THE EUCHARISTIC RELICS OF LANCIANO IN BIOLOGIC RESEARCH*

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In the year 700, a monk of the Basilian Fathers was celebrating Mass in the church of Sts. Legonzian and Damian (now St. Francis) near Lanciano in the province of Chieti, Italy. As he pronounced the words of the consecration, doubt rose in his mind as to the Real Presence of Christ in the Eucharist, i.e., in the consecrated Bread and Wine. And in the very moment of doubt, according to the tradition, the miracle happened; the species of bread changed into Flesh and that of wine became Blood, which then clotted in five little irregular pellets.

We call this a tradition because only by tradition has the account of the miracle been handed down to us. The first document, unfortunately, only dates from 1636 and therefore it has but relative value, being much later than the miracle itself. Through the centuries the relics have always been conserved, at first in lateral chapels and then, since 1902, in the main altar of the church. The Flesh is kept between two panes of glass in a 17th century silver monstrance. It is round in form, 55-60mm in diameter, colored a yellow-brown-maroon with some shades of more intense color. The lamina of tissue is thin, with a great many lacerations in the central part, resulting from retraction of the tissue toward the periphery, where it swells in circular ripples. The surface is smooth but irregularly marked by cracks or incisions. One notes a diffusion of little white formations; sometimes they are extremely minute, sometimes like a grain of millet; often they are clustered together. They are of a soft consistency and detachable, as they are not a part of the thread of the tissue, and they dissolve poorly in physiologic solution.

Under the microscope these formations proved to be colonies of mold (Hyphomycelium), certainly from pollution. In the marginal zone of the circular lamina of tissue, one notices little holes, evident signs of needle punctures made in ancient times. The consistency of the tissue is uniformly hard and woody, requiring a strong pressure with a blade to remove the two very tiny fragments which were to serve in the examination which we will describe.

The Blood is contained in an antique chalice of glass, closed with a glass lid. It is in five grumous pieces, weighing altogether 15.85 grams.

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The pellets are of a yellow-maroon color with some whitish spots. Their form is irregular; the surface is rough, raised in various parts, and they are of uniformly hard consistency so that a strong pressure of a blade is necessary, and with difficulty, to detach a fragment.

It was appropriate that, for the examination of the relics of Lanciano, the ecclesiastical authorities should appoint Prof. Odoardo Linoli, Chief of the Laboratory of Chemical Analysis and of Pathological Anatomy of the hospital "St. Mary over the Bridges" of Arezzo. The recognition began 18 Nov. 1970 and lasted until 4 March 1971, the day on which Prof. Linoli reported his findings in a conference held in the Lanciano church. The news was echoed widely: from the *Osservatore Romano* to Turin's *Civitas Pacis* (#6, 1971).

The aim of Prof. Odoardo Linoli's work ("Histological, Immunological and Biochemical Research of the Flesh and Blood of the Eucharistic Miracle of Lanciano, VII c.," in *Quaderni Sclavo di Diagnostica*, Siena, 1971, Vol. 7 #3) was as follows:

1. to ascertain the histological structure of the tissue traditionally regarded as flesh;
2. to define if the hardened stony-cretaceous substance traditionally regarded as blood responds to the characteristics of blood;
3. to establish which biological species the flesh and blood belong to;
4. to identify the blood group of the two tissues;
5. to examine the protein and mineral components of the blood.

Leaving to more competent interpreters the study of the methods of the tests employed by Prof. Linoli and the reading of the documents of the reports (histological study of the Flesh; microscopic examination of the Blood; microchemical study of the Blood; chromatographic research in thin strata of the hemoglobin of the Blood; immunological definition of the species to which the Blood and Flesh belong; determination of the blood group of the Blood and Flesh; electrophoretic analysis of the proteins of the Blood; determination of the minerals—calcium, chlorine, phosphorous, magnesium, potassium, sodium—of the Blood), the results of the tests conducted by Prof. Linoli can be summarized in the following points:

1. the blood proved to be exactly that, based on the demonstration of the hemoglobin (alkaline hematin) with chromatography in thin stratum;
2. the flesh proved to be made of a striate muscular tissue which, by the syncytial union of the fibres, was shown to belong to the myocardium;
3. the flesh and blood belong to the human species, as was ascertained on the basis of the zonal precipitation reaction of Uhlenhuth;
4. the blood group, determined by the method of absorption-elution was identical (AB) in the flesh and in the blood;
5. in the liquid elutrate of the blood, proteins were found fractioned in the same percentage which occurs in the serum-protein

compartment of normal fresh blood;

6. in the blood were found reductions of chlorides, phosphorous, potassium, sodium. A noticeably high level of calcium was encountered.

This reduction of the minerals can be reasonably attributed either to an aging process and impoverishment of the tissue's substance during so many centuries, or to an "exchange" of minerals through the glass panes of the container, a common phenomenon. For this reason, in modern times, containers made of inert materials are used for solutions of major importance. According to a founded hypothesis, the high level of calcium could be correlated to mural dust, rich in calcium salts, falling into the chalice, besides vegetal fragments (flowers) as were found in the histological examinations of the blood.

The histological diagnosis of the myocardium, based on objective, indisputable elements, renders the hypothesis of a fraud executed in antiquity quite unacceptable.

In fact, even supposing that a heart had been removed from a corpse, it must be admitted that only an expert hand, experienced in anatomic dissection, could have—and not without great difficulty—obtained from a hollow viscus a uniform and continuous "slice", tangentially in the length of the myocardiac fibres, taking into account that precisely in the superficial area, the mantle of the heart, are found fibre bundles running lengthwise which then quickly become oblique.

Finally, the study confirms the possibility that in tissues of antique date, organic materials such as protein can be perdurable—almost like a surmounting of the inevitable destiny of the flesh. The proteins and the antigens of the hemo group AB, present after 1200 years in the ancient Flesh and ancient Blood of Lanciano, coincides with the discovery of proteins in Egyptian mummies dating back 4000 to 5000 years, even if, being objective, we recognize that the conditions of a mummified corpse, prepared by known procedures and thoroughly protected from contact with the external environment, are very different from the case of that scrap of myocardium and of hematic coagulations left in their natural state for centuries and, what is more, exposed to the action of physical agents, atmospherical, environmental and parasitical.

These few pages were written to demonstrate how science and faith can come at last to an understanding; an understanding which is today (1973) the foundation on which science can congratulate itself to be true science, without preconceptions or prejudices and without false, ambiguous or predetermined mental attitudes; and faith, while remaining free and independent, can turn to science for that assistance and that clarification which it needs to illuminate its own beauty and truth with greater splendor. Science, in fact, has already demonstrated—if it were necessary—that "the Bible was right". The fact that

ecclesiastical authorities requested a scientist to examine and discuss, in the light of all the resources available to science, a "miracle" (i.e., to support a "Miracle" with science) and that the scientist accepted the commission; that he undertook it scientifically and (we can even say) cordially, "*con scienza e coscienza*" (with science and conscience); and that he concluded by declaring the reality and the truth of that "miracle" demonstrating that it cannot be considered a fraud; is one of those facts which give us much hope for the future of science, which is liberating itself from the many chains which slow its steps and retard research possibilities; and hope for the continuous affirmation of and need for faith. But if we raise our eyes, if only for a moment, from the cold reports of the scientist and lift our thoughts and our sentiments, we will certainly be aware that we are confronting a fact, exceptional and extraordinary, which goes beyond the bounds, however wide they are, of every human possibility.

If the host of Lanciano transformed itself into flesh and the wine into blood, then the flesh and the blood that Prof. Linoli studied are the Flesh and the Blood of Jesus Christ.

Of this Flesh and of this Blood we now know everything; histologically, anatomo-pathologically. A man was examined in a laboratory of chemico-clinical analysis, even if this time it concerns the Man. A complete, inerrant examination, as if it had been conducted on blood just drawn from the vein of a patient. Of this Blood, I repeat, we know everything; and that it belongs to the AB blood group. Now if this blood examined by Prof. Linoli is the Blood of Christ, it is the same blood which stains the Shroud, if the Shroud is the living testimony come down to us of the Passion and Death of Jesus Christ. Since we are certain that the Shroud is the Burial Sheet of the Man who is the Son of God, the examinations that Prof. Linoli made on the Blood of Lanciano proposes, in fact imposes, that a scientific-biological exam—comprising all the details on which science can aggress, employing all the methods and all the means that science has at its disposal—be conducted on the Shroud.[*]

An examination which will give witness once again to the faith and above all, to the credibility of faith; that unshakable faith which Christ expects of his followers.

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[*]See "Identification of the Group of the Traces of Human Blood on the Shroud", by Prof. Baima Bollone & associates; in SPECTRUM #17, March, 1983.