Why do not medical graduates join programmes in hard science?

V. Sitaraman has raised some important issues for us to ponder (*Curr. Sci.*, 2000, **79**, 938–939). What he has raised in the medical field may be very much true for the engineering field also. With the floodgates open for most of the engineering graduates with an IT background to jump into the bandwagon of software producers, this is not surprising. The same mad rush is sadly lacking in the hardware field and we still have to get the all-important hardware from Japan or Korea. The hype in making a fast buck whether it is in the medical field, software dishing, medical transcription or in the cricket field encompasses all other priorities.

The tendency to rush to clinical subjects for the masters' degree says a lot about medicine – a noble profession. Masters' seats for non-clinical subjects like radiology, biophysics, biostatistics, pathology, etc. go begging even in prime medical teaching institutions. The recent news has it that some of these subjects have been taken off from the list for post-graduate education by the Indian Medical Council. A sad commentary indeed. This is despite lures like a stipend for those taking up non-clinical subjects. None of the medical graduates would like to take up basic fields where there is a likelihood to be drawn into research because the fields are not lucrative. The medical graduates are ready to try for several years to get a clinical subject in any institution. Even those who take up the non-clinical subjects do so only to use the library facilities and other perks attached to a teaching institution to try and get a clinical field in the following year or better still go abroad. This being the main driving force, it is hard to expect and believe that those with the desired framework to do medical research will emerge from amongst the medical graduates. As has been rightly pointed out by Sitaraman, why bother to take up a science career that offers far less money than what a good clinician could make. It would be hard to expect science graduates to match the need for achieving the kind of transition needed for 'tangible end points'. A better alternative would be to allow the science graduates to work along with the medical graduates with strong cross-disciplinary currents that benefit both.

That science is relegated to the background in all professional disciplines except in agriculture, is a point well made by the author. An agricultural graduate undergoes courses not only in several basic sciences like mathematics, statistics, zoology, botany, chemistry, physics and the like, but is also put through the rigours of human relationship subjects like sociology and psychology so important for agricultural extension. In addition, they also delve into the field of economics and marketing. In many agricultural universities, improvement in communication skills in the local language and English is also given priority. This is all done as a prerequisite in preparing the graduate to study agriculturally important subjects like soil science, entomology, plant pathology, plant physiology, plant breeding and genetics, agricultural economics, agricultural extension, agronomy, agricultural engineering, veterinary science, dairying, etc. Thanks to the planners of the curriculum in agricultural universities, the agricultural graduate is better equipped, more versatile and more enterprising than most others are.

There is another aspect that has important lessons to be drawn. This is regarding developing strong departments in the basic sciences in medical schools. A department that just caters to the teaching design for the undergraduate degree can never motivate a researcher. A good example is the basic sciences departments in agricultural universities. These departments work in tandem with the departments in the agricultural field. The staff are involved in research activities which form part of the wider objective of promoting research in the agriculturally related subjects, teach post-graduate courses in basic sciences as a routine, are involved in the research advisory committees of post-graduate students and help in their research. In some agricultural universities the basic science departments even offer graduate and post-graduate science degrees. Even the departments involved in language teaching are not far behind and teach courses like scientific writing, communication skills, translations, etc. to suit the needs of researchers.

The very many advantages of allowing the science graduates and post-graduates to work with professional degree holders are intangible. Again, the agricultural research scenario is a good example. In the prime institutions of the Indian Council of Agricultural Research, basic science post-graduates do excellent work in the applied field of agricultural research along with the agricultural post-graduates in addition to those who work in purely basic science fields like physics, statistics, biochemistry, botany, genetics, cellular biology, etc. This has helped agricultural research with a strong input of basic science. It is well known that many agricultural graduates have taken up molecular biology, cell biology, biochemistry, physiology, ecology, economics, taxonomy, computers and the like and have made significant contributions. But for a few who are in premier institutions like IISc, TIFR, CCMB, etc., this is sadly true only for those who have ventured abroad and have found a niche in the basic science fields in the US or other countries.

The neglect in the framing of proper policies and designing curricula has to be stemmed and a thought given to enabling a congenial atmosphere and a permissive style that allows medical research to flourish. Are the ICMR and the Medical Council listening?

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