

Editorial

S Mahadevan, Editor

An ongoing debate in science is whether the primary goal of scientists should be alleviation of human suffering or addressing unsolved questions related to Nature. This is often portrayed as applied versus basic science. While the former involves the generation of a technology or a product that is of immediate benefit to society, the latter is more esoteric and does not promise any short term gains to society. While finding a drug for AIDS belongs to the former category, sending a space mission to Mars falls under the latter category. Does a developing nation have the luxury of spending its precious financial and human resources in the pursuit of basic science or should it focus only on applied research?



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The fact that is often unrealized is that no applied science is possible without a proper foundation of basic science. In other words, unless we can build a strong knowledge base, there will be no science that can be applied. In the end, there is only good science and bad science and the choice is very clear. There are several examples of discoveries having a strong application component emerging unexpectedly from what was originally an esoteric pursuit. Today's blue-sky research therefore will be tomorrow's technology base. What might be a good strategy for basic scientists is to keep their eyes open for a possible application for their discoveries down the line. An even better strategy will be to choose a system that has a practical relevance in order to pursue fundamental questions.

Dr. S N De, who carried out pioneering work on organisms that cause enteric diseases, *Vibrio cholerae* and enteropathogenic *E. coli*, exemplified this approach to science. By choosing a problem that was of significant clinical relevance to our country for pursuing what could be called basic science, his work resulted in the formulation of strategies for clinical intervention, saving the lives of countless fellow citizens. His work also ultimately led to the elucidation by others of the mechanism of action of cholera toxin that was crucial for understanding how cells communicate with each other and the environment. *Resonance* honours this pioneer whose path-breaking work was appreciated only several decades later.

