



## Innovation demands freedom

**Innovation within India's scientific institutions may not take place at any significant level until the feudal system of Indian patron-client relationships is destroyed, says expatriate Indian scientist V. A. Shiva Ayyadurai, following his controversial hiring and firing from the Council for Scientific and Industrial Research (CSIR).**

The events surrounding my recruitment and resignation from CSIR as its first outstanding Scientist Technologist of Indian Origin (STIO) demonstrate how a feudal infrastructure demolishes those who seek real change and enables those who support its continued but not-so-significant existence.

International media and scientific communities are asking hard questions on India's path for 'innovation' following my public spat with CSIR: What is the real nature of these innovations? Who benefits? Such questions - positive offshoots of the current 'controversy' - should tug into the heart of the CSIR leadership, which wants this story to simply fade away.



V. A. Shiva Ayyadurai

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The controversy is also encouraging scientists, innovators and ordinary citizens to engage in a public dialogue and demands for concrete actions against a leadership which executes egregious violations upon those who dissent, disagree and exercise their right to free speech - the basic elements of scientific discovery and innovation.

The experience at CSIR has made me appreciate, as never before, America's greatest competitive advantage for innovation: (1) a historical and unabashed right to dissent, and (2) a relatively higher level of jurisprudence that supports such dissent.

If dissent is a priori for innovation, my experience at CSIR indicates that India has a long way to go.

## **The sequence of events**

On October 19, 2009, Deepak Sardana and I published a draft document entitled CSIR-TECH: The Path Forward. I was recruited five months prior to that on June 10, 2009 by CSIR Director General Samir Brahmachari. My mandate was to create and be the CEO of CSIR-TECH, an initiative to enable spin-off companies from technologies across CSIR's 37 laboratories.

The draft was an important part of fulfilling that mission and was distributed to the staff, scientists and directors of CSIR to elicit and integrate comments before their final submission to the CSIR leadership.

Chapter 7 of the draft entitled Challenges, documented, for the first time in print, well known problems of the CSIR leadership that would need to be addressed to ensure success of CSIR-TECH. Nearly 300 e-mail responses providing positive and constructive feedback were received. Eminent scientists such as P. M. Bhargava, founder of the Centre for Cellular and Molecular Biology (CCMB) and one of CSIR's oldest employees concluded that it "...was a very honest report and it ...captured exactly the challenges within this organization."

The CSIR leadership, however, responded quiet differently. An order was issued 72 hours later on October 23, 2009 demanding that Sardana and I cease and desist from "...oral and written communications with scientists and directors of CSIR."

In response to our defiance and not recanting the draft, they proceeded with lies, threats and vindictive actions against me, my family and Sardana. This included evicting my family and me from our home with less than six days notification. Ironically, such a reactionary response reinforced the characteristics of "...cover ups, denials and sycophancy..." documented in Chapter 7 of the draft.

We wrote letters and attempted several times to seek the counsel of Prithivraj Chavan, Minister of S&T and Vice-President of CSIR, who approved my appointment as STIO and to the Prime Minister of India Manmohan Singh. Silence was their response.

## **Questions raised**

The actions and inactions of CSIR leadership, at all levels of hierarchy, not only beckons questions of CSIR's real intent for the STIO program but also the sincerity of the Indian government's seemingly poignant self-criticisms and proclamations concerning innovation in India.

How seriously can one take CSIR President Manmohan Singh's lamentations at the 92nd Indian Science Congress: "I am concerned about the tyranny of bureaucracy and the quality of output of our scientific establishments. Have we allowed patron-client relationships to stifle creativity? Are we scaring the young away with our hierarchical systems?" when he remains silent on this matter?

While my family and I were enduring the abusive treatment of CSIR, the Minister of HRD and former Vice-President of CSIR Kapil Sibal flew to M.I.T., my home institution,

and proclaimed that India and M.I.T. share the "...freedom of speech, diversity of culture and the enormous ability to have dialogue." This at a time when CSIR was issuing gag orders, threats and eviction notices upon an M.I.T. graduate, struggling in India to pursue these basic tenets of freedom.

Such disparity between words and deeds raises many other questions.

What, therefore, is the real purpose of recent initiatives, programmes such as STIO and MoUs linking India's scientific establishments with US universities? Who are the beneficiaries of Private Public Partnerships (PPPs) such as The Centre for Genomic Application (TCGA)? Was the recruitment of the first STIO just a ploy to acquire the M.I.T. brand for CSIR and to lure more STIOs? Why then are scientists of 'Indian origin' needed? Can scientists from within India not achieve the same?

## **Paper innovations**

These questions in turn raise doubts on the so-called 'innovations' being pedaled including Soleckshaw, Open Source Drug Discovery (OSDD) and the CSIR University. There are more glossy brochures of Soleckshaw and press stories than any Soleckshaws on the streets of India. Soleckshaw is said to be "...gaining traction across the country..." solving TB for the masses of Indian rickshaw drivers.

As the head of CSIR-TECH and a CSIR insider, I was not able to get a hold of a single Soleckshaw and was told they were non-operational.

A key official responsible for the much-touted OSDD project confided in me. "OSDD is a fraud," he said a few days prior to the August 29, 2009 Director's conference. He was uncomfortable being responsible for the nearly 40 million dollar OSDD. I shared his concerns with Brahmachari, OSDD's chief promoter. Subsequently and surprisingly, at the Director's Conference the official ended up presenting OSDD and lauding Brahmachari's innovation and ingeniousness! How can opinions on such an important and expensive initiative change so fast? What is the reality of OSDD? Media is being promulgated on OSDD's success based on its growing registrants. Who are these registrants? Is that a measure of success? Are these the same registrants pedaling Soleckshaws and gaining 'traction' across India?

CSIR University is the most recent innovation for media consumption. As I recall, it was merely a white board diagram a few days before an Indian government entourage invaded U.S. universities promoting it as the next "World Class Research University". I did not know a few good magic markers could produce a world-class university. Who will run and teach at this world-class university given the abysmally low production of PhDs in India? More importantly, who will profit?

The media has already begun to investigate these issues to separate fact from fiction. Beyond the aforementioned questions, there are others that need to be investigated including TCGA, a public-private partnership between IGIB and the Chaterjee Group? Why is there a financial audit inquiry on TCGA? Is it only coincidental that around the start of this audit inquiry a major fire at CSIR headquarters, which housed most of the documents relating to CSIR projects such as TCGA, took place?

## Lessons to be learnt

There may be simple explanations for these questions. I am compelled to ask them on behalf of the many progressive, dedicated and voiceless scientists. The Indian government and CSIR have a unique opportunity even in the midst of this seemingly ugly controversy. They can rise to the occasion, think out-of-the-box and do something really innovative by taking some small steps.

How?

I am willing to be part of an open forum with CSIR — televised live, available real-time on the internet — to review all documents and interactions leading to my appointment and resignation. Such a forum would enable all to understand why I was appointed, why the gag order and why I resigned. A small step for CSIR, but one giant step for Indian innovation — demonstrating transparency, accountability and competence — the environment for 21st century innovation.

Innovation demands such freedom. Is CSIR ready to devolve such freedom? Is India ready for real innovation? It would be nice to witness the 'freedom' and 'open dialogue', which India and M.I.T. supposedly share so much.

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