

Newsdesk

Debate of the age

A conference, entitled "The debate of the age", has been organised by Age Concern to coincide with the end of the current millennium and is aimed at highlighting the future of our ageing society. Many aspects including health, housing, public attitudes to the aged, and the labour market/employment prospects for older people, will be highlighted. Statistics on the ageing population indicate that there were 9.6 million people over the age of 65 in 1996 and there are estimated to be 12 million by 2021 and 14.6 million by 2061. In contrast, there will be a steady decline in the number of young people (under 16) from 12 million in 1996 to slightly over 10 million in 2061. Life expectancy is projected to rise from a mean of 74–78 for men and 80 for women by 2021 and 80 for men and 83 for women by 2061. These figures represent healthcare issues of epidemic proportions and will directly affect the practice of ophthalmology. The debate of the age was launched in 1998 with three aims: to raise awareness about the ageing society, to provide a forum for all interested individuals to consider the implications of ageing on society, and to influence public policy in matters relating to the demographics of ageing. The five core themes of the debate are Health and care, Paying for age, the Built environment, Values and attitudes, and Work and lifestyle. A series of conferences has already taken place and the final meeting will be held at the Royal Naval College, Greenwich on 9 December. The findings from the Debate of the age will be presented to the British government in early 2000. Several issues are to be addressed such as: how to reverse the increasing trend towards earlier retirement from the workforce; how to finance the increasing size of the budget for state pensions from private sources; the introduction of legislation to outlaw ageism in the employment market; how to alter attitudes and awareness of problems faced by the ageing population. For instance, the Royal National Institute for the Blind recently held an "eye test action day" to highlight the public awareness of age related macular degeneration as the leading cause of blindness: according to a international survey of western countries carried out by Age Related Macular Degeneration (AMD) Alliance International, nine out of 10 people are unaware of AMD as the major cause of blindness. Already, many of these issues are in the public domain and it is likely that many changes will be introduced during the next decade to deal with these problems.

Health Which Report on General Medical Council

The level of dissatisfaction among complainants against the General Medical Council is alarmingly high according to the most recent

Health Which Report, a publication of the Consumers' Association, UK. Following an advertising campaign asking people who had complained to the GMC to come forward with their stories, 82% of patients were unhappy with the fairness of the process which they had been through while 79% were unhappy with the handling of their complaint. In addition, there was a high level of dissatisfaction with the amount of support and the level of information they received. Most people who complained merely wanted recognition that a mistake had been made and wanted to prevent a recurrence in other patients. A minority wanted the doctor struck off. However, the problem was confounded by the perception of the GMC's handling of the cases which according to *Health Which* again raises a concern over the effectiveness of self regulation by doctors. A call for more lay representation on GMC panels is made. According to *Health Which* the GMC has responded positively to many of the suggestions.

Top down processing sited in the prefrontal cortex

Decades of visual psychophysics have produced information on how we perceive images. This depends not only on receipt of signals through the sensory pathways (bottom up processing) but also on integration of information from the higher cortical centres (top down processing) which imply feature such as visual memory and texture analysis. A major question in this field has been the location of cortical centres which mediate top down processing for visual memory. It has long been suspected to reside in the prefrontal cortex and a recent paper in *Nature* (1999;401:699–703) has now shown in primate experiments that this is indeed so. The researchers removed the bottom up signal from the inferior temporal cortex in monkeys—an area previously known to be involved in visual memory, and found that the remaining input to visual memory was derived from the prefrontal cortex. It thus appears that it is not enough to "see" the image but it is also necessary to have the ability to interpret what is seen and with this information to select or add to the image information which may modify the original stimulus.

A new immunosuppressive agent?

A recent paper in *Nature Medicine* (Tassignon *et al*, 1999;8:947–50) has reported that a new anti-AIDS drug may be useful in the treatment of immunologically mediated disease including autoimmune diseases and transplant rejection. Azodicarbonamide is a drug which targets the zinc finger domains of the HIV-1 NCp7 nucleocapsid protein and in Tassignon's paper it was shown to inhibit in a

dose dependent manner the responses of purified human CD4+ T lymphocytes stimulated either by monoclonal antibodies against CD3 and CD28 or by allogeneic dendritic cells. The drug appears to act directly on the calcium mobilisation machinery, as there was a marked reduction in calcium influx induced either by antibodies against CD3 and CD28 or the chemokine RANTES, as well as by thapsigargin, an activator of depletion activated calcium channels. An in vivo action of the drug was also shown after administration of azodicarbonamide into mice delayed rejection of skin allografts. These results are promising for the treatment of T cell mediated immunological diseases and possibly represent a new class of immunosuppressive agent.

Gene therapy for inflammatory disease

A recent study of experimental rheumatoid arthritis has shown that induced expression of the senescence gene P16ink4a in synovial fibroblasts will effectively inhibit the inflammatory damage to the joint in a model of adjuvant induced arthritis (*Nat Med* 1999;5:760–7). P16ink4a is a cyclin dependent kinase inhibitor which was found to be expressed in the joints of patients with rheumatoid arthritis but not in normal joints or in patients with osteoarthritis. In addition, synovial cells derived from hypertrophic synovial tissue readily expressed p16INK4a when they were growth inhibited. The authors speculate on how the overexpressed gene may be acting but at present it remains unclear. However, it is encouraging that this approach is shown to be effective and has direct relevance for similar gene therapy approaches to ocular inflammatory disease.

Modified antithrombin III as an inhibitor of angiogenesis

Antithrombin III is a circulating blood protein involved in the regulation of intravascular clotting. Recent studies from Folkman's laboratory in Boston, Massachusetts, have shown that the modified forms of this protein can inhibit angiogenesis. Previous studies have shown that thrombin can induce angiogenesis and the present work has shown that when antithrombin III is modified by heat or by enzymes it will inhibit vessel formation in a model of tumour growth in mice when administered by daily injection. The effects were found to be as strong as equivalent treatment with angiostatin or endostatin. The modified protein has now been licensed to Genzyme Molecular Oncology for development as an antitumour reagent. It may also have potential in the treatment of ocular neovascular syndromes.



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