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Shroud of Turin: Full Disclosure

From Catholic Answers

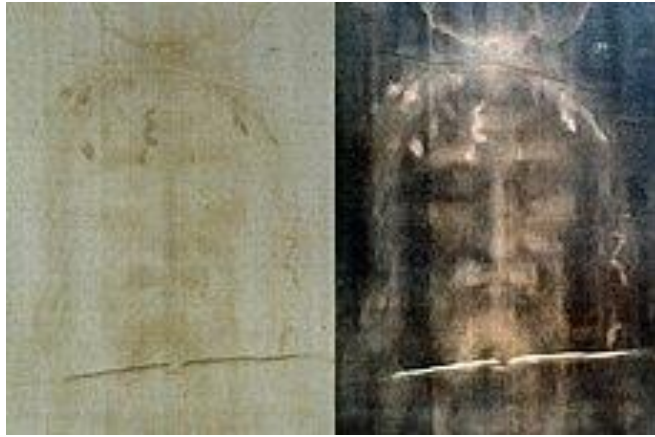


Image from [Wikipedia](#)

The Shroud of Turin is the most studied icon in the history of humankind. For over a hundred years, the Shroud has been scrutinized by every scientific discipline.

The Shroud is a linen cloth showing the front and back of a naked man who was tortured, crucified, and humiliated. The cloth also holds human blood, sweat, bodily fluids, and mucus. Science has proven that this image is not a painting, drawing, or scorch. The image creates three-dimensional data when evaluated in a VP-8 scanner. No human-made artwork can do that. And after decades of study and evaluation, modern-day science cannot reproduce the image with all the same attributes. Full disclosure of all the facts, evidence, theories, details, and probabilities for the linen burial cloth of Jesus, known as the Shroud of Turin, continues to be a monumental task.

I have been following the Shroud of Turin since I was fourteen years old. As an environmental and Shroud scientist, I remember when I first saw the photograph of Jesus' face. The event occurred about two years after my family moved to Long Island, when I went from Catholic school to a public school. I quickly realized that my new friends had different faiths or no faith at all. Science classes and the Apollo space program sparked my interest. Then I started questioning the existence of God, because many scientists did not believe in a God. Nevertheless, I did my

homework by researching all faiths and philosophies, which caused my mother to worry that I would lose my faith.

It was during this period of questioning that I looked up Jesus Christ in the encyclopedia. Starting from the last page of the section, each page presented an artist's rendering—paintings and sculptures—of what Jesus may have looked like. When I saw the image on the first page, I froze. I felt the hair on the back of my neck stand up, and I became acutely aware of how insignificant I was in our universe. I said to myself, “How am I looking at a photograph of Jesus?”

I was looking at the first successful black-and-white photograph of the Shroud of Turin.

The photograph was taken by Secondo Pia in 1898, Italy. The detailed positive image of Jesus' face was visible in that photograph, because the faint image on the cloth was already a negative, like film exposed in an analogue camera. Thus, when developed, we had a positive detailed image. No human-made art can accomplish that feat.

I set out to search for any and all data on the Shroud of Turin—a task not easily done, since this was before the scientific team (STURP) went to Italy in 1978 to study the Shroud. Despite not knowing where this path would lead me, I followed faithfully.

After bringing elements from environmental science into the Shroud of Turin's equation with my thesis, I obtained certification from Rome's university of Science and Faith, the Pontifical Atheneum Regina Apostolorum, and OTHONIA, the International Center of Sindonology of Torino. Today, I am an assistant to the director of OTHONIA's Shroud Apostolate Group, English (SAGE). SAGE consists of the United States, Canada, Mexico, and the Philippines. I oversee and conduct presentations in the Northeast United States.

Most experts, including myself, assert that the authenticity of the Shroud can no longer be disputed. All the theories claiming the Shroud to be a forgery have been disproven. Even an infamous 1988 carbon dating test has been re-tracked by the same scientific journal that originally published the results. There are dozens of individual pieces of evidence and new age-testing methods, such as the Wide Angle Scattering X-ray test (WAXS), that show that the Shroud is 2,000 years old.

Currently, new AI-generated images of how Jesus may have looked are circulating throughout social media and the news. These images are being created from the

Shroud's black-and-white photo of Jesus' face. The key word is "may." Like the pages in the encyclopedia I viewed when I was fourteen, each AI-generated image is a rendering created by software based on more accurate digital mapping of Christ's features as offered by the Shroud. So these images offer us yet another version, with color.

Although the faithful may not need the Shroud, the story the Shroud tells needs to be heard. When I speak on the Shroud of Turin, I see the facial expressions on the people I am talking to, and that is what tells me I have to continue on the path that was shown to me all those years ago.

With my own research, I applied what I learned about "everything being connected" as an environmental scientist. In order to have a complete picture of the Shroud, I've used data from my field of environmental studies to include information from multiple other disciplines of study for the purpose of presenting more solidified data that respond to events reported to have happened on the day Jesus was crucified.

By incorporating historical and current weather physics, we can now insert new data into the equation of *when* Jesus died. We have relative temperature conditions on the ground; location and phases for the sun and moon as per NASA's data, considering the changes in Earth's axis, which match pre-recorded prophecies; and accounts of recorded conditions that took place at the time of the crucifixion. We have accounts, such as what was documented by the Gospels and secular historians. And we now have geological research that cites historical earthquake parameters and new data derived from archeologists studying geological formations in newly exposed layers of the Dead Sea, which provide documentation that is extremely relevant to deciphering the *when*.

Throughout the years, many skeptics ask what is so special about the Shroud. People wonder why this cloth captures the imagination and the conscience. The Shroud holds the truth for many . . . and a fear of accountability for others.

If this truth is different from what you believe, do not create a tempest in your heart, mind, or soul. Rather, open them so that you may know the constant undeniable truth given to us. This is a life-enriching truth that no human should fear coming to terms with. The image of Jesus on his shroud was his last miracle, done 2,000 years ago for us to discover today with our modern technology.

Trial of the Shroud of Turin

From Catholic Answers

The [Shroud of Turin](#) is an ancient burial cloth containing the front and back images of a scourged, crucified man whom many believe is [Jesus Christ](#). It is the most-studied artifact in human history. It would be hard to disagree with this often-quoted statement:

“The Shroud of Turin is either the most awesome and instructive relic of Jesus 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 one or the other; there is no middle ground” (John Walsh, *The Shroud*, c. 1963).

So, which is it? How can we know? As a former federal prosecutor, I propose that we determine the issue using the jury procedure of a federal criminal court—and you are the jury.

Imagine this hypothetical scenario: The Shroud of Turin is stolen from its home in Turin, Italy, and brought by the thief to the United States, where it’s recovered by the FBI. A grand jury charges the defendant with stealing an authentic and priceless relic, which is a felony. The defendant has pleaded not guilty, alleging the cloth is a mere curiosity—a worthless fraud.

After three weeks, the trial reaches closing arguments. Each side seeks to have the jurors recall the evidence most favorable to its position. The prosecution carries the heaviest legal burden, since it must establish the defendant’s guilt by establishing the authenticity of the Shroud “beyond a reasonable doubt.” Therefore, procedure dictates that the prosecution addresses the jury both first and last.

The Prosecution’s First Closing Argument

Ladies and gentlemen of the jury, it’s been a long trial, and we thank you for your close attention to the experts we’ve presented. You’ll recall those experts established the journey of the Shroud from Jerusalem in A.D. 30 to its site at the time of the theft in the Cathedral of St. John the Baptist in Turin, Italy (see map p. xx). You’ll also recall the seventeenth-century painting showing how the Shroud was wrapped around the body to create the head-to-head image (see image p. xx).

You learned that the first photograph of the Shroud was taken by Secondo Pia in 1898 and that he nearly fainted when he realized that the Shroud image has the characteristics of a negative, while its photographic negative has the characteristics of a positive print. It is the only such object on Earth.

Our experts explained that the Shroud is approximately 14.5 feet by 3.5 feet of linen that is consistent with fine, first-century weaving. They explained the various features on the front and back images.

Conclusions of expert witnesses

I'm sure you'll recall our witness, Frederick T. Zugibe, M.D., Ph.D., who is respected worldwide as a forensic pathologist and crucifixion expert. For the past fifty years he has studied the Shroud as if it were a crime scene.

Zugibe's extensive studies concluded:

- The features and bloodstains on the Shroud are natural, forensically accurate, and indicate direct contact with a human body.
- The image was definitely not applied by an artist's hand.
- Severe anxiety (such as Christ suffered in the Garden of Gethsemane) caused hematomas, i.e., sweat became blood.
- The scourging was particularly brutal.
- The crown of thorns was in the shape of a cap, not a circlet. It caused trigeminal neuralgia, "the worst pain that man is heir to. It is devastating and unbearable."
- The Shroud reflects blows to the man's forehead, brow, right upper lip, jaw, and nose.
- Shoulder abrasions are consistent with injuries sustained while carrying the cross piece of the cross. "There is little doubt that Jesus stumbled and fell numerous times before arriving at Calvary."
- "I find it extraordinary that he [Christ] was able to make the trek to Calvary at all in the condition he was in."
- The nailing caused causalgia, an "agonizing pain like lightning bolts traversing the arms and legs."
- Cause of death: "Cardiac and respiratory arrest due to hypovolemic and traumatic shock due to crucifixion."
- Travertine aragonite dust taken from the foot area of the Shroud was a strong match to samples taken from Jerusalem.

- “In spite of the bleeding and brutality depicted in the movie *The Passion of the Christ*, it is important to emphasize that Jesus actually suffered more than that.”

Next, world-renowned artist Isabel Piczek addressed the issue from an artistic viewpoint. She cited ten different reasons that “all exclude that the object called the Shroud of Turin could be a painting.”

Conclusions of scientific study

In October 1978, the Shroud of Turin Research Project (STURP) performed the only in-depth scientific examination of the artifact in question. Scientists from twenty different prestigious organizations—including Lockheed Corporation, Los Alamos National Scientific Laboratories, IBM, and the U.S. Air Force Academy—studied the Shroud for five days, using the world’s most advanced scientific equipment and instruments. (The members of STURP were chosen solely for their scientific skills. Subsequently it was determined that the group consisted of atheists, agnostics, Jews, and Christians.)

Their principal findings, quoted from the “STURP Final Report” of 1981:

- “No pigments, paints, dyes, or stains have been found on the fibrils of the Shroud linen. X-ray, fluorescence, and microchemistry on the fibrils preclude the possibility of paint being used for creating the image. Ultraviolet and infrared evaluation confirm these studies.”
- “Computer image enhancement and analysis by a VP-8 image analyzer show that the image has unique, three-dimensional information encoded throughout both the front and back sides.” (It’s now known to be the only such object in existence.)
- “Micro-chemical evaluation has indicated no evidence of any spices, oils, or any biochemicals known to be produced by the body in life or in death.”
- “It is clear the Shroud had that direct contact with a human body, which explains certain features such as scourge marks and bloodstains.”
- “Experiments in physics and chemistry with old linen have failed to reproduce adequately the phenomenon presented by the Shroud of Turin.”
- “No physical, chemical, medical, or biological methods can adequately explain the image.”

- “How or what produced the image continues to be a mystery. We can conclude for now that the Shroud image is that of a real human form of a scourged, crucified man.”

Three final things should be noted:

- 1) STURP’S data was published in twenty-four different scientific papers, most of which appeared in highly respected, peer-reviewed scientific journals.
- 2) Of the defense witnesses, only one has published any of his work about the Shroud in a peer-reviewed scientific journal and, as you will soon see, he has been proven wrong.
- 3) The three-dimensional information encoded throughout the front and back sides shows that the body was in the state of rigor mortis when the image was created. That establishes forensically that the image was created on the cloth within the first forty-eight hours after death, since the body is known to relax from rigor mortis by that time.

The Defense’s Closing Argument

Ladies and gentlemen of the jury, please remember that the judge instructed you that the defendant has no obligation to prove anything whatsoever. Nevertheless, we want simply to point out that there are several perfectly natural processes that may have caused the image. Here are the possibilities:

- 1) It could be simply a painting.
- 2) It could be a scorch from a heated statue.
- 3) It could be a rubbing of iron oxide.
- 4) It could be a medieval “photograph”—possibly even produced by Leonardo Da Vinci.

Let’s hit the highlights of these likely possibilities in order.

Simply a painting

You’ll recall that our witness Walter McCrone told you about the particles of red iron oxide he found on the sticky tape samples taken by the STURP team in 1978.

It's common knowledge that iron oxide was a regular ingredient in many medieval paints, so he quite naturally concluded that the Shroud was simply a "beautiful painting."

Furthermore, you'll recall that our blood expert pointed out the alleged bloodstains on the Shroud are still red. However, the expert established that human blood typically turns brown or black over time. It does *not* remain red.

I'm sure you also remember the shocking evidence from our historian that in 1359 the local bishop of Troyes stopped all profit-making from and public showings of the Shroud in Lirey, France. Thirty years later, his successor, Bishop Pierre d'Arcis, wrote to the pope, advising that the Shroud was simply a painting and that the previous bishop knew the artist.

A scorch from a heated statue

You'll recall our witness Joe Nickell proposed that an artist simply heated a life-size metal statue of a man to a high temperature and then pressed a large sheet of linen against the statue, scorching the image onto the cloth.

A rubbing of iron oxide

Dr. Emily Craig testified it was possible that the original artist first drew the image onto newsprint using iron oxide/collagen dust. Then the newsprint was laid onto the linen fabric and rubbed against it to transfer the image. She showed you that the resulting image on the linen appears similar to a photographic negative like the Shroud.

Supporting a similar possibility was Luigi Garlaschelli, an Italian chemistry professor. He told you that the Shroud was "reproduced" using simple methods and inexpensive materials available in the fourteenth century—the same century pointed to by the famous carbon dating. He detailed how linen can be aged artificially by heating it and then washing it in water. Next, red ochre (i.e., iron oxide) could be applied to a body, and the linen cloth then could be rubbed over the body's prominent features. After that, the bloodstains, burn holes, scorches, and water stains could be added for the final effect.

A medieval photograph

You'll remember the testimony of our photographic expert, Nicholas Allen. He told you that medieval artists often used a drawing aid called the camera obscura.

It's a darkened room with a small hole at one end. The hole acts as a lens and focuses an object onto a sheet coated, in this instance, with light-sensitive emulsion to retain the image on the cloth.

Our next witnesses, Lynn Picknett and Clive Prince, agreed and further suggested that this technique was likely employed by the medieval genius, Leonardo da Vinci, to create the Shroud. And here's what it looked like—very similar to the Shroud.

Ladies and gentlemen, as stated previously, the defense doesn't have to prove how the fake Shroud was created. But you've just seen the top four possibilities, so take your pick. Any one of the four creates a reasonable doubt in this case.

Finally, science dates Shroud to medieval times

The most significant evidence for inauthenticity is that the radiocarbon dating performed in 1988 proved the Shroud was medieval in origin. Remember the photograph we showed you of the three scholars who announced that the carbon dating proved within a 95 percent probability that the Shroud was created between 1260 and 1390? It's only about 700 years old, not 2,000.

This information was accepted around the world as valid, and the Shroud was declared a fake. The issue was closed in the minds of all but the most ardent supporters of authenticity—and frankly, they are a bit wacky.

Ladies and gentlemen of the jury, by now I know that you can see that there isn't just one reasonable doubt about the authenticity of the Shroud: There are *many* very reasonable doubts about it! Therefore, it's crystal clear that my client is not guilty.

Your honor, the defense rests.

The Prosecution's Final Argument

Ladies and gentlemen, allow me to clear up any possible confusion created by the defense.

First, there is no possibility that the Shroud is “just a painting.”

It's well worth noting that defense witness Walter McCrone has *never even seen* the Shroud. He saw only sticky tape samples under a microscope. He performed *no*

chemical or other scientific analyses on the samples. Next, he simply published his work in a magazine he owned and edited and not in any peer-reviewed scientific journal.

Furthermore, you'll recall our undisputed testimony that STURP also reported the presence of red iron oxide particles but went on to determine they were very, very few—and they were scattered evenly across the Shroud, even where there was no image. The STURP team concluded that the image was not formed by such particles.

So, where did McCrone's particles come from? It's no mystery. He conveniently forgot to take into account the fifty-two well-documented occasions when artists are known to have "sanctified" their Shroud replicas by touching them to the original Shroud, causing an unintentional transfer of microscopic paint particles onto the entire Shroud, and not just where the image appears. This ancient practice provides a conclusive explanation of how small amounts of pigment have been scattered evenly across the Shroud of Turin.

Furthermore, the blood on the Shroud has been confirmed as human blood by spectrographic and chemical analyses. The results were published in the peer-reviewed scientific journal *Applied Optics*.

In addition, the prosecution witness explained exactly why this particular blood has remained red over the centuries. You'll recall that blood from victims of severe torture extending over many hours, like that suffered by the man on the Shroud, go into shock, and over time their red blood cells start to break down. At the same time, their liver floods their bloodstream with bilirubin. Under these very rare conditions, it's a scientific fact that human blood remains red forever.

Now, let's recall that twentieth-century research has shown that the defense's highly touted "d'Arcis Memorandum"—which claims that the Shroud is just a painting—is not at all credible. Our expert witness testified, "Research this century throws considerable doubt on whether the d'Arcis document was any more than an unsigned, undated, and unsent memorandum, not even written by said bishop" (Rex Morgan, writing in *Shroud News*).

Second, there is no possibility whatsoever that the image on the Shroud is a scorch.

Our experts established that scorched linen will fluoresce under certain types of UV illumination. STURP found that the burns on the Shroud fluoresced as

expected, but the image itself did not. In fact, it actually inhibited the fluorescence, eliminating heat as a possible image-formation mechanism.

Furthermore, STURP determined that if the cloth had been heated enough to scorch it, there would have been changes in the structure of the flax fibers and the blood—but there were none. Kinetic studies support a low-temperature image-formation process.

Joe Nickell, who proposed this theory, is merely a former stage magician and not affiliated with any scientific or academic institutions. He is certainly not a scientist. Furthermore, he has never presented even one such scorched-on-linen image. In fact, we know that a scorch would not have the same chemical or physical characteristics as the Shroud image. We also know his results were never published in any peer-reviewed scientific or academic journal. They were revealed on a TV show. You see, ladies and gentlemen, criticizing the Shroud is easy and even profitable. Proving the criticisms is another matter completely.

Third, there is no possibility that the Shroud image is a rubbing of iron oxide.

Recall that our experts reviewed with you a series of 1978 photographs showing various Shroud image areas at high magnifications. You were invited to see if you could find any red iron oxide particles. If the image were the result of a rubbing of iron oxide, you would have seen millions of red iron oxide particles permeating the cloth at every magnification. Yet virtually none were found.

Our experts also noted that although Emily Craig created an interesting image, she did so using 100 percent red iron oxide, of which the Shroud image doesn't consist of any. Also, she never addressed the bloodstains. STURP proved the blood blocked the image-formation mechanism. There is no image under the bloodstained portions of the cloth. An artist would have had to first apply the blood to the cloth in the correct forensic positions and then paint the image around the bloodstains—impossible!

Also, the defense testimony by Luigi Garlashchelli is hardly original. He's the fourth person in the last thirty years to propose that the image was created by iron oxide. However, STURP determined by multiple scientific tests that iron oxide did not constitute the image. Furthermore, his image does not have true three-dimensional properties as does the Shroud. He even admitted under cross examination that he put blood on after the image, totally unlike the Shroud. He also admitted that he had not duplicated the fluorescent "serum halo" that exists on the Shroud bloodstains. After scientific review and direct consultation with Luigi

Garlaschelli, our medical witness, Dr. Thibault Heimburger, M.D., concluded, “The properties of his image remain in fact very far from the fundamental properties of the Shroud image.”

Fourth, there is no possibility that the Shroud is a medieval photograph.

Defense witness Nicholas Allen never made a side-by-side comparison of his “camera obscura” results with the image on the Shroud. Yet no reasonable conclusion can be drawn without such a comparison—so I’ll do it.

For starters, Allen’s photography shows a strong directionality of light from above. The Shroud shows no such effect. Allen’s image also shows a distinct and sharp edge around the entire image. However, the Shroud image has no such distinct or sharp edges. It fades out gradually. Clearly, the image on the Shroud was not created with a camera obscura.

STURP data proved that the image was darkest at the points where the body and cloth came into direct contact with each other: tip of the nose, tops of the hands, etc. The image grows fainter as the distance between cloth and body increase. This result cannot be accomplished or duplicated using any photographic or artistic mechanism and requires some form of direct interaction between cloth and body.

Moreover, the positioning of the hands lifted the cloth away from the torso. This resulted in the torso image appearing fainter around the hands. Images made by light do not have this property. Furthermore, no light-sensitive photographic emulsion to retain the image was found anywhere on the Shroud, so it cannot be a photograph. It’s also interesting to note that not one example of a true photographic image exists prior to the invention of photography in 1818.

Now, as for the defense’s claim that the great Leonardo da Vinci may have created the Shroud, it should be noted that the first fully documented public exhibition of the Shroud of Turin to thousands occurred in 1355. That’s almost a hundred years before da Vinci was born in 1452.

Lastly, there is also no possibility that the Shroud is medieval in origin, even though much of the world has been deceived into believing so.

Prior to the radiocarbon dating of 1988, there was credible historical evidence detailed by our historians that proved the Shroud was older than the earliest C14 date of A.D. 1260. For instance, traditional accounts include:

- April 7, A.D. 30—likeliest date of the crucifixion of Jesus. Apostles take the Shroud from the tomb to protect it from Romans and from the Jews, who considered burial cloths “unclean.”
- Disciple Thaddaeus travels from Jerusalem to Edessa (eastern Turkey) with cloth bearing full imprint of Jesus’ likeness, where it is used to cure King Abgar V of leprosy.
- A.D. 57-502—Shroud is hidden above the city gates of Edessa.
- A.D. 569—Syrian hymn mentions cloth with Jesus’ likeness as “not the work of human hands.”
- A.D. 787—Lector of Constantinople tells Council of Nicaea that he saw in Edessa “the holy image made without hands revered and adored by the faithful.”
- A.D. 943—Byzantine Emperor negotiates with Moslems for possession of the Edessa Cloth “imprinted with Jesus’ likeness.”
- A.D. 1130—A sermon reiterating a discourse by Pope Stephan II in 769 says: “On this cloth . . . the glorious features of Jesus’s face and the majestic form of his whole body have been supernaturally transferred.”
- The Hungarian Pray Manuscript, a.k.a. the Pray Codex, is documented to A.D. 1191 and well known to Shroud scholars by 1988. It shows a herringbone woven cloth, the nude image of Jesus with hands folded over his torso, no thumbs visible, blood over the eye, and, most importantly, a set of four “L”-shaped burn holes—all the features of the Shroud.
- The thoroughly documented historical record begins in A.D. 1355, when the Shroud is exposed to large crowds in Lirey, France.

There is a related burial cloth known as the Sudarium of Oviedo, which has been documented to be in Oviedo, Spain, since A.D. 631. It was studied by a team of forty scientists beginning in 1989. It does not have an imprinted image but rather is a bloodstained linen cloth—34 by 21 inches, a size traditionally used as a handkerchief in Jesus’ time.

It shows a unique pattern of obvious puncture wounds at the nape of the neck that matches the stains on the Shroud. Blood in the shape of a Greek epsilon, which is prominent on the Shroud, is also on the Sudarium in the same place. Pollen from Palestine was also found on the Sudarium cloth.

Experts have told us that a cloth was generally wrapped around the head of a crucifixion victim while he was on the cross, rewrapped when the body was in a

horizontal position, and left in place while the body was transported to a nearby location. This particular head cloth established death, since the flow of pulmonary serum through the nose and mouth allows for no possibility of respiratory movement.

The scientists studying it concluded: “It is clear that the two cloths must have covered the same corpse.” All agree that the Sudarium has been in Spain since the early seventh century. Therefore, the C14 results concluding that the Shroud didn’t exist prior to the thirteenth century cannot be correct.

Fraudulent carbon dating

Now, let’s carefully recall what our experts have explained about the mistaken and likely fraudulent carbon dating of 1988. First, we now know that a protocol was prepared in advance by top scientists to detail exactly how the carbon dating was to be done. It required multiple samples to be taken from specific locations and dated independently by seven labs. That protocol was approved in writing by Pope John Paul II.

However, the authorities in Turin ignored the scientific protocol. The only reason they gave as to why they didn’t execute the papal directive was “expediency.” Instead, they took a single strip that was .47 inches by 3.15 inches from the edge of the Shroud. Only half of that sample was used, and it was divided into three equal sections by weight.

One section was given to each of the three laboratories allowed to participate. The other half of the sample was held in reserve. In other words, the C14 dating results were based on a single sample that was too small to represent anything definitive about the rest of the cloth or its age.

After the 1988 carbon dating, the world in general ignored the scientific evidence established by STURP in 1978 and believed the Shroud was a medieval fake. From 1988 to 2005, many unsuccessful attempts were made to explain the C14 dating results.

Then, in 2000, Shroud researchers Sue Benford and Joe Marino presented a new paper at the Shroud conference in Orvieto, Italy. They had given existing photographs of the 1988 C14 dating samples to several textile experts for examination, none of whom knew they were looking at samples from the Shroud of Turin.

The response was a surprise. All three independent textile experts agreed there were definite signs of “reweaving” in the samples that would be apparent only to a trained eye. Benford and Marino concluded that the 1988 C14 dating had actually dated a rewoven area of the Shroud that had been repaired using a medieval process known as “French invisible reweaving.”

Next, I know you’ll recall the amazing testimony of Raymond Rogers, who was Head of STURP’s Chemistry Group and a retired chemist from the Los Alamos National Laboratory. He said he had strongly disagreed with the reweaving theory and had set out to prove it wrong. However, after studying it, he admitted that it was indeed correct. He explained that the 1988 sample contained cotton, gum, and dye, and the linen of the main body of the original Shroud definitely didn’t.

On January 20, 2005, Rogers’s paper was published in the highly respected, peer-reviewed journal *Thermochimica Acta*. His conclusion: “The combined evidence from chemical kinetics, analytical chemistry, cotton content, and pyrolysis/mass spectrometry proves that the material from the radiocarbon area of the Shroud is significantly different from that of the main cloth. The radiocarbon sample was thus not part of the original cloth and is invalid for determining the age of the Shroud.”

In August 2008, Robert Villarreal and a team of eight researchers from Los Alamos National Laboratory analyzed Rogers’s samples and presented their results at the Columbus, Ohio, Shroud Conference. Their data corroborated all of Rogers’s conclusions.

Also, in July 2008, a paper by Benford and Marino was published in the respected, peer-reviewed scientific journal *Chemistry Today*. Their new research further supported the earlier data and provided additional evidence for an anomalous sample.

Conclusion: There is overwhelming evidence that the sample used for the 1988 radiocarbon dating of the Shroud of Turin was anomalous and did not represent the main body of the Shroud cloth. The 1988 C-14 test results that declared the cloth was medieval in origin should be set aside due to their use of an invalid sample.

Ladies and gentlemen of the jury, if the Shroud of Turin was anything other than the burial cloth and image of Jesus, no one would question its antiquity and authenticity. After all, even twenty-first-century science can’t duplicate it or explain how it was formed. Fortunately, we have an avalanche of evidence—twenty-six peer-reviewed science articles—that, since 2005, establish beyond any

reasonable doubt that the Shroud of Turin is the shroud of Christ. Therefore, the defendant is guilty beyond any reasonable doubt of stealing an authentic and priceless relic.

The prosecution rests its case.