The undergraduate (UG) medical students of the All India Institute of Medical Sciences (AIIMS), New Delhi recently protested against the outdated curriculum being followed in their institute. One of the allegations of the students’ was that they were being asked to prepare castor oil and liniment of turpentine which are not relevant in today’s clinical practice. The response of the authorities, according to the newspaper, was that “if students have such strong opinions about what the curriculum should be like, they can go and open a college of their own.” Rather than giving the students a sympathetic ear and willing to consider whether the curriculum needs to be updated, the administration chose to be aggressive, a sure way of alienating the students. The undergraduate medical curriculum in pharmacology, which has been a topic of intense debate among the pharmacologists, unfortunately, has not undergone the requisite changes commensurate with the explosion of knowledge, techniques and new drugs that have flooded the medical scene. Does the present curriculum in pharmacology meet the course objectives?

There can be no dispute amongst us that we as a group of academics have failed to keep the curriculum abreast of the rapid changes in the subject. A few colleges (including mine) have brought out some modifications in the practical pharmacology section but none have done the massive, sweeping revisions that are so urgently needed. Apart from our usual reticence to venture into vistas uncharted, we are also forced to honor the graduate medical curriculum of the Medical Council of India (MCI), one that is now seven years old! The mandatory continuous monitoring and restructuring of the curriculum, unfortunately, not a part of our academic ethos.

There seems to be an almost unanimous feeling that dispensing pharmacy practicals such as those mentioned in the newspaper report are irrelevant. If so, why have only some colleges removed them from the practical syllabus? During the course of a conversation with friends in Karnataka, I came to know that some medical colleges had removed these exercises a few years ago and then reintroduced them since they were given to understand that the MCI insists on them! This kind of misinterpretation and confusion should never happen and we should never dither until our students point out the lacunae of the curriculum to us. We may console ourselves that at least the practical pharmacology syllabus has been revamped to some extent by different colleges; some more extensively than others incorporating clinical pharmacology exercises. The experimental pharmacology section is still weighed down by the isolated tissue experiments as many institutions have not had the inclination to remove them or their substitute “charts”. The fact remains that the bioassay has now lost its relevance for UG medical students. There are better tools and methods to teach the concept of receptor pharmacology. Students pretending to interpret a few (previously discussed) charts and calculating the strength of the “unknown” solution do not translate into important learning concepts.

We need no reaffirmation that pharmacology as a subject has grown beyond the boundaries which once were thought to define the subject. The first and foremost question that needs to be answered is “What aspect(s) of pharmacology should an undergraduate know?” Basic pharmacology? Therapeutics? Clinical pharmacology? Dispensing? Experimental pharmacology? The second would be “How much?” Recent advances? Established drugs? Prototypical agents of each class? The nebulous nature of many of the “new drugs” makes the teachers cautious of teaching the pharmacology of drugs that have been recently introduced into the market. We do know that very many drugs last only a few years and it may be unwise to spend a lot of time teaching a student the pharmacology of a drug which may well disappear from the scene by the time he or she graduates! If that is so, is it time we started concentrating on teaching students how to select drugs based on evidence? This may mean concentrating on the methodology of clinical trials, statistics and so on and imparting the skills to critically evaluate the evidence before selecting a drug. There can be no doubt that this is exactly what we should be doing, but we are totally unprepared to change the way we teach pharmacology. It is easier to take a lecture on calcium channel blockers than to teach students how to select one for a particular indication / type of patient. Closely linked to this aspect is how prepared are we mentally, logistically, and academically to take up these challenges? Many pharmacologists in medical colleges hold administrative positions in addition to their role at the top of the hierarchical ladder within the department of pharmacology. How much time would they be able to devote to a restructuring of the curriculum or to train themselves with the skills needed to impart such training?

Another stumbling block in restructuring the curriculum comes in the form of the university examinations. At the present time, the UG practical examinations consist of two parts—a practical and viva voce. In the practical exam, students are asked to perform one experiment (usually with an animal) and either prepare some mixture/ointment or write answers to clinical problems. These examinations are more often a sham because the students have already been shown the problems/charts. Unlike the theory paper where the student is likely to come across a question he or she is not prepared for, it is not so in the practical exam. Built into our psyche is the fact that we do not want our students to be confronted with an unknown (or previously unencountered) question, problem or chart at the examination. Hence the so-called
“problem solving exercises” are no more than testing recall. For example, a problem on pharmacoeconomics is based on a student calculating the costs of different drug regimens for a condition and writing down which is cheaper. Need I say that the students are given a few problems beforehand and the same are repeated at the exams? Is this the best way to teach a student to be conscious of the cost of drugs? This is an aspect which involves the affective domain and to emasculate it to the level of a simple addition sum is carrying things too far. Yet we have not changed the examination pattern for decades, indulging in only a few minor cosmetic changes at best.

In my personal opinion, the present curriculum in pharmacology for undergraduate medical students is an example of the apathy that almost symbolizes the teachers of pharmacology in medical colleges in India. Where have we gone wrong? What can we do? How can we do it? These are the three most relevant questions that need to be answered. Give a man a fish; you have fed him for today. Teach a man to fish; and you have fed him for a lifetime. It is time we reduced the focus on facts available in the textbooks and taught our students to evaluate evidence so that they would have the requisite skills to select appropriate drugs for a particular patient. Even more challenging would be to modify our examination patterns to address the demands of the present day. The students seem ready for the change but are we?

B. Gitanjali
Associate Editor, IJP
E-mail: gitanjali@jipmer.edu

References
1. AIIMS students unhappy with archaic syllabus. Times of India 2004 Feb 20.