In this issue

Resurrecting microbiology

Sidney Brenner remarked some time ago that 1990 marked the demise of both biochemistry and communism. For good measure he categorized physiology as an extinct discipline (*Current Biology*, 1995, **5**, 332). Carl Woese recently suggested that 'if microbiology is not dead today, it definitely is moribund' (*Microbiol. Rev.*, 1994, **58**, 1). To the outsider, the present boom in biology would appear to contradict these remarkably harsh assessments on the state of many areas of the science. However, in the headlong rush to clone, sequence and sometimes express genes, most students of biology and bordering areas have gravitated to 'molecular biology'. Armed with a formidable array of cellular and molecular tools, identifying, cutting, pasting and modifying genes appears to be the most desirable activity for new students of molecular biology. Research in this area has advanced at a furious pace with an ever increasing number of companies providing ready-made kits to perform almost any experiment. In universities and institutions where researchers are trained, the unchecked growth of 'molecular biology' has been at the expense of several more traditional disciplines, resulting in a new generation of students unaware of the importance of microbiology, biochemistry and physiology. Are these murmurs of discontent only a case of sour grapes? After all, the molecular genetic approach has provided incisive solutions to many major biological issues and resolved many an impasse faced by the traditionalists. The successes of genome sequencing are already impressive, with the *Haemophilus influenzae* story being the most recent (*Science*, 1995, **269**, 496). Should scientific disciplines be given a graceful burial when their time is past? Or will life in many forgotten areas of biology, if nurtured, result in a new flowering in the future. Ramesh Maheshwari makes a strong and reasoned plea (**page 401**) for vigorously promoting microbiology as central to the study of all biology.

P.B.

Functional imaging

When Paul Lauterbur published the first NMR images of coaxial tubes (*Nature*, 1973, **242**, 190), few would have imagined that the new technique called 'zeugmatography' would herald the birth of magnetic resonance imaging (MRI). The prefix 'nuclear' was quietly dropped when the vast potential of the method in clinical medicine was realized. This undoubtedly enhanced the rate with which this amazing technique entered many areas of diagnostic medicine. MRI has progressed at an impressive pace helped by many fundamental advances in the practice of nuclear magnetic resonance; the introduction of high field superconducting magnets, the development of two-dimensional spectroscopy and the fusion of spectroscopy and imaging. Today MRI facilities exist at many centres in India, with the All India Institute of Medical Sciences (AIIMS) boasting of a Department of Nuclear Magnetic Resonance. The results of the first functional MRI experiments carried out on the 1.5 T whole body scanner at AIIMS are reported by Jagannathan and Raghunathan on **page 448**. The authors demonstrate the possibility of using conventional pulse sequences and equipment for functional imaging. Neuronal activity stimulated by specific physical tasks is shown to affect the magnetic resonance image. The possible applications in neurosciences are many. This will undoubtedly require a very close interaction between neuroscientists and spectroscopists.

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