

**Exploring the diagnostic and therapeutic potential of  
rationally designed and synthesized novel  
multifunctional ligands for Alzheimer's disease**



**Thesis submitted in partial fulfilment for the  
Award of Degree**

**Doctor of Philosophy**

**By**

**Nilesh Gajanan Bajad**

**Department of Pharmaceutical Engineering & Technology  
Indian Institute of Technology  
(Banaras Hindu University)  
Varanasi-221005, India**

**Roll No. 21161501**

**Year: 2025**