

Act, under the category of cosmetics. But unlike the guidelines mentioned by the Food and Drug Administration (FDA) in the United States, India possesses no separate regulations for sunscreen products available in the Indian market. Some Indian companies follow the US guidelines for ingredients and get their products tested in Germany<sup>3</sup>.

The notable fact is that sunscreens are categorized as over-the-counter drugs in USA and non-prescription drugs in Canada<sup>4</sup>. The critical concern here is whether the ingredients present in the sunscreen formulations penetrate the skin? Due to lack of regulatory guidelines in India, tall claims can be made to promote these products as more beneficial than the ex-

isting conventional regulated products. It is high time that the Indian regulatory authorities prescribe regulatory guidelines for sunscreens to check which products are safe for the Indian consumers.

1. Sharma, P. P., *Cosmetics – Formulation, Manufacturing and Quality Control*, Vandana Publication Pvt Ltd, Delhi, 2005, 3rd edn, pp. 177–178.
2. <http://www.ffnmag.com/ASP/articleDisplay.asp?StrArticleId=1092&str=FFNsite-evolution> of sun care; accessed on 24 February 2007.
3. <http://www.moneycontrol.com/india/news/advertisingmarketing/sunscreens-may-mislead-say-experts/20/10/213988>; accessed on 9 April 2008.

4. Final Report prepared for the European Commission, DG Enterprise by Risk and Policy Analysts Limited, UK, August 2004, p. 14.

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## CSIR–UGC NET life sciences exam: A harsh nightmare for biotechnology students

The All-India CSIR–UGC NET exam is intended primarily to provide an index for selection of faculty to teach undergraduate and postgraduate courses. Those who qualify in the exam are provided with a fellowship to pursue research. According to estimates made by DBT, there are more than 300 college-level educational and training institutions across the country offering degrees and diplomas in biotechnology, bioinformatics and biological sciences, producing nearly 500,000 students annually. However, a large number of biotechnology students who appear for the NET exam are unable to qualify. Most institutions accept only a NET (JRF) exam qualified candidate to pursue research.

Topics related to biotechnology find little space in the syllabus for CSIR–UGC NET life sciences exam. The matter needs a thorough debate among educationists, policy makers and scientists. Biotechnology is one of the fastest growing fields in India. In addition, as the Pharmaceuticals biotech industry is entering into the R&D phase after the 2007 GATT and WTO agreements, there is a huge additional requirement of scientists in this field. In the field of drug discovery, drug development and other allied health sciences, biotechnology scientists have proven themselves competent. Postgraduates in biotechnology generally study subjects like plant and animal tissue culture, genetic engineering and recom-

binant DNA technology, medical/bio-process engineering, and immunology and environmental biotechnology<sup>1</sup>. If they wish to pursue funded research or post-doctoral research at any of the national institutes, they need to clear the NET exam. Now, the question arises regarding the selection of subject area. At present the only choice available to biotechnology students for NET is life sciences. In paper-I of the NET life sciences exam, not even a single unit is related to biotechnology. In paper-II where generally questions are selected from the topics in which the candidate is interested and/or specialized, limited space is given to biotechnology. Therefore, many biotechnology students fail to qualify, even after multiple attempts. This has led to a shortage of qualified teachers in biotechnology in colleges or universities. Although there are other alternatives for biotechnology students for research funded by the Indian Council of Medical Research (ICMR) and DBT, they are not eligible for lectureship and seats are limited.

Why not have specialized biotechnology subject area in the NET exam? Also, exams conducted by DBT must be treated on par with the NET exam in respect to eligibility for lectureship. In the case of GATE examination conducted by IITs, although there is no separate branch of biotechnology, one can select a complete section related to biotechnology. Thus every year several biotechnology postgraduates

appear for this examination and have a chance to prove their calibre. Therefore, there is no reason as to why we should also not have biotechnology as a subject area in the NET exam. Or else, the syllabus of the NET life sciences exam should be revised keeping the problems of biotechnology students in mind. We hope that the educationists and governing bodies will make the necessary amendments. This would not only help biotechnology students, but also biotechnology research and education in India.

1. Lakhota, S. C., *Curr. Sci.*, 2008, **94**, 1244–1245.

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