

MINERVA

The American College of Physicians plans to collate two anthologies of previously published great poetry and prose by established writers which it thinks are of special interest to physicians. The associate editor of the *Annals of Internal Medicine* is asking for recommendations for iconic pieces to be included. Poems should ideally be 75 lines or less and prose should be 5000 words or less. Please send your ideas to mlacombe@mainegeneral.org.

Scientists have discovered a natural barrier to HIV. It's a protein called langerin and it prevents transmission by capturing the virus and targeting it to be broken down. Human epithelial Langerhans cells, which express langerin, are the first cells to encounter the virus; they scavenge invading HIV-1 and prevent dissemination of the virus, says a study in *Nature Medicine* (online publication 4 March 2007; doi: 10.1038/nm1541). Any strategies that combat the virus must enhance, preserve, or—at the very least—not interfere with the function of this protein.

Penicillin and related antibiotics act on a specific enzyme known to help build the bacterial wall, but bacterial resistance against these drugs is growing. Another enzyme is also an attractive target, but its structure has proved difficult to purify and crystallise. Now scientists have gleaned insight into the structure of a protein called PBP2 which functions as both types of enzyme and looks to provide a starting point for a new, structure based design for new antibacterials (*Science* 2007;315:1402-5).

A previously healthy 30 year old man developed regular seizures and became constipated and developed a rash during times of increased seizures. A magnetic resonance scan of his brain revealed multiple lesions involving white and grey matter. After many investigations, antigliadin and anti-endomysial antibodies were found to be raised, and a small bowel biopsy showed changes typical of coeliac disease. A gluten-free diet and antiepileptic drugs stopped the seizures, and the brain lesions resolved (*Neurology* 2007;68:533-4).

The fall of communism brought about momentous change and social upheaval in Russian and Ukrainian society, and its effect on a group of Soviet veterans of the second world war is described in the *Gerontologist*



A 14 year old girl presented to her GP with a swollen ulcerated fifth toe. Eight days before, she had experienced excruciating pain in her toe while wading in the sea on the Sussex coast, followed by the swelling of her entire lower leg for several days. The clinical presentation was typical for a sting from the weever fish (*Echiichthys vipera*), which inhabits flat sandy shores and has a heat-labile venom in its dorsal spines. Envenomation leads to pain, swelling, and occasionally systemic disturbances such as cardiac arrhythmias. Emergency treatment involves immersing the wound immediately in non-scalding hot water for 30-90 minutes.

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(2007;47:52-60). Perhaps not surprisingly, this group of people proved very resilient and more than capable of rising to the challenges of a new national identity. Strong family bonds proved to be critical to successful adjustment.

Another investigation into ageing brains reports that cognitive decline markedly accelerates during the last three to four years of life. This terminal decline is not modified by age, sex, education, or the presence of mild cognitive impairment. It was not present in people with vascular disease or in those without at least one copy of the apolipoprotein E 4 allele, suggesting that Alzheimer's disease may contribute to the "terminal decline" phenomenon (*Psychosomatic Medicine* 2007;69:131-7).

Passive smokers seem to have disproportionately higher levels of fibrinogen and homocysteine, two biochemical markers of cardiovascular disease risk, compared with people with no evidence of exposure to secondhand smoke (*Circulation* 2007;115:990-5). The levels were up to 45% of those seen in active smokers. The authors say this is further evidence that secondhand smoke has a clinically important effect on susceptibility to heart disease.

Minerva grew up in the era when tetracyclines were not given to children for fear of staining their teeth. But after observing that routine use of doxycycline in a paediatric asthma clinic didn't seem to cause any dental changes, an Israeli team conducted a small randomised controlled trial involving 61 children in which the

treatment group was given at least two courses of doxycycline. They say that no teeth staining was detected by a dentist in any of the children in the study (*Clinical Pediatrics* 2007;46:121-6).

Arterial stiffness is associated with an increased risk of stroke, and stroke is associated with cognitive dysfunction and dementia. But after adjustment for cardiovascular risk factors in a prospective population based cohort study, arterial stiffness was not an independent risk factor for either cognitive decline or dementia (*Stroke* 2007;38:888-92).

A chaplain on an oncology ward recalls the first patient who broke his heart (*American Journal of Hospice and Palliative Medicine* 2007;23:498-9). The man, a senior officer in the Coast Guard, said he wished to die in the corner of a room where he would not be an inconvenience to anyone. He died on the Saturday between Good Friday and Easter Sunday, while his wife was on the phone in the same room. His death was inconspicuous in place and time. His wish, says the writer, was granted.

An opiate detox programme using the drug buprenorphine has proved successful in the short term, but not in the longer term. In the short term the number needed to treat was 5, but after two years no advantages were seen, and only five of the 11 audit criteria had been met. The author says that there may be some benefit to taking this approach, although whether it's feasible in the "real world" remains to be tested (*Psychiatric Bulletin* 2007;31:91-3).