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Research interests:

1. Fungal morphogenesis: Dimorphism in *Benjaminiella poitrasii* and *Yarrowia lipolytica*; Conidiation in *Conidiobolus coronatus*
2. Carbohydrate based enzymes: Cellulases, chitinases, chitin deacetylase, chitosanase and amylolytic enzymes.
3. Other enzymes: Proteinases, glucose isomerase and polyphenol oxidase, glutamate dehydrogenase, ornithine decarboxylase
4. Chitin metabolism as a target for biocontrol agents/ antifungal drugs
5. Mycoinsecticides for insect pest control; Bio-prospecting of insect pest controlling fungi: Value addition to high volume low cost product
6. Biosensors

Publications: 137(List enclosed)

(*Research papers*, 83; *Reviews*, 16; *Chapters*, 37); *Popular articles*, 23 (English, Hindi and Marathi); *Report*, 3; *Books*, 6; *Patents*, 9; *Technical brochures*, 2; *Personal news*, 3

- Chavan S.B. and **Deshpande M.V.** (2013) Chitinolytic enzymes: An appraisal as a product of commercial potential. *Biotechnol. Progress* 29: 833-846 (DOI 10.1002/btpr.1732)
- Kapoor M. and **Deshpande M.V.** (2013) Development of mycoinsecticide for the control of insect pests: Issues and challenges in transfer of technology from laboratory to field. *Kavaka* 40: 45-56
- Chaudhary P.M., Tupe S.G. and **Deshpande M.V.** (2013) Chitin synthase inhibitors as antifungal agents. *Mini-Rev. Med. Chem.* **13**:222-236 (1)
- Ghormade V., **Deshpande M.V.** and Paknikar K.M (2011) Perspectives for nano-biotechnology in plant protection and nutrition. *Biotechnol. Adv.* **29**: 792–803 (IF 8.25; 9)
- Yadav P and **Deshpande M.V.** (2010) Fungus- fungus and fungus–insect interactions. *Biopestic. Int.* **6**:21-35

Deshpande M.V. (1998) *Novel biopesticides. A popular science book.* National Institute of Science Communication, New Delhi.

Deshpande M.V. (2004) Entomopathogenic fungi- a valuable alternative to fight against insect pests. A Proceeding of the International Workshop organized at NCL, Pune in Sept. 2002.

Deshpande M.V. and Ruiz-Herrera J. (Eds) (2013) Biotechnology: Beyond Borders. Published by NCL, Pune