

## US soldiers' drug use

# Dispute about diagnostic testing

Washington

AN Air Force scientist who criticized analytical methods used by the military to detect drug use among servicemen has been removed from his post. Colonel William Manders, chief of the toxicology division at the Armed Forces Institute of Pathology (AFIP), had repeatedly questioned both the validity of test procedures used to detect marijuana metabolites in urine and the quality control in military laboratories.

The testing programme is a major part of the military's effort to crack down on drug use. The Army alone last year analysed more than 100,000 urine specimens, and reported positive results in 17 per cent of them. AFIP is responsible for coordinating quality control procedures and providing technical advice.

The issue is whether the procedure developed by Manders and a colleague, John Whiting, for drug detection is being misused. Its components are radioimmunoassay followed by gas chromatography (GC). In 1981, when the procedure was first introduced, the military's policy was to refer for counselling any serviceman with a positive urinalysis. In December that year, however, the policy changed: a single positive test became grounds for disciplinary action, including court martial.

Manders — supported by at least one prominent civilian toxicologist, Dr Arthur McBay of the University of North Carolina (who is also chief toxicologist for the state medical examiner) — maintains that his test was never intended for use as a forensic tool. A published description of his procedure (*J. analyt. Tox.* 8, 49-52; 1982) notes his laboratory's policy of confirming a positive result from an immunoassay with GC-mass spectrometry — not simply GC as is used by the military now.

Manders' troubles began in March 1983, when he was asked by the prosecution in a court martial at Brooks Air Force Base to testify as to the reliability of the evidence — an immunoassay plus a GC — and he replied that he could not vouch for the reliability of those procedures without mass-spectrometry. At a meeting afterwards with Department of Defense (DoD) officials in charge of the drug testing programme, Manders suggested that if these tests were to be used at courts martial, at least 10 per cent of the GC samples should be verified with mass-spectrometry. But DoD did not change its testing policy.

In October, Manders was called as a defence witness in a court martial at Homestead Air Force Base in Florida, where he repeated his opinion. A few weeks later, he received orders transferring him to Travis Air Force Base in California, to assume the post of officer in charge of the clinical laboratory. Manders had been at AFIP for 12 years, and head of the toxicology division since 1977. The new post

does not involve research and does not require a doctoral degree. Manders has a PhD in biochemistry.

The move is said to have come at the behest of DoD officials upset by Manders' failure to support official DoD policy. An Air Force spokesman said that Manders' transfer became necessary when the Army, which runs AFIP, "released" him from his assignment there, after DoD officials made their wishes known to the Army Surgeon General.

Dr John Johns, the DoD official in charge of the drug testing programme, declined to comment on the case, saying that Manders does not report to him. The situation is complicated by the overlapping responsibilities of DoD and the service branches, and the perennial squabble over territorial rights among them. Each service

## France deliberates on bioethics

Paris

**ETHICS are not urgent, according to President François Mitterrand of France: ". . . Give yourselves time: time to reflect, time to discuss, and time to appraise the moral issues", he told the opening meeting of the French national ethics committee for life sciences and health earlier this month. His meaning: better to get it right later than wrong now.**

**The committee, containing a minority of 15 non-scientists out of a total membership of 36, has already taken nearly a year to assemble, and it will meet every two months for the next year to cope with the backlog of problems placed before it.**

**A technical subcommittee consisting of eight doctors and four representatives of other disciplines will meet more frequently, starting this month to address questions on medical trials, the medical use of human embryos and the use of surrogate mothers — the creation of "children of two mothers", in the words of committee chairman Professor Jean Bernard. The committee will also consider its own relationship with the media and with similar committees in other countries.**

**In answer to criticism concerning the dominance of technical scientists in the committee, Bernard has pointed out that since half the committee is to be replaced every two years, nobody is in office for very long.**

**Each year, the committee will report to the ministers of health and research; it will create a documentation centre on ethics at the medical research council (INSERM) in Paris; and, Bernard announced, since its role is to inform not only scientists but also the general public, it will organize an annual public conference on the issues it tackles, the first to take place next year.**

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has its own testing programme and laboratories, but DoD is responsible for overall coordination of the programme and for quality control, and can decertify laboratories that do not meet uniform standards. AFIP, and Manders in particular, was responsible for providing technical support and advice to DoD.

Johns did say, however, that Manders "has never advised me differently in what we've done". Johns said he had "the utmost confidence" in the use of immunoassays plus GC alone, noting that the cut-off of 100 ng ml<sup>-1</sup> in the immunoassay "errs in the favour of the individual". "Our policy is based on the belief that it is valid for forensic purposes." Johns added that his confidence in the GC procedure was reinforced by validation tests with 800 samples using mass-spectrometry. But McBay, who serves on a board of advisers to Johns, said that "the evidence I've seen [from DoD] is that GC alone is not reliable".

Apart from testifying against the prosecution's evidence in a court martial, Manders may also have been a thorn in the side of DoD because of his objections to quality control procedures at the testing laboratories. Manders had in particular criticized the Navy for failing to check a contract laboratory, Mead Compuchem, with external control samples, and then, after this criticism, for sending 400 negative controls in a row after having sent 7,000 test samples without controls.

An Army laboratory at Fort Mead was shut down last month after attorneys preparing a case for nine accused servicemen whose urine samples had been analysed there found evidence said by expert witnesses — including McBay — to show improper interpretation of GCs and contaminated positive and negative standards. Charges against the nine were dropped.

Despite Johns' assertion that GC plus immunoassay is enough, the military seems to be tacitly acknowledging the need for mass spectrometry. According to McBay, "as soon as I get involved in a case, they run a mass-spec".

The problem, McBay says, is that many servicemen faced with a positive urine test (without mass-spectrometry) are disciplined administratively, with loss of promotion, loss of security clearance and the like. "It is ironic, but right now it is almost to the service member's advantage to go to court martial", says Mark Waple, a North Carolina attorney who has represented many defendants in military drug cases. Waple says he has successfully defended 12 servicemen in courts martial by calling on expert witnesses, such as McBay, to repudiate the GC evidence. Waple is also representing 7 servicemen who suffered disciplinary measures on the basis of a single urine sample; he is seeking to expand that to a civil class-action suit on behalf of the thousands dealt a similar punishment since 1981.

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