

#### **Molecular Modelling Winter Internships**

Participate in Molecular Modelling winter internships to explore computational methods for studying molecular systems in cold environments, focusing on cold-induced molecular dynamics, protein-ligand interactions under cold stress, and molecular simulations for cold-resistant drug design.

## Focussed Areas under Molecular Modelling Winter Internship

- 1. Cold-induced molecular dynamics simulations
- 2. Protein-ligand interactions in cold-stressed environments
- 3. Molecular modelling in cold-tolerant biomolecular systems
- 4. Quantum mechanics and molecular modelling under cold stress
- 5. Molecular simulations of cold-induced protein folding
- 6. Cold-environment drug design using molecular models
- 7. Cold-stress molecular simulations for enzyme catalysis
- 8. Energy minimization and geometry optimization under cold conditions
- 9. Virtual screening for cold-resistant drug discovery
- 10. Cold-environment homology modelling of protein structures
- 11. Multi-scale molecular modelling under cold-stress conditions
- 12. Molecular modelling for studying cold-tolerant materials
- 13. Molecular mechanics in cold-environment simulations
- 14. Cold-stress biomolecular interactions in molecular modelling
- 15. Molecular docking for protein-drug interactions under cold stress
- 16. Free energy calculations in cold-environment molecular simulations
- 17. Applications of molecular modelling in cold-environment pharmacology
- 18. Cold-induced conformational analysis of proteins
- 19. Molecular modelling of cold-stress genetic mutations
- 20. Cold-environment simulations in nanotechnology

### Protocols Covered across various focussed areas under Molecular Modelling Winter Internship

- 1. Cold-stress molecular dynamics simulation protocols
- 2. Protein-ligand docking under cold conditions workflows
- 3. Quantum mechanics integration under cold-stress conditions
- 4. Energy minimization protocols for cold-stressed systems
- 5. Homology modelling protocols for cold-tolerant proteins

- 6. Cold-stress free energy calculation techniques
- 7. Molecular docking workflows for cold-resistant drug discovery
- 8. Cold-environment molecular simulations of enzyme catalysis
- 9. Multi-scale modelling workflows under cold-stress conditions
- 10. Molecular mechanics and force field application in cold environments

#### Duration: 5, 10, 15, 20, and 30 Days

# Note: Please cross confirm whether internship slots for this field are available before joining.

Click Here for Molecular Modelling Winter Internship Fees

Application Process and Other info