**Biographical Sketch**

**R.A. Mashelkar, f.r.s.**

Dr. R.A. Mashelkar, National Research Professor, served as the Director General of Council of Scientific and Industrial Research (CSIR), with thirty eight laboratories and about 20,000 employees (1995-2006).

He was also the President of Indian National Science Academy (2004-2006), President of UK Institution of Chemical Engineers (2007) as also the President of Global Research Alliance.

42 universities from around the world have honored him with honorary doctorates, which include Universities of London, Salford, Pretoria, Wisconsin, Swinburne, Monash and Delhi.

Dr. Mashelkar is only the third Indian engineer to have been elected (1998) as Fellow of Royal Society (FRS), London in the twentieth century. He was elected Foreign Associate of US National Academy of Science (2005) and also National Academy of Engineering (2003), Associate Foreign Member, American Academy of Arts & Sciences (2011), Fellow of Royal Academy of Engineering, U.K. (1996), Foreign Fellow of Australian Technological Science and Engineering Academy (2008), Corresponding Member of Australian Academy of Sciences (2017), Fellow of World Academy of Arts & Science, USA (2000), Fellow of US National Academy of Inventors (2017), the first ever Indian from India to be elected and TWAS-Lenovo Science Prize (2018), which is considered as mini – Nobel Prize for developing world scientists.

Deeply connected with the innovation movement in India, Dr. Mashelkar served as the Chairman of India’s National Innovation Foundation (2000-2018). Currently he chairs Reliance Innovation Council, KPIT Technologies Innovation Council, Persistent Systems Innovation Council and Marico Foundation’s Governing Council. He co-chairs the Maharashtra State Innovation Council.

He has been a member of External Research Advisory Board of Microsoft (USA), Advisory Board of VTT (Finland), Corporate Innovation Board of Michelin (France), Advisory Board of National Research Foundation (Singapore), among others.

In August 1997, Business India named Dr. Mashelkar as being among the 50 path-breakers in the post- Independent India. In 1998, Dr. Mashelkar won the JRD Tata Corporate Leadership Award, the only scientist so far to win it. In June, 1999, Business India did a cover story on Dr. Mashelkar as *"CEO OF CSIR Inc."*, a dream that he himself had articulated, when he took over as DG, CSIR in July 1995. On 16 November 2005, he received the Business Week (USA) award of ‘Stars of Asia’ at the hands of George Bush (Sr.), the former President of USA. He was the first Asian Scientist to receive it.

Dr. Mashelkar has been on the Board of Directors of several reputed companies such as Reliance Industries Ltd., Tata Motors Ltd., Hindustan Unilever Ltd., Thermax Ltd., Piramal Enterprises Ltd., KPIT Technologies Ltd., etc. He chairs the Boards of GeneMedix Life Sciences Pvt. Ltd., Vyome Biosciences Pvt. Ltd. and Invictus Oncology Pvt. Ltd.

Dr. Mashelkar’s contributions have been multifarious.

When Dr. Mashelkar took over as the Director General of CSIR, he enunciated *“CSIR 2001: Vision & Strategy”*. This was a bold attempt to draw out a corporate like R&D and business plan for a publicly funded R&D institution. This initiative has transformed CSIR into a user focused, performance driven and accountable organization. This process of CSIR transformation has been recently heralded as one of the ten most significant achievements of Indian Science and Technology in the twentieth century.

Dr. Mashelkar has been propagating a culture of innovation and balanced intellectual property rights regime for over two decades.It was through his sustained and visionary campaign that growing awareness of Intellectual Property Rights (IPR) has dawned on Indian academics, researches and corporates. He spearheaded the successful challenge to the US patent on the use of turmeric for wound healing and also the patent on Basmati rice. These landmark cases have set up new paradigms in the protection of India's traditional knowledge base, besides leading to the setting up of India's first Traditional Knowledge Digital Library. In turn, at an international level, this has led to the initiation of the change of the International Patent Classification System to give traditional knowledge its rightful place.

As Chairman of the Standing Committee on Information Technology of World Intellectual Property Organization (WIPO), as a member of the International Intellectual Property Rights Commission of UK Government and as Vice Chairman on Commission in Intellectual Property Rights, Innovation and Public Health (CIPIH) set up by World Health Organization (WHO), he brought new perspectives on the issue of IPR and the developing world concerns.

In the post-liberalized India, Dr. Mashelkar has played a critical role in shaping India's S&T policies. He was a member of the Scientific Advisory Council to the Prime Minister and also of the Scientific Advisory Committee to the Cabinet set up by successive governments. He has chaired twelve high powered committees set up to look into diverse issues of higher education, national auto fuel policy, overhauling the Indian drug regulatory system, dealing with the menace of spurious drugs, reforming Indian agriculture research system, etc. Currently, he is the Chairman of Government of India’s two High Powered Technology Expert Committees on Swachh Bharat Abhiyan set up by Ministry of Rural Development as well Ministry of Urban Development.

Dr. Mashelkar has won over 50 awards and medals, which include S.S. Bhatnagar Prize (1982), Pandit Jawaharlal Nehru Technology Award (1991), G.D. Birla Scientific Research Award (1993), Material Scientist of Year Award (2000), IMC Juran Quality Medal (2002), HRD Excellence Award (2002), Lal Bahadur Shastri National Award for Excellence in Public Administration and Management Sciences (2002), World Federation of Engineering Organizations (WFEO) Medal of Engineering Excellence by WFEO, Paris (2003), Lifetime Achievement Award by Indian Science Congress (2004), the Science medal by the Academy of Science for the Developing World (2005), Ashutosh Mookherjee Memorial Award by Indian Science Congress (2005), etc.

The President of India honored Dr. Mashelkar with Padmashri (1991), with Padmabhushan (2000) and with Padma Vibhushan (2014).