### PUBLICATIONS (1) PAPERS & ARTICLES

### FAITH AND SCIENCE DIALOGUE IN THE SHROUD OF TURIN Josep Fernández-Capo in Scientia et Fides, Vol. 3, No.1 (2015)

This paper was published in the Spring, but it did not come to my attention until Barrie Schwortz mentioned it on shroud.com. Without discussing any of the specific evidence in favour or, or against, authenticity, Fernández-Capo sees the study of the Shroud as "a paradigm of the constructive dialogue between faith and science", and divides his paper in sections entitled: 'Services that the science of the Shroud renders to faith', 'Services that faith renders to the science of the Shroud' and 'Sindonology as a paradigm of interdisciplinary study', all of which are carefully and sensibly discussed. It is a very worthwhile contribution to Shroud literature, and has much wider ramifications towards other confrontations between more or less literal interpretations of Holy Books.

### AUTHENTIC ACID BLOOD MORDANTED THE MADDER DYED SHROUD OF TURIN PINKISH-RED BEFORE IMAGE FORMATION -JESUS WAS DEAD Adrie van der Hoeven at academia.edu

The premise behind this 243 page paper is that the colours of the Shroud can be explained by an interaction between a yellow madder dye with which the cloth was allegedly tinted during manufacture, and a particular blood formation due to the trauma suffered by the Jesus, a hyperfibrinolysis process which can only occur when the blood is too acidic to support life - hence the statement that Jesus was dead.

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The explanation of this premise is complex and detailed, involving analysis of current literature, especially as regards various form of spectrography, and new experiments involving madder dye and blood samples. As usual with van der Hoeven, absolutely no stone is left unturned in the investigation of the premise, and the paper bears careful study. She has long held, not without justification, that the Shroud began life as a priestly garment (which has been disputed, also not without justification), a contention which colours some of her later interpretations of the madder dye hypothesis.

Ultimately, for me, although it is very persuasive, it is not quite convincing, and the multitude of little conclusions with which it is difficult to disagree with do not quite add up to the totality of the summary at the end. This claims that: "the best explanation, and a consistent one, for the peculiar pinkish redness of the bloodstains on the Shroud is that authentic acid blood of a dead crucified person stained an authentic Jewish madder-dyed temple mantle during and after an authentic Jewish burial procession of a person whose dead body formed an image on and disappeared from the Shroud in an extremely delicate way before putrefaction. This delicate and timely disappearance of the dead body and the presence of a bloodstained image of what seems to be a first century Jewish ornament of a Sanhedrin member indicate that this person most probably was Jesus Christ."

## UNCOVERING THE SOURCES OF DNA FOUND ON THE TURIN SHROUD Gianni Barcaccia, Giulio Galla, Alessandro Achilli, Anna Olivieri & Antonio Torroni in Scientific Reports 5, at www.nature.com

The coupling of the words 'Shroud' and 'DNA' was enough to set the popular press afire with eagerness to announce that God's biology had been identified, but although this paper is interesting, and adds a new dimension to Shroud studies, it does not come to any very definite

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conclusions. Dust from the underside of the Shroud collected in 1978 and 1988 was analysed, and the results divided into plant and human, with no mention of any fungal or other animal source, which is perhaps curious. About 20 plants were identified, most of them with European distribution, some more typical of the Middle East, and a few from South America and South East Asia. The human haplotypes identified were even more confusing; among the varieties typical of Europe and the Middle East were some almost exclusive to the Horn of Africa and India, which led to some fairly spurious speculation that the Shroud might have had an Indian origin.

The real value of the paper is in demonstrating that a comprehensive DNA survey of ancient artefacts is both possible and potentially useful. This initial, somewhat scattergun investigation is not it, but I hope it will help pave the way towards a more comprehensive study in the future.

## THERE IS NO MASS SPECTROMETRY EVIDENCE THAT THE C14 SAMPLE FROM THE SHROUD OF TURIN COMES FROM A "MEDIEVAL INVISIBLE MENDING"

Marco Bella, Luigi Garlaschelli, Roberto Samperi in Thermochimica Acta, Vol. 617, October 2015

Rather cheekily published in the Journal founded by the author whose paper they refute, the authors attempt to discredit Raymond Rogers's own Thermochimica Acta paper from 2004, 'Studies on the Radiocarbon Sample from the Shroud of Turin', by analysing two of his mass spectra, from fibres taken from the main body of the Shroud and from the sample taken off the 'radiocarbon corner' in 1793 by Belgian textile specialist Gilbert Raes. It was Rogers's contention that the spectra supported his microscopical observations that the two fibres were so different that they must have come from different threads, from different periods of manufacture, but Bella et al. showed that simple contamination from a hydrocarbon could just as well account for the spectrographic

evidence. Although their demonstration was fairly conclusive, and justified the specific claim of the title of the paper, their concluding sentences, rejecting all Rogers's evidence of interweaving, were very provocative, as perhaps they were intended to be, and aroused the ire of many sindonologists. 'The work of the late Dr. Rogers has been exploited to support a pseudoscientific hypothesis which is in no way confirmed by the reported data. Regardless of the debate on the hypothetical authenticity of the Shroud, the scientific community and the general public can only be misled by this paper.'

# THE SHROUD OF TURIN - A CRITICAL ASSESSMENT and EXCURSUSES TO "THE SHROUD OF TURIN - A CRITICAL ASSESSMENT" Atle Ottesen Søvik both at academia.edu

The first of these was published as 'Likkledet i Torino – en kritisk vurdering', in the Norwegian Journal of Theology 'Teologisk Tidsskrift', No. 3, 2013, and the follow-up covers some of its topics in greater detail. They were brought to anglophone attention by Barrie Schwortz earlier this year. Atle Søvik is the Professor of Systematic Theology at the Norwegian School of Theology, Oslo, and these papers are a superb, clearly stated, carefully researched and fairly impartial survey of all the evidence gathered for and against authenticity. He himself decides that most probably the Shroud is indeed that of Jesus, but although I disagree with some of his arguments, and more particularly the value he places on some of them, they are presented fairly and he does not ignore the evidence to the contrary. The dispassionate and conditional style of his conclusion makes an interesting contrast to that of the previously reviewed paper - in amusingly epitomising Scandinavian/Mediterranean juxtaposition stereotypes.

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### THE PRESENCE OF DYE IN THE 1988 RADIOCARBON DATE SAMPLES OF THE SHROUD OF TURIN Pam Moon

at <a href="http://www.shroudofturinexhibition.com">http://www.shroudofturinexhibition.com</a>

Pam builds on the findings of Ray Rogers as explained in his own paper, 'Studies on the Radiocarbon Sample from the Shroud of Turin', (Thermochimica Acta, 2005), and includes some of Rogers's hitherto unpublished comments. With well-chosen photographs she points out the marked darkening of the cloth towards its corners, and speculates that a dye, applied to the corner in order to match some newer, interwoven, cotton threads, might have been responsible. She shows that some could have seeped through to the Holland cloth underneath. She recruits dye expert Teresinha Roberts of wildcolours.co.uk to suggest that the colour could be from anything from iron oxide to blood, tannin or madder, as found by Rogers.

In these newly published notes, Rogers refers to the surface of his Raes sample fibres as 'frosty', a coating which 'softens and swells' in water. Its colour is eliminated with a strong (6 molar) solution of hydrochloric acid, and the whole crust hydrolysed by concentrated (12 molar) acid, suggesting that it is a pentosan plant gum. When dampened, 'it will mostly dissolve', but when the water evaporates, 'a colorless, easily seen film of the gum is deposited around the fiber.' Clearly, under running water, such as in preparation for radiocarbon testing, both the colour and the gum would have been washed away completely.

Pam concludes her paper with reference to some of the evidence for interwoven threads which has been discussed before, and overall agrees with Rogers that "the radiocarbon sample can not be valid for dating the time at which the cloth was produced."

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