Roy considers his work on SSDs as the most important because it was cited in the graduate student textbook titled *Radiation Detectors and Measurements*, Wiley Press, 2000.

International connections began for Roy in 1974, when he participated in two international conferences: Fifth International Congress on Radiation Research in Seattle, USA, and First International Symposium on Radiation Physics (ISRP) at Bose Institute. He established a life-long friendship with Pratt. Roy writes: 'What I most admire in him and Mrs. Pratt is their magnanimity to accommodate all visitors in their house for months together.' He worked at Yale University, USA with R. E. Apfel for two years (1981–83) in developing a 'practical' neutron dosimeter using superheated drops. According to Roy, the period at Yale was one of the best in his professional life. He developed close connections with John H. Hubbell and David A. Bradley through the International Radiation Physics Society with which he was associated from 1974 till his retirement.

During his long stint at Bose Institute, Roy honed his skill in editing by bringing out the Institute's *Newsletter*. His association with *Science and Culture* started when he became a member of its editorial board in 2000 and started writing editorials. An analysis shows that Roy wrote 58 editorials, 35 general articles, 21 book reviews, 35 'Notes and News' and four research articles for the journal. He left no stone unturned to improve the quality of the journal and its propagation by contacting scientists, politicians, bureaucrats, authors and columnists. He served as the Chief Editor of *Science and Culture* for the longest duration and made the journal financially independent. In 2017, he became a member of the National Commission of History of Science and thus his journey into the history of science started.

One of the chapters of this book (chapter 6) is the longest with personal opinions of Roy's foreign and Indian friends, relatives and students. My first impression was to ignore this chapter as most of these opinions could be subjective and may touch the fringes of flattery. However, I decided to give the opinion of his student, Rakesh Das, as a sample. Rakesh writes: 'As a student I was deeply fascinated by his sense of punctuality, soft-spoken nature, and flawless teaching methodology. I have been in touch with him all these years; whenever I meet him, his words enrich and motivate me. I will forever be inspired by his teaching and analytical approach to solving the fundamental problems of Medical Physics. He taught us not only to be better researchers, but also to be self-disciplined and moral human beings.'

An analysis of Roy's published research papers leads to conclusion that most of his publications are co-authored with his research collaborators. Out of 100 papers listed (in chapter 8 of this book), only 4 are authored by Roy alone, 30 are with his life-long collaborator Pratt, 33 are with his Ph.D. students and the rest with his colleagues in Bose Institute. The quality of papers can be judged from the journals in which these are published. In modern parlance, we can say these are published in high-impact journals. There is another list which includes 25 papers published in the conference proceedings. In addition, Roy has published 21 book reviews, 58 editorials, 35 popular articles of general interest, and 36 'Notes and News'. These publications reflect Roy's wide range of interest in areas other than his chosen field of scientific research.

This book has nearly 100 photographs, some of which seem to be superfluous. On p. 78, there is a mismatch between the text and caption of figure 33. Since I was personally present in Dubrovnik, Croatia, during ISRP-5 in 1991, I could identify this discrepancy. One more suggestion: The gist of news items may be given in larger font for the convenience of readers.

The authors of this book deserve praise for their efforts. Its narrative justifies the subtitle, *A story of courage and determination*. I hope our younger-generation scientists will read this biography to get motivated to perform good research.

HARDEV SINGH VIRK

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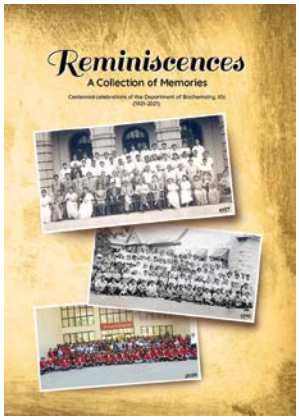

Reminiscences: A Collection of Memories – Centennial Celebrations of the Department of Biochemistry, IISc (1921–2021). Department of Biochemistry, Indian Institute of Science, Bengaluru 560 012. 2021. x + 248 pages.

The establishment of a Department of Biochemistry at the Indian Institute of Science (IISc) in 1921 is an example of the remarkable far-sighted vision of IISc, making it a unique institution in India. Reminiscences of its alumni, compiled in this e-book as part of the department's centenary celebrations, justify the vision with which this department was started. A historical account of hundred years of an academic institution provides an interesting panoramic view of its path through the ups and downs. When written independently by many who have been part of the centennial journey, the narration becomes more interesting than when compiled by an outsider. Although the latter may provide a critical assessment of the progress, the reminiscences penned by alumni bring out subtle, yet significant facets of the journey and document the changing perceptions, attitudes and missions.

My interactions with faculty members in life science-related departments of IISc started in the 1970s and have continued since then. It is indeed satisfying to note that the new faculty members have maintained the high scholastic benchmarks that were set-up by the pioneering researchers. The Department of Biochemistry, the oldest life sciences unit at the IISc, has been remarkable in terms of the diversity of topics that have been and continue to be researched, which result in high quality of the research output. Reading through the present collection of reminiscences makes me nostalgic about those with whom I had the privilege of interacting in the bygone days, but who are now no more.

The nearly 250-page e-book carries reminiscences written by 90+ alumni who were or remain connected with the Biochemistry Department for varying lengths of time during the past 70 years. The compilation starts with a foreword by Profs D. N. Rao and Dipankar Nandi, followed by a brief about the early history of the department by Drs Purusharth Rajyaguru and Sandeep Eswarappa. Reminiscences take off with the experiences of an alumnus who joined the department in 1951 and end with those of some current students. Reading through such a wide panorama of experiences provides glimpses of the dynamics that have kept this department at the forefront of research while training young students in Biochemistry and related disciplines. The final chapter by Dipankar Nandi reminisces the very recent pandemic period and how the material things and the spirit of facing challenges were kept 'alive' despite the prolonged and crippling lockdowns.

Dr P. R. Krishnaswamy who was associated with the department between 1951 and 1958, shares some fascinating anecdotes about the conditions in a research lab that was already 30 years of age. He lets the readers know about the refrigerated centrifuge, which was 'a massive, noisy, monster machine back then, almost like a flour mill, which had to be wrapped in ice that we used to get from a soda factory in Yeshwantpur to cool the contraption'. He also describes how micropipettes were fabricated: 'We used to take a pyrex tubing and draw it extremely finely to construct a long capillary with a uniform diameter. Then, we'd cut it into small pieces with a magnifying glass, give it a decent file and polish the two shattered edges. To hold this capillary, we'd insert it in a cork with a bigger tube. Then fill it with pure mercury and weigh it four times, five times to make sure it's accurate, before calculating the volume'. Obviously, the skill and patience needed to manually fabricate accurate pipettes of 1 µl, 2 µl, 3 µl, 10 µl are now unimaginable. No wonder, these pipettes were guarded 'as if they were the most valuable property.' Several other older alumni have also narrated the 'drudgery' and innovation essential in the 'good old days' to let experimental studies move forward and, in the process, sharpen their skills of ingenuity, which has made them what they are now. Understanding the significance of working under difficult 'good old days' should be of special interest for the present generation, accustomed to automated 'smart' systems.

The current generation of researchers who are used to the digital eco-system will also find it interesting to learn about the regular visits by the faculty to the library in the pre-digital era, and the competition amongst them to read the new journal issues, especially the 'Current Contents', which was a hard-copy equivalent of the contemporary ETOC service that most journals provide to desiring readers. While the current digital services and smart systems let the researchers know about very recent publications on the 'go', the older hard-copy versions required the researchers to go to the library. In the 1980s and 1990s, the weekly discipline-specific issues of Current Contents were the major source of knowing what articles were published in the week preceding the issue date. It also carried the postal address of the corresponding authors of the listed articles. Of course, this required careful skimming (without a 'search engine') through the thin pages of fine-print to find titles of articles of one's interest, writing down the title, journal and volume details and the postal address of the corresponding author (listed alphabetically at the end of each issue) in one's old-fashioned note-book, so that a reprint-request-card could later be posted to the author for hard copy reprint. Receiving the requested reprint could take several months. Despite the delay, the practice of exchanging hard-copy reprints was very useful. Worries about open-access charges, which have become a major concern now, did not exist.

Besides many other interesting anecdotes, the reminiscences also bring out the exciting academic atmosphere in the department, which effectively supported and mentored new students and younger colleagues. Many alumni have highlighted the spirit of free sharing of facilities and reagents between labs. In this context, one of the alumnus' comment 'And if some doors remained inaccessible during the day, they most certainly opened after 7 pm every evening' reveals remarkable comradery between research students of different labs even though the faculty-in-charge of some of the labs may not have been so forthcoming.

Several reminiscences are in the form of paintings and poems, which nicely reflect the competence of members of this department in different domains of creative activities. Many have remembered the joy obtained through music programmes or sports. Obviously, appropriate encouragement and opportunities have been available for unwinding.

The piecemeal history of the IISc Biochemistry department narrated by its alumni in this collection helps the readers, especially the young researchers, to appreciate the grit and determination needed during the formative years that made it possible for the alumni to reach where they are in their lives.

Reproduction of each article as received from the contributors has maintained the diversity and individuality of the alumni. A more careful editing, however, would have further improved the quality of this unique collection. For example, in several reminiscences, the text refers to some pictures which do not exist or are not properly keyed to the text. Also, some pictures are without adequate explanation.

The IISc's Biochemistry department can justifiably be proud of its journey through 100 years. Learning from the experiences recorded in the 'Reminiscences', it should march ahead with greater success.

Researchers, educators, and historians of science will find this collection of memories stimulating and enjoyable.

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