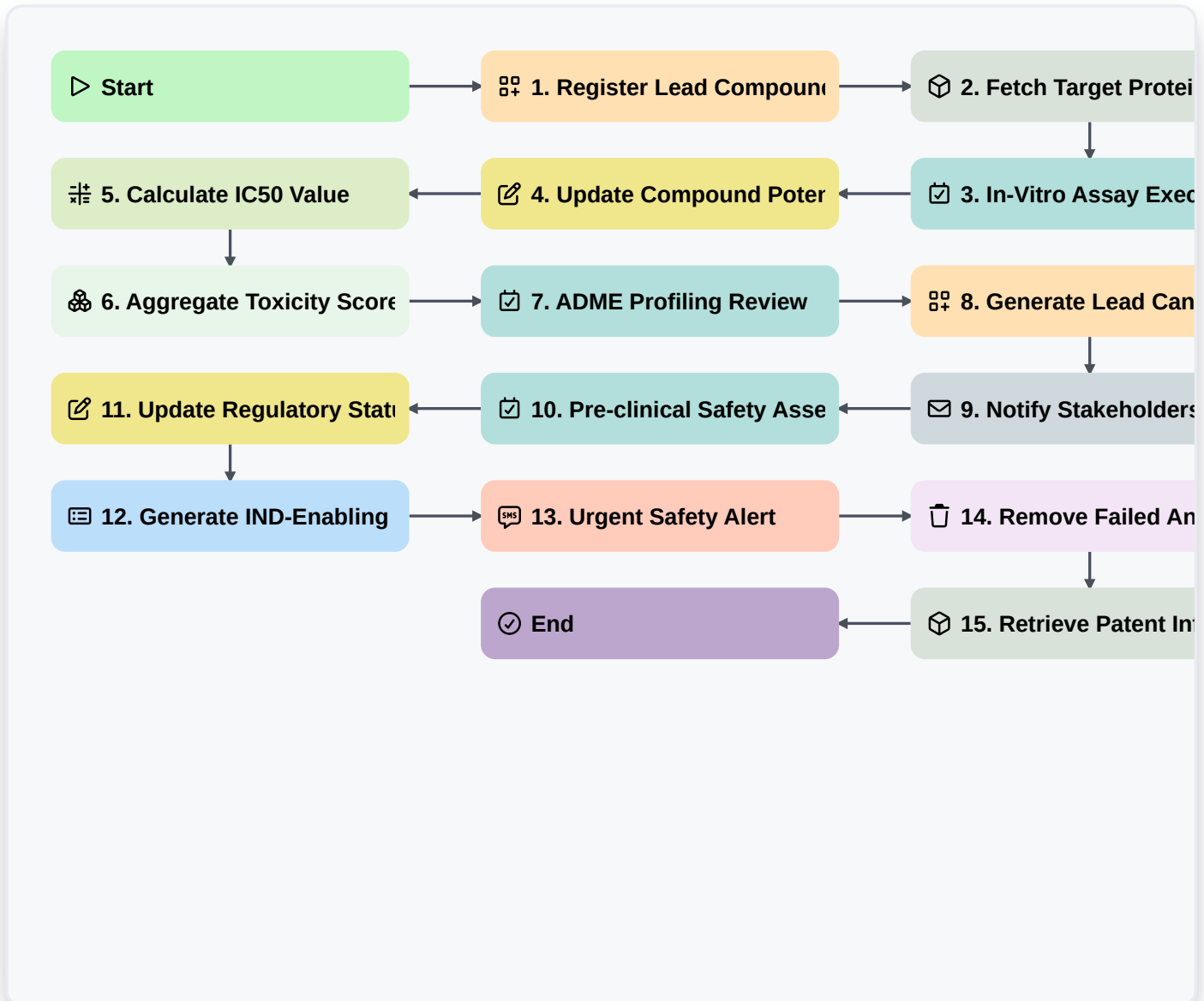


Drug Discovery And Development Lifecycle Management



▷ Start

Start of the Workflow/Process.

🔧 1. Register Lead Compound

Create a new entry in the 'Chemical Compounds' data model to initialize the discovery phase.

📦 2. Fetch Target Protein Data

Retrieve existing biological target information from the 'Proteomics' data model.

📝 3. In-Vitro Assay Execution

Assign a task to Lab Technicians to perform initial binding affinity tests.

📝 4. Update Compound Potency Scores

Update the 'Potency' field in the 'Chemical Compounds' entry based on assay results.

🔧 5. Calculate IC50 Value

Execute a formula to calculate the half-maximal inhibitory concentration based on dose-response data.



6. Aggregate Toxicity Scores

Calculate the average toxicity score across all tested analogs in the current batch.

7. ADME Profiling Review

Create a task for Pharmacologists to review Absorption, Distribution, Metabolism, and Excretion data.

8. Generate Lead Candidate Profile

Create a new entry in the 'Lead Candidates' data model once a compound passes screening.

9. Notify Stakeholders of Hit Identification

Send an email to the Research Director when a significant hit is identified.

10. Pre-clinical Safety Assessment

Assign a task to the Toxicology team to initiate animal model studies.

11. Update Regulatory Status

Update the 'Regulatory Milestone' field in the 'Drug Program' data model.

12. Generate IND-Enabling Study Report

Create a comprehensive report summarizing all pre-clinical safety and efficacy data.

13. Urgent Safety Alert

Send an SMS to the Principal Investigator if unexpected toxicity is recorded in the data entry.

14. Remove Failed Analogs

Delete entries from the 'Active Screening' model for compounds that failed toxicity thresholds.

15. Retrieve Patent Information

Get intellectual property status from the 'IP & Patents' data model to ensure freedom to operate.

End

End of the Workflow/Process.