

## Editorial

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### Physiology : a turning point

The fact that a Nobel Prize was instituted for Physiology or Medicine is a testimony to the place of pride physiology once occupied in medical sciences. The place has gradually passed on to daughter disciplines such as biochemistry, biophysics, and the super brat, biotechnology. While the old order must change and yield place to new, even the most detached observer is sometimes disturbed by the degree of reductionism promoted by the recent trends in life sciences. Man is more complex than the membranes and molecules in his body, and deserves a periodic holistic look for a more comprehensive understanding. Hence it was very heartening to learn that integration of molecular information will be a major issue to be addressed during the forthcoming XXXIInd International Congress of Physiological Sciences (ICPS) to be held at Glasgow from 1-6 August 1993. In the words of Denis Noble, Chairman of the Organising Committee of the Congress :

**"The end of the 20th century sees physiological science benefiting from an unprecedented wealth of information at the cellular and molecular levels. The 'black boxes' discovered by cell biophysics (ion conductances, pumps, carriers) have been opened by molecular biological techniques, while intracellular events are probed in great detail by fluorescent and other indicators. The great intellectual challenge now is to start to reintegrate this information into an understanding of whole tissues, organs and organisms. Integrative physiology will, therefore, return to the forefront of the scientific agenda since organisation and integration are at least as important as mechanisms, if not more so. This is a fact that our East Asian colleagues are continually reminded of. Those who use Chinese characters in their written languages actually use three characters for our single word 'physiology' (Fig. 1). The translation is 'Life-logic-study'.**



**"The progressive triumph of physiology over molecular biology" is how Sir James Black (Nobel laureate, 1988) recently envisaged the prospect for the forthcoming decades. This characteristically provocative remark was not, of course meant to distance physiology from the use of molecular biology. On the contrary, we need its wealth of techniques and information. Sir James (who with his fellow British Nobel laureates, Sir Bernard Katz, Sir Alan Hodgkin, Sir Andrew Huxley and Sir John**

Vane, will be Honorary Presidents of the 1993 Congress) meant rather to remind us that the integration of this information into an understanding of whole tissues, whole organs and whole organisms is essential. Without that integration, the molecular information could become a confusing cataloguing of structure and mechanism. In the 1993 Congress we intend to address these issues. Glasgow 1993 will therefore of a date with the future of physiology".

The emphasis on integration proposed during the XXXIInd ICPS perhaps represents a new level of maturity in physiological thought characterized by assimilation of molecular information into the scheme of whole body function. Alternatively, the concern with integration could be simply a voice in the wilderness. Time will show, and our attitudes may determine, the extent to which the XXXIInd ICPS turns out to be a turning point for physiology.

## ANNOUNCEMENTS

I : XXXIInd INTERNATIONAL CONGRESS OF PHYSIOLOGICAL SCIENCES, GLASGOW, 1-6 AUGUST 1993.

The themes being planned include :

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| 1. Ion Channels  | 14. Central Integration of Autonomic Function          |
| 2. Intracellular Ions  | 15. Lungs and Breathing                                |
| 3. Synaptic Mechanisms   | 16. Energetics and Exercise                            |
| 4. Sensory Transduction and peripheral processing of sensory information | 17. Environmental Physiology                           |
| 5. Visual System   | 18. Comparative Physiology                             |
| 6. Cerebral Cortex   | 19. Epithelial Transport Mechanisms                    |
| 7. Learning; Memory and Development                                      | 20. Secretory Pathways                                 |
| 8. Somatic Sensation and Hearing   | 21. Integrative Aspects of Gastrointestinal Physiology |
| 9. Neurophysiology of Motor Control                                      | 22. Integrative Aspects of Renal Physiology            |
| 10. Striated and Cardiac Muscle  | 23. Neuroendocrinology and Endocrinology               |
| 11. Smooth Muscle  | 24. Development  |
| 12. Endothelium  | 25. Behaviour Rhythms and Stress                       |
| 13. Cardiovascular System  |  |

For further details and registration, please contact, CEP Consultants Ltd., 26-28 Albany Street, Edinburgh EH1 3QH, Scotland, U.K.

II : THE 2ND INTERNATIONAL CONGRESS ON AIDS IN ASIA AND THE PACIFIC. 8-12 NOVEMBER 1992, NEW DELHI, INDIA

FIGURE 1

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Life - Logic - Study

The themes planned for discussion include clinical, laboratory, social, behavioural, cultural and legal issues.

For further details, please write, giving name, address, profession, and area of interest, to :

Prof. A. N. Malaviya, Chairman, Organizing Committee, AIDS Congress, Department of Medicine,  
All India Institute Medical Sciences, New Delhi 110 029, India

III. PRELIMINARY INFORMATION : 4TH BIENNIAL PAKISTAN PHYSIOLOGICAL SOCIETY, DECEMBER 1992/JANUARY 1993.

For details, please contact : Prof. Shahnaz Javed Khan, Professor and Head, Department of Physiology,  
Postgraduate Medical Institute, Lahore, Pakistan.