

Revenue generated by CSIR through research projects

An unstarred question #2682 asked in the Rajya Sabha by Anil Kumar Sahani (MP) was answered on 19 March 2018. The question was specifically on whether the Council of Scientific and Industrial Research (CSIR) generated revenue by undertaking various research projects and on the revenue generated during the last four years, lab-wise.

For several years now we have reported in these pages the progress of

CSIR institutions within India and globally on academic research¹⁻⁴. This is the first time the present author has seen tabulated data on the revenues earned by R&D projects undertaken by the various CSIR institutions in the public domain. Table 1 shows the number of Group IV scientists in 38 CSIR institutions and the total revenue generated (lakhs of rupees) from R&D projects over the last 4 years by these institutions. The position of

Group IV scientists is as of 1 February 2018. Figure 1 shows on a two-dimensional map, the revenue in the 4-year period/ Group IV scientists versus the number of Group IV scientists in CSIR. Only four laboratories generated over 25 lakhs per year per scientist from R&D projects. On an average over the 38 laboratories, 14.21 lakhs per year was earned by CSIR scientists. It may be useful to note that CSIR has been allocated Rs 4734.71

Table 1. Number of Group IV scientists and total revenue generated (lakhs of rupees) from R&D projects over four years by CSIR institutions

Institution	Group IV scientists (1–2–2018)	Total revenue generated (lakhs)	Revenue per Group IV scientist
4PI Fourth Paradigm Institute	23	1053.16	45.79
Advanced Materials and Processes Research Institute	36	1491.01	41.42
Central Building Research Institute	66	3392.67	51.40
Centre for Cellular and Molecular Biology	72	4	0.06
Central Drug Research Institute	111	305.74	2.75
Central Electrochemical Research Institute	103	1673.25	16.25
Central Electronics Engineering Research Institute	96	14788.81	154.05
Central Food Technological Research Institute	118	495.96	4.20
Central Glass and Ceramic Research Institute	87	7377.11	84.79
Central Institute of Medicinal and Aromatic Plants	67	2655.47	39.63
Central Institute of Mining and Fuel Research	139	29952.62	215.49
Central Leather Research Institute	96	5121.19	53.35
Central Mechanical Engineering Research Institute	116	936.69	8.07
Central Road Research Institute	82	606.36	7.39
Central Scientific Instruments Organisation	88	1490.26	16.93
Central Salt and Marine Chemicals Research Institute	72	115.2	1.60
Institute of Genomics and Integrative Biology	41	6154.06	150.10
Institute of Himalayan Bioresource Technology	45	220.25	4.89
Indian Institute of Chemical Biology	42	13333.7	317.47
Indian Institute of Chemical Technology	150	11821.95	78.81
Indian Institute of Integrative Medicine	57	1760.63	30.89
Indian Institute of Petroleum	62	3853.86	62.16
Indian Institute of Toxicological Research	50	956.55	19.13
Institute of Minerals and Materials Technology	95	7303.28	76.88
Institute of Microbial Technology	53	211.31	3.99
National Aerospace Laboratories	365	30781	84.33
National Botanical Research institute	59	2774.83	47.03
National Chemical Laboratory	136	10873	79.95
National Environmental Engineering Research Institute	104	721.03	6.93
North-East Institute of Science and Technology	78	1173.35	15.04
National Geophysical Research Institute	101	6897.93	68.30
National Institute for Interdisciplinary Science and Technology	60	235.59	3.93
National Institute of Oceanography	119	6494.08	54.57
National Institute of Science and Communication and Information Resources	25	0	0.00
National Institute of Science, Technology and Development Studies	17	0	0.00
National Metallurgical Laboratory	127	11156.51	87.85
National Physical Laboratory	136	175.47	1.29
Structural Engineering Research Centre	82	3469.72	42.31

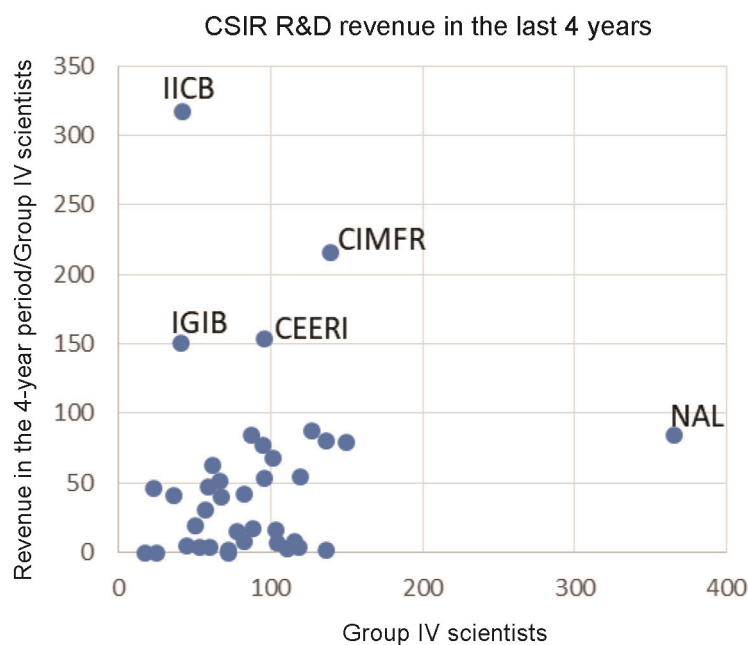


Figure 1. A two-dimensional map of revenue in the 4-year period/Group IV scientists versus the number of Group IV scientists in CSIR.

crores (budget estimate) for the financial year 2018–19, compared to Rs 4582.12 crores (revised estimate) for the financial year 2017–18 (from an answer on 19 March 2018 to another unstarred question #2683 by A. K. Selvaraj (MP)). That is, the outlay per Group IV scientist

works out to roughly 136 lakhs per year in 2017–18.

1. Prathap, G., *Curr. Sci.*, 2014, **107**, 1121–1122.
2. Prathap, G., *Curr. Sci.*, 2016, **110**, 288–289.
3. Prathap, G., *Curr. Sci.*, 2016, **111**, 962–964.

4. Prathap, G., *Curr. Sci.*, 2018, **114**, 9–11.

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NEWS

R. A. Mashelkar wins the TWAS-Lenovo Science Prize

R. A. Mashelkar, a noted Indian scientist in the field of polymer chemistry and engineering was awarded the 2018 TWAS-Lenovo Science Prize for ‘his seminal contributions in mechanistic analysis, synthesis, and applications of novel stimuli responsive polymers’. The Prize was announced at the 28th TWAS General Meeting in Trieste, Italy.

The TWAS President, Bai Chunli lauded Mashelkar’s work with the following statements: ‘His work has had an impact on a broad range of applications from agriculture to medicine, and it reflects a deeply ingrained spirit of science: that investment in fundamental research can give rise to discoveries in

applied science that have a real and powerful impact on people’s lives.’

Mashelkar, during his address at the awards ceremony, delved deep into smart hydrogels and breakthrough applications owing to the properties of these smart gels. Examples of such applications are novel synthetic bone grafts and therapeutic interventions to assist bone regeneration and healing, developing devices to plug tissue damage in the gastrointestinal tract and plugging porosity of underwater geological strata to enable enhanced oil recovery.

Mashelkar, an alumnus of the University Department of Chemical Technology (now the Institute of Chemical Techno-

logy), Mumbai, has served as President of the Indian National Science Academy and the UK Institution of Chemical Engineers. He was also Director General of the Council of Scientific and Industrial Research. Mashelkar has several awards to his credit; the noted ones being the Shanti Swarup Bhatnagar Prize and Padma Vibhushan. He is a Fellow of the Royal Society (FRS) of London and International Fellow of the Royal Academy of Engineering. He is also the first Indian to be selected as Fellow of the National Academy of Inventors, USA.

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