

## New technique helps to assess vegetative state

Zosia Kmietowicz *London*

Doctors and relatives of patients with brain injury can now determine more accurately whether they have any awareness thanks to a technique developed by staff at the Royal Hospital for Neuro-Disability in London.

The sensory modality assessment and rehabilitation technique (SMART), which took 10 years to develop, is the brainchild of occupational therapists in the brain injury unit at the hospital. Dissatisfied with the lack of a standardised tool for assessing patients with brain injuries, they set about making their own.

In 1996 a study showed that after assessment with SMART 43% of the patients who had been admitted to the brain injury unit and believed to be in a vegetative state had been wrongly diagnosed (*BMJ* 1996; 313:13-6).

Dr Keith Andrew, director of medical and research services, who carried out the study, commented: "The slow-to-recover patient is often incorrectly labelled as being in vegetative state. Although aware of their surroundings, they are unable to communicate their needs whatsoever. As a consequence, patients' potential for recovery and interaction with their environment is not identified, and they may spend a lifetime trapped in a damaged body, with poor quality of life.

"The frustration of understanding what is being said and done around them, but being unable to express their needs and thoughts or indeed respond in any way has been described by patients whose potential to

communicate was unlocked by SMART."

The technique, which has been refined and developed over the past four years, provides a structured sensory programme that records patients' response to sensory and environmental stimulation over two weeks. If they respond in a consistent and meaningful way it will be picked up. Means of communicating with the patient can then be set up that improves their quality of life.

The programme encourages relatives and carers to participate in the assessment, often giving them greater purpose at a time when events seem out of their control.

The SMART kit will be available to other hospitals by the end of the year. About 1500 patients in the United Kingdom are thought to have been in a vegetative state for more than three months. □

For more information see [www.smart-therapy.org.uk](http://www.smart-therapy.org.uk)

## FDA says statin cannot be sold over the counter

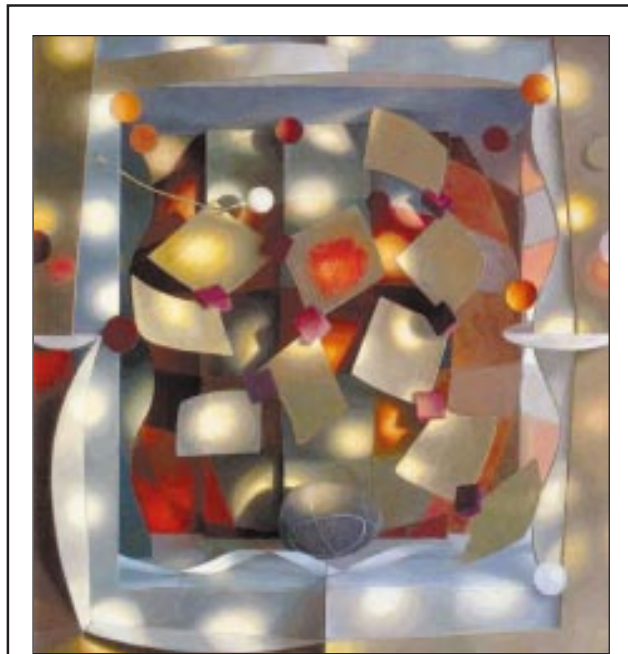
Scott Gottlieb *New York*

An advisory committee to the US Food and Drug Administration rejected a request by the US pharmaceutical company Merck for its cholesterol lowering drug lovastatin to be sold over the counter (without a doctor's prescription).

In issuing the rejection, the panel said no evidence showed that it could be used safely and effectively in a consumer setting.

The drug's manufacturer wanted to market a 10 mg dose over the counter to people without heart disease who have a total cholesterol level of 5.2-6.2 mmol/l. □

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Physiologist Professor Frances Ashcroft of Oxford University and artist Benedict Rubbra collaborated to produce this abstract painting of insulin secretion now on show at the University Museum of Natural History, Oxford. The subject of Professor Ashcroft's research is the release of insulin from the  $\beta$  cells of the pancreas in response to sugar in the bloodstream. Rubbra created two paintings, which symbolise "the unfolding drama of the living cell at work," after conversations with Professor Ashcroft and visits to her laboratory. The exhibition continues until 31 July.

## Interleukin 2 increases CD4 T cell counts in people with HIV

Deborah Josefson *San Francisco*

Adding interleukin 2 to antiretroviral drugs substantially increases the CD4 T cell count and decreases the viral load of HIV, according to a multicentre trial sponsored by the National Institutes for Health (*JAMA* 2000;284:183-9).

The combination treatment may further extend the immune competency and therefore the life span of people infected with HIV. The two year study, led by Drs Richard Davey Jr and H Clifford Lane of the National Institute for Allergy and Infectious Diseases, enrolled 82 patients and randomised them into two groups. Nearly all the patients were male.

Forty three patients received antiretroviral drugs alone, and 39 patients received antiretroviral drugs plus intermittent therapy with subcutaneous interleukin 2 at a starting dose of 7.5 mIU twice a day for five days every eight weeks.

The choice of antiretroviral was left to the patients and their physicians, but both groups had similar proportions of patients who were taking protease inhibitors (89% of those in the interleukin group; 80% of those taking only an antiretroviral). Patients with serious AIDS defining illnesses were excluded from the study.

Enrolment criteria included either a baseline CD4 count of  $200-500 \times 10^6$  or 14% of all T cells, a viral load of less than 10 000 copies of HIV-1 RNA, and no previous treatment with interleukin 2.

Additionally, patients had to be free of treatment with systemic steroids, chemotherapy, and cytotoxic agents for at least four weeks before the trial.

Of the initial 82 patients enrolled, 78 completed the study. After one year, patients who had been receiving both interleukin 2 and antiretroviral drugs sustained a greater increase in CD4 counts than those given antiretrovirals alone, with an average increase of 112% compared with 18%. Moreover, there was a dose related increase in CD4 count with increasing dose of interleukin 2. □

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