Drug Discovery Technologies | (1/6)

(Revised October 28, 2026)

Molecular Design

- **Technologies for generating novel small-molecule scaffolds while retaining the required pharmacophore**

- **Virtual screening technology enabling rapid exploration of large virtual libraries with a high hit rate**

- **AI technology/agents for accurate and interpretable prediction of protein-ligand interactions**

- **Structure-based drug design integrating biophysical data and computational approaches**

Drug Discovery Technologies | (2/6)

(Revised October 28, 2026)

Molecular Design

- **Drug discovery technologies for nucleic acid analog design and optimization**

- **Technologies for peptide design and optimization, including enhanced permeability, oral bioavailability, stability, formulation, and manufacturing**

Drug Discovery Technologies | (3/6)

(Revised October 28, 2026)

Macromolecular Drug Modalities

- **Linear and circular mRNA engineering for enhanced protein expression and durability**

- **LNP design and optimization for tissue targeting, safety, and stability**

- **Formulation technologies for improved refrigerated stability and scalable manufacturing of mRNA-LNP products**

Drug Discovery Technologies | (4/6)

(Revised October 28, 2026)

Drug Discovery Platform Technologies

- **Technologies for accelerating protein structure determination, including cryo-EM, and enabling challenging targets and membrane proteins**

- **Technologies for protein structure and interaction analysis using biophysical methods, including HDX-MS**

- **Screening technologies for evaluating intracellular target engagement**

- **AI-driven reaction condition prediction and experimental design for high-throughput experimentation using historical synthesis data**

- **Automation and robotics for high-throughput compound synthesis and purification**

Drug Discovery Technologies | (5/6)

(Revised October 28, 2026)

DMPK and Safety Technologies

- **High-sensitivity screening technologies for physicochemical and early ADME profiling using minimal compound quantities**

- **Models and evaluation technologies for predicting human PK of long-acting injectables from formulation and preclinical data**

- **Preclinical safety assessment technologies for predicting clinical adverse events, including headache, nausea/vomiting, seizures, biliary toxicity, and gastrointestinal toxicity**

Drug Discovery Technologies | (6/6)

(Revised October 28, 2026)

Vaccine Platform Technologies

- **DDS and formulation technologies for enhanced mucosal vaccine delivery and immune responses**

- **In vitro, organoid/MPS, and AI-based technologies for predicting vaccine immunogenicity and antibody responses**

- **VLP and nanoparticle technologies for enhanced antigen immunogenicity and developability**

- **Next-generation vaccine platforms with the potential to transform vaccine development and manufacturing**
