

BOOK REVIEW

Council of Scientific and Industrial Research Eight Decades of Success Inspired by Visionary Leaders

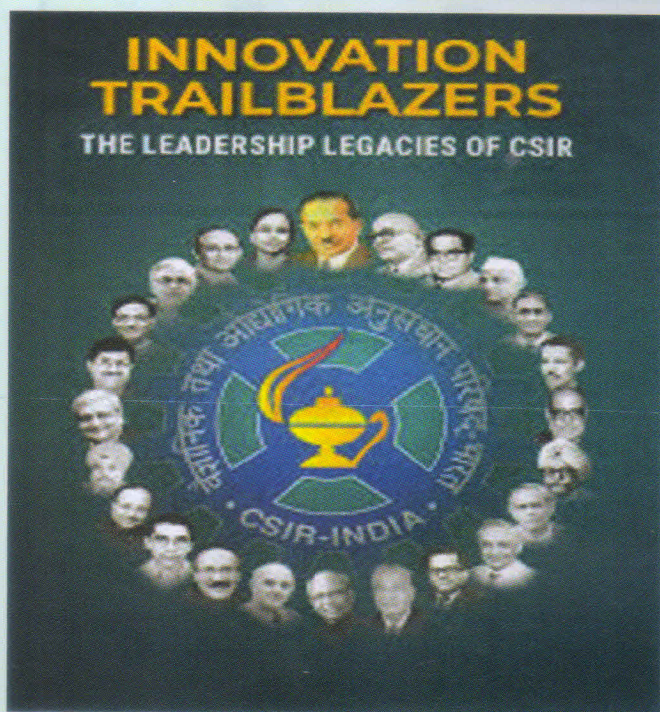
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Title: *Innovation Trailblazers — The Leadership Legacies of CSIR*

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WHETHER it is the first ever baby food in the world from buffalo milk or the first Indian parallel processing computer, the first complete genome sequencing of an Indian or the first indigenous two-seater trainer aircraft, with its array of laboratories spread around the country, the Council of Scientific and Industrial Research (CSIR) has always been at the helm of Indian science.

The technology to derive infant milk food from buffalo milk led to the popular Amul baby food and was instrumental in ushering in the milk revolution in the country. After the successful development of Flosolver, the first Indian parallel processing computer, Indian technologists went on to come up

with the PARAM series of supercomputers that could compete with the best in the world at a fraction of the cost.

From developing drugs for diseases like malaria, asthma, tuberculosis and many more, scientists of the CSIR have also come up with the country's first lithium-ion battery, ingenious low-cost water filters and high oil-yielding varieties of crops such as Mint that have significantly boosted farmers' incomes.

Over the years, CSIR has also been instrumental in catalysing amazing turnaround successes in several fields. In recent times, CSIR resurrected the glory of Kangra tea, which had fallen into bad times, making the Kangra tea industry grow into a Rs 50 crore industry annually. Another instance where CSIR scripted a turnaround story is that of the transformation of the drylands of Ananthapur in Andhra Pradesh into cultivable land resulting into 100% more profit for the farmers of the drought prone area. However, one of the most remarkable turnaround success stories is that of leather. In 1996, the Supreme Court ordered the closure of leather tanneries because they were letting out polluting chrome salts into effluents. Virtually on the verge of closure, CSIR came up with several chrome recovery plants in tanneries to mop up the polluting chrome, evolved tannery modernisation packages by which not only pollution loads but also processing times were cut down, and set up effluent treatment plants in several tanneries. The leather industry survived, and today, the sector is one of the five largest foreign exchange earners in India.

While the scientists and technologists of the laboratories of the CSIR have placed the organisation at the forefront of Indian science, a substantial part of the credit also goes to the visionary leaders — the Director Generals — who have shaped the trajectory and direction that the mammoth organisation should take. The book *Innovation Trailblazers — The Leadership Legacies of CSIR* recounts the leadership and unique vision of the twenty-four Director Generals who have led CSIR ever since its inception in 1942. The authors of the 24 profiles are eminent scientists who have served or are still serving CSIR in leadership positions.

The architect of CSIR was Dr Shanti Swarup Bhatnagar, who, while laying down the roadmap and the foundations of the physical infrastructure for CSIR laboratories, envisioned national laboratories that would meet the immediate needs of a newly independent nation. Future DGs would recalibrate national research strategies to ensure that the outcomes of CSIR laboratories remain relevant. So, while Dr MS Thacker in the 1950s focused on enhancing India's technological capabilities in chemicals and engineering, under Dr S Varadarajan in the 1980s, CSIR strengthened its ties with industries. As India entered the 21st century, Dr RA Mashelkar's emphasis on intellectual property rights made CSIR a global leader in patent filings. And Dr Samir Brahmachari's tenure was instrumental in the setting up of the Academy of Scientific and Industrial Research (AcSIR).

The book places the most significant contributions of the CSIR laboratories in a historical context riding on the vision and leadership of its 24 Director Generals over the past eight decades. It is as much important reading for those interested in the history of science as it is for the younger generation who could be inspired to dream big and work towards the betterment of the country.

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