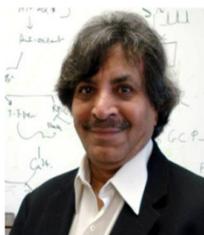


*Research & Development:***My Scientific Journey and Strides in US**

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After obtaining Master's degree in human physiology from M.S. University, Baroda, India, I joined the laboratory of Professor Hans Loeschcke, Ruhr University, Germany. Professor Loeschcke was a pioneering physiologist, who made seminal contributions to the field of chemical control of breathing, especially known for the discovery of "Central Chemoreceptors". The training in Loeschcke's laboratory was very different...in that we chose our scientific problem...and discussed the results with professor. Thus, although the main theme of the laboratory was control of breathing by CO₂ and O₂, I worked on regulation of breathing by visceral afferents. After my sojourn in Germany, I joined Professor Curt von Euler, at the Nobel Institute for Neurophysiology, Karolinska Institute, Stockholm, Sweden. Professor Curt von Euler was an authority on neural control of

breathing, especially known for his seminal contributions to respiratory rhythmogenesis. Professor von Euler gave freedom to work on my own project. Here I initiated my studies on carotid body O₂ sensing..., a topic I continue to work even today. Thus, my training at both these laboratories made me an independent scientific thinker...but had no training in obtaining resources to run the laboratory and little experience in writing scientific papers. My studies at Loeschcke and von Euler's laboratories caught the attention of Professor Neil S. Cherniack, a reputed respiratory physiologist from Case Western Reserve University (CWRU), Cleveland. I came to US with an invitation from Professor Cherniack, and was appointed as a tenure-track assistant professor at CWRU. I was warned that obtaining independent grant support and high level of scientific productivity are the essential requisites for a successful career in a US university. Since, my experience in grant writing is none and my publications were modest, at the best, I was

clearly at a disadvantageous position compared to US trained faculty, who already has experience in both these areas. After initial failures, I got my first grant funded three years after my arrival to US and was able to publish few important papers in the field. Despite this initial modest success, I had a nightmare of establishing myself in the field for nearly six years. Mainly, because neither I was trained in US nor blessed by the leading people in US. At one point, I even contemplated leaving US. My mentor, Dr. Cherniack said that “if you can’t convince few people in the field...how would you convince the rest of the scientific world? You do your science and the rest will follow”. Following this important advice, I published a series of *carefully done important studies*....and finally people in my field began accepting my views. Nearly 10 years after my arrival to US, with great perseverance, I was able to head major research programs in the country. Thereafter, a series of invitations to review panels at NIH, invited lectures, and other honors followed. The key for overcoming all these struggles and subsequent success in US, despite being trained outside, in my opinion, is doing science as best as you can with unwavering faith....and “no short cuts”.

Professor Nanduri R. Prabhakar is a leading authority in the field of O₂ sensing and physiological consequences of chronic hypoxia. Substantial population of adult humans and nearly 50% of premature infants experience chronic intermittent hypoxia as a consequence of sleep-disordered breathing manifested as recurrent apneas. People with recurrent apneas develop serious morbidities including hypertension, ventilatory abnormalities, myocardial infarctions, metabolic syndrome and even stroke. Using rodent and cell culture models of intermittent hypoxia, Dr. Nanduri Prabhakar’s lab identified novel signaling pathways and molecular mechanisms underlying the morbidity associated with chronic intermittent hypoxia.