DISHA: A Career Resource Book for Life Science and Biotechnology Students. Suman Govil. IndiaBioscience, Bengaluru. 2020. v + 191 pages. e-Book; https://indiabioscience.org/media/articles/Disha_A_Career_Resource_IndiaBioscience.pdf

Disha is a comprehensive e-book that provides career guidance to Indian life science and biotechnology students. Suman Govil has a long experience of working in human resource development programmes of the Department of Biotechnology (Govt of India). IndiaBioscience has been acting as a facilitator in the life-science ecosystem in India. Skill building is an important vertical at IndiaBioscience, with one of the key activities being to create awareness about different career opportunities that exist for life-science graduates. This book, a result of combined efforts of Govil and the IndiaBioscience team, is a good addition to ongoing efforts to create awareness about different career opportunities and advising them on the key skill-sets that are required to craft a successful career.

Choice of career is difficult and perplexing situation for the young students and their parents in India. This is primarily due to the prevailing concepts about what is a 'career'. Conventionally, most parents and school teachers advise a 'bright' student, who is on the threshold of selecting the subject combination for final school years, to study 'Science' and within that domain, engineering or medicine are presented as mutually exclusive career options. If any of these are not attained after the marathons of numerous entrance tests, the student reluctantly joins a Bachelor of Science course. The restrictive and fixed choices of subjects and the uncertain future career options at this stage add to the frustration of the young child (and parents). Most students join Masters and Doctoral programmes following their Bachelor's degree as a matter of routine without any clear idea of what may lie ahead. The near complete absence of career counselling for students and the generally poor teaching-learning in most class rooms result in students coming out of the academic institutions with a degree, but without any idea of what can be done with it. Not only their subject training remains subcritical, they do not get any opportunity to become aware of the skill sets needed for different careers. Consequently, in most cases the academic institutions or the industry which want young students to join for academic research or a corporate career, find round pegs in square holes.

The advent of Biotechnology courses a few decades ago appeared to provide a better alternative to young students for their career options and this led to a mushrooming of Biotechnology courses (and variants with all kinds of luring names) at all levels across the country. However, the promise with which such academic programmes were initiated remained largely unfulfilled. One of the reasons for this failure, besides the poor course content of most such courses, was the complete lack of clarity about what these students can do with the degree they obtain, often at huge costs to their parents. Thus a need for career guidance to young students and parents has long been felt. In this context, the present book *Disha* is a welcome compilation. This book is aptly named '*Disha*', a Sanskrit word which means direction. As expected, the book is 'meant to provide guidance to life science and biotechnology students on choosing a career direction and embarking upon it'.

This freely downloadable e-book has chapters on (i) Careers in life science and biotechnology: An introduction, (ii) Implementing job search strategy, (iii) Career options for life science and biotechnology students, (iv) Selecting an appropriate course and institute, (v) Indian biotechnology industry: Status, opportunities and challenges, and (vi) Learn from the leaders. Each chapter has subsections for specific issues which help the reader to conveniently refer to a specific issue. A further useful feature is the list of other relevant available online resources at the end of each section. The introductory chapter discusses expectations of different career paths and how an informed choice about the career can be made. It provides useful advice about career options to students and teachers, and, importantly, also to parents. Practical details about strategic and informed decision by understanding of the requirements and expectations of different career paths are provided, so that, the young aspirant can acquire appropriate qualifications, necessary skills and training. Comprehensive guidance on preparing curricular vitae and facing the interviews etc. are included with sample questions and answers.

Joining the academia seems to be the obvious, and often the only, choice to most Indian students since other careers are generally considered secondary and termed 'alternate' or 'lateral' careers. It is good to note that *Disha* refrains from using such terms, but actually emphasizes that a larger proportion of students coming out of the higher educational institutions are absorbed in careers outside the academia. During their master's and doctoral training, students are rarely enlightened about career options and how to prepare for the diverse options that are available. This book fills this void with useful information that would greatly help them in deciding where they want to be. The chapter on Indian biotechnology industry covers the current trends and skills required in each sector that is useful for students in appropriately preparing themselves to become industry-ready by understanding the scope and expectations of that sector. The last chapter on 'Learn from Leaders' is an interesting compilation of interviews of some of the established academic and industrial leaders and thus it provides unique insights from personal experiences of those who have made it successful in the biotechnology field.

Layout of this e-book, written in simple conversation mode language, provides a ready reckoner for diverse sets of information. The illustrations are apt and capture reader's interest, so that the message is effectively conveyed. It would have been useful if the different sub-sections listed on the contents page of this e-book were hyper-linked to the given page.

I compliment Govil and the IndiaBioscience team for taking up this much needed initiative and preparing a freely downloadable e-resource book for the benefit of student community. It would be good, if they can periodically update and expand the factual information. This book should be read not only by students and teachers, but also by parents of the young students, so that everyone concerned is well aware of the diverse possibilities and requirements.

S. C. LAKHOTIA

Cytogenetics Laboratory,
Department of Zoology,
Banaras Hindu University,
Varanasi 221 005, India
e-mail: lakhotia@bhu.ac.in