Kallam Anji Reddy (1941–2013)

Kallam Anji Reddy, the Founder-Chairman of Dr Reddy's Laboratories succumbed to cancer on 15 March 2013.

There are few parallels in India to Anji Reddy's towering achievements as a scientist-turned-entrepreneur. He joined Indian Drugs and Pharmaceuticals Limited (IDPL) in Hyderabad as a Senior Scientific Assistant in 1967. After a six-year stint in IDPL, he turned entrepreneur and set out to make bulk drugs. Later, he founded Dr Reddy's Laboratories in 1984, which grew rapidly to become one of the front-ranking generic companies in the country with global operations. No other Indian pharmaceutical company surpassed annual revenues of US$ 1 billion (2006–07) or US$ 2 billion for that matter (2011–12), quicker than Dr Reddy's Laboratories.

Commercial success and scientific achievement are rarely associated with the same individual, but that was the hallmark of Anji Reddy's life. He explained his vision of science and its purpose in a memorable public lecture at the Mid-Year meeting of the Indian Academy of Sciences in 2002. Interestingly, he was the first businessman invited to deliver such a lecture. The title of his lecture said it all: 'Science for profit is profit for science'. The thrust of his thesis was that both non-profit and commercially sponsored research are complementary, as illustrated by drug discovery research. While research funded by tax-payer's money has its place, Anji Reddy argued that the application of funds generated from commercial profits was the only way to sustain and intensify drug discovery in the 21st century.

A remarkable aspect of Anji Reddy's vision and commitment was the utter clarity of the purpose of research. He stated with inspiring conviction that to be useful, the output of drug discovery research must be affordable. As a matter of fact, that was the guiding principle in his life. When Anji Reddy started out as an entrepreneur in 1976 to make bulk drugs, he wrote out his dream which became his mission in life: 'to bring new molecules into the country at a price the common man would afford'.

It was an unusual vision in those days as the Indian pharmaceutical industry was dominated by foreign companies and the country did not have adequate bulk drug manufacturing capability. Companies that made bulk drugs often made them from the imported penultimate intermediate. This was rarely cost-effective and the newer drugs in the 1970s and 1980s were invariably so highly priced that they were unaffordable to the majority of the people in the country.

Anji Reddy broke away from this stultifying high-cost model and developed efficient processes for the manufacture of bulk drugs from basic raw materials, and many of them were developed for the first time in India. The first drug he developed was metronidazole and it was followed by sulphamethoxazole and several other essential drugs, but the breakthrough came after he set up Dr Reddy's Laboratories and developed the new fluoroquinolones – norfloxacin and ciprofloxacin. He not only sold the bulk drug at reasonable prices, but also marketed the finished dosages at half the then prevailing market price. The established pharmaceutical companies had no option but to follow suit. The pricing model for new drugs in India was irreversibly changed and the era of affordable medicines was ushered in.

This kind of a game-changing approach to business would not have been possible but for the solid foundations of good science. Anji Reddy excelled in marshalling and directing the work of scientists to this end, apart from being involved personally in process development in the early days. As a matter of fact, had fate willed, Anji Reddy would have been a traditional scientist. After graduating from the Andhra Christian College at Guntur with chemistry as his major, Anji Reddy obtained a postgraduate degree in pharmaceutical technology from the University Department of Chemical Technology (as it was then called) of the University of Bombay. Thereafter, he pursued his doctoral studies at the National Chemical Laboratory in Pune under Doraiswamy.

Even before he completed his doctoral thesis on the kinetics of oxidation of toluene, Anji Reddy developed a semi-empirical modification of the Stokes–Einstein equation, which came to be known as the Reddy–Doraiswamy equation. Anji Reddy seemed to be well set to pursue a research career and he was accepted for a postdoctoral fellowship at the University of Science and Technology at Trondheim. It was then that he heard of IDPL being set up at Hyderabad and the idea of joining a public sector organization making bulk drugs from basic raw materials attracted him. He got a job there and chose to pursue it instead of a career in academic research. As he recalled in his public lecture at Bangalore, Jawaharlal Nehru had once called upon 'scientists to come out of their shell'. To Anji Reddy, it was a call for scientists to venture beyond the boundaries of academic research and contribute to applied science for the benefit of humanity.

Anji Reddy contributed greatly to the transformation of the bulk drug industry in India and played no small part in Hyderabad becoming known as the 'bulk drug capital of India'. He then went on to establish a global business in not just bulk drugs, but also in finished dosages. He was, however, not content to rest on his laurels and the lure of research was never forgotten. In 1993, he embarked on new drug discovery research and set up a facility at Hyderabad. That was at a time when drug discovery research was not even in the contemplation of Indian industry.

Anji Reddy personally led the programme in the area of diabetes and was the co-inventor of a potent glitazone compound that came to be called balaglitazone. This was licensed to Novo Nordisk in March 1997 and was a landmark

for the Indian pharmaceutical industry as it was the first new drug synthesized in India that was licensed to a multinational company for clinical development. A slew of other molecules followed, including a first-in-class agonist of two isoforms of the peroxisome proliferator activator receptor (PPAR), which was also licensed to Novo Nordisk. The discovery of a first-in-class compound that could potentially reduce both blood glucose and lipids simultaneously was yet another milestone for the pharmaceutical industry in India.

Unfortunately, the PPAR compounds had safety concerns as a class and clinical development had to be discontinued. Anji Reddy did not have the satisfaction of seeing one of the discoveries from his laboratories making it to the global markets in his lifetime. As he often said in recent years, that was his unfinished agenda and his zeal to discover new drugs never flagged. He continued to pursue discovery research outside of his company and funded it personally. By the time of his passing away in March 2013, the first of the novel compounds discovered in this programme had entered phase1 clinical trials in the US and the second compound was scheduled to enter phase1 clinical trials later in the year. Anji Reddy started his career as a scientist and transitioned into a visionary entrepreneur in the pharmaceutical industry, but his passion for scientific research never diminished.

Anji Reddy's pioneering efforts in drug discovery research at Dr Reddy's Laboratories have put India on the global research map. These efforts have brought credibility to Indian scientific capability in the area of drug discovery. The greatest tribute to his memory would be the global launch of a novel molecule discovered in India.

Anji Reddy's concern for the less privileged members of the society extended also to Corporate Social Responsibility (CSR) initiatives such as Naandi and Dr Reddy's Foundation (for human and social development).

Anji Reddy has been a recipient of several national awards, including the Padma Bhushan in recognition of his distinguished service in the field of trade and industry.

Whether it was his pioneering contributions to the Indian pharma industry or his passion for drug discovery research or his compassion for the common man, Anji Reddy has left us a rich legacy worthy of emulation.

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