

THE LEGEND: Dr Mahendralal Sircar
(2 Nov 1833 – 23 Feb 1904)

India's First Science Visionary



Image Courtesy: Internet

But for the vision of Dr Mahendralal Sircar to create infrastructure for original scientific research, Sir CV Raman would not have found the platform to undertake Nobel Prize-winning work



■ Tapas Chakraborty

As India celebrates 'Swatantrata ka Amrut Mahotsav' to commemorate the 75th anniversary of independence from colonial rule — to which the role Indian scientists played in the freedom movement has been added as a special theme of the celebration — let us look back and pay homage to the founder of the Indian Association for the Cultivation of Science in the last quarter of the nineteenth century, Dr Mahendralal Sircar.

Dr Sircar, an MD graduate from the Calcutta Medical College in the year 1863, holds a very special position in the modern Indian history as a humanist, social reformer, renowned physician and propagator of western science education and research in the country. The scientific organisation that he established in 1876, the Indian Association for the Cultivation of Science (IACS) — where Sir CV Raman carried out his Nobel prize-winning discovery, the Raman Effect — turned out to be the favourite destination of the science enthusiasts in the first half of the 20th century. It produced a galaxy of scientists who built the foundations of science disciplines in different parts of the country. IACS was the workplace of notable astrophysicist Meghnad Saha, the discoverer of the Bose-Einstein statistics Satyendra Nath Bose, the co-discoverer

of the Raman effect, KS Krishnan, the eminent crystallographer Kedareshwar Banerjee, physicist and meteorologist KR Ramanathan, the discoverer of the Ray-Dutt twist mechanism in chemistry Priyadarajan Ray, to mention a few.

FERMENT ALL AROUND

Dr Sircar was born in a humble family in Pikepara village of the Howrah district in undivided Bengal on 2 November 1833. He lost both the parents at a very tender age and was brought up by his maternal uncles in Calcutta, and sent to a traditional *pathshala* for early education. As a brilliant pupil, he received the support of many well-wishers and got free education in the school of David Hare, a Scottish philanthropist. After finishing school education in 1849, he went to the Hindu College, which was established in 1817 by the initiative of the prominent citizens of Calcutta for spreading western education. However, the facilities to offer science education through experimentations were almost non-existent in the college, and emphasis was largely on arts, humanities and mathematics. The Hindu College at that time turned out to be the breeding ground for the Young Bengal movement under the influence of teachers like Hen-

His passion was for science and in those days, the only place where students were given some practical lessons was Calcutta Medical College, which he joined in 1854

ry Louis Vivian Derozio. Commenting on the period, Acharya Prafulla Chandra Ray noted, "There was ferment all around. A new world had been opened out; new aspirations were awakened. Roused from a period of stupor and stagnation Young Bengal began to realize that there were immense possibilities in the Hindu Nation." A young Mahendralal was also fully ingrained with the nationalistic feeling of the time. However, his passion was for science and in those days, the only place where students were given some practical lessons was Calcutta Medical College. So, he



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Calcutta Medical College in the mid-nineteenth century

left Hindu College and took admission in Calcutta Medical College in 1854.

He cleared the Licentiate in Medicine and Surgery examination in 1860, and by that time, Calcutta University had been established (in 1857), which allowed him to obtain his MD degree from the University in 1863. The same year, the Bengal Chapter of the British Medical Association was started and he became an active member, where initially he served as its secretary and became

a successful high-priced Homeopathy doctor within a few years. In 1868, Dr Sircar started publishing a new monthly journal, called the *Calcutta Journal of Medicine*, to convey his ideas, and particularly to popularise the Homeopathic treatment. As the story goes, his popularity was so high that around the year 1875, his fee for an outstation visit per day was Rs 500. In 1883, he was made a Companion of the Indian Empire by the Viceroy Lord Ripon and also appointed as the Sheriff of Calcutta in 1887. His association and dialogues with Sri Ramakrishna on science and religion were also fascinating. Although his views were at variance with the tenets of Hinduism propagated by Sri Ramakrishna, their interactions greatly influenced the minds of each other.

THE ROAD TO IACS

In the education sector, Dr Sircar maintained a close association with Calcutta University. He became a member of the Syndicate and was appointed as a fellow of the university for life. He observed that the amount of science taught in any of the educational institutions was inadequate to make any advanced career in science and there was no scope to know the scientific developments in Europe as no science journal was available. At that time, the British government established a number of scientific institutions

its Vice-President in 1867. Alongside, he practiced medicine privately which brought him financial and social successes.

In a move that surprised his colleagues and teachers, Dr Sircar left Allopathy practice and adopted Homeopathy under the influence of Rajendralal Dutt, a millionaire merchant and a Homeopathy practitioner of the time. Dr Sircar's views were not accepted by the Medical Association, and he was forced to resign from the British Medical Association. However, as a determined person, he established himself as

Sir CV Raman (seated, centre) with scholars at the Indian Association for the Cultivation of Science

equipped with advanced research facilities, but those were exclusively for the Europeans to conduct botanical, geological and geographical surveys to gain economic and military advantages for the rulers, and the Indians were barred on the pretext of incompetence. The only place to know about contemporary scientific activity was the Asiatic Society, established in 1784 in Calcutta by Sir William Jones, a Supreme Court judge, philologist and a scholar of ancient India. The Medical and Physical Society of Calcutta, established in 1823, was closely associated with the Asiatic Society. Dr Sircar realised that new institutions were required to generate mass awareness and interest in science and to train and motivate young, brilliant Indians to undertake original scientific research as a career. No doubt he got the idea from the examples of the Royal Institution of Great Britain, established by the leading scientists of England in 1799 and Henry Cavendish as the first president. The foundational principles of the Royal Institution were to diffuse scientific knowledge, facilitate inventions and to enhance the application of science for the common purpose of life. Prominent scientists of the age, Thomas Young, Humphrey Davy, Michael Faraday, John Tyndal, James Dewar and others carried out brilliant pieces of research, and also charmed the audience of London with their popular expositions and direct demonstrations.

In the issue of 2 August 1869 of *The Calcutta Journal of Medicine*, Dr Sircar wrote an article on the desirability of an organisation for the cultivation of sciences by the natives of India. He advocated that the organisation should be entirely under native management and control. In his words, “We say this not out of vanity but simply that we may begin to learn the value of self-reliance.” His proposal got wide appreciation from the educated section of the society and

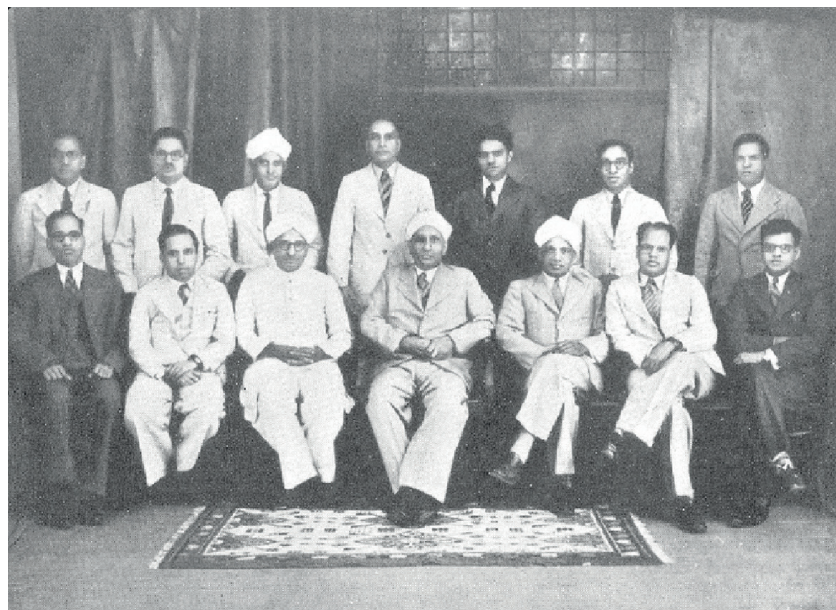


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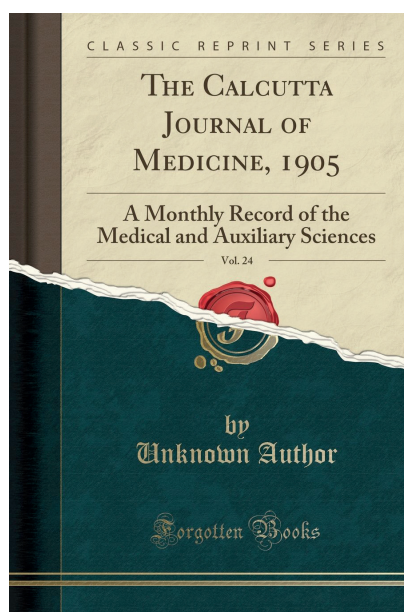


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A reprint of a volume of The Calcutta Journal of Medicine

many articles in support of his proposals were published in the daily newspapers of the time. In 1870, Dr Sircar published a prospectus in *Hindu Patriot*, clarifying his ideas about the Association, where he wrote, “The objective of the Association will be, as its name indicates, to invite, encourage and enable the natives of India to cultivate science

in all its departments. A correlative objective will be to rescue from oblivion whatever is connected with India, ancient or modern. Thus, the Association will aim at editing and publishing the ancient records, so replete with interest and wisdom.” Money was required for the realisation of the project and he appealed to all well-wishers of India for contributions.

Discussion and debate to attract funds were continued for several years. Meanwhile, a new interest for science was generated among common people by the great Jesuit teacher, Reverend Father Eugene Lafont, who built a spectro-telescopic observatory at the St. Xavier’s College, Calcutta, and became an enthusiastic supporter of Dr Sircar’s proposal for a science association. The provisional committee meeting of the proposed Science Association was held on 16 December 1875 and Dr Sircar presented a sketch on the scheme mentioning the scientific disciplines that could be opened. He noted that one of the greatest obstacles to the introduction of science in the school and college curricula was the paucity of indigenous teachers, and he hoped the vacuum could be filled through the realisation of the Science Association. Finally, the Association was formally inaugurated



Bust of Dr Meghnad Saha at the IACS campus, Kolkata

on 29 July 1876 in a building at 210 Bow Bazar Street, Calcutta. The premises were offered by the Lt Governor Sir Richard Temple.

ACTIVITIES AT IACS

Teaching activities at the Association started shortly after its inauguration and Father Lafont offered to deliver lectures in physics on light, sound and general physics; he was also instrumental in importing a large assortment of equipment for demonstration, teaching and research. Dr Sircar himself offered lectures on static and dynamic electricity, magnetism and heat. In 1885, Acharya Jagadis Chandra Bose started conducting practical physics classes at the Association with demonstrations on contemporary discoveries in the fields of electricity, magnetism and optics. In 1887, Ashutosh Mookherjee started delivering lectures on mathematical physics and pure mathematics. The lectures gained tremendous popularity

Great care was taken to select books for the library so that the works of noted scientists in all areas of basic sciences were adequately represented

and more than three hundred students from the University, Medical College and La Martiniere institutions started to join the discourses. Dr Sircar was happy with the developments as the lectures were intended to be disseminated to the intelligentsia as well as to the general public. Father Lafont also made clear that the lectures were not merely for the education of students to write examinations but to promulgate modern discoveries in sciences so that the students were in no way behind their contemporaries in Europe. Great care was exercised to select the books for the library so that the works of noted scientists in all areas

of basic sciences were adequately represented on the bookshelves. A number of scholarships, prizes and medals were introduced to encourage students to attend lectures at the Association.

With time, Dr Sircar started to realise that without permanent professorship, the main goal of the Association — to conduct original research — could not be achieved. In every annual meeting, he appealed to the countrymen for donations to endow whole-time professors, but he was immensely disheartened as the response on this issue was poor. Occasionally, he openly expressed his bitter disappointment and frustration for the general apathy of the rich community to this issue. During his lifetime, he could not see serious research activities in his Association that were at par with those in Europe.

Dr Sircar died on 23 February 1904 and his son Amritalal Sircar took over the charge of the Association as the Honorary Secretary, and all the success stories of the organisation in the next few decades were scripted only during his tenure. Before his death, Dr Mahendralal Sircar expressed his last wish in a written, positive note, “I have only now to reiterate my conviction that if our country is to advance at all and take rank and share her responsibilities with the civilized nations of the world, it can only be by means of Science or positive knowledge of God’s work.” The world now knows that the founding of the Indian Association for the Cultivation of Science was indeed a milestone event for India’s journey into the arena of modern scientific research and the successes of IACS symbolise the visions of the torchbearer.

**The writer is Professor & Director (Additional Charge), School of Chemical Sciences, Indian Association for the Cultivation of Science, Kolkata*

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