Stanford

Niraj Mehta

MBA, expected graduation 2027

Bio

BIO

I am a Chemistry PhD candidate at Stanford University. I was born in India and attended school in Pune, Maharashtra. I did my undergraduate at UCLA, where I received a Bachelor's degree in Chemical Engineering. At the UCLA Systems Engineering Laboratory, I designed control systems for the continuous manufacturing of pharmaceutical drugs. At Stanford, for my PhD thesis project, I joined the Sattely lab, where I study the production of therapeutic small-molecules in plants. Through my work, I discovered the biosynthetic pathways for various plant compounds of agronomic, dietary and therapeutic interest and engineered their production in heterologous systems. I also developed genomics tools that enable the improved discovery of plant metabolism. Ultimately, my work aims to enable the transfer of these biosynthetic pathways into scaleable heterologous systems like yeast for sustainable, large-scale production of these high-value plant compounds through processes like industrial fermentation of yeast.

PROFESSIONAL AFFILIATIONS AND ACTIVITIES

- Fellow, Artis Ventures (2022 - present)
- President, Stanford Biotech Group (2022 - present)
- Communications Director, Stanford Biotech Group (2020 - present)
- Volunteer, Stanford Chemistry Outreach (2018 - 2020)

LINKS

- LinkedIn: https://www.linkedin.com/in/nirajsmehta/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Plants provide some of the most important drugs in current clinical use. It can be challenging to chemically synthesize these drugs or sustainably source them from producer plants. These issues could be alleviated if their biosynthetic genes are engineered into heterologous organisms for large-scale production. I am interested in a) understanding how plants produce these valuable drugs and b) engineering the sustainable production of these drugs into other plants for large-scale production.

LAB AFFILIATIONS

- Elizabeth Sattely, Sattely Lab (9/13/2019)

Publications

PUBLICATIONS

- **A developmental gradient reveals biosynthetic pathways to eukaryotic toxins in monocot geophytes.** *bioRxiv : the preprint server for biology*
  Mehta, N., Meng, Y., Zare, R., Kamenetsky-Goldstein, R., Sattely, E.
  2023

- **A Pathogen-Responsive Gene Cluster for Highly Modified Fatty Acids in Tomato.** *Cell*
  Jeon, J. E., Kim, J. G., Fischer, C. R., Mehta, N. n., Dufour-Schroif, C. n., Wemmer, K. n., Mudgett, M. B., Sattely, E. n.
  2020; 180 (1): 176–87.e19