

Govindarajan Padmanaban

Many Indian scientists have been tempted by the allure of the West—but not G. Padmanaban. At the tail end of a career that spans four decades, the biochemist has recently staked a more public presence, updating outdated notions of India and urging scientists to pursue a social mission.

Early one Monday morning, during one of the 11 trips Govindarajan Padmanaban made to the University of Chicago between 1973 and 1986, he overheard a colleague angrily inquiring about a batch of chemicals that had been ordered the previous Friday and had not yet been delivered.

The conversation was just one more reminder of the vast difference between the American ethos and that of his native India, Padmanaban now says. “Here, I used to wait six months [for delivery of shipments],” he says, explaining that he never “got perturbed” or lost his temper in the lab. “They used to ask me if I practiced yoga because I was always so calm, but I was used to it. Here, if we get it in two weeks’ time, I’m very, very happy.”

Padmanaban has been a dedicated teacher and mentor for more than four decades, turning out more than 40 Ph.D. graduates from his laboratory at the Indian Institute of Science (IISc) in the southern Indian city of Bangalore. He has been a prolific and decorated researcher, and the author of more than 120 papers. For the past 20 years, he has focused on chloroquine resistance and the detection of drug targets against *Plasmodium falciparum*, the most common of the four parasites that cause malaria. He has been an administrator and a valued advisor to government and industry. In recent years, he has also somewhat reluctantly stepped into the role of public intellectual, taking unapologetic positions on such hot-button issues as India’s fledgling nuclear weapons program and, most recently, genetically modified (GM) crops.

Now semiretired, Padmanaban, 65, seems somewhat confounded by this latest role. He says he has always preferred the laboratory to limelight, but at this stage of his career, he believes it is more imperative than ever to urge scientists to pursue projects that benefit both ends of the social spectrum. “There’s a reason I take all these responsibilities,” he says. “Not because I enjoy it, but if there is an opportunity to do something for the poor children, I feel it should be done.”

Padmanaban marvels at the media’s proclivity to selectively report his words. During a talk he gave at the UK Royal Society’s India Day celebration last December, for example, he offered the hypothesis that GM potatoes could be used as a “value-addition” to India’s school lunch program.

“I talked about so many things that day, but this is the only one the media focused on,” he says, adding that he mentioned the GM potato not as a panacea for India’s poverty and malnutrition, but as a single example of biotechnology’s potential. “I really feel that we have a great opportunity,” he says. “The controversy that’s in the West should not be extended to a developing country like India.”

Padmanaban took his most outspoken public stance after India set off several nuclear test explosions five years ago, just as he was ending his four-year term as the IISc’s director. The incident engendered a degree of euphoria among India’s citizens but, according to Padmanaban, it was the country’s scientists who endured the gravest repercussions. At the IISc, he recalls, foreign vendors refused to ship materials and equipment, and students found it difficult to obtain visas for postdoctoral training abroad.

In a thoughtful explication of the country’s reaction, published in *Science*, Padmanaban analyzed the euphoria and described a pervasive

“alienation” among segments of the population that had grown tired of the outdated portrayal of India as a land of poverty, dependence and filth.

Padmanaban says many Westerners still have to be goaded into acknowledging India’s progress, but he remains well aware of the contrasting mindsets of Indian scientists and their Western—particularly American—counterparts. Indian scientists, he says, have never had to work under much pressure to beat the competition and be the first to “reach the top.” But while he has long admired the American spirit of perseverance and determination, he says, there is little else he encountered that impressed him. “I believe you should enjoy what you are doing,” he says. “To be honest, I feel there are a lot of superficial things in the West, actually. People say, ‘Oh, I enjoy my work’. I don’t think they do.”

Even as an emeritus professor, Padmanaban says, it is still the hours he spends each day in his laboratory on the leafy campus of the IISc that give him the deepest pleasure. “When I see him working from 9 o’clock in the morning until 8 o’clock at night, I know there is no way I could do that,” says P.N. Rangarajan, who completed his Ph.D. under Padmanaban.

Through the years, Padmanaban has had many opportunities to work

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in less familiar and more lucrative settings, but says he has never been compelled to leave. In the early 1980s, Padmanaban welcomed the Swedish pharmaceutical company Astra into his laboratory and recruited half a dozen young scientists to conduct research on malaria, tuberculosis and diarrheal diseases.

When the company built the Astra Research Centre two years later, it offered Padmanaban the directorship. He promptly declined. Several years later, he says, he was offered the directorship of an international center for genetic engineering and biotechnology, a joint venture between the governments of India and Italy. Again, he decided to stay put. Apart from his trips to Chicago and one brief stint in 1969 at St. Mary’s Hospital Medical School in London, the IISc has remained Padmanaban’s permanent base since 1961.

Such stability should not be mistaken for complacency, says Inder Verma, a Salk Institute immunologist who currently works with Padmanaban on the Indian government’s committee to improve its biotechnology infrastructure. What keeps Padmanaban going, Verma says, is the conviction that India can play a starring role on the world’s scientific stage.

“Indian philosophy teaches that you try to do your best, but don’t get elated because of success and don’t get depressed because of failure,” Padmanaban says. “It is possible to balance it out, and I try hard to practice that.”

Bruce Diamond, Bangalore