

ON THE RECORD

“I’m sorry if I’m making people a little frightened, but I feel it’s my role.”

Virologist Robert Webster warns that bird flu could kill half the world’s population.

“On shuttle missions we often see mosquitoes... They seem very confused and die very quickly.”

A space-station astronaut comments on creatures that are unwittingly launched into space.

Sources: ABC News, ARRL

SCORECARD

Flying saucers
Patent-spotters unearth a 1973 British Rail patent that seems to be for a futuristic craft running on ‘thermonuclear fusion’. Sadly, the project never made it off the ground.

Compost canard
Entomologists squelch the rumour that gardening mulch made from trees felled by Hurricane Katrina is packed with destructive Formosan termites from the area.

Sandy snow
Dust storms in Northern China cause yellowish snow to fall across South Korea. Health officials warn that breathing in the sandy flakes might have ill effects.

OVERHYPED

The Tunguska blast
The meteorite that exploded above Siberia in 1908 has been credited with felling 60 million trees over 2,000 km². Now it is being blamed for global warming. Vladimir Shaidurov of the Russian Academy of Sciences says that the impact may have disturbed the distribution of atmospheric water vapour and increased global temperatures. But the big blast wouldn’t have done this, many climate scientists counter. Among other objections, they argue that the localized explosion could not have kicked off an unstoppable change in the dynamics of Earth’s atmosphere.

Trauma trials leave ethicists uneasy

SAN DIEGO

A US trial of an experimental blood substitute given to trauma patients who cannot give consent is stirring concern about the way that such ‘no consent’ trials are run.

It is rare for experimental treatments to be given without consent. In the United States, for example, the practice was authorized in limited circumstances only a decade ago. But such trials are set to increase under an initiative to test treatments for trauma and heart-attack victims. Advocates say that the tests are the only way to gather critical information in emergency situations — but critics argue that patients’ rights are not being sufficiently protected.

In the blood-substitute study, communities are supposed to be educated about the programme in lieu of each individual giving prior consent. But ethicists worry that, in at least some of the areas involved, consultation has been inadequate and there is little public knowledge about the risks, and how to avoid taking part.

Initiated in 2003, the study seeks to enrol 720 patients as they are rushed to 32 hospitals nationwide, with about 600 people having been enrolled so far. The oxygen-carrying blood substitute, called PolyHeme, is made by Northfield Laboratories in Evanston, Illinois. It consists of treated haemoglobin from human blood, and is designed to replace the saline solution given by emergency workers to prevent shock from blood loss.

Some ethicists are particularly concerned about blood transfusions being withheld from

patients once they are hospitalized, to see how well the blood substitute works. “I have a lot of problems” with various aspects of the work, says attorney Nancy King of the

University of North Carolina in Chapel Hill.

King is one of three medical ethicists who last week wrote an open letter criticizing the trial’s construction to the *American Journal of Bioethics*¹. They are concerned that the trial conflates conditions in ambulances, where blood transfusions are not a feasible part of patient care, with conditions in hospitals, where they are.

Northfield officials refused interview requests, directing enquiries to the company’s website, which states that “Northfield is committed to conducting its study with the utmost concern for patient safety”.

Over the past year, ethicists have become increasingly vocal about various issues relating to the trial. One problem is that the product is often provided in poor communities with high proportions of ethnic minorities, as these can have higher numbers of trauma cases.

The only way to opt out of receiving PolyHeme if injured in areas covered by the trial is to wear a particular blue wristband. But critics say there have been inadequate advertisements and education meetings, and interviews with members of the emergency services and

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Chemists shrug off unseemly spotlight

The decision by Dalibor Sames to withdraw two published papers^{1,2} and part of a third³ has drawn unwanted attention to the chemical field of C–H functionalization. But the furor seems unlikely to dim the area’s lustre.

Sames says in his retraction⁴ that his group at Columbia University in New York has been unable to reproduce the published results since graduate student and co-author Bengü Sezen left the lab. Sezen stands by the results and says that she is prepared to repeat the work under Sames’s supervision. Columbia University, meanwhile, has launched an investigation into the matter.

C–H functionalization — the art of replacing carbon-bound hydrogen atoms in organic molecules with something more interesting — is unlikely to be badly damaged. “There are dozens, even hundreds, of exciting papers published every year,” says Alan Goldman of Rutgers University in Piscataway, New Jersey, author of a recent survey of the field. “I don’t think the retractions will cast any shadow.”

Bonds between carbon and hydrogen atoms are ubiquitous in the raw materials from which synthetic chemists make new molecules. Unfortunately, it is a serious headache to cut the strong bond between