulfilled, in which he separates himself unto the Lord, he shall be holy, and shall let the locks of the hair of his head grow." (Numbers 6:5). There were different kinds of Nazarite vows depending on the length of time: 1- Normally, the vow lasted for 30 days. 2- Rarely, it could last beyond 100 days. 3- Exceptionally, like in the case of John the Baptist, it could be a lifetime vow. The most well-known characters of the Bible to have been under such a vow are Samson, Samuel and John the Baptist. In sum, letting his hair grow long was a distinctive sign that a person was under a Nazarite vow. It was kind of a public statement made by someone who wanted to separate himself from certain worldly things and consecrate himself to God. A person under such a religious vow lived a life that reassembles pretty much a Christian monk's life, even though, as we said, it was in most cases only a temporary situation that would last 30 days. For more information about the Nazarite vow in Judaism, see: [http://en.wikipedia.org/wiki/Nazirite#As\\_a\\_vow](http://en.wikipedia.org/wiki/Nazirite#As_a_vow).

<sup>91</sup> It's important to emphasize the fact that Jesus was most probably not under a Nazarite vow during the time of his ministry or, at least, not in an orthodox way. Effectively, the fact that he drank wine and was not afraid to have contact with dead bodies is a clear sign that he wasn't an orthodox Nazarite because these were strictly forbidden. Many people through history have been confused by the fact that Jesus is sometimes called a "Nazarene" in the Gospels, which is very close to "Nazarite". In fact, in Jesus case, it's more probable that the use of the term "Nazarene" simply refers to his birthplace, which was Nazareth in Galilee, but nevertheless, because of the numerous examples in the Gospels where we see Jesus not respecting all the Jewish prescriptions of ritual purity, we cannot totally exclude the possibility that he really was under a Nazarite vow during the time of his ministry, while at the same time keeping some distance with some particular prescriptions that normally came with this vow, like the prohibition to drink wine and to touch a dead body. In fact, we can even think that he took such a vow while he was living for a time with John the Baptist and his group before starting his own public ministry. Because we know for a fact that John was a real orthodox Nazarite, this last hypothesis is far from being crazy.

<sup>92</sup> In Jesus case, if he really had long hair, this could have been a sort of tacit statement (using a visual symbol easy to recognize for a pious Jew) to make people understand the real nature of his prophetic and Messianic mission. It's interesting to note that, in his encyclopaedic work entitled *The Death of the Messiah*, published by The Associated Sulpicians of the U.S. in 1994, the biblical scholar Raymond E. Brown concluded that it is truly possible that Jesus consciously wanted to evoke the ancient Jewish prophets in some of his public actions. Here's what he said about that: "In particular, some activities of Jesus seem intentionally destined to evoke the ancient prophets, like Elijah and Elisha;" If this really was the case, it is also possible to think that Jesus extended this link with the ancient prophets of Israel even to his physical appearance, including the style and length of his hair and beard, in order to have a "prophetic look" that would match his prophetic actions.

characters like Absalom, who were known for having long hair<sup>93</sup>, and to bring people to recognize them as legitimate successors.

Now, concerning the particular case of Jesus, as we said in note #92, the first thing we have to note is the fact that just before he started his own ministry, he most probably spent some time with the group of John the Baptist, who took a lifetime Nazarite vow and surely had long hair. In this context, it's truly possible to think that Jesus adopted the same look as John the Baptist when he decided to leave him and his group in order to start his own prophetic ministry, even though he probably never was officially under the same Nazarite vow or if he was indeed under such a lifetime vow, it's almost certain that he took some liberties with the rules connected with it, like the prohibitions to drink wine and to touch a dead body. And since we know that some of Jesus' closest disciples also came originally from the group of John's disciples (like Andrew, the brother of Peter, who is the unnamed disciple of St John's Gospel), we can think that these men too could have had long hair. In their cases, like Jesus, we can presume that they could also have taken the same Nazarite vow than John or more simply, we can think that they would have let their hair grow long because they wanted to adopt the same look as their master (first the Baptist and later Jesus himself).

And as we also said in note #92, in Jesus case, along with the possibility that he could have been some kind of an unorthodox Nazarite, it's also truly possible that he could have let his hair grow long simply as a symbolic way to tell people that he was an authentic Jewish prophet just like John or some great prophetic character of the Old Testament, such as Moses. In such a case, Jesus would have adopted a well-established "prophet look" for the purpose of his mission. Finally, it's also possible that by letting his hair grow long, Jesus wanted to be recognized as someone who wanted to separate himself from worldly things in order to completely dedicate his life to God, just like an authentic Nazarite, but without being under such a religious vow.

Because these ideas are far from being illogical in the historical context of a recognized Jewish prophet of the 1<sup>st</sup> Century A.D. like Jesus of Nazareth, the possibility that he could have had long hair seems quite good. And as we said, the same logic can also be applied to some other charismatic figures that could have been present in Palestine before the middle of the 2<sup>nd</sup> Century A.D. (like self-proclaimed Messiahs, prophets, rebellious leaders, etc.).

We can conclude this point by saying that, at first sight, if the Shroud man was really a Jew, the probability that this person could have been someone else than Jesus of Nazareth would be very weak, because it wasn't common for the Jewish men during Antiquity to let their hair grow as long as the man of the Shroud, at the exception of lifetime Nazarites who were not present in great number in Palestine. But when we consider that this man was most probably the leader of a subversive group or a self-proclaimed Messiah (because of the crowning with thorns), the probability that such a Jewish man had long hair must be estimated between relatively weak to average, because of the fairly good possibility that such a rebellious person could have let his hair grow long. On the other hand, if the Shroud man was really a subversive leader who came from another ethnic group from the Middle East and who was executed in the Jerusalem area, the probability that he could have worn long hair would be much stronger. As we can see, the most important data to consider for this kind of analysis is clearly the fact that the Shroud man had been forced to wear a cap of thorns, which indicates that he was probably the leader of some subversive movement. In that context, the fact that this kind of rebellious figure (whether it be Jesus, another Jew or a non-Jewish Middle Easterner) had let his hair grow long should not be considered as being very odd. Because of this, we can estimate as average<sup>94</sup> the probability that the man of the Shroud could have been a man other than Jesus of Nazareth, crucified who wore his hair long.

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<sup>93</sup> In the case of some ancient Jewish characters of the Old Testament like Moses for example, scholars are still divided on the question of whether or not he really had long hair. However, the most important thing to understand here is the fact that during antiquity, most Jews were certainly thinking that many of these greatest historical figures of the Old Testament had long hair, and historically there is not enough evidence to discard that possibility.

<sup>94</sup> This conclusion also includes the possibility that the Shroud man could simply have been an anonymous Jew under a lifetime Nazarite vow, even though this particular scenario appears to be highly improbable because of the small number of Jewish men who were under such a lifetime vow during antiquity.

6- The man of the Shroud had the privilege to be buried in a high quality linen shroud<sup>95</sup> (most probably in a family tomb) despite the fact that he was probably the leader of a subversive group that was crucified by the Romans.

**Analysis of point #6:** In note #23 of my first paper about the Shroud's authenticity<sup>96</sup>, I demonstrated that it was totally uncommon for the Romans to allow a crucified man to be properly buried in a family tomb at the time of Jesus of Nazareth. Here's the text of this relevant footnote for the present point: "In his article *Crucifixion in Antiquity – The anthropological evidence*, renowned anthropologist Joe Zias states: "Giving the victim a proper burial following death on the cross, during the Roman period was rare and in most cases simply not permitted in order to continue the humiliation. Thus the victim was in many cases simply thrown on the garbage dump of the city..."<sup>97</sup>. It's interesting to note that the same conclusion can also be found in the excellent article *Medical theories on the cause of death in crucifixion*, written by Matthew W. Maslen and Piers D. Mitchell. On the other hand, we have to understand that the description given by Zias and taken by Maslen and Mitchell concerning the Roman practice in general, and it is truly possible that the procedure could have been different in Palestine at the time of Jesus. In the documentary *The Wonder of the Shroud*, Fr. Martin Haigh, quoting the book *The New Testament and Rabinnic Judaism*, written by the distinguished Jewish writer David Daube, states that the normal procedure in Palestine during the 1<sup>st</sup> Century A.D. was to throw the body of crucified victims into a common grave and only after a year, the family was hallowed to collect the bones (in order to place them in an ossuary and bury them in a family tomb). We can also read a very similar description in the book *La Passion de Jésus : De Gethsémani au Sépulcre* (The Passion of Jesus: From Gethsemane to the Sepulchre)<sup>98</sup>, written by Jean-Maurice Clercq, a French doctor, but with an interesting precision, i.e. that this very particular procedure came from a description that is found in the Talmud, which is a text written **after** the time of Jesus. Personal note: no matter if the correct procedure at the time of Jesus was the one described by Zias, Maslen and Mitchell or the one described by Daube and Clercq, we must always assume that, under Roman law, it wasn't a normal procedure to allow a condemned person (Jew or other) to be buried in a high quality burial shroud after his execution by crucifixion<sup>99</sup>. That could explain why the Gospels emphasised the fact that Joseph of Arimathea had to ask

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<sup>95</sup> The high quality of the Shroud is obvious when we consider the fact that it was woven in 3:1 herringbone twill, which shows a high level of sophistication and complexity for an ancient cloth. The fact that very few other linen cloths woven in 3:1 herringbone twill have been found to this day clearly indicates that it wasn't a common or a cheap cloth, but on the contrary, a cloth that was certainly considered of a very high quality for the time, which was certainly very expensive. This fact echoes very well the Gospel accounts that specified that it was Joseph of Arimathea, a wealthy man who brought it for the burial. Another example of an antique linen cloth that has been woven in 3:1 herringbone twill can be seen in the article *Akeldama repudiation of Turin Shroud omits evidence from the Judean Desert* written by Diana Fulbright of the Shroud of Turin Center in Richmond, Virginia. It is in fact the girdle (or sash) of Rameses III, the Egyptian Pharaoh, who reigned during the middle of the 12<sup>th</sup> Century B.C. This very long cloth of 17 feet had been very finely woven in five colors, in a design consisting of 3:1 herringbone twill, alternating with 4:1 and 5:1 herringbone twills, and was certainly considered a sophisticated cloth of a very high quality, pretty much like the Shroud of Turin. This Egyptian artifact is a definitive proof that this kind of complicated weaving was known in antiquity. Finally, the fact that the weaving of the Shroud has been done with a very unusual "Z" twist (in a clockwise direction) is another good sign that this cloth was not a common cloth but a sophisticated one. Effectively, the vast majority of the antique cloths that have been found show a "S" twist (in the counter-clockwise direction) instead and this is true no matter the material that was used to manufacture it, whether it be linen, silk, wool or another kind of fabric. Here's the reference for Miss. Fulbright's paper: Diana Fulbright, *Akeldama Repudiation of Turin Shroud omits evidence from the Judean Desert, Proceeding of the International Workshop on the Scientific approach to the Acheiropietos Images*, ENEA, Frascati, Italy, May 4 to May 6, 2010 (<http://www.acheiropietos.info/proceedings/FulbrightAkeldamaWeb.pdf>).

<sup>96</sup> See note #1 for the reference of that paper.

<sup>97</sup> <http://www.ioezias.com/CrucifixionAntiquity.html>

<sup>98</sup> See note #76 for the reference of this book.

<sup>99</sup>In his book *La Passion de Jésus : De Gethsémani au Sépulcre* (The Passion of Jesus: From Gethsemane to the Sepulchre - see note #76 for the reference), Jean-Maurice Clercq mentioned that the normal burial procedure for criminals was to put their corpses into a sheet before they were placed into a common grave. In that particular context, it is almost certain that the cloth (or cloths) that was (were) used to envelop the corpses of these criminals was not of the same high quality as the Shroud of Turin, which is obviously a sophisticated and expensive linen cloth of high quality (see note #95). In the case of these criminals, we must assume that a very cheap linen or wool cloth (certainly woven with a very simple technique) was used. A recent archaeological discovery made in Jerusalem confirms of this assumption. Effectively, in 2000, the archaeologist Shimon Gibson discovered a relatively well-preserved burial shroud mingled with a layer of fragmentary human remains in a 1<sup>st</sup> Century A.D. tomb of the well-known ancient cemetery of Akeldama located in the lower Hinnon Valley. Totally unlike the Shroud of Turin, this shroud was simply woven (two-way weave to be exact) linen and wool textiles. In fact, it was not a single piece shroud, but four pieces of cloth put together to envelope different parts of the dead body. That explain why some fragments were made of linen and some others were made of wool. Subsequent molecular DNA analysis determined that the human remains were of an adult male who

permission of Pilate to properly bury the corpse of Jesus. That can also explain the presence of a post-mortem wound in the side of the man of the Shroud. Effectively, this type of post-mortem injury to the chest was surely done by one of those who were in charge of the crucifixion to make sure the victim was really dead. This kind of post-mortem procedure is logical only in a case in which “special” permission was given to take the body, in order to give him a decent burial.

In his 1983 paper about the authenticity of the Shroud<sup>100</sup>, William Meacham gave us confirmation of this: “...the bodies of rebels and subversives were not normally released for burial according to a 6<sup>th</sup> Century digest of Roman law (Ulpian, cited in Barbet 1963:51).” There’s no doubt that if this particular law was applied by the Romans at the time of Jesus, the release of his body to his family would not have been part of the normal procedure because he was considered by the Romans as a subversive criminal who had aspirations of kingship<sup>101</sup>. On the other hand, the same manuscript indicates that for all the other kinds of criminals condemned to be crucified<sup>102</sup>, the release of their bodies to their family was normally allowed by the Romans. However, if Daube’s opinion is correct, this part of the crucifixion procedure would not have been followed by the Romans in Palestine. Effectively, Daube states that the standard procedure for any crucified Jew was to place his body in a common grave and their family had to wait one full year before being allowed to collect their bones and bury them in their family tomb. There is no indication from this author that the Romans were making any kind of distinctions between the Jewish criminals they were executing, no matter if they were subversive criminals or not.

But in the end, no matter if Daube is right or wrong for the particular burial procedure applied by the Romans in Palestine, it seems almost sure that the bodies of at least rebels and subversives were not normally given back to their families after the crucifixion, and so, it does not matter where the crucifixion was done in the Roman Empire. This is an important conclusion because it seems highly probable (thanks to the cap of thorns he was forced to wear) that the man of the Shroud really was considered by the Romans as some kind of rebellious (we can think of a Zealot leader) or messianic figure (like Jesus of Nazareth and some other Jews from the same era who were considered by some as the Jewish Messiah<sup>103</sup>).

Because of the most probable subversive status of the Shroud man, we can conclude that the probability is extremely weak that this man could have been someone else than Jesus of Nazareth who would have been crucified by the Romans and would have received nevertheless the privilege to be buried properly in a high quality linen shroud (probably in a family tomb).

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had been infected with both leprosy and tuberculosis. The fact that this man was a leper who was most probably cast-out from his community is most probably the reason that explains why he was buried in an assembly of very cheap clothes. And since criminals sentenced to death were as poorly considered as lepers in Jewish society during antiquity (in Deuteronomy 21:23, it is even mentioned that those who died on a pole or a tree, and by extension, on a cross, are under God’s curse), we can easily assume that after someone was crucified by the Romans in Palestine, it was standard procedure to put his corpse into one or many cheap cloths like the ones found in Akeldama before placing it in a common grave. This probable fact is a good indication that the burial of a crucified man like the Shroud man was certainly unusual for the time. For more information about the Akeldama discovery, see Diana Fulbright’s article referenced in note 95).

<sup>100</sup> See note #9 for the reference to that paper.

<sup>101</sup> In his Gospel, St John indicates precisely the motive of Jesus condemnation. This motive was written on a wooden tablet that was placed on the cross (most probably over his head) that read: “Jesus of Nazareth, the King of the Jews.” (John 19:19).

<sup>102</sup> For example, we can think about road bandits, like the 2 criminals that were crucified with Jesus, or some solitary killers who were not members of a rebellious and/or Messianic group like the Zealot party.

<sup>103</sup> See note #54.



7- When we put together the fact that no traces of any known ancient burial products have been found on the Shroud by the STURP team and also the fact that the corpse has not been washed before being enveloped in the Shroud, we can conclude that the burial of the Shroud man was incomplete<sup>104</sup>.

**Analysis of point #7:** Before we start analysing this point, it seems appropriate to explain why this particular conclusion is probable from a scientific standpoint, because many people, including Shroud researchers, have criticized some aspects of it, whether it is the apparent lack of burial products on the cloth or the apparent absence of a washing of the corpse.

Let's begin with the apparent absence of any burial product on the cloth. During his personal investigation of some samples he took from the Shroud in 1978, just before the STURP team did its own examination of the cloth, Pierluigi Baima Bollone, an Italian forensic expert, claimed he was able to find traces of aloes and myrrh on the Shroud<sup>105</sup>. But since he has not published his finding in a peer-reviewed scientific journal and because the STURP team investigation has not been able to confirm his conclusion, we have to remain very prudent versus such a positive conclusion. Here's what Raymond N. Rogers, the head chemist of STURP, wrote about that in his book *A Chemist's Perspective on the Shroud of Turin*<sup>106</sup>: "Dr. Baima Bollone, a professor in forensic medicine in Turin, had claimed to have found aloes and myrrh on the Shroud by antibody-antigen testing, but he did not publish details or ask for confirmation. These claims needed confirmation by independent observations." Then, Rogers indicates the procedure that was used by he and other members of the STURP team to verify if there were some traces of aloes and myrrh on the fibers<sup>107</sup> and concludes by saying: "We could not confirm Bollone's claim for either aloes or myrrh."<sup>108</sup> The same conclusion can also be found in

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<sup>104</sup> Numerous data that comes from the Shroud really gives the impression that the corpse was simply deposited inside the burial cloth still naked and still covered with dirt and blood clots, in the same state he was when his body was brought to the tomb. The burial of the Shroud man appears to have been done very quickly with a simple enshrouding of the crucified corpse, without any preliminary treatment whatsoever, which really gives the impression that the time was missing to accomplish a complete and proper burial rite, which was described by Moses Maimonides, a 12<sup>th</sup> Century Jewish scholar from Cordoba (Spain) in these terms (cited in Meacham's paper about the Shroud's authenticity): "After the eyes and mouth are closed, the body is washed; it is then anointed with perfumes and rolled up in a sheet of white linen, in which aromatic spices are placed." Even though Maimonides lived a long time after the abolition of crucifixion by the Romans, we have good reason to think that the Jewish burial rite did not change much. As Meacham wrote: "The account by Maimonides...parallels what can be constructed from 4<sup>th</sup> Century Palestinian Talmud, 2<sup>d</sup> Century Mishnah and biblical accounts." In his book *La Passion de Jésus Christ selon le chirurgien* (A Doctor at Calvary – see note #57 for the reference), French Doctor Pierre Barbet confirms Meacham's point of view by quoting a relevant part of the Mishna (Chabbath, XXIII, 5): "We accomplish everything that is due to the dead: we anoint and washed it." Then, he also reports a comment made by Alfred Lévy, who was a rabbi in Lenéville, and who wrote this concerning the normal Jewish burial procedure: "...we close the mouth and the eyes of the dead, we give a normal posture to his body, we envelop it in a shroud... before doing the funeral dressing, we purify the corpse, we wash it with mild water, in the past we would perfume it with different essences. After that, we would dress it in ordinary clothing." Barbet also wrote that this procedure described by Lévy was probably almost the same during antiquity. Finally, it's important to note that the interpretation of the data coming from the Shroud strongly suggests a hasty burial, which is in total agreement with the Gospel accounts concerning the burial of Jesus of Nazareth. For example, here's the description of Jesus' burial that we find in the Gospel of Matthew: "Joseph took the body, wrapped it in a clean linen cloth and placed it in his own new tomb that he had cut out of the rock. He rolled a big stone in front of the entrance to the tomb and went away." (Matthew 27:59-60). This laconic account is roughly the same as what we found in the two other Synoptic Gospels, while it is a bit more elaborate in John's Gospel, even though there is still no clear mention in this book that indicates that a washing and an anointing of the corpse was ever done, while we can find in this book one of the clearest indications that there was no time left to do a proper and complete burial of Jesus: "Because it was the Jewish day of Preparation and since the tomb was nearby, they laid Jesus there." (John 19:42). And even if it's true that St. John mentions 100 pounds of aloes and myrrh (some translations says 75 pounds) that was brought to the tomb by Nicodemus, it's crucial to understand that he never mentions these substances being used to anoint the body. Later, in this same part of the article, we'll see that researchers like Pierre Barbet proposed an interesting hypothesis concerning these odoriferous substances. In sum, the numerous signs of a hasty burial that we can find in each Gospel account and also the fact that no clear reference to a washing or an anointing of Jesus body prior to his deposit in the Shroud can be found in these books is a strong indicator that a very incomplete burial was performed in his case, which is totally consistent with what we see on the Shroud.

<sup>105</sup> An excellent summary of his claim can be found in his book *Sindone 101 domande e risposte* (101 questions on the Holy Shroud). See note #31 for the reference of this book.

<sup>106</sup> See note #2 for the reference of this book.

<sup>107</sup> This procedure included reflectance spectrometry and chemical tests.

a paper entitled *Spectral properties of the Shroud of Turin*, was written by Samuel F. Pellicori, another member of STURP<sup>109</sup>: “There is no confirming evidence from visual microscopic or SEM examination of fibrils and particles removed from the Shroud that any of these substances<sup>110</sup> exist as such today.”

There was also another claim made by Giovanni Riggi di Numana who said he found traces of natron (sodium carbonate) in the dust samples he collected on the reverse side of the Shroud in 1978, at the same time Baima Bollone took his own samples. Natron is a product that was commonly used for mummification in ancient Egypt because it absorbs water and behaves as a drying agent, but in the case of a Jewish burial, it should be noted that there is absolutely no written mention anywhere (in the bible or in other ancient texts) of the use of this particular mineral product. And it should also be noted that Riggi di Numana never published his results in a peer-reviewed journal<sup>111</sup> nor was his finding confirmed by the STURP team or any other researcher who has made chemical, microscopic, and/or spectroscopic analysis on samples from the Shroud. Also, in the particular case of Riggi di Numana’s claim, there is another important reason to seriously doubt the validity of his finding and that comes from the nature of the samples he analyzed. Effectively, it is very hard, scientifically speaking, to be sure that part of the dust samples that were vacuumed from the reverse side of the Shroud<sup>112</sup> by Riggi di Numana were originally present on the cloth and did not come from contamination that could have occurred anytime during the long history of the relic and particularly after 1534, when the backing cloth was sewn to the reverse side of the Shroud. For this reason, any claim of a new discovery that would come from these particular dust samples (such as Riggi di Numana’s natron) must be taken with a very high degree of prudence (and even scepticism) and at the very least, it seems appropriate to wait until such a discovery could be confirmed with samples taken from the front side of the cloth.

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<sup>108</sup> Despite the fact that the STURP team has not been able to confirm Baima Bollone’s finding, we should note that other researchers like Kohlbeck and Nitowski in 1986 and Scannerini in 1997 have also claimed having found some traces of aloes and myrrh in samples from the Shroud. Nevertheless, these claims were mostly based on surveys made with light microscopy and have not been backed-up by chemical analyses. Because of this, we have to remain very prudent. In a paper written by Sue Benford and Joe Marino and presented at a Shroud conference in 2008, here’s what the authors wrote about the conclusion made by Kohlbeck and Nitowski: “An archaeologist, the late Dr. Eugenia Nitowski, who obtained numerous Shroud fibers from Rogers, conjectured that the red particle contaminates discovered by Kohlbeck were the burial spices Aloe and Myrrh. However, this assumption was based solely on her comparison of the debris with reference photos of the suspected substances and not via chemical analyses. She reported: “The study could go no further (beyond photo comparison), because of the inability to perform testing which would either remove or destroy materials from the tapes.”” Along with the lack of any chemical characterization of the debris, the fact that the singular yarn (1FH) with the impurities came from the ventral missing-corner-exposed-medieval Holland cloth and not the main Shroud, argues strongly against Nitowski’s assumption that the debris was from burial spices. Based on the Quad-Mosaic data and Roger’s findings, it is far more plausible that the 1FH impurities were also red Madder and Gum Arabic as chemically-verified by Rogers in multiple adjacent samples.” Note that this red Madder and Gum Arabic have only been found by Rogers in the corner of the Shroud where the C14 samples have been taken in 1988 and allowed him to conclude that the results of this radiocarbon dating are certainly not accurate because this particular corner of the Shroud is not representative at all of the main body of the cloth in terms of chemical composition. Note also that this 1FH sample of the exposed Holland backing cloth was collected by STURP in 1978 in a zone that is immediately adjacent to this C14 corner and it is highly probable that a portion of the alien substances found there by Rogers were able to move over time and contaminate the whole area where this 1FH sample had been taken. Effectively, it is a well-established fact that the numerous folding and unfolding of the Shroud over the years have caused a mechanical stress that has allowed the different particles present on the cloth to move away from their original locations. To summarize the situation, we can say that unless new direct chemical and/or spectroscopic tests on the Shroud can possibly confirm these few positive claims concerning the presence of aloes and myrrh on the Shroud, it’s much better to consider them as scientifically unfounded. Here’s the reference for the paper: Sue Benford and Joseph G. Marino, Discrepancies in the Radiocarbon Dating Area of the Turin Shroud, *Proceedings of the Columbus International Conference entitled “The Shroud of Turin - Perspectives on a Multifaceted Enigma”*, Columbus, Ohio, August 14 - 17, 2008. For more information about Rogers’ findings concerning the C14 area of the Shroud, see: Raymond N. Rogers, Studies on the Radiocarbon Sample from the Shroud of Turin, *Thermochimica Acta*, 425:1-2, 20 January 2005. See also: Raymond N. Rogers, *A Chemist’s Perspective on the Shroud of Turin*, Barrie Schwartz Editor and Publisher, July 2008.

<sup>109</sup> Samuel F. Pellicori, *Spectral Properties of the Shroud of Turin*, *Applied Optics*, Vol. 19, June 15, 1980.

<sup>110</sup> Pellicori is referring to the most common burial products that could have been used for the burial of the Shroud man, along with some body substances that could have still been present on his skin. These substances are myrrh, aloes, olive oil and human perspiration mixed with skin oil.

<sup>111</sup> Just like Baima Bollone, Riggi never published his results in an independent and widely recognized peer-reviewed scientific journal.

<sup>112</sup> This is where the Shroud was in direct contact with a medieval backing cloth known as the Holland cloth. There’s no doubt that the presence of this backing cloth on the reverse side of the Shroud for 468 years had a facilitating effect of trapping foreign dust particles in comparison with the open surface of the front side of the cloth, where the body image can be seen.

For all the reasons enumerated above, we have to conclude that, for the moment, the so-called presence of some burial products on the Shroud (as claimed by Bollone, Riggi di Numana and other researchers<sup>113</sup>) cannot be considered as having been adequately confirmed yet in the pure scientific sense<sup>114</sup> and it is much more prudent to conclude that unless new direct chemical and/or spectroscopic testing could be performed on the front side of the cloth and could confirm the presence of such products, it seems more probable that there was no use of any known burial substance on the body of the Shroud man and/or on his burial cloth itself before his corpse was placed in the Shroud.

Also, it's important to note that there is another strong indication that there were probably no burial products involved in the burial of the Shroud man and this comes from the fact that the coloration that has formed the body image on the cloth has never been detected by the STURP team outside the actual body image on the Shroud, even where we know that there was a direct contact at some point during the burial of the Shroud man<sup>115</sup>.

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<sup>113</sup> See note #108.

<sup>114</sup> This conclusion is mainly based on the fact that there are some contradictory claims versus the possible presence of ancient burial products on the Shroud. Here, we have to constantly remember that even if the STURP team made an exhaustive analysis of particles taken from the Shroud in order to see if there cannot be some traces of such substances, nobody in that team of experts was able to get a positive result for any known burial product that were used during antiquity. That fact is very important and calls for caution regarding some other positive claims that were made by other researchers.

<sup>115</sup> It's imperative to understand that the vast majority of the blood transferred on the Shroud came from exudates of moistened or more probably remoistened blood clots and that such transfer can **only** have occurred if there is a direct contact between the cloth and the humid blood clot. Here's what Doctor Pierre Barbet wrote about this in his book about the Shroud (see note #57 for the reference): "...unless there's direct contact (note: he means between the cloth and the body), wounds and clots have not been able to transfer." Such a scientific fact clearly indicates that everywhere we see a bloodstain or a scourge mark on the Shroud, a direct contact **must** have occurred, no matter if it was permanent or just temporary and this is also true for all the bloodstains and scourge marks that have been located on the Shroud in areas where there is absolutely no body image. Here's the complete list of all these particular stains: 1- A blood flow and 2 distinct bloodstains that are located outside the right elbow on the frontal image. 2-Possibly a bloodstain located outside the left elbow on the frontal image. 3- Some bloodstains located outside the right feet on both the dorsal and frontal image. 4- Some scoured marks located outside the right calf and some others located outside the right thigh on the dorsal image. 5- A possible portion of the lateral blood flow in the lower part of the back that seems to be located outside the body image, particularly on the right side of the back where the blood was coming from the side wound in the chest region. 6- Some scourge marks located behind the knees on the dorsal image where a rare missing part of the body exists. This "hole" in the body image has been confirmed by Miller and Pellicori during their examination of the ultraviolet fluorescence photographs of the Shroud (see note #73 for the reference of their UV fluorescence study). **All these bloodstains and scourge marks, along with their particular locations on the cloth, can be seen in the annex 2, at the end of this article.** In sum, the presence of these bloodstains and scourge marks located in places where there is no body image clearly indicates that at some points during the burial of the Shroud man, some lateral body parts not visible on the cloth (like the heels, the lateral parts of the legs, the underside of the knees and the lateral and underside parts of the elbows) were in direct contact with this cloth (which caused these particular blood imprints on the cloth) and such a direct contact must have been removed before the end of the burial. This temporary direct contact was most probably caused by a manual compression of the cloth that has been applied on many regions of the corpse during the burial and was later removed (at least partially) when the position of the cloth was changed to become much looser over the corpse. And the fact that the vast majority of the off-body image bloodstains we just mentioned were formed by direct contact with the right side of the Shroud man's corpse, along with the fact reported by Miller and Pellicori in their study of the UV fluorescence photos that the blood streaks located in the hair on both sides of the face are denser on the right side, strongly suggest that more important manual compression was probably applied over and under that particular side of the body. Even Pierre Barbet indicated in his book that a manual compression of the cloth **must** have occurred on the right side of the chest region in order to leave blood imprints of the side wound and the underneath blood flows on the cloth. Effectively, Barbet noticed that if we laid out naturally a cloth over the chest of someone resting in the same burial position than the man of the Shroud, we see the cloth making a bridge over the side wound and the blood flow located under it without ever touching these blood stained zones of the body, because of the higher position of the head and also the position of the arms, which are crossed over the body. And we can assume that most if not all of this right side compression probably happened near the end of the burial when the enshrouded corpse was moved by some people from a central place inside the tomb (where it was probably first deposited inside the cloth) to a stone bench carved in one of the walls of the tomb, which was the normal final resting place for a dead body buried in the common antique rock tombs that were found in Palestine by archaeologists. That compression would then have been removed after the body had been laid on his final resting place, which is the most rational way to explain the fact that no important lateral distortions have been found by Dr. John P. Jackson during the three dimensional study of the body image he made with other STURP members. In fact, these scientists have not detected any saturation in the entire body image and have only found some slight distortions in the region of both forearms and thighs, along with some possible very slight distortions in the region of the face, which lead them to conclude: "The frontal image on the Shroud has a shading structure consistent with a body shape covered with a **naturally draping cloth** and which can be derived from a single, global mapping function relating image shading with distance between these two surfaces." It's crucial to note that this form of loose draping over the body is inconsistent with the important manual compression of the cloth that must have occurred in order to cause so many bloodstains and scourge marks on the cloth in so many different regions, which is the most important piece of

This fact concerning the absence of any coloration outside the body image is very important, especially when we place it in relation with another important fact that comes from some interesting experiments made by Samuel F. Pellicori, who was a member of the STURP team. Effectively, in a paper he wrote for STURP entitled *Spectral Properties of the Shroud of Turin*<sup>116</sup>, Pellicori describes the results of many coloration experiments he made with some linen samples and the most common substances that were used in ancient Jewish burials like aloes, myrrh and olive oil<sup>117</sup>. His results clearly show that any type of contact (even a very gentle one) of these products with a linen cloth **always** produced some sort of coloration after the cloth has been artificially aged, which indicates that in normal conditions, sooner or later, a coloration **will always** appear if one of these substances contacts the cloth<sup>118</sup>.

These results can be seen as a very good indicator that no such burial products were ever used on the cloth or on the body of the Shroud man before he was put in the cloth. This is so for the simple and good reason that if it would have been the case, there is no doubt that some colored stains would have been formed on the Shroud, outside the actual body image. Effectively, if one or more of these burial products would have been spread all over the Shroud, the experiments made by Pellicori shows that with time, this action would have certainly created visible colored stains in every area where these substances would have come in contact with cloth and not just where the body image can be seen (i.e. at the center of the Shroud).

And if one or more of these burial products (or human sweat) would have been only present on the skin of the Shroud man when his body was put in the Shroud, there's no doubt that this would also have created some colored stains outside the actual body image, particularly in the regions where there are some bloodstains located in areas where there's no body image<sup>119</sup>. Effectively, since it is a well-established fact that these bloodstains on the Shroud were formed by direct contact between exudates of humid blood clots on the skin of the man and his burial Shroud, it's crucial to understand that each one of these bloodstains represents an area of the cloth where direct contact **must** have occurred<sup>120</sup>. In that context, if one or more burial products (or even just natural human sweat) would really have been present on the skin of the Shroud man, the experiments made by Pellicori leave no doubt about the fact that this direct

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evidence that strongly suggests that a change of position of the cloth did occur at some point during the burial of the Shroud man. And as we said, this most probably happened near the end of the burial, right after the enshrouded corpse had been placed in his final resting place. It also suggests that when this final transfer was done inside the tomb, a lot if not all the blood clots present on the skin of the Shroud man were moistened enough on their surface to already stain the cloth. It's probable that most if not all of the pre-mortem blood clots were dry some time after the death of the Shroud man and were able to get remoistened afterward (possibly because of the presence of some convenient environmental and/or biological factors), while we can easily assume that most if not all the blood clots that were made of post-mortem blood coming out of the side wound and the wound in the feet never had the chance to dry completely before the corpse was placed inside the Shroud, so they could easily leave a good imprint on the cloth before the cloth could finally be laid out over the corpse in a more natural position, probably near or at the end of the burial. Finally, here's the reference for three complementary papers that fully describe the three dimensional study of the Shroud's image done by John P. Jackson and his colleagues from STURP: John P. Jackson, Eric J. Jumper and William R. Ercoline, Correlation of image intensity on the Turin Shroud with the 3-D structure of a human body shape, *Applied Optics*, 23:14, July 15, 1984. Also: John P. Jackson, Eric J. Jumper and William R. Ercoline, Three Dimensional Characteristic of the Shroud Image, *Proceedings of the International Conference on Cybernetics and Society*, Washington, D.C., October 1982. Also: John P. Jackson, Robert C. Downs Jr. and William R. Ercoline, Examination of the Turin Shroud for Image Distortions, *Proceedings of the International Conference on Cybernetics and Society*, Washington, D.C., October 1982.

<sup>116</sup> Samuel F. Pellicori, Spectral Properties of the Shroud of Turin, *Applied Optics*, Vol. 19, June 15, 1980.

<sup>117</sup> As we mention in note #110, he also made the same kind of experiment with human perspiration mixed with skin oil.

<sup>118</sup> To simulate the effects of aging, Pellicori used the well-known technique of baking the cloth (he baked it at 150°C for 7.5 hours) and after doing so, he **always** got some coloration on the linen samples he used for his experiments and most of them showed spectral characteristics very close to the image on the Shroud. In fact, the best coloration matches he obtained were with the use of myrrh alone, olive oil and also with human perspiration mixed with skin oil.

<sup>119</sup> See note #115.

<sup>120</sup> Again, see note #115. Also, to learn more about the particular nature of the blood transfer that is responsible for the vast majority of the bloodstains and for all the scourge marks we see on the Shroud, see my first article about the Shroud's authenticity: Yannick Clément, Concerning the question of the authenticity of the Shroud of Turin: please, don't forget the evidence of the bloodstains!!!, *Shroud Newsletter*, British Society for the Turin Shroud, Issue #76, December 2012 (<http://shroud.com/pdfs/n76part5.pdf>).

contact would have produced a coloration on these particular places of the cloth where a bloodstain is present without any body image<sup>121</sup>.

In sum, because there are absolutely no colored stains outside the body image (including the areas where there are some bloodstains), we can conclude with confidence that none of the ancient burial products (or human sweat<sup>122</sup>) tested by Pellicori were present on the skin of the Shroud man when his corpse was placed in the cloth, which totally agrees with STURP's inability to find any burial product on the Shroud. In the end, the complete absence of imaged fibers outside the body image, especially where there has been a temporary direct contact with the body that has left some bloodstains or scourge marks on the cloth, is certainly the best indicator that only a very partial burial rite was performed in the case of the Shroud man, which didn't include the normal anointing of the body with ancient burial substances (like aloes, myrrh and/or olive oil) and/or a spreading of these products on the cloth.

Certainly, this particular conclusion could really be a surprise for all the persons who believe, thanks to the Gospel of John, that there was aloes and myrrh in a liquid state (oil) that were used on the body and/or on the Shroud itself prior to the deposit of the body in the burial cloth. However, because St John clearly indicates that Nicodemus brought around 100 pounds (a huge quantity!) inside the tomb, many researchers like Pierre Barbet<sup>123</sup> have concluded that these products were used in a solid state (most likely in powder) and were most probably put inside other smaller cloths (like

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<sup>121</sup> If one or more burial product(s) would have been present on the skin of the Shroud man when the body was laid in that cloth, the experiments done by Pellicori have clearly demonstrated that the temporary direct contact that is responsible for the formation of these off-body image bloodstains on the cloth would have been plenty sufficient to produce eventually a visible coloration in all these particular areas, which is not the case. Of course, anyone can speculate about a possible anointing of the body after the removal of the tight compression that is responsible for the presence of some bloodstains where there is no body image on the cloth, but such an assumption is highly unlikely for simple reason that the most convenient time for an anointing of that nature is without a doubt prior to the deposit of the body in the Shroud, when every part of the body were fully accessible and could have been easily returned to allow an anointing of the back portion of the body as well as the front side. It is thus evident that this idea that an anointing of the corpse took place near the end of the burial, after the body had already been placed inside the Shroud for quite a long time and after some form(s) of compression had been applied in many places, has to be seen as extremely unlikely because it rests on some very special assumptions. In fact, such an idea must be considered as totally irrational and the fact that the STURP team has not been able to find any traces of burial products on the Shroud must be regarded as a strong piece of evidence that totally supports this particular conclusion. Beside that, others might also interject that it is possible that other burial products not tested by Pellicori (like some perfumes for example) were the ones that have been used on the body and/or on the cloth of the Shroud man and this could explain why there is no image in the areas where some bloodstains and scourge marks are visible. In the end, this idea must also be considered extremely unlikely because it also rests on the very special assumption that these undefined products would not have caused any visible coloration on the linen cloth, while **every** product tested by Pellicori (even normal sweat) did. Because it is highly doubtful that the use of any possible burial product could avoid to cause any visible stain on a linen cloth, it's easy to understand that such an idea is as irrational as the previous one and the most probable conclusion still remains that no particular substances were used on the body and on the cloth during the burial of the Shroud man, which is totally consistent with the STURP team analysis of all their Shroud samples coming from various locations and also very consistent with the particular accounts we find in the Gospels of Mark (16:1-2) and Luke (23:56-57 and 24:1), in which it is clearly stated that the women returned to the tomb very early Sunday morning (after the Sabbath) to complete the hasty burial that was done on Friday and, particularly, to anoint the body.

<sup>122</sup> This probable absence of sweat on the body of the Shroud man is a good indicator that his corpse might have stayed on the cross for some time after he died in order to allow a complete drying of the important sweat that most probably covered his body at the time of death. This intense sweating produced by a man that is crucified has been very well described by Doctor Pierre Barbet in his book *La Passion de Jésus Christ selon le chirurgien* (A Doctor at Calvary). Finally, we should note that this possible complete drying of the body is in total agreement with the hypothesis proposed by Barbet in his book about the Shroud (see note #57 for the reference) concerning the fact that all the blood clots on the skin of the Shroud man were most probably dried when the body was placed in the Shroud and soon after, the particular environmental conditions that prevailed inside the Shroud and/or inside the tomb allowed a remoistening of the dry blood clots which were then able to leave bloodstains on the cloth. Also, such a complete drying of the sweat is in total agreement with the conclusion of a study done by a Spanish team of scientists at the end of the 1990s to compare the Shroud of Turin and the Sudarium of Oviedo, which is another blood stained relic associated with the Passion of Jesus of Nazareth. In that study, the team found that the Shroud man, if this is really the same man on which the Sudarium was used, would have been placed in his burial cloth approximately three hours after his death, which gave most probably well enough time for a complete drying of all the sweat (as well as all the liquid blood and blood clots) that were present on the skin of the Shroud man at the time of his death on the cross. Here's the reference for that study: Guillermo Heras Moreno, José-Delfin Villalain Blanco and Jorge-Manuel Rodríguez Almenar, Comparative study of the Sudarium of Oviedo and the Shroud of Turin, *Proceedings of the 3<sup>rd</sup> International Congress for the Study of the Shroud*, Turin, Italy, June 5 to June 7, 1998.

<sup>123</sup> See note #57 for the reference of this book.

little bags) and placed all around the body, possibly inside the Shroud<sup>124</sup>. For Barbet, the main reason for using these particular products was simply to remove the bad smell and maybe also to retard the putrefaction of the corpse in preparation of a return inside the tomb on Sunday morning to complete the burial. There's no doubt that the possible use of aloes and myrrh in powder as proposed by Barbet would have been far less fastidious for the ones who did the burial than a complete anointing of the body and because of that, such an idea fits much better with the hypothesis that there was not enough time to do a proper burial, which is exactly what the image and bloodstains on the cloth suggest.

Finally, we should note that the probable absence of aloes and myrrh on the Shroud can be seen as problematic data for the first possible scenario that was described in page 3 of this paper. Effectively, since the Gospel of John mentions the presence of these burial products, it would be pretty hard to explain why a brilliant forger who succeeds to reproduce the Shroud of Christ with such a high degree of realism would have completely neglected this particular aspect of Jesus burial. On the other hand, we have to take note of the opinion of Samuel F. Pellicori and Mark S. Evans of STURP who wrote in their paper *The Shroud of Turin Through the Microscope*<sup>125</sup> that the incapacity for the STURP team to find any traces of burial products on the Shroud could well be explained by the fact that these products "could easily have evaporated or even been washed away over the centuries." However, we must emphasize the fact that there is absolutely no historical evidence to support the idea that a global washing of the Shroud ever happened. Also, and this is the most important aspect of the present analysis, we should never forget the fact that there is absolutely no coloration outside the body image, which strongly suggests that no burial product has ever been used on the body of the Shroud man and/or on the Shroud itself, which is a great indicator that his burial was most probably incomplete.

Now, concerning the conclusion that the body of the Shroud man wasn't washed prior to being placed in the Shroud, this comes mainly from the fact that the vast majority of the bloodstains on the cloth (including all the scourge marks) have been formed by a transfer of exudates of blood clots that were still humid at their surfaces. This conclusion, which was first described by Doctor Pierre Barbet in the 1930s, has been independently confirmed by the analyses of blood samples from the Shroud made by Alan Adler of STURP<sup>126</sup> and Pierluigi Baima Bollone in Italy<sup>127</sup>. The result of this particular kind of blood transfer gives a mirror image of the blood clot on the cloth with very well defined borders and, in most cases, a ring of clear serum around the bloodstains resulting from a phenomenon called "clot retraction" that happens a period of time after the coagulation has started<sup>128</sup>.

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<sup>124</sup> If Barbet's hypothesis is correct versus the use of a mix of aloes and myrrh in powder that would have been put in some smaller cloths (used like bags) and then placed all around the corpse inside the Shroud, then there's a possibility (even if it's a thin one) that the supposed discovery of some traces of these burial products by Baima Bollone, Kohlbeck and Nitowski and also by Scannerini could be true and was caused by a falling of small amounts of this powder on the Shroud during the burial instead of coming from a residue of these same products that would have been used in a liquid form (oil) for an anointing of the body and/or for a treatment of the cloth before the body could be placed inside it. Of course, this idea can only be seen as a possible explanation for the claims made by these few researchers and in the end, this hypothesis described by Barbet could also account (and possibly even better) for the fact that the STURP team was unable to find any traces of these burial products on the Shroud because these substances would have been placed inside other cloths and not directly on the Shroud. Also, we must note that such a hypothesis can possibly account also for the lack of an image of some specific parts of the body, particularly those of each side of the body and the one of the top of the head. Effectively, if many bags full of a mix of aloes and myrrh in powder were scattered all around the body inside the Shroud, the presence of these small cloth could well have created a sort of wall between the cloth and these particular parts of the body (along with a remoteness of the cloth versus the body in these places), thus preventing the formation of a body image in these areas. Effectively, we know for a fact that even a very thin layer of blood material or serum on the cloth has been sufficient to prevent the formation of an image on the cloth, so it's easy to assume that if these full bags were present all around the body, their presence could have prevented the formation of a body image there.

<sup>125</sup> Samuel F. Pellicori and Mark S. Evans, *The Shroud of Turin Through the Microscope*, *Archaeology*, January-February 1981.

<sup>126</sup> Alan D. Adler, *The Orphaned Manuscript: A Gathering of Publications on the Shroud of Turin*, Effata Editrice, Torino, Italy, 2002.

<sup>127</sup> Pierluigi Baima Bollone, *Sindone 101 domande e risposte* (101 questions on the Holy Shroud), Edizioni San Paolo s.r.l., Milano, Italy, 2000.

<sup>128</sup> This phenomenon starts between 20 to 40 minutes after the blood has begun to clot, depending on many factors. In a paper entitled *The Importance of Time in the Transfer of Blood Clots to Cloth as Distinctive Clot Image*, Doctor Gilbert Lavoie made a very interesting observation concerning the expulsion of serum from drying blood clots. He noticed that when the blood clot is drying in a horizontal position, the serum does not drain from the clot but when the clot was drying in a vertical position, the serum dropped from the clot in good quantity and for a long time period (i.e. around 40 minutes). Here's the reference for this particular article: Gilbert R. Lavoie, Bonny B. Lavoie, Rev. Vincent J. Donovan and John S. Ballas, *Blood on the Shroud of Turin, Part II: The*

Here, it's crucial to understand that this well-defined result concerning the bloodstains on the Shroud would have been impossible to obtain if the Shroud would have been stained with liquid blood<sup>129</sup>. In his book *La Passion de Jésus Christ selon le chirurgien* (A Doctor at Calvary), Pierre Barbet explains why the vast majority of bloodstains present on the Shroud are not the result of a staining of the cloth with liquid blood (personal translation): "Everyone who has some experience in that matter knows that a bloodstain (liquid) done on a cloth doesn't stay immutable, even more when the cloth is not sized. On a compress, in a surgery room, we see a drop of blood diffuse rapidly. The stain grows larger while it soaks the cloth, but it happens faster in some directions, following the threads of the cloth. For example, if the weave is simple, like it normally is, we see developing around a central zone more or less round, four little lengths following the weft and warp weaving, drawing a little red cross. This *irregular and directed*<sup>130</sup> diffusion is even more evident when the thread is absorbent. And we already saw that the linen thread of the Shroud, which is coarsely woven, is an excellent absorbing fabric." For Barbet, it was evident that if the bloodstains on the Shroud would had been caused by blood in a liquid form, these stains would have showed the kind of irregular and directed diffusion he describe in that part of his book, while in reality, there are very few bloodstains on the Shroud which show that particular characteristic<sup>131</sup>.

Nevertheless, an American forensic pathologist named Doctor Frederick T. Zugibe still proposed a scenario involving a partial washing of the body in order to explain the presence of many bloodstains on the cloth (like the scourge wounds) that would have been clotted since a long period of time when the body was deposited in the Shroud<sup>132</sup>. The problem with this particular hypothesis is the fact that after the vigorous washing proposed by Zugibe, there's an oozing of fresh post-mortem blood in a liquid state that is be transferred on the cloth to form the bloodstains and as Barbet's explained, this kind of blood transfer could never has formed the kind of well-defined bloodstains that we see on the Shroud. On the contrary, if Zugibe was right, we would expect to see irregular and directed bloodstains running along the particular herringbone weave of the cloth, along with the presence of many smudge of blood, particularly in the dorsal region where there was an important pressure on the Shroud that was caused by the weight of the body<sup>133</sup>. Also, it should be

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Importance of Time in the Transfer of Blood Clots to Cloth as Distinctive Clot Image, *Shroud Spectrum International*, September 1983. This observation of Lavoie clearly indicates that in the case of the Shroud man, the clot retraction phenomenon certainly happened mostly when his body was still on the cross, in a vertical position, which has caused an important expulsion of serum around the blood clots that leads eventually to the transfer of this serum on the cloth, at the same moment than the blood tranfer occurred. Otherwise, only bloodstains would have been formed on the cloth. In a presentation about the blood on the Shroud that he made in 1986 in Hong Kong, Alan Adler from STURP made roughly the same conclusion: "He (Lavoie) did the experiment of letting the blood clots hang vertically, and found that a lot of the exuded serum dripped off. In sum, he found that, to get imprints closest to what we have on the Shroud, the blood needed to clot in a vertical position..." Here's the reference for the article of Adler's presentation: Alan D. Adler, The Origin and Nature of Blood on the Turin Shroud (Excerpts), *Proceedings of the Shroud of Turin Exhibition and Symposium of Photographs*, Hong Kong, March 3 to March 9, 1986 (<http://freepages.religions.rootsweb.ancestry.com/~wmeacham/adler.pdf>).

<sup>129</sup> This conclusion also applies to the hypothesis of a staining of the cloth with post-mortem blood in a liquid form that would have been caused by a vigorous washing of the body that would have removed all the dried blood clots on the body and re-opened the wounds underneath them. This washing and blood transfer hypothesis has been proposed by pathologist Dr. Frederick T. Zubibe in the 1980s. We'll discuss that particular hypothesis in page 37.

<sup>130</sup> These words have been underlined by Barbet himself in his book.

<sup>131</sup> Barbet only notes these kinds of irregular bloodstains in the area of the feet, which lead him to conclude that it was probably the only bloodstains that were caused by post-mortem blood in a liquid form that didn't have time to coagulate. Elsewhere on the Shroud, there are some other stains that come from post-mortem bleeding of the side wound but, for Barbet, that blood was probably shed before the body reached the tomb and was already into the early stage of its coagulation phase when the body was placed inside the Shroud, which had the effect of producing well-defined bloodstains that never smeared.

<sup>132</sup> Frederick T. Zugibe, The Man Of The Shroud Was Washed, *Sindon N. S.*, No.1, June 1989 (<http://www.shroud.com/zugibe2.htm>).

<sup>133</sup> Even a blood clot that is still not completely dried can easily cause some smearing on a cloth. This fact has been described by Doctor Gilbert Lavoie in his paper *The Importance of Time in the Transfer of Blood Clots to Cloth as Distinctive Clot Image* (see note #128 for the reference). Here's what he wrote about that referring to a recent blood clot that has not completely dried: "In this state, the clot can be very easily disturbed." So, if very recently clotted blood can be easily disturbed, imagine what kind of smearing could be caused by a fresh oozing of post-mortem blood on the skin of someone who is placed in a linen cloth! This kind of liquid blood transfer proposed by Zugibe is just inconsistent with the well-defined bloodstains we can see on the Shroud, especially for the back region of the body image, because of the high pressure that was put on the wounds located there by the body weight. And because there is no smearing of blood on the Shroud, even though it is easy, as Lavoie said, to disturb recent blood clots that are still very humid (this was the case at least for the recent blood clots that were caused by the post-mortem blood coming out from the side wound and the wound in the feet), we



noted that the hypothesis proposed by Zugibe implies a transfer of fresh complete blood in a liquid state on the cloth while the analyses of Baima Bollone and particularly those of Alan Adler of STURP have clearly demonstrate that these bloodstains (including all the scourge marks) have not been formed by complete blood nor by blood in a liquid state but by exudates of humid blood clots. This crucial fact indicates that all the blood clots that have formed the very well-defined bloodstains<sup>134</sup> on the cloth were still present on the skin of the Shroud man when the blood transfer occurred, which is something that would have been impossible if Zugibe's hypothesis was correct. Also, this particular kind of blood transfer is responsible for the quasi-total absence of blood smudges on the cloth<sup>135</sup>. For all these reasons, we can confidently conclude that the corpse of the Shroud man was certainly not washed prior to his deposit in the cloth<sup>136</sup>.

After having done such a long and detailed explanation of why an incomplete burial of the Shroud man is very probable from a scientific standpoint, we can now do a proper analysis of that particular conclusion in link with the present scenario. Right from the start, we have to note that the absence of washing and anointing could be rationally explained by another factor than a hasty burial, especially when we consider only this particular fact without taking note of the fact that no burial products appears to have been used on the body of this man. As Meacham said in his article about the Shroud's authenticity<sup>137</sup>: "The failure to wash the body may be explained by the Sabbath prohibition or by the existence of early injunctions, similar to those incorporated in medieval codes of Rabbinical laws, against washing of the body or cutting of the hair, beard and fingernails of victims of capital punishment or violent death<sup>138</sup> (Lavoie, et al. 1981)." However, it's important to note that it is not clear if this law really existed during the 1<sup>st</sup> Century A.D. Meacham

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must expect that the deposit of the body in the Shroud was very carefully and gently done, which is in total agreement with the fact that the Jews of antiquity were recognized to take great care of the blood that was shed at the time of a violent death. This historical fact has been described by Doctor Gilbert Lavoie in the paper we just mentioned. Here's what he wrote: "It is important to note that the clots seen on the Shroud have not been disturbed. Therefore, extreme care had to be taken in the removal of the body from the vertical position to its subsequent horizontal placement in the Shroud. This corresponds to the concern that the Jews had for life blood, which is the blood that flows from wounds at the time of a violent death." It really seems that the same concern not to disturb the blood clots had been taken by those in charge of the burial when they placed the corpse in the Shroud and also when they removed the compression of the cloth in some places and replaced the Shroud more naturally (loose) over the body later on (probably at the end of the burial – see note #115).

<sup>134</sup> In their study of the UV fluorescence photographs of the Shroud (see note #73 for the reference), Miller and Pellicori of STURP were particularly amazed by the very sharp details of the scourge marks, which is a clear indicator that these stains were formed by exudates of moistened or more probably remoistened blood clots and not by an oozing of post-mortem liquid blood following removal of these blood clots due to a vigorous washing of the skin, as proposed by Zugibe.

<sup>135</sup> In their study of the UV fluorescence photographs of the Shroud (see note #73 for the reference), Miller and Pellicori of STURP have only observed two possible small smudges of blood. One is located behind the head and the other is located between the dorsal and the frontal image, in a non-image area.

<sup>136</sup> One more indirect fact that indicates that the Shroud man wasn't washed prior to his deposit in the Shroud comes from the numerous dirt particles (mainly composed of different kinds of calcium deposits) that have been found in the sticky tapes samples taken by the STURP team. Eugenia L. Nitowski has described this fact in a book entitled *The Field and Laboratory Report on The Environmental Study of the Shroud in Jerusalem* (see note #34 for the reference) concerning the investigation she did with Joseph A. Kohlbeck of limestone samples taken from the Shroud and various 1<sup>st</sup> Century A.D. tombs in Israel (one of which being located in Jerusalem). Here's what she wrote about these dirt particles: "The "even" or "uniform" distribution of calcium, reported by some scientists, over the surface of the Shroud, could be attributed, possibly, to the folding and rolling of the cloth repeatedly which has caused a considerable distribution of loose particles of various types all over the Shroud. In my observation of the Mylar-tapes, however, some exhibited much higher amounts of calcium than others, while still others had practically none. The foot area, sample 1AB, contained the highest concentration, the dorsal image area more than the frontal and so on, all of which illustrate the previous presence of a human body, one whose feet were dirty from the walk to his crucifixion and contact points relevant to positioning in burial." This microscopic observation made by Nitowski is truly relevant for the present analysis because it appears quite clear that, for her, most of this dirt contamination of the internal part of the Shroud came from direct contact with a dirty body. In that context, it seems highly unlikely that there would have been as many calcium particles scattered all over the internal part of the Shroud (the one that was in direct contact with the corpse) if many parts of the Shroud man's body would have been vigorously washed prior to his deposit in the cloth, as it was proposed by Zugibe. In sum, this obvious presence of dirt as well as the presence of numerous blood clots all over the Shroud man's body should be well enough to understand that no washing of the body was done before the corpse was placed inside the Shroud.

<sup>137</sup> See note #9 for the reference of that paper.

<sup>138</sup> This prohibition concerning violent death was applied only in the case where blood had flows at the moment of death.

doesn't seem to think it was the case. Here's what we can read elsewhere in his paper<sup>139</sup>: "The omission of normal washing and anointing<sup>140</sup> of the body may possibly be explained by the onset of the Sabbath<sup>141</sup> since different ritual treatment of executed victims does not seem to have been practiced in 1<sup>st</sup> Century Palestine." Effectively, when we consider also the fact that no burial product of any sort has been scientifically confirmed on the Shroud, this non washing of the body seems to be even more easily explainable by an incomplete burial linked with the upcoming Sabbath and Passover feast, instead of a legal exception for crucified criminals or victims of a violent death, as it was suggested by Doctor Gilbert Lavoie in 1981.

Now, the question that we have to answer is this: What are the chances that a criminal other than Jesus could have been buried in a high quality linen shroud without having been washed or anointed? Extremely thin it seems! Effectively, if we agree with Meacham that there was no legal exception concerning the washing of the corpse of a crucified man (or of a victim of a violent death), then there are only two rational ways to explain this very incomplete burial that didn't include a washing and an anointing of the corpse:

1- The Sabbath was approaching (like in Jesus' case) and there was no time left to accomplish these important aspects of a normal Jewish burial rite.

2- The participants in the burial of this criminal were totally unprepared for this task and had to leave the dead body unwashed and not anointed in his burial shroud for at least 24 hours, which is also a scenario that fits well with Jesus' case.

We can also think of a mix of these two potential explanations. But outside these few hypotheses, there doesn't seem to be another way to rationally explain why the corpse of this man could have been put in a burial shroud without having been washed and anointed. And when we consider the fact that it was most probably a rarity for a crucified criminal to have the privilege to be buried in a high quality linen shroud<sup>142</sup> (particularly in the case of this man who appears to have been considered as some kind of subversive figure<sup>143</sup>), we can conclude that the probability that one of these two situations could have happened for a crucified victim other than Jesus of Nazareth to be very weak<sup>144</sup>.

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<sup>139</sup> See note #9 for the reference of that paper.

<sup>140</sup> This quote from Meacham's paper seems to indicate that he agrees with Raymond N. Rogers and other scientists of the STURP team about the fact that there was probably no use of burial products on the body of the Shroud man before his corpse was put into the Shroud. However, we must note that elsewhere in his paper, Meacham did leave the door open for the possibility of such a use of burial products on the body of the Shroud man. But again, it's important to emphasize the fact that no traces of any known burial products that have been found by the STURP team, which implies that the few positive claims that were made over the years (see note #108) are still waiting to be properly confirmed and we have the right to doubt that they ever will.

<sup>141</sup> If the Shroud man is really Jesus of Nazareth, the moment of his burial on Friday evening was not only performed just prior to a normal Sabbath, but, if we believe St John's account, just before the beginning of the Passover feast, the most important Jewish feast of the year. And the Jewish law was clear about the fact that every Jew had to be in his house for the beginning of the Sabbath and the feast, around 7 PM, and there was absolutely no exception in the case of the burial of a criminal sentenced to death. In such a particular context, there's no doubt there was not enough time for an elaborate burial, especially in the case of Jesus, because we know from the Gospel accounts that his arrest and his condemnation were not something that his disciples and family had foreseen. This important lack of time to perform a complete burial on Friday evening forces some women of Jesus' group to come back to the tomb very early on Sunday morning in order to finish the job. The Gospels of St. Luke and St. Mark are clear about that fact.

<sup>142</sup> See point #6 of the present analysis.

<sup>143</sup> See point #5 of the present analysis.

<sup>144</sup> It would be tempting to conclude that this probability is extremely weak, but because it was most probably very rare to see the Romans allowing the family of such a subversive criminal to recover his corpse in order to give him a proper burial, it's probable that if the authorities ever gave such permission, the family of this kind of subversive criminal would have been totally unprepared for his burial, just like in the case for Jesus' family. Effectively, if such an improbable scenario ever happen, it's easy to assume that the family of this criminal would never have expected the authorities to make such a positive decision, which could have forced them to only do a partial burial on the day of his death. And as it was proposed by Doctor Gilbert Lavoie, there is also a possibility that the medieval prescriptions concerning the burial of victims of capital punishment or violent death was already in

8- The data coming from the Shroud indicates that the corpse must have stayed inside the cloth for a short period of time that goes from approximately 24 to 72 hours<sup>145</sup>.

**Analysis of point #8:** First, it's interesting to note that this particular conclusion that the body must have stayed inside the Shroud for only a short period of time (approximately between 24 and 72 hours) is totally consistent with the Resurrection account that we find in the Gospels, which indicates that the tomb and the burial Shroud of Jesus was found empty on Sunday morning, some 36 hours or so after the time he was put into that cloth. It's important to emphasize the fact that what really happened to the corpse during that period of time is not so important for the present analysis. What really matters is the sure fact that the corpse of Jesus stayed inside his burial cloth for far less than 72 hours, which is the upper time period in which a corpse could have stayed in contact with the Shroud of Turin without starting to damage it with the release of the first liquids of putrefaction.

On the other hand, it is very hard to understand why some persons would have removed the corpse of another crucified man that would have received the rare privilege to be put into a high quality linen shroud (probably inside a family tomb) after a so short period of time. Of course, with a good imagination, someone can always find some plausible explanation, like to think that, for an unknown reason, this Shroud would have been used temporarily in the wait that the participants in the burial of this unknown criminal could find another (more appropriate?) burial Shroud and once found, they would have done the transfer of the body some 24 to 72 hours after the first enshrouding<sup>146</sup>. We could also think that there would have been an error on the part of the Roman soldiers that would have first allowed the body to be given back to his family after the crucifixion and later (24 to 72 hours), they would have corrected their mistake by removing the corpse from inside the burial cloth used by his family for his burial and throw him naked into the common grave that was normally used for the criminals that were sentence to death<sup>147</sup>.

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place during antiquity and could have included a prohibition to wash the body (and maybe also a prohibition to anoint it). However, as William Meacham indicates in his article about the Shroud's authenticity, it seems to be a lack historical evidence to support such a proposal.

<sup>145</sup> The minimum period of contact between the cloth and the corpse has been determined from an experiment done by Paul Vignon at the beginning of the 20<sup>th</sup> Century, while the maximum period of contact has been estimate to 72 hours by many scientists because no traces of any liquid of putrefaction have been found on the Shroud and 72 hours is the maximum time range before these liquids appears after death (see note #2). In his paper about the ancient history of the Shroud entitled *Enshrouded in Silence - In search of the First Millennium of the Holy Shroud*, the historian Maurus Green talks specifically about the results obtained by Vignon: "Delage accepted Paul Vignon's vaporographic theory, according to which vapours released by the chemical reaction of the urea of the body sweat and the spices, stained the cloth to form the image. This process would need at least 24 hours as Vignon's experiments, details of which Delage presented to the Academy..." It's important to note that even if one day, science could clearly demonstrate that Vignon's hypothesis for image formation is totally incorrect regarding the Shroud (science is not there yet, even if this hypothesis has been strongly criticized by many scientists especially regarding the high definition of the image on the Shroud), the assumption that the body must have stayed inside the Shroud for at least 24 hours would still be very probable because of the particular chemistry of the body image, which has been described as a dehydration and/or an oxidation process that has affected only the top-most fibers on the surface of the cloth or, more probably, a thin layer of carbohydrates impurities on the surface of these superficial fibers. Effectively, it is a well-established fact that this kind of chemical process needs a minimum time of exposure in order to create the kind of coloration that we see on the Shroud. Of course, Vignon's rough estimation of 24 hours cannot be considered as a proven fact concerning the body image on the Shroud but nevertheless, because it is a scientific estimation that was based on laboratory testing, it appears solid enough to conclude that the corpse must have stayed in contact with the cloth for a minimum period of time of more or less 24 hours and if the contact with the cloth would have been interrupted after just a few hours, it is almost certain that no body image could have been formed on the surface of the cloth. Finally, here's the reference for the paper written by Green: Maurus Green, *Enshrouded in Silence - In search of the First Millennium of the Holy Shroud*, *Ampleforth Journal*, 74:3, 1969, (<http://www.monlib.org.uk/papers/aj/aj1969green.htm>) and here's the reference for a very good book written by Vignon in which he discusses his image formation hypothesis: Paul Vignon, *Le linceul du Christ: étude scientifique* (The Shroud of Christ: Scientific Study), Éditions Masson, Paris, 1902.

<sup>146</sup> The fact that the burial of the Shroud man really seems to have been done partially (see the previous point of the present analysis) appears to be consistent with this particular scenario, just as it is also consistent with the hypothesis that the Shroud is really the authentic burial cloth of Jesus of Nazareth.

<sup>147</sup> On the contrary to the previous scenario and also to the hypothesis that this Shroud is really the burial cloth of Jesus, this particular scenario doesn't appear to be consistent with the fact that the burial of the Shroud man seems to have been done partially (see point 7, Page 30). Also, it is somewhat inconsistent with the normal procedure used by the Romans in Palestine concerning the burial of crucified men as it is reported by Doctor Jean-Maurice Clercq, who indicates that these corpses were put in a sheet before being placed into a common grave (see note #99). If this is correct, it would be very

However, when we use Occam's razor principle, the last hypothesis we described (i.e. the one that involves an error of the Roman soldiers in charge of the execution) must be considered as being far less probable than the other two scenarios<sup>148</sup>, especially the one that claim the Shroud to be the authentic burial cloth of Jesus. This conclusion is not hard to reach because in all documented history, it is the only time we know for certain that the dead body of a crucified man disappeared from his burial shroud shortly after his burial. Even more, we should note that it is also the only documented occasion where we're sure that a crucified Jew was allowed to be buried in a high quality linen shroud after his execution (point 6, Page 28), which is another important aspect that favors greatly the hypothesis that the Shroud of Turin is really the authentic burial cloth of Jesus of Nazareth, especially when we consider other data, like the fact that the Shroud man presents all the stigmata of Jesus as described in the Gospels, including the wearing of a cap of thorns and the wound in the side.

In such a context, it is extremely unlikely that in Palestine, before the middle of the 2<sup>nd</sup> Century A.D., there could have been many other crucified corpses that were removed from the initial burial cloth in which they had been buried, especially if that cloth was a high quality linen shroud like the Shroud of Turin<sup>149</sup>. Because of that, the probability that the crucified body of someone other than Jesus of Nazareth could have been removed from his shroud some 24 to 72 hours after his body has been put in that cloth is extremely weak<sup>150</sup>.

**9- Never mind the fact that the Shroud is a blood stained burial cloth that has covered a corpse for a time, it was kept well preserved until this day.**

Outside the context of the Resurrection of Jesus Christ, it is very hard to understand why someone would have wanted to keep and preserve a burial cloth like the Shroud of Turin. Effectively, it's a well-known fact that this kind of grave cloth would have been considered gruesome, horrifying and unclean by any reasonable person during Antiquity<sup>151</sup> and

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hard to explain why the soldiers would have wanted to remove the corpse of the Shroud man from his burial cloth at the same time they transferred him from his family tomb to the common grave, except maybe if they considered his high quality linen Shroud as being inappropriate for such a criminal destined to be buried in a common grave. As we can see, this particular scenario relies on some special assumptions in order to work correctly.

<sup>148</sup> This conclusion mainly comes from the arguments we described in the previous footnote and also from the historical fact that it was not common at all for the Romans to allow a crucified body to be given back to his family for a proper burial, especially if that person was most probably considered by them as a subversive character (see point 5, page 25). In that context, the risk for the soldiers to commit such of great mistake, as described above, must be considered as extremely unlikely, especially when we consider the historical fact that the Romans were normally more careful of the legal procedure than most people of that era when it was time to execute a criminal.

<sup>149</sup> This argument applies to the scenario in which some persons would have wanted to remove the body from his initial shroud in order to put it into a new one. On the other hand, this argument cannot be applied to the scenario involving removing the corpse from the Shroud by some Roman soldiers.

<sup>150</sup> The fact that the undisturbed aspect of the bloodstains on the Shroud and the unbroken fibrils under them doesn't seem to be consistent with a manual extraction of the body from the shroud which have been seen by some scientists like Pierre Barbet and Paul Vignon as another important piece of evidence that can link directly the Shroud with Jesus of Nazareth and no one else, because they saw this as possible sign (not a proof) of a "dematerialization" of the body of the Shroud man while he was still covered by the cloth. Concerning this very strange aspect of the bloodstains on the Shroud and the fibrils under them, see note #21 of my previous article entitled *Concerning the question of the authenticity of the Shroud of Turin: please, don't forget the evidence of the bloodstains!!!* (see note #1 for the reference).

<sup>151</sup> This is particularly true in the case of the Jews who were not allowed by their law to even touch an object that has been in contact with a dead body. In fact, the prohibition from touching a corpse can be found in the book of Numbers of the Torah, 19: 11, 14, 16, 22, while the prohibition from touching something that has been in contact with a dead body can be found in the Oholot tractate in the Mishnah. It's important to note that these rules had to be followed by every Jew, including those under a Nazarite vow and each time someone would come in contact with a burial cloth that had covered a dead body, he was considered ritually unclean and had to follow a long ritual to become clean again, which include the isolation of the person from others for a period of 7 days and on the third and the seventh day, this person had to be sprayed with the water of cleansing (which was composed of water mixed with the ashes of a red heifer). It's only after the second aspersion done on the seventh day of the isolation that the unclean person was delivered of his impurity. It's also important to note that such contact with a burial cloth like the Shroud was not considered as a crime by the Jewish law (like, for example, theft or murder) but only as a sin of impurity. However, in the highly repressive religious context of the time, the idea that a Jew would have dared to break the law concerning ritual purity by keeping and preserving such a blood stained grave cloth appear to be completely irrational and even absurd, except in the light of the finding of the empty tomb (and the empty Shroud!) by some disciples of Jesus on Easter morning, as it is described in the

surely, it would have been destroyed or left inside the tomb, even in the case the body it covered would have been removed from it for an unknown reason<sup>152</sup>. Because of this, it's not surprising at all that throughout history, there's no other reported case where an ancient burial cloth covered with bloodstains would have been kept and preserved after it would have been used to cover the crucified body of a man (or any other type of corpse).

At first sight, this unique aspect concerning the Shroud really seems to be linked with the uniqueness of the Resurrection event, as reported by the Gospels. Effectively, the idea that someone from Antiquity, Jew or not, but particularly a Jew, would have wanted to keep and preserve such a burial cloth is almost impossible to explain rationally, except in the case of Jesus' followers who discovered his burial cloth empty in the tomb on Sunday morning and eventually believed that he was resurrected after having reportedly seen him alive again<sup>153</sup>. In that particular context, we can understand why they would have wanted to preserve his burial cloth, but in all logic, this same reasoning cannot be applied to the case of a burial cloth that would have covered, for a short period of time, the dead body of an anonymous crucified man.

Nevertheless, it is still possible to describe a scenario that could potentially explain the preservation of this kind of blood stained grave cloth in the case it would be the Shroud of someone else than Jesus of Nazareth. This particular scenario is related to the body being removed from the Shroud shortly after it was covered by it and the presence of a body image on its surface. Effectively, it is possible to think that when this anonymous corpse was removed from the Shroud after a short delay of 24 to 72 hours, someone discovered the ghostly image of the Shroud man on the surface of the cloth<sup>154</sup> and was so impressed by it that he decided to preserve this grave cloth, even though it was against the Jewish law to do so<sup>155</sup>. Eventually, because this Shroud was showing the same bloody stigmata as the ones of Jesus Christ, the Church and faithful would have become convinced that it was really his authentic burial cloth. It's important to note however that this scenario rests on two very special assumptions: 1- That the body image on the cloth would have been already formed enough to be visible after a so short period of time. 2- That the real identity of this

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Gospels. There's no doubt that the preservation of such a burial cloth is one, if not the most problematic fact for the present scenario involving an unknown criminal that would have been crucified by the Romans.

<sup>152</sup> This assumption is even more probable in the present case, which involves the burial cloth of a crucified criminal. We just have to remember how much these criminals who died on the cross were poorly considered in ancient Jewish culture to understand that it's true (see note #99).

<sup>153</sup> This particular reasoning rests solely on the belief of Jesus' followers that he was resurrected.

<sup>154</sup> Here, we must clearly state that it is highly doubtful that the body image on the Shroud would have been easily visible on the cloth after such a short period of time. Effectively, many scientists who have studied the Shroud, like Raymond N. Rogers from STURP, were convinced that a pretty long period of time (difficult to estimate though) was necessary before the formation of the body image could become visible on the cloth. This conclusion mainly comes from the particular chemistry of the body image, which has been described as a dehydration and/or an oxidation process that has affected only the top-most fibers on the surface of the cloth (or a thin layer of carbohydrate impurities on the surface of these superficial fibers) and it is a well-established fact that this kind of chemical process can rarely create a visible coloration on a linen cloth after only 72 hours at normal room temperature. In fact, we must note that Samuel F. Pellicori and Raymond N. Rogers, while using different natural techniques for coloring linen (Pellicori used different burial products and skin perspiration while Rogers used ammoniac vapors) were both forced to use the baking technique for simulating the ageing of the cloth in order to obtain a truly visible coloration on their linen samples, which implies that no discernible coloration would have been present on their linen samples for some time if they would have kept their samples at a normal temperature. Because we still don't know the process that produced the body image on the Shroud, we have to leave the door open for the possibility that the actual very faint image of the Shroud man would have been already discernible when the cloth would have been separated from his body (after no more than 72 hours). However, we must understand that such a hypothesis really constitutes a very special assumption in the light of Rogers and Pellicori's coloration experiments. Finally, here's an interesting quote taken from Rogers and Arnoldi's article entitled *The Shroud of Turin: An Amino-Carbonyl Reaction (Maillard Reaction) Could Explain the Image Formation*, in which they discuss a possible delay in the appearing of the image on the cloth in the context of the natural formation process called a "Maillard reaction" that they proposed to explain the Shroud's image: "Several Shroud researchers have wondered why there is no mention of an image on the "cloth" reportedly found in Jesus' tomb. Assuming historical validity in the accounts, such a situation could be explained by the delay in the development of the Maillard reactions' colors at moderate temperatures." It should be noted that this delay principle can also be applied to most natural formation hypothesis involving a chemical reaction at the surface of the cloth. Here's the reference for that paper: Raymond N. Rogers and Anna Arnoldi, *The Shroud of Turin: An Amino-Carbonyl Reaction (Maillard Reaction) Could Explain the Image Formation*, *Melanoidins*, Vol. 4, Ames J.M. ed., Office for Official Publications of the European Communities, Luxembourg, 2003 (<http://www.shroud.com/pdfs/rogers7.pdf>).

<sup>155</sup> See note #152.

anonymous crucified man would have been lost, forgotten or kept hidden at the time his well-preserved grave cloth became a Christian relic associated with Christ’s Passion.

So, because this whole explanation concerning the present feature rest on some very special assumptions, the probability is extremely weak that the Shroud could be the blood stained grave cloth of someone else than Jesus of Nazareth that would have been kept and well preserved after it covered his corpse for a short period of time.

**General conclusion for the present scenario**

When we take every feature one by one, as we just did, and we assume that the man of the Shroud was someone else than Jesus of Nazareth, it is always possible to find some more or less rational explanation(s) for each one. However, it is extremely important to note that the vast majority of these potential explanations are unlikely because they rest principally on special assumptions, which is never a good thing when the Occam’s razor principle is used to estimate the level of probability of a particular hypothesis. That’s why, for the vast majority (seven out of nine) of these analyzed features, we have concluded that their level of probability is very weak or extremely weak in the case the Shroud would really be the burial cloth of someone other than Jesus of Nazareth who would have been crucified by the Romans before they abolished crucifixion between 315 and 337 A.D.

**To have a better view of the situation, here’s a summary table of the conclusion we reached for each of the features:**

Particular feature from the Shroud	Level of probability that it can applied to another crucified man than Jesus of Nazareth
There are numerous puncture wounds all over the head area (front and back) that appeared to have been caused by the wearing of a cap of thorns.	Very weak
There is a side wound in the chest area that appeared to be a direct hit to the heart that was done post-mortem.	Very weak
There is no sign indicating that the legs of the Shroud man have been broken.	Between relatively weak and average
There are more or less 120 scourge marks all over the body of the Shroud man, which indicates that he endured a very violent scourging that had been done prior to his crucifixion.	Very weak
There are some physiognomic and anthropometric characteristics of the body image that indicate that the Shroud man probably originated from the Middle East and that he was possibly a Jew, despite the fact that he had long hair, which was not common for the average Jewish man living during Antiquity.	Average
The man of the Shroud had the privilege to be buried in a high quality linen shroud (most probably in a family tomb) despite the fact that he was most probably the leader of a subversive group that was crucified by the Romans.	Extremely weak
When we put together the fact that no traces of any known ancient burial products have been found on the Shroud by the STURP team and also the fact that the corpse has not been washed before being enveloped in the Shroud, we can conclude that the burial of the Shroud man was incomplete.	Very weak
The data coming from the Shroud indicates that the corpse must have stayed inside the cloth for a short period of time that goes from approximately 24 to 72 hours.	Extremely weak
Never mind the fact that the Shroud is a blood stained burial cloth that has covered a corpse for a time, it was kept and well preserved until this day.	Extremely weak
<b>Total of nine particular features</b>	<b>For 7 of these 9 features, the level of probability is considered very weak or extremely weak (red in the table)</b>



The previous table made it clear: in order for this particular hypothesis to work, we have to assume that an anonymous man was scourged and crucified in the region of Jerusalem by the Romans no later than 135 A.D. or so<sup>156</sup>, in the same exact manner as the Gospels have reported concerning Jesus of Nazareth. In particular, we have to assume that this person was Jewish, even though he was wearing long hair, which was not common at all for a Jewish man who lived in Palestine during that time. Then, we have to assume that this person was severely beaten on the face and also endured a very violent scourging that could have killed him before he could reach the place of crucifixion, which was most probably not part of the standard Roman procedure. Also, we must assume that the soldiers in charge of his execution forced him to wear a cap of thorns covering all his head, which is another non standard procedure in the context of a Roman crucifixion and seems to indicate that this person was considered by the authorities to be the leader of a subversive group. After this, we have to assume that this rebellious man died pretty fast on the cross because no *crurifragium* was used by the soldiers to hasten his death. And after he died, we must assume that one of the soldiers pierced his side in the region of the chest with a Roman *lancea* (or another similar weapon), which was certainly not part of the standard procedure for this sort of rebellious criminal. Then, we have to assume that this man received the privilege to be buried with a high quality linen shroud (most probably in a family tomb) despite his status as a rebel, which again was not part of the normal Roman procedure. And even if his family received this great favor from the authorities, we must assume that his burial was only done partially, most probably in haste, without any known burial products have been used on the body and/or on the cloth and without any washing of his corpse having been done. And after this very incomplete burial, we have to assume that for some unknown reason very hard to explain rationally, the dead body of this man was taken out of his Shroud after having stayed there for only a short time period, which can be estimated between 24 and 72 hours. We have to assume that this extraction was done in such a way that it did not disturb the bloodstains, never broke the linen fibrils under them and did not disturb the body image<sup>157</sup>. After this removal of the body from inside the Shroud, we must assume that, for another very obscure reason, someone dared to preserve this gruesome burial cloth, even though it was against Jewish law to do so. Finally, we must assume that after some time, the identity of the Shroud man would have been completely lost, forgotten or kept hidden and his burial cloth would have ended up being considered as the authentic burial Shroud of Jesus Christ by the Church and his faithful.

**As we can see, many features that come from the Shroud are truly problematic for the present scenario, which needs to rely on a very high number of special assumptions in order to work. Because of this, when we use the Occam's razor principle to make one global analysis of all the features we just analyzed, we can easily conclude that the probability that the Shroud man could be someone other than Jesus of Nazareth who would have also**

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<sup>156</sup> See note #16 concerning the expulsion of the Jews from Jerusalem by the emperor Hadrian in 135 A.D.

<sup>157</sup> When we say that the removal of the body was done in such a way that it did not disturb the body image, that doesn't mean the image was already formed. In fact, since it is highly probable that no image was already visible on the cloth at that moment (see note #155), this particular assumption can simply mean that the oxidation and/or dehydration process that was active at the surface of the cloth was never affected enough by the extraction of the body to cause some colored stains outside the body image or to greatly disturb the high resolution of the actual body image. Also, it's important to note that the separation of the cloth with some parts of the corpse covered with humid blood clots that must have occurred in order to produce the bloodstains detected in places where there's no body image (see note #115) should not be seen as a fact that goes in contradiction with the undisturbed aspect of the bloodstains, because this most probable change in the position of the Shroud certainly happened pretty soon after the corpse had been originally placed in the cloth, at a moment when the surface of the blood clots were still humid. In such a context, it was certainly possible for one or many persons who did the burial of the Shroud man to remove the compression in some areas without really disturbing the shape and general aspect of the very recent bloodstains and scourge marks on the Shroud, especially if such a removal was done with great care, which is truly consistent with the great care the Jews of antiquity had concerning the blood that was shed at the time of a violent death (see note #133). Here, the most important thing to note is the fact that it's only after the blood clots had dried completely, thus producing a strong adhesion of these clots with the cloth, that a removal of compression in some places or a complete removal of the body from inside the Shroud would have been impossible to do without disturbing greatly the bloodstains that were already formed on the cloth and breaking some linen fibers located underneath these stains. As Barbet said in his book *La Passion de Jésus Christ selon le chirurgien* (A Doctor at Calvary – see note #57 for the reference), normally, when a blood clot leaves an imprint on a piece of cloth, after the removal of this clot from the fabric (note: Barbet is referring to a clot that has completely dried and that is stuck to the cloth), it results that only a part of the clot remains fixed on the cloth and the other part stayed fixed on the skin, leaving holes and/or missing parts in the portrait of this clot on the fabric. But on the Shroud of Turin, the mirror images of the blood clots are, to the naked eye, perfectly intact, complete, reproducing each time the familiar image of a normal blood clot. Again, it's crucial to understand that this description from Barbet concerning the normal effect on a bloodstain coming from the removal of a wounded corpse from inside a burial cloth only applied in the case where the blood clot is completely dry and is stuck to the fabric.



been legally crucified by the Romans in the same manner as him is almost nonexistent<sup>158</sup>, even though there are numerous reasons to believe that this man was scourged and crucified in the Jerusalem area<sup>159</sup> with the known standard procedure that was used by the Romans during Antiquity, at the exception of a few acts of torture (cap of thorns, wound in the side) that appear to be uncommon<sup>160</sup>.

### **Analysis of the alternative scenario involving a willing Christian martyr that would have wanted to live in his own flesh all the Passion of Jesus Christ, including his death on the cross**

In the footnote #12, we've summarized an interesting alternative option proposed by the archaeologist William Meacham for the scenario that we have just analyzed. Here's a more exhaustive description of it: A Christian (maybe the leader of some early monastic movement like the anchorites<sup>161</sup>) would have been so fanatic about Christ that he would have wanted to re-live his Passion, death and entombment, as described in the Gospels. Meacham mentioned that such a person would have found some collaborators (probably his disciples) that would have inflicted on his own person all the wounds of Christ in a gruesome imitation of his Passion and death. A short time after his death and burial, the body of this anonymous martyr would have been taken out of his Shroud for some unknown reason and it would have been kept and preserved by one of his collaborators, not with the purpose of producing a false relic of Christ, but instead with the purpose of preserving the burial shroud of someone he considered a saint.

In that scenario, it seems obvious that the appearing of the body image would have been totally accidental instead of being planned and if the image would have been already visible right after the removal of the corpse from the Shroud, this could have been one of the main reasons for the preservation of such a blood stained grave cloth. In other words, there's no doubt that the presence of a visible but mysterious body image on the cloth would have greatly contributed to make this martyr a saint in the eyes of his followers. And in the end, after some time, the identity of this martyr would have been forgotten and this burial cloth would have been considered falsely like the authentic shroud of Jesus Christ because of the striking similarity between the bloodstains on the cloth and the stigmata of Christ and also because of the "mysterious" nature of the body image on the cloth.

First of all, the first thing any reasonable person will note concerning this kind of scenario is the strangeness of such a gruesome idea. But to remain honest in this analysis, we have to put aside this first impression in order to study this particular scenario freely and scientifically. And as Meacham wrote in his paper about the Shroud's authenticity<sup>162</sup>: "There is ample evidence of asceticism and self-denial carried to extremes in the early monastic-anchorite movements of the late 3<sup>rd</sup> and 4<sup>th</sup> centuries. Hermits isolated themselves in the deserts, in cave cells, on pillars, there to indulge in all manner of bizarre vilifications of the flesh: wearing of chains for years, self-flagellation, dietary privations, exposure to heat and cold, etc... The 4<sup>th</sup> Century anchorites of Egypt retained practices of mummification of the dead; the body was wrapped in bandages and the outer surface sometimes painted with a mask or Christian symbols. As this custom fell out of use, the dead were simply wrapped in a winding sheet and carried into the desert, to be buried after

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<sup>158</sup> The simple fact that there are many features (and not just one or two) that are extremely unlikely in the context of the present scenario is well enough to come to this kind of drastic conclusion. In sum, the very poor conjuncture created by the last four points we just analyzed, linked with the fact that the Shroud man shows all the stigmata of Jesus of Nazareth (along with his unbroken legs), is really what makes the present scenario untenable. In fact, there's no doubt at all that such a scenario that involves an unknown crucified man other than Jesus really stands **near absolute zero in terms of probability**.

<sup>159</sup> See the analysis that was done in pages 9 to 15.

<sup>160</sup> See the first part of note #16.

<sup>161</sup> For more information about the anchorites, see: <http://en.wikipedia.org/wiki/Anchorite>.

<sup>162</sup> See note #9 for the reference of that paper.

three days of wailing. The Shroud might thus be the burial sheet of an unknown but charismatic figure in the early anchorite communities of Egypt or Syria<sup>163</sup>, crucified by followers in a manner exactly imitating that of Christ.”

If this is true, we have to assume that it was done before the abolition of crucifixion by the Romans between 315 and 337 A.D. or not long after, at a time when there were still people who had actually seen this kind of supplice. We have to think like this because of the numerous evidence that supports the idea that the Shroud man was crucified with the same standard method (with the exception of a few particularities) used by the Romans when this form of capital punishment was still legal. So, in order to reproduce all the very particular wounds we see on the Shroud (let’s think only of the nailing in the wrist area instead of in the palms), it’s evident that the collaborators of this anonymous martyr would have known the Roman procedure very well and would have most probably saw crucifixions with their own eyes. On this subject, it’s interesting to note that this assumption is totally coherent with the probable era (at the end of the 3<sup>rd</sup> Century or during the 4<sup>th</sup> Century) given by Meacham for this particular hypothesis, which is a good point in his favor.

And, at first sight, it seems that it’s not the only one! Effectively, when we consider rapidly the nine features that we analyzed concerning the previous scenario without making a proper analysis, this alternative scenario involving a willing Christian martyr appears as an interesting option that can potentially account for most of them. On the other hand, there are still some features that, at first sight, do not seem to fit very well with such a hypothesis.

In order to have a better view of the situation, we will now do a short analysis of each one of these nine features to see if the present scenario is really able to explain them rationally.

**1- There are numerous puncture wounds all over the head area (front and back) that appeared to have been caused by the wearing of a cap of thorns.**

This particular feature is not very strange in the context of the present scenario involving someone who wanted to faithfully reproduce all the Passion of the Christ. Since the tortures inflicted would have certainly been based on the Gospel accounts, there’s no doubt that a crowning with thorns would have been part of the plan. In fact, the only question that exists is whether or not this kind of cap of thorns that covered the totality of the head would have been the obvious choice of that kind of martyr. But as we’ve seen in the analysis of the previous scenario, it’s a well-established fact that this kind of cap would have looked pretty much like the mitre that most Oriental kings were wearing during Antiquity. So, because the present scenario would have happened during that era and probably in the region of Jerusalem<sup>164</sup>, it seems quite probable that this is the kind of crowning with thorns that would have been used on the

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<sup>163</sup> Meacham mentioned the regions of Egypt and Syria because that’s the region where there were many anchorites at that time, but because of the very good probability that the Shroud man was executed in the Jerusalem area (see the description of the data in pages 9 to 15), we have to assume that the willing martyr came from a group or a community that was living near that region, which is truly possible for that era. Effectively, since 135 A.D., Jews were cast out of Jerusalem and Judea and were gradually replaced by Pagans and Christians (see note #16). Around the time of the conversion of the Roman emperor Constantine around the beginning of the 4<sup>th</sup> Century, there is no doubt that a good portion of the population of Judea was Christian and it’s easy to assume that there were some monastic-anchorite communities in that region. In fact, an archaeological discovery made in 1991 really seems to confirm this assumption. Effectively, that year, the skeleton of a 24-26 year-old ascetic monk was discovered in a subterranean complex of cells dating to the Byzantine period that was located on a hill near the Jerusalem – Bethlehem road. Specialists have concluded that this skeleton is that of a Christian recluse who chose to live as an anchorite in this subterranean complex of cells (the innermost cell being his room). And the fact that the archaeologists have found an iron chain wound four times around his pelvis and back and over his shoulders indicates that he was constantly wearing it as an instrument of mortification. That discovery clearly show that during the Byzantine era that followed the transfer of the ancient imperial capital from Rome to the city of Byzantium (Constantinople) by Constantine in 330 A.D, there really were anchorites who lived in the Jerusalem area and who were practising intense mortification of their flesh. The present case is the one of someone who lived like a hermit but it’s truly possible that there were also some monastic-anchorite communities in Palestine during the same era. In the end, the very good probability that the Shroud man was crucified in the Jerusalem area cannot be considered as a weak point for the alternative hypothesis proposed by Meacham because there’s a fairly good probability that there were some overly devoted Christians in that region (maybe from the monastic-anchorite movement) who could have imitated Jesus’ passion and death during the era he proposed (i.e. at the end of the 3<sup>rd</sup> Century or during the 4<sup>th</sup> Century A.D.). For more information about this interesting archaeological discovery, see: Elena Kogan-Zehavi, The tomb and memorial of a chain-wearing anchorite at Kh. Tabaliya, near Jerusalem, *’Atiqot*, Issue #35, Israel Antiquities Authority, Jerusalem, Israel, 1998.

<sup>164</sup> See the descriptive list of the principal data that seems to indicate that the Shroud man was probably crucified in the Jerusalem area in pages 9 to 15.

head of this imitator of Christ, even though we can't be totally definitive about that. For this reason, we must conclude that there is a strong probability (instead of extremely strong) that this Christian martyr would have been crowned with a cap of thorns instead of the traditional circlet of thorns always depicted by the artists before the first known public exhibition of the Shroud in Lirey, France, ca. 1357.

**2- There is a post-mortem side wound in the chest area that appeared to be a direct hit to the heart.**

Again, such a feature is not strange at all in the context of the present scenario that involves a reproduction of Christ's Passion that would have been based on the Gospel accounts. There's no doubt that this would have been one of the most important wounds that the collaborators of this imitator of Jesus would have wanted to recreate on his own body in order to complete the stigmata of Christ. Because of this fact, the probability is extremely strong that the corpse of the willing martyr would have been pierced in the the chest area<sup>165</sup>.

**3- There is no sign indicating that the legs of the Shroud man have been broken.**

Because of the particular nature of this scenario that involves a willing martyr who would have wanted to experience the Passion and death of Jesus Christ in the same way as reported in the Gospels, this particular feature is not surprising at all. It's obvious that if this martyr and his collaborators would have based their tortures on the Gospel accounts, particularly on the Gospel of John, no breaking of the legs would have been done. Because of this fact, the probability that this Christian martyr would not have his legs broken before his death on the cross is extremely strong.

**4- There are approximately 120 scourge marks all over the body of the Shroud man, which indicates that he endured a very violent scourging prior to his crucifixion.**

Just like the previous three characteristics we just analyzed, we can say that at first sight, this particular feature that comes from the Shroud doesn't appear very strange in the context of the present scenario. After all, it's pretty obvious that if a Christian martyr wanted to live in his own flesh the Passion of Jesus Christ, one of the first tortures he would have been willing to endure is a scourging. But the fact that the Shroud man was scourged with an authentic Roman

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<sup>165</sup> In his paper about the Authenticity of the Shroud (see note #9 for the reference), William Meacham stated that the side wound that indicates a post-mortem stabbing to the chest possess a shape and a size consistent with a Roman *lancea* (lance), which was the regular weapon used by the militia. Because this particular hypothesis has been accepted by many researchers, some might think that this fact constitute a special assumption for the present scenario because it implies that the group that performed such an imitation of Christ's Passion must have been able to get an authentic Roman *lancea* in order to reproduce faithfully the chest stabbing, which is not so evident at first sight. But this idea must be rejected because even if the shape and the size of the side wound on the Shroud really fits with the blade of an authentic Roman *lancea*, that doesn't mean that this is the only possible weapon that could have been used. Effectively, it is truly possible to think that the collaborators of this imitator of Christ could have used another weapon in order to create a wound in his side with a similar shape and size. Because of this, it would be an error to assume that this overzealous group must have been able to find a real Roman *lancea* and nothing else in order to create the post-mortem wound we see in the right side of the Shroud man. However, because the particular location of the wound in the right side of the chest is not found anywhere in the Gospel of John (he only wrote that a soldier pierced Jesus side with a lance) but is totally consistent with the stabbing technique used by the Roman soldiers (it was common for them to target the right side of their enemy because it was normally the open side that was not protected by a shield), we have to assume that the ones who imitated Christ's passion must have been aware of this particular method of stabbing. This would explain very well why they chose to pierce the right side of the chest instead of the left side. In sum, because of the particular era in which this reproduction of Christ's Passion would have been done, it is fair to presume that the person who did the chest stabbing would have been fully aware of this particular method normally used by the Roman soldiers on the battle field and decided to use it in order to produce a very realistic wound that would fit perfectly with the crucifixion of Jesus, which was done by the Romans. This assumption finds confirmation in a manuscript written by Origen, which is mentioned in the paper of William Meacham concerning the Shroud's authenticity. Here's what Meacham wrote: "The lance thrust to the side of Christ was, according to Origen of the 4<sup>th</sup> Century (note that Meacham made a dating mistake here because Origen lived during the second and third centuries A.D.), administered following the Roman military custom, *sub alas* (below the armpits), where the wound of the Shroud image is located." The fact that Origen, who lived between 184/185 and 253/254 A.D., was well aware of this particular technique used by the Roman soldiers is a very good sign that many Christians must have been well aware of it too during that era, as well as during the following centuries before the fall of the Roman Empire in the 5<sup>th</sup> Century.

*flagrum* and the high probability that the scourging he suffered was so intense that he could have died before his crucifixion<sup>166</sup> really appears problematic for the present scenario.

Here, we have to remember that this martyr and his collaborators would all have been Christians. So, if this reproduction of Christ's Passion was really done during the probable era proposed by Meacham (i.e. at the end of the 3<sup>rd</sup> Century or during the 4<sup>th</sup> Century), the idea that such a Christian group could have been able to get a real instrument of torture used by the Romans for legal punishments and crucifixions is not so evident<sup>167</sup>, especially if this event happened before the Edict of Milan in 313 A.D., which legalized the Christian cult in all the Roman Empire. Also, the fact that the scourging inflicted on the man of the Shroud really appears to have been much more violent than the standard scourging done prior to a normal crucifixion as to be seen as the most important problem related to this particular hypothesis, because it is highly unlikely that the collaborators of this willing martyr would have taken the chance to kill him before he could reach the place of crucifixion. Effectively, the main goal of the whole operation was to crucify this anonymous man in the same way than Jesus Christ and not to scourge him to death. Concerning this aspect of the analysis, it's very important to note that there is no information in the Gospels concerning the level of intensity of the scourging that was inflicted to Jesus, even though it is pretty easy to deduce that it was probably more violent than usual<sup>168</sup>. But because the Gospels are not specific about the amount of hits inflicted to Jesus or the severity of his punishment, there was no need to inflict such a violent scourging on this willing martyr.

Finally, the fact that the Shroud man received almost as many strikes on his front than back is another problematic fact concerning the present scenario. Effectively, these kinds of direct blows to the front would appear quite odd and even unnecessary in the particular context of someone who simply wanted to reproduce Jesus scourging. And as it is for the level of severity of the scourging, there is also no indication in the Gospels that Jesus was not only scourged on his back but also on his front, which reveals a very different technique than what the Jews and probably many other people during antiquity were doing when they were scourging a criminal<sup>169</sup>.

In face of all the problems we just mentioned, the only way the present scenario can work is to assume that this group of informed Christians would have been aware that a very violent scourging done on both sides of the body with a Roman *flagrum*, the norm for every standard Roman scourging that always preceded a crucifixion and that they would have wanted to reproduce a true Roman scourging in every detail with a high level of accuracy. But because we don't know if this kind of scourging of the front side was part of a standard Roman scourging and also because it really seems highly unlikely that a very violent scourging was the norm before a Roman crucifixion, we must conclude that the probability is extremely weak that an imitator of Christ would not have suffered such a violent scourging (that was potentially life-threatening) before his crucifixion, and that such a scourging would have been done with an authentic Roman *flagrum* on both sides of his body.<sup>170</sup> In sum, it seems much more probable that such a rendition of Jesus scourging would have been done essentially on the back of this martyr with a lower number of hits and possibly with the use of a more common whip, which would not have produced the characteristic dumbbell shaped marks we see on the Shroud.

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<sup>166</sup> See note #81.

<sup>167</sup> The argument used in this analysis to show that the shape and size of the scourge marks appear to be problematic for the present scenario is pretty much the same as the argument that we mentioned in note #165 concerning the shape and size of a Roman *lancea*, but in this particular case, this argument is much more convincing because of the very specific aspect of the scourged marks that could not have been caused by other known instruments of torture used during antiquity, such as the Roman *flagellum* (see note #74) or any common whips used for the scourging of a criminal by other people, including the Jews and probably also by the Christians themselves. Because of this, the idea that Christians would have been able to get and use an authentic Roman *flagrum* in order to reproduce the scourging of Christ with a very high level of realism constitutes a special assumption that tends to lower the level of probability of the present scenario, especially if this scourging was done when the Christians were still persecuted by the Romans.

<sup>168</sup> See notes #79 and #80.

<sup>169</sup> See note #76.

<sup>170</sup> See note #81.

5- There are some physiognomic and anthropometric characteristics of the body image that indicate that the Shroud man probably originated from the Middle East and that he was possibly a Jew, despite the fact that he had long hair, which was not common for the average Jewish man living during Antiquity.

As we've seen at the beginning of this article, there is some data on the Shroud that indicates that the man was probably executed in the immediate region of Jerusalem. Because of this probable fact, we have to assume that the probable location of the Christian community of this imitator of Christ would have been in Palestine, not far from Jerusalem. In such a context, it would not be surprising if such a willing martyr would have looked like a Middle Eastern man and even possibly a Jew, even though he was a member (possibly even the leader) of a Christian community. Effectively, it is a fact that, at the very beginning of the Christian era, many Jews converted to Christianity and we can think that at the end of the 3<sup>rd</sup> Century and during the 4<sup>th</sup> Century, there were still many Christians in the Middle East (in Palestine particularly) who were still looking very Semitic or at the very least, who were presenting a strong Middle Eastern physiognomy.

And concerning the fact that this Christian martyr would have had long hair and a beard, because of the particular context of the present scenario that involves someone who wanted to reproduce Jesus' passion, death and burial in every detail, we have to assume that he was also trying to imitate his physical appearance, or at least, the appearance he thought Jesus had. And on this point, it is a fact that at the end of the 3<sup>rd</sup> Century or during the course of the 4<sup>th</sup> Century, there were some Christians who really thought Jesus had long hair and a beard, even though it's important to note that this was certainly not the most widespread perception among the Christians of that era.

On that point, the history of the depiction of Jesus from that particular era is really helpful to understand the general perception of the Christians concerning the physical appearance of Christ. It is a fact that during the most probable era in which this imitation of Christ would have been done, the vast majority of the surviving depictions of Jesus are showing him as a young beardless man with short hair in the pure Greco-Roman style, but nevertheless, from the end of the 3<sup>rd</sup> Century onwards, some Christian artists started to depict Jesus with long hair and a beard. These particular early artworks are mainly frescos that were found in the catacombs of Rome<sup>171</sup>. Because of the presence of these few early depictions of a bearded Christ with long hair, it is truly probable that at least some Christians of that era would have been convinced that this is how Jesus might have looked like during his lifetime on Earth. However, because all these early artworks have all been realised in Rome, some might think that this could only apply to the Western Christians, but it is truly possible that this way of seeing Christ's physical appearance was also present in some parts of the Eastern Church.

Of course, because we don't know for sure if there were some artistic depictions of a bearded Christ with long hair in the Middle East during that time, it's impossible to be 100% sure of this, but because these two parts of the Christendom were still united at that moment, it is hard to imagine that Roman ideas about the physical appearance of Jesus hadn't reached the Eastern Church and had no influence at all on some of his faithful. In fact, this quote taken from the *Letter to the Emperor Theodosius* that was written by Epiphanius of Salamis<sup>172</sup> between 379 and 395 A.D.

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<sup>171</sup> The best known of these frescos are the ones located in the Orpheus cubiculum in the Domitilla catacomb (end of the 3<sup>rd</sup> Century), in the Comodilla catacomb (beginning of the 4<sup>th</sup> Century) and in the Marcellinus and Peter catacombs (second half of the 4<sup>th</sup> Century). For more information about the evolution of Christ's depictions, see: [http://en.wikipedia.org/wiki/Depiction\\_of\\_Jesus](http://en.wikipedia.org/wiki/Depiction_of_Jesus). It's important to note that the most probable influence for these early depictions of a bearded Christ with long hair is not the image on the Shroud but the standard depictions of the most important Pagan gods like Zeus and Jupiter. Also, it's truly possible that the common way to depict the classical philosophers had a significant influence on some Christian artists who decided to depict Jesus with long hair and a beard because they were considering him like the greatest teacher. During that time, if the Shroud was already present, it's highly probable that it was kept hidden from the public because of the high risk of destruction faced from the Pagans, the Jews and probably also of some Judeo-Christians who were against any artistic depictions of the Son of God. In any case, the idea that there could have been some artistic depictions of a bearded Christ with long hair before this imitation of Christ's Passion could be executed cannot be seen as a highly problematic fact that can allowed us to reject such a hypothesis.

<sup>172</sup> Epiphanius of Salamis was born between 310 and 315 A.D. and died in 403 A.D. He is considered a saint and a Church Father by both the Eastern Orthodox and Catholic Churches and he was an active defender of the orthodoxy of Christian faith against many heresies that were present during his era. He was the Bishop of Salamis at the end of the 4<sup>th</sup> Century, which is the time when he wrote that letter. Epiphanius was born in Besanduk, which is near Eleutheropolis, in Palestine and as a young man, he lived as a monk in Egypt, before returning to Palestine. He then founded a monastery in Ad, in Palestine, where he lived for thirty years as the Superior of this Christian community. After that, in 367, he was named the Bishop of Salamis, which was a

really seems to confirm this assumption: “Which of the earlier Fathers ever painted an image of Christ and put it in a church or a private home? Which early bishop ever dishonored Christ by portraying Him on door curtains? . . . Moreover, they are deceiving who represent the likeness of saints in various forms according to their fancy, sometimes showing the same persons as old men, sometimes as youths, intruding into things which they have not seen. For they paint the Savior with long hair, and this by guessing because He is called a Nazarene, and Nazarenes wear long hair. They are in error if they try to attach stereotypes to Him, because the Savior drank wine, whereas the Nazarenes did not.”

It’s important to note the confusion of this author between the terms “Nazarene”, which probably means “from Nazareth”, and “Nazarite”, which was used to describe a particular category of Jew under a religious vow. It’s probable that this confusion was present among many Christians of that era and this letter also seems to indicate that this confusion even influenced some Christian artists who decided to depict Jesus with long hair and a beard, because they really thought he was a “Nazarite”, instead of a “Nazarene”. In sum, this letter of Epiphanius of Salamis, who was born in Palestine and lived for a while in Egypt, is important because it indicates that the idea that Christ had long hair and a beard was probably present in many regions of Christendom, including the Middle East<sup>173</sup>.

But even if this idea would not have reached the Christians who lived in Palestine during these early days of the Church, including the fanatical group who did this imitation of Christ’s Passion, there would still be a very good probability that their willing martyr would have worn long hair and a beard because we know for a fact that it was common for a majority of the Christian men who were living among these early monastic groups to let their beard and hair grow long<sup>174</sup>.

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Greek city located in the island of Cyprus. For more information about him, see the introduction of a book entitled *The Panarion of Epiphanius of Salamis* that was translated in English by Frank Williams. A PDF version of this book is available here for free: <http://www.jacksonsnnyder.com/yah/manuscript-library/the%20panarion%20of%20epiphanius%20of%20salamis.pdf> and [http://en.wikipedia.org/wiki/Epiphanius\\_of\\_Salamis](http://en.wikipedia.org/wiki/Epiphanius_of_Salamis).

<sup>173</sup> One incident in the life of Epiphanius even seems to indicate that at the end of the 4<sup>th</sup> Century, there were already some artistic depictions of a bearded Christ with long hair in Palestine. This incident was described in a letter he wrote to Bishop John II of Jerusalem in 394. It happened in 393, during a visit he made in Palestine to meet John in Bethel and share a service with him. Epiphanius wrote that while he was on his way to Bethel, he went into a village church to pray and saw a curtain with an image of Christ or of a saint, which he tore down and asked the parishioners to use it as a burial shroud for the poor. In his letter, he told Bishop John that such images were “opposed . . . to our religion.” That story can be found in the introduction of the book entitled *The Panarion of Epiphanius of Salamis* that we mentioned in the previous footnote. Even though it is impossible to be 100% certain if the particular image he saw was really that of Christ and if he was depicted with a beard and long hair (or even if it was an artistic copy of the actual Shroud of Turin), it is still tempting to make a link between this incident and his *Letter to the Emperor Theodosius*, in which he complained about these particular depictions of Christ. In sum, if that letter was really written after this particular incident, then we can think that this is what motivated him to write a virulent critical analysis about these depictions of a bearded Christ with long hair. And because the range of dates given by scholars for the dating of this document makes it possible that it was written after 393 A.D., and also because there is a reference in that letter about some portraits of Christ “on door curtains”, the probability is very high that it was truly the case. If this hypothesis is correct and there really were already some artistic depictions of a bearded Christ with long hair in Palestine before the end of the 4<sup>th</sup> Century A.D., then the probability that some of these depictions were already present in that region during the era proposed by Meacham for an imitation of Christ’s Passion would also be high. If this assumption is correct, it would be logical to think that such an imitator of Christ would have wanted to adopt Jesus look, in the same way he was depicted on these particular artworks. And the fact that we don’t have any depictions of a bearded Christ with long hair that would have been made between the 3<sup>rd</sup> and the 5<sup>th</sup> Century A.D. by Eastern Christian artists can well be explained by the later Iconoclast period (726-843 A.D.), which caused the destruction of a lot of sacred images in the Orthodox Church, especially those that were depicting Christ. Because of this, we can estimate the probability that there were actually some depictions of a bearded Christ with long hair during those early days of the Eastern Church as pretty strong and we can surely think that if none of them has survived to this day, it is mainly due to the Iconoclasts who would have destroyed most of them.

<sup>174</sup> This was also the case for most Christian hermits of that period who lived in reclusion. The main reason why these monks and hermits were wearing long hair and beards was most probably to express their will to separate themselves from earthly things while dedicating their life to God, pretty much in the same manner as the Jewish Nazarites in antiquity. And even in the case where there would have been no artistic depictions of a bearded Christ with long hair in the East, it’s truly possible that some of the monks and hermits of that region were still convinced that Jesus was a Nazarite who would have had a beard and long hair. If this assumption is correct, there’s no doubt that such a belief would have had a deep influence on the hair and beard fashion of these men of these early days of the Church who would probably have wanted to adopt the same look as the one they followed. The *Letter to the Emperor Theodosius* written by Epiphanius of Salamis that we just saw strongly suggests that before the end of the 4<sup>th</sup> Century, many Orthodox Christians (among them, some artists) were truly convinced that Jesus was a Nazarite and it’s probable that such a belief was also present before that time. In this



So, as we can see, the probability is strong that this Christian martyr would have showed some physiognomic and anthropometric characteristics of a Middle Eastern man and even of a Jewish man (because of the particular place where he and his monastic group would have been located) and that he would have worn long hair and a beard in a desire to imitate the supposed physiognomy of Jesus or simply because it was common for men living in these early Christian communities to adopt this particular look. In sum, there is no good reason to doubt that such a Christian could have looked exactly like the man of the Shroud.

#### 6- The man of the Shroud had the privilege to be buried in a high quality linen shroud.

For the previous scenario, the level of probability for this particular feature was extremely weak because it meant that a real criminal who was legally crucified by the Romans would have been buried in that kind of expensive cloth (probably in a family tomb), which is far from being the normal procedure, especially when we consider the probable fact that this person would have been crucified in the Jerusalem area. But for the present scenario, things are completely different because it involved an imitator of Christ. In that particular context, the idea that such a person would have been placed in a single linen shroud of high quality after death is not surprising at all because this is exactly the description we found in the Synoptic Gospels concerning the burial of Jesus<sup>175</sup>. Because of this and also because it was also a common Christian tradition in the early days of the Church to bury the dead in a shroud (or shrouds)<sup>176</sup>, the probability seems to be extremely strong that this Christian martyr would have been buried in a high quality linen shroud after his death on the cross.

However, as we have seen previously, there is some data coming from the Shroud that strongly suggests that this particular burial cloth had been woven by a Jewish artisan. This strong probability is somehow problematic for the present scenario because it doesn't involve a group of Jews but a Christian group. In this context, the idea that they would have wrapped the corpse of their willing martyr in such a cloth appears quite strange and somewhat unlikely. When we also consider other data coming from the Shroud that strongly suggests that the Shroud man was executed around Jerusalem, then the level of strangeness of this idea drops dramatically. But there is another fact to consider for the present analysis: at the time this imitation of Christ's Passion would have been done (at the end of the 3<sup>rd</sup> Century or during the 4<sup>th</sup> Century), there were not a lot of Jews in Jerusalem. Effectively, after being chased from the city and

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context, the idea that an imitator of Christ of that era would have worn long hair and a beard is certainly not strange. Finally, no matter if the belief that Jesus was a Nazarene was popular or not among Eastern monks and hermits of that period, we still have confirmation that it was truly the norm for these men to wear long hair and beards in the fact that this particular look is still very common in the Orthodox Church today, particularly among monks and hermits. In fact, up until the First World War, this ancient tradition was rarely broken in the Eastern Church and it's only from then on that we saw some members of that clergy starting to adopt a more modern look of cropped hair and no beard. Nevertheless, even today, it isn't rare at all to see Orthodox priests, monks and hermits who wear long hair and beards, on the contrary to what goes on in some Catholic monastic movements. In sum, it's obvious that this ancient tradition has not died out in the Eastern Church and has its roots in the earliest days of the monastic movements. For more information about this very ancient tradition in the Christian Church for members of the Clergy to wear long hair and beards, see: <http://pc-freak.net/blog/why-does-orthodox-christian-priests-wears-long-beards/>.

<sup>175</sup> See note #104.

<sup>176</sup> In his paper written about the ancient history of the Shroud (see note #145 for the reference), Maurus Green describes the burial tradition of the early Christians living in Egypt, which normally included the enveloping of the corpse in a shroud: "However, Egypt does provide examples of shroud burial among the early Christian interments at Antinoe, a town built on the Nile by Hadrian in 132 A.D. The bodies were buried between then and the 6<sup>th</sup> Century. From 1897 to 1902 Albert Gayet unearthed some 10,000 pagan and Christian bodies in an intact state. The Christians were buried in a variety of ways, some clad in clothes, others wrapped in shrouds with and without face veils, their ankles and wrists bound by ribbons. People were interred in anything up to twenty shrouds, embroidered with the early Christian symbols of the Alexandrian catacombs. Single shroud burials were like the Jewish burials of the poor in Palestine before and after Our Lord's time, such as are described in pre-Christian apocrypha and recorded of Rabbi Gamaliel and his grandson. Before Gamaliel's reform "a plain cloth chosen without care would be used only for a criminal or at best a person despised by everyone. It would be a sign of shame". Joseph, by buying a "clean shroud" and burying Jesus in a new tomb, ensured that he did not suffer the ritual disgrace of criminal burial." And there is no reason to believe that this burial procedure of the ancient Christians of Egypt to put their dead into a shroud was not followed by other Christian communities living elsewhere in the Roman Empire. Here's what Green wrote about that: "...the Antinoe burials are important for two reasons. Firstly, they show how the early Christians followed the Jewish burial custom, perhaps consciously imitating the manner in which they thought Christ was buried. This was a widespread fashion, since similar shroud burials were found in the Catacomb of St Sebastian, Rome..."



also from the rest of Judea in 135 by the emperor Hadrian, it took a while before a strong Jewish presence could be seen again in Jerusalem. In fact, it is a historical fact that the Jews only started to come back slowly to their capital around the 4<sup>th</sup> Century, while at the time, the inhabitants of the city were mostly Christians and Pagans. So, it is highly probable that when this imitation of Christ was done, there were very few Jewish artisans around Jerusalem that could have sold a burial cloth like the Shroud to a monastic group of Christians who wanted to reproduce the burial of Christ with the highest level of realism. In all logic, because of the strong presence of Christians in the city during that era, it's much more probable that this willing martyr would have been buried in a burial cloth manufactured in the city by a Pagan or Christian artisan or elsewhere, maybe in Egypt or Syria, by a non-Jewish artisan. Because of this, the level of probability that the Shroud man could have been buried in a Jewish style grave cloth that seemed extremely strong at first sight has to be greatly reduced.

Nevertheless, because there were still some Jews in the capital at that time and probably some artisans among them, and also because it is truly possible that some Christian artisans in Jerusalem could have copied the Jewish style of manufacturing linen cloths, the probability that such a Christian group could have put their hands on a very particular grave cloth like the Shroud of Turin must be estimated as average instead of weak. And the fact that this group would have been very cautious to reproduce every possible detail of the Passion, death and burial of Christ with a high level of realism only reinforced this particular conclusion. In other words, because of their desire to imitate Christ's Passion with a very high degree of historical fidelity, it is truly possible (even if we cannot say that it is probable) that this group of Christians would have made some effort to get an authentic Jewish style burial cloth instead of just any high quality linen cloth available at the time that probably would have been woven by a non-Jewish artisan.

**7- When we put together the fact that no traces of any known ancient burial products have been found on the Shroud by the STURP team and also the fact that the corpse has not been washed before being enveloped in the Shroud, we can conclude that the burial of the Shroud man was incomplete.**

In the light of the Gospel accounts, we could think at first sight that an incomplete burial that would not have included any anointment or washing of the body would fit nicely with the present scenario involving a willing martyr who wanted to reproduce Christ's Passion and death with fidelity. For the unwashed body in particular, this is exactly what we would expect to see, because nowhere in the four Gospels can we find a reference for the washing of the body of Jesus and there are numerous elements in the accounts of the Passion that make us think that his burial was done in haste.

Nevertheless, concerning the absence of any traces of known burial products, like the aloes and myrrh in particular, this is not what we would expect to get. Effectively, because of the piercing in the side, we know that this reproduction of the Passion would have been based, at least partially, on the account we found in the Gospel of John, because he is the only one to report that very particular wound. So, if the collaborators of this willing martyr would have used John's Gospel to reproduce this very odd feature, it seems very likely that they would also have thought to spread some aloes and myrrh (more likely in an oily form) on the cloth and/or on the body<sup>177</sup>.

However, we should consider the possibility, as it was first proposed by Samuel F. Pellicori and Mark S. Evans of STURP<sup>178</sup>, that these substances were originally present on the cloth but "could easily have evaporated or even been washed away over the centuries." But as we've already seen, this possible explanation seems highly unlikely, mainly because of a total absence of coloration outside the body image<sup>179</sup>. Of course, we can also presume that the burial of this unknown martyr would really have been done without the use of such products, but because this plan would have

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<sup>177</sup> Here's the specific mention about the use of these particular products we can find in the Gospel of John: "And there came also Nicodemus, who at first came to Jesus by night, and brought a mixture of myrrh and aloes, about a hundred pounds in weight. Then they took the body of Jesus and wound it in linen cloths with the spices, as is the manner of the Jews for burial." (John 19:39-40).

<sup>178</sup> See note #125 for the reference of that paper.

<sup>179</sup> See the analysis that was done in pages 31 to 34.

been carried out with a very high degree of realism<sup>180</sup>, it seems truly improbable that this group of Christians could really have forgotten to use them for the burial of this imitator of Christ. Finally, we can think that these products could have been used in powder form and put in bags made of smaller cloths, just like it was proposed by Barbet in context of the burial of Jesus of Nazareth<sup>181</sup>. If this hypothesis is correct, it's highly probable that very few particles of these products would have been left on the cloth and this could explain very well why the STURP team was unable to detect them.

So, even if this apparent absence<sup>182</sup> of aloes and myrrh on the cloth really seems to be quite problematic at first sight for the hypothesis of an imitation of Christ's Passion and death, the fact that Barbet's hypothesis can offer a rational explanation definitely has an impact on the probability that such a feature could fit with the present scenario. Besides that, the fact that the body has not been washed before being put in the Shroud must be seen as a very probable feature in the context of this reproduction of Christ's hasty burial based on the Gospels. That's why it is prudent to estimate the probability that the burial of this imitator of Christ would have left no detectable traces of burial products on the cloth and would have been done without any washing of his body somewhere between relatively weak and average.

**8- The data coming from the Shroud indicates that the corpse must have stayed within the cloth for a short period of time that can only go from 24 to 72 hours.**

There is no doubt that this particular feature is very problematic for the present scenario because it really seems that there is no rational way to explain why the collaborators of this willing martyr would have decided to remove his corpse from his Shroud, except if we think that they would have wanted to also reproduce the finding of the empty tomb and the empty shroud. There's no doubt that such an idea has to be considered as a very special assumption because it really seems highly unlikely at first sight. And beside this unlikely scenario, we can also make the same special assumption we did for the first scenario, i.e. that, for an unknown reason, this Shroud would have been used temporarily in the wait that the participants in the burial of this anonymous imitator of Christ could find another (more appropriate?) burial Shroud and once they would have found it, they would have done the transfer of the body, between 24 and 72 hours after the first enshrouding. Finally, we can also think that this removal of the body from the Shroud could be linked with a desire to keep his burial cloth as a relic because his collaborators were already convinced that he was a saint.

But because all these explanations rest on some very special assumptions, we have no other choice than to conclude that the probability is extremely weak that the corpse of this imitator of Christ would have been removed from his burial cloth after a short period of time, between 24 and 72 hours after death.

**9- Never mind the fact that the Shroud is a burial cloth covered with bloodstains, it was kept and well preserved until this day.**

The analysis of this particular feature is pretty much the same as we did for the first scenario<sup>183</sup>, except that beside the slim possibility that the preservation of this blood stained grave cloth could have been due to the presence of the body image already visible on the cloth at the time the body was removed, the recovery and preservation of the Shroud could

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<sup>180</sup> Let's just think about the particular size and shape of the scourge wounds and the side wound, which indicates that an authentic Roman *flagrum* and possibly also an authentic Roman *lancea* (lance) were used to produce them. We can also think about the particular location of the wound in the right side of the chest, which correspond exactly with the standard technique of stabbing that was used by the Roman soldiers (see note #167).

<sup>181</sup> See the description of Barbet's interesting hypothesis in page 34.

<sup>182</sup> It seems more prudent to talk of an "apparent" absence of these substances because some researchers over the years claimed they were able to find the presence of these substances on the cloth in small quantities, but without having been able to get their conclusion confirmed by independent researchers and also without having been able to publish their results in an independent peer-reviewed scientific publication. On that subject, see the analysis in pages 29 to 34 concerning the probable absence of any burial products on the Shroud and especially note #108.

<sup>183</sup> This particular analysis can be found in pages 40 to 42.

also have been caused in this case by the will of the collaborators of this Christian martyr to make a relic of his burial cloth because they were already convinced that he was a saint.

Nevertheless, because these two possible explanations rest on special assumptions, the probability that the Shroud of this imitator of Christ would really have been kept and well preserved after it covered his tortured corpse for a short period of time has to be considered extremely weak. Also, it's important to note that the present hypothesis rests on the same special assumption that we mentioned for the first scenario, i.e. that even though his burial cloth would have been kept and well-preserved, the real identity of this anonymous crucified man would have been lost, forgotten or kept hidden when it became a relic associated with the Passion of the Christ. This is truly another unlikely aspect related to the present point and it helps to confirm his extremely weak level of probability.

### **Other problems related to this scenario**

Along with the nine features we just analyzed, there are three other features that come directly from the Shroud which appear to be problematic for this particular scenario:

1- We have to assume that this willing martyr and his collaborators would have been able to torture and crucify the willing victim so secretly that their very unique and gruesome reproduction of Jesus' Passion and death never became publicly known. Because of the very good probability that this imitation of Christ's Passion would have been done around a big antique city like Jerusalem<sup>184</sup> during the late 3<sup>rd</sup> or 4<sup>th</sup> Century<sup>185</sup>, the probability that such a fanatical group would have succeeded in keeping their elaborated plan<sup>186</sup> totally secret (with or without the help of the Church) should be considered extremely weak.

2- We have to assume that this complete imitation of Jesus Passion was never recorded in any manuscript of the time and was never done again, whether it would be by one of the followers of this willing martyr or by any other ascetic Christians after that time. Effectively, even if "there is ample evidence of asceticism and self-denial carried to extremes in the early monastic- anchorite movements of the late 3<sup>d</sup> and 4<sup>th</sup> centuries" (as Meacham stated in his article about the Shroud's authenticity<sup>187</sup>), we must understand that there is absolutely no written evidence in all the history of Christianity of someone who would have been so fanatical about Christ that he would have wanted to relive in his own flesh Christ's Passion in every detail including his crucifixion. So, if this scenario is correct, that means this willing

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<sup>184</sup> See the descriptive list of principal data that seems to indicate that the man of the Shroud was probably crucified in the Jerusalem area in pages 9 to 15.

<sup>185</sup> During that particular era, the Church of Jerusalem was well implanted and it's highly unlikely that no Christian living in that region would have been aware of such a gruesome imitation of Christ's Passion and the same thing is true for all the other persons who lived there at the time. In that context, it's truly improbable that an elaborate plan like that could have been so hidden that the identity of this imitator of Christ, along with the story of his martyrdom, would never have been publicly known and/or recorded from that period. Nevertheless, this is the most logical way to explain why the burial cloth of this anonymous martyr would have ended up being mistaken for the true Shroud of Christ. Besides that, there is another explanation that the Jerusalem Clergy would have been aware of this plan but would have decided to keep it a secret in order to make believe that the Shroud of this willing martyr was really the authentic Shroud of Christ. However, we must consider this last scenario as highly improbable for the simple reason that there are only two ancient sources that refer to the presence of a Shroud of Christ in Palestine and only one of them mentioned that it was kept and showed publicly in Jerusalem. One of these written accounts (the pilgrimage account of Antoninus of Piacenza) has been dated from ca. 570 and mention that the Shroud of Christ was kept in a rock cave on the banks of the Jordan River, while the other (the pilgrimage account of the French Bishop Arculf) has been dated from ca. 670 and talks about a public showing of the Shroud of Christ that he saw in Jerusalem. These few references strongly suggests that no public showing of a Shroud of Christ in Jerusalem or elsewhere in Palestine probably occurred prior to the second half of the 6<sup>th</sup> Century and even possibly prior to the second half of the 7<sup>th</sup> Century, which constitutes problematic data regarding this conspiracy hypothesis involving the Church of Jerusalem. For more information concerning the testimony of Antoninus of Piacenza, see: [http://en.wikipedia.org/wiki/Antoninus\\_of\\_Piacenza](http://en.wikipedia.org/wiki/Antoninus_of_Piacenza) and for more information concerning the testimony of Arculf, see: <http://en.wikipedia.org/wiki/Arculf>.

<sup>186</sup> This plan would have included some beating of the face, a very violent scourging, a crowning with thorns, a barefoot trip to the place of execution that was long enough to seriously damage the upper back and the knees of this imitator of Christ, a crucifixion that would have probably lasted at least a few hours and a rapid burial, probably done in a real stone tomb located near Jerusalem. All this in order to match the Gospel accounts perfectly.

<sup>187</sup> See note #8 for the reference of that paper.

martyr was most probably a unique case in the history of ascetism and his great act of gruesome communion with Christ would not have been documented anywhere, even though his burial cloth would have been kept very soon after his death and well-preserved until this day. Without a doubt, the probability that all those things could have happened simultaneously is extremely weak.

3- We have also to assume that the scourging and the crucifixion of this willing martyr was done while he was totally naked. And after the death of this imitator of Christ, we also have to assume that his collaborators decided to keep his dead body completely naked for the burial. On that particular subject, it's very important to note that nowhere in the Gospels we can find any allusion to the total nudity of Christ during his Passion and his burial. Because of this, it seems truly unlikely that such a fanatical Christian martyr would have wanted to be scourged, crucified and buried without any clothes or even some kind of modesty cloth. To explain this strange idea, we must assume that he would have been aware that this was the norm for a standard Roman crucifixion and also for the Jewish burial of a criminal and that he would have wanted to reproduce this very "crude" feature realistically, even though this could have been seen as totally scandalous for most Christians of that era<sup>188</sup>. This explanation rests on some very special assumptions (particularly that a Christian group would have dared to do this imitation of Christ's Passion in such a crude way), and so the probability that such a scenario can be true must be considered very weak.

### **General conclusion concerning this alternative scenario**

As we've seen in this analysis, on the contrary to the first scenario, there are many features present on the Shroud (like all the stigmata of Christ's Passion and the absence of fracture of the legs) that fits very well with the present hypothesis involving an imitator of Christ who wanted to reproduce all aspects of his Passion, death and burial. But nevertheless, it should be noted that there are other features that are still almost impossible to rationally explain in the context of this particular scenario. Finally, there are at least three more features related to some data coming from the Shroud or from ancient written sources that also tend to greatly lower the level of probability of such a scenario.

In sum, for each feature when we compile the conclusion, we found that the level of probability of six of them (out of twelve) is very weak or extremely weak in the case the Shroud would really be the burial cloth of a willing Christian martyr who wanted to imitate Christ's Passion, death and burial with the highest possible degree of fidelity to the Gospel accounts. See table on next page.

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<sup>188</sup> Here, we have to remember the archaeological finding done in Qumran that we described in pages 8 and 9 of the present paper (point #3), which shows that the burial posture and the nudity of the Shroud man is really compatible with a known Jewish burial rite of the 1<sup>st</sup> Century A.D. As we said in this section of the present article, it is truly possible to think that this particular way to bury the dead could have been used by some Jewish and also by some Christian communities for a long time after that era. Because of that, it is possible that such a fanatical group of Christians would have been well aware of this particular form of burial and if some of these Christians were really able to witness a real Roman crucifixion before doing their reproduction of the Passion of the Christ, it would be possible to make the same kind of assumption concerning the nudity of the willing martyr during his scourging and crucifixion. Nevertheless, it's one thing to assume that this fanatical group would have been aware of these particular procedures used by the Romans and the Jews during Jesus time, but it's a totally different thing to think they would have dared to reproduce Christ's passion by placing this Christian martyr totally naked during his scourging, crucifixion and burial. Here, we must consider this important historical fact: no Christian artist (not even the ones who depicted the first known crucifixion scenes at the beginning of the 5<sup>th</sup> Century) has ever dared to depict Christ totally naked during his Passion or burial prior to the making of the Pray codex, which has been dated between 1192 and 1195. Effectively, prior to this manuscript, which contains some depictions of Christ after his death on the cross, all the Christian artists always covered the body of Jesus with some kind of modesty cloths. This was probably done as a sign of respect for Christ as well as a way to conform to the Judeo-Christian culture of their time, which did not tolerate artistic scenes of total nudity, compared to the Pagan world where it was usual for artists to produce nude representations. Because of this Judeo-Christian culture in which this Christian group would have been living, it seems highly probable that at least much of their reproduction of Christ's Passion would have been done with the use of some kind of modesty cloth on the body of their willing martyr.

Like we did for the first scenario, here's a summary table of the conclusion for each feature:

Particular feature from the Shroud	Level of probability that it can applied to an imitator of Christ
There are numerous puncture wounds all over the head area (front and back) that appear to have been caused by the wearing of a cap of thorns.	Strong
There is a post-mortem side wound in the chest area that appears to be a direct hit to the heart.	Extremely strong
There is no sign indicating that the legs of the Shroud man have been broken.	Extremely strong
There are more or less 120 scourge marks all over the body of the Shroud man, which indicates that he endured a very violent scourging prior to his crucifixion.	Extremely weak
There are some physiognomic and anthropometric characteristics of the body image that indicate that the Shroud man probably originated from the Middle East and that he was possibly a Jew, despite the fact that he had long hair, which was not common for the average Jewish man living during Antiquity.	Strong
The man of the Shroud had the privilege to be buried in a high quality linen shroud.	Average
When we put together the fact that no traces of any known ancient burial products have been found on the Shroud by the STURP team and also the fact that the corpse has not been washed before being enveloped in the Shroud, we can conclude that the burial of the Shroud man was incomplete.	Between relatively weak and average
The data coming from the Shroud indicates that the corpse must have stayed inside the cloth for a short period of time, from approximately 24 to 72 hours.	Extremely weak
The Shroud is a blood stained burial cloth that has covered a corpse for a time and it was kept and well preserved until this day.	Extremely weak
<b>Additional features directly related to the present scenario</b>	
This willing martyr and his collaborators would have been able to complete the torture and crucifixion in such secrecy that their gruesome reproduction of Jesus' Passion and death never became publicly known.	Extremely weak
The exact reproduction of the Passion, death and burial of Christ by this willing martyr would have been a unique case in all the history of Christianity and would never have been documented in any known ancient manuscript, even though his burial cloth would have been kept immediately after his death and well preserved until this day.	Extremely weak
This willing Christian martyr would have been totally naked during his scourging and crucifixion and his corpse would have been kept that way for his burial.	Very weak
<b>Total of twelve particular features</b>	<b>For 6 of these 12 features, the level of probability is considered very weak or extremely weak (in red in the table) and two others are considered relatively weak or average (in yellow in the table)</b>

The previous table clearly shows how much the present scenario appears unlikely when we take into account all the features we analyzed. In fact, in order for this particular hypothesis to work, we have to assume that an anonymous man, probably the leader of an monastic-anchorite community of the 3<sup>rd</sup> or 4<sup>th</sup> Century, would have been so fanatical about Christ that he would have wanted to live his Passion and death in his own flesh, as it is reported in the Gospels. Then, we have to assume that this imitator of Christ would have been buried in a high quality linen shroud after his death on the cross, just like the Synoptic Gospels indicate for Jesus. Also, we must assume that his reproduction of Christ's Passion was done in the immediate region of Jerusalem with the help of some collaborators who were probably his followers. And concerning the torture that was inflicted to this willing martyr, we have to assume that he was severely beaten on the face and that he was scourged very severely on the front side of his body as well as his back side with an authentic Roman *flagrum*. So much in fact that he was probably close to death after this particular torture was completed, which was certainly not part of the original plan. Then, we must assume that after this very violent beating and scourging was done, they would have chosen to put a cap of thorns on his head instead of just a circlet of thorns.

And after all this severe torture, we have to assume that, in a desire to reproduce the way of the cross of Jesus with a high level of realism, this imitator of Christ would have found the strength to carry his crossbeam a good distance, well enough to really damage his upper back and to cause some falls that have injured his knees. We also have to assume that the collaborators of this willing martyr were well aware of the standard method of crucifixion used by the Romans during Antiquity, including the nailing of the wrist instead of the palms, and would have been able to reproduce it in every detail. And after his death on the cross, while his body was still on the cross, we have to assume that it would have been stabbed in the side with an authentic Roman *lancea* or some other very similar weapon, in a style that was commonly used by the Roman infantry. After that, we must assume that the corpse of this martyr would have been buried very rapidly without the use of any known burial products for the body and/or the cloth and without any washing of his corpse. Also, we must assume that the scourging and crucifixion of this imitator of Christ would have been done while he was totally naked and that his corpse would have been kept that way for his burial. Then, after this incomplete burial, we have to assume that for some unknown reason very hard to explain rationally, the dead body of this man would have been taken out of his Shroud after being in it for only a short time period, which can be estimated between 24 and 72 hours. And we must assume that this extraction was done in such a way that it did not disturb the bloodstains, never broke the linen fibrils under them and did not disturb the body image<sup>189</sup>. After this, we must assume that, for another obscure reason, someone dared to keep and preserve this gruesome grave cloth, even though it was against Jewish law to do so. Also, we have to assume that this first and only known case of a complete imitation of Christ's Passion would never have been documented in any ancient writing. And finally, we must assume that after some time, the identity of the Shroud man would have been completely lost, forgotten or kept hidden and his burial cloth would have ended up being considered as the authentic burial Shroud of Jesus Christ by the Church and faithful.

**As we can see, this alternative scenario possesses as many special assumptions as the first scenario we've analyzed. Again, if we use the Occam's razor principal to make a general analysis of all the results showed in the previous table, we can easily conclude that the probability that the Shroud man could be an anonymous Christian martyr who would have wanted to imitate the Passion and death of Jesus of Nazareth in every detail is almost near absolute zero.**

### **Final conclusion concerning the two scenarios analyzed in this paper**

When we consider all the analyses we did for both scenarios in their entirety, we have to conclude that the simple fact that such a blood stained burial cloth had been kept and well-preserved after having been in contact for only a very short period of time with a crucified corpse is really the most problematic characteristic concerning any non-forgery scenario that would involved someone other than Jesus of Nazareth, whether it be a criminal that was legally crucified by the Romans or a Christian martyr who wanted to imitate the Passion, death and burial of Christ<sup>190</sup>. In fact, even if

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<sup>189</sup> See note #158.

<sup>190</sup>Even if the goal of this article is not to emphasize this aspect of the Shroud, it is still truly possible to interpret the preservation of this blood stained grave cloth as a sign (but not a proof!) of the Resurrection of Christ. Effectively, in the case where the Shroud would not be the product of a "natural" forgery done with a real crucified body, the fact that it was kept and preserved by someone only seems to be rational and understandable in the context of the Resurrection of Jesus of Nazareth, especially when we also consider that the body inside this cloth only stayed there for no more than 72 hours, which is totally consistent with the account of the Resurrection found in the Gospels. In sum, if the Shroud is not the product of a "natural" forgery, its preservation to this day only seems to fit with the idea that someone was so much convinced that Jesus was resurrected that he decided to keep his gruesome burial cloth, even if this was forbidden by the Jewish law (see note #152). As we have just examined, it is extremely difficult to find one credible and rational explanation for the keeping and preservation of the blood stained grave cloth of a crucified man, except if we dare to consider the possibility that such a person would have found this empty Shroud (probably in an empty tomb!) and would have ended up being convinced that the Shroud man was resurrected from the dead. If such a scenario is true, this idea in itself doesn't prove the Resurrection of Jesus. It would only prove that the Shroud is really the authentic burial cloth of Jesus of Nazareth and it would be a great piece of evidence to show that there was at least one person who was so convinced that he was resurrected that he even dared to keep and preserve the burial cloth. Also, along with the possible sign of the Resurrection of Jesus that comes from the preservation of his Shroud, we can also consider the undisturbed aspect of the bloodstains and the unbroken fibrils that are underneath them on the Shroud as another possible sign of the Resurrection. Here, it's important to note that this very strange feature (which doesn't seem for the moment to be scientifically explicable) have not been included as a particular feature to analyze in the present paper because of the possible link with the Resurrection, which is a supernatural event related to Christian faith that we deliberately chose to leave aside. Anyway, if you want more information about this, you should read the footnote #21 of my first article about the Shroud's authenticity (see note #1 for the reference).



this very particular feature would be well enough to consider these two scenarios as extremely unlikely, that's far from being the only problematic feature that doesn't seem to fit with these particular hypotheses.

**As can be seen in the two summary tables to this point in this paper, the total of seven problematic features of nine for the first scenario, the total of six problematic features out of twelve for the second scenario and the very high number of special assumptions that these scenarios command in order to work lead us to conclude that the probability that the Shroud man could be someone else than Jesus of Nazareth (whether it be a criminal or an imitator of Christ) who would have been crucified in a very similar manner is almost nonexistent<sup>191</sup>. In sum, there's no doubt that we have to look elsewhere in order to find a rational explanation for the Shroud of Turin, because the two hypotheses we analyzed in this paper don't fit with the general portrait that is depicted by all the features we've seen.**

## Epilogue

As we saw at the beginning of this article, there are **two important scientific conclusions** that can be considered as definitive about the Shroud:

- 1- The Shroud is not an artwork of any kind, simply because the bloodstains clearly indicate that it is a real burial shroud that enveloped for less than 72 hours, a real man who was tortured, scourged, crowned with thorns and died by crucifixion.
- 2- The body image on the Shroud must absolutely have been caused by some form of interaction between the cloth and this tortured and crucified body.

Now, after the analysis done in the present paper, **more can be generally concluded**<sup>192</sup> to these previous two:

- 1- The Shroud **is not** the burial cloth of an anonymous man who would have been legally tortured, scourged, crowned with thorns and crucified by the Romans in the exact manner as Jesus of Nazareth reported in the Gospels.
- 2- The Shroud **is not** the burial cloth of an anonymous and willing martyr of the early Church who would have wanted to reproduce all the passion, death and burial of Jesus Christ with a very high level of realism.
- 3- The Shroud **is** the burial cloth of someone from the Middle East (probably a Jew) who was executed in the region of Jerusalem and who shows all the stigmata of Jesus of Nazareth, as reported in the Gospels.

In sum, these new conclusions show with a very high level of confidence that the body image and bloodstains that we see on this cloth cannot be someone other than an image of Jesus' passion, as it was described in the four Gospels. At the end of the present study, it's fair to say that only one true question remains unanswered: **Is it the image of the real historical Jesus right after his passion and death on the cross or is it the image of an anonymous person that would have been tortured and crucified by a forger in order to create a false relic of Christ's passion?**<sup>193</sup> In other

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<sup>191</sup> To repeat, there's no way we can be 100% absolute certain of the conclusion of this kind of probabilistic study, but nevertheless, the high number of problematic features concerning these two scenarios leads us to conclude that both are really standing **near absolute zero in term of probability**.

<sup>192</sup> It's very important to note that each one of these three conclusions cannot be considered as definitive in the same manner that the two general conclusions, which were first published by the STURP team in their final report issued in 1981. Nevertheless, unless a future series of direct research on the cloth could really contradict one or more of the scientific data and observations that I described in the present study and that I used as a solid scientific base for the surmising of these new conclusions, each one should be considered as **highly probable**.

<sup>193</sup> This final conclusion can be seen as pretty good confirmation of the opinion offered by Philip M. J. McNair, a Serena Professor of Italian and Head of the Department of Italian at the University of Birmingham in England. Here's what McNair had to say about the most probable identity of the man of the Shroud, in a paper he wrote in 1978: "It seems to me otiose, if not ridiculous, to spend time arguing... about the authenticity of the man represented in the Turin Shroud. Whether genuine or fake, the representation is obviously Jesus Christ." It's important to note that at when he gave voice to this opinion, McNair was still leaving the door open to the possibility that the Shroud could be the product of an artistic forgery of some sort. But as I've clearly showed in my first paper about the Shroud's authenticity (see note #1 for the reference), science has been able since to completely and definitively reject such a scenario. So, the possibility of a fake Shroud that McNair mentioned cannot be seen as anything else than a possible "natural" forgery that would have been done by someone using the tortured and crucified body of a real man who would have suffered the same exact tortures than Jesus, as described in



words, if the Shroud is not the authentic burial cloth of Jesus of Nazareth, the only rational explanation for this relic would be the first scenario that was described in page 3 of the present article, which involves a “natural” forgery, done with the use of a body who had been tortured and crucified like what is reported in the Gospels concerning Jesus<sup>194</sup>. In a future paper, we will analyze this particular scenario and at the end of that process, there’s no doubt that we will have a very good overview of the situation concerning the Shroud of Turin. When this is done, we should be able to reach a final conclusion concerning the most probable identity of the man who once was lying in the Shroud, whether it is Jesus of Nazareth or the anonymous victim of a gruesome forgery made a very long time ago by an anonymous person (or a group of anonymous persons).

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the Gospels. Finally, here’s the reference of McNair’s article: Philip M. J. McNair, *The Shroud and history: Fantasy, fake, or fact?*, in *Face to face with the Turin Shroud*, Edited by Peter Jennings, Oxford: Mowbray, 1978.

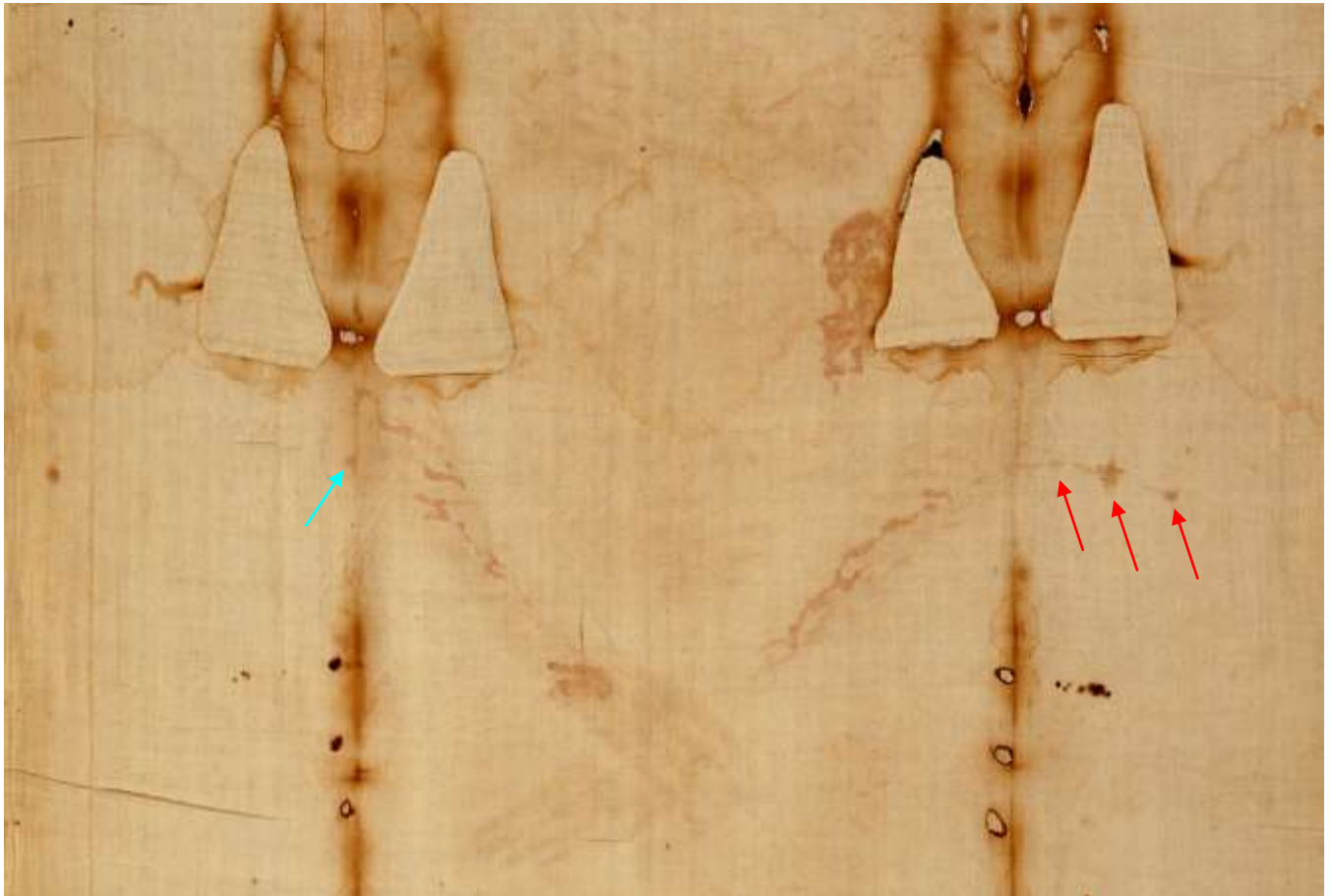
<sup>194</sup> The simple fact that such a gruesome burial cloth like the Shroud, which is a cloth filled with bloodstains and that bears the image of a dead man who has been horribly tortured and crucified, has been kept and well-preserved for a very long time (date unknown) is the best confirmation that this final conclusion is correct. Effectively, as the present study has demonstrated, it is totally irrational to think that this grave cloth can be related to something else than the person of Jesus of Nazareth, whether it be directly as the authentic burial Shroud or indirectly as a false relic of his Passion that would have been created “naturally” by a forger (or a group of forgers) who would have tortured and crucified an innocent victim in the exact manner as Jesus or who would have used the crucified corpse of an unknown criminal who would have been legally crucified by the Romans in the same manner than Jesus.

**Annex 1: The list of all features analyzed in this paper, along with a list of Gospel references showing that each one is totally consistent with Jesus of Nazareth, except for the two of them, which are only consistent with him through Christian tradition.**

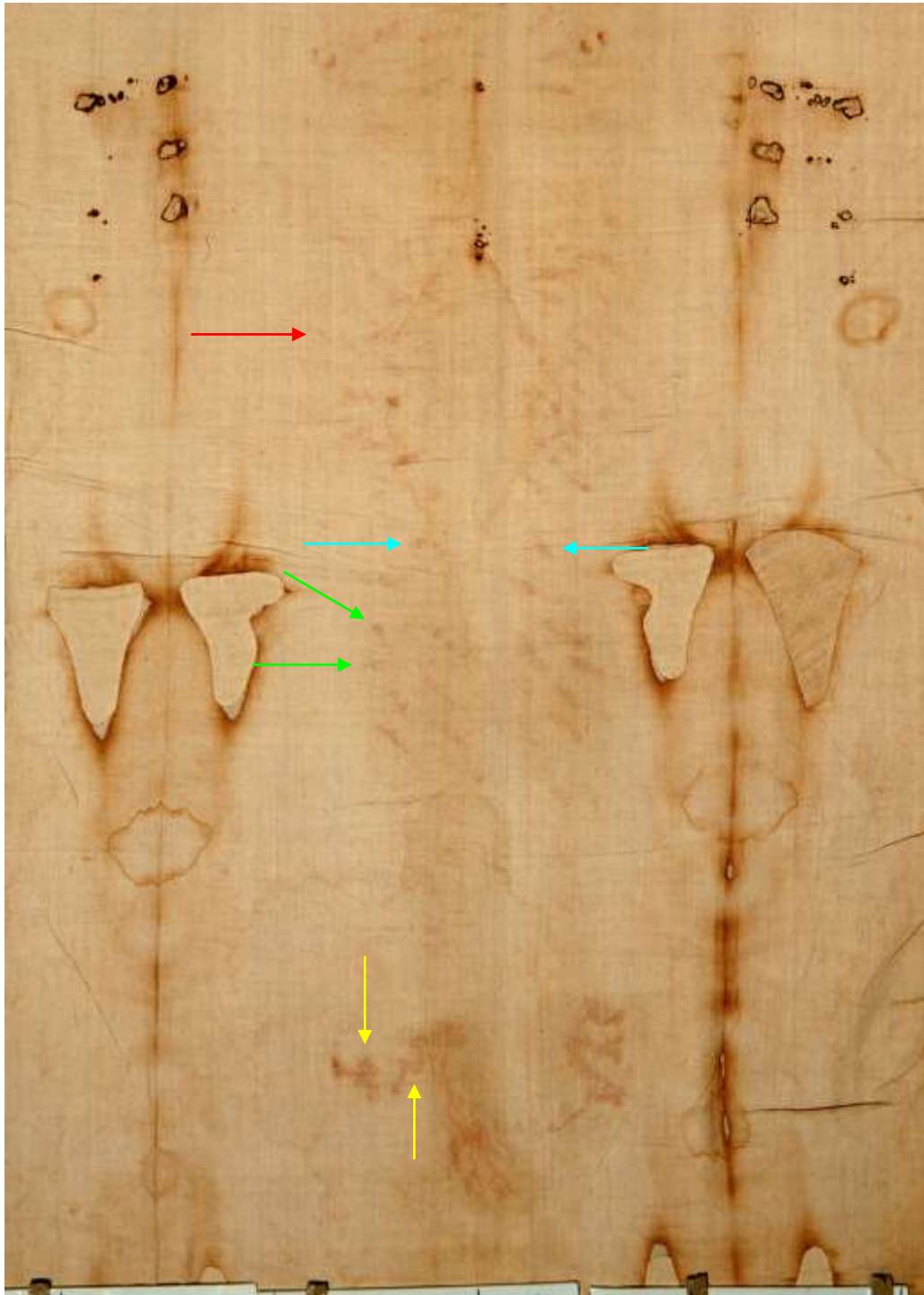
Particular feature from the Shroud	References in the Gospels
There are numerous puncture wounds all over the head area (front and back) that appeared to have been caused by the wearing of a cap of thorns.	Matthew 27:29 / Mark 15:17 / John 19:2
There is a side wound in the chest area that appeared to be a direct hit to the heart that was done post-mortem.	John 19:34
There is no sign indicating that the legs of the Shroud man have been broken.	John 19:33
There are more or less 120 scourge marks all over the body of the Shroud man, which indicates that he endured a very violent scourging that had been done prior to his crucifixion.	Matthew 27:26 / Mark 15:15 / John 19:1
There are some physiognomic and anthropometric characteristics of the body image that indicate that the Shroud man probably originated from the Middle East and that he was possibly a Jew, despite the fact that he had long hair, which was not common for the average Jewish man living during Antiquity.	<p>For the fact that Jesus was a Jew: Matthew 1:1-17 / Mark 1:9 / Luke 1:26-38 / John 1:45</p> <p>The long hair feature is not reported in any of the four Gospels but as been reported by a certain Christian tradition since at least the end of the 3<sup>rd</sup> Century or the beginning of the 4<sup>th</sup> Century A.D. in Rome, where the first known artistic depiction of a bearded Christ with long hair has been found. This particular tradition only got stronger and stronger over the years, so much that it became largely accepted in the Eastern Church from the 6<sup>th</sup> Century until this day as well as in the Western Church later on. It is truly possible that, historically, this “fixation” of the tradition of a bearded Christ with long hair is due to a certain influence (whether it had been a direct influence or an indirect one) of the Shroud’s image on popular Christian art, including the Pantocrator Christ icons and the so-called supernatural images on linen cloths of Christ’s face supposedly “not made by human hands” that started to appear in the East during the 6<sup>th</sup> Century.</p>
The man of the Shroud had the privilege to be buried in a high quality linen shroud.	Matthew 27:57-60 / Mark 15:43-46 / Luke 23:50-53
When we put together the fact that no traces of any known ancient burial products have been found on the Shroud by the STURP team and also the fact that the corpse has not been washed before being enveloped in the Shroud, we can conclude that the burial of the Shroud man was incomplete.	Mark 15:42 / Luke 23:54 / John 19:42
The data coming from the Shroud indicates that the corpse must have stayed inside the cloth for a short period of time that goes from approximately 24 to 72 hours.	Matthew 28:1-8 / Mark 16:1-8 / Luke 24: 1-8 / John 20:1-10
Never mind the fact that the Shroud is a blood stained burial cloth that has covered a corpse for a time, it was kept and well preserved until this day.	This particular feature is not reported in any of the four Gospels but has always been reported by Christian tradition since the earliest documented exhibition of the Shroud in Lirey, France, in ca. 1357, as well as in Constantinople, where the presence of a Shroud of Christ in the imperial treasure is well documented from 958 to 1204. Also, there are at least two ancient sources (one is named “Pseudo-Antoninus of Piacenza” and is dated to around 570 A.D., while the other is named “Of Sacred places” and is dated to around 670 A.D.) that reports the presence of a Shroud of Christ in Palestine. In the first case, the anonymous author of the manuscript uses the word “sudarium” to describe the cloth, while the other use both words “sudarium” and “sindon” to describe it. In the first case, it is truly possible that he was in fact refeering to a long burial shroud. The example of the other text clearly shows that it wasn’t uncommon for ancient writers to use both words “sudarium” and “sindon” to talk about the same burial cloth.

**Annex 2: The position of the bloodstains located in areas where there is no body image on the Shroud.**

**Here's a natural light picture of the arms where we can see a blood flow and two distinct bloodstains located outside the right elbow (red arrows) and also a possible bloodstain located outside the left elbow (blue arrow):**



Here's a natural light picture of the back of the legs where we can see some scourge marks located outside the right thigh (red arrow), some scourge marks located behind the knees on the dorsal image where a rare missing part of the body exist (blue arrows), some scourge marks located outside the right calf (green arrows) and some bloodstains (made of post-mortem blood) located outside the right foot (yellow arrows). Note that a total absence of a body image in the specific areas where all these bloodstains are located have been confirmed by Miller and Pellicori of STURP during their examination of the Ultraviolet fluorescence photographs they took from the Shroud in 1978<sup>195</sup>:

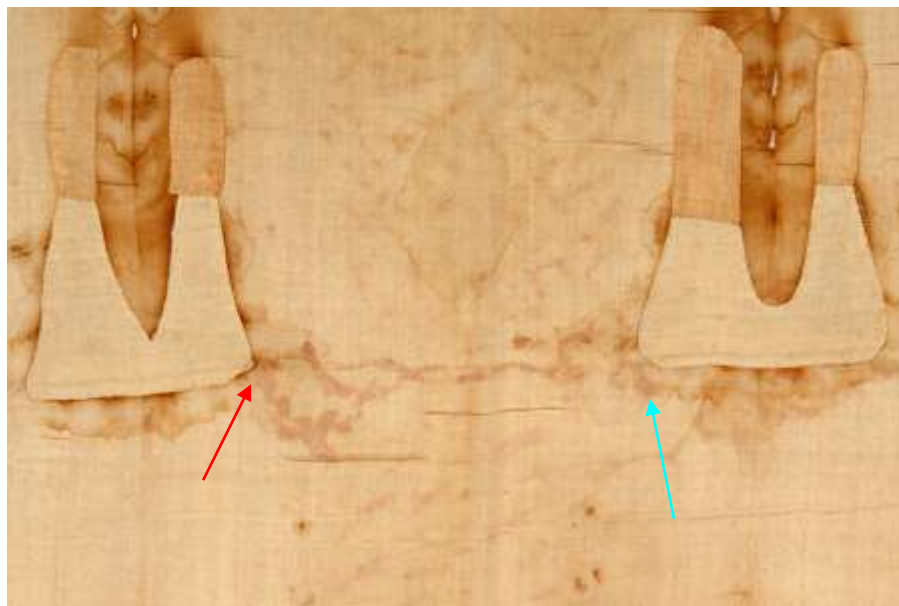


<sup>195</sup> See note #73 for the reference of that particular study.

Here's a natural picture of the feet where we can see some bloodstains (made of post-mortem blood) located outside the right foot (red arrows). Note the great faintness of the image of the lower part of the legs, which comes from the fact that they were not in direct contact with the Shroud during the image formation process because the cloth was probably forming a bridge over them due to the higher location of the feet. Note also the complete absence of an image of the feet, which probably comes from the fact that the cloth was already covered with blood in this area when the image formation started and this blood staining would have acted as a "protective shield" for the topmost fibers of the cloth:



Here's a natural light picture of the lower part of the back where we can see some huge lateral post-mortem blood flows. A portion of these bloodflows are possibly located outside the body image, particularly on the right side of the back where the blood was coming from the side wound in the chest region (red arrow) and possibly also on the left side (blue arrow):



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