

## A REQUEST FOR NEW TESTS

The following is the text of a document presented last year to His Eminence Archbishop Giovanni Saldarini, the new Archbishop of Turin, on behalf of the U.S.-based Shroud group ASSIST (Association of Scientists and Scholars International for the Shroud of Turin Ltd.):

"On October 13, 1988 it was announced that the carbon date for the Shroud was set between AD.1260-1390. In the February 16, 1989 issue of the British journal *Nature* the formal results were released. A preliminary evaluation of those results indicate that the accelerators selected did their work with high precision. Nevertheless the question of the accuracy of the results remains. The singular question is: Did the sample removed from the corner of the Shroud represent the date of the main body of the Shroud?

ASSIST therefore believes, along with many other researchers of the Shroud, that further carbon dating tests on samples taken from at least two other sample sites on the main body of the cloth must be performed. Thus, we hold that the mediaeval date of the Shroud is not scientifically proven.

Before such new tests of the Shroud are carried out we believe more information about the Shroud is necessary. We therefore would request new tests aimed at gaining new needed data upon which scientists would base future testing decisions.

### I. Holography.

Very little is known about the Shroud at a microscopic level. Since it is impractical to take the actual cloth into a laboratory we believe it is in the interest of the future science of the Shroud to establish a permanent and microscopic record. ASSIST has previously proposed to create holograms on glass plates. Thus there would be a permanent record for future reference which can be used in a scientific laboratory. We consider holography the next step beyond photography and, like photography, it is non-destructive; it will not damage the Shroud.

### II. Physical Examination.

#### A. Forensic Examination:

New, unpublished information about the Shroud appears to reinforce the conclusion published by STURP in 1981 that an actual corpse was wrapped in the cloth of the Shroud. But this new information needs to be verified. In a paper read at the Ferris State University Second Annual Conference on the humanities, Science and Technology at Big Rapids, Michigan, and in a more recent version of this paper read at Bologna, Italy, new evidence has been offered to suggest that actual markings on the area of the Shroud which wrapped the feet must be interpreted as encompassing an actual corpse and that these markings preserved bloodstains in various forms from whole blood, to clotted blood, to partial exudate, to nearly pure serum which has run for a distance of about 5¼ inches across the cloth.

Since the proposed carbon date for the cloth places the Shroud in the fourteenth century it is now highly important for science to determine whether or not an actual corpse was wrapped in this cloth. This is why physical forensic examination of the cloth is essential to determine whether or not the original STURP conclusion can be verified.

We therefore suggest that an international body of blood chemists and specialists in the forensic sciences converge on the Shroud for a physical examination of the image on the cloth and that microscopic samples of very specific areas of the cloth be micromanipulated from it for chemical testing. In the case of the area of the Shroud which wrapped the feet we believe there lies the greatest potential for verifying the STURP conclusions, and that this testing include a battery of scientific photography (T-Mat film, infrared, possibly ultraviolet, etc). Specific areas, such as the proposed 'serum flow' across the Shroud, should be made objects of close-up photography and photomicrography to provide tools for the interpretation of this feature.

#### B. Textile Examination:

In preparation for the next round of carbon dating we need to know more about the nature of the textile itself. We therefore suggest that an international body of textile technologists and textile chemists converge on the Shroud to aid in determining the answers to the many questions which exist about the cloth.

(i) What effect did the fire of 1532 have on the cloth; did the 'pressure cooker' effect alter the textile in such a way that would affect carbon dating results?

(ii) What kind of contaminants are there on (and in) the textile and how do these relate to the fibers of which the cloth is composed?

(iii) How do the fibers of the 'Raes corner' compare to fibers taken from elsewhere on the Shroud? Answers to this question may shed light on why the three accelerators obtained the results they did.

(iv) All factors taken together (nature of fibres and chemical characteristics), what sites on the Shroud would be best for selection for future carbon dating? If an international body of forensic scientists, textile chemists and other specialists work together under international coordination, we believe that a fresh body of new material can be assembled about the Shroud which will enable future scientists to make proper decisions about how best to conduct further carbon tests of the cloth."

[signed] Paul C. Maloney,  
General Projects Director, ASSIST, May 4, 1989