

From the Library

"To attend a Karajan performance with his orchestra was to see an entire orchestra playing with the passion of a solo musician. The musicians moved as one, the tips of the string players' bows rising and falling with the miraculous exactitude. Technically, the musicians were close to perfection. In later years Karajan conducted with his eyes closed. Since a conductor's eyes are his foremost means of communicating with his musicians—more important than the beating of time—it was as if Karajan wanted to show how completely his orchestra was in his thrall." (Johanna Fielder. *Molto Agitato: the mayhem behind the music at the Metropolitan Opera*. New York: Nan A Talfie, 2000; 255)

Chlamydia trachomatis remains an important infectious agent for ophthalmologists since it is responsible for conjunctivitis and trachoma (the most common preventable cause of blindness worldwide). Now scientists at the National Institutes of Allergy and Infectious Diseases Rocky Mountain Laboratories have found a gene in chlamydia that produces a toxin responsible for an array of chronic illnesses. The investigators have concluded that *C trachomatis* produces a toxin that collapses protein scaffolding inside cells. This raises hope for the development of new treatments such as anti-toxin vaccines. (*Proceedings of the National Academy of Science* 13 November 2001)

The number of authors cited for scientific papers seems to be increasing. The question is often asked if all of those credited really substantially contributed to the work. Richard Horton, editor of the *Lancet*, conducted a study of several papers (which had a range of 2–11 authors) published in the *Lancet* in 2000. He asked the questions about the work's key findings—implications as well as weaknesses. When Horton analysed the responses of the contributors of these articles he found significant disagreement among co-authors of key findings, weaknesses, implications, and future research. This obviously raises serious questions about how much real collaboration occurred among these co-authors. (*JAMA* 2001;286:2931)

Smoking and hypertension are known to be risk factors for developing cardiovascular disease. In a recent study from the University of Connecticut the impact of smoking cessation on blood pressure and heart rate was measured in post-menopausal women. In this study smoking cessation was associated with a reduction in systolic blood pressure and heart rate during the daytime

when patients typically smoked. This suggests that the haemodynamic changes related to smoking are due at least in part to stimulation of the sympathetic nervous system activity. (*American Journal of Hypertension* 2001; 14:942–9)

Herpes simplex virus infections of the anterior segment of the eye remain an important and troubling cause of visual disability. There is disagreement on the effect of antiviral therapy on herpes simplex virus latency and the potential for subsequent reactivation. Investigators have used a mouse model to study whether the use of high dose aciclovir during the active infection would reduce latent infection. In this study the use of aciclovir within the first 24 hours after infection reduced latently infected neurons by more than 90% and when given 48 or 72 hours after infection it reduced latent infected neurons by 80% and 70%, respectively. These findings suggest that high dose antiviral therapy during early primary herpetic simplex virus infection can reduce the magnitude of latent neuronal infection. (*Journal of Infectious Diseases* 2001;184:964–71)

Pyogenic liver abscesses in Western countries are usually caused by *Escherichia coli*, streptococci, and anaerobic bacteria. However, over the past two decades in Taiwan liver abscesses have usually been caused by a single micro-organism, *Klebsiella pneumoniae*. In 4–8% of these cases a metastatic endophthalmitis occurs. Studies have shown that diabetes mellitus is the most common risk factor for developing this infection both in Taiwan and in recent reports from Trinidad, the USA, and Singapore. Now a study from Taiwan suggests that the vast majority of complicated endophthalmitis cases associated with *K pneumoniae* are related to a single sera type (K1). Sera typing studies may be important in the evaluation of patients with *Klebsiella* liver abscesses in order to establish the risk of developing subsequent endophthalmitis. (*Gut* 2002;50:1–3)

The most common inheritance pattern for congenital cataract is autosomal dominant. Fifteen independent loci are now known and identified for autosomal inheritance. Now investigators from London have identified a syndrome of X linked inherited cataracts with involvement of the X chromosome within the Nance-Horan locus. An apparent association in some patients with congenital cardiac anomalies as well as with cataract suggests a new oculo-cardiac syndrome. (*Journal of Medical Genetics* 2002;39:2–4)

Recent studies of addiction suggest that cocaine and glutamate may share common neuroreceptor sites. Researchers have shown that glutamate activates brain cells devoted to dopamine, a neurotransmitter associated with feelings of reward and pleasure. This dopamine reward circuit is seen as the addiction pathway for many drugs like cocaine. In a recent study of mice investigators have identified a particular glutamate receptor known as mGluR5 that seems to be crucial for cocaine dependence. Mice that lacked this receptor did not become dependent no matter how much cocaine they were given. Treatments based on this interaction between glutamate and cocaine seem promising. The ubiquitous distribution of glutamate throughout the nervous system will require investigators to find precise delivery systems that will target only very specific brain circuits. (*Scientific American* 2002;286:20)

Many surgeons enjoy hearing music played on a radio or CD player during surgery. More importantly, it appears that music may be of value to the patient undergoing general anaesthesia. In a study of 90 patients undergoing hysterectomy under general anaesthesia investigators from Sweden have shown that patients exposed to music in combination with therapeutic suggestions required less rescue analgesia compared with the controls. Moreover, patients in the music group experienced more effective analgesia the first day after surgery and could be mobilised earlier than the control group. At discharge the patients exposed to music and music combined with therapeutic suggestion were less fatigued. No differences were noted in nausea, emesis, bowel function, or length of hospital stay between the groups studied. (*Acta Anaesthesiologica Scandinavica* 2001;45:812–17)

A strong family history of breast cancer increases significantly the risk for bilateral involvement in an affected woman. Many women therefore consider the possibility of prophylactic contralateral mastectomy as part of their therapy for unilateral breast cancer. Now in a study from the Mayo Clinic investigators have demonstrated that the incidence of contralateral breast cancer can be reduced significantly with the use of prophylactic contralateral mastectomy in women with a strong family history of breast cancer. In this study the risk of bilateral involvement was reduced by 95% in both pre-menopausal and post-menopausal women. (*Journal of Clinical Oncology* 2001;19:3938–43)