

## Entrepreneurial ID «venture leaders» 2008



### Sai Reddy

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«**NanoImmune**»: A Hepatitis C vaccine based on a proprietary nanoparticle vaccine technology.

*Industry:* Biotech

### *The venture leader*

Sai received his B.S. and M.S. in biomedical engineering at Northwestern University (Evanston, IL, USA) where he learned extensively about the impact engineering and applied sciences can have on medical and pharmaceutical technology. Sai worked for two years in the laboratory of Prof. Melody Swartz on a research project in the area of drug delivery and nanotechnology. Research under Prof. Swartz eventually resulted in the decision to join her and Prof. Jeffrey Hubbell at EPFL for a PhD. EPFL has provided Sai the combination of basic and applied science. Prof. Hubbell has extensive experience in technology development, which is evidenced by his many publications, intellectual property, and successful startups (Focal, Boston and Kuros AG, Zurich). The labs of Prof. Swartz and Hubbell have provided an excellent environment to pursue goals in academic science. Sai aims to translate academic science to commercial development. The work from his thesis has resulted in a proprietary technology that has the potential to be a highly stable and effective vaccine technology. Sai, along with his colleagues have published US patent (*USP# 20080031899*). Furthermore, the work has been published in world's leading biotechnology journal (*Reddy, Nature Biotech, 2007*). And finally Sai recently was awarded the prestigious prize for the most innovative technology in Switzerland (*KPMG Tomorrow's Market Award, 2007*). This work has resulted in the company *Nanoimmune* that is working towards developing a Hepatitis C vaccine.

### *The Company / project*

There is currently no existing Hepatitis C virus (HCV) vaccine, and for the 200 million sufferers of this deadly disease, there is no cure. 200 million people worldwide carry HCV and there are 4 million new infections each year. The HCV vaccine market will surpass \$2 billion once a successful vaccine is developed. *Nanoimmune's* technology offers a safe and effective solution for a HCV vaccine. We have developed proprietary technology that enables a highly efficient and safe delivery of vaccines. Our technology is based on a scientifically recognized nanoparticle system, which directly targets and activates the cells responsible for immune protection. Our formulation is stable long-term and easily stored in even very unfavourable environments (e.g., places without adequate refrigeration). Our technology has been protected with a now published US patent (*USP# 20080031899*) and scientifically recognized in the world's leading biotechnology journal (*Reddy, Nature Biotech, 2007*) and has won an award for the most innovative technology in Switzerland (*KPMG Tomorrow's Market Award, 2007*).

Our technology will provide an HCV vaccine by specifically targeting immune cells and activating them. No other vaccine technology can specifically target these cells and activate them. Our development timeline ensures we can gain market entry before our competitors. Investment over 6 years we will require \$75 million of total investment capital. At the end of 6 years we expect to have phase II approval of the vaccine for use in adults and will seek potential acquirers or licensors with a market valuation expected to exceed \$750 million.