



Lycopene production by *Para Rhodospirillum oryzae* JA318^T (Patent no. 302668)

Inventors: E.V.V Ramaprasad, Chintalapati Sasikala, & Chintalapati Venkata Ramana, School of Life Sciences, UoH

This patented technology is designed by scientists from the University of Hyderabad, in which lycopene, a carotenoid is synthesized by muted *Para Rhodospirillum oryzae* JA318^T gram-negative bacteria. Lycopene is a major natural colorant in food and cosmetics. *E. coli* and *Candida utilis* were previously reported resources for Lycopene production but the quantity was very low. To overcome this problem, researchers used *Para Rhodospirillum oryzae* JA318^T as a biological resource for large-scale production of the carotenoid. This strain has a high amount of diphosphatidylglycerol, phosphatidylglycerol, and phosphatidylethanolamine polar lipids that help in the production of lycopene in large amounts. In summary, researchers from University of Hyderabad developed a simpler and more economical method for lycopene synthesis. This technology is ready for commercialization in the field of pharmaceuticals, nutraceuticals, and animal feed additives.

