'Faked' rock-dating data charge dismissed...

San Diego

Arizona State University (ASU) has cleared geography professor Ronald Dorn of fabricating rock-dating data, prompting the National Science Foundation (NSF) to close its investigation of allegations of scientific misconduct in Dorn's federally funded studies.

Milton Glick, the university provost, issued a brief statement last week stating that Dorn, who is widely known for dating geological and archaeological sites, "did not commit scientific misconduct in collecting and preparing rock varnish samples for carbon dating".

The ASU investigation found that "the evidence did not support allegations that Dorn added coal and charcoal to rock varnish samples to hit predetermined 'target dates'". But the controversy over Dorn's dating technique continues, as he is suing a group of researchers who published an article in *Science* in June 1998 detailing how they found coal and charcoal-like material in 80 of Dorn's rock samples (see *Nature* **401**, 419; 1999).

Dorn's technique involves scraping the varnish off a rock surface, preparing the material and sending it to a radiocarbon laboratory for analysis to try to determine a date for the geological formation or adjacent archaeological discovery.

The authors of the *Science* article wrote that Dorn's varnish-dating technique was meaningless, given the presence of the materials, as any results would be a ratio of the two materials with differing ages. In 1996, some authors raised questions about Dorn's results with the NSF, which funded much of his studies.

In court and state records, Dorn alleges that the *Science* authors intentionally, "with evil motives and malice," misrepresented and manipulated data and contaminated samples to accuse him of professional misconduct. None of the authors of the *Science* article would comment, but they are reported to be surprised at the university's verdict.

Arizona administrators say the disagreement between Dorn and his critics is scientific, not legal. "The issue is resolvable and should be resolved in the normal arena of science, involving assessments, measurements and debate," says Eugene Levy, an astrophysicist and dean of the university's College of Science.

Neither Dorn nor his attorney in Phoenix have been available for comment in recent weeks, and ASU officials have declined to release any documents about the investigation or be interviewed.

Earlier this year, however, Dorn and two co-authors described the dispute (*American Indian Rock Art* **25**, 1-31; 1999) as the "sordid

side of science", adding that Dorn was the victim of a "scientific witch hunt". In the same article, it was noted that Dorn verbally began retracting his varnish-dating method in 1996, as the investigation was beginning.

According to NSF spokeswoman Mary Hanson, the foundation's Office of Inspector General closed its investigation late last month after reviewing the ASU investigation, which showed that "the preponderance of the evidence didn't support the allegations". The inspectors felt that "any remain-

ing issues would best be resolved in the scientific community", says Hanson.

Howard Schachman, a professor of biochemistry at the University of California, Berkeley, and a member of the American Association for the Advancement of Science's committee on scientific freedom and responsibility, says that, although he is not familiar with the details of the Dorn case, court action over such a dispute could "have a very serious chilling effect" on the publishing and debating of results.

Rex Dalton

... and German garlic study under scrutiny

Munich

A German university last week began a formal investigation into allegations that a prominent researcher was involved in the fabrication of data in a paper claiming an antisclerotic effect for a garlic preparation.

The paper was subsequently published in a journal of which one of its co-authors was acting as guest editor. But the main author is strongly denying any suggestions of impropriety.

The Humboldt University in Berlin is investigating allegations against Holger Kiesewetter, the director of the Institute of Transfusion Medicine, part of its medical school, and joint author of a paper published in the May issue of the medical journal *Atherosclerosis* (**144**, 237-249; 1999).

The paper is based on a clinical trial carried out between 1991 and 1996, and concludes that taking high-dose garlic pills "can reduce the increase in arteriosclerotic plaque volume by six to 18 per cent, or even effect a regression, within four years".

But an article in the *Süddeutsche Zeitung* has questioned the authenticity of two figures in the paper. The figures are described as "very precise" ultrasound images of the common carotid artery of a patient before and after the 48-month therapy, and are used as proof of the claimed reduction in plaque volume.

A bad smell? Medical benefits of garlic have been questioned.

Doubts have been triggered by the similarity of the pictures' details and angles of vision. According to experts, if the pictures had been taken at different times, such similarities would have been a remarkable coincidence.

"Although the pictures are apparently not identical or retouched, they are very likely to date from the same series of shots," says Ulf Rapp, a professor of biology and immunology at the University of Würzburg.

"We are taking the case very seriously," says Cornelius Frömmel, dean of research at the Humboldt University. He says he plans to ask Kiesewetter for the original prints of the pictures.

Kiesewetter, the senior author of the paper, is also accused of ignoring the high drop-out rate of patients unable to bear the smell of the garlic preparation. "The possible bias caused by this was not taken into account in the statistical analysis," says Jürgen Windeler, a biostatistician at the University of Heidelberg.

But Kiesewetter hotly denies the allegations, claiming that the figures are authentic and that the statistical analysis is "correct". He says he is prepared to hand over all his files to investigators, and is confident that the enquiry will clear his name.

Kiesewetter's paper was chosen for publication by a guest editor of the German Society for Atherosclerosis, Günter Siegel, a professor of physiology at the Free University of Berlin. Siegel, then president of the society, is a co-author of the paper.

Siegel did the statistical analysis, and he agrees that the drop-out rate should have been studied more thoroughly. "But it would certainly not have significantly altered the results, nor added new aspects to the study," he says.

The study was commissioned and financed by the Berlin-based pharmaceutical company Lichtwer Pharma, the producers of Kwai, Germany's leading garlic preparation. The company has been using the results in its marketing campaign, trumpeting the preparation's 'clinical relevance' in advertisements.

At a Lichtwer Pharma press conference in May, Kiesewetter recommended the use of Kwai to anyone over 40. A spokesman for the company says it is considering stopping the campaign.

Quirin Schiermeier