Communication for Biomedical Scientists. S. R. Naik and Rakesh Aggarwal (eds). Indian Council of Medical Research, Ansari Road, New Delhi 110 029. 2003. 180 pp. Price not mentioned.

The object of all research is publication. We know that a considerable amount of Indian biomedical research is often substandard. However, even for those whose research is of the highest quality, getting the message across to the editors and readers often seems to be a problem. Admittedly, this is not a difficulty unique to Indians, judging from the fact that there are numerous books published by writers abroad, on the topic of how to write research papers.

The Indian Council of Medical Research (ICMR) has published this title so as to redress this problem. The editors are eminently qualified to do so, being amongst those responsible for one of the few success stories of Indian medical journalism, the *Indian Journal of Gastroenterology*. Perhaps because of this bias, as many of seven of the 14 contributors are from the field of gastroenterology. Remarkably though, for a multi-author book, there is little repetition, if any, of ideas and thoughts. This illustrates careful planning on the part of the editors. The style is informal and, at times, tongue-in-cheek.

Communication for Biomedical Scientists is a book that most researchers, and all postgraduates, would greatly benefit from. There are the usual suspects – chapters on IMRAD style and the various parts of a manuscript, writing style and so on. Wisely, however, the editors have also included important topics which are often not addressed – these are the excellent articles on how to select the right journal (with the expected reference to impact factors!) and on conflict of interest (while on this topic, I must state a personal conflict of interest – this essay, along with three others are written by friends of mine). Moreover, the editors have accepted the words 'biomedical communication' in the complete sense of the phrase. Thus, there are chapters on writing a thesis, poster and podium presentations, etc. That the selection by the editors, of authors for this book is appropriate is seen from the fact that D. Balasubramanian, among the best science essayists in the nation, has written on the difficult art of popularizing science to the public.

What changes would I make if I were to edit the next edition of the book? First, 177 pages of a lot of black and white text may be bit forbidding for young investigators, for whom the book is meant. The book can be made more reader-friendly with coloured boxes which highlight key points of the article and make it easy on the eye. Secondly, and this was the only drawback of the book, a good, detailed bibliography at the end of each chapter, with relevant websites and their URLs would have been useful. Finally – and I am most serious when I state this, as I have read many books on this topic –this one stands out there with the very best. If the changes mentioned above were to be made, with additional ones that other reviewers and critics may add, I believe that the ICMR could, with good marketing, sell the book abroad. With globalization being the key word today –and with the 'feel good' factor in the nation as I write this, be it in the sporting world, IT or finance, *Communication for Biomedical Scientists* would be the appropriate tool to match and supercede Western writers.

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Comparative Biomechanics – Life's Physical World. Steven Vogel. Princeton University Press, 41, William Street, Princeton, New Jersey 08540, USA. 2003. 580 pp. Price: US$ 60.

In about 2,30,000 words printed on 580 pages, *Comparative Biomechanics* explores the structures and functions, the motions and mechanism of living organisms set in a physical world which is determined almost entirely by the forces of gravity, elasticity, viscosity, capillarity, surface tension, and the van der Waals attraction. The material of the book is organized in 25 chapters, grouped in four parts, with a comprehensive index for ease of reference. The bibliography at the end is impressive.

Part One prepares the reader with the basics of physics, mathematics and biology that would be needed later. It introduces the physical variables and the issues of shapes and sizes – their variability. It also introduces the notion of dimensions and dimensional analysis leading to the powerful ideas of scaling – the allometric scaling that relates relevant physical quantities, e.g. the size and the mass of an organism varying over many powers of ten. Part Two is all about fluids, mostly air and liquid water, their flow patterns and the forces that control them, specially in the Small World. Part Three is about the biological materials, often composites, e.g. bones, and the questions of structure and motility. Part Four is about some general contexts in biomechanics – questions of safety and tolerances, of adaptation (in response to mechanical stresses of wind and gravity). Also, what Nature does not or cannot – its limitations – and what we can learn from it, e.g. biomimetics. In all these, the author has tried, rather successfully, to describe and explain the organism in form and action in terms of the science that there is in everyday life, but going much beyond common sense. The level of description is intermediate between that of the grossly macroscopic and the minutely microscopic. Atoms and molecules do not feature here – in fact, there is no chemistry in the book. Biology is known for the tyranny of the particular. This book shows that much is nevertheless explicable in robust and generally valid terms, accessible to the undergraduate students of science and engineering.

The sense and the flavour of *Comparative Biomechanics* can be had from the questions it poses and tries to answer. How is walking different from running? Why a two-legged creature, a man say, must switch from walking to running beyond a particular speed, but a four-legged creature, a horse say, must change its gait – or the pattern of footfall – from walking to trotting to, finally, galloping. And still why the long-legged camel or giraffe, must pace and rack. In all these patterns of locomotion, where and how is the potential energy stored – gravitationally in the raised centre of gravity or elastically in the strained muscles? And then, what about the six-legged insects, or the no-legged snakes and the worms, or the slithering slugs. How do flies fly, and the samaras spin? How does the water-strider walk the air–water interface? What about adhesion – how does the