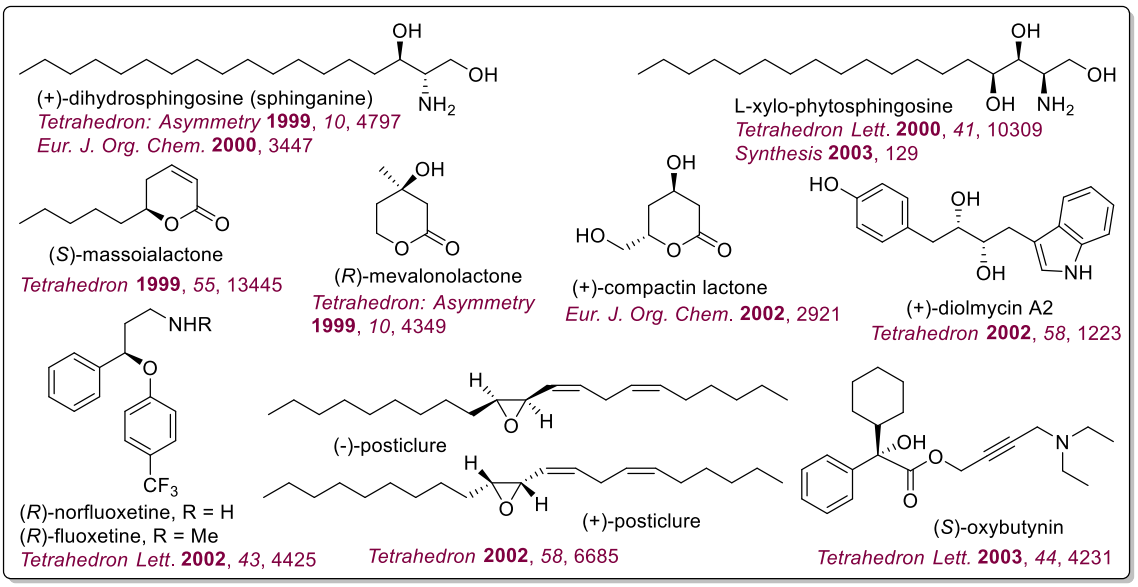
Statement of research achievements, on which any award has already been received by the applicant.

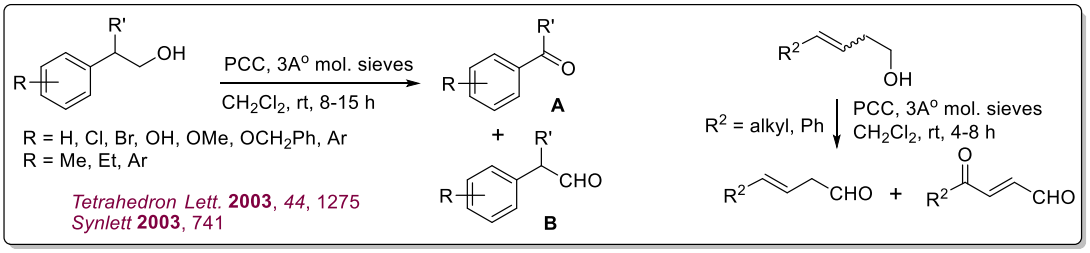
INDIAN NATIONAL SCIENCE ACADEMY (INSA)
Young Scientist Medal Award, Chemical Sciences 2004

The Applicant, Prof. Dr. Rodney A. Fernandes is recipient of the Indian National Science Academy (INSA), New Delhi, **Young Scientist Medal Award** in Chemical Sciences in 2004.

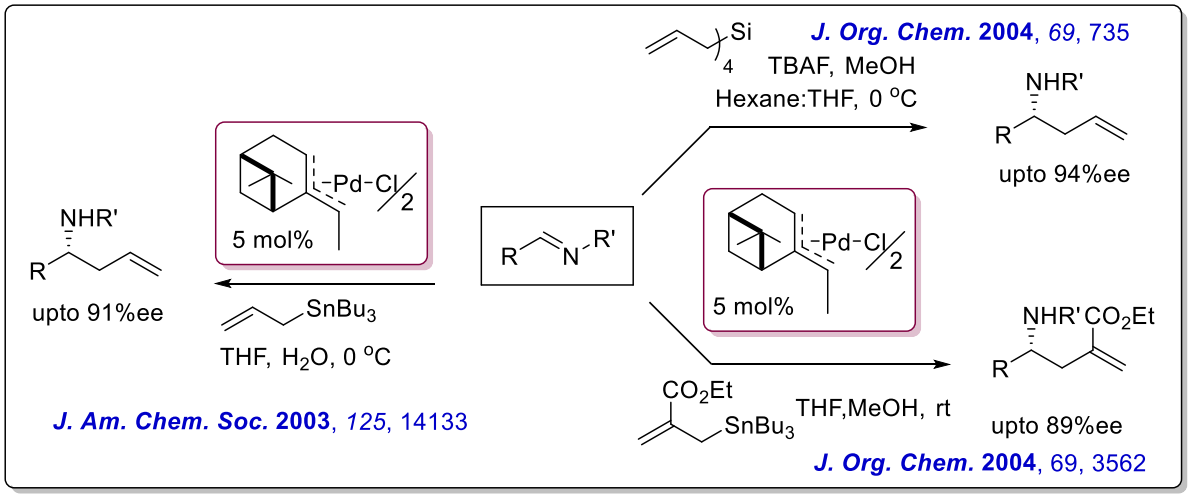
The award at that time was considered for a young researcher below the age of 31 years for significant contribution to advanced research in chemical sciences. I had a Ph.D. from National Chemical Laboratory (NCL)/Pune University in January 2003 with 13 research publications in various international journals and 2 patents to my credit. I worked in the area of natural products synthesis by employing various strategies. The below listed molecules were synthesized during the tenure of my Ph.D. research at NCL-Pune.



We also developed the novel oxidation reactions of homobenzylic and homoallylic alcohols with PCC. The reaction interestingly proceeds through alcohol oxidation to aldehyde, enol formation and oxidative cleavage to give aryl aldehydes from homobenzylic alcohols. In case of homoallylic alcohols the double bond migration to the αβ-unsaturated aldehyde is followed by next allylic oxidation to the ketone with excess of PCC. This resulted in γ-keto-α,β-unsaturated aldehydes.



My postdoctoral research for one year (2003) in the laboratory of Prof. Yoshinori Yamamoto in Tohoku university, Sendai Japan resulted in high impact international journal publications, one in *J. Am. Chem. Soc*. and two in *J. Org. Chem*. and 2 Japanese patents. The work included the development of π-allylpalladium catalysts based on pinane moiety for asymmetric allylation of imines. The reaction in presence of π-allylpalladium catalyst and one equiv. water was found to catalyze the asymmetric allylation in up to 91% ee (***J. Am. Chem. Soc.*** **2003**, *125*, 14133). The reaction was also tuned using allyl silane and required the presence of TBAF and MeOH to result in much simpler reaction conditions and high up to 94% ee (***J. Org. Chem.*** **2004**, *69*, 735). The use of functionalized allylstannane gave α-methylene-γ-amino esters in up to 89% ee (***J. Org. Chem.*** **2004**, *69*, 3562). The earlier two works resulted in two Japanese patents.



I was awarded the INSA medal for significant contributions in the area of synthesis of bioactive natural products and development of asymmetric catalysis as discussed above.

Sincerely,

Rodney A. Fernandes

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