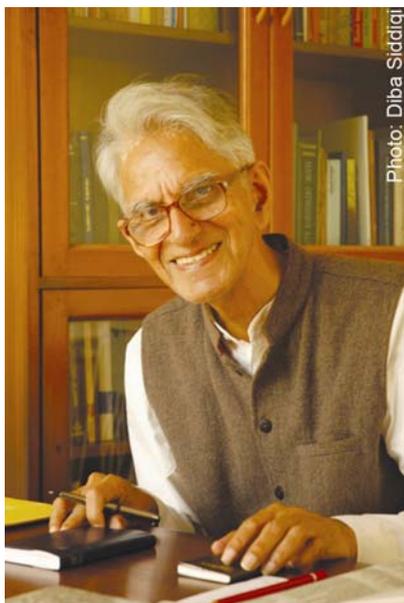


Obaid Siddiqi (1932–2013)



Colleagues of Obaid Siddiqi¹ in TIFR and NCBS had frequent and largely similar encounters with him. Walking alone with eyes to the ground, apparently deep in thought, he would abruptly look up and trap you in a brilliant, unwavering gaze before proceeding into an unhurried but penetrating conversation on music, art, science, people or politics. His sophistication was simple and unostentatious as were his broad interests. He spoke to directors and students, with almost equivalent levels of engagement and interest. Around Siddiqi, always 'Obaid' to his students and colleagues, it was impossible not to realize that the beauty of pursuing the truly interesting and original, even with its risks of failure, hugely outweighed success from solid, incremental advancements. He lived his life and did his science based on these simple, heartfelt principles. He transmitted the excitement of big questions together with a liberating lightness of spirit that made these seem accessible. He was particularly drawn to the amateur and the novice. To them, he was a source of both the intellectual inspiration and sympathetic support crucially required during the too-often lonely process of scientific inquiry.

In the 1970s, friend Seymour Benzer (1921–2007) was a natural draw for Obaid, particularly when the interests of both shifted from molecular genetics to neurogenetics^{1–3}. The study of *Droso-*

Obaid Siddiqi passed away on 26 July 2013 in tragic circumstances. He was born on 7 January 1932 in Basti in Uttar Pradesh to M. A. Qadeer Siddiqi and Umme Kulsum. He received his early education at Aligarh Muslim University (AMU). He obtained his Ph D from the University of Glasgow in 1961. He started his academic career as a lecturer in AMU (1954–57) and then moved to IARI, New Delhi as a research scholar (1957–58). He then continued his post-doctoral work at the University of Pennsylvania. In 1962, he moved to India and set up the Molecular Biology Unit at the Tata Institute of Fundamental Research (TIFR) in Mumbai. Thirty years later, he moved to Bangalore as the founding director of the TIFR National Centre for Biological Sciences.

His contributions to science and institution building have been recognized widely. He was an elected member of the Royal Society, London (FRS), the US National Academy of Sciences, The Third World Academy of Sciences, all the three Science Academies of India and the Maharashtra Academy of Sciences. He served on the Council of the Indian Academy of Sciences for 18 long years (1974–91) and was its President (1986–88) and Vice-President (1983–85). He also held positions of responsibility at the Indian National Science Academy, the US National Academy of Sciences and the Third World Academy.

He has been honoured with the *Padma Vibhushan*, *Padma Bhushan*, Bhatnagar Prize, INSA Golden Jubilee Medal, Birla Samarak Kosh National Award, Goyal Foundation Prize, INSA Aryabhata Medal, Bhasin Foundation Prize, Science Congress Plaque of Honours, BC Roy Award for Biomedical Research and Firodia Award for Basic Sciences.

Siddiqi has held visiting professorships at Yale University, the Massachusetts Institute of Technology, the California Institute of Technology and Cambridge University. He was twice Sherman Fairchild Distinguished Scholar at Caltech and was a life member of Clare Hall, Cambridge. He was conferred the honorary degree of D Sc by AMU, Banaras Hindu University, Jamia Hamdard, Kalyani University, IIT Bombay, Jamia Millia Islamia and the Central University of Hyderabad.

Siddiqi is survived by his wife, two sons, two daughters and his grand children.

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phila mutants with strikingly visible and memorable defects in nervous system function, fit beautifully with both Benzer's and Siddiqi's whimsical approach to science. These were the primary focus of Obaid's science from the mid 1970s, when he went on the first of three visiting professorships to Benzer's laboratory in California Institute of Technology.

His first work in neurogenetics focused on fruitfly mutants that appeared normal at room temperature, but abruptly paralysed when shifted to higher temperatures. The paralysis reversed when the animals were shifted back to room temperature. Captivated by the simplicity

and exactness of these mutant phenotypes, Obaid showed how electrical recordings from single muscle fibres in genetic mutants could be used to identify the likely molecular targets of the mutations and the mechanism of paralysis. In doing so, he provided the impetus for path-breaking studies of *Drosophila* neural excitability mutants, particularly by young Benzer postdocs Chun-Fang Wu and Barry Ganetzky, who went on to provide the first glimpse of important classes of ion channel genes, now known to be involved in human epilepsy and heart disease. On his return to India, Obaid suggested to his new Ph D student Veronica Rodrigues (1953–2010), a simi-

lar neurogenetic approach to understand the mysterious processes of smell and taste perception. Using still relevant behavioural assays that they devised, Obaid and Veronica isolated and characterized the first collection of genetic mutants with defects in smell or taste in *Drosophila*. When presented with the Birla Award for his work on taste and smell, he unhesitatingly presented a cheque for half the prize to his star student (who in turn quietly refused to cash it). As a consequence of these pioneering studies, the broad field of neurogenetics, though severely set back by the recent loss of both Obaid and Veronica, still remains one of India's internationally recognized strengths today.

Obaid effortlessly built a biological research community in TIFR. He invited talented scientists to join his unit paying scant attention to their CVs. He cherished the diversity of styles and individuals around him, and would ensure that the administration respected the centrality of their research and supported their needs. Rarely was Obaid authoritarian or annoying. When, convinced that he knew best, he would speak rapidly, brook no interruption, and when particularly moved his voice would rise in volume and he would shake his finger in emphasis. Yet such times were truly rare. In subsequent conversations, Obaid's views would lose their rigidity and he never grudged anyone a contrary position.

The combination of intellectual interest, institutional vision and collegial concern allowed Obaid to recruit to TIFR and NCBS, a legion of scientists (initially including Pabitra Maitra (1932–2007) and Padmanabhan Babu) with fiercely independent styles and temperaments. But Obaid contributed subtly and unobtrusively to their success. To small conferences, workshops and meetings held around TIFR in molecular biology, genetics, neuroscience and neurogenetics, he attracted all major stars and intellects in each field and treated them with attention and kindness, but no particular deference. Comfortable being treated like friends and grateful for a gentle and dignified introduction to India, most came more than once. And so it came about that all members of TIFR to lesser or greater degrees found themselves included in an exclusive freemasonry of outstanding scientists. In these rarified intellectual communities, TIFR faculty and students not only gained access to

the best minds and best thoughts in the field, but also discovered that they could themselves aspire to greatness. Thus, association with Obaid opened many doors and greatly expanded TIFR's scientific worlds.

Remarkably, Obaid was still at heart a modest man. In early 1983, the year before he was elected to the Royal Society, on a stroll with K.S.K. along the TIFR sea front, Obaid casually remarked that he felt like a failure. If the bars are set low, success is easy; but to achieve greatness, Obaid must have frequently confronted the spectre of failure. But thirty years on, it is difficult to believe that he was not content with an extraordinarily fulfilling and successful life.

We include in this brief memorial essay, two of the many hundreds of stories, that may convey both the simplicity and richness of Obaid's company. In the 1970s, Obaid was well known for his empty wallet and requests for small loans to buy lunch or tea at the canteen, loans that he inevitably forgot to repay. But the colleagues, young and old, were rewarded by his instant appreciative thanks and the slight pride of having given something to a person of Obaid's distinction. Once, Pabitra Maitra, whose street-scraping, argumentative, working-man's style contrasted wonderfully with Obaid's benevolent aristocracy, responded to Obaid's request for a two-rupee loan with the offer of a hundred rupee loan instead. This was carefully orchestrated. Earlier, Maitra had claimed to his younger colleagues that as Obaid would surely remember and repay such a large loan, this would teach him a lesson and make him remember all the old loans he had not repaid. Obaid thanked Maitra with his usual grace and yet again forgot to pay him back. Not even Maitra, suffering the 100-rupee loss together with considerable loss of face with his younger colleagues, could summon the crudeness required to remind Obaid of his lapse. Obaid's forgetting was a tacit reminder that money is meant to enable acts of human companionship, of sharing food, knowledge, ideas, art and music among colleagues who were, in the best periods of TIFR and NCBS, also family.

In 1992 (or 1993), when M.R. was in UC San Francisco on leave from NCBS, Obaid phoned with an intention to visit San Francisco and 'spend a few days'. With some anxiety, M.R. unloaded Obaid into his small apartment ('very

nice' said Obaid uncoiling into a faded and stained couch with holes in its upholstery). M.R. then embarked on two days of hyperactive hostliness, which included driving for hours along the stunningly rugged Pacific coast, almost empty of people, with crashing waves, steep cliffs and occasional fields of vegetables stretching to the edge of foggy beaches with kelp, dunlins, pelicans and elephant seals. During the drives, Obaid, wonderfully relaxed, told several long stories. One was about Helen Spurway, second wife of the famous geneticist J.B.S. Haldane, a fiercely independent woman who moved with Haldane to India. The story (not checked for factual content or defects in M.R.'s memory) went as so. A final push for Haldane's move to India, initially driven by his isolation from mainstream British academics, was a pending court case against Helen Spurway for having kicked a London policeman who had demanded her to comply with a law that she did not respect. Haldane and his wife skipped out of the UK before Spurway's date to appear in court. A geneticist in her own right, Spurway gained considerable publicity and attention (e.g. from the Catholic Church and *Time Magazine*) for her statement that humans could be capable of parthenogenesis (asexual, monogametic reproduction) based on her observations of the phenomenon in the guppy fish. Spurway also worked on silkworm breeding and animal domestication. After Haldane's death in 1964, she moved from Bhubaneswar to live for the next 13 years in the outskirts of Hyderabad, still staying in touch with Indian geneticists including Sharat Chandra who visited her regularly. (Spurway inherited the *Journal of Genetics* from Haldane and subsequently bequeathed the journal to the Indian Academy of Sciences.) During her studies of animal domestication in Hyderabad, Spurway fed wild birds and animals and was particularly friendly with a small fox, which one day nipped her while she was feeding it. Spurway complained of a tooth ache for a few days and by the time it became clear that she had contracted rabies, it was too late for her to be saved. Perhaps the sun broke through the clouds as Obaid neared the end of this story. Nonetheless in his narration, the randomness of Spurway's end, together with Obaid's smiling acceptance of the certainty and incongruity of death, dramatically framed the freedom of

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her science and the strange beauty of her life.

In TIFR and NCBS, Obaid Siddiqi was a constant presence, taken for granted despite his subtle and deep influence. We ask now how the future will unfold without his presence. Will we find within ourselves, and or within others among us, Obaid's ability to simultaneously impart both the inspiration and the security necessary for the flowering of new science? Are there among us others with his ability to effortlessly transmit the spirit and beauty of science, so easily forgotten

in the modern professional world? More worrying, are the days of such science and such scientists over and will we forget the spiritual core of Obaid Siddiqi's legacy even as we write his praise?

1. VijayRaghavan, K., *J. Neurogenet.*, 2012, **26**, 257–259.
2. Krishnan, K. S., Ramaswami, M. and Wu, C.-F., *J. Neurogenet.*, 2012, **26**, 255–256.
3. <http://news.ncbs.res.in/page/professor-obaid-siddiqi-passes-away>

Obaid Siddiqi (1932–2013)*

One sign of getting old(er) is to see the heroes of your youth leave this mortal world. I lost three in 2011 – my father in August, 'Tiger' Pataudi in September and Dev Anand in December. Last week I lost another one of my heroes – Obaid Siddiqi or simply Obaid. He passed away in Bangalore after receiving a severe head injury in a freak road accident while on his evening walk.

Obaid was popular with three generations of my family. Being related to my maternal grandfather through his mother, Obaid shared with him the common bonds of leftist ideology and progressive Urdu literature. He and my father had the same last name and were contemporaries at the Aligarh Muslim University, having done their M Sc in the same year in Botany and Chemistry respectively. Both returned to India in 1962 to establish a career in teaching and research.

While growing up in Aligarh, I do not recall meeting Obaid; he made short visits to see his parents. But there was always talk of his genius and even as kids we knew that he was an important scientist. I was friendly with his father, who we called Qadeer Nana. He came frequently to the AMU Lawn Tennis Courts where Obaid's nephews – Salman and Chotu, and I played. There were many tips on the game, admonition for bad shots and endless stories in his inimitable style.

My first interaction with Obaid was in 1978 when I was selected as a National

Science Talent Summer Fellow in his lab at TIFR. This was my first taste of laboratory research and it was so much fun. We rarely left the lab and many nights were spent sleeping on the seminar library table. I worked directly with Krishnan (who is as kind now as he was then), and Obaid appeared occasionally to enquire if all was well. He was quiet but there was an aura around him that made people respect him and be comfortable at the same time.

Much through the 80s, I was in US and lost touch with him, but reconnected again when I returned to India. Obaid was starting NCBS and proudly gave me a personal tour of the interim laboratories on the Indian Institute of Science campus. For the past 25 years, we have been in constant touch and developed a bond that cannot be described, but only felt.

Over the past few years, our link has been Abu, who Obaid took on as a Ph D student on my recommendation. Abu graduated from rearing flies to taking care of Obaid, while trying to understand the biochemical and genetic basis of olfactory memory. Obaid sent him to my lab to use biochemical methods for identifying proteins associated with olfactory learning in *Drosophila*. Having been in a completely different field or research, this was my chance to fulfill a life-long dream to publish a paper with Obaid. But fate had other plans. The paper will be written up, but there will be no Obaid to celebrate it.

Though I never worked with Obaid after that summer in 1978, I have benefited both professionally and personally

from his visionary thinking for Indian science. Around the turn of the century, he played a big role in the Wellcome Trust's decision to start a special International Senior Research Fellowship competition for Indian scientists. In the few years that it ran, the ISRF selected 30 odd Fellows; many are now in leadership positions in the country. I was lucky to be one of the Fellows. He also catalysed the Wellcome Trust-DBT India Alliance, a visionary partnership between the British charity and Government of India that was set up in 2008. I recently started looking after the India Alliance and hope it will produce the next generation of biomedical research leaders for the country.

That will be my tribute to Obaid. In his silent and unassuming ways he has done more for Indian science than many of his vociferous peers.

*dhoondho-gey hameiN Mulko-Mulko
milney key naheeN, naayaab haiN hum!*

I admired Obaid for many things, but one stands out – his confidence in the next generation. Many people in leadership positions claim to do this, but become large trees under which very little can grow. Obaid, however, was different. He conceived and set up NCBS, but then let his younger colleagues manage it. And they have done full justice to the confidence he reposed in them to make NCBS a world-class institution. This is a legacy we must celebrate and nurture as our best tribute to this visionary.

A few months back Obaid had fallen down at home and had hurt himself. I went to see him on 20 June and was

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