

Breakthroughs and wars



It is difficult to argue with the proposition that the greatest advances affecting medicine in the past two decades have been in computer technology and molecular biology. Where once we retyped manuscripts endlessly and communicated by slow mail we now fax, email, scan, select, save, and surf on the Web. In molecular medicine there is likewise no end to new techniques, promises of new treatments, and newly discovered genes for a variety of diseases.

Success on other fronts has been more modest, especially in the war against cancer, declared by President Nixon with great fanfare 25 years ago—though statistics indicate minor declines in the prevalence of certain malignant tumors. Now yet another president has declared war, this time on

AIDS, but already the troops have penetrated deep into enemy territory, with new reverse transcriptase inhibitors, nucleoside and non-nucleoside protease inhibitors, new combination regimens, and promises of vaccines and chemokine drugs.

The war on smoking is also continuing, but without one of its foremost generals, Dr David Kessler, newly appointed dean at Harvard University and former commissioner of the Food and Drug Administration (FDA). During his six year tenure he also helped with the war on obesity by introducing compulsory labeling of the fat and calorie content of grocery products; enacted a controversial ban on silicone breast implants; made many enemies; and reduced the once notorious "drug lag," even though the testing of new products remains unduly expensive and cumbersome. Recently the FDA has also moved to prevent mad cow disease by limiting the recycling of protein products from slaughtered animals into livestock feed; while government officials worry that vaccinating too few pet cats and dogs could lead to an outbreak of rabies.

In the war against Alzheimer's disease investigators have a new diagnostic tool, three dimensional computer scans. They are testing old hat drugs such as vitamins, aspirin, oestrogens, prednisone, hydroxychloroquine, and colchicine. And there are new approaches such as synthetic antioxidants and anti-inflammatory drugs, gene therapy, and implanting genetically engineered cells that produce a nerve growth factor, or implanting pig dopamine producing cells into human brains. And for strokes, we read how a neurosurgeon reportedly restored brain function by supplying the ischemic area with blood diverted from the femoral artery via a tube threaded into the veins going to the brain.

In the political arena the wars between the congress and the administration show signs of abating, now that the electorate has voted for continuing gridlock. Bipartisanship has become the order of the day, and the two parties have promised to cooperate on balancing the budget, reforming Medicare and social security, improving education, and combating crime. Some progress has been achieved in the war against crime, figures from several cities showing declining homicides rates. But some 1.5m Americans remain in prisons, many for quite minor drug related offences. The war on drugs remains a disaster, and the current approach does not seem to be working.