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Educator's successful research avatar

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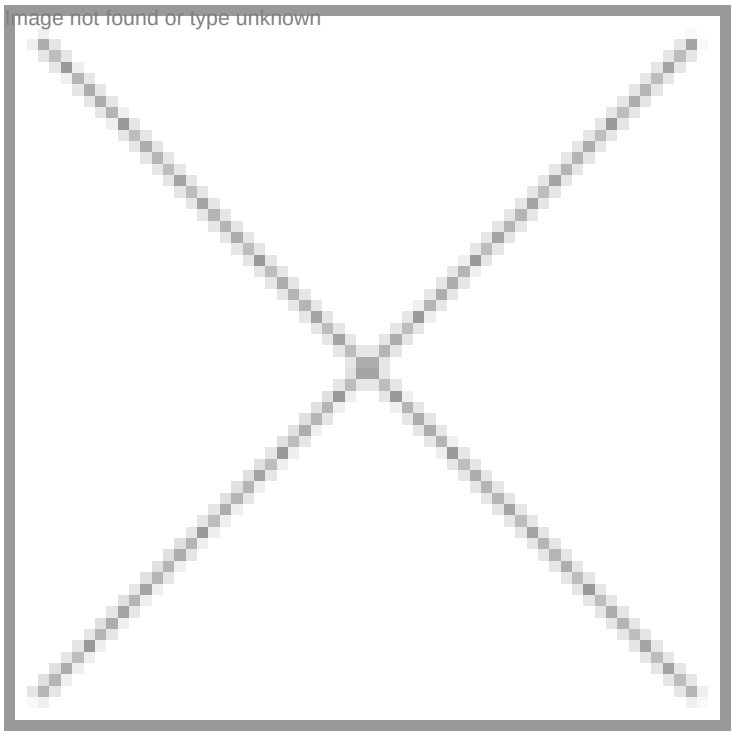

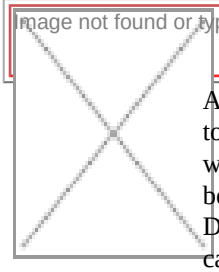

Biochem Research **Dr Dhinakar Kompala**
CSO, Richcore Lifesciences

Actually he was looking for a course that would give him a â€œsureshot Aâ€? when he took up biochemical engineering at Purdue University. â€œMy interest in biotechnology was thus developed by accident. Since then, I pursued only biochemical engineering because traditional chemical engineering suddenly became very boring!â€? That is how Dr Dhinakar Kompala, CSO at Richcore Lifesciences, describes the start of his 27-year-long career in biochemical and bioprocess engineering. Dr Kompala frequently shuttles between USA, where he has been teaching at the University of Colorado, and India every three months. While on a brief sabbatical in India five years ago, Dr Kompala decided to take up the offer of Subramani, CEO, Richcore Lifesciences, to help make Richcore a modern biotechnology company. Dr Kompala then helped set up the research and development facilities and the production plant at Richcore' s campus in Bangalore. Finding the right talent to lead the team was always a challenge, Dr Kompala adds. However, he believes that no challenge is insurmountable, as the team's efforts has now come close to fruition, with the near commencement of the manufacturing of their first enzyme, recombinant trypsin, which is an important enzyme with a variety of uses, including one in the production of insulin. One of the proudest moments in his career was when he developed an apparatus, called an inclined settler, used in large-scale perfusion bioreactors. He explains the principle behind its functioning when he says, â€œIf you put a filter inside the bioreactor to allow the liquid media to pass but not the cells, you can separate out the cells and have a continuous cell culture system. However dead cells would start to accumulate after a given time, which would then release proteolytic and glycolytic enzymes that can degrade secreted glycoprotein products. Dead

cells are smaller in size as compared to live cells. If you send in a mixture of dead and live cells over an inclined flat surface, the difference in settling velocity of these two types of cells would be further enhanced as it is proportional to square of cell diameter. So the live and productive cells would settle down completely but the dead cells would not, allowing for their easy separation. By following this idea you could run a reactor continuously without having to stop it.â€? Dr Kompala published the results in 1990. This concept has been widely adopted by a number of biotech firms. Even though Dr Kompala did not patent this invention, it did allow him to obtain a number of research grants for his future projects. He was also awarded the NSF Presidential young investigator award in 1988 by the US government. In the future, Dr Kompala hopes to move towards working in biosimilars as well, along with helping establish a subsidiary in the US for the parent company. â€œI like to learn new things all the time. If a day goes by without me learning something new, maybe I am vacationing,â€? he concludes. **Manasi Vaidya**