

A NEW BEGINNING...

Microbiology is at the beginning of an exciting new era with enormous potential. Whether this potential is maximized is a question of communication.

Today, microbiology and microbiologists are in the spotlight like never before. As a discipline, the study of microbial life is at a pivotal moment in its development — both professionally and economically. Time and again, research on microorganisms has been the cornerstone for much of our understanding of biology. Yet, it is fair to say that in the past, microbiology has suffered from a lack of recognition in the general life science and medical communities. The reasons why microbiology is now at the top of the life science agenda are varied and complex; however, if one examines this issue from just one perspective, that of public health, then clear explanations emerge.

Infectious diseases kill more than 14 million people each year, 90% of whom live in the developing world. Despite this appalling statistic, an analysis of new drugs approved by regulatory bodies between 1972 and 1997 indicated that of the 1,450 new chemicals introduced to the global market in this period, only 13 were specifically for treating infectious diseases that afflict poor and marginalized populations, preventable scourges that account for 90% of the global disease burden. Recent public-private partnerships are starting to tackle some 'neglected diseases' of the developing world, such as AIDS and tuberculosis, which, of course, are still prevalent in the affluent regions of the world. Although such initiatives are to be welcomed, they are still a long way short of the amount of funding that the United Nations feels is necessary to tackle this situation effectively. Not surprisingly, neglected infectious diseases restricted to the developing world, including African trypanosomiasis and Chagas disease, are still virtually ignored in terms of drug development by the private sector.

Of course, it is the misuse of microbiology and its associated technologies that is, perhaps, the principal reason why microbiology now has the attention of both the life science community and the general public. The anthrax attacks that occurred in the United States demonstrated the threat posed by the potential misuse of microorganisms as weapons of mass destruction. And although it is not clear how real this threat is, the United

States is taking unprecedented actions to develop its biodefence capabilities, with consequences that could change the face of microbiology for decades to come.

So, although microbiology is receiving unprecedented public and fiscal attention, it also faces the challenges of a diverse and rapidly evolving discipline. The traditional organization of the discipline based on core organism types — viruses, bacteria, fungi and protozoan parasites — created barriers that fostered fragmentation and hindered communication and progress. Hastened by the advent of new technologies and a growing recognition of the enormous degree of microbial diversity, microbiology is moving into an era that focuses less on specific organisms and more on the processes and mechanisms that link them. As the discipline transforms, the need for a new information resource that reflects this new era, has become clear. This requirement, not to mention the vast flow of information that microbiologists must contend with, is the main motivation behind the launch of the seventh and latest member of the *Nature Reviews* series. *Nature Reviews Microbiology* will encompass every aspect of the dynamic world of microbiology and erode those barriers hindering progress. Using the innovative approaches developed by our sister *Nature Reviews* titles, our articles will present authoritative updates on key developments in an accessible way, with the presentation of ideas tailored to suit our particularly broad audience. As part of this commitment, the journal will undertake to promote the study of infectious diseases that disproportionately affect developing nations — to this end, *Nature Reviews Microbiology* has formed a major partnership with the Special Programme for Research and Training in Tropical Diseases (TDR), an organization co-sponsored by the United Nations, the World Bank and the World Health Organization. One outcome of this collaboration will be the publication of a monthly update on the latest developments in the field of infectious diseases.

So whatever your area of interest, it is both a fascinating and a challenging time to be a microbiologist. Important concerns remain and much work needs to be done — *Nature Reviews Microbiology* aims to be your guide.

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